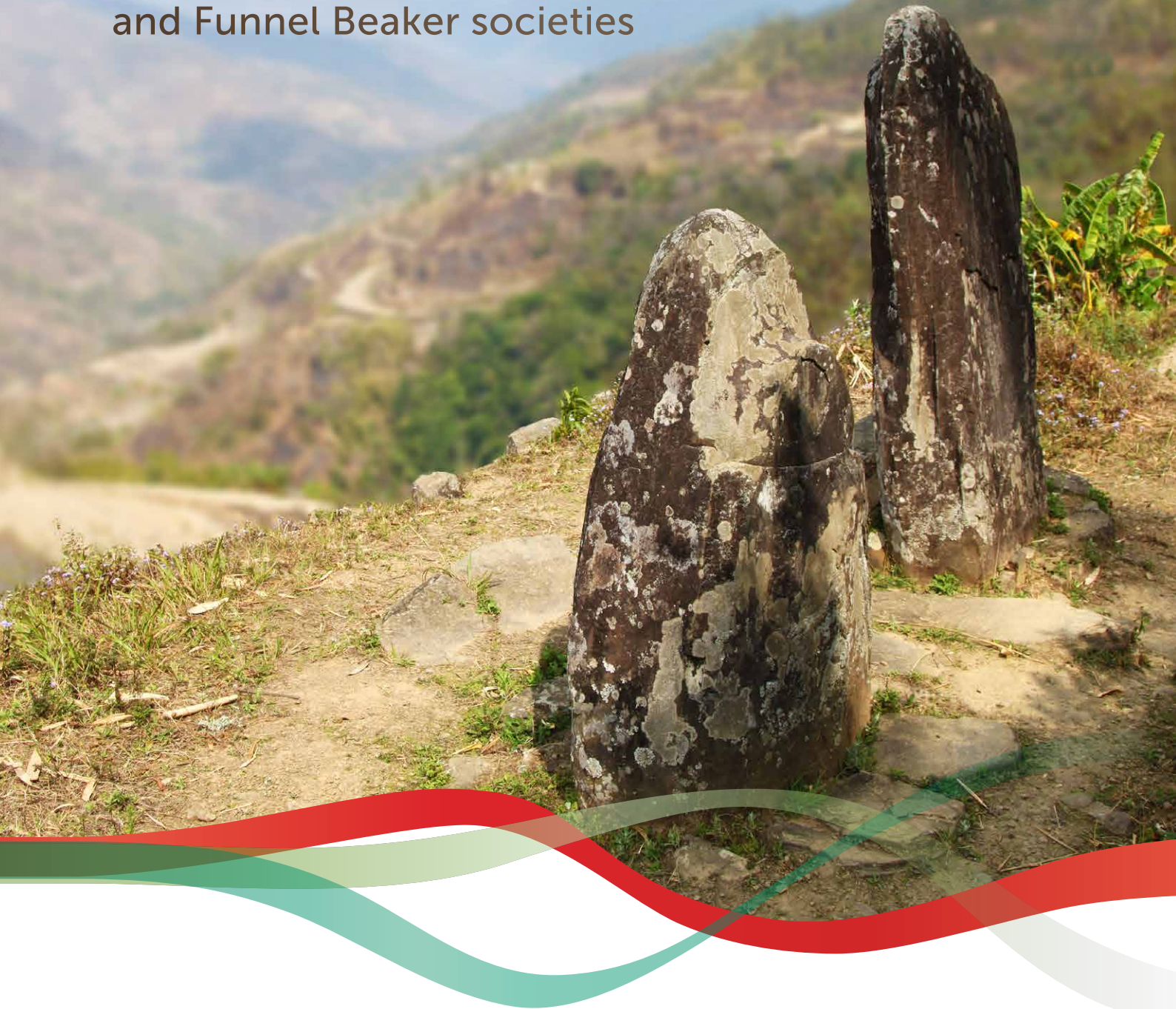


MARIA WUNDERLICH

# MEGALITHIC MONUMENTS AND SOCIAL STRUCTURES

Comparative studies on recent  
and Funnel Beaker societies





# **MEGALITHIC MONUMENTS AND SOCIAL STRUCTURES**

 **sidestone**press



**MARIA WUNDERLICH**

# **MEGALITHIC MONUMENTS AND SOCIAL STRUCTURES**

Comparative studies on recent  
and Funnel Beaker societies

© 2019 Maria Wunderlich

Published by Sidestone Press, Leiden  
[www.sidestone.com](http://www.sidestone.com)

Imprint: Sidestone Press Dissertations

Layout & cover design: CRC 1266/Carsten Reckweg and Sidestone Press  
Cover images: Commemorative standing stones in Nagaland, Northeast India  
(photo: Maria Wunderlich)

ISSN 2590-1222

ISBN 978-90-8890-786-9 (softcover)  
ISBN 978-90-8890-787-6 (hardcover)  
ISBN 978-90-8890-788-3 (PDF e-book)

The STPAS publications originate from or are involved with the Collaborative Research Centre 1266, which is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation; Projektnummer 2901391021 – SFB 1266).

## Preface of the editors

With this book series, the Collaborative Research Centre ‘Scales of Transformation: Human-Environmental Interaction in Prehistoric and Archaic Societies’ (CRC 1266) at Kiel University enables the bundled presentation of current research outcomes of the multiple aspects of socio-environmental transformations in ancient societies by offering this new publication platform. As editors, we are pleased to be able to publish monographs with detailed basic data and comprehensive interpretations from different case studies and landscapes as well as the extensive output from numerous scientific meetings and international workshops.

The book series is dedicated to the fundamental research questions of the CRC 1266 dealing with transformations on different temporal, spatial and social scales, here defined as processes leading to a substantial and enduring reorganization of socio-environmental interaction patterns. What are the substantial transformations that describe human development from 15,000 years ago to the beginning of the Common Era? How did the interaction between natural environment and human populations change over time? What role did humans play as cognitive actors trying to deal with changing social and environmental conditions? Which factors triggered the transformations that led to substantial societal and economic inequality?

The understanding of human practices within the often intertwined social and environmental contexts is one of the most fundamental aspects of archaeological research. Moreover, in current debates, the dynamics and feedback involved in human-environmental relationships have become a major issue looking at the sometimes devastating consequences of human interference with nature. Archaeology, with its long-term perspective on human societies and landscapes, is in the unique position to trace and link comparable phenomena in the past, to study the human involvement with the natural environment, to investigate the impact of humans on nature, and the consequences of environmental change on human societies. Modern interlinked interdisciplinary research allows for reaching beyond simplistic monocausal lines of explanation and overcoming evolutionary perspectives. Looking at the period from 15,000 to 1 BCE, the CRC 1266 takes a diachronic view in order to investigate transformations involved in the development of Late Pleistocene hunter-gatherers, horticulturalists, early agriculturalists, early metallurgists as well as early state societies, thus covering a wide array of societal formations and environmental conditions.

The publication on detailed aspects of transformation in Neolithic and recent societies and landscapes with megalithic monuments includes the analysis of both, past and living societies. We are very thankful to the author Maria Wunderlich and

to graphic illustrator Janine Cordts for their deep engagement in this publication. We also wish to thank Karsten Wentink, Corné van Woerdekom and Eric van den Bandt from Sidestone Press for their responsive support in realizing this volume and Hermann Gorbahn for organizing the whole publication process.

*Wiebke Kirleis and Johannes Müller*



# Contents

<b>Preface of the series editors</b>	<b>5</b>
<b>Foreword and acknowledgement</b>	<b>11</b>
<b>1 Introduction</b>	<b>13</b>
1.1 <i>Research questions and scientific approach</i>	13
1.2 <i>Megaliths as a worldwide phenomenon: space and time of investigation</i>	15
1.2.1 Selection of the case studies	16
1.2.2 Megalith construction in Madagascar	17
<b>2 History of research: megalithic monuments</b>	<b>19</b>
2.1 <i>Functional interpretations</i>	20
2.2 <i>Symbolic and ideological interpretations</i>	21
2.3 <i>Megalithic tombs in their active use</i>	21
2.4 <i>Megalithic tombs and social differentiation</i>	22
<b>3 Theoretical background</b>	<b>25</b>
3.1 <i>Theoretical background of the concept of monumentality</i>	25
3.2 <i>Cultural memory in pre-modern societies</i>	26
3.3 <i>The relationship between subsistence strategies and the extent of social differentiation/inequality</i>	27
3.3.1 Social differentiation in hunter-gatherer societies	28
3.3.2 Social differentiation in pastoral societies	28
3.3.3 Social differentiation in agricultural societies	28
3.4 <i>Political and ritual economy</i>	29
3.4.1 Anarchistic approaches	30
3.4.2 Corporate and communal strategies	32
3.4.3 Ritual economy	34
3.4.4 Landscape construction and resource control	35
3.4.5 Cooperation theory	35
3.4.6 Collective action theory	38
3.5 <i>Excursus: lineage and clan structures</i>	39
3.6 <i>Summary</i>	40

<b>4 Methodology</b>	<b>41</b>
4.1 <i>The examination parameters</i>	41
4.1.1 Settlements	41
4.1.2 Monumentality and megalithic-building traditions	43
4.1.3 Economic markers	49
4.1.4 Specific artefact types	50
4.2 <i>Ethnoarchaeological research and the use of analogies</i>	52
4.2.1 Ethnoarchaeology: history of research and methodology	52
4.2.2 Analogy and comparative archaeology	54
4.2.3 Middle-range theory: linking theory and empiricism	56
4.2.4 Own methodical approach	56
<b>5 The Ethnoarchaeological case studies: Sumba and Nagaland</b>	<b>59</b>
5.1 <i>Ethnoarchaeological case study 1: Sumba</i>	59
5.1.1 Brief characteristics	61
5.1.2 History of research and source criticism	70
5.1.3 Research area: methodology	72
5.1.4 Tarung (Waikabubak, Loli)	78
5.1.5 Wailiang (Waikabubak, Loli)	91
5.1.6 Pasunga (Anakalang)	97
5.1.7 Prairita (Anakalang)	107
5.1.8 Praikumis (Wanokaka)	112
5.1.9 Waiwuang (Wanokaka)	119
5.1.10 Wainyapu (Kodi)	126
5.1.11 Toda (Kodi)	139
5.1.12 Prailiang (Northeast Sumba)	144
5.1.13 Uma Bara (Eastern Sumba)	154
5.1.14 Comparative analyses	163
5.1.15 Megalith-building traditions in Sumba: modelling	171
5.2 <i>Ethnoarchaeological case study 2: Nagaland</i>	176
5.2.1 Brief characteristics	177
5.2.2 History of research and source criticism	184
5.2.3 Research area: methodology	191
5.2.4 Khonoma (Angami-Naga)	194
5.2.5 Sechüma (Angami-Naga)	206
5.2.6 Khezhakeno (Chakhesang-Naga)	213
5.2.7 Mesülumi (Chakhesang-Naga)	223
5.2.8 Rüzazho (Chakhesang-Naga)	232
5.2.9 Zhavame (Chakhesang-Naga)	242
5.2.10 Comparative analyses	251
5.2.11 Megalith-building traditions in Nagaland: modelling	255
5.3 <i>Ethnoarchaeological case studies: summary</i>	258

<b>6 The archaeological case studies: Funnel Beaker societies in present-day Northern Germany and Scania</b>	<b>261</b>
6.1 <i>Archaeological case study 1: Funnel Beaker societies in Northern Germany</i>	261
6.1.1 The study area	262
6.1.2 Settlement sites	264
6.1.3 Economic markers	272
6.1.4 Megalithic graves	281
6.1.5 Regional comparison	310
6.1.6 Megalith-building traditions in Funnel Beaker communities of modern-day Northern Germany: modelling	313
6.2 <i>Comparison of two archaeological regions: Northern Germany and Scania</i>	316
6.2.1 The reference area: Scania	316
6.2.2 Settlement sites	317
6.2.3 Economic markers	320
6.2.4 Megalithic monuments	322
6.2.5 The archaeological case studies: summary	335
<b>7 Synthesis</b>	<b>339</b>
7.1 <i>The different models</i>	339
7.1.1 Megalith-building traditions on Sumba	339
7.1.2 Megalith-building traditions in Nagaland	340
7.1.3 Megalith-building traditions in Funnel Beaker communities	341
7.2 <i>Comparison and synthesis</i>	343
<b>8 Summary</b>	<b>347</b>
<b>9 References</b>	<b>349</b>
<b>Appendix: photos of the ethnoarchaeological field work</b>	<b>367</b>



## Foreword and acknowledgement

This work was part of the project ‘Equality and Inequality: Social Differentiation in Northern Central Europe 4300-2400 BC’, which is part of the DFG-funded priority programme 1400 ‘Early Monumentality and Social Differentiation. On the Origin and Development of Neolithic Large-scale Buildings and the First Complex Societies in Northern Central Europe’. The latest stages of the project work were also strongly interlinked with the CRC 1266 ‘Scales of Transformation – Human-Environmental Interaction in Prehistoric and Archaic Societies’.

The databases and transcriptions of the interviews which were conducted in Sumba and Nagaland can be found on the ‘Data Exchange Platform’ of the Johanna Mestorf Academy.<sup>1</sup>

First of all, I would like to thank my supervisor and head of the subproject, Prof. Dr. Johannes Müller, for his continuous support and his trust in my work. I would also like to thank my second supervisor, Prof. Dr. Henny Piezonka, for her support and assistance.

In addition to my own field work, archaeological data bases as well as archival holdings were integrated within the scope of this work, through which the data basis could be considerably expanded. In this context I am indebted to the State Office for cultural heritage preservation Mecklenburg-Vorpommern and in particular to Mr. Thoralf Bergmann, who enabled me an uncomplicated and successful access to the relevant data. Other archival holdings containing photographs and manuscripts of researchers and colonial officials who were in Nagaland at the beginning of the 20<sup>th</sup> century could be seen at the Pitt Rivers Museum Oxford. I would like to thank Dr. Christopher Morton for his friendly and productive cooperation.

The field work in Nagaland was carried out in close cooperation with the University of Nagaland, Kohima. Prof. Dr. Toshi Jamir and Dr. Ditamulü Vasa were involved in all of the work and made the success of this field work possible in the first place. I am very grateful for their hospitality and support. In addition to Prof. Dr. Johannes Müller, Dr. Knut Rassmann from the RGK Frankfurt and Sara Jagiolla from the Institute of Prehistoric and Protohistoric Archaeology in Kiel also took part in the field work. I would like to thank everyone involved for the relaxed and focused ethnoarchaeological fieldwork in Sumba and Nagaland. I am also very grateful to Sara Jagiolla for the creation of various 3D models of megalithic monuments in Nagaland. The preparation of the manuscript and especially of the numerous figures was accompanied by Janine Cordts, Kiel, to whom I would also like to express my gratitude.

During my time at the Institute of Pre- and Protohistoric Archaeology in Kiel, I was able to benefit from a productive and friendly working environment in which

---

1 <https://www.jma.uni-kiel.de/en/research-projects/data-exchange-platform>.

discussions and exchanges among colleagues and fellow students were common and helpful. I would also like to thank all of the proofreaders for their efforts and courtesy. Many of the comments and discussions have improved this work and helped me a lot.

I am especially grateful to my family, who has tirelessly supported and encouraged me in all of the years of project work and the development of this dissertation and have been an emotional support for me. Although mentioned last, my greatest thanks go to Julian Laabs, who always stood by my side and made an invaluable contribution to the success of this work.

# 1 Introduction

Megalithic monuments in their distribution, function and social significance have long been an important object of research, especially in prehistoric archaeology. In today's Europe alone, there are many areas where megalithic-building traditions are archaeologically documented. These areas also include Northern Central Europe, where megalithic monuments were erected over a wide area and across a long period in connection with the Neolithic Funnel Beaker societies. Since 2009, these societies have been a research priority within the interdisciplinary DFG-funded priority programme (SPP) 1400 'Early Monumentality and Social Differentiation. On the Origin and Development of Neolithic Large-scale Buildings and the Emergence of Early Complex Societies in Northern Central Europe' (cf. Müller 2012). The projects associated with this programme have pursued different approaches and thematic orientations and cover a wide range of topics.

Of course, an important aspect is the social interrelationships and mechanisms that affect the construction of megalithic monuments. As already mentioned in the title, this is important in the SPP. In the course of the 'Equality and Inequality: Social Differentiation in Northern Central Europe 4300-2400 B.C.' project, the focus is on these very aspects.

## 1.1 Research questions and scientific approach

The question of social differentiation and inequality in societies of megalithic-building traditions was repeatedly raised in prehistoric research (cf. chapter 2.4). These were formulated linking the construction of megalithic monuments with a central organisation and the emergence of socially-prominent personalities. The social models thus drawn are partly oriented towards evolutionary social typologies (*e.g.* according to Fried 1967; Sahlins and Service 1960) and they deal less with the reasons and the influence of the erection of monuments as a conscious act of a community. With a fundamentally comparative approach, this work examines possible significant social mechanisms and behaviours that could have affected the construction of megalithic monuments.

In order to gain insights into a possible social differentiation within Funnel Beaker communities, both archaeological and ethnoarchaeological case studies are examined in this work. The following research questions were chosen to analyse aspects of social organisation and courses of action:

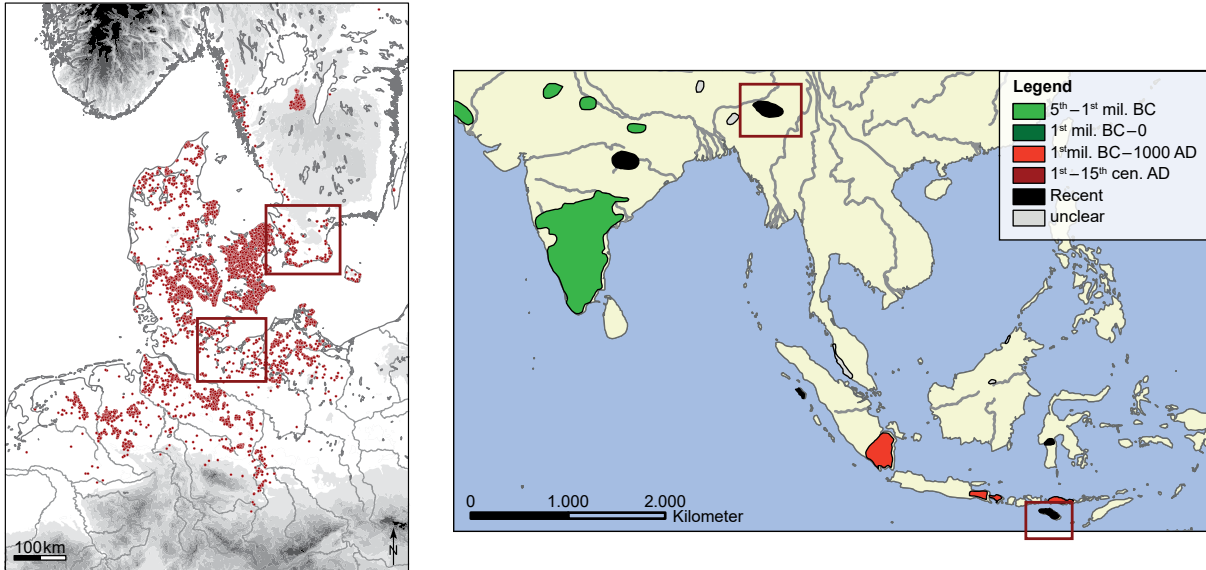


Fig. 1: The location of the different study areas of this work (left after Fritsch et al. 2010; right after Joussaume 1985).

- What social mechanisms are important in the construction of megalithic monuments? Can structural similarities and dissimilarities of significant courses of action and forms of social organisation be determined based on the different case studies?
- To what extent and in what way do economic factors affect construction activities? Do differences in factors such as natural conditions or the occurrence of important raw materials influence the construction of megalithic monuments?
- To what extent can the construction of megalithic monuments be linked to social inequality? Is there a close relationship between institutionalised social hierarchies and megalithic monuments in material terms or regarding the arrangement of the monuments?

The questions described are analysed using a total of three case studies and a comparison region (Fig. 1). These include two ethnoarchaeological case studies, the content of which relates to Sumba and Nagaland and the selection of which is explained below.<sup>2</sup> Furthermore, an archaeological test area in today's Northern Germany and another archaeological comparison area in Scania were selected, both of which can be assigned to Funnel Beaker contexts in accordance with the content orientation of the SPP 1400.

Due to the very different nature of the data basis in the different case studies, the approach within the case studies is adapted with respect to the overall research questions. Regarding the ethnoarchaeological case studies, extensive literature is available, particularly in relation to the social structures and existing social differentiation of the communities concerned. In a second step, these can be compared with the data collected on the megalithic monuments during the fieldtrips, whereby the connection and material characteristics of the effective courses of action can be evaluated. Naturally, such an approach in relation to the archaeological case studies is only possible to a very limited extent. In this case, data are collected and examined to assess the existence and development of social forms of organisation and intra-community relations (cf. chapter 4.1). The results of these investigations are linked to the documented megalithic monuments and contextualised to examine

<sup>2</sup> A selection of photographs taken during the field work in Sumba and Nagaland are to be found in the appendix. These photos give an impression of the villages, the landscape and specific aspects such as quarry areas.



the theoretical approaches presented in chapter 3. However, there are limits to the traceability of specific actions within the archaeological data material.

In order to provide a coherent argumentation structure and make the modelling of the individual case studies comprehensible, different work steps were necessary. A first step is to discuss social science and archaeological theories and approaches that are seen as potentially influential and effective in the construction of megalithic monuments. Since the overarching questions of this work are multifaceted, theories and approaches were used that show a strong degree of openness regarding the existence of social hierarchies, the handling of resources and the structuring of social groups' living and working together. These include approaches that relate to opposing concepts such as individualism vs. collectivism or inclusion vs. exclusion.

From these approaches, the respective factors are identified, which can be traced in the archaeological data material. However, the aim of this work is not to identify a specific approach as the appropriate one for the ethnoarchaeological and archaeological case studies considered here and thus to classify the other theories and approaches as inappropriate; rather, it discusses which aspects and courses of action of the respective theoretical approaches are effective and parallel – or not – in the case studies.

In a second step, the individual case studies and the comparison region are presented. Regarding the ethnoarchaeological case studies, the presentation is primarily in the form of the individual villages, which are presented in relation to the megalithic monuments and the interviews conducted. Subsequently, a model of the interdependence of socially-relevant areas of life and ways of acting under consideration of megalith building takes place. The aim is to understand which of the preceding theoretical approaches can be considered relevant and effective based on the statements of the informants and the data presented. The archaeological case study as well as the reference region will be presented and investigated based on available data on megalithic monuments, settlement features and economic markers. Here, again the case study is followed by modelling, which is then compared with the reference region.

In a synthesis, a comparison is made of the relevant social mechanisms developed based on the individual case studies. It evaluates which actions and factors are only effective in the individual case studies and whether a similar set of important social practices can be found within the different communities studied.

## **1.2 Megaliths as a worldwide phenomenon: space and time of investigation**

Megalithic-building traditions are by no means a singular phenomenon, in both (pre)historical and recent contexts, and they have a worldwide distribution (Fig. 2). Nevertheless, the map shows that there are some regional priorities. Especially in Europe between the 5<sup>th</sup> and 1<sup>st</sup> millennium BC, there is a concentration of megalithic monuments. The construction of dolmens, passage graves and gallery graves over a wide area of Northern Central and Western Europe forms a focal point. However, in France in particular, the construction of menhirs prior to the construction of the gallery graves also warrants mention.

Overall, the variance and recurring similarities of megalithic monuments – some of them certainly determined by functional aspects – hold strong interest. For example, graves whose stones on the narrow side have an incorporated hole (partly called a 'Seelenloch') can be found in both central Europe and Jordan (cf. Schierhold 2011; Joussaume 1985). Stone circles – some of which are linked to graves – can be found in both modern Senegal and the Central African Republic (see Laporte *et al.* 2012; Mohen 1989).



Fig. 2: The global distribution of areas with megalithic building traditions (map based on Joussaume 1985).

In this context, a diffusionist model according to which megalithic-building traditions have a common origin and have spread globally from there is not assumed (cf. also Bauer and Trivedi 2013, 47).

It is striking that the South and Southeast Asian region in particular shows a concentration of prehistoric, historical and recent examples of megalithic-building traditions. Here, especially on the Polynesian Islands, there is a strong variety of megalithic monument types, including platforms, tombs and menhirs. This makes the greater region of South and Southeast Asia particularly interesting for comparative approaches.

### 1.2.1 Selection of the case studies

The worldwide occurrence of communities with megalith-building traditions in the distant and recent past is characterised by considerable architectural variability and a presence in different geographical regions (cf. Joussaume 1985). However, communities of a living megalithic tradition can only be found sporadically in this selection, including areas in Madagascar (cf. Bloch 1994; Dieball 1971), Indonesia and India. All of these areas show strong variability in the specific traditions of megalithic construction. In Indonesia, for example, megalithic structures could be found on various islands in a large number of communities. These include dolmens built on Nias, West Java or South Sumatra, which perform purely ceremonial functions. On the other hand, on Sumba, this tradition lives on, whereby dolmens are used as burial grounds there. However, in Indonesia, there are also other, diverse stone monuments to be found, including stone enclosures, menhirs and decorated stones, which can be found – for example – on Timor or Sulawesi (e.g. Kirleis *et al.* 2012; Adams 2007; Sukendar 1985; Soejono 1982). In most of these cases, the construction of these monuments has recently been discontinued. A large variety of archaeologically-documented cases of megalithic-building traditions can also be found in India (e.g. Bauer and Trivedi 2013; Sarkar 1982). Recent examples can be found in Northeast India, whereby important examples here are the Khasi Hills and

Nagaland. In both cases, the megalithic-building traditions were also discontinued relatively recently. Although contemporary witnesses of individual building events can still be found within the oldest generations, new megaliths are only built in a completely different context (*e.g.* as memorial stones for church festivals; Jamir 2004; Mawlong 2004).

The selection of case studies for this work was based on several factors. Due to the small number of areas in which recent megalithic-building traditions can be found, the selection of possible case studies is severely limited from the outset. Sumba is a special case in this context because megalithic tombs are still being built here. This is certainly one of the reasons why Sumba has been exceptionally well studied in anthropological terms. For example, there are various studies dealing with language, social structure, performative aspects or megalithic construction (*e.g.* Adams 2007, Gunawan 2000; Kuipers 1990). This provides comprehensive data and information on such aspects, which are also important regarding megalithic construction but could not be collected specifically during the field work due to time constraints, among other reasons. For Nagaland, there are also a number of complementary studies available, which mainly deal holistically with individual villages or communities (*e.g.* Nienu 2015; Venuh 2014; Lohe 2011). Taking into account source-critical factors, the reports of former British colonial officials also hold interest (*e.g.* Hutton 1969; Mills 1922).

Finally, the diversity of the case studies also played a role. The comparative approach of this work should be based on case studies that are as diverse as possible, whereby different social mechanisms that can be effective under different conditions can be analysed. This is the case in Nagaland and Sumba, whereby megalithic-building traditions have emerged in communities that appear to be partly contrary. In Nagaland, different forms of social organisation within communities are present. On the one hand, there are areas where chiefdoms were developed at the time of colonisation and showed comprehensive restrictions on megalithic construction (construction of the stones was only permitted for the chieftains themselves). On the other hand, there are communities that only had flat and permeable hierarchies (*e.g.* Hutton 1969; Mills 1922). A similar situation exists in Sumba, where the western and eastern part of the island strongly differ and these divergences also affect megalithic construction (*cf.* chapter 5.1).

Regarding the archaeological case studies, attention was paid to the availability of data sets that were as comprehensive as possible for the planned analyses. On the one hand, these were available for Northern Germany through previous investigations within the framework of the SPP 1400. These data sets include excavation results from megalithic graves, enclosures and settlements (Schmütz 2017; Brozio 2016; Dibbern 2016; Hage 2016). In recent years, extensive excavations have also been carried out in the region of Scania, providing further insights into the settlement system of the Funnel Beaker period and forms of variation and spatial distribution of megalithic tombs (*cf.* Andersson *et al.* 2016).

## 1.2.2 Megalith construction in Madagascar

The megalithic-building tradition documented in Madagascar played a prominent role in the history of research and is used as an analogy for the interpretation of Neolithic megalithic monuments such as Stonehenge (*cf.* Parker Pearson and Ramilisonina 1998). Therefore, a brief summary of this recent example of megalithic-building traditions will be provided.

In Madagascar, different communities show different forms of megalithic construction. Especially common are massive stone graves, which are partly brick-built or nowadays built of concrete. A group that still builds this kind of graves are the Tandroy in the southern part of the island. Tandroy subsistence farming is funda-

mentally based on livestock farming, bean and cassava cultivation. Although there was traditionally a ruling royal clan, social hierarchisation was rather weak, especially within the kinship groups. The construction of the stone tombs of the Tandroy began relatively late in the mid-19<sup>th</sup> century. The first to build these types of graves were members of the royal clan. Today, the burial in the corresponding graves is widespread and much less dependent on the individual status of the deceased person. Nevertheless, the construction of the tomb is a financially costly affair and requires months of work, whereby such a tomb is not built for every deceased person. In contrast to the graves of Merina, the graves of Tandroy are generally not built for groups but rather for individual (Adams 2007, 269-270; see also Parker Pearson *et al.* 2010).

Located in the central area of Madagascar, Merina was also a focal point. Traditional farming was wet rice cultivation, with further cultivation of sweet potatoes and a strong importance of cattle – among others – as livestock. Between the 17<sup>th</sup> and 19<sup>th</sup> centuries, there was a strict social hierarchy between slaves and the free, as well as a ruling royal family. The so-called *Demes* were basic for the social organisation, as endogamous kinship groups that held joint land ownership. These were defined in their social rank primarily based on their kinship with the royal family. After the democratisation of Madagascar, these kinship groups remain an important basic social unit today. The graves of Merina comprise underground burial chambers and above-ground burial structures. These are built of stone walls with partially massive stone slabs as capstones. The graves are closely connected with the ancestors of the family and the land on which they were built will no longer be usable for other purposes in the future. As permanent structures linked to specific villages and social groups, these tombs can also be seen as an ideal vehicle for representing oneself before others and expressing the ability to build a large tomb. These graves are clearly the property of the builders; however, as a rule they are built not only by an individual but rather by a social group. Both the extremely expensive construction and the complex maintenance of the tombs are the responsibility of the entire group of those who later want to be buried in this tomb. For this reason, local family associations – which then belong to a *Deme* – are primarily buried together in a grave. A special role within these grave groups is played by the group leader, who in many cases will be the oldest male member of the group, a rich man or one in an influential position, such as in administration. The most serious decisions can be seen in the exclusion of single individuals from this burial community; for example, if they do not participate in necessary repair work. These individuals would then have to find another group to be buried in a megalithic tomb, which may be difficult under certain circumstances. Besides the megalithic graves, menhirs were also built by the Merina. These could – for example – mark *Demes'* land holdings (Adams 2007, 265-269; Bloch 1994, 111-122).

## 2 History of research: megalithic monuments

In the following, an overview of different approaches to interpret the role of megaliths in Funnel Beaker contexts is provided. There is no claim to absolute completeness; however, different models are presented in summary form. On the one hand, a rough distinction is made between more functional or symbolic and ideologically-oriented theories. On the other hand, approaches that focus more on the active management of megaliths by the associated communities are also briefly explained. Finally, approaches and models relating to the relationship between megalithic monumentality and social differentiation are described. The latter has been a very important aspect for decades, having been studied repeatedly and using very different theoretical approaches. The transitions and proportions of these combined interpretations are fluid.

Many of the approaches presented here incorporate – explicitly or implicitly – very different theoretical concepts. Among the basic theoretical schools that have generally been widely used in archaeological work are neo-evolutionist concepts. These were particularly received in connection with the ‘New Archaeology’ from the 1960s and were also applied – at least in part – in research on megalithic monuments (*e.g.* Müller 1990; Sjögren 1986; Kristiansen 1984). The idea of a broad social development in the context of an evolutionary concept has been found in ethnology and related social sciences since the 19<sup>th</sup> and 20<sup>th</sup> century. Starting from an evolutionary sequence of social organisation, the existence of different cultural stages was assumed, at the end of which would stand the industrialised, western societies. Influenced by the experiences of the colonial rulers and defined by a pronounced Eurocentrism, these concepts soon came under criticism. Based on the critical reception of evolutionist theories, neoevolutionist concepts were increasingly developed in the course of the 20<sup>th</sup> century, whose basic assumptions clearly differed from those of evolutionist theories. Classification criteria form the basis for the classification of cultures in a superordinate order of stages in the neoevolutionist framework (Bernbeck 1994, 9-10). These are characterised by economic factors, such as strategies for the exploitation of natural resources (*cf.* White 1959), as well as by the specific characteristics of the political community (*cf.* Fried 1967; Sahlins and Service 1960). The result of neoevolutionist studies can be the definition of very specific forms of society, which can only be compared with one another to a limited extent or transferred to the archaeological source material (Bernbeck 1994, 11). Such corporate forms include – for example – Big Man societies, chieftainships or tribal societies. As already mentioned, one of the main problems in adopting and applying these concepts to archaeological case studies is that the ethnographic studies always represent very specific entities, some of which have already been shaped by colonialism and thus do not have to be found as universal patterns in other regions and periods. However, overarching concepts such as historical materialism (*e.g.* Smith *et al.* 2010) and – partly in connection with this –

approaches of political economy (e.g. Artursson *et al.* 2016) also had a major influence on the archaeological case studies described below.

## 2.1 Functional interpretations

A fundamental and influential interpretation of the Neolithic megalithic tombs was made in the 1970s by Renfrew (1976; 1973). Based on models of segmented social structures, a territorial division of group areas was adopted, which found its symbolic expression in the megalithic graves. A central location within the area concerned and a strong link with ritual aspects are assumed. This functional interpretation – which extends beyond the basic character as graves – is based on the assumption of lineage-based communities. The emergence of these communities and above all the assumed need for external demarcation by territorial markers are explained by increasing pressure on natural resources (due to a growing population). The population increase is justified by the introduction of the plough and the subsequent agricultural economic improvements and intensifications. In this model, the resulting population pressure causes an intensification of territorial division, which ultimately manifests itself in the emergence of central, ritually-afflicted places. These should have a community-building and centralising effect, including due to the large catchment area (Renfrew 1976, 200). Renfrew's approach can be summarised under the buzzword of group-oriented chieftainship, which obviously implies a certain social differentiation in the societies concerned. R. Chapman (1981) also made strong reference to the possible territorial importance of megalithic tombs in Northern Europe. In his contribution, he made a fundamental distinction between Mesolithic hunter-gatherers and Neolithic agrarian societies, which primarily refers to the contrast between short-lived and longevity. Regarding the long-lived, agrarian contexts, he emphasises the importance of an ancestor cult, which potentially establishes a connection between subsistence, social groupings and territoriality. This potential connection gains a formal meaning in the Neolithic due to an increasing spatial structuring, as well as an increasing relation to resources of different communities. These include the Early Neolithic communities in Northern Europe, for whom marine resources held lasting importance. Chapman (1981) links the increased emergence of formal burial grounds with increasing uncertainties regarding such important resources. The increasing pressure of technological innovation has led to long-term developments that have resulted in an increasing formation of social structures at the local level, represented by megaliths and formal burial grounds. A similar strong correlation between the location and density of megalithic tombs and the presence of resources was also seen by T. Madsen (1982) in his case study in present-day Denmark. He sees the strong occurrence of archaeological finds in general and megalithic tombs – in particular in places rich in marine and terrestrial resources – as an expression of symbolic markings of land claims. Especially the richly-decorated ceramics from the megalithic tombs are regarded as an expression of different social groups and thus as a means of distinction.

Archaeologically, these factors could be traced by:

- a spatial separation of simultaneous graves and clusters of different grave types (with reference to Renfrew 1976; 1973);
- the absence of hierarchies of space that could indicate political or social hierarchies (with reference to Renfrew 1976; 1973);
- a reflection of the complete everyday activities within a cluster which defines a social community;
- a link between the placement of megalithic tombs and the presence of important resources (in relation to Chapman 1981);
- the existence of formal burial grounds (in relation to Chapman 1981).

## 2.2 Symbolic and ideological interpretations

Both R. Bradley (1998) and I. Hodder (1990) placed a stronger focus on the symbolic and ideological level of the erection of megalithic monuments in Neolithic Europe. Both saw the erection of megalithic monuments as an expression of human domestication of the environment. Megalithic tombs stand for an emerging belief system that emphasises the power of man through changed circumstances and economic development (Bradley 1998). Hodder (1990) also emphasises the supposedly contradictory spheres of the domesticated ('Domus'), as well as the wild and natural ('Agrios') environment. Megalithic tombs were deliberately erected outside the domestic spheres in the landscape to allow one to penetrate into the other sphere and symbolise the dominance of man over the wild. This makes megalithic tombs an integral part of the domestication process in Neolithic Europe.

A sub-group of symbolically- and ideologically-influenced interpretations of megaliths are approaches that emphasise the astronomical significance of monuments. However, these interpretations can be found primarily in connection with Henge monuments and passage graves in Great Britain. Some of these monuments have attributes such as specific passages, as well as alignments that correlate with specific seasonal events (such as solstices or similar). These attributes were partly associated with a function as astronomical observatories and their use by a social elite (e.g. MacKie 1977). Since these interpretations are irrelevant for Funnel Beaker contexts, they are not further considered in this context.

Archaeologically, these factors could be traced by:

- a very clear link between megalithic monuments and signs of domestication developments (in relation to Hodder 1990; and Bradley 1998);
- a strict separation of the 'domesticated' and 'wild' spheres, whereby megalithic tombs would then only be found in the 'wild' sphere (with reference to Hodder 1990).

## 2.3 Megalithic tombs in their active use

A stronger emphasis on the active use of megalithic graves by Neolithic societies was given by Tilley (1996) and Fleming (1973), as well as being addressed by other authors (e.g. Müller 1990; Strömberg 1971). The focus is on the construction of social reality and the definition of social identity. Megalithic tombs are involved in this process because they are part of the inalienable prosperity of the building group and they also represent an objectification of the group identity. Due to their longevity and visibility, megalithic graves have a stabilising function in this context. The size and shape of the monuments are seen as an expression of the prosperity and prestige of the group that built them. This principle partially contradicts that of individual prosperity. It is assumed that there is a strong dependence of the individual on the group, whereby prestige is generated about belonging to a certain group. If this group builds more or larger tombs than other communities in the area, they and their members gain prestige and reputation. The origin of this development towards a competitive situation is seen in the emergence of long barrows, which are later increasingly replaced by dolmens and passage graves. The progress in agricultural technology is seen in this context primarily as a necessity due to increased demand for meat and grain for feasting activities, *etc.* Overall, factors influencing megalith building are thus seen above all as being determined by specific social dynamics. This in turn seems dependent on the possibilities of building large monuments, maintaining exchange networks and producing food for ritual purposes (Tilley 1996, 120-140). Fleming (1973) also saw the monumental tombs primarily in terms of design and architecture. Monuments are seen as an important means of representation that have

a strong competitive element (cf. Gebauer 2014, 108). Therefore, the visible parts – such as the burial mound or visible ritual elements – holds particular importance. In this sense, the cost of constructing a grave can be seen as a supporting factor within the social structure. Accordingly, the workload is seen as a signal from a leader to draw attention to his legitimacy. The existence of leaders is justified by increasing economic complexity and a growing population. The increasing complexity favours the emergence of individual leaders who are legitimised not only by their abilities and charisma but also by visible proofs of authority (Fleming 1973, 187-189).

Archaeologically, these factors could be traced by:

- a clear size hierarchy of the graves and a chronological increase in size;
- the presence of representative and accessible elements at the tombs;
- a spatially clear group reference and different grave types per group;
- the emergence of special features of leaders (in relation to Fleming 1973);
- the visibility of wealth especially in relation to groups rather than individuals (in relation to Tilley 1996).

## 2.4 Megalithic tombs and social differentiation

K. Kristiansen applied the concept of ritual economy to the Funnel Beaker and Single Grave Culture in Denmark as early as 1984. Based on an organisation of the social structure by lineages, he presupposes the existence of a ‘chiefly lineage’, which in some aspects take precedence over other lineages. In this context, he interprets passage graves as ossuaries of the mentioned lineage, which serve as a manifestation of religious and ritual aspects. He sees the connection between ritual and economic aspects of society above all in the deposition and distribution of flint axes, as well as the function of passage graves as ossuaries of the mentioned ‘chiefly lineage’. On the one hand, flint axes fulfil a purely profane, economic use as a tool. Kristiansen also emphasises its value as an object of exchange, which is used in ritual contexts. Since flint axes and stone axes were also often part of depositions and hoards, a combination of ritual aspects with the production and exchange of flint and stone axes is seen here. In addition, an increased agricultural productivity is enabled through the use of flint axes and stone axes. This in turn provides the possibility of a surplus production, which made it possible to organise feasting activities and enabled depositional activities. Of course, the passage graves are primarily located in the ritual area; however, here a link to the economic area is created via the materials stone and wood, which were required for construction. The ritualised place becomes part of the economy and influences it retroactively (Kümmel 1998, 155-162). Depositions of flint axes and megalithic tombs ultimately represent an explicit combination of ritual and economic aspects. In addition, depositions can also be part of larger exchange networks. This combination of control over exchange, depositions and rituals can be seen as a source of prestige, if not inequality. In particular, a participation in distribution networks holds strong importance due to the limited number of suitable sources (Kristiansen 1984, 77-81). A study on Funnel Beaker societies in Southern Sweden and North Frisia (Artursson *et al.* 2016; Müller 2011b) is also linked to political economy concepts. In this context, the permanent and collective or regional character of the monuments is emphasised, which in the following emerge as a medium particularly suitable for the representation of political institutions. The factors involved here include a propagated need for central coordination of construction activities, feasting activities as well as special skills such as the preparation of construction plans and the logistical organisation of the construction project. This ability or type of organisation is explicitly associated with societal structures that extend beyond the typical house and communal structure of egalitarian societies. Megalithic monuments are seen as a



kind of central site related to developing ownership, the mobilisation of surplus production and the formation of regional political relations. In particular, the political networks and relationships needed to build the monuments and organise the time and resources needed are seen with the strengthening of regional leaders and authorities (Artursson *et al.* 2016, 1-2). Furthermore, in a further development of his interpretation of megalithic graves – which focuses primarily on territorial factors – R. Chapman (1995) emphasises the importance of a certain control over workers, which could have surpassed the importance of land in particular. With the importance of labour invested in non-utilitarian purposes such as megalithic construction, Chapman (1995) links the possibility of a strong competition between different groups. However, in particular, the importance and social relevance of the work to be carried out to build the tombs and their connection with social hierarchisation is not undisputed. Thus, the effort for the construction of the collective graves of the Wartberg groups as well as for small communities was estimated (cf. Hinz 2007, 10). Even if the presence of local leaders and architects was partly assumed for the construction of the megalithic tombs, a clear social stratification is partly rejected due to the wide variation of grave types and associated grave goods and the lack of clear ‘sets of grave goods’ for certain groups of people (see Bakker 2011, 270-271). Overall, regarding Funnel Beaker communities, both the evaluation of the social relevance and significance of megalithic-building activities and the interpretation of ‘classical’ social-archaeological markers such as grave types and grave goods appear very controversial and differently evaluated for the individual phases of the Funnel Beaker societies (*e.g.* Müller 2011b).

Furthermore, studies on the role of prestige objects are partly linked to the concept of ritual economy. The question is whether these artefact types can be seen as an indicator of increasingly hierarchical social structures and exchange systems. While Larsson (1985) analysed a total of nineteen flint hoards and copper finds from the Early Neolithic in Southwest Sweden, Klassen (2004) investigated the occurrence of jade and copper finds in the Early Neolithic of the Western Baltic Sea region. Following on from Kristiansen (1984), hoards of flint axes are seen on the one hand as an accumulation of exchange products, but also as part of ritual behaviour. The classification of the axe hoards as places for votive offerings is based among other things on the frequent spatial proximity to megalithic graves. Graves and votive finds are interpreted below as ritual centres, which could have a further function as markers for raw material and land claims of the local community. A population increase and the formation of settlement clusters during the Early Neolithic are assumed to be fundamental for this territorial aspect. The resulting competition for land and raw materials subsequently leads to the development of control instruments, which, among other things, are connected to the ritual sphere (Larsson 1985). The role of copper in particular, but also of jade, as exchange products is highlighted by Klassen. Starting with the Ertebølle groups, access to extensive European exchange networks continues in the early Funnel Beaker period. Therefore, the increasing need for prestige items – indicated by the increasing occurrence of jade and copper – reflects an increasing differentiation within societies. These distribution and redistribution processes are seen as markers of an incipient vertical differentiation which, after the import of jade and copper has been discontinued, is increasingly reflected in the desposition of large flint axes (Klassen 2004).

Archaeologically, these factors could be traced by:

- a comparison of the size of the graves (in relation to Kristiansen 1984);
- the presence of representative, outwardly visible elements at the graves (with reference to Kristiansen 1984);
- the visibility of exchange networks (in relation to Klassen 2004);

- the visibility of at least a horizontal and possibly vertical social stratification in the archaeological source material (in relation to Müller 2011b and Klassen 2004);
- a distribution focus of prestige goods close to good flint sources (in relation to Larsson 1985);
- increasing development of settlement clusters (in relation to Larsson 1985; cf. Müller 1990);
- a correlation between graves and good-quality soils (in relation to Larsson 1985).

## 3 Theoretical background

The theoretical background of this work comprises different theories and aspects employed to examine the presented research questions. Since both megalithic tombs and the stones erected by Naga societies are regarded as monuments in this work, a brief outline of the theoretical background of the concept of monumentality is provided at the beginning. Since monumentality in archaeology is a subject that has received much attention and has been dealt with since the beginning of research history, no claim is made below to the completeness of the reception of all theories and facets existing in this context. A frequently taken up aspect is the importance of monuments within the culture of remembrance of the respective community (Osborne 2017, 166). Therefore, this aspect will also be briefly examined. However, in the foreground and considered fundamental for the questions of social implications of megalithic building in the four selected case studies, theories that can be attributed to political economy in the broader sense are considered. An example of the comparative analysis of historical and modern data sets under the premises of historical materialism is given before this complex to give a concrete example of the application of theories that attempt to draw connections between economic factors, power and inequalities, as well as social factors. A selection of different theories and approaches that can be assigned to political economy and serve as an important basis for the interpretation and modelling of the four case studies is described below.

### 3.1 Theoretical background of the concept of monumentality

An influential definition of monumentality in archaeological reception was introduced in 1990 by B. Trigger. In his thermodynamic approach, he assumes that the defining characteristic of monumental architecture is its size and elaboration exceeding the necessities of practical use. Furthermore, he assumes that this characteristic is particularly true in highly-stratified societies, with palaces being a famous example. In more egalitarian societies, on the other hand, only rare and moderate, or no forms of monumentality would be present (Trigger 1990, 119-120). He thus diametrically contrasts the concept of monumentality with those that take greater account of cost-benefit ratios. Rather, Trigger (1990, 124) moves monumentality into a sphere in which above all of the 'waste' of resources and labour are decisive. Later approaches emphasise a fundamental openness towards opposing factors such as usefulness and uselessness. If these factors, as well as the connection of monumentality with central organisation and social hierarchies, are considered more openly and without a compelling connection, a definition of monumentality can be viewed

in a larger theoretical frame. This also opens up the possibility of looking at known factors, such as the runtime of construction work on individual monuments known from <sup>14</sup>C-dating, in which both a centralised and decentralised organisation of the required resources and manpower is possible (cf. Bayliss *et al.* 2007, 43-44; Raetz-Fabian 2000, 54-55). A separate analysis of different factors such as the presence of monuments and the presence of social differentiation also prevents a circular conclusion that links one phenomenon to the other (Rosenswig and Burger 2012, 7). Some approaches assigned monuments a much more active role. In the course of this reinterpretation, Agency was also attributed to single objects, and thus a direct influence on social interaction by those was considered (cf. Dobres and Robb 2014). In particular, the relationship between a monument, its builders and its users, as well as the way they experience it, is decisive for any analysis. In such a framework no clear definition of monumentality is necessary, whereby methodological and theoretical freedoms exist (Osborne 2014, 8-13).

The monuments interpreted in this way can be classified in various ways as specific elements of community life. P. Bourdieu (1997) divided the entire capital of a community into three basic types. It was divided into economic, cultural and social capital. The monuments erected by a community are to be seen within this framework as part of the objectified cultural capital. However, the necessary abilities to use such objectifications are subject to their own accumulation process. There is a close link to economic capital, into which cultural capital is essentially convertible (Bourdieu 1997, 49ff.). Following on from this concept, the following theories describe remembering in a cultural and collective context in further detail.

A fundamental assumption for the application of such concepts seems to be that illiterate societies also generally have a historical consciousness and a specific way to pass down tradition (Veit 2005, 25). Ethnographic studies show that such an assumption is often true. Specific traditions and knowledge of the same enable access to social influence and prestige in some communities. The focus of this traditional knowledge is on rites and practices, as well as customs, but also moral concepts of previous generations. In some cases, this knowledge also represents a kind of secret knowledge that is only accessible to a certain group within a community and thus gives it greater influence (Schott 1990, 273-277).

In contrast to ethnographic research, prehistoric research lacks important data, such as the basic availability of oral tradition. The most important objects of archaeological research remain material culture, as well as the features of various kinds (Veit 2005, 25). If these, and in particular material culture, are seen as an expression of one aspect of the identity of prehistoric communities, an application of the mentioned concepts is promising.

### 3.2 Cultural memory in pre-modern societies

Possible explanations for the social background and social processes associated with the use of monumental structures are theories concerning memory and specific memory cultures. These include the remarks on the cultural (Assmann 2013) and collective (Halbwachs 1950; 1941) memory.

Building on the concept of collective consciousness introduced by E. Durckheim, M. Halbwachs (1950; 1941) developed a theory that distinguishes between individual and collective memory. A collective frame of reference is fundamental to every form of individual-dependent memory. Communicative processes that take place between very different groups develop into a collective frame of reference that ultimately forms a collective memory. Individual memory is defined by a specific composition and service to the collective memory of different groups. A collective memory is always bound to a memory community and therefore requires a special

group reference. Through a clear reference to the past, the group can distinguish itself from the outside and present itself as homogeneous from the inside. Equally important is a constant reconstructibility, which guarantees the reference back to ideas, *etc.*, including for future generations. This can be achieved – for example – by using certain places that provide an easily accessible frame of reference and can be used to reorganise the community. For an idea, a concept or the like can find its way into a group-specific memory, it must be materialised, which is called a memory figure. Memory figures are meaningful representations of specific elements, which subsequently become part of the idea system of a community. As already mentioned regarding the necessary reference back, specific places are particularly suitable for making ideas tangible. These spaces or places are often visited periodically, creating a concrete spatial and temporal reference (cf. Halbwachs 1950).

The concepts of communicative and cultural memory according to J. Assmann (2013) are also linked to this concept. While the communicative memory refers to the recent past and passes away with the supporting generation, the cultural memory is directed towards a more distant past and is rather diffuse in itself. It is based on the preservation of specific fixed points and works with or serves the creation of symbolic figures, namely the memory figures. In this framework, there is often a link between reminiscent awareness (to preserve the past) and ritual/religious aspects. Important means of preserving and regenerating cultural memory by securing group identity are celebrations and other ceremonial activities. A specific form of communication shaped by ritual aspects serves the circulation and reproduction of knowledge that assures identity. A concrete possibility of participation is important for the community concerned, *e.g.* in the form of active participation in meetings. This is particularly the case because the participation structure of cultural memory is often differentiated and focused on specific carriers that have control over its dissemination and reproduction. For the participation of the community members and a successful reproduction of cultural memory, spaces of memory hold particular importance, since these special spaces are filled with symbolic content (Assmann 2013, 45-59).

Archaeologically, these factors could be traced by:

- the materialising aspects ('memory figures');
- specifically-connoted areas/ceremonially-shaped objects.

### **3.3 The relationship between subsistence strategies and the extent of social differentiation/inequality**

In addition to the concentration on other social aspects reflecting social inequality, the consideration of subsistence strategies represents a method that presupposes different determination parameters. One of the earliest representatives of this field of research was Marx, who defined social classes and strata based on their relationship with modes of production and economic systems. According to Marx, economic relations are the focus and driving force of the social and political order (Smith *et al.* 2010, 29-32). For example, a broad-based study of different societies with different subsistence strategies compares three different wealth classes: material, relational and embodied wealth. Material wealth implies household goods, livestock and items such as jewellery and land ownership. The term relational wealth is referring to the extent of networks of which a person might be part of and its own position within this. The analysis of this wealth category is mainly done through analyses of food and livestock sharing, combined with the social status of the people enacting with each other. Finally, embodied wealth includes factors such as the health of a person,

as well as skills and knowledge a person exhibits. The studies focus on the relative expression of prosperity on the one hand, but also on the transmission of social differences between the generations (Bowles *et al.* 2010, 9-10). In order to examine and determine the degree of social differentiation in societies, it makes sense to precisely differentiate the shares of farming, livestock farming and collecting activities. The question of the existence of joint and specialised activities also seems worthwhile in this context. Nevertheless, it is not possible or constructive to see the following results of cross-cultural comparisons *per se* as representative and transferable to archaeological case studies. As it was already stated, each and every society has its own characteristics, regardless of similarities; for example, regarding the subsistence strategies.

### **3.3.1 Social differentiation in hunter-gatherer societies**

The ethnographic research of Smith *et al.* (2010) on five different communities in Africa, South America and Southeast Asia is based on the aforementioned wealth classes. The habitats of these societies range from savannah to tropical rainforests. Overall, the expression of social inequalities differs between these societies in a number of respects, but above all there were similarities. The mobility of the respective group seems to be a dependency of the characteristics of the wealth classes. Thus, very mobile groups exhibit only a small amount of material wealth, while the embodied wealth had higher values. The opposite is true for the less mobile communities. All societies share significantly higher values of embodied and relational wealth. The manifestations of relational wealth are less diverse than those of embodied wealth. Relational wealth has only been demonstrated by exchange practices in general and food exchange, while the category embodied wealth includes; for example, body weight, strength and other parameters. In addition to differences within the wealth classes of the individual actors of the communities, the studies also showed that there is a link between the wealth level of parents and children (Smith *et al.* 2010).

### **3.3.2 Social differentiation in pastoral societies**

Based on four pastoral societies in Africa and Southwest Asia, the three classes of prosperity mentioned above were examined. Prosperity in these societies was primarily seen through relational aspects. The embodied aspects of prosperity are also relevant, while material wealth has only a small manifestation (Borgerhoff Mulder *et al.* 2010).

### **3.3.3 Social differentiation in agricultural societies**

Horticulturalists occupy a differentiated position within the agrarian societies, as they are characterised by sometimes very mobile behaviour, small groups and inter-community dependency. These societies often have a much more differentiated social structure than more complex hunter-gatherer societies do, although they are much more egalitarian than intensive agricultural societies. Overall, however, the degree of differentiation differs when considering different societies. Thus, in the oceanic region Great and Big Man are known in horticulturalist societies, while other communities are much more egalitarian. The distribution and density of resources also plays a role in the development of differentiated structures in these cases. Regarding the wealth classes, material prosperity is again the least important, while relational aspects and above all embodied aspects are formative for societies

(Gurven *et al.* 2010, 57-62). In contrast to the other subsistence strategies presented, intensive agriculture is much more characterised by material prosperity. On the one hand, this refers to land that essentially defines the economic strength of the owning group and thus becomes a valuable material good. However, other material goods such as jewellery, *etc.* can also represent an important form of expression of prosperity. However, studies have also shown that social connections – *i.e.* the relational prosperity of a community or group – hold strong importance, since communities with an intensive agricultural character often define themselves based on lineage. While the basis for differentiation lies mainly in land ownership, other factors such as craft specialisation or social classes, *etc.* can also be considered. Studies of different societies have unanimously shown that material prosperity in particular is formative. In agrarian societies, there is often a generation-specific link between the wealth of parents and their descendants. Relational and embodied aspects are much less important (Shenk *et al.* 2010).

### 3.4 Political and ritual economy

Approaches that can be attributed to the political economy emerge from the age of industrialisation. One of the first and still influential works in this field was A. Smith (1778), ‘The wealth of nations’. In this work, Smith advocated the deregulation of markets and an increase in specialisation to combat rampant poverty. However, as the formation of monopolies took place to a large extent in the course of industrialisation, it was not one of Smith’s demands and goals, although it was what later authors were confronted with. By far the most influential work that appeared in this context is ‘Das Kapital: Kritik der politischen Ökonomie’ published by K. Marx (1867). Largely based on this work, approaches of the political economy examine factors such as the influence of property rights on the flow of materials, trade relations or the influence of labour and goods on structural social inequality and political power. Adopting an explicit and diachronic perspective, archaeological approaches can address societies in which local agricultural production and trade in goods were a dominant social factor. Based on such case studies, conditions under which social hierarchies, inequalities and political control mechanisms may have developed are to be uncovered. It is assumed that structures of power are formed under specific economic conditions and represent a connection between modes of production and social relations. Significant archaeological factors to investigate such an overarching question can be production chains of certain goods, exchange relations, the availability of resources, and the existence of bottleneck situations (both natural and artificial). Questions of potential control mechanisms on the part of individuals and groups – which can then lead to the formation of institutionalised hierarchies – hold particular interest. Regarding all of these factors and mechanisms a high variability in human interaction is always to be assumed, whereby different behaviours, especially those that prevent or mitigate the emergence or aggravation of social inequalities, must be analysed (Earle and Spriggs 2015, 516-517).

The following approach should also be regarded as a premise in this context:

*‘By ‘political economy’ we mean an analytical approach that elucidates the interactions of types and sources of power. No simple evolutionary-stage sequence of societal types appears capable of capturing the complexity and variety found in political economy. [...]’*  
(Blanton *et al.* 1996, 3).

This corresponds to a broad understanding that investigates very different strategies of action and their mutual relationship with existing and developing power structures.

In the following, some approaches are outlined that hold interest for the present work. These include more complex approaches such as anarchistic theories, whose comprehension in the archaeological database is by no means clear and only seems to be possible to a limited extent. Nevertheless, this approach is important as an alternative to so-called ‘top-down’ approaches, since it summarises the ways in which institutionalised mechanisms of inequality and domination can be opposed. Furthermore, theories on very concrete collective behaviours and strategies are described, which can (but need not) also be seen as the opposite pole to elite-based structures. This includes corporate approaches as well as collective and cooperative courses of action. All of the approaches and theories outlined in the following are by no means to be understood as courses of action represented purely within egalitarian social structures. On the contrary, they will be found in both flat and more hierarchical societies. However, they are suitable for looking at specific phenomena, such as the construction of megalithic monuments, also in the sense of a ‘bottom-up’ perspective.

### 3.4.1 Anarchistic approaches

While anarchism has long been known as a political philosophy and social topic, ethnological research, in particular, has had to contend with this topic much belatedly. The communities described by E. Durkheim (1988) as ‘segmented’ societies comprise social groups (segments) of equal rank, but do not allow any broad conclusions about the basic functioning of existing anarchistic societies. In this context, the term ‘anarchism’ means societies to be characterised as ‘acephalous’ or non-state societies. Fundamental characteristics of such communities can be an emphasis on reciprocity, a decentralised organisation, as well as a high importance of local collectives and cooperations (Angelbeck and Grier 2012, 548-549). From the 1930/40s, anarchistic societies were primarily the subject of research by British ethnologists in the service of the English colonial administrations. This early research focused primarily on African communities, whose social structure made it difficult to integrate them into the structures of British colonial rule because they did not recognise any of the usual forms of authority. Roughly speaking, the term ‘anarchistic societies’ (societies with an acephalous socio-political organisation) refers to such forms of coexistence in which interlocking social networks and institutions are used to avoid a specific central power. Reciprocity is a dominant social principle in societies characterised by the absence of tight hierarchical structures (Amborn 2016, 9-13). Today – and in the course of the dominance of nation states – such structures only be found in a few places; for example, in Southeast Asia (Scott 2009) or Africa (Amborn 2016). Both of these examples will be explained below in their broad lines to highlight important and fundamental principles and characteristics of self-governed communities.

Amborn (2016) investigated self-governed societies in Africa, primarily Ethiopia. Essentially, these societies can be described by some overarching characteristics, which can differ in each community. The extent to which these communities can be described as acephalous or only partially acephalous is very different and tends to vary. Structures without institutionalised power structures are usually endangered by various factors. The most important factor outside the affected communities is certainly the state administration, which in many cases tries to increase its influence. However, from the inside, specific elected officials and dignitaries, influential individuals (*e.g.* Big Man-like) or also the heads of the clans and lineages are to be mentioned. All of these individuals may seek to increase their influence; for example, through the inheritance of their positions (dignitaries), the expansion of possible social influence (Big Man) or the expansion of their powers (Lineage leaders) (Amborn 2016, 98-107). Within societies with an acephalous socio-political organisation, the social positions mentioned are thus always precisely defined



and controlled by meetings and committees. Clan and lineage leaders often have important sacred or socio-religious roles in these communities. They are often wealthy and act as important arbitrators in various situations. However, in many cases there are sanctions and institutions that prevent these leaders from extending their powers to political and economic matters. In addition, they have no authority. In effect, therefore, the prominent social role of such persons is limited in such a way that no abuse of power or ultimately rule over others can take place. Overall, the communities concerned have structures in which power is distributed over generations, institutions and groups (in the form of different assemblies, boards, social positions or officials), whereby there is always a balanced opposition. Decisions and consensus building always take place within a group of variable size and competence and violations of community values and the common good are severely punished. This applies in particular to officials and dignitaries and may result – for example – in the removal from office or expulsions (Amborn 2016, 111-120). Within the community structures different forms of power are important (*e.g.* power over knowledge) and overall this is always gained and distributed jointly. Discourses about living together, specific rules and guidelines hold particular importance and are conducted collectively. Of course, acephalous societies know specific rights and duties, they are an important part of living together and the members of the community are required to observe and exercise them. However, judicial power is never held by individuals, but by bodies and assemblies based on joint discussion. The law and rules of living together are based on moral and virtue concepts and are part of the reality of life and cultural heritage. Every member of the community has obligations towards them and the responsibility of each person to respect their rights is essential. Judgements for offences are strongly dependent on the specific situation and what the community can and cannot accept at that moment. The importance of community consensus building, collective decisions, the avoidance of central powers and the rule of individuals over many is correspondingly great in societies without power. However, this does not mean that inequalities should be excluded. Thus, there are typical – and sometimes serious – differences in the distribution of material wealth. However, the impact on social behaviour is particularly important here. The exploitation of human beings is outlawed and there are legal provisions to regulate land and property ownership. Structural inequalities and personal supremacy are actively regulated and counteractive behaviour (*e.g.* generosity) is promoted socially (Amborn 2016, 130-135).

The situation in ‘Zomia’ – a highland area in Southeast Asia – is different: this area of about 2.5 million m<sup>2</sup> represents a territory in which different states (above all Vietnam, Laos, Thailand, Myanmar and China) have a share, although it is largely beyond state control. Zomia is a quasi-autonomous area in which different groups have actively escaped integration into the national states concerned, and in some cases still can. In contrast to the example above from Africa, ‘Zomia’ can be described as inhomogeneous due to its history and the diversity of the different communities in this area. Within the ‘Zomia’ communities, specific behaviours and strategies have been established which continue to serve to escape national control. The communities there are highly flexible and diverse, with a constant exchange and resettlement of communities, groups and individuals. This also means that, depending on the benefit and use for these communities, both adaptation to and isolation from external circumstances (*i.e.* primarily the state-controlled areas) is possible and practised (Scott 2009, 328-331). Three central strategies help the highland groups to avoid external intervention when necessary. First, these groups and communities are very mobile: if necessary, they retreat to the lower highlands. The further the retreat takes place and the more remote the place of retreat, the lower the risk of external influence. This is directly linked to a strong degree of flexibility regarding subsistence strategies. In remote areas and with a high need for autonomy, other

forms of agriculture may be chosen than traditional field cultivation, for example. The size of the autonomous communities is also variable and there is generally a strong degree of adaptability to linguistic and ethnic circumstances. Small groups in particular are easier to keep egalitarian or free from domination. An increasing hierarchisation of lineages within a community can be actively prevented. For example, specific marriage alliances can be chosen, narratives can dominate that warn of the danger of overly powerful groups, and it is possible to fragment groups into smaller segments if inequalities threaten to become permanent. However, there are also groups in ‘Zomia’ that accept a certain degree of internal hierarchy (Scott 2009, 332-337).

A special approach, which seeks to combine a ‘bottom-up’ approach of political economy with anarchism theory and refers to archaeological and ethnographic data sets, was presented by Angelbeck and Grier (2012) and refers to decentralised but socially-complex societies on the north-west coast of North America. At the heart of this approach are principles of social organisation aimed at preserving autonomy in local groups and for individuals. These principles can include an organisation in open networks, a strong degree of decentralisation, and clearly justified (and thus regulated) forms of authority. These principles and basic rules then lead to or aim to ensure that social control is distributed across the entire community and does not lie with single individuals or community segments. Within the networks, groups should also be free to interact with other groups. Cooperative behaviour and communal structures are therefore of fundamental importance for self-organised groups, which in turn can link smaller, largely autonomous groups with each other. Authorities are present both within the broader networks and within the local groups, but always within a clearly defined framework. Outside this framework and as far as possible considered unacceptable are artificial authorities appointed by higher institutions. Natural or achieved authorities described above all persons who are needed by their knowledge or their ability. These are also present in the context of more anarchistic structures. However, the power of these natural authorities is severely limited in time and space by the groups or communities and is only of importance in certain situations. In this context, the principle of decentralisation primarily describes an active resistance against a centralisation of power by any authority (*e.g.* by a state) (Angelbeck and Grier 2012, 548).

Archaeologically, these factors could be traced by:

- a largely even distribution of goods and resources, which could suggest open access for different groups;
- indications of the importance of collective structures (through places of assembly, the presence of networks);
- indications of a low degree of vertical social differentiation (house inventories, burial objects, *etc.*); horizontal differentiations may nevertheless exist.

### 3.4.2 Corporate and communal strategies

A holistic approach to describe policies, contexts in which they are applied, as well as different possible sources of power, offers approaches that deal with corporate and communal strategies. The advantage of these approaches is that they are independent of the degree of social hierarchy and take into account a wide range of different factors and strategies that can be found to a certain extent in every society. Accordingly, a case study is not assigned to a rigid type of society or rule; rather, an assessment is made of coexistence and the significance and intensity of specific relevant political and social strategies and factors.

A fundamental division into different power strategies that can be applied by individuals or specific groups within a community can include a division into corporate,

exclusive, and network-based strategies (Blanton *et al.* 1996). An exclusive strategy of achieving and maintaining political influence and power includes political actors who seek to preserve their power base in a monopoly manner. The power base can be very diverse: it could include control over exchange routes, specific knowledge or even warriors. Historically, this is a model that has often been applied to archaeological case studies. Examples are interpretations of Bronze Age societies and Iron Age princely graves (control of trade routes; *e.g.* Earle *et al.* 2015; Kneisel and Müller 2011; Krause 2005 Kristiansen and Larsson 2005). In some cases, these interpretations are empirically difficult to trace or largely ambiguous. Despite these fundamental problems, alternative interpretative patterns are too rarely included. However, the aforementioned corporate strategies could also be included or at least not excluded from beginning on. These strategies aim to distribute power into different groups and thus create a mutual dependence of different subgroups within a society. The formation of monopolies is prevented by various types of restrictions. Within these strategies, prestige goods hold lesser importance, while collective representations and accompanying rituals can be important (*cf.* Müller 2011b). In this context, in particular the collective provision of surplus products may be legitimised.

The network-based strategy can involve individuals as well as groups. It resembles exclusive strategies in its broad lines but is primarily related to exchange. These exchange relationships are mainly established outside the local group and are built up and maintained through certain events (such as bridal exchanges) and payments (*e.g.* exchange of exotic goods). Extra-local exchange relationships are reflected in the importance of the participants within the local group (Feinman 2000b, 212-215). This strategy is characterised by a strong degree of sustained competition and the importance of prestige goods. The two fundamental sources of political and social power can be divided into objective (wealth, factors of production, *etc.*) and symbolic (*e.g.* religious and ritual factors) sources. Both will occur in the different strategies, although they will have different significance depending on their characteristics. Since in exchange relationships there must always be a shared value of the exchanged goods known beyond local borders, symbolic sources are naturally of minor importance here. The social contexts in which influence and power are negotiated and preserved are also adapted to them. These can be knowledge-based, *i.e.* the sovereignty over knowledge and information defines and structures social groups and their hierarchies. Since knowledge is based on sharing, political action often takes place in local groups in these contexts, with the aim of strengthening group solidarity through the sharing of specific information. Individual prestige can be less important in these contexts. However, wealth-based contexts are also common. In these, actors define themselves primarily according to their centrality within a network or their access to certain factors. Prestige holds strong importance both within and outside the local group (Blanton *et al.* 1996, 2-5).

Communal structures are very similar to corporate strategies. Access to certain production factors within a community is guaranteed and the means of production are held and managed by local authorities. However, not all members of the communities are guaranteed equal access to resources and political power, nor is it necessary. Part of the communal social entitlements, *i.e.* factors with guaranteed access, can be both basic goods and prestige goods if they are indispensable for certain events. In particular, work is seen as an important factor in this system. However, work that goes beyond securing the means of existence of the respective community but is indispensable, is usually administered jointly in communal systems. An example would be specific social positions, such as ritual specialists or craftsmen, which are needed for the entire community and held by communal structures. These people may then occupy a special social position, but not necessarily within the framework of rigid hierarchies. This principle stands in contrast to other principles, such as production for an unspecific mass or for specific persons.

In both cases, the specialist will have to pay for his own maintenance through the production and distribution of his goods. However, it would also be possible to invest surplus labour in specific community projects in a communal manner (Saitta 1997, 9-11).

Archaeologically, these factors could be traced by:

- the control of production and resources by individual groups (in the case of exclusive strategies);
- the absence of (physical) access restrictions to resources (in the case of corporate and communal strategies);
- a (largely or partially) equal distribution of goods and products (in the case of corporate and communal strategies);
- a linking prestige and exchange goods to individual persons/groups (in the case of network-based strategies).

### 3.4.3 Ritual economy

The concept of ritual economy places an increased focus on exchange processes and the linking of ritual and productive processes. In general, it is assumed that the occurrence of ritual economy is based on already hierarchised social structures. However, ethnographic references also suggest an importance in egalitarian structures (Kümmel 1998, 115-116). The ritual economy essentially describes processes of appropriation and consumption that can materialise and affirm specific worldviews. Finally, these worldviews serve the creation of meanings and the shaping of social interpretations. Rituals and economic aspects in particular are interwoven in these processes, although they cannot be reduced to one another. Three different research areas are fundamental for the research and definition of ritual economies. Of course, first and foremost is economic practice, namely the appropriation, production and consumption of goods. An economic practice is always opposed by a specific decision-making step; for example, specific beliefs and world views result from an influence on the economic structures of a community controlled by specific preferences. The result of this process is ultimately the materialisation of worldviews, albeit which always behaves recursively. Finally, specific economic and institutional resources and practical elements are used with the help of ritual practices to create and fix own interpretations. These influence economic practices and thus set new processes in motion, through the help of which meaningful contents can be constantly discussed and consolidated (McAnany and Wells 2008, 4-13). The central aspect of ritual economy is the significance of ritual concerns in the overall social context, whereby a special connection of ritual and economic aspects is assumed (cf. Kümmel 1998). Special importance is attached to ritual places in this process. Their importance lies in the often-collective method of establishment involving several segments of society. The construction process is not only defined by the common construction method, but also by continuous interventions and changes in its relevance. In addition to the amount of work involved, there are indications of craft activities within monumental ritual places, such as the partial production of stone axes. Through these factors, ritual places can become a link between various aspects of ritual, economic and political networks (Spielmann 2008, 38-47)

The concept of ritual economy emphasises the close connection between subsistence economy and social structure in the form of the connection between economy and ritual for the definition and renewal of social connections and world views. Monuments can play an important role in this context, serving as a link between various ritual, political, economic and social aspects of the network. Monumental tombs can also be seen in this context, although they are also important as a materialised element of economic aspects.

Archaeologically, these factors could be traced by:

- the presence of monuments and their integration into larger networks;
- the importance of ritual places for society as a whole;
- the linking of economic resources and ritual contexts.

### 3.4.4 Landscape construction and resource control

Another element that can be important in shaping social relationships and social hierarchies is the natural and constructed landscape. Landscapes can be seen as a recursive element, which is shaped by people and in turn has an influential effect (also cf. Tilley 1996). The modification of landscapes can be both non-intentional and intentional. However, in both cases, landscape is experienced through social relationships, among other things. This means that changes in the landscape can also lead to social transformations (cf. Ingold 1993, 155). A greatly increased investment in landscapes in the form of expanded infrastructure, intensified production or other landscape design also leads to the development of specific social domains. These social domains can be held by the whole community, although they can also be considered the property of individual social groups. In this sense, property is understood as an active restriction on the part of this group (or single individuals); for example, regarding access to places or resources. Restrictive access to knowledge, especially ritual knowledge, can lead to ownership of social practices. Important factors that can have a formative or influential effect on these processes are on the one hand the natural equipment of landscapes (availability of certain resources), but also the intensity of investments. In particular, large-scale and collectively structured investments are accompanied by social rules and practices and influence the social order retroactively. In particular, the ownership of specific knowledge and landscapes by individuals or groups can increase and create social inequality because they offer potential opportunities to control resources and shape (environmental) conditions (Grier 2014, 232-240).

Archaeologically, these factors could be traced by:

- limited distribution of resources, (raw)materials and products;
- features that restrict access to certain places and may be belonging to a specific group (*e.g.* enclosures).

### 3.4.5 Cooperation theory

Besides dimensions related to individualism, competition or networks, cooperation is part of the basic repertoire of human group behaviour. In this context, cooperation as a more collective and inclusive strategy seems to contrast with exclusive and in part competitive individualistic strategies. However, cooperation is also a fundamental part of competing behaviour between social groups and thus potentially inclusive for the members of the respective group, but also exclusive to non-members (Fig. 3).

Every individual within a community, whether small or large in scale, will be part of several cooperative structures at the same time, which are partly, but at least temporarily, in contradiction to each other. Precisely due to their fundamentally fluctuating and situational character, cooperations depend on different mechanisms and rules that favour their formation and influence their maintenance and defence against potentially endangering factors (Carballo 2013, 5-9).

Reasons for the emergence of cooperation could be the visibility of lasting advantages of the respective cooperation, an increased resistance to external factors, or also the presence of competition or competitive situations between groups (Roscoe 2009, 70).

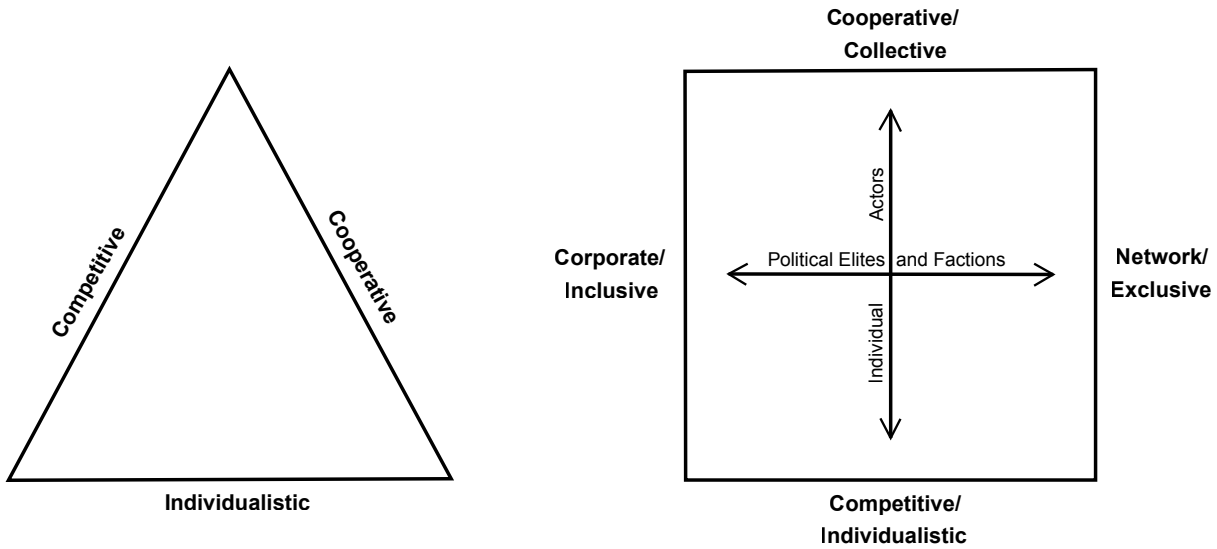


Fig. 3: Basic forms of group behaviour (after Carballo 2013, 9).

A fundamental distinction can be made between permanent and temporary forms of cooperation, as well as between forms of cooperation dealing with potentially exclusive or open goods/resources. This distinction also has a major impact on the social structure of the community concerned. Temporary cooperation in particular creates coalition structures that cannot be equated with what is often seen as a social group (in the sense of a lasting bond). Long-term cooperation, on the other hand, has a considerable influence on the basic social group and thus social structure. These forms of cooperation could include recurring work such as field work or construction work on houses, but also reproductive factors. If a specific group structure enters into cooperation in these areas, the probability that these groups will gain a high and permanent social significance is increased. The intensity of cooperation might also depend on the extent to which the participation of individual group members could be vital. Therefore, it is generally easier to enter into defensive cooperations – for example – which serve the survival of all parties involved. Furthermore, a fundamental distinction must be made between cooperations that serve to treat goods and resources exclusively. An example of this would be medieval guild structures. In contrast to this are cooperations that are based on openly available goods and resources (and in many cases want to keep them open), whereby communal rights of use of pasture land would be an example here (Feinman and Nicholas 2016, 283-284). However, both forms of cooperation can be changed in both directions (Carballo 2013, 9-11; Roscoe 2013, 60-61). Conflicts of interest between the groups involved and between the forms of cooperation in which individuals are simultaneously involved are always an inherent problem of different forms of cooperation. While in centrally organised societies, especially in state systems, a central body can organise and mediate accordingly, a conflict of interest can pose a problem in small-scale communities. Although a common authority could also act as mediator here; however, another way has been described which can be used in particular in the event of conflicts of interest. These are social signals of a specific group, which should signal the strength of the group as truthfully as possible and thus avoid an actual physical conflict (Roscoe 2009, 72-74).

The importance of various social mechanisms and factors for the development and maintenance of cooperative structures was particularly emphasised in the context of evolutionary research approaches. These mechanisms include reciprocity, individual or group reputation, retribution and rewards. Mechanisms that are strongly reciprocal are probably best known in archaeological research. Thus, reciprocity forms the basis for social phenomena such as the Kula-Ring exchange

(Mauss 1954; Malinowski 1922), or Potlach systems (Mauss 1954; Adam 1922), which also experienced an intensive reception in archaeology. Reciprocity is also one of the basic principles in the organisation and execution of festivities, which also proved to be most important in the ethnographic database (cf. Hayden 2001, 40-53). Reciprocity can be very differently organised: either in a rather loose form and based on the memory and satisfaction of the parties involved, or shaped by fixed social rules and regulations. Individual reputation as a second important social mechanism fundamentally shapes the willingness of individuals to cooperate. This applies in particular to individuals who do not belong to the same kinship group or another closed group. A person's reputation depends on individual deeds and actions on the one hand, but also on passive factors such as rumours and bad slander. Thus, reputation can also be seen as a mechanism that can be influenced to a great extent by social sanctions and reward. Individual reputation can also serve as a balancing force within a community. Thus, a person's reputation may be independent of their social status. However, in the opposite sense, the image can be manipulated through targeted display. Community penal and sanction measures hold fundamental importance, particularly where cooperation already exists. While individual (or group) reputation and reciprocity may in many cases be necessary to create cooperation, retribution is very important to maintain it. This includes individual retribution against free riders (see next paragraph), but also sanctions against persons who either do not join the cooperation (without benefiting from it themselves) or leave it. Which form the retribution and sanctioning measures take depends very much on the overall social significance of cooperation, but also on the group-specific social structure and regulations. However, the importance of retribution systems, especially in small communities, is scientifically controversial. One final mechanism that should be emphasised in its importance for cooperation is reward systems. Reward systems can, of course, be geared to those who actively participate in cooperations. However, they may also be aimed at actively not punishing non-cooperating individuals. Both factors could in some cases be a more effective motivation than retribution (Carballo 2013, 11-13).

Cooperative structures are probably at greatest risk from people called 'free-riders'. These are individuals who enjoy all of the advantages of cooperative structures but do not make any contribution themselves. In most cases, such behaviour is not tolerated because it can lead to increasingly more people turning away from cooperative structures. As a rule, the measures to keep the 'free-rider' problem as small as possible to maintain or expand cooperation (cf. Feinman and Nicholas 2016, 281) are correspondingly high. A distinction can be made between three different measures, which in many cases are not exclusively represented. One of these options is to limit access to any controversial resources that may exist. This could be the case – for example – with land use or the exploitation of mines. If the number of people competing for the resource is small, the 'free-rider' problem is automatically kept smaller. A second possibility would be that access to a resource would not be kept open to every individual, but would be representative of all existing social groups. A classic example of this would be the organisation into family groups, from each of which a deputy is granted access. In the following, this person will have to trust that the rest of the group will not exploit their position, but still have indirect access to the resource. However, in some cases, both options can also be harmful to cooperative projects. Finally, one last possibility is that the (economic/social) costs and a severe punishment for potential free riders will be increased to such an extent that this behaviour will be less frequent. Within state societies, these could be taxes, imprisonment or fines. However, communally-organised societies can also counter this problem, in particular through social stigmatisation and graduated penal systems. Extreme forms could also include the threat of supernatural or religious punishment. Overall, these are three main mechanisms for keeping the free-rider

problem in moderation, whereby they will be applied to varying degrees depending on the situation and social organisation (Eerkens 2013, 152-154).

Archaeologically, these factors could be traced by:

- open structures when large parts of the community participate in cooperative projects (*e.g.* through central and ritual places used by several communities);
- a broad social representation in funeral communities (mixed in terms of age, gender and kinship);
- (comprehensive) cooperative projects should exceed the capacities of individual subgroups (*e.g.* individual farms);
- an emphasis on symbols that indicate a shared group identification (*e.g.* ceramics);
- public (and accessible) rituals.

### 3.4.6 Collective action theory

As a fundamentally different characteristic between approaches and theories, which are dedicated to cooperative and collective forms of action and strategies, the scaling of the respective form of society treated can be regarded. From a research history perspective, cooperative approaches were mainly applied to small-scale societies or communities and activities that require cooperation between a smaller group. On the other hand, approaches to collective forms of action were mainly based on cooperation involving large groups (Carballo *et al.* 2014, 101). Classically, this concerns forms of cooperation in early-state societies (*e.g.* Blanton and Fargher 2008).

One of the important conclusions of these studies is the recognition that collective mechanisms are particularly important in large communities when political actors are highly dependent on the support of the local population and its resources. If actors or leaders are largely independent, exclusive strategies are increasingly used, up to the emergence of autocratic structures (cf. Feinman and Nicholas 2016, 283). The direct influence of the local community on the actions of important and representative actors is therefore of fundamental importance, irrespective of the size and complexity of society. An important question is which social groups played a role in promoting practices that contribute to the importance of collective structures. Different mechanisms such as moral and ethical control of public officials or an effective limitation of individual property in combination with a strong degree of publicly held property can protect and promote collective mechanisms in an administratively shaped community (Blanton and Fargher 2009, 145-150).

In addition, where a strong degree of direct communication is possible, collective mechanisms in smaller communities can counteract the emergence of strict hierarchies. However, in large communities where direct communication is no longer possible, collective mechanisms will require establishing administrative structures. First, there is a wide field of variability and the relationship between collective mechanisms, autocratic structures and the size of the community cannot be determined by mere numbers alone. Second, the presence of large and complex communities does not automatically indicate that factors such as individual dominance and autocratic structures prevail (Carballo *et al.* 2014, 113-115).

These results suggest that even larger social communities, even if they are already highly complex, are not directly associated with the emergence of clearly defined leadership positions and a strong degree of autocratic structures. This is an important finding as it shows how variable collective mechanisms can be. They can be part of mechanisms that reduce the emergence of social hierarchies and inequalities as well as part of these very structures. An essential factor here is the distribution and accessibility of resources.



Archaeologically, these factors could be traced by:

- a wide distribution of products and goods within the archaeological database (graves, houses, regions...);
- open access to resources and absence of physical access restrictions;
- the absence of bottleneck situations and distribution centres.

### 3.5 Excursus: lineage and clan structures

Among the wide range of differently constituted social groups within a society there are very different principles of order. These principles of order, which ultimately define the specific composition and affiliation of the respective group, may be political, religious or even economic/professional principles. However, the most important principles include kinship categories that define influential social groups. Over the decades of ethnological research, a large number of kinship concepts were presented and described in their course of action.

Among the common terms that were coined in the first half of the 20<sup>th</sup> century in particular and are now highly controversial and criticised are those of the clans and the lineages. What these two categories of kinship have in common is that they are based on a linear relationship that can be traced back to a common ancestry (*e.g.* from an ancestor). The mostly unilinear defined lineages refer to an unclear, mystical ancestor who cannot be attached to a specific person. On the other hand, clans can usually trace their divided lineage back to a concrete ancestor, in some cases over up to ten generations. This makes it possible to define kinship relationships not only within but also between the individual clans. Within the research, lineages and clans were described and defined based on a number of different case studies and in particular the social differentiations implied in these kinship constructs were also discussed. According to Evans-Pritchard (1955), there are only differences between the individual lineages or clan groups, which are expressed less through specific privileges than through the attainment of prestige. On the other hand, the analyses of Fortes (1949) speaks of gradients and structures within the segments. The individual segments are characterised by a relatively strong degree of economic and political autonomy. However, due to the enormous size that clans sometimes reach, it is also possible to organise large groups for cooperation purposes (Hahn 2012, 35-36). According to Sahlins (1961), segmental societies are very limited in their expansion because they have specific conditions of origin (such as restrictive access to raw materials under competitive conditions) and because they represent a relatively unstable system.

However, the universal validity of such specific ideas of kinship was questioned early on. Instead, the singularity of concepts of kinship in general, and consanguinity in specific were emphasised, which are quite often deviating from European standards (Röder 2012, 109). Newer concepts, which can be assigned to *New Kinship Studies*, question the general significance of genealogical factors and strict kinship affinity. Terms such as ‘relatedness’ contain different levels, which can be very different and situational. Kinship can be created by natural/biological factors, by laws or by social factors such as sharing food. Although these approaches have been criticised, especially for lack of formalities, they seem to have in common the possibility of describing specific social practices that can significantly influence and shape concepts of kinship. However, it should be noted that day-to-day negotiation practices also always take place in front of a certain structural framework that is also influential (Röder 2012, 110; Schnegg *et al.* 2010, 7-14).

In the following, in relation to the two ethnoarchaeological studies, the terms are used that were used by the people themselves during the discussions on site. On the

other hand, the terms commonly used in specialist literature are used for the respective related groups. Both factors together form the structural reference system that represents the related social groups of the case studies.

### 3.6 Summary

Megalithic structures as an expression of a specific form of monumentality are in their totality a phenomenon which represents an interface of various social mechanisms and influences. Therefore, their analysis should include consideration of various factors. Megalithic monuments are not defined in this case by their usefulness (or their supposed useless character). Rather, usefulness is defined not only by functionality and thus by the question of whether (in the case of funerary monuments) a simple earth grave would also fulfil the primary purpose (*i.e.* that of a burial place). Monuments are understood as an active mechanism whose usefulness can be seen against the background of very different factors. An often-received background is a potential function as a place of remembrance. In this context, as stated above, a permanent collaborative reconstructibility and the possibility of a strong group reference must be guaranteed. This is an attribute that is evaluated for each case study below.

However, all of those mechanisms and actions that could contribute to the construction of such monuments hold utmost importance for this work. In the sense of the political economy approach, the focus will be on linking economic factors, social reference systems and the potential avoidance or promotion of social hierarchies and power structures. The concise studies on the link between the degree of social inequality and specific economic systems show how different the types of individual wealth expressed can be. In addition to material prosperity, social relations also hold strong importance. In turn, this is a factor that can be evaluated using approaches aimed at cooperative and collective action structures.

In the following, the theories and approaches outlined here will be evaluated using the available data for each case study. Not every aspect can be treated equally, since the data quality of the ethnoarchaeological and archaeological case studies naturally varies greatly.

## 4 Methodology

The following chapters present the methods used to help answer the questions raised in the previous chapters. In addition to the basic principles of ethnoarchaeological work and comparatively oriented research approaches, the methodological approaches that make the various (archaeological/material) sources and selected research parameters of the archaeological and ethnographic case studies usable to answer the questions will be explained.

### 4.1 The examination parameters

In order to give the study a methodical garment, the different investigation parameters are now described, which are particularly considered for the analyses of the archaeological case studies. The selection of the individual parameters results on the one hand from the greatest possible inclusion of different factors in the sense of a holistic working method, and on the other hand from their relevance in relation to the superordinate research questions. It is not possible to guarantee a comprehensive presentation of all archaeological parameters, as this would go beyond the scope of this work.

However, for the ethnoarchaeological case studies, these parameters are only used to a limited extent, given that not all of the necessary data could be recorded in the course of the field work. This meant that no data could be recorded regarding the house inventories. Nor are any prestige goods and ritual communication about specific artefact types integrated into these analyses.

#### 4.1.1 Settlements

Besides the burial rites, the settlements of a prehistoric society can be regarded as one of the most important aspects used for the analysis of social structures and social organisation of the communities concerned (Trebsche 2010, 144). In particular, the structuring and organisation of an extensively excavated settlement allows interpretations of these factors, although these may not stand for themselves, but must always be considered in terms of source criticism and in connection with other parameters.

##### 4.1.1.1 House sizes

The interpretation of house sizes can look back on a long tradition and followed very different theoretical approaches. There are examples of a far-reaching equation

of the distinct builder and inhabitant units, as well as recognisable differences of house sizes with the existence of economic and social inequalities (cf. Trebsche 2010, 150). The fact that the size of houses, and thus also the presence of particularly large dimensions, could also be determined purely functionally and owed to their use as a community house, is sometimes ignored (cf. Jung 2010, 260). Other approaches explicitly take into account that individual status and social positions do not have to find direct expression in architecture and that very different processes and framework conditions can influence architectural designs (Müller-Scheeßel *et al.* 2010, 172). Nevertheless, it is important that architectural designs in very different forms are connected with social relations, reflection and rearrangement of social orders (Furholt 2016, 1197). In this broad field of tension an approach must also be located that deals with the theoretical background of corporate forms of organisation (*e.g.* Feinman 2000a). In terms of house sizes, this approach, which has already been explained, offers a wide range of options for linking them with social organisation and hierarchisation. In this context, rather uniformly appearing houses are not necessarily to be equated with an egalitarian society. Rather, such a feature merely shows that the appearance of the houses was deliberately built according to a uniform scheme and in this context a strong emphasis on the collective reference can be recognised. However, it would have to be further investigated whether and which institutions of government exist in such societies (cf. Trebsche 2010, 161-162).

These examples show how differently the interpretative significance of house sizes is judged. Accordingly, house sizes in this work are not seen as an isolated, clear indication of the existence or absence of social hierarchies. However, in connection with other parameters, the house sizes are also evaluated in the overall picture.

In any case, the archaeological case studies offer only a very small number of preserved house floor plans, whereby statistically significant statements on possible differentiations of the house sizes in the test areas are not possible (albeit a supra-regional evaluation can take place; cf. Müller 2013). Differences in house sizes within a settlement are also only possible to a very limited extent. The Middle Neolithic settlements Oldenburg-Dannau and Büdelsdorf (Brozio 2016; Hage 2016) offer an exception with several examined houses within a settlement. Especially in Southwest Scania, a large number of house and hut floor plans have been uncovered in the course of construction work and associated extensive archaeological investigations in recent years, which provide a relatively broad database of different features (see Andersson *et al.* 2016, Appendix). One problem with the archaeologically available data on house sizes is the sometimes-difficult distinction between huts and houses. Even in ethnological research and with its much better sources, this is possible on a formal level, but here again there is a lack of knowledge regarding an understanding of the importance of specific architectural forms, such as huts or houses (cf. Hahn 2010, 110-112). Furthermore, a further functional differentiation of house features is often not possible due to the difficult source situation. Finally, it is often difficult to estimate the simultaneity of houses within a settlement, even with an existing <sup>14</sup>C date.

The situation regarding ethnoarchaeological case studies varies. In Sumba, based on the documentation during the fieldwork and the available satellite images, it was possible to document the size of the houses differentiated according to the different clans and relate them to other parameters. Based on the documentation in the field, a clear distinction can also be made between functional units such as the smaller kitchen buildings and the actual residential buildings, whereby different levels of meaning of the architecture are tangible here. In Nagaland such documentation was not possible, whereby house sizes are omitted here as examination parameters. Due to the size of the villages, it was not possible to document the village plans and the affiliation of individual houses to different *Khels* and clans. Furthermore, the available satellite images do not allow a functional differentiation of the recognisa-

ble house structures, which include residential buildings, other utility buildings in the broadest sense, as well as formal buildings such as churches.

#### 4.1.1.2 House inventories

Regarding the analysis of house inventories, very similar problems can be assumed as with the interpretation of house sizes (cf. previous section). House inventories are in no way directly equivalent to the social position of their (supposed) inhabitants. In addition, a differentiation must be made between builders, residents and any other, perhaps more sporadic users. However, this differentiation in archaeological material is usually not possible or very difficult (see also Arponen *et al.* 2016, 553-555). Like architectural features of buildings, inventories can also be significantly influenced by other factors such as ideological factors (see Müller-Scheeßel *et al.* 2010, 171-172). Finally, taphonomic factors also play a role in the conservation of artefacts and ecofacts in former house areas, whereby a complete recording of house inventories is often problematic. Despite these problems, distribution of finds within settlements, as well as identifiable house inventories, can provide indications of functional differences and, according to the restrictions mentioned, also of social differences (cf. *e.g.* Ebersbach and Doppler 2016, 379; Nockemann 2016; Trebsche 2010, 151).

As described in the previous paragraph, complete house features in Funnel Beaker contexts are still relatively rare. Especially larger settlements are missing, whereby a comparison of different house inventories and distribution of finds is only possible to a very limited extent and will often be in a statistically insignificant range.

In the course of the ethnoarchaeological investigations, no data on house inventories or economic data on individual households could be included in either case study. However, in the case of Sumba, there is already some data specifically on economic indicators that can be used for the purpose of a comparison (Adams 2007).

### 4.1.2 Monumentality and megalithic-building traditions

As explained in the introduced, monumentality and especially megalithic-building traditions as a specific phenomenon can take many forms and must not be limited to the megalithic graves dominating in the European Neolithic. Enclosures and meeting places can also be assigned to the overarching concept of monumentality and sometimes require just as much or considerably more work to be build.

#### 4.1.2.1 Megalithic monuments: size and expenditure of work

The importance of the size of the grave is reflected in some studies, especially in connection with the investigation of possible vertical differentiations within the burial society. This connection follows the assumption that the expenditure invested in the tomb – in terms of both work and resources – indicates the social status of the buried person (Müller 2001, 311; Parker Pearson 2001, 74-84). In principle, however, the same theoretical and methodological problems can be found here as with the grave goods. In principle, it is not possible to differentiate between the influence of the social position of the deceased and the influence of the burial group on the specific design of the funeral. However, it seems significant that features and finds in connection with graves are the result of complex social processes and are thus connected to very different practices and ideologies (cf. Hofmann 2014, 117).

In the context of an economic-archaeological approach, labour plays an important role. Work is one of the factors of production that can also be at least

partially traced in the archaeological field. Explicit theoretical approaches to deal with the labour factor are largely lacking and studies on this are relatively rare. The different work units (*e.g.* families, households, villages) and the expenditure of time for the different and existential tasks of daily life are to be seen as fundamental fields of work in archaeology. In principle, calculations of the time to be spent on different activities are possible by adding ethnological or experimental-archaeological data. At the same time, the investigation of the various activities required, but also those that are fundamentally not vital, forms an important basis for understanding earlier life realities (Kerig 2013, 143-147; Kerig 2010). An important factor in the analysis of the monuments is therefore the amount of work required for the individual grave types. An estimation of the workload makes it possible to make statements about possibly necessary cooperations. Furthermore, the calculation of the workload of as many tombs as possible offers the possibility to make regional and local comparisons on a standardised level. However, workload calculations were often used in a very reducing form, especially regarding monumentality. In these cases, a high workload was practically equated with the emergence of social hierarchies and the central action of a leader (to the contrary: Müller 2001, 385; Müller 1990, 30). Often other factors such as social benefits or the duration of the construction of a monument are not taken into account (Osborne 2014, 5).

The calculation of the work involved must of course follow uniform guidelines to guarantee a relative comparability of different monuments (see, for example, Müller 2001; Müller 1990). However, some calculation variables are very difficult to estimate in this process. The use of cattle as draught animals within the framework of stone procurement would reduce the necessary effort by at least 30% (Rosentstock *et al.* 2019). The use of cattle as draught animals is indeed proven by decorations, models and car tracks for the Neolithic. The Flintbek tracks hold particular interest, as they are directly related to the megalithic long barrow LA 3 (Mischka 2014). The documented cases of Indonesia and India show that the chosen mode of transport does not necessarily have to follow the easiest way. In India, stones of both larger and smaller sizes were also pulled or carried by humans. On the one hand, this is connected with partly impassable terrain, while on the other hand the ability to organise a large number of companions for the stone transport and the participation in this act held strong importance (Hutton 1922, 243-247). Another unclear factor is the estimation of the distance of the required stones. In today's tidy landscape, it is no longer possible to locate the formerly existing boulders. Previous studies indicate a transport distance between 1000 and 2000m. For this reason, a standard distance value of one kilometre was assumed (*cf.* Bekkema 2013, 115). This distance may not always be correct, but it allows a reliable comparison of the data and can be regarded as a minimum value at the same time. Of fundamental importance is ultimately the entire *chaîne opératoire* of the construction process of a megalithic tomb (*cf.* Tab. 1). First, this includes the necessary procurement of raw materials, including wood for the construction of a sledge or to facilitate the pulling of the stones, but above all stones that are needed for the dry-stone walling, the filling of the pits, as well as sealing the chamber and constructions inside the chamber. In a second step, the construction area must be prepared. Plough marks and house floor plans under megalithic tombs (*e.g.* Steffens 2009) show that some of the building sites have already been intensively used. In this case, there would be no need to clear the building area. However, as this cannot be assumed for all graves, it is assumed that all sites will be cleared in the following. The wood obtained in this way could subsequently also be used for sledges and the like. The pits for the orthostats and the surrounding stones also had to be dugged out and prepared. In a further step, the building material finally had to be transported to the construction site. This applies to smaller stones as well as to megaliths. This and the erection of the orthostats and the installation of the capstones represent the most labour-intensive and

Construction phase	Step of procedure	Assumption	Formula
Construction area	1. clearance	felling time trees 10-20cm: 0,8h; 1 tree/m <sup>2</sup>	$A \times 0,8 = ph$
Construction area	2. digging of the pits	V pit= V stone : 4	$V : 0,5m^3 = ph$
Construction area	3. earth transport	45kg (0,35m <sup>3</sup> )/h; 100m distance	$V : 0,35m^3 = ph$
Raw materials	4. stone quarrying	max. 180-330kg/h	weight : 330 = ph
Stone transport	5. small stones	0,028m <sup>3</sup> /h; 1km distance	$V : 0,028m^3 = ph$
Stone transport	6. megaliths	1t=132 ph; 1km distance	weight x 132 = ph
Erection of the stones	7. megaliths	1t=65 ph	weight x 65 = ph
Cladding	8. dry-stone walling	0,38m <sup>3</sup> /h	$V : 0,38m^3 = ph$
Hill filling	9. hill filling	earth transport: 222,04kg/h	$V = 2/3 \times \pi \times r^2 \cdot (-V \text{ chamber})$

Tab. 1: The working steps considered in megalithic construction; values taken from: Renfrew 1979 (step 8); Erasmus 1977 (step 2-5); Heyerdahl 1957 (step 7); Atkinson 1956 (step 6).

important construction steps. Subsequently, the dry-stone walling had to be piled up and any constructions (e.g. stone packings) erected. Finally, the hillfill, which probably almost always existed in the past, was also carried out in several phases and extension work, which could extend over several hundred years (cf. Mischka 2014). Thus, the calculation of the workload is to be understood as the end product of a construction process that could easily span several decades to centuries. Ethnographic and experimental-archaeological data were used to calculate the effort of the individual work steps in person-hours (Tab. 1).

For a calculation of the amount of work only graves could be considered which allowed a reconstruction of the grave type. The calculated tombs can be divided into different classes of quality. Uncertain monuments, such as those which are totally destroyed and only indicated by scatters of burnt flint, were not taken into account.

**1. Fully-preserved burial monuments.** Both the chamber and the extension of the barrow have been preserved. Specific internal and external structures such as quarters, pavings and stone fills have also been preserved. Such graves are very rarely found in the area of work, as they usually also include as complete an archaeological investigation as possible. In principle, these examples can be used as a reference for monuments that can be determined as a type but cannot be precisely calculated. Among other things, it would be conceivable to calculate the workload of different complete tombs and determine an average value, which is then transferred to other graves. The very different sizes of the chambers in particular are problematic and consequently cause a low representativity of such average values.

**2. Well-preserved burial monuments.** The basic structure of the chamber in particular has been preserved, i.e. orthostats and capstones are still present and can be used for calculations. The dimensions of the barrows have also been preserved. Interior and exterior constructions are not or only partially preserved or documented. The calculation of these elements is omitted in the following. However, since design features such as paving generally account for only a very small part of the total work involved, a lack of them is not significant in the results of the calculations.

**3. Moderately well-preserved burial monuments.** This category includes monuments that are only partially preserved. This concerns – for example – graves whose chamber has been partially preserved and examined, but is not complete, e.g. due to the removal of individual megaliths. The type can be safely determined

for these tombs, while the barrow is mostly only partially or not preserved at all. Construction details such as pavings are very rarely preserved. The calculation of the workload of these tombs is relatively accurate, except for the barrows.

**4. Poorly-preserved burial monuments.** The poorly-preserved graves include those where the type can only be determined with uncertainty. These are – for example – archaeologically investigated but destroyed monuments in which the former pits of the orthostats are still preserved, whereby at least an uncertain assignment of the grave type is possible. In such cases, the former volume of orthostats and capstones can only be determined or estimated with uncertainty. Finally, tombs fall into this category that have already been destroyed in the past and have not been documented. In some cases, a type of grave can be estimated based on designations on historical maps (*e.g.* for megalithic long barrows), but an approximate calculation of the work involved is not possible. In such cases, an estimate can only be made based on the mean values of other installations.

Regarding the size of the Funnel Beaker monuments, both the floor area of the chambers and that of the barrows were taken into account, if available. However, since most of the tombs had already been destroyed too much, this parameter could only be determined for a relatively small part of the megalithic tombs of the Funnel Beaker period.

In both ethnoarchaeological case studies, the size of the monuments could be comprehensively documented and linked to other parameters (such as the size of the house) or factors (such as clan membership). No labour calculations were made in these cases, as the size and number of megalithic monuments proved more important parameters.

#### 4.1.2.2 Megalithic tombs: grave goods

Graves in general and grave goods in particular have long played an outstanding role in archaeological research and knowledge production. Grave goods were used to analyse questions about such diverse thematic references as gender roles (see *e.g.* Staecker 2009), social status and economic factors (see *e.g.* Endrigkeit 2014; Hofmann 2013; Müller 2001) or ethnic identities (see *e.g.* Brather 2004). Within a processualistic approach, the graves in general, but grave goods in particular, were largely directly equated with the status and socio-political role of the buried person. The symbolic level of grave goods and the question why these specific objects were chosen received little attention. Later approaches, including post-processualist studies, placed a stronger focus on these very factors and increasingly also looked at performative and contextual aspects. Graves were seen as a space actively used to (re)design social references and systems and grave goods were not merely a mirror of the social position of the deceased (Ekengren 2016, 174-177). Sociological studies with a strong practical orientation have always been used as a pioneering theoretical foundation for such research priorities (Nilsson Stutz 2015, 5). Rituals, courses of action and communicative structures were increasingly regarded as relevant factors, which on the one hand shape the complex feature ‘grave’ and on the other hand hold importance in the investigation of past living environments (Hofmann 2013, 282). A source-critical approach and a comparison of individual factors, such as grave goods, with other aspects, *e.g.* scientific data, can enable a critical and more balanced interpretation of the archaeological source type ‘graves’ (Müller-Scheeßel *et al.* 2010, 171). Studies of graves and grave goods currently follow different directions, taking into account various of the factors listed above. Even if the equation of grave goods with the social status of the deceased is not permissible, these may nevertheless indicate a differentiated treatment of the dead.



A fundamental problem regarding the comparison of grave goods from megalithic graves is the character of many tombs as collective graves, as well as the absence of closed features. In addition, a large number of the megalithic tombs were cleared in the Late Neolithic and Bronze Age periods and used for reoccupation. Thus, the entire and original grave inventory is almost never preserved (one of the few exceptions may be the Denghoog on Sylt; see Wunderlich 2014). Any previously-existing spatial associations between individual dead and grave goods would therefore in most cases not be preserved anyway. In addition, the strong degree of destruction of the graves through the use of individual boulders as building material and through agricultural activities, especially after industrialisation (Schirren 1997, 147-149), also weighs heavily. Due to the inadequate data situation, individual artefacts from the collective graves cannot generally be assigned to individuals, and it is also questionable whether such an assignment originally existed at all. Furthermore, the completeness of the grave inventories must generally be doubted. Only a few closed dolmens were apparently not used for later subsequent burials and thus represent well closed features (*e.g.* Madsen 1896). Therefore, a comparison of grave goods from megalithic graves of the Funnel Beaker communities, in addition to the described methodical problems, must remain clearly limited in its informative value. Furthermore, the number of single graves from Funnel Beaker contexts is relatively small and also these graves are not all preserved in a closed state (Kossian 2005, 130-140). Despite these problems, a presentation and evaluation of the burial objects in the different grave types represents important additional information that can shed light on possible transformations and differentiations of the individual grave types or the treatment of the dead in these grave types.

In the context of ethnoarchaeological studies, the use of burial objects as parameters of investigation is only considered in Sumba, since grave goods still have a certain significance outside the strongly Christianised contexts. Data on grave goods could only be obtained on a general level in the course of the interviews, whereby no quantified statements on their use are possible here. In Nagaland, the focus was generally not on the graves due to the lack of megalithic grave monuments.

#### 4.1.2.3 The placement of monuments within the social space

A fundamental distinction must be made between a largely passive view of space and those approaches that see spaces in a more active role. The former is partly related to ancient concepts but was part of archaeological research. Although these also dealt with the role of the environment in terms of conditions and prerequisites, they often did not give it any further active significance (Reinhold 2014, 245). However, in the course of the ‘spatial turn’, spatial concepts and their theoretical location also became increasingly important within archaeological research. Regardless of theoretical points of view, the importance of human-structured space was emphasised early on, especially regarding monumentality (*e.g.* Nakoinz 2013; Johansen 2004; Chapman 1981; Renfrew 1976). The space was not only interpreted in relation to the areas used (in terms of streets, buildings, *etc.*) but also to the areas in between, which can function – for example – as an important connection, as well as a separation. The built environment in particular reflects social relationships and constructs. On the other hand, there is always an interrelation between the space and the community that uses it, which allows the reproduction and – if necessary – adaptation of social structures and ideas. Both local and regional structures and in particular their relationship with each other hold strong importance (Rosenswig and Burger 2012, 12-14). Such spatial conceptions also have a processual character. The physical and social space as well as social factors of various kinds are interrelated and interacting: if one of these factors changes, so can the others. In particular, changed modes of action and arrangements in relation to the built environment

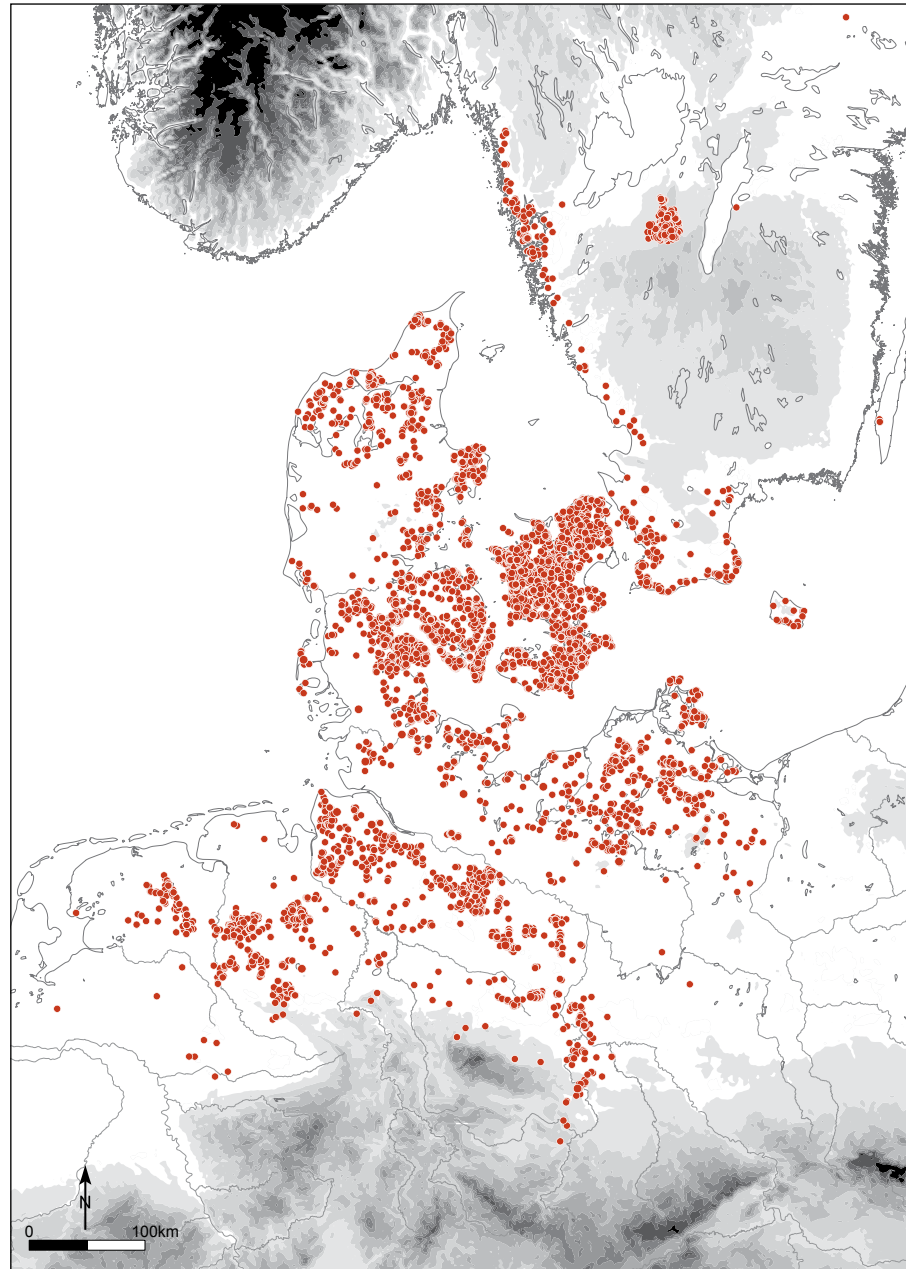


Fig. 4: The distribution of documented megalithic tombs in Funnel Beaker societies (Fritsch et al. 2010, 2).

can thus provide important insights or indications of changed social structures (Reinhold 2014, 245; Rosenswig and Burger 2012, 12).

Regarding the placement of the Funnel Beaker monuments in space, as well as the reference of the monuments to each other, source-specific problems arise for the same reasons as is the case with the grave goods in megalithic tombs. The visible distribution of megalithic tombs today (cf. Fig. 4) merely reflects an image marked by a strong degree of destruction (cf. Hinz 2011, 137).

The probably original arrangement and distribution of the megalithic tombs is only preserved in a few cases. These include the island of Langeland in Denmark, where the current distribution of burial monuments is estimated at ~90% of the original inventory. In this case, the graves occur both individually distributed and in grave clusters consisting of different grave types (Tilley 1996, 131). Similar clusters can also be found in other regions (see Gebauer 2014; Mischka 2014), as well as in

today's forest areas (*e.g.* Schuldt 1970a). Forest areas generally show a significantly lower rate of destruction due to limited agricultural activities. The data indicate that both the construction of individual megalithic tombs in a relatively isolated location and a location in grave clusters consisting of different types of monuments were common. In addition, studies showed that both options mainly took place outside the settlement areas, resulting in a clear separation of the social space (*e.g.* Schmütz 2017, 20; Sjögren 2011, 134). Enclosures and megalithic tombs often occur in close proximity to each other, whereby it can perhaps be assumed here that both types of monuments are related to each other. However, the unclear dating of megalithic tombs in particular often proves to be difficult. An example of this are the graves around the enclosure near Rastorf, which cannot be dated sufficiently accurately to establish a clear connection between the enclosure and the graves (Steffens 2009, 88). In some cases, enclosures (such as Büdelsdorf; Hage 2016) were used as settlement sites in individual phases, whereby specific places were connoted differently in individual phases (*cf.* Müller 2011a, 29-31).

In both ethnoarchaeological case studies, the location of the megalithic monuments is an easily understandable parameter that allows clear statements on the structure of the social space. Critical factors here are above all monuments that have fallen into oblivion and are largely overgrown and out of sight. This happened in some cases in Sumba as well as in Nagaland. Nevertheless, a representative distribution of the megalithic monuments and their relation to other elements such as the actual village areas and the economic areas can be established.

### 4.1.3 Economic markers

A view of economics, particularly in the context of substantivist approaches and political economy, is that economy is above all an important functional component of social systems. Socio-economic processes understood in this way can then be seen as a formative element of pre-modern societies. Naturally, individual or group self-interest as well as general values and ethics will be important in such systems. Important factors are the distribution of specific resources, the arrangement and use of the production of goods, the design of barter trade or the contextual use of labour (Mölders 2014, 317-318). In the sense of an understanding of economic archaeology that wants to link these economic factors with social systems and specific community structures, the following economic markers are included analytically.

In relation to the case studies of the Funnel Beaker communities, three factors are seen and considered as potential economic markers. The first and fundamental for agricultural activities is the quality of soils in regional comparison. Since subsistence economy was fundamental to the settled Neolithic communities of the case studies, the fundamental importance of this factor is self-explanatory. Soil quality may have had a fundamental impact on the population density and intensity of landscape use in these communities. Although a relatively low population density in Funnel Beaker communities can be assumed in principle, of course this does not exclude regional fluctuations (*cf.* Schiesberg 2012). Regarding megalithic construction, soil quality is also a very interesting factor (see Müller 1990; Fraser 1983). For example, the quality of the soil and thus its fertility may have influenced the ability of individual communities to produce a surplus. This, in conjunction with the availability of manpower, may have been essential for the construction of megalithic tombs and is therefore of fundamental interest for this investigation.

Flint axes are the second factor that is important in this context in two ways. In Funnel Beaker temporal contexts, flint axes occur in different contexts. These include grave finds (grave goods), settlement finds (often fragments and manufacturing waste), scattered finds in connection with other finds (settlement or activity indicator), as well as individual finds. On the one hand, individual finds could

represent activities that are clearly linked to the main function of the axes as tools. Mainly woodwork is to be thought of, which was regularly and everywhere of importance. However, on the other hand, such individual finds – and in particular complete exemplars – could also constitute depositions. These could have taken place in ritual contexts, for example. Both facets equally point to the ability of individual communities to expand specific activities outside of the villages and even to use part of their production for non-economic purposes. Flint axes are therefore seen as markers of the extent to which individual regions and/or communities have been able to expand their production of axes (cf. Sjögren 2011, 130-132). Finally, copper finds have also been of interest as an externally sourced product (Klassen 2004). A more detailed explanation of their significance as potential items of exchange can be found below. In addition, labour and labour costs are also an economic factor, as already explained above.

In the context of the ethnoarchaeological case studies, some information could be collected that allows a comparison between economic factors and megalithic monuments. These include regional statistics, albeit which are only available in a very rough framework and in isolated cases. In addition, construction costs and, in particular, the necessary expenses for feasting activities can be estimated in part. These can then be associated with the number of megalithic monuments and their affiliation to individual families or clans. This makes it possible to estimate the proportionality with which economic resources could be used for megalithic construction by different social groups (within a village and in regional comparison). However, a comprehensive documentation of the house inventories and properties could not be carried out, as is the case – for example – in Adams (2007), although these data can be included in a comparative manner.

#### **4.1.4 Specific artefact types**

Besides the comprehensive types of finds represented by settlements, houses and graves, an evaluation of material culture in the form of specific artefact types is also important. In this context, flint axes are seen as one of the possible markers that can provide information about economic factors of prehistoric Funnel Beaker societies, whereby this is particularly important in combination with the other factors mentioned above. Further specific artefact types are described below, which are considered in the case studies of this work.

##### **4.1.4.1 Potential communication via artefact types?**

Theories that deal with possible communication via specific artefacts are always based on internal and external concepts that are important for the formation of individual or group-related identity. Thus, identity concepts can only be perceived in relation to the ‘other’, which does not correspond to one’s own concept. Styles in particular can be seen as an important medium that can be used to represent one’s own identity. This can be done individually as well as in connection with smaller or larger groups. In these cases, stylistic devices can be used to convey and present one’s own values, ideas or practices (cf. *e.g.* Biehl and Gleser 2003). The way in which artefacts are designed is compared to other individuals and groups. Stylistic designs of artefacts can thus be used for specific comparisons and give different individuals or groups involved information about the identity and social affiliation of their counterparts (Wiessner 1984, 193-195).

In the case of the archaeological case study, a specific type of ceramic is discussed as an example, which has some special features that seem interesting for the question. Although other types of artefacts can be seen as potential carriers of communication, ceramics is a particularly interesting artefact group due to the

interplay of form and decoration, which can be characterised by specific symbolism. As explained in the previous paragraph, ceramics can be seen as a type of artefact which, due to its mutability, frequent standardisation and wide distribution, could well have functioned as a means of communication beyond communal boundaries. In Funnel Beaker contexts the occurrence of variable local styles is to be registered, which differed in form and decoration. However, especially the pottery found in the graves also shows some fundamental parallels, which coincide over large parts of the distribution of Funnel Beaker communities. These include in particular ceramics from the North and West Group, some of which have a strong degree of standardisation in the MN (cf. Menne 2018; Bakker 2011, 265-266; Ebbesen 1975).

Specific artefact types were not further analysed in the ethnoarchaeological case studies. However, specific decorations of the tombs, which could be documented on Sumba, can also be a potential carrier of ritual communication. Some of these have a specific symbolism, which can be found throughout the island despite considerable regional differences and are therefore interesting as markers. However, in Nagaland, there are no decorations of the megalithic monuments and other artefact types of interest in this context could not be identified.

#### 4.1.4.2 Prestige goods and early exchange

The definition 'exotic goods' has long been seen archaeologically as goods which are primarily associated with certain social groups or 'elites' and which, through their differentiation from everyday objects, serve as indicators of social influence and competition. However, the extent to which the value of goods can be determined at all by archaeologists and the process of value creation as a primarily social process can theoretically be considered remained largely unconsidered for a long time. Furthermore, the question of an archaeological identifiability of prestige beyond the identifiable special goods is an urgent question, which can be partly remedied by a stronger theoretical orientation of action (Bernbeck 2014, 221-223). Despite these methodological and theoretical problems, different characteristics have been identified which can (not have to) characterise prestige. These include the procurement of goods via (complex) exchange routes, the production from rare materials, as well as the complex processing of objects (cf. Bernbeck and Müller 1996). The often-received distinction between staple and wealth finance (D'Altroy and Earle 1985) and the dual-process theory, which is partly based on similar premises (see previous sections; Feinman 2000a; Blanton *et al.* 1996), stems from the environment of theoretical approaches to political economy. Regarding dual-process theory, the importance of prestige goods is described above all in connection with structures that correspond to the 'network strategy'. Particularly highlighted social positions within one's own group are achieved by maintaining extensive networks and participating in strategic alliances through marriages or similar. In this context, access to exchange networks and the presence of objects called 'prestige goods' also play an important symbolic role. The functioning of economic practices based on wealth finance is also based on very similar premises. However, it is important that both theoretical approaches see fluid boundaries to the respective 'counter-systems', namely the 'corporate strategy' and 'staple finance', and that both strategies can be present in one and the same community at the same time. Accordingly, the identification of prestige goods must be carried out on the one hand with the necessary methodological caution and, on the other hand, its interpretative significance must not be overestimated.

Apart from the complex question of the definition of concrete prestige goods, only very few goods are available in Funnel Beaker contexts that can be described as exceptional. In addition to the special types of ceramics already described, the extra-long flint axes and large quantities of deposited amber should be mentioned

in particular. Furthermore, the Neolithic battle axes, which occur at least partially increased at the transition between EN II and MN Ia in graves, can possibly be counted to this group (Müller 2011b, 279). Overlong thin-butted flint axes are known in large numbers from the entire area of the Funnel Beaker North- and West Group (incl. Denmark, Scania, Northern Germany and the Netherlands) and occur in lengths of up to 40 cm (see *e.g.* Karsten 1994, 55; Nielsen 1977). The extent to which these axes might have been in use and how they can be clearly differentiated from the already-described individual finds of complete flint axes must remain largely unclear. A clear differentiation can only be made regarding the hoard finds, which in Scania comprise up to eight overlong axes (Karsten 1994, 56). Depositions of large quantities of amber are also very rare and can be located mainly in Denmark (cf. Ebbesen 1995). However, within the selected case studies both types of finds play no role. Early supra-regional exchange is only represented in the EN and MN by a few sporadic finds. L. Klassen (2004; 2000) carried out a detailed analysis of the finds of copper and jadeite axes, of which the copper finds are further taken into account in the following.

In the ethnographic case studies, this parameter was not taken into account further.

## 4.2 Ethnoarchaeological research and the use of analogies

The present work follows a comparative approach, which includes three very different case studies as well as a comparison region. Since two of these case studies include recent societies, the methodology of this work can be classified in the broad field of ethnoarchaeological approaches. Therefore, an overview of research history, methodology and criticism of this special area of archaeological research methods is given.

### 4.2.1 Ethnoarchaeology: history of research and methodology

The use of analogies and the comparison of archaeological source material with modern societies has been present since the 19<sup>th</sup> and 20<sup>th</sup> centuries. This is mainly due to the fundamental characteristics of archaeological research as ‘silent’ research. The interpretation of the isolated and incomplete traces of prehistoric societies alone is not possible without the help of different methods and analogical thinking. However, early approaches often comprised a simple confrontation and comparison of the ethnographic and archaeological case studies, which thus cannot have scientific validity (Yalman 2005, 16; Wylie 1985, 65-66). During a changeable history, the use of analogies and the importance of comparative approaches within archaeological research traditions was evaluated very differently. While some early researchers completely rejected such approaches, during the 1950s and 1960s a neo-evolutionistic use of analogies emerged (*e.g.* Clark 1951; continuing: Wylie 1985). Even though the first ethnoarchaeologically oriented case studies existed in the 1950s and 1960s, the beginning of systematic ethnoarchaeological research as a separate field within archaeology is fundamentally linked to L. Binford’s studies (especially *ibid.* 1978) and the development of New Archaeology and Processual Archaeology in America in the 1960s and 1970s (cf. Cunningham 2014, 53). With the development of middle-range theory and the increase in attempts to link artefacts and human behaviour, the use of sometimes complex analogies and especially conducted ethnoarchaeological fieldwork gained in importance (Peregrine 2004, 283). One research objective was the formulation of largely universal laws

and explanations that could be used to explain material traces and their variability (cf. Binford 1989). One of the most important aspects dealt with in particular by Binford (1983) is the origin and development of archaeological sites and features under the keyword 'site-formation processes'. The inclusion of ethnoarchaeological, but also experimental-archaeological studies to correctly understand the importance of archaeological features is considered very important in this context (Cazella 2013, 5). Another fundamental thesis put forward by Binford (especially in 1971) is that social behaviour is consistent in comparable contexts, at least partly implying the existence of universal laws of human behaviour. Comparable environmental conditions hold the utmost importance, which could even lead to similarly pronounced burial rites of independent societies (Cazella 2013, 6). Parts of these hypotheses were subsequently criticised, especially by representatives of post-processual archaeology, and their applicability and transferability were questioned. Ian Hodder played a key role in this line of argument, questioning the applicability and fundamental validity of Binford's second hypothesis in particular. In the context of post-processual archaeology, the existence of (almost) universal basic laws of human action and their dependence on environmental conditions, *etc.* was doubted and an alternative approach to ethnoarchaeological research was proposed. This is strongly based on the necessity of a long-term participating stay of the researching archaeologist in the field (cf. *e.g.* Hodder 1991) and thus ties directly to the ethnographic method of the participating observation according to Malinowski (1922). The historical background of the individual case study, the general context, as well as the development of material culture in relation to it should be the focus of research. With this approach, which is strongly oriented towards the individual case study, important buzzwords such as those of the agency were also coined (Yalman 2005, 20-23).

Newer approaches to ethnoarchaeological research (from the 1980s) are very diverse and cannot be clearly assigned to a single superordinate theoretical stream. Some are strongly oriented towards approaches that follow that of the middle-range theory, while others focus more on a post-positivist approach (Cunningham and McEachern 2016, 629). Classically, in connection with processual archaeology, modern societies that were roughly classified as 'hunter-gatherer societies' were in the focus of interest. These were then used for comparisons with different Stone Age societies in Europe. In the following, societies that had an agricultural or nomadic way of life and economy increasingly became a point of interest. These were also used for comparisons with various prehistoric communities (cf. David and Kramer 2001, 21-24; van Reybrouck 2000, 41).

Methodologically speaking, no uniform and clear orientation of ethnoarchaeological approaches has emerged to date, whereby very diverse and different works are summarised under this catchword, which do not follow a clear methodological framework. However, the need for such a system was emphasised in several places (*e.g.* Roux 2007, 154). Nevertheless, a fundamental distinction can be made between two types of application of ethnoarchaeological research. On the one hand, the aforementioned field work, in which ethnographically shaped working methods are carried out by an archaeologist in a broader sense. There has been no agreement and no uniformity about the exact design of this field work, *i.e.* whether it is to be carried out on a long-term or only short-term basis, and which methodological tools (different interview forms, *etc.*) are used. The second way in which ethnoarchaeology is carried out in a broader sense is to include ethnographic data sets and models in the interpretation of otherwise purely archaeological works (Näser 2005, 19). For example, databases such as the 'Human-relations area files' are used. These, but also the use of a broad range of ethnographic monographs and case studies can be summarised under the keyword 'cross-cultural studies' and are also applied in ethnographic research itself (Smith and Peregrine 2012, 636). However, the use of individual case studies or their social-theoretical model to explain an archaeological

case study has also been and still is used. There are particular difficulties in the second approach, as there is the risk of equating very different case studies due to an assumed similarity without the necessary differentiation according to similarities and differences. There is the possibility that complex models of human life and action can be simply superimposed on any case study (Gosselain 2016, 219). Societies that are often perceived as ‘traditional’ can be influenced from outside; for example, by increasingly expanding nation states. Supposedly independent cross-cultural similarities could therefore be based on contexts, but not on independent structural similarities (Saitta 1997, 20). The effects of the colonisation of many of the commonly-used case studies in the 19th century are also often not sufficiently addressed. Thus, some of the principles to which frequent reference is made in archaeology (e.g. Kula rings) may have developed only through the influences of colonial land grabbing (cf. Spriggs 2008).

However, this is only one point of the broad disputes that have arisen around the buzzword ethnoarchaeological research and whose discussion has existed since the establishment of the branch of research. A simple comparison of an ethnographic or ethnoarchaeological data set, which is regarded as a comparison, with archaeological case studies has been criticised quite sharply. This point of criticism primarily concerns the central field of analogy formation. Some of the researchers argue that analogy is always and both consciously and unconsciously formed. The personal horizon of experience and the social affiliation of the researcher are in the foreground. This already begins with simple analogies; for example, if a grave is classified as such or a common burial of a man and a woman is interpreted as a burial of a married couple. However, such analogies often happen unreflected, can go much further and include – for example – the classification of organisational forms of archaeological societies in the sense of models familiar to researchers themselves (cf. Cunningham and McEachern 2016, 629-630; Gosselain 2016, 217-218; Näser 2005, 19). The conscious use of complex analogies in particular, which is contrary to this, carries the already-mentioned danger of the largely unreflected equation of different communities from the past and present without taking into account any serious differences that may exist (e.g. concerning environmental conditions). Ultimately, even communities that are very similar in their conditions do not necessarily have the same structures and behaviours, as these can be influenced by many other factors, taboos and preferences. Another important point of criticism is the lack of clear and uniform methodology in ethnoarchaeological research. For example, the lack of competence of archaeologists in ethnographically shaped field work, the suppression of sometimes significant aspects of the social life of the communities concerned (which do not directly concern the researcher’s question), as well as the dependence on and trust of researchers in the statements of individuals (Gosselain 2016, 221). Finally, the already-mentioned own ideological background of researchers primarily from western industrial nations can lead to a distorted perception of ethnographic data. In the search for alternatives to capitalist and profit-oriented production processes, ethnographic contexts can thus be easily idealised and romanticised. Thus, in such a case, communities understood as ‘traditionally’ are seen in part as the opposite of the systems known to us and perhaps similar characteristics similar to us are at least partially ignored (cf. Cunningham and McEachern 2016, 635-637; Gosselain 2016, 222). In the worst case, these problems can lead to ‘the present being discovered in the past’ and the imagination of researchers being severely limited (Saitta 1997, 20).

#### **4.2.2 Analogy and comparative archaeology**

In the history of research, the use of analogies can be seen as a widely applied and consistent, but also very changeable methodology within archaeological research. Thus, in the 1930s, the direct historical approach was particularly present. Within



this approach, human behaviour and cultural aspects of archaeological case studies and ethnographically documented cases were considered fundamentally identical. An identical geographical space was regarded as elementary and a historical continuity was assumed. Relationships and an assumed socio-cultural continuity played a decisive role in this. This approach was relatively popular in the US, for example. From the 1940s, concepts of a general comparative analogy were also used. As part of these concepts, societies with an assumed similar level of technological development were used for comparison. This was partly linked to an idea of stages of cultural evolution that are passed through universally. This approach was not spatially bound up; however, a similar ecological environment was in part regarded as mandatory (Lyman and O'Brian 2001, 316-326).

Currently-used approaches of analogies can be classified in different ways. Primarily in areas that deal with technological aspects of material culture, a fundamental distinction can be made between simple and complex correlations. In the case of simple correlation, material culture is linked to statistical phenomena, which in turn are collected in experimental-archaeological or ethnoarchaeological contexts. A prominent example are studies on the processing of raw materials. The analysis of the end product then includes – for example – surface analyses that can be associated with specific, ethnographically observed manufacturing strategies and movement structures. A complex correlation would associate material culture with dynamic phenomena and specific social situations. Thus, the analysis of ceramics can be carried out according to technological aspects, although it can also include questions about their occurrence in specific traditions and social spheres. However, such specific historical scenarios are unique and not reproducible, and therefore cannot per se be applied to other case studies (Roux 2007, 155-169). Comparisons of forms, which only aim at formal properties of objects, functional identification of objects, as well as object-related comparisons of meaning can also be classified in these areas of the use of analogies (cf. Näser 2005, 20-23). Such analogies are often generated with the help of cross-cultural comparisons. Particular specific are analogies that refer to the social significance and conditioning of specific practices. Part of these analogies can be formal comparisons, but also relational analogies, which are then formed on a universal level and applied to different contexts (cf. Gramsch 2014; Näser 2005, 23-24). A current example of particularly comprehensive analogies is the classification of archaeological societies according to ethnographically documented types of societies (e.g. Big Man societies; e.g. Kristiansen 1984).

A fundamental contribution to the methodology and approach of the use of analogies was made by Wylie (1985). A central point of her remarks are her constructive answers to criticism of the use of analogies. These answers cover three key points. First, Wylie calls for a systematic comparison of source and subject. The number of similarities is to be evaluated and compared with the existing dissimilarities. The second point is the extension of the basis for comparison. By including the highest possible number of sources and checking their similarity to the hypotheses assumed, in particular dissimilarities can be better interpreted. Finally, the extension of the conclusions in relation to the premises is called for. An analogy becomes all the stronger when the specific similarities found in the case studies ultimately outweigh the assumptions made in advance (*ibid.* 1985, 97-99). A specific focus of archaeological research is comparative archaeology, which makes partial use of analogies but does not necessarily include ethnoarchaeological case studies. According to this approach, statistically-evaluated comparative ethnographic data sets (cf. Peregrine 2004, 284-286), diachronic comparisons of archaeological case studies that can be assigned to the same regional area (e.g. Glørstad and Melheim 2016) or classified globally (e.g. Earle and Spriggs 2015) can be used.

### 4.2.3 Middle-range theory: linking theory and empiricism

One of the major advantages of using ethnoarchaeological approaches is their strong compatibility with the concept of ‘middle-range theory’. Ethnoarchaeological case studies enable a close connection between material culture (empiricism) and human action to a strong degree. According to Binford, this connection between static features and dynamic action is the central aspect of middle-range theory. Special attention is also paid to processes that contribute to the development of archaeological features and processes that lead to the distortion of the original features (Bernbeck 1997, 66-67).

### 4.2.4 Own methodical approach

Following the problem of the unconscious and partly unreflected use of analogies mentioned in the previous chapters, a brief introduction of the comparative approach used for this work will follow. As explained in chapter 2, Neolithic megalithic tombs in Northern Central Europe have already been interpreted in many different ways. Many of these approaches have in common that they are based on a concrete database and the interpretation of it. Not unusual in the sense of a comprehensive and socio-archaeologically oriented interpretation is the application of specific theories and models of social forms of organisation, which are made either in direct comparison with ethnographic case studies (*e.g.* Artursson *et al.* 2016, comparison with North American societies), or in reference to the corresponding primary and secondary literature (*e.g.* Kristiansen 1984; comparison with Big Man societies and chieftainship).

In both cases, such an approach represents a direct analogy of extremely complex forms of social interaction, which is rejected in this form for the present work. Ultimately, each society is unique in itself in its interplay of significant modes of action and forms of organisation, whereby the transfer of a form of society documented in a very specific context must remain inadmissible. The influence of the researchers own social background must also always be taken into account in the context of further interpretations, especially when specific social mechanisms are the subject of a work. The aim of this work is therefore expressly not to apply the interpretations to be worked out for the ethnoarchaeological case studies directly to the archaeological case studies. Rather, the ethnoarchaeological case studies will be used to investigate which factors and processes can play a role in the phenomenon of megalith building. Based on this information and data it can then be examined for the archaeological case studies whether there are indications that similar mechanisms and actions were significant. Of particular importance here is the possibility of expanding the researcher’s own social context and ideological background and highlighting alternatives (*cf.* Gramsch 2000, 156). This is one of the great opportunities and advantages of comparative approaches, especially when taking into account societies that have undergone structural developments that need to be differentiated from one another and have corresponding characteristics that can complement our own ideas and premises.

Therefore, this work is based on the following principle. Modelling and interpretation is carried out based on the respective data basis for each individual case study. This applies to both ethnoarchaeological and archaeological case studies. The respective models stand for themselves, whereby no claim is made to a direct comparability of the individual contexts. The ethnoarchaeological case studies hold particular importance, as in these cases many mechanisms become visible that are much more difficult to understand in the archaeological data set. Nevertheless, these can serve as an impulse to see the archaeological material in a new light. In a second

step, the case studies are compared. In this context, a final assessment of the similarities and differences between the case studies will be made to achieve a balanced assessment of possible underlying principles in several and/or all case studies in connection with the social and economic-ecological backgrounds of megalith-building traditions. No claim is made to the uncovering of generally valid patterns. All results are only valid for the case studies considered here.

In the sense of a broad and multidimensional comparative archaeology, the methodology of the present work is defined according to the comparative dimensions presented by Smith and Peregrine (2012).

**Size of the case study:** see chapter 1

**Selection of case study:** see chapter 1

**Contextualization:** in both archaeological and ethnographic case studies, an attempt was made to include as many aspects of the communities concerned as possible. However, especially regarding the ethnographic case studies, these could only be taken into account to a limited extent. Due to time constraints and the intended comparative approach, no individual house inventories could be documented during the field work, taking into account as many data sets as possible. Available information on important factors shaping societies (such as kinship systems, economic forms or political organisation) were included to investigate the links between megalithic-building traditions and these. Again, in the archaeological case studies, the broadest possible approach was chosen, which includes the consideration of different data sets (*e.g.* on settlement sites, flint axes and the subsistence strategies).

**Scale:** the focus of interest is only one specific social phenomenon, so a small analytical scale was chosen.

**Primary/secondary data:** primary data were only collected in connection with the ethnoarchaeological case studies to enable a concentration and adaptation to the research questions of the work. Secondary data were used for the archaeological and ethnographic case studies. Although different standards and qualities of the published data must be assumed, the availability of detailed excavation data obtained in the course of extensive scientific investigations in recent years is an advantage in both archaeological test areas.

**Archaeological/historical data:** both recent and archaeological data are used. These and the models for the social significance of megalithic construction that are derived from them with the help of theoretical concepts are equally important. Only at the end of the work is a synthesis in which similarities and differences between these four models are described and interpreted.

**Synchronous/diachronous data:** all case studies are mainly dealt with in a synchronous framework. While this is largely self-evident for the ethnoarchaeological case studies, this concept is also used for archaeological examples. Certainly, a diachronic view of the changed social realities in the course of developments from the Mesolithic to the Early, Middle and Late Neolithic would be interesting. However, such an examination could not be carried out for reasons of time alone.

**Spatial and temporal setting:** as already made clear by the synchronous orientation of the studies, no approach is explicitly pursued here that aims to trace cultural-evolutionary processes. The use of recent and archaeological data sets and the global location of the case studies will help to understand the range of social meanings of megalithic construction. The regional, temporal and internal social variability of this phenomenon are in the foreground, without a temporal or spatial connection between the case studies.



## 5 The Ethnoarchaeological case studies: Sumba and Nagaland

The ethnoarchaeological case studies are presented below. The descriptions of the collected data from Sumba and Nagaland are preceded by introductory chapters covering fundamental social aspects of the communities there, an outline of the history of research, and the methodology of the field work. Basic for the final modelling of megalithic-building traditions in these case studies are the collected data of the field work. These include interviews and a documentation of the megalithic monuments, which are explained in detail for ten and six villages respectively. Some comparative analyses have also been added, including the remaining available data.

The megalithic monuments in Sumba consist exclusively of grave monuments (stone slabs or different types of dolmens), while in Nagaland standing stones (of different types) and stone platforms (meeting places) have been erected. A major difference between the two case studies is the fact that in Nagaland the construction of monuments has been abandoned over the last generations, while megalithic tombs are still being built on Sumba.

### 5.1 Ethnoarchaeological case study 1: Sumba

The island of Sumba is located in the eastern part of the Indonesian archipelago, about 500km east of Java, one of Indonesia's main islands. Unlike other islands in the region, Sumba is not of volcanic origin and is much less fertile. There is a fundamental difference between the western and eastern parts of the island, separated by a low mountain range. The western part of the island is by far the more fertile part, whereby some rainforests can still be found here (Fig. 5). This part includes the areas of Anakalang, Kodi, Wanokaka, which are later mentioned in the text.

On the other hand, the eastern part of the island is characterised by open grasslands (Fig. 6), and field cultivation is only possible along the rivers.

Influenced by south-eastern winds, Eastern Sumba is hot and dry with a dry season from April to November. Accordingly, the population density in Sumba varies greatly from region to region. Except for the capital Waingapu, the east is sparsely populated, while the good agricultural conditions in the west, including the second Sumbanese city Waikabubak, allow a dense settlement (Vel 2008, 23-25).

Essentially, Sumba can be divided into different traditional domains (Fig. 7), which are given by the islanders as a reference regarding their own group membership. These domains also correspond to linguistic subunits in which different dialects are spoken. Within the individual domains there is still a strong correlation,



*Fig. 5: Landscape in Wanokaka, one of the most fertile areas of Sumba (photo: Knut Rassmann).*



*Fig. 6: Landscape in Eastern Sumba. The dry grasslands that characterize the eastern part of the island can be seen (photo: Johannes Müller).*

which at the same time requires differentiation from the outside (Vel 2008, Hoskins 1993, 5). On a larger scale, the inhabitants of the island apply the term ‘Sumbanese’ to themselves. However, this does not apply to immigrants from other Indonesian islands, who live mainly in Waingapu and Waikabubak.

Subsequently, the data obtained during a research stay in 2015 from 23 different villages in Sumba will make up the main part of the first ethnoarchaeological study. However, in order to ensure a complete and comparable survey, these data are limited to specific aspects that are particularly important in connection with the overarching issues of this work. A detailed description of the methodology applied follows in chapter 5.1.3.

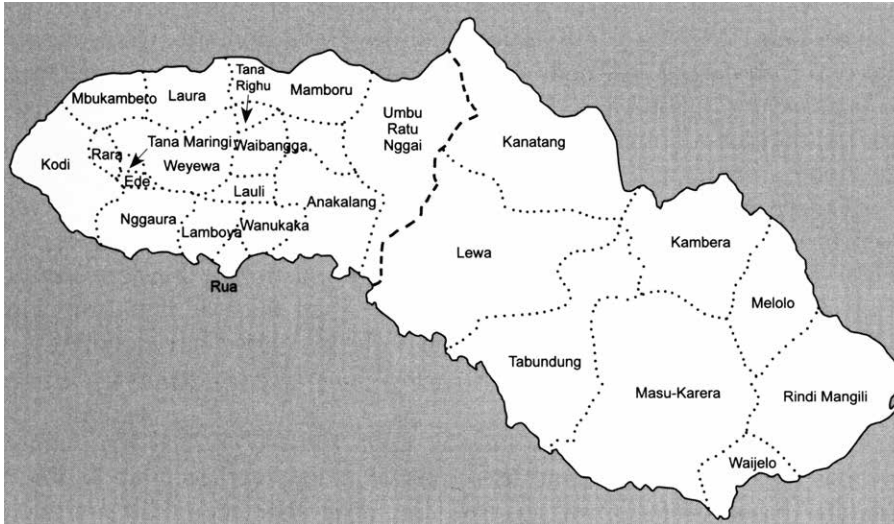


Fig. 7: The traditional ethnolinguistic domains of Sumba (Vel 2008, 61).

## 5.1.1 Brief characteristics

The following is an overview of important historical and political developments and relevant social and economic structures of Sumbanese communities. This is done on the one hand to place the data and interview statements collected in the field in a socio-economic context, and on the other hand to take into account as many different factors as possible when interpreting the importance of megalithic construction in the social structure of the villages.

### 5.1.1.1 Historical background

To understand the genesis of social and political organisation in Sumba, the consideration of historical developments and contexts is of fundamental importance. Even if Sumba occupies a rather remote position in the context of the Indonesian archipelago and is considered marginal due to limited economic interest, a recurring influence by external factors must be emphasised even before the integration into state structures. Thus, Sumba was already in the 14<sup>th</sup> century a tributary region of the Javanese Hindu Majapahit Empire. At that time and until the 16<sup>th</sup> century, Sumba was part of regional trading networks that included Java, Flores, Sumbawa and Savu. Sumba products traded included sandalwood and cattle (Keane 1997, 41; Hoskins 1993, 35). From the 16<sup>th</sup> century the presence of European traders in the Indonesian archipelago is proven, whose business also includes Sumba. By contrast, the integration of Sumba into Arab and Chinese trade networks is not clearly demonstrable, but not unlikely. Of particular importance at this time was the slave trade, in which Sumba was also involved (Hoskins 1993, 41-43). The slave trade was embedded in warlike conflicts on the island and led to a change in the settlement choice and villages were built on more defensible hills (Kuipers 1990, 16-17). The beginning of the construction of the megalithic tombs could be connected with these manifold trade relations. Imported tools made of iron were described as one of the prerequisites for the beginning of the monument construction and the age of Sumba's oldest tombs is estimated to be approximately 500 years. However, the fundamental impact of these trade relations on the basic social organisational units of the *Umas* and clans within Sumbanese communities seems to have been relatively small (Adams 2007, 52-56).

The island was first integrated into the structures of a centralised state by the Dutch colonial government. This development in Sumba is linked to attempts by Christian churches to proselytise (Vel 2008, 31). The education and health system

introduced in Sumba was not independent, but rather accompanied and administered by missionary work. However, the first official administrative representatives were not stationed in Sumba until 1845, prior to when the colonial power's efforts to keep Sumba out of the influence of other European forces were mainly due to the island's low economic interest. The representatives of the Dutch government rely on contracts with individual local leaders ('rajas') (Kuipers 1990, 25-26) to enforce their interests. They should govern their territories, taking into account the advice of the Dutch representative. From the outset it was problematic that the 'rajas' were not allowed to sign such agreements under traditional law and their authority in the enforcement of claims to power was severely limited. Colonial influence was particularly strong in the east of the island, where influential elites were promoted within the village communities, some of which are still called 'royal families' today. However, in the west of the island, the colonial government was much less influential. Although local leaders also became government contacts here, traditional structures were better preserved here. By 1877, Waingapu had become the urban centre of the island, but was threatened by various wars on the island. Therefore, 'pacification measures' were introduced, which included the abolition of the slave trade in which the colonial government itself was involved, comprehensive disarmament and the introduction of a tax system. Over the years of colonial rule, profound changes took place on the island: the introduction of Christianity with simultaneous suppression of traditional belief systems, the creation of local, indigenous elites with involvement in colonial administration and the development of new hierarchical structures through the installation of rulers far beyond their original powers are among the most momentous (Vel 2008, 32; Keane 1997, 43; Hoskins 1993, 55-57).

After Indonesia's declaration of independence in 1945, Sumba was quickly integrated into the newly created nation-state (Hoskins 1993, 273-274). Some of the previously installed instances retained their influence. This includes the involvement of Christian missionaries in education and health care. The 'new order' promoted by President Haji Suharto demanded the classification to one of the five recognised religions (Christianity, Hinduism, Islam, Buddhism and Confucianism). Since the traditional belief systems were not part of these recognised religions, Christianisation was promoted even further. Some of the social hierarchies installed during the colonial era retained their significance in the context of the Indonesian nation-state, which applies in particular to the east of the island (Vel 2008, 30-35).

### 5.1.1.2 Social organisation

Since the beginning of the twentieth century, the previously-existing social structure in Sumba has changed fundamentally, whereby former class differences are now significant to a much lesser, in any case formal, extent. Even before the time of colonisation, many regions of Sumba had already made a fundamental distinction between the free and the unfree, and between the upper and lower social strata (Vel 2008, 57-58). Three-class social structures (nobles, commoners and slaves) were found in Anakalang and Eastern Sumba. In Kodi, however, only noblemen and slaves were found (Adams 2007, 75-76). In Wanokaka, society can also traditionally be divided into three classes: the noble, free and unfree. Superior clans who act independently and equally are found here (Gunawan 2000, 99-102). The classification into a social class takes place throughout Western Sumba in a matrilinear system. After slavery was officially banned by the Dutch colonial administration in 1908, these nominal social classes were dissolved. Nevertheless, the effects can still be felt to a certain extent today. For example, in Anakalang, the former members of the upper class own most of the valuable buffalo herds and – due to their wealth – usually have a number of poor 'dependents'. In exchange for the provision of labour for festive activities or megalithic construction, they receive economic support and



help in the organisation of their own festive activities by members of the former noble class. Such relationships are also often crucial in terms of the exchange of goods in the course of planned weddings. The preservation of social privileges and dominance after the official abolition of the class systems could be ensured by the ownership of land, livestock, as well as access to higher levels of education and traditional influence on the administration. In Kodi, however, such dependency systems are less important than in Anakalang and Wanokaka (Adams 2007, 78-79; Gunawan 2000, 103-104). In contrast to the western part of the island, the social class was determined patrilinear in Eastern Sumba. In this area, the formerly existing classes are still much more significant and influential. Furthermore, important titles such as 'Rajas' were inherited in these areas (Kuipers 1990, 23). Thus, the former slave families are still clearly disadvantaged in economic and social terms, while in the west the former social class is less important in everyday social interaction. The social classes still present in memory and self-image have a particular impact on marriage relationships, whereby a man will try to marry a woman of at least equal rank. This – at least in Western Sumba – is also due to the fact that the social class is determined by the mother (Vel 2008, 58).

While some of the consequences of the traditional social class-based organisation described are still effective, clans and Umas are the social units that have the greatest impact on a person's everyday life, but also on their individual social status. Both units are explained in further detail because they are also of fundamental interest for megalithic construction. The daily living together takes place within a household in which a married couple lives together with the unmarried children and possibly their own parents, as well as grandchildren (usually 5-11 persons/household). These form a (core)family as a basic unit. Units connected to the actual house can also be those in which dependents or second or third women live (Adams 2007, 81).

### Uma

The term *Uma* refers directly to the ancestral houses found in traditional villages of Sumba. Each group of people defined as *Uma* refers to a specific house, which can usually be found within the ancestral villages (cf. chapter 5.1.1.6) and has a specific name (e.g. 'Uma Hara'). The oldest respected ancestral home within an ancestral village is called 'Uma Bakul' and mostly occupies an outstanding ideal position, which is spatially consolidated by a central location in the ritual area of the village (Kuipers 1998, 25; Hoskins 1993, 15). All ancestral houses have in common that they are considered to be the oldest houses built in the village and represent the origin of the individual family associations. The houses must always remain in the same place, and the supporting posts must not be moved during repairs. The care and maintenance of the ancestral houses is an important task of the groups concerned, whereby the houses are still used as residential houses today (Keane 1997, 48-49).

The term *Uma* refers to both these special houses and a social group that refers to a common ancestor (Weyewa: 'Kabizu'). An *Uma* always comprises several households, which originate in patrilinear line from the same ancestor (Kuipers 1990, 18-19). However, outsiders can also become part of an *Uma*. This includes adopted members of a household. The individual houses of the group of people belonging to an *Uma* are located both inside and outside the ancestral villages. Many houses are also located near the gardens outside the villages. The houses within a village that belong to an ancestral home are called 'Ana Uma'. In the event of serious disputes or strong population growth within an *Uma*, individual members can split up and form a new house group (Adams 2007, 81-82; Gunawan 2000, 59).

The ancestral houses hold central importance. Their care and maintenance is a duty of all members of the specific *Uma*. The importance of the ancestral house as a central meeting point for all members is illustrated by the fact that all ritual

festivals are held here (cf. chapter 5.1.1.3). This principle applied (and applies) independently of the specific group holding the festival. The jaw or horns of the pigs and water buffaloes slaughtered at the feasts are displayed on the front of the ancestral house to highlight the achievements of *Uma* as a whole (Hoskins 1993, 202). Traditionally, heirlooms, ritual objects and gold jewellery have also been kept in this house, although (personal) jewellery can increasingly be found in other houses today (Keane 1997, 49). Significant decisions affecting *Uma* as a whole are made by significant, older men who gather for such purposes and consult collectively. The (male) heir of the ancestral home himself has a special right to a say and his opinion has a high weighting. However, if this person is not distinguished by holding feasts and demonstrating good leadership skills, this position can also be entrusted to another person. *Umas* can perform very different tasks. They play an important role in rituals (e.g. by beating the gong that calls to the meeting and accompanies the ritual) or guarding village gates (Adams 2007, 83-86; Gunawan 2000, 58).

In Anakalang and Kodi land is not collectively owned by an *Uma*, the rights to land belong to individuals or (core)families. In Wanokaka, on the other hand, there are special cultivated areas which are regarded as the property of the ancestors of an *Uma*. The rice grown there may only be used for ritual purposes. These areas are nominally collective property of the entire *Uma*; however, they are practically associated with the family that lives in the ancestral house and are regarded as direct descendants of the founding ancestors. Many of the *Umas* also have their own priest (*Rato*), who ideally comes from their own *Uma*. This position is not hereditary and is filled in by persons considered suitable for the task (Adams 2007, 82; Gunawan 2000, 56-57).

### Clan

Clans can be seen as the most basic and influential social unit in Sumba. Belonging to a clan is defined as patrilinear, whereby weddings take place exogamously. A clan comprises several *Umas* and refers loosely to a common ancestor who founded the clan. Nevertheless, membership is quite diverse through mechanisms such as adoptions and is not necessarily to be equated with an assumed consanguinity. For example, in Wanokaka a woman's children can also become members of a clan if her father was supported in paying the bride price by the members of another clan. In addition, although the social position is usually defined by belonging to the clan of the father, a family relationship is primarily assumed through the mother's family. This kinship relationship can then create a much stronger emotional bond to the mother's family than to one's own clan (cf. Gunawan 2000, 51; Hoskins 1993, 17-18).

The number of clan households in Kodi and Anakalang can be several hundred (Adams 2007, 87). Furthermore, in relation to the clan one ancestral house is considered to be the oldest house attributed to the founding ancestors. Here important celebrations take place and this house will always lie directly at the ritual areas of the ancestor villages. Besides the main ancestral house, other important ancestral houses of the clan can be found here. A clan has a kind of leader or speaker, who usually comes from the lineage of the main ancestral house of the clan. This plays an important role in meetings and disputes. If a member of a clan plans a feast, this person is obliged to consult the head of the clan. Moreover, in this case this is not necessarily a fixed and inherited position: if the candidate is not suitable or heirs do not exist, other members of the clan can also fill in the position. Usually there is a group of particularly important members in the clans, which defines itself by personal suitability and performed achievements. These members often carry titles such as *Tokoh* (a person of personal achievement) or *Rato* (priest): the construction of megalithic tombs is one of the factors that can be decisive in their selection. In order to gain influence within clan affairs and be heard at meetings, material

participation in feasting activities or exchange relationships is usually expected (Vel 2008, 63-64; Adams 2007, 87-90).

Clans possess a certain amount of collectively used land, most of which may not be cultivated. If available, quarries are also part of the collective property and used as quarrying areas for megalithic stones. These quarries can be used freely by the members of one clan; however, members of another clan must pay a material consideration for the use. Generally, members of a clan are expected to participate in feasting activities, house building, the provision of bride money and the megalithic constructions of other members, in terms of both resources and labour. In the worst case, non-participation could lead to exclusion from a clan. However, such participation is indispensable to obtain support in the event of the exchange of labour (*e.g.* field work) or material factors required. Thus, the clan is Sumba's most important socio-political unit, which contains a range of basic rights and duties. Cooperation and assistance are common and indispensable in all cases where the economic and personnel capacities of an individual household are exceeded (Adams 2007, 90-91).

In many cases not only one clan is resident within a village. In these cases, there will usually be one or more clans that can be regarded as particularly influential and usually represent the founding clans, *i.e.* the first clans resident in the village. In some cases, there are alliances between several clans (*kabihu*) that work in a spatially defined area. These alliances then include a number of different ancestral villages: when several clans share a village, each clan often has a separate area with a central ritual place. Cooperations within these alliances can serve to settle disputes, provide mutual support in armed conflicts with other villages or for feasting activities (Gunawan 2000, 51-56).

### 5.1.1.3 The *Marapu* Faith

Sumba is one of the few regions within Indonesia in which the traditional belief system continues to exist and in which, at least until 1986, according to statistics, the majority of the population was still without official religious affiliation<sup>3</sup> and still adhered to the *Marapu* faith. Since that time Christianity has gained in importance, but a mixture of elements of the traditional belief system (*Marapu*) and Christianity can be observed (Keane 1995, 290-294). Especially in the 1990s Christianity became increasingly established as a lived religion. This is connected with the state promotion of the commitment to the monotheistic faith, which is pursued in particular within the state education system. Elements of traditional religion, such as feasting activities or the knowledge of ritual language, were partly abandoned by this development. Within the framework of the *Marapu* faith, celebrations are used to legitimise and strengthen the social significance of the activities associated with them. There is a strong connection with the *Marapu* faith in festivals related to the agricultural calendar, dedicated to individuals or held in the context of the construction of houses and megalithic tombs (Kuipers 1998, 1-4).

An intrinsic connection with almost all areas of life is fundamental to the *Marapu* faith. This includes marriages, economic factors, the political level of action, as well as ceremonial and ritual aspects of society. The presence of the 'ancestral spirits' (*i.e.* the 'spirits'<sup>4</sup> associated with the respective *Uma* or Lineage) is assumed in each area (Kuipers 1990, 46). Since all areas of life and levels of action are regarded as interwoven, disregarding the necessary invocations and rites in one area also has (usually negative) effects on other areas. Beside the mentioned 'ancestral spirits', the presence of many other 'spirits' is assumed, which were settled in the direct envi-

3 Religious affiliation in Indonesia refers to only five officially recognized religions: Islam, Christianity, Buddhism, Hinduism and Confucianism.

4 In the following, no translation of religiously coined terms takes place, since there is the danger of an impermissible transfer from foreign contexts.



Fig. 8: A megalithic tomb in Pasunga (Anakalang) which illustrates the connection of the traditional burial custom with Christian elements (photo: Maria Wunderlich).

ronment, but also in the sky. Although the *Marapu* faith includes the idea of a creator figure, it was seen as male and female, mother and father, at the same time. No direct prayers could be addressed to this figure, rather there was an invocation through several instances and different ‘spirits’ associated – for example – with the gardens or the houses. As already mentioned, the assumed ‘ancestors’ of the respective *Umas* and villages play a central role. Most of the stories associated with the *Marapu* faith are about these characters. Thus, rituals and ceremonies are carried out according to a fixed scheme, which should consequently correspond to the ‘ancestors’ path (Hoskins 1993, 278-280). The direct connection between the individual *Umas* and the ‘ancestral spirits’ – which symbolically stand to a strong degree for the unity of the respective *Uma* – justifies the prominent position of the ancestral villages. Since only parts of the *Uma* and thus the entire lineage or ancestral line live in the individual villages and in particular the garden houses, which are mainly important for economic work, an appeal to the ‘ancestral spirits’ in these would be inappropriate. Invoking them requires the collective presence of at least a large part of *Uma* (Kuipers 1990, 48-49). Therefore, the most important feasts and ceremonies always take place within the ancestral villages, which thus have an important function as a central place and connecting element between otherwise partly only loosely associated groups. The burials also take place in the ancestral villages to ensure proximity to the descendants of an *Uma* and the ‘ancestral spirits’. Within a sacred area within the ancestral village is the *Marapu* hut. It contains the most important ritual objects and may only be entered by priests (Gunawan 2000, 233-234). In summary, the close relationship between the members of an *Uma*, ancestral villages, and the ‘ancestral spirits’ is of fundamental importance. It explains the prominent position of the ancestral villages, since only here is a direct communication between the people and the ‘ancestral spirits’ possible. This in turn determines the burials within or near the ancestral villages.

The mixture of traditional and Christian elements of faith can be seen particularly strongly in the megalithic tombs. Due to their location in the centre of the village and their connection to feasts, these have a clear connection to the *Marapu* faith. Meanwhile Christian elements are integrated into the burial custom, such as the elongated position in the grave, as well as Christian-influenced representations on the graves (Fig. 8).

#### 5.1.1.4 Political organisation

Due to the national integration of Sumba, the political organisation is now mainly the responsibility of the administrative representatives, whereby clan structures hold little importance in this context. In particular, the social rank, which is quite strongly dependent on factors such as land ownership or belonging to a social class, is not formally decisive here. Nevertheless, employees of the administration have access to important financial means and the possibility to benefit the relatives in case of employment, award of construction projects, *etc.* Access to politically influential positions is possible through the accumulation of different capital (cf. the terms according to Bourdieu 1997). These include economic capital, cultural capital in the sense of a high level of education, and social capital in the sense of networks and relationships (Vel 2008, 10-13). However, at this point belonging to higher social classes and thus the position of one's own clan also holds strong importance. Therefore, although the traditional social structure is not directly reflected in the political organisation, it has a considerable influence on it through accessibility to the various forms of capital (cf. Kuipers 1998, 100). Especially in political elections, a strong connection to and reference to traditional social structures is crucial. Reciprocity within the *Uma* structures is decisive for the outcome of the election, which includes complex debt relations. Debt is a fundamental social option in this context, reflecting the importance of relations within the *Uma* and showing that a person (especially the person receiving support) is rich in social capital. Such actions can also be observed in legislative periods: reciprocity and mutual (debt) relations are an important factor in generating votes and solidarity within the basic social units holds strong importance. The political class in Sumba includes persons directly employed by the state, who receive contracts directly from the state through construction projects or similar, as well as persons who maintain informal links with the administration. Contexts that are actually state shaped (like state acts) can also serve as important events in which locally influential groups can represent and reassure their position (Vel 2008, 14-19).

#### 5.1.1.5 Economic system

The traditional economic system of Sumba has largely been preserved and – due to its remoteness and insignificance – is partly unaffected by the interests of the globalised economy. Due to the economic importance and the demand on the export market, the cultivation of coffee and cashew nuts is partly driven forward, but the importance of this on the global market remains quite low to this day. On the whole, a production method that continues to be geared towards subsistence can be observed. Rice is one of the most important cultivated foods. Although the more productive wet rice cultivation, which allows two harvests per year, is of greater importance in most regions of Western Sumba, dry rice cultivation is also practised here (Vel 2008, 24-25; Gunawan 2000, 18). This is particularly the case in the Kodi lowlands, where low rainfall and rivers running deep below the fields make it impossible to irrigate the fields (Hoskins 1993, 3). In other areas (including Eastern Sumba, Wanokaka and Anakalang), which are more characterised by differences in altitude, rice is cultivated in the river valleys, while the villages and partly also the gardens are located on the surrounding hills. Rice is essential for feasting activities and as a food to be served to guests. Therefore, harvested rice is often stored for those occasions when other food cannot be used (cf. Keane 1997, 70-71). In addition, cassava, sweet potatoes, maize and taro are grown. These hold strong importance as basic foodstuffs, especially where wet rice cultivation is not possible. The cultivation takes place partly in a rotating system on the rice fields, which are partly relatively far away from the villages due to the location of the villages on

hills (Hoskins 1993, 3-4). In addition, the use of garden areas for the cultivation of mentioned crops, as well as for bananas, is common. These areas are significantly smaller than the fields but are often in close proximity to the villages. In Anakalang, Kodi and Eastern Sumba the land is inherited by the eldest son. However, there is an obligation to share this land with all other married sons, whereby the land is often very fragmented. Traditionally, the amount of land ownership in both Eastern and Western Sumba is quite unevenly distributed between clans and families. The work required for the development of garden areas and fields is traditionally carried out by collectively organised working groups. Of special importance are water buffaloes, which are important for the preparation of fields for wet rice cultivation. Since many families have no or only a few water buffalo, these working groups are fundamental. In particular, each of those involved in the work will receive a share of the yields (Adams 2007, 58-67; Gunawan 2000, 22).

Animals of economic importance in Sumba include poultry, horses, cattle (both cattle and water buffalo), pigs, dogs and goats. Goats and Indian cattle are relatively recently imported animal species that are not important within the traditional system of feasting activities, as well as in the debt system (cf. Keane 1997, 81-82; Hoskins 1993, 3). Livestock are often kept in confined areas, while pigs and chickens are kept in the villages under the houses. The consumption of animals outside feasting activities or other special occasions is not widespread, although dogs and poultry are exceptions (Hoskins 1993, 206-207). Horses are not eaten at all, they are bred mainly in the east of the island and used as mounts. Water buffalo and pigs in particular appear to be unevenly distributed and are often owned by only a few families. However, if individual water buffaloes or pigs are needed for slaughtering, they can be 'lent' by other people for an equivalent value and later repaid. In the course of such debt relations, and also with profit-oriented sales, the length of the horns is decisive for its value in the case of water buffaloes. In Eastern Sumba, the open grasslands are particularly suitable for breeding water buffalo and horses. A large part of these are sold to other Indonesian islands. The ownership of large herds marks rich families in Eastern Sumba, while in Western Sumba, due to the fertility of the land, the ownership of large cultivated areas and herds of cattle and buffalo is decisive. Wild boars and game that can be hunted in the forests may also be a supplement (Adams 2007, 67-74; Gunawan 2000, 18-26).

### 5.1.1.6 The villages

In Sumba, a rough distinction can be made between three different forms of settlement. The youngest and least linked to traditional structures are the two cities of Sumba: Waingapu to the east and Waikabubak to the west. Both cities are experiencing population growth due to both the availability of jobs and the wider range of educational opportunities. There are also Muslim minorities here, which are rarely found in the predominantly Christian Sumba (Vel 2008, 40-41).

Beside small villages, which comprise house groups, also single houses are present. Both forms of settlement have in common their proximity to the associated horticultural areas. They are always dependent on an ancestral village, whose clan and *Uma* they can be assigned to. The ancestral villages, in which all important social events take place, are the spiritual and social centres for one or more clans. They are also the most traditional and still important form of living together in Sumba. Thus, the ancestral villages fulfil a function as a central village, which is of fundamental social and ritual importance for other village communities in the surroundings and belonging to the same clan (Keane 1997, 48-49; Kuipers 1990, 18-19). Essentially, an ancestral village is founded by a family by establishing a relationship with the local spirits or forces. All sons and brothers descending from this family have the right to found a branch there. Furthermore, members of the clans from which the married

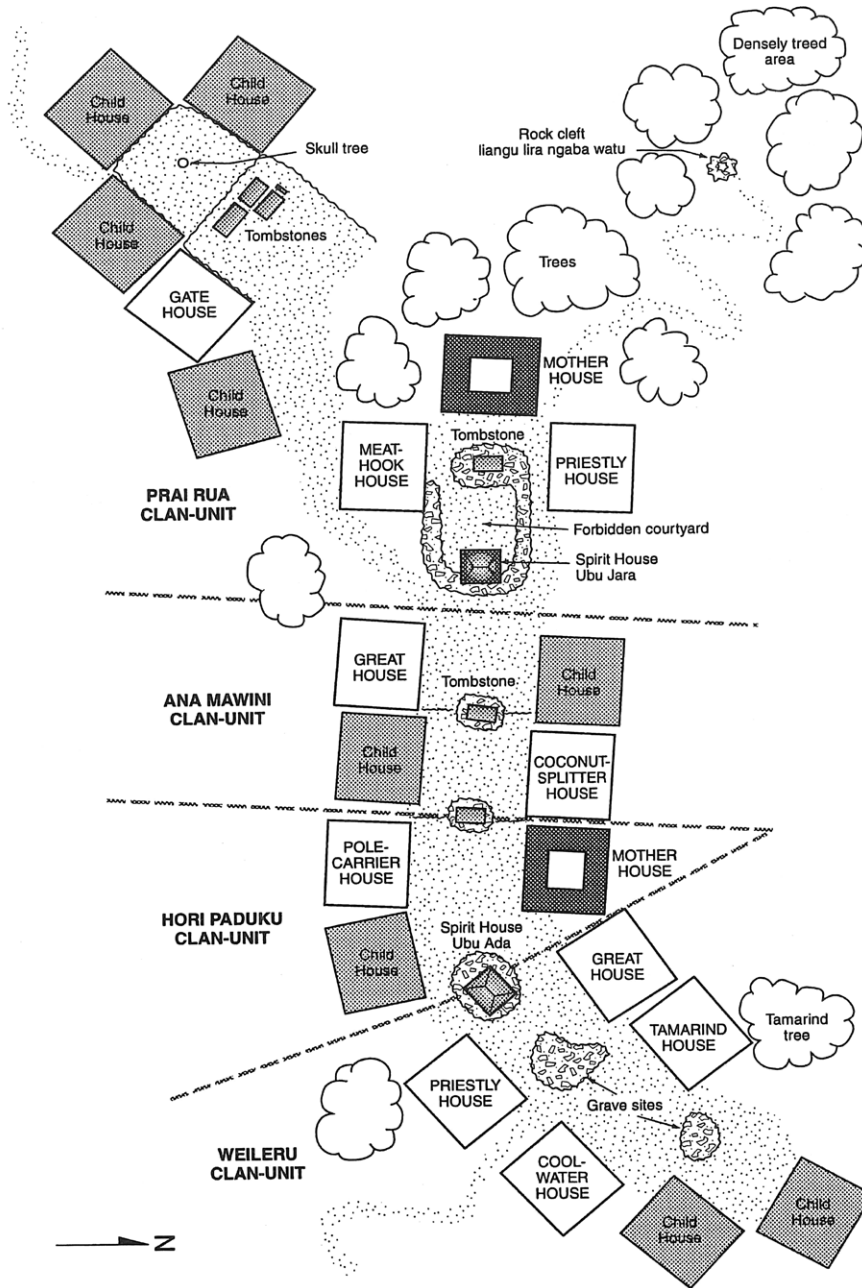


Fig. 9: Setting-up of a typical ancestral village in Wanokaka (Gunawan 2000, 256).

women of the originally resident clan comes can settle there. Thus, an ancestral village can gradually enlarge. However, the construction of the village holds strong importance and reflects the underlying social structures (Fig. 9). In the centre of the village there is always the ritual place (in Kodi: *Natara*; Anakalang: *Talora*) surrounded by megalithic tombs (Keane 1997, 49; Hoskins 1986, 32). Further megalithic tombs can be found inside and outside the ancestral village. This relates to the fact that the members of the local clans and Umas are buried not only in the outer villages and individual farms, but partly in the ancestral village itself. The ancestral houses of the different clans are grouped around the central square. They are surrounded by other houses of the respective *Uma*.

All important rituals as well as the storage of ritual objects in the ancestral houses and in the *Marapu* huts (see chapter 5.1.1.3) take place in the ancestral village. The



Fig. 10: The central area of the ancestral village of Tarung. Visible are the traditional house forms, the Marapu hut, as well as the megalithic tombs situated at the ritual area (photo: Maria Wunderlich).

*Marapu* hut, as well as a sacred area that cannot be entered, are usually located in the immediate vicinity of the central square (Fig. 10) (Gunawan 2000, 35-40).

#### 5.1.1.7 Burial rites

The burial in megalithic tombs is traditionally the most important and most common form of burial in Sumba, although the shape of the grave varies according to the builder's fortune and possibilities. Inhumation burials, which usually took place in a crouched position in connection with the *Marapu* faith, were always common. At the beginning the burial chamber is built. After the capstone had also arrived in the village, the body of the deceased person was placed in it. This was previously wrapped in cloths and fastened in such a way that the body posture was crouched together. In the case of multiple burials within a burial chamber, the same could be reopened. The construction of a grave could in principle be started before death, but there are differences between the individual regions (Hoskins 1986, 39). In the course of Christianisation, burials in an extended lying position became common, for which the dimensions of the burial chambers had to be extended. The funerals then take place in a coffin. During the interviews it was mentioned that not all deceased were buried in a megalithic tomb, as some of them lacked the financial means. Another possibility of burial is a simple earthen tomb, over which a simple stone slab is placed.

The specific burial customs mentioned for each village are described below. In principle, however, each funeral is held according to the briefly outlined pattern.

#### 5.1.2 History of research and source criticism

As one of the economically insignificant islands of the Eastern Indonesian archipelago, Sumba received no attention until the second half of the 19<sup>th</sup> century,



which would have been reflected in publications or reports. Even after this date, which marks the signing of treaties between the Dutch colonial power and local people, reports are still very scarce and available only on individual thematic aspects. It was not until the first half of the 20<sup>th</sup> century that more extensive publications can be found, dating back to the work of travellers, missionaries and civilian employees. Accordingly, one focus of these works is on topics such as the traditional Sumbanese belief system (*e.g.* Onvlee 1938; Gunawan 2000, 4-5). Further studies dealt with the (pre)history of the colony of Dutch India as well as with individual areas. The publications by R. von Heine Geldern (*e.g.* 1945), G. P. Rouffaer (*e.g.* 1937), W. G. Keers (1938) as well as A. N. J. van der Hoop (*e.g.* 1932) can be mentioned. These publications – which were subsequently widely distributed – contain the earliest photos of megalithic monuments, as well as construction activities in Sumba. The first summarising ethnographic works – which dealt with the whole or eastern part of the island – were only published in 1922 by A. C. Kruyt, as well as in 1940 by W. O. J. Nootboom.

Regarding these early publications, various source-critical aspects have to be considered. As in any environment characterised by colonial structures of rule, the close association between the researchers and the colonial power must be emphasised in this case. This meant that such observations and research did not take place within the framework of an equal relationship, but rather against a background in which the researching person regarded himself as culturally or otherwise superior. It was only relatively late in ethnographic research to investigate these very assumptions of early ethnographers about societies that were considered subordinate to their own in terms of civilisation, as well as the deliberate concealment of negative effects of colonial rule and prevailing racist views that flowed into ethnographic reports (*cf.* Schupp 1997, 9-14). Some of the authors did not have any scientific training, but were rather local colonial officials or travellers. This does not make their reports worthless at all, but it must be taken into account when criticising the sources. The Sumbanese author Oemboe Hina Kapita forms an antipole to these publications, which were obviously intended for the scientific public in Europe. For decades he wrote treatises on various aspects of life in Eastern Sumba, the history of Sumba and the ancestral villages on Sumba. His studies were only published in 1976 and 1977 and constitute the only collection of publications written in Indonesian and thus accessible to the local public (Gunawan 2000, 5).

Only much later, with the establishment of the Indonesian state after the Second World War, did an independent Indonesian research tradition begin to emerge. The eastern islands of Indonesia in general, and Sumba in particular, were already the subject of this research in the 1980s. One focus was on megalithic designs mentioned by Dutch authors. One of the most important Indonesian researchers is H. Sukendar, who conducted extensive research, among others in Sumba (*e.g.* Sukendar 1985). During the same period, detailed anthropological studies of various aspects of Sumbanese communities increased. These studies were primarily written by European and Australian scientists and deal with various aspects of Sumbanese societies. The studies of Joel C Kuipers (1998; 1990), which focus in particular on ritual language and performative aspects, are mainly linguistically influenced. Another work by Webb Keane (1997), whose subject of investigation is the Anakalang area, also refers to linguistic and performative, but also to the social significance and representative level of objects. A similar focus on the relationship between property and identity aspects, but located in Eastern Sumba, was set by Janet Hoskins (1998). Jaqueline A. C. Vel (2008; 1994) addressed the democratisation process and the shaping of traditional and modern forms of rule. There are also studies focusing on different regions of Sumba (*e.g.* Gunawan 2000; Hoskins 1993; Needham 1987; Forth 1981). Overall, the corpus of available studies on various aspects of Sumbanese societies has expanded considerably during the 20<sup>th</sup> century and today offers one of

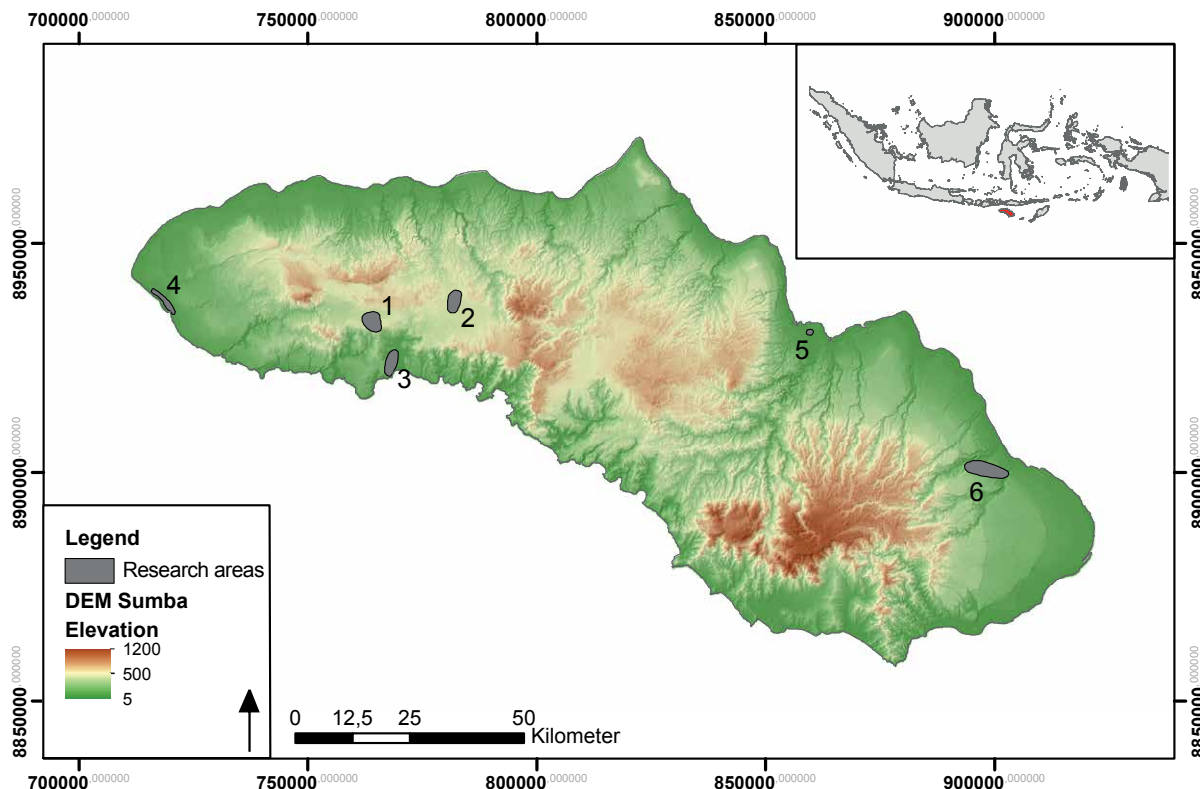
the most extensive and diverse collections within the (eastern) Indonesian region. This is due to the linguistic diversity and complexity of the Sumbanese communities, as well as the traditional knowledge still passed on, at least in part (Gunawan 2000, 2; Fox 1980, 328-329).

### 5.1.3 Research area: methodology

In addition to the previously-explained available studies on the megalithic-building tradition in Sumba, information was collected during a field visit in August and September 2015. In addition to the author, Prof. Dr. Johannes Müller (University of Kiel) and Dr. Knut Rassmann (RGK Frankfurt) took part in the field work. According to the overarching research question of this work, the focus was on megalithic monuments in different communities of Sumba. Five different regions were selected on the island, in which several villages were documented as examples. No information is available on the age of the individual villages, so the temporal depth of settlement dynamics cannot be dealt with in this work. The selection of regions includes both main areas of the island, namely Western and Eastern Sumba (Fig. 11).

The focus of the data collection was on the western part of the island, as there is a much higher population density and megalithic-building traditions are continued on a more intensive scale. The selection of the individual case studies took into account the historical and administrative boundaries of the island (cf. chapter 5.1.1). The study areas in the west of the island are located in Kodi (three villages), Waikabubak (Loli district; seven villages), Wanokaka (four villages), and Anakalang (four villages). In the eastern part of the island, a total of four villages could be visited and documented; of these, one (Prailiang) is located in the north-east and three others in the east on the coast. The quality of the recording varies. Thus, in all villages the location of the megalithic graves and at least a rough classification of types could be carried out. The possibility to conduct an interview was only given in 13 of 22

Fig. 11: The location of the five study regions on Sumba:  
1: Waikabubak 2: Anakalang  
3: Wanokaka 4: Kodi  
5: Northeast Sumba  
6: Eastern Sumba.



villages. In the following, ten villages are described in detail: two were selected from each study area, which show a good data situation. If no information was given on certain topics during an interview, this is briefly noted. In these cases, the informants were usually unaware of the subject in question, or certain phenomena (such as grave goods) were simply not present. The selection of the interlocutors was always made by the villagers themselves. With one exception, the interviewees were always men who were usually older and fulfilled a special function in the village in some cases (e.g. as priests).

The documentation within the villages included the inclusion of all associated megalithic tombs and any stelae. Altogether the following seventeen different grave types could be defined during the field stay:

- Type 1: simple stone slab; lying on the ground
- Type 2: closed dolmen; made of stone (Fig. 12)
- Type 3: closed dolmen; made of concrete/cement (possibly bricked) (Fig. 13)
- Type 4: capstone resting on four pillars; a small dolmen on the floor under the plate (Fig. 14)
- Type 5: cement grave poured
- Type 6: dolmen made of sandstone; lower part comprises four individual slabs
- Type 7: modern dolmen; outsides are tiled (see Fig. 8)
- Type 8: dolmen of untreated stones (Fig. 15)
- Type 9: stone slab; resting on stone heaps on narrow sides
- Type 10: closed dolmen; at the four corners of the lower part legs are indicated
- Type 11: same as type 4; but with six legs and larger (Fig. 16)
- Type 12: same as type 11; but with dolmens on the capstone
- Type 13: closed dolmen with door on one of the narrow sides
- Type 14: stone slab; resting on a heap of rock (Fig. 17)
- Type 15: concrete slab lying on the floor with handles
- Type 16: like type 11; but with partly complex superstructures (like house models) (Fig. 18)
- Type 17: dolmen; half-height panels are placed between the supporting elements

Information on the age of the graves and a possible chronological sequence of the different grave types could not be given. Usually it was not known how old the individual tombs were. In some cases, the building material used provides an indication.



Fig. 12: Graves of type 2 near the ritual place in Tarung, Waikabubak (photo: Knut Rassmann).



Fig. 13: Graves of type 3 in Parona Baroro, Kodi (photo: Knut Rassmann).



Fig. 14: A type 4 tomb in Tarung, Waikabubak (photo: Knut Rassmann).



Fig. 15: A grave of type 8 in Mamodu, Wanokaka (photo: Maria Wunderlich).



Fig. 16: A grave of type 11 in Pasunga, Anakalang (photo: Knut Rassmann).



Fig. 17: A grave of type 14 in Wainyapu, Kodi (photo: Knut Rassmann).



Fig. 18: One of Sumba's largest graves (type 16) in Anakalang (photo: Knut Rassmann).



Fig. 19: A stele placed next to a type 4 grave in Mamodu, Wanokaka (photo: Knut Rassmann).

For example, the graves were traditionally built from locally-available rock, whereas in recent times concrete and/or cement is increasingly used, which makes these graves relatively new. However, the use of stone was never abandoned, whereby no clear chronological sequence of the graves can be read from the building material used either. Only the sizes of royal tombs could partly be classified according to their age. In Uma Bara (see chapter 5.1.13) all of these tombs could be assigned to specific persons. In Pasunga (cf. chapter 5.1.6) the age of the large graves was estimated to be up to 500 years. Consequently, in the presentation of the individual villages there is no temporal classification of the tombs. Only types 2 and 3 are called dolmens of old and new types. In addition to the actual tombs, some stelae were also erected, which are then attached to the tombs (Fig. 19). The stelae have no particular significance, although they are usually decorated over a large area and represent a significant increase in costs throughout the entire construction process. Accordingly, they point to the economic situation of the builder and are to be seen as a sign of his high status.

All monuments were photographed, measured, their orientation was recorded and any decorations were also documented photographically. All documented tombs of the ten villages visited can be found in a database (digital appendix: databases). The location of the graves was documented by means of simple GPS markings. With the help of freely accessible satellite images (Google Earth) and maps of the location of the houses and tombs and their affiliation to certain clans, detailed plans of ten villages considered here can be presented. These plans can be found as figures, whereby the IDs given there (as well as in the following illustrations) correspond to the internal village IDs of the database. Furthermore, the association of the individual tomb monuments with individual clans or individual *Umas* could be determined in most cases and can also be found in the village plans and descriptions.

In addition to documenting the graves, a semi-structured, guideline-based interview was conducted in many cases. The guide for the interviews, as well as the transcripts of the villages presented here in Sumba can be found as a digital

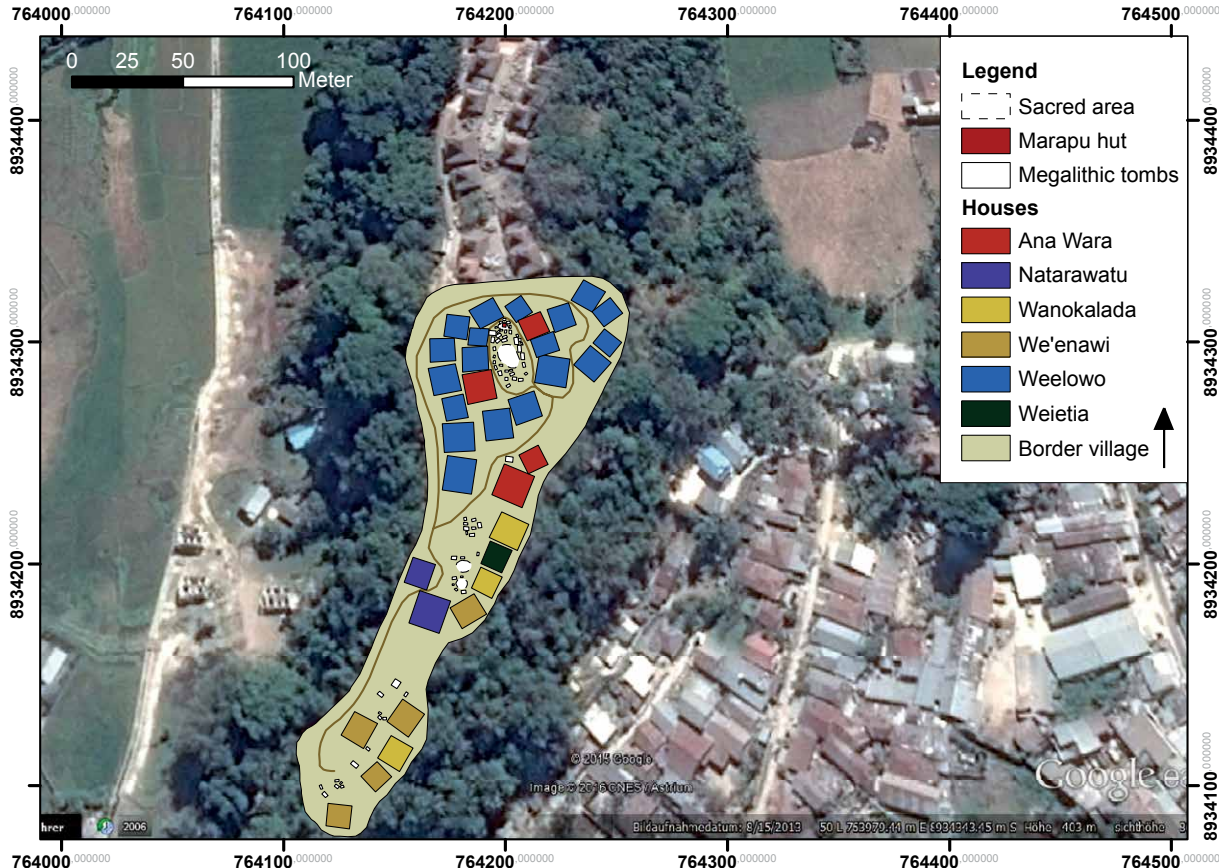
appendix (transcripts). This type of interview was chosen because it was assumed that all informants could probably only be interviewed once due to the limited time in the field. In these cases, a guideline-supported, semi-structured interview is a good solution, because on the one hand it makes it possible to respond individually to the respective informant and thus take individual particularities into account, and on the other hand, at least in part, it allows the qualitative data to be compared based on the partly standardised questionnaire (cf. Bernard 2006, 212). In the field, the help of a translator was used to translate the questions from English into Indonesian or local dialects. The interviews were conducted in some villages with individual persons, but often also with smaller groups of persons. The interviews were transcribed and anonymised for evaluation.

### 5.1.4 Tarung (Waikabubak, Loli)

Tarung is one of the most important villages in the area around Waikabubak. It is a traditional ancestral village, which, due to the growth of the town, is now located in the middle of Waikabubak. The data recording in Tarung took place on 06.08.2015. The location of the village itself is on a hill (Fig. 20).

Tarung is located in the immediate vicinity of several other villages. Located directly to the north of Tarung is the village Waitabar, with which Tarung not only shares a close position but also close kinship ties. In addition, there are other villages such as Bondo Ede on other hills in the vicinity. These villages are partly to be regarded as satellite villages of Tarung and are also closely connected with it.

Fig. 20: The ancestral village Tarung. The clan affiliation of the individual houses is marked in color (satellite image: Google Earth).





### 5.1.4.1 Village plan

Tarung itself can be divided into three village sections, which are relatively independent of each other. The village area covers about 1.65ha and is limited in its

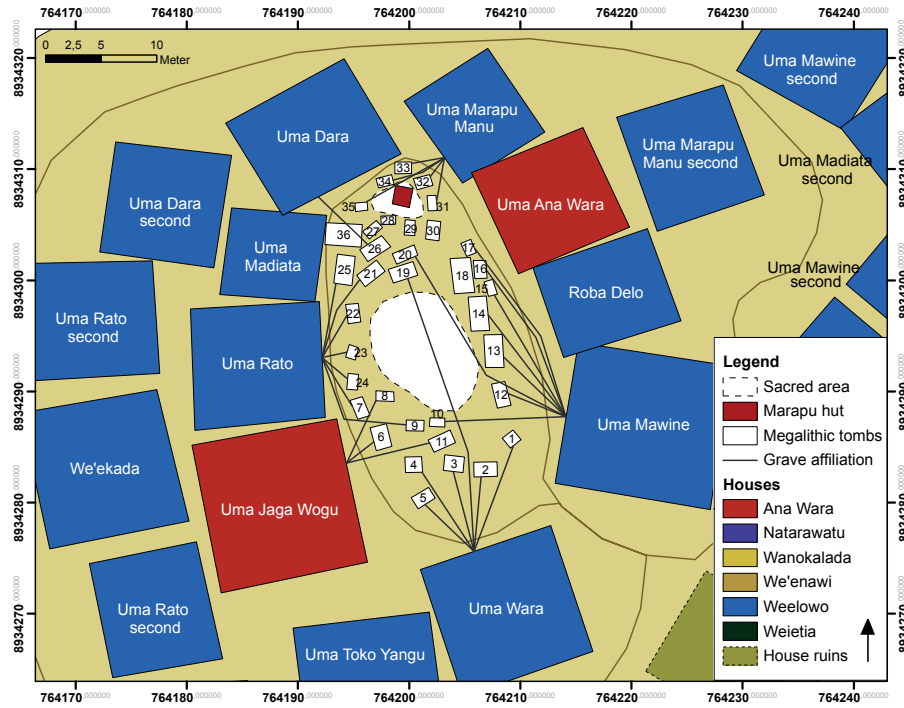


Fig. 21: The central area within Tarung. The surrounding houses are the ancestral houses of the most important clans in Tarung.

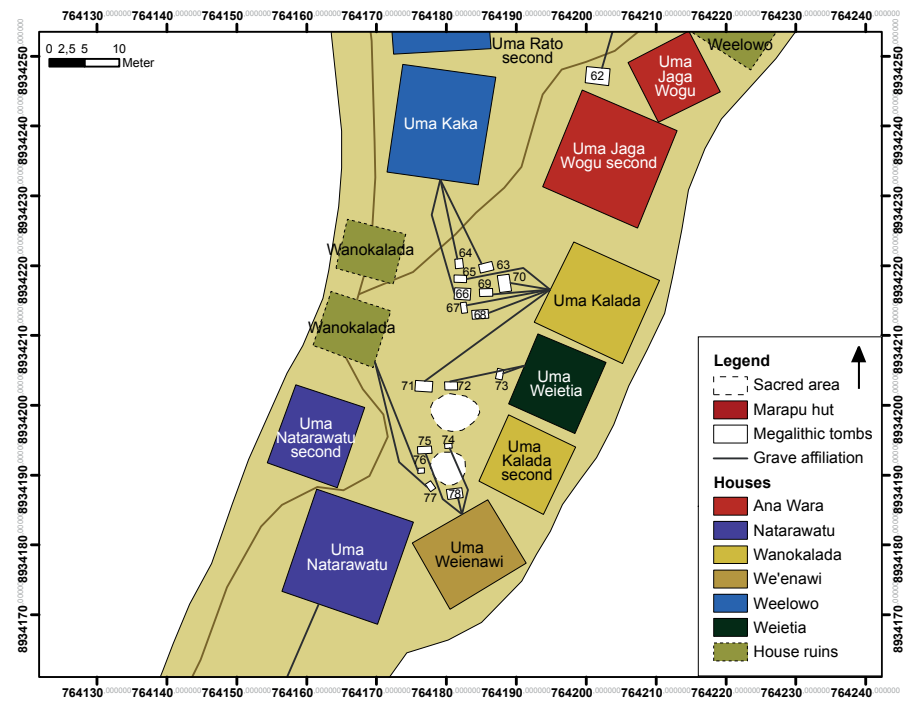


Fig. 22: The middle section of the village within Tarung. The clan affiliation of the individual houses is marked in color.

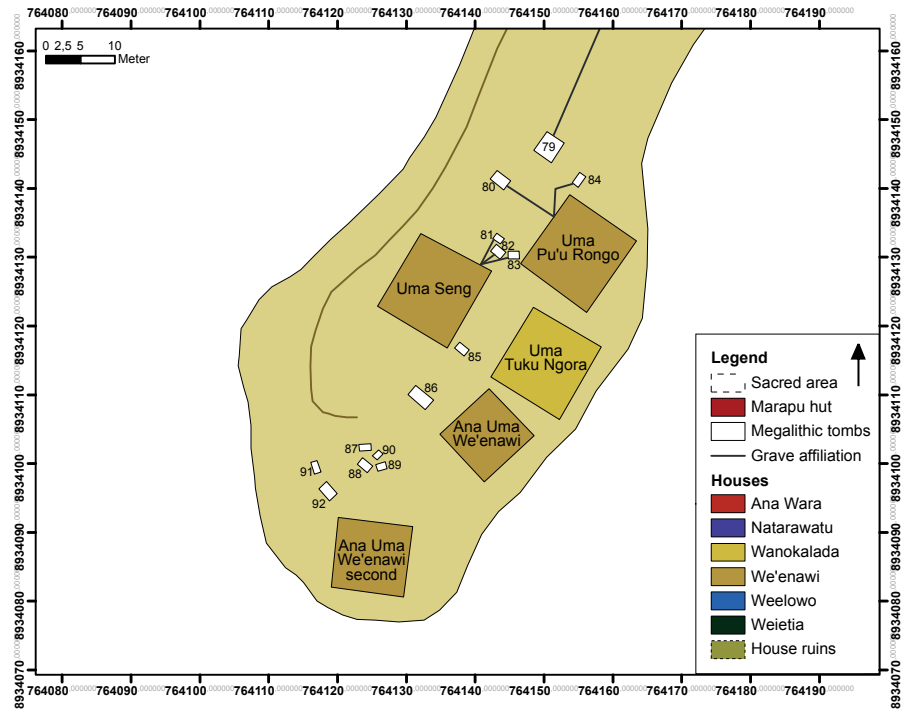


Fig. 23: The southern part of Tarung. The local clans were described as the least influential in the course of the interview.

growth by the borders of the hill and extension Waikabubak. The oldest and most important part of the village lies in the northern area and is easily recognisable by the circular arrangement of the houses around a central square. The houses in the inner circle are the oldest in the village: among them are the main houses of the two oldest clans, Weelowo and Ana Wara. Around these ancestral houses of the different families are the second houses of the same clan. The central importance of this part of the village is also clear from the location of the sacred area and the *Marapu* hut. All ceremonies and rituals take place in this area, including the central celebrations in October and November, which mark the beginning of the (agricultural) economic calendar. On this occasion the inhabitants of all villages connected with Tarung will come to this place. Between the sacred area and the main houses are some of the megalithic tombs. The graves of the different families are always assigned in relation to the ancestral houses. It is irrelevant whether the family concerned actually lives in this house or not (Fig. 21).

The graves are remarkably close to the houses in question, whereby there is a direct connection between the two. Further south are the main and second houses of the remaining four clans (Natarawatu; Wanokalada; We'enawi; Weietia) of Tarung. In the second part of the village they are arranged around a central square, which also includes two smaller sacred areas. Around them, as well as in a second cluster, are the tombs of these houses (Fig. 22).

Finally, the third part of the village comprises only a small number of houses and graves, mainly belonging to the We'enawi clan. This clan settles as far as possible separated from the central area of Tarungs. However, the assignment of the megalithic tombs is not completely clear (Fig. 23); however, it is highly probable that all graves erected there belong to this clan. Three more groups of graves are finally found at the foot of the hill on which the village was built. In these areas there are mixed graves of each clan.

The spatial distribution of the grave types within Tarungs seems to reflect at least partially the meaning of the types concerned. In the central area of the Tarung, which is on the one hand the oldest part of the village and on the other hand the

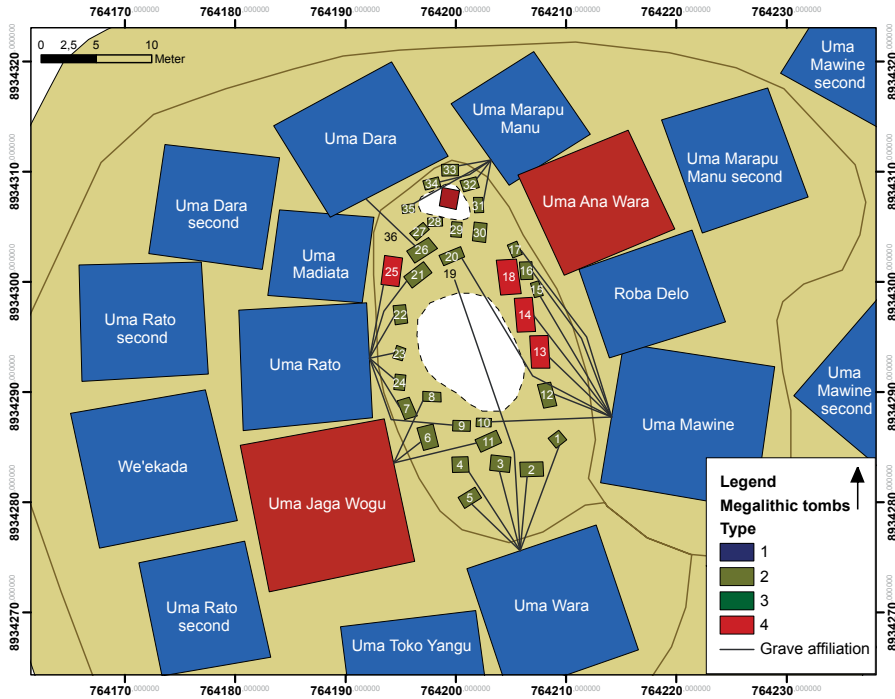


Fig. 24: The grave types located in the central village area of Tarung.

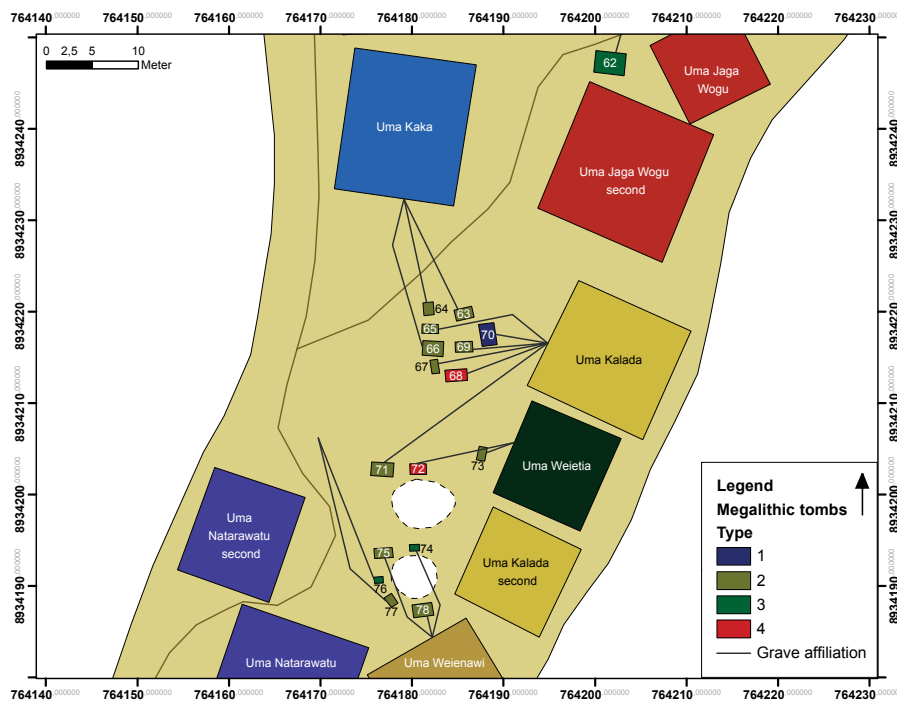


Fig. 25: The grave types located in the middle part of Tarung.

ritual area, the *Marapu* hut, as well as the oldest ancestral houses of the village, are exclusively graves of type 2 and 4 (Fig. 24).

Type 4 in particular represents a special type of grave, the construction of which is associated with a particularly high economic expenditure and is highly valued in terms of the status of the builder. The other type 2 tombs are probably the oldest type of dolmen and certainly represent part of the early construction activities within Tarung.

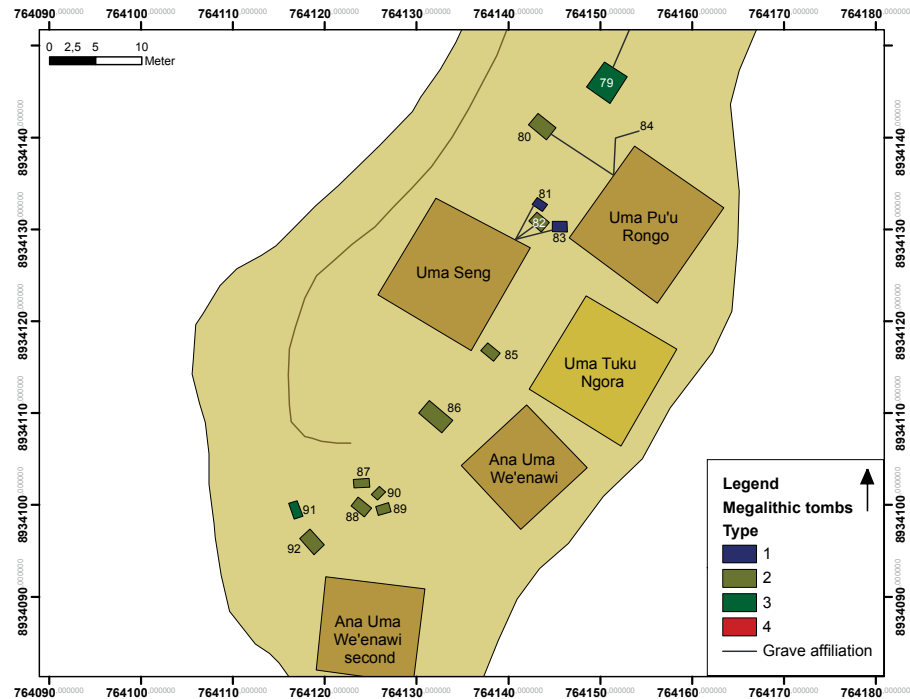


Fig. 26: The grave types located in the southern area of Tarung.

In the other part of the village there are a smaller number of graves, which are of four different types. Besides the two types of graves – which can also be found in the central part of the village – there are also simply grave slabs and new closed dolmens built of concrete (Fig. 25).

On the one hand, this reflects the successive expansion of the village area, in which later also newer grave types were built. On the other hand, the stone slabs – which are very easy to erect – seem to be placed only outside the particularly important central square of the village.

No more type 4 graves can be found in the lowest and most recent area of Tarung (Fig. 26). This seems plausible, since the clans resident in this area were described as least wealthy during the interview. Therefore, the absence of type 4 graves is understandable here.

#### 5.1.4.2 Interviews

The interview took place on 6<sup>th</sup> August at 'Uma Mawine' in Tarung and lasted 70:46 minutes. Since the informant spoke good English, no translator had to be called in.

#### The village

The structure of the village is determined by the fact that the main houses always stand in front of the younger houses. All inhabitants of the village are regarded as at least loosely related, which is especially true for the older houses in the centre of the settlement. These come from two clans, while seven clans are represented throughout the settlement. Each clan has its own priests who perform all rituals together. Weddings are not allowed within a clan, but weddings with members of another clan of Tarung are. Polygamy is generally permitted for men, but quite unusual, while this is forbidden for women. Widowed women may also marry only one brother of their deceased husband. It was reaffirmed that the rules of marriage in particular have undergone major changes and are now less strictly applied. However, the taboo, after which marriage within a clan is forbidden, continues to apply. Due to the spatial limitations of Tarung, its extension directly to the existing

village is hardly possible anymore and so houses outside the village are also counted as Tarung. Especially newly married couples who cannot stay in Tarung due to lack of space or inheritance rights either move to another existing village or found a new one. While these villages sometimes have their own names, the strong bond is evident in the fact that their inhabitants always come to Tarung for the ceremonies in October and November. In these months the most important ceremonies take place, which are connected with the beginning of the year in December. During this time, thanksgiving feasts and the baptisms of newborn babies take place. Festivities connected with the construction of megalithic tombs and smaller rituals outside the festive season are usually carried out in the new villages.

In general, the inheritance rules are flexible in Tarung. Accordingly, animal populations can be distributed to the children: this serves – among other things – to reduce inheritance disputes. Inheritance is primarily to male offspring, female children will inherit significantly less often, although this cannot be ruled out.

### **Specialists**

Different specialists were mentioned, which occurred or still occur in Tarung. However, all specialists are also farmers at the same time and should therefore not be regarded as fully specialised workers. The first special social role mentioned was that of the traditional priests. This is closely related to shamans, but both have different roles. While the shaman has been described as a healer, the priests' sphere of responsibility is clearly limited to ritual and religious tasks. The social standing of the priests (*Rato*) generally exceeds that of the other villagers, including the shamans. However, priests can be found in every village, possibly even in every main house. This priest is headed by a main priest, the *Rato Rumata*. The other priests have their own names, which are derived from the house to which they belong.

The processing of the stones for megalithic tombs and the construction of them was described as a specialised craft. This also applies to the decoration of the stones. It was stated that many of the young men could make the ornaments themselves in Tarung, since the new monument types are made of cement. However, some time ago, when rock was still being used, the specialists were paid for their work and fewer men were able to do it.

The last group of specialised workers described were blacksmiths and jewellery manufacturers. Here again, a development from a few competent individuals to a broader mass of possible manufacturers was described. In addition, these items, such as knives, are no longer produced in the village, but purchased at the market.

### **Funerals: rules and taboos**

For funerals in general and those in megalithic graves in particular, some taboos and rules have been described. Thus, no rituals may be held for persons who have died in October or November, since this time of dying is seen as a sign of missteps by the deceased. Although these people are buried, they are buried without the expressions of grief and the usual slaughtering of pigs or buffaloes. This can only be done from December onwards, after the family has made small sacrifices to twelve houses. The construction period for megalithic tombs was described as the post-harvest period, between May and early October, as there is less work to be done during this period. A time limit for the construction of megalithic tombs and houses is set by the beginning of the time for ceremonies between October and November. However, this rule only applies to cement graves to a limited extent, as they can be completed within one week. The construction of a stone grave, on the other hand, can take weeks or months. The burial in a grave is essentially done according to family affiliation. An exception to this rule can be made if a family cannot afford its own megalithic tomb. In this case, a deceased can be temporarily buried in another

family grave, whereby the place is then 'borrowed'. A price must be paid for the place and the grave may then be subdivided into segments to avoid leaving any unrelated persons lying next to each other. After the family of the deceased has erected their own grave, the cleaning of the grave must still be paid in such cases. Single graves are unusual and are only built if a deceased person insisted on such a funeral during his lifetime. Usually at least one family will be buried in a grave: this includes not only parents and children but also grandchildren. Married women are always buried in the grave of their family in-law.

### **Grave goods**

No information was given on the customary of grave goods.

### **The grave types and the size of the graves**

Regarding the different grave types, no information on chronological differences could be given during the interview, since the megalithic-building tradition is too old to distinguish the different types according to their age. However, it was noted that the capstones placed on supporting legs (type 4) can mainly be assigned to priests. At a later time of recording in Tarung, this type was described as Anakalang style. It was said that people emigrated from Tarung to Laitarung, Anakalang. Further special features regarding grave types and certain burial rules regarding grave types have not been described.

The size of the graves was clearly described as dependent on the economic background of the respective family. If a megalithic tomb can be attributed to a rich family, it will usually be large, as this family can afford to build such a tomb. Which quarry area is used and which type of grave is built ultimately depends on the preferences of the builders and will thus be enforced, regardless of any higher costs.

### **Ornamentation**

The decorations on the tombs in Tarung follow various symbols and meanings, some of which coincide with decorations on the posts of houses and are also used as decoration on woven textiles and bags for betel nuts. The symbolism coincides with different aspects of life. For example, certain jewellery or the objects used to offer betel are shown on the graves. A common ornament is zig-zag lines and wave patterns that stand for the course of life. Three other common symbols are pieces of jewellery called *Maraga*, *Mamuli* and *Tabelo* (Fig. 27).

*Maraga* is worn as a necklace, while *Mamuli* are certain earrings. *Tabelo* is used as a headdress. On the symbolic level, *Mamuli* stands for fertility and is regarded as a symbol of femininity. *Mamuli* is presented by the future husband to the wife at the wedding to bring happiness and fertility. *Maraga* is also a symbol for women, while *Tabelo* is a symbol of masculinity and symbolises horns.

### **Location of the monuments**

The megaliths belonging to Tarung can be found both inside and outside the village. The reason given for the construction outside the village was a lack of space. For this reason, the possibility of building a megalithic tomb in a public place was created early on. This possibility applies to all inhabitants of the village. This public square is located at the foot of the hill on which the village stands and also includes tombs of the villages Bondo Ede and Praikalimbu. Beside this place there are some more graves within Waikabubak, on the market place. Whether a monument lies outside or inside the village has been described as equivalent, whereby there are no differences in status or the like.

As can be seen from the village plan, the megaliths can be found within Tarung mainly in central areas. This circumstance is connected with the idea that the graves

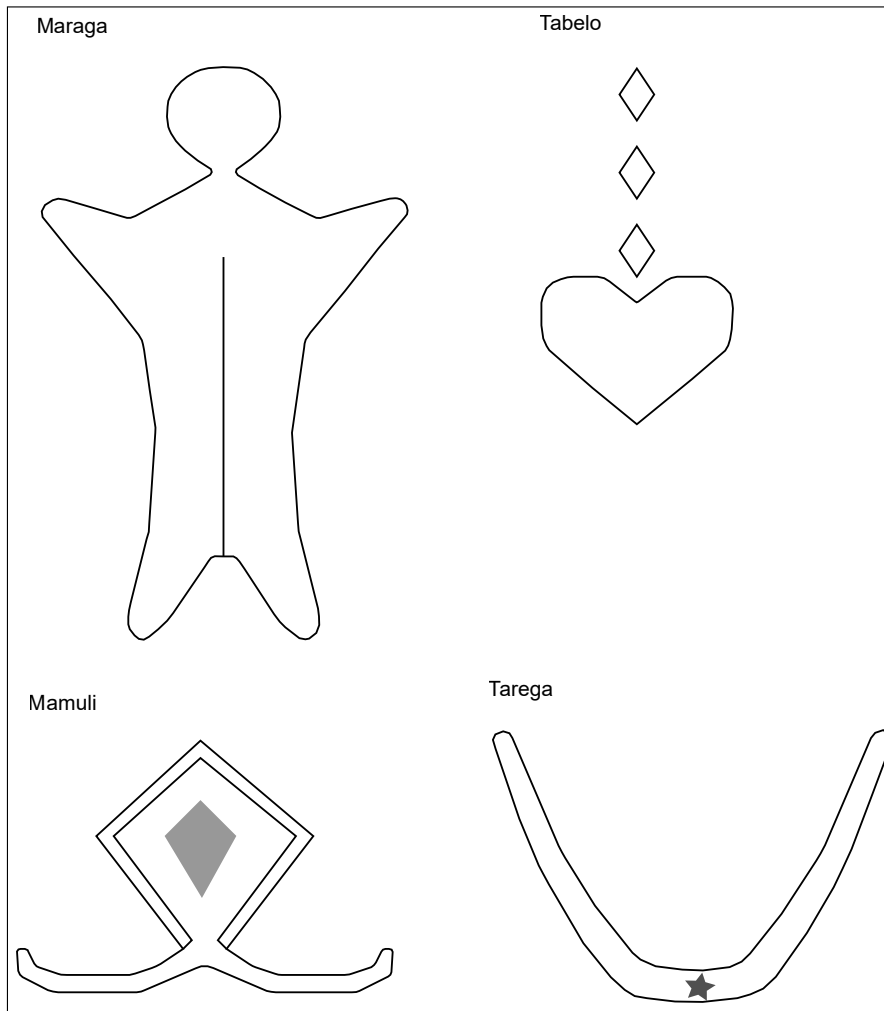


Fig. 27: The traditional symbols: Maraga, Mamuli, Tabelo and Tarega.

can be regarded as a second house. The graves were described as signs for the future that should remind all living people that they will one day die and that they should be as good as possible in their lives. The integration of the monuments into everyday life illustrates the mortality of the living. The monuments also serve as a reminder of the deceased and who they were. In addition to the memory of the dead, the symbols attached to the graves were described as a memory of the traditional culture of Tarung. Another reason for the situation within the village was the easier maintenance of the tombs, if they are located directly at the houses of the relatives.

### Worship and rituals

While no special rituals related to the megalithic tombs were mentioned, it was described that gongs *etc.* would be played on the tombs at night. As a result, the graves are integrated into the events in the village, especially in connection with ceremonies, as well as feasting activities and the related nocturnal activities. In addition, a stone located on the western side of the ritual area was described as special: it was not allowed to be measured. When pigs are slaughtered, parts of the slaughtered animals are placed on this stone, which directly involves the grave in ritual acts.

### The quarry areas

One of the quarry areas used for the stones is only about 2km away from Tarung. Stone is still quarried there, both as a normal building material and for the construction of the megalithic graves. The area belongs to a family that has to be paid for its use. This applies in addition to the costs for the workers who mine the stone. Another used quarry area is located near Tarimbang, approximately 70km from Tarung. The use of this area is significantly more expensive, as the transport route is longer. The stones themselves have not been described as of higher quality and the costs of quarry are no higher than for the stones of the nearby quarry area. The use of Tarimbang stones was described above all as a certain form of prestige resulting from the high transport costs mentioned above.

### 5.1.4.3 Statistics: grave types and their affiliation

Altogether 144 tombs could be documented in Tarung, which are located at different places within the main village or the adjoining houses, or at different places outside the village. At the same time, other tombs, some of which have fallen into oblivion, may be scattered that could not be documented. The graves recorded can be divided into four different types, but 21 exemplars could not be assigned to any type (Fig. 28).

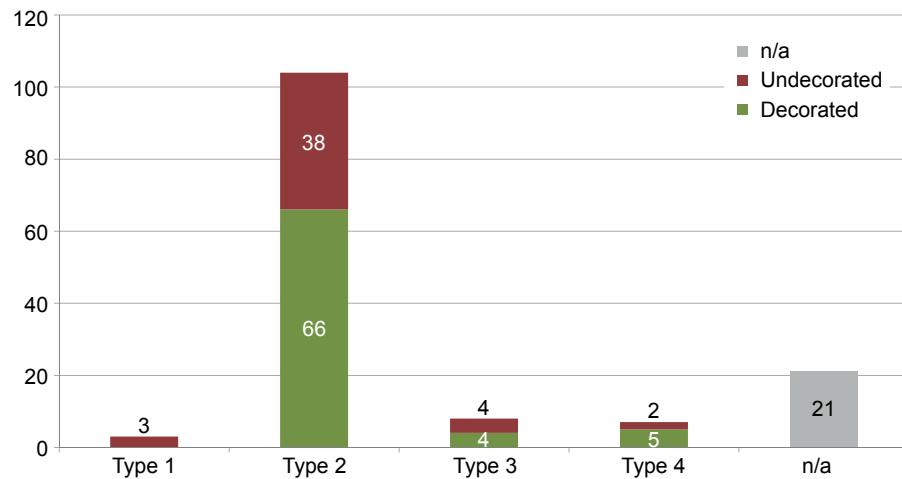


Fig. 28: The different grave types represented in Tarung.

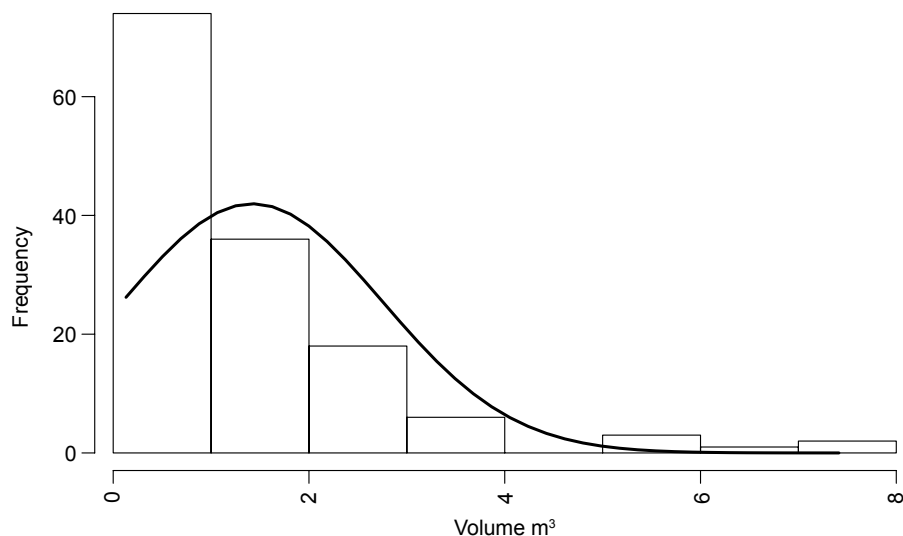


Fig. 29: Histogram of the volume (m³) of the tombs in Tarung.



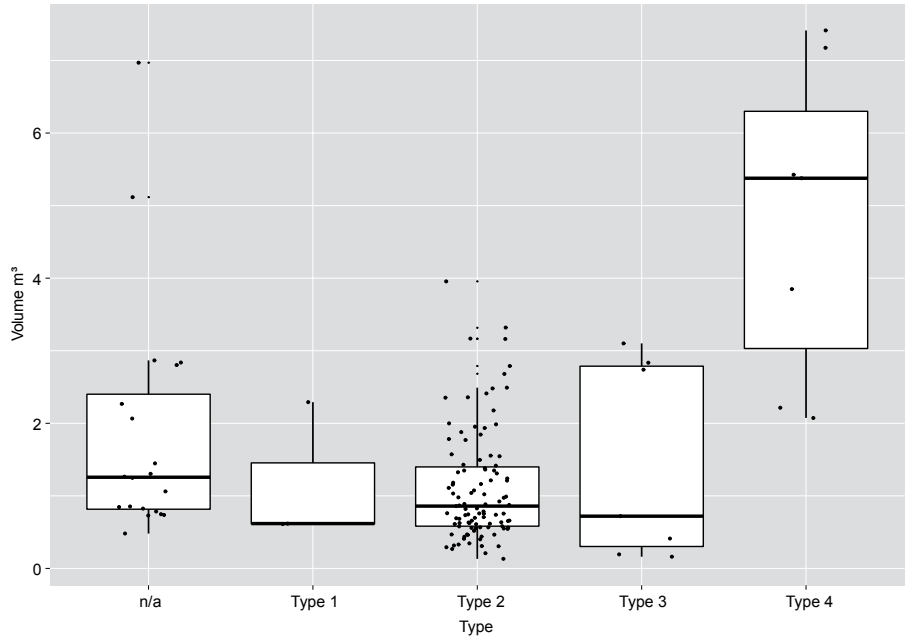


Fig. 30: Boxplot of the volume (m<sup>3</sup>) of the tombs in Tarung with consideration of the type.

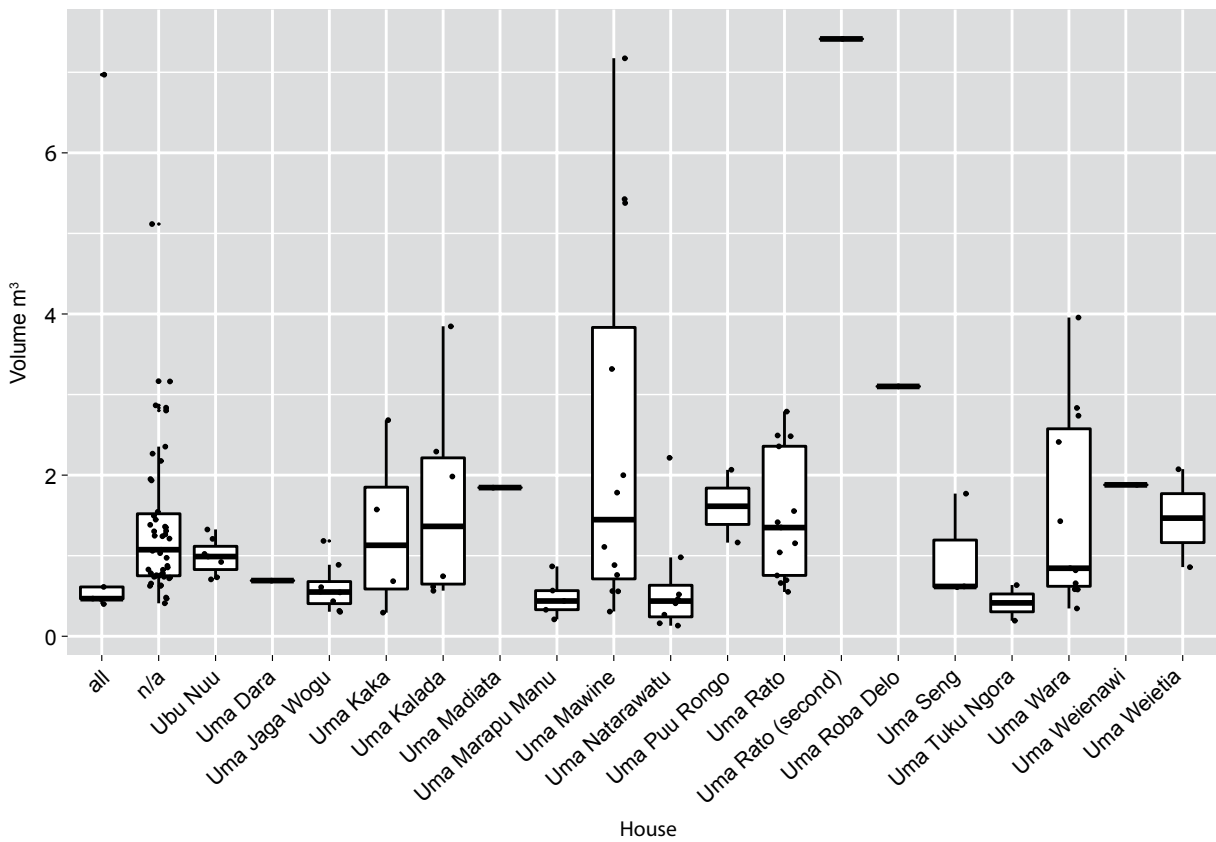


Fig. 31: Boxplot of the volume (m<sup>3</sup>) of the tombs in Tarung with consideration of the house affiliation.

The most common form of burial are the closed dolmens (type 2 and 3; n=112) made of stone or cement, which occur both decorated and unornamented. Of all other grave types there are only very few tombs. These include the simple stone slabs (type 1; n=3), which are also the only type that only appears unornamented. Finally, capstones lying on supporting legs with an underlying dolmen (type 4) are also rare

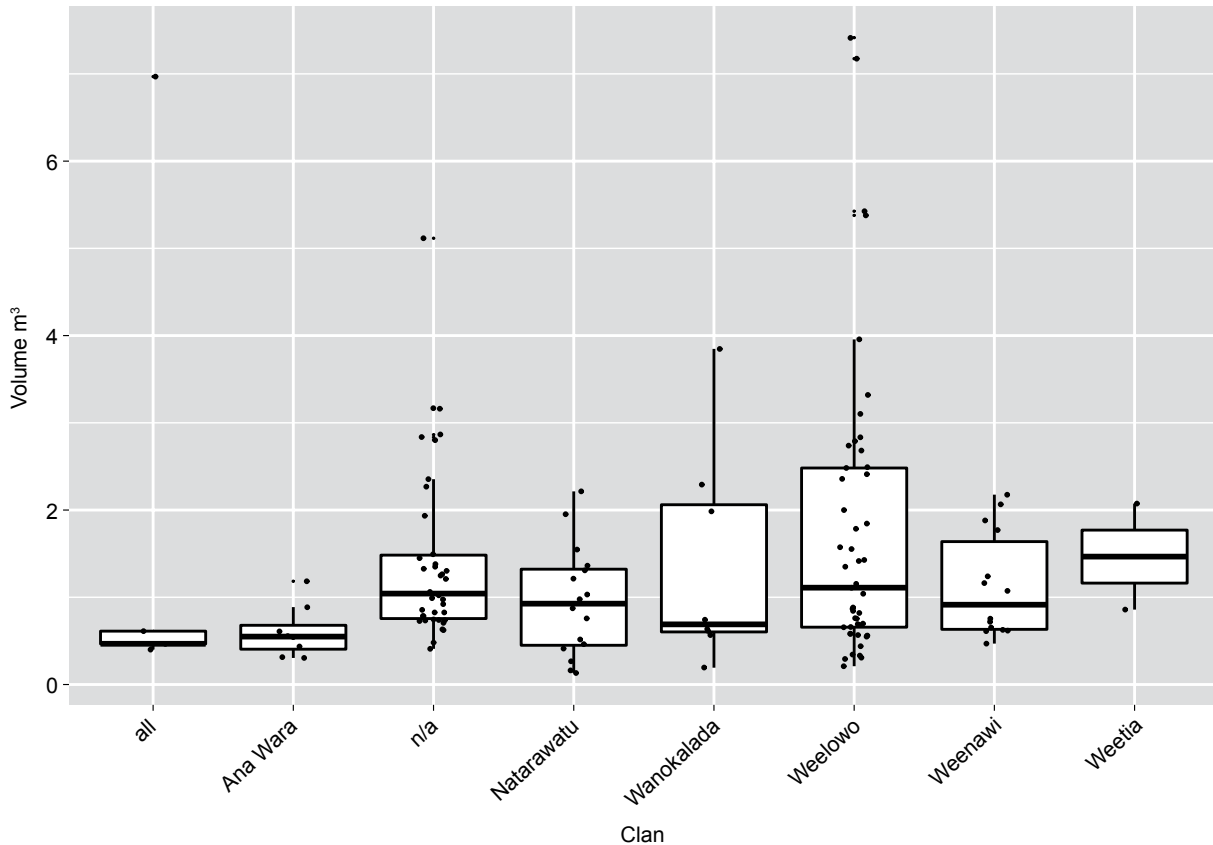


Fig. 32: Boxplot of the volume ( $m^3$ ) of the tombs in Tarung with consideration of the clan affiliation.

( $n=7$ ). The types are mixed in the clans and houses represented. The volume of the graves is not normally distributed, as is visible in the distribution curve (Fig. 29).

This distribution is mainly related to the type 4 graves, which have a large volume due to their open construction. However, all closed graves are within the expected values and follow a normal distribution. This can also be seen in the box plot broken down according to the type of graves (Fig. 30).

Only some graves of unknown type, as well as graves of type 4 show an extraordinarily high volume. The smallest tombs are, as expected, the simple stone slabs, followed by the closed dolmens made of stone. However, there are a few outliers. The new dolmens, which are usually built of cement, are generally larger but overall rather uniform. Taking into account the different main and second houses, there are clear differences (Fig. 31). This concerns both the number of graves per house and the size of the graves. A similar picture results from the examination of all graves per clan (Fig. 32).

The clan with the largest tombs is Weelowo, which is also one of the two oldest clans in the village. Four of the seven type 4 graves, which, as already described, are the largest burial monuments, can also be assigned to it at the same time. Only the Wanokalada clan has built tombs of a similar size. The remaining clans are in a similar range of sizes. The orientation of the tombs of Tarung follows a rather uniform pattern and does not depend on the type of grave or the location inside or outside the village. However, in some cases, the orientation follows the existing conditions: the graves around the central square are arranged in a circle and thus follow different orientations. The vast majority ( $n=68$ ) of the tombs of Tarung follows an N-S orientation or slight variations of it ( $n=4$ ). The second largest group of graves ( $n=26$ ) faces north-east to south-west. With 22 graves each, alignments according to E-W and NW-SE are also common.

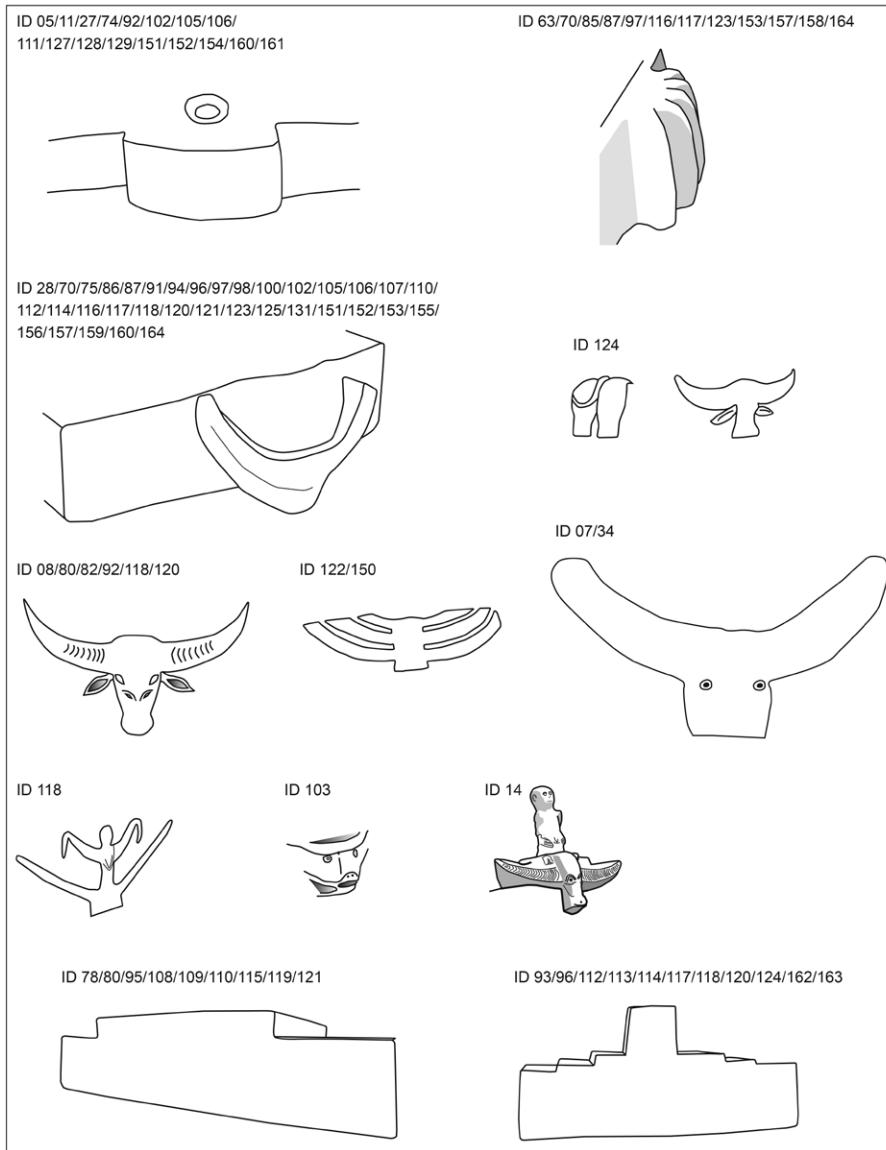


Fig. 33: The different sculpted ornamentations occurring in Tarung.

#### 5.1.4.4 Ornamentation

A total of 76 of the 144 megalithic tombs have ornaments that can be essentially distinguished between incised and sculpted ornamentations. By far the most common (n=38; 34 graves) decorations are attachments with plastic sculpted buffalo heads (Fig. 33), which are attached either to one or both narrow sides of the capstone.

This decoration is often combined with simple (n=18; 16 graves) or stepped (n=13; 12 graves) attachments of the capstones, which also occur alone. Two special types of these decorations are only represented once. It concerns a pig-like exemplar, as well as a worked-out buffalo, which contain the head at one narrow side and at the other narrow side the rear part. In some cases, the buffalo heads are also shown one above the other in multiple versions (n=4). Another common form of decoration are vertical extensions on the capstones, which can also be found on the two narrow sides. These occur in simple (n=13; 9 graves) and stepped and complicated form (n=18; 11 graves). Among the ornaments – which are also carved out of the stone and worked plastically – are buffalo heads, albeit

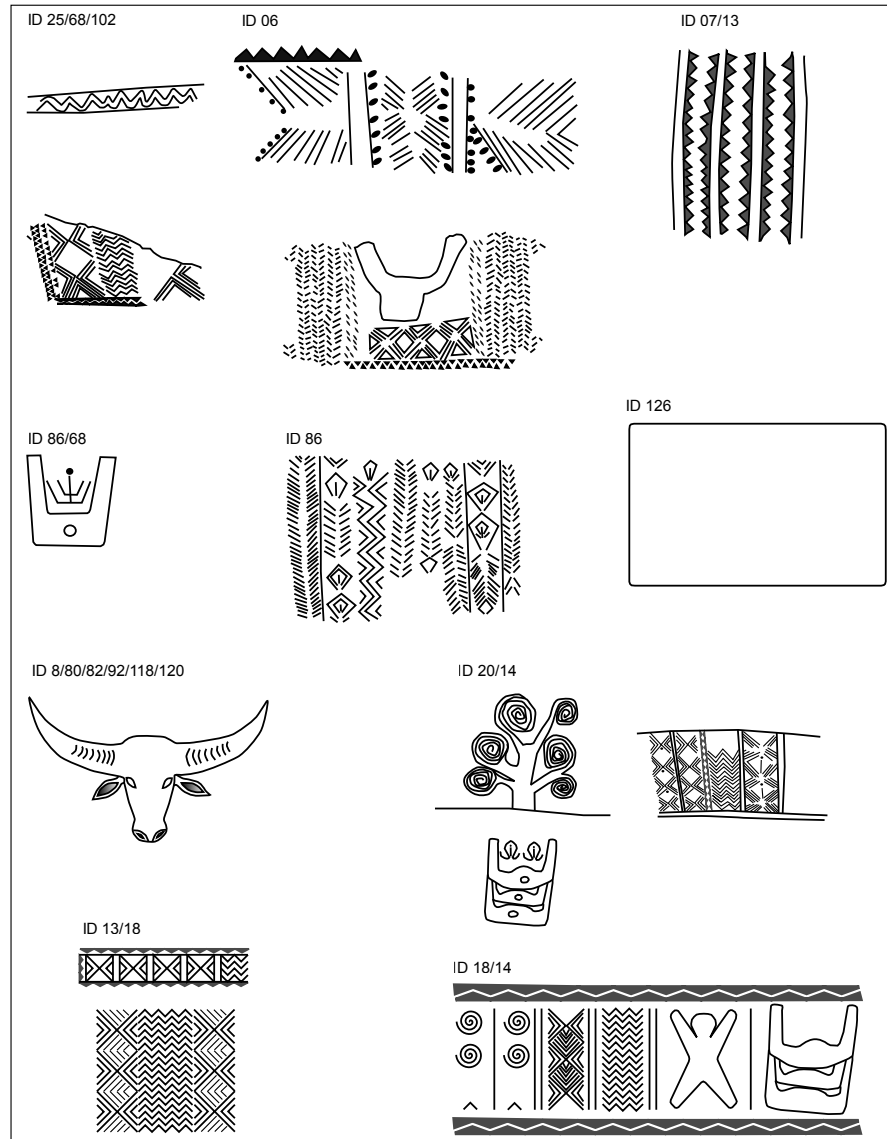


Fig. 34: The different incised ornamentations occurring in Tarung.

which are free-standing and are not bound to an attachment on the capstone. These rarely occur in 'cut off' form and mostly lying on the narrow side of the capstone (n=2; two graves). More frequent are free-standing and complete buffalo heads, which occur both at the narrow sides of the grave bottom parts, and at the capstones (n=7; 6 graves). The last type of decoration to be found on the tombs of Tarung are various motifs incised into the stone (Fig. 34). Relatively common are zig-zag lines described as symbols of life (n=5). Rarer are cross-like motifs, as well as incised horn symbols (n=1 or 2). In addition, complex carvings on capstones and pillars can also be found in eight cases: these are partly graves of type 4, as well as closed dolmens of type 2 (e.g. ID 18 and 86). Especially in these complex patterns, the different symbols of masculinity and femininity that were already described during the interview can be found.

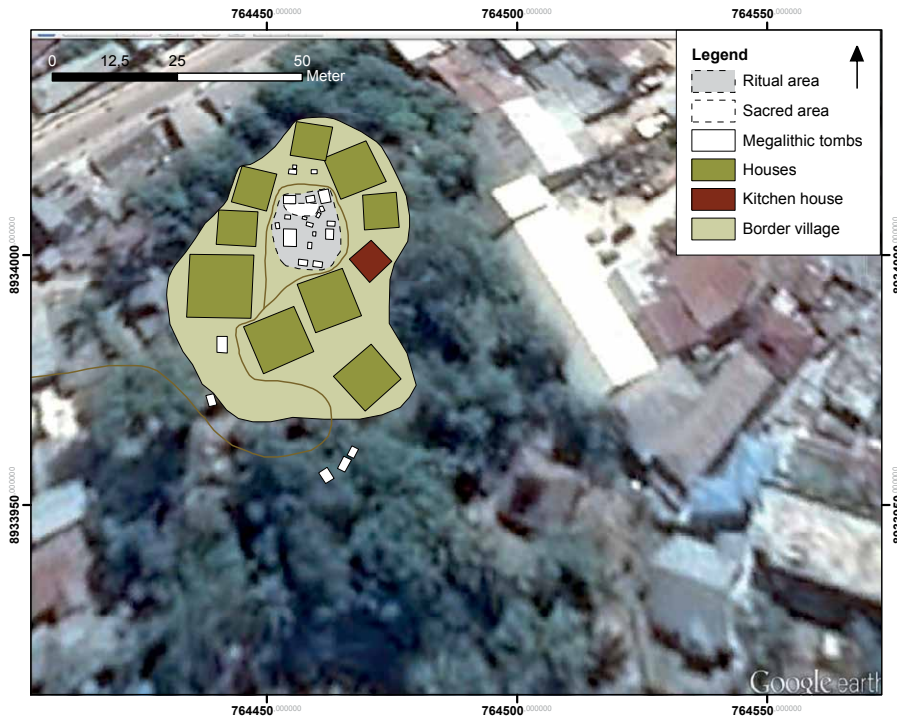


Fig. 35: The village of Wailiang in today's urban area of Waikabubak (satellite image: Google Earth).

#### 5.1.4.5 Summary

The investigations of the material in Tarung show some interesting aspects. On the one hand, it can be seen that the burial grounds have traditionally been established and hold particular importance within the village, but that they can be changed as required. The orientation shows no distinction according to grave type, location or similar. It is mainly the result of an adaptation to the local conditions. The decorations show a conspicuous accumulation of buffalo motifs of different shapes and complex carvings with motifs for wealth and fertility. These motifs are mainly related to grave type 4 and are a clear expression of the components that strongly influence the megalithic construction. That these are economic aspects was emphasised in the course of the interview. Wealth and the ability to win other families as supporters of the construction project are also the most important factors in terms of the choice of raw materials.

### 5.1.5 Wailiang (Waikabubak, Loli)

Wailiang is located in what is now Waikabubak, in the immediate vicinity of the villages of Tarung, Waitabar and Bondo Ede. Wailiang is a relatively small village with an area of 2.285m<sup>2</sup> (Fig. 35). Like the other traditional villages, Wailiang is situated on a small hill, slightly above the rest of the city. There are close family ties between the villages, but the We'ehole clan, which is present in Wailiang, is not represented in Tarung and Bondo Ede. During the recording in the village, work on a new megalithic tomb (ID 23) took place. The lower part of the dolmen was hollowed out and decorated, while the already finished capstone was ready to be put on.

#### 5.1.5.1 Village plan

The structure of the village follows a circular arrangement. All houses are arranged around the central ritual square, which includes most of the tombs, as well as the sacred area of the village. Due to the small size of the village, only

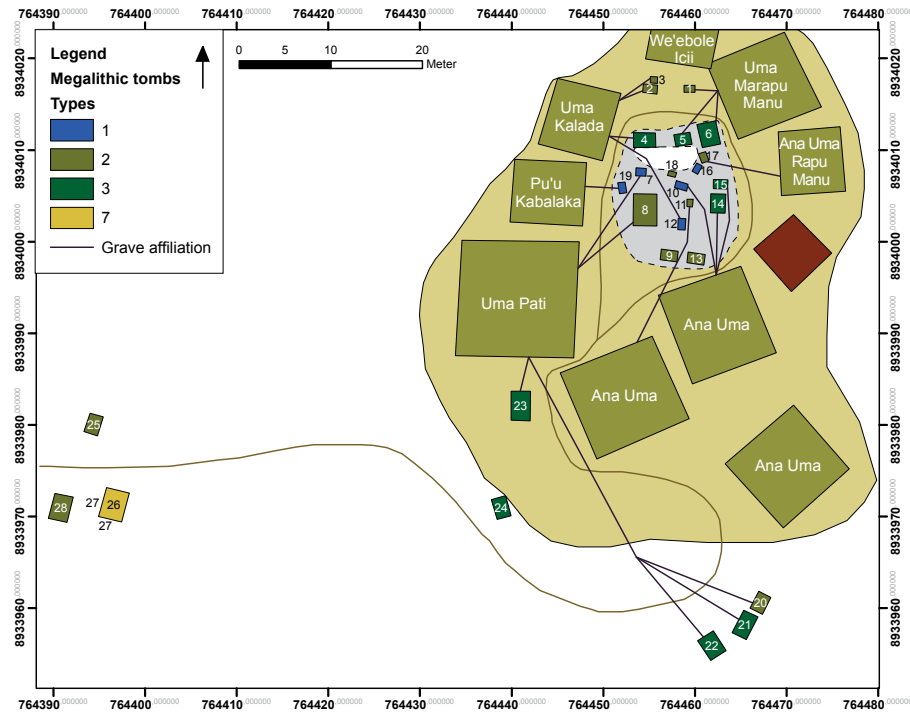


Fig. 36: The spatial distribution of the different grave types in Wailiang.

a few second houses are available: these include two of the houses belonging to 'Ana Uma', which are arranged in the immediate vicinity. There is also a kitchen building on the village grounds. Altogether, seven different families are represented in Wailiang, which all belong to the same clan. The tombs of the village can be found in the centre of the village as well as along the path leading down to the town of Waikabubak. The affiliation of the graves shows that megalithic graves can be assigned to almost all houses.

The spatial distribution of the different grave types in Wailiang, excluding the new type 7 (concrete dolmen), represents a mixture of all types represented in the village (Fig. 36).

Thus, both simple stone slabs (type 1) and closed dolmens made of stone (type 2) and concrete (type 3) can be found in the central area. Both types of dolmen can also be found throughout the rest of the village. The positioning of these isolated graves is mainly due to the lack of space around the central area of the village, which from a certain point in time no longer allowed the construction of new graves.

### 5.1.5.2 Interviews

There was no interview conducted in Wailiang.

### 5.1.5.3 Statistics: grave types and their affiliation

In Wailiang there are 28 tombs in total, which can be assigned to four different types (Fig. 37).

These include simple stone slabs (type 1), closed dolmens of stone and concrete (types 2 and 3), an externally tiled tomb (type 7), and a tomb of unclear type. Most of the tombs of type 2 ( $n=11$ ), type 3 ( $n=7$ ), as well as the tomb of type 7 are decorated. The simple stone slabs are undecorated. The volume of the graves follows a normal distribution after the Shapiro test, while the KS test shows that the data are not normally distributed (Fig. 38).

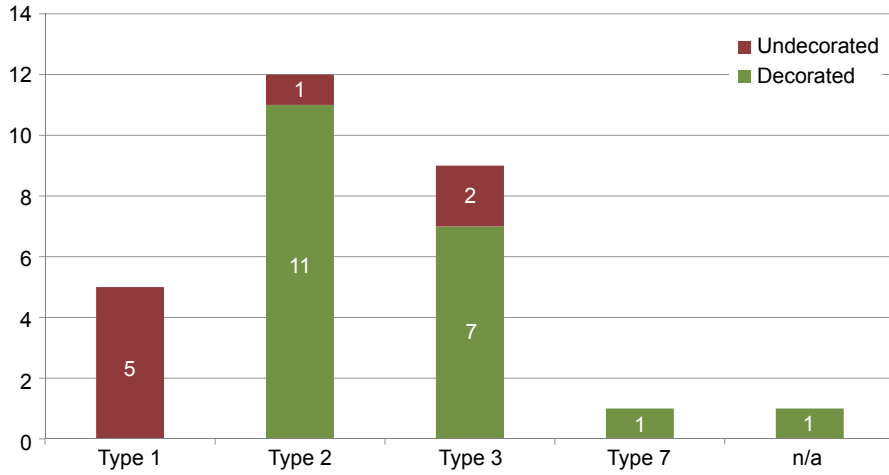


Fig. 37: The different grave types represented in Wailiang.

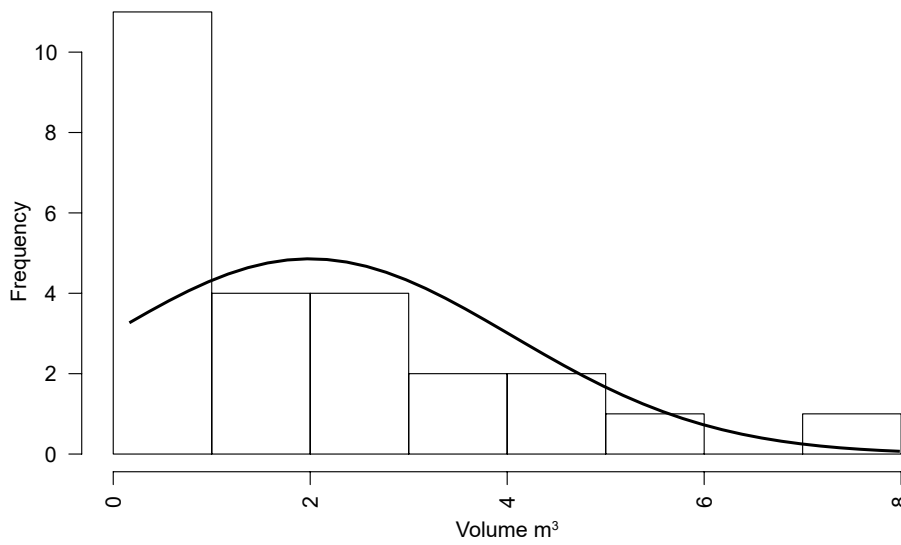


Fig. 38: Histogram of the volume (m³) of the tombs in Wailiang.

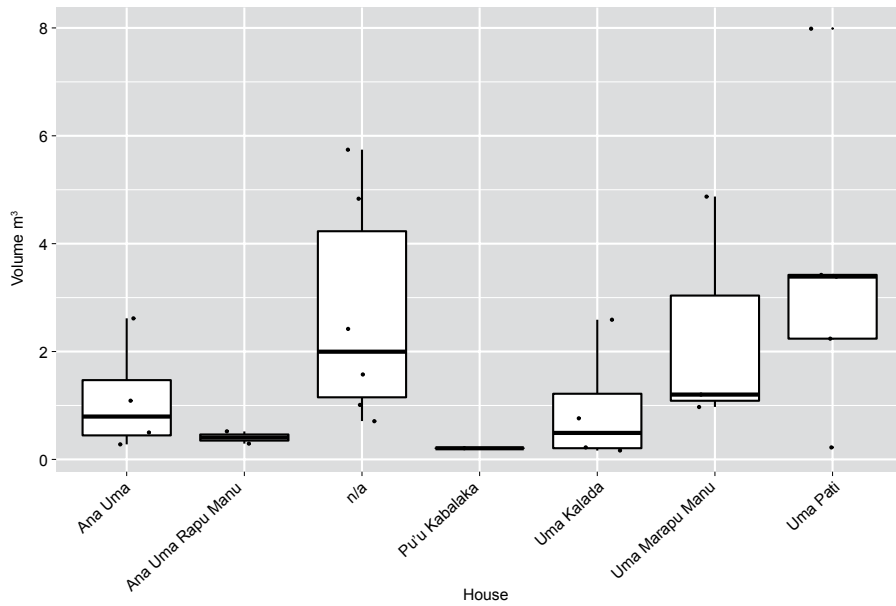


Fig. 39: Boxplot of the volume (m³) of the tombs in Wailiang with consideration of the house affiliation.

It is remarkable that there is a very large grave monument, which can be assigned to type 2. The remaining three largest graves belong to type 7, 2 and 3. The boxplot of the volume of tombs per house shows that although there are some differences in the number and size of tombs per house, there is no single house that would be particularly conspicuous (Fig. 39).

Moreover, some graves could not be assigned to a house, whereby the data situation is not quite clear here. However, it is striking that both 'Uma Kabalaka' and 'Rapu Manu' have only a very small number of small graves, while the other houses show both a larger number and a wider size span.

The orientation of the graves as a whole is quite inconsistent. The three most common orientations include an E-W, N-S and north-eastern orientation of the graves. These are represented in seven, six or five cases. The remaining tombs (n=7) are oriented to WNW-ESE, NW-SE, NNW-SSE and NNE-SSW.

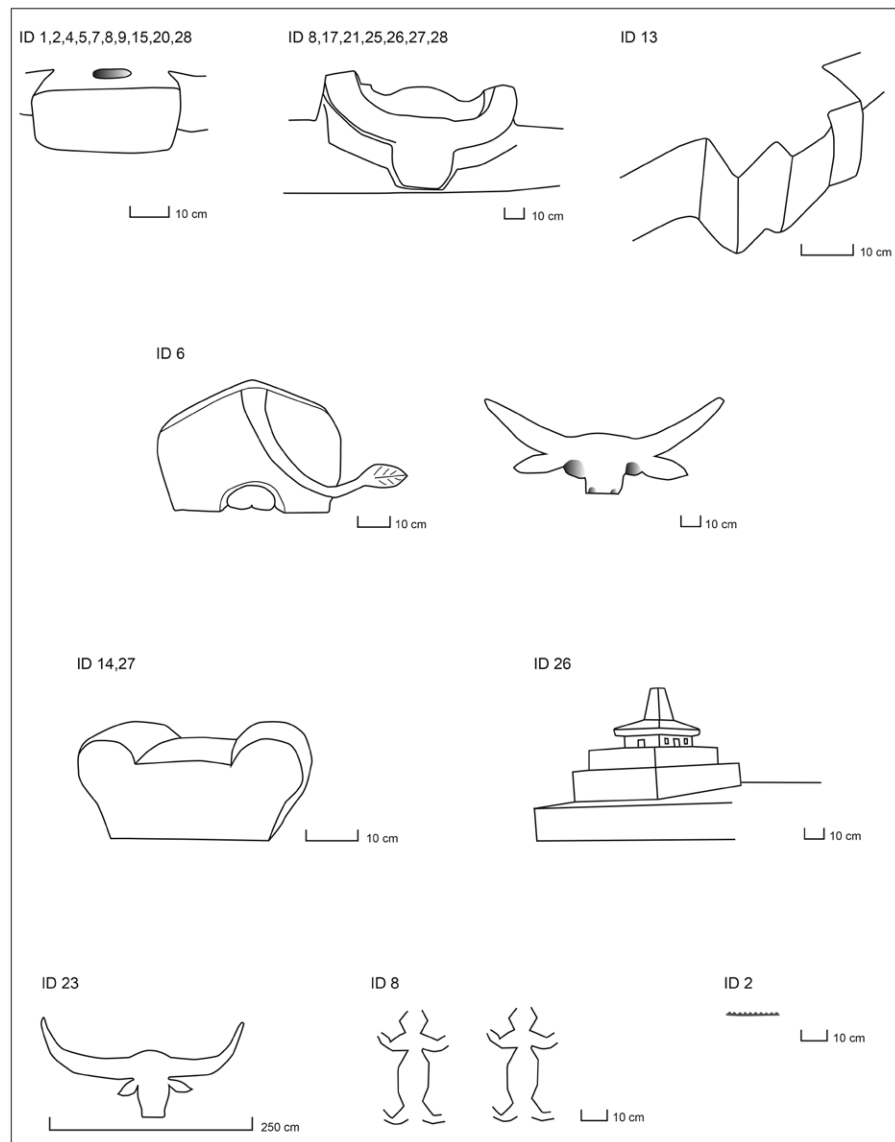


Fig. 40: The different sculpted and incised (ID 23/8/2) ornamentations occurring in Wailiang.



### 5.1.5.4 Ornamentation

The tombs of Wailiang are remarkably often decorated: only eight of the 28 graves are unornamented. The decorated graves mostly show very similar motifs. Incised decorations are very rare and only attached to two graves, both of which are of type 2 (Fig. 40).

Much more common are sculpted decorations of different motifs. Simple or graduated attachments are very common (e.g. ID 1 and 13, n=13). Attachments also include those decorated with a buffalo head and are also frequently represented (e.g. ID 8, n=7). Only once in the material a buffalo is represented, whose head is attached in front and its rear part in the back at the grave (ID 6). Structures of a special form are much rarer. These include stylised cow horns on the capstone and a house on the capstone (ID 14, 16, 27). Rarer than attachments, but nevertheless quite frequent (n=9) are simple and graduated vertical extensions on the capstones. Finally, free-standing buffalo heads carved out of the stone can be mentioned, which can only be found on tomb 23.

### 5.1.5.5 Summary

Overall, Wailiang’s material resembles that of Tarung in many respects. The ornamental motifs are very similar in both villages. This also applies to rare motifs such as the buffalo depicted with its head and back. Furthermore, the distribution of grave type in both villages is very similar. While the closed dolmens of old and new types (i.e. made of stone or concrete) are by far the most common, the stone slabs are among the rarest, as are the tiled dolmens. Overall, the size distribution shows some outliers, but the graves as a whole are rather normally distributed and show no clear differences in their allocation to the houses. There are differences, of course, but these are not striking.

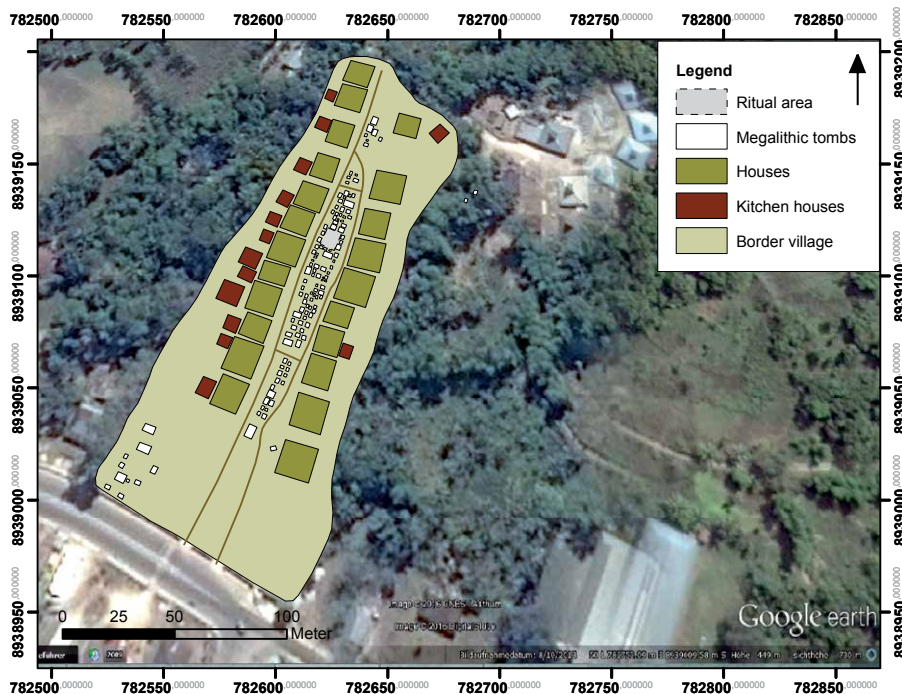


Fig. 41: The ancestral village Pasunga. The village Prairita lies to the north-east (satellite image: Google Earth).

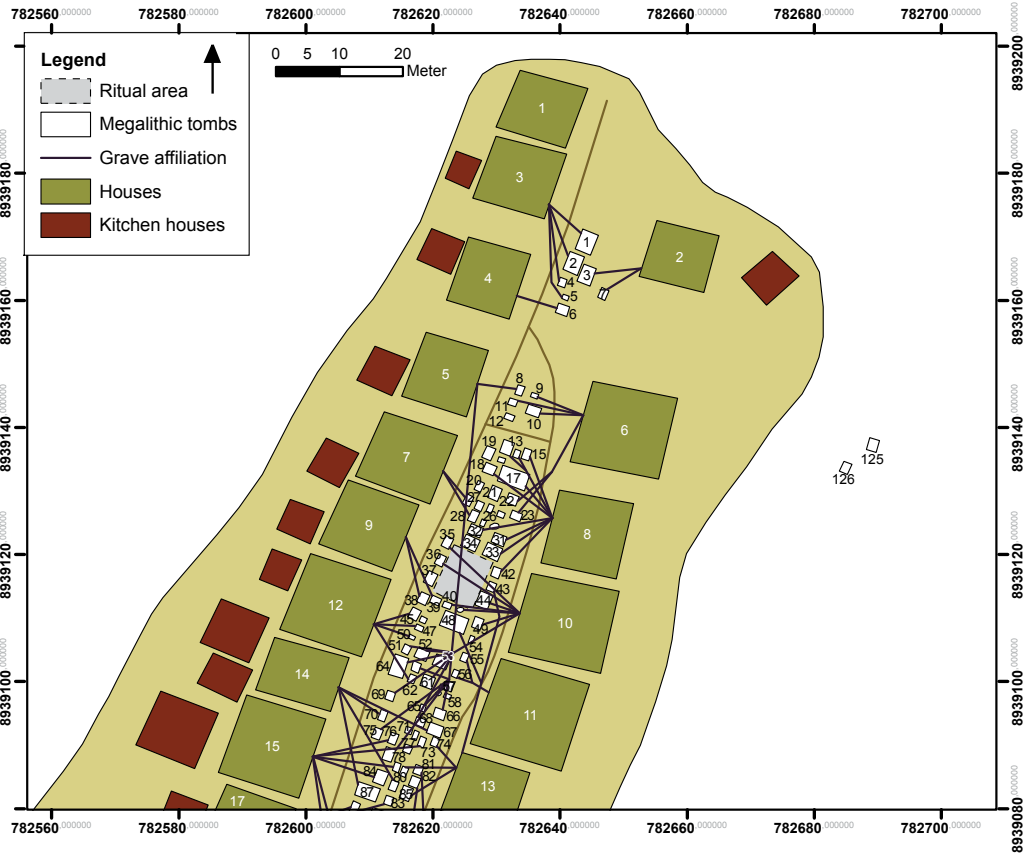


Fig. 42a: The northern part of Pasunga, including the ritual area and the house affiliation of the different tombs.

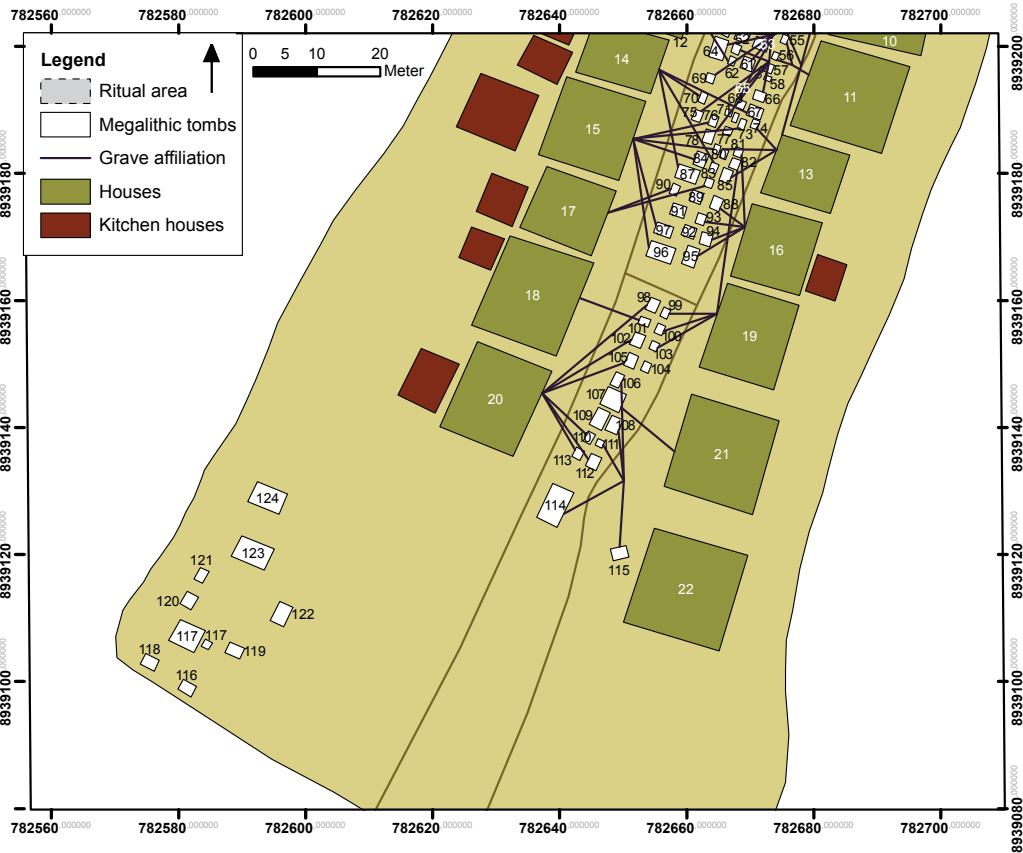


Fig. 42b: The southern part of Pasunga and the house affiliation of the different tombs.

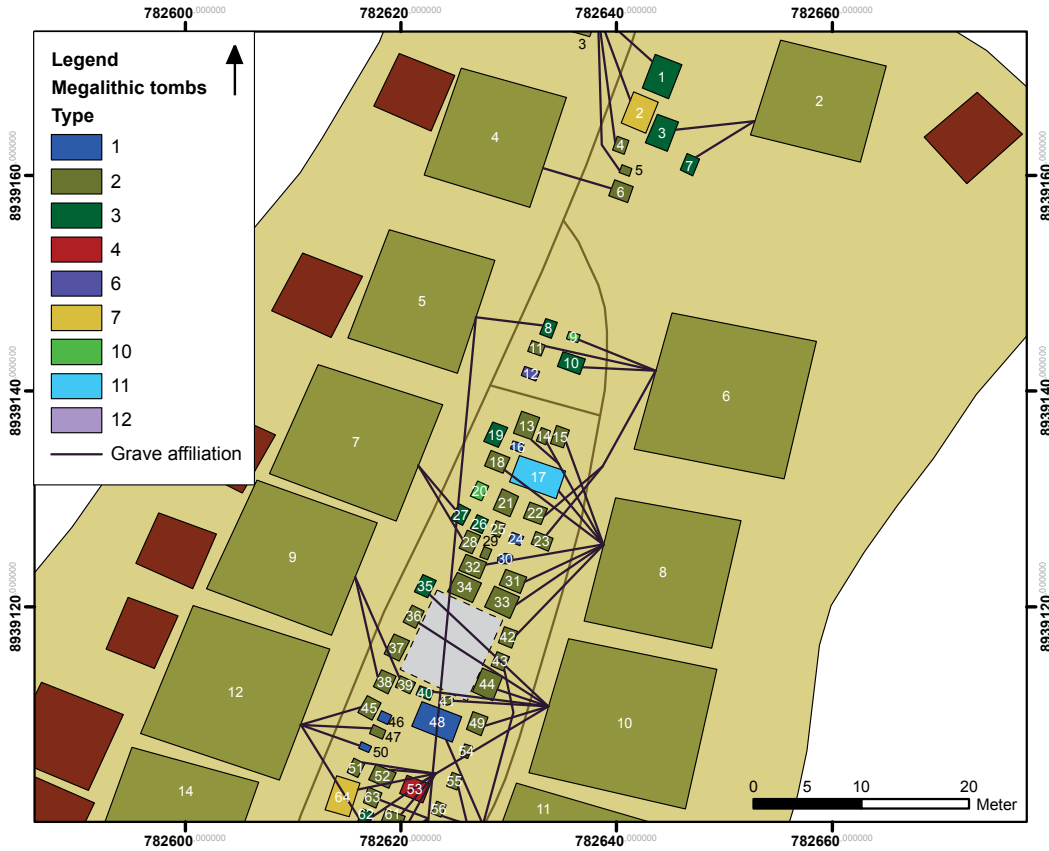


Fig. 43: The grave types located in the northern part of Pasunga.

### 5.1.6 Pasunga (Anakalang)

Anakalang District is a few kilometres from Waikabubak and Loli District. Anakalang lies at an approximate height of 450m and has an area of approximately 1.8ha. The village has a very elongated structure stretching from south-west to north-east (Fig. 41). West of Anakalang begins the mountain range, which represents the geographical border between Western and Eastern Sumba. Pasunga itself is centrally located directly on the highway that connects the west and the east of Sumba. The village is described as a cultural village and is to a certain extent oriented towards tourism. Pasunga is also one of the villages most used for public relations due to its large and old tombs.

#### 5.1.6.1 Village plan

There are 22 houses in the village, arranged in two rows. Behind these are some separate, smaller kitchen buildings. This is particularly true of the western row of houses. The houses and their families belong exclusively to one single clan. The construction of the village changed drastically around 1960/1970 until it reached its present form. Originally there were only four houses in the village, which were not arranged linearly. In the following, both the position of the houses and the graves were changed. Due to the extensive renovation work, today's houses are no longer exactly designed to match the ancestral houses. The driving force behind this enormous effort was a gain of space within the rapidly growing village. Most of the graves are located between the two rows of houses in the central part of the settlement. The oldest tombs, estimated to be 500 years old, are located in the south-west, directly at the entrance to the village. These are the

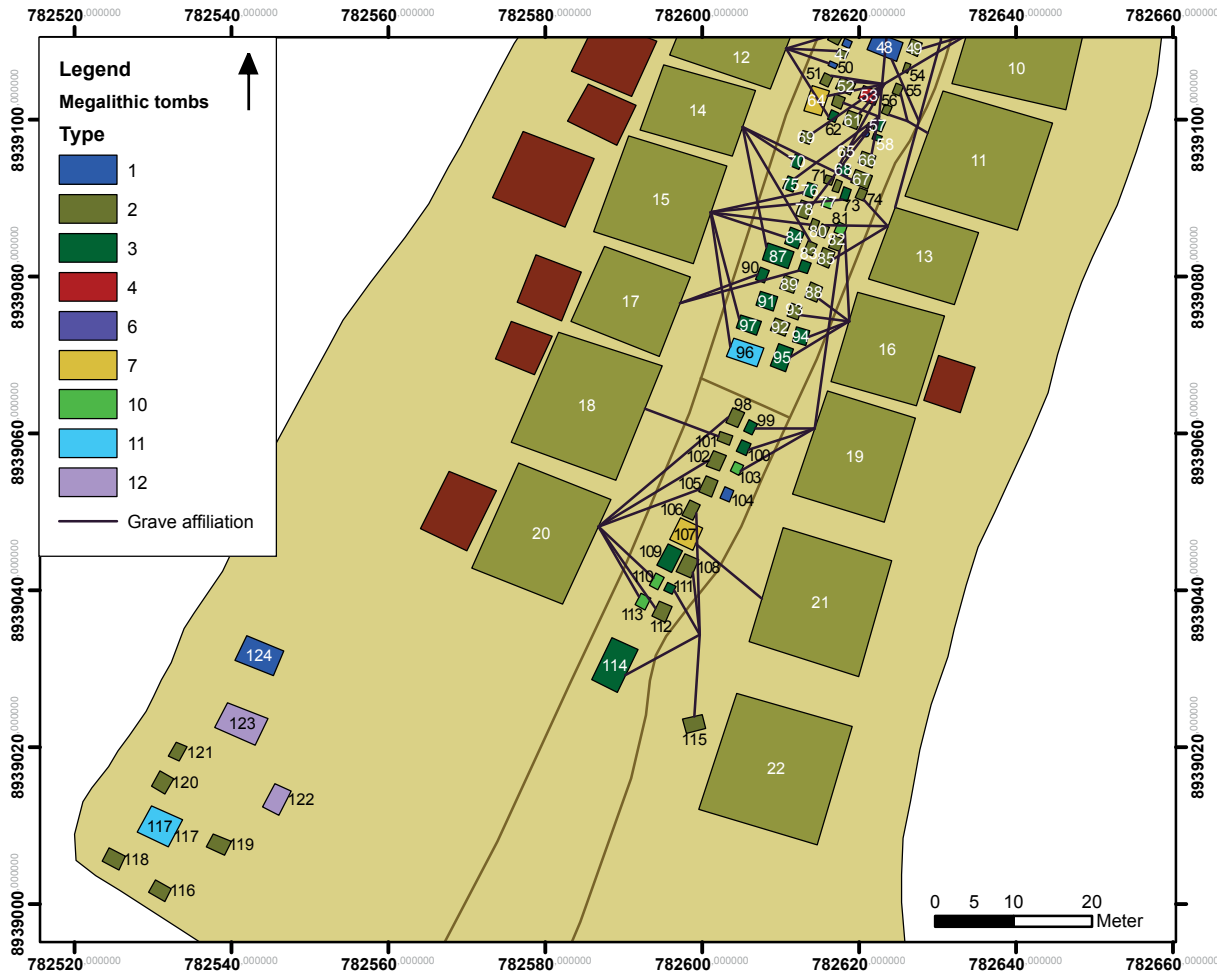


Fig. 44: The grave types located in the southern part of Pasunga.

old so-called royal tombs of the village, which were once influential ‘rajas’. There are also two graves in the north-east, outside the village area. In particular, the graves in the central, elongated village area are often located close to the houses to which they are assigned (Fig. 42a and b).

Nevertheless, there are many graves far away from the house to which they can be assigned (e.g. ID 14; belongs to house 10). This is particularly the case with houses to which many tombs can be assigned. The royal tombs cannot be assigned to any of today’s houses. The age of these graves was estimated at about 500-600 years. The builders are described as direct ancestors of the families living in the village today. It is assumed that the ancestors came from the eastern part of the island and partly moved on to Kodi. Within the village there is a centrally-located ritual area, albeit which does not contain a *Marapu* hut and can also be entered. Nevertheless, ritual acts take place here. The square is rectangular and surrounded by tombs.

All grave types represented in Pasunga are very evenly distributed over the entire village area (Fig. 43 and Fig. 44). The fact that no specific type of grave is highlighted by a specific location near the central area may have to do with the fact that there is no *Marapu* hut in Pasunga and no sacred area that should not be entered. This eliminates the hierarchy of places within the village that is more clearly visible in Tarung – for example – in which individual tombs occupy a more prominent place. The only two types of graves that can only be found in one place are the special royal tombs, which are particularly old and are located in the south-western part of the

village. However, it cannot be ruled out that the monuments were removed from their original location and rebuilt in the course of spatial changes within the village.

### 5.1.6.2 Interviews

The interview in Pasunga was conducted on 17.08.2015. The interview lasted 135:00 minutes and took place in front of the interviewee's house. This house is also the main house, the 'Uma Kalada' of the village. During the interview, a woman's bones were moved because the grave in question was not watertight. This led to some minor interruptions during the interview. In the meantime, two older men were still involved in the conversation; however, they did not remain present for the entire conversation.

#### The village

The normal size of a family<sup>5</sup> – albeit which might be living in different houses or even villages – was estimated at about 500 people. A family can have up to fourteen houses in different villages. However, the ancestral village is Pasunga, which is why the burials take place in this village. Since only one clan is resident in the entire village, it is not allowed to get married within the village. Originally, water buffalo and horses were kept in the village behind the houses. At this time, buffalo were also used for field work, forming cooperatives in the village. Today, the remaining buffalo are kept by children outside the village. However, in addition to livestock, land ownership also holds importance. Both factors together formed the decisive factor for the wealth of a family, which could then be inherited.

#### Specialists

No specialists were mentioned in the village.

#### Funerals: rules and taboos

The funeral custom in Pasunga generally allows grandparents and their grandchildren to be buried together in one grave. However, this only applies to one grandchild's gender, although it remained unclear during the interview whether male or female grandchildren were not allowed into the grave. This can generally be repeated until the grave is full and a new one has to be built. It is possible that rich families do not have to occupy graves so fully and quickly build a new one, while poor families depend on them to use old graves again and again. Generally, the burial might take place in two ways. One possibility is the Christian tradition of burying the dead in a coffin and lying on their backs. The older tradition, which still originates from the ancestors, includes wrapping the dead in *Ikat* (a handwoven cloth). The dead are buried in an embryonic position. In both cases, it is customary to lay out the deceased person in the house before the funeral, in both cases in a coffin. At Christian funerals, the deceased is buried in the coffin, which is why larger graves are often built of cement. In the traditional ritual the coffin is not buried because it is too large for the graves. As a rule, the laying out takes place for at least three nights, although for rich families it can also have been up to one month. This month can then be used to complete the tomb, during which gongs were played. An exception are deceased infants who are buried immediately after death. In general, the grave can be erected before a person's death, depending on their personal preference and the financial means of the respective family. However, in this case, a special

---

5 Author's note: this is most likely the entire clan. Members of a clan are also called brothers and sisters and can certainly be regarded as a family. However, it does not refer to the concept of direct kinship that is valid in Europe.

sacrifice is necessary to prevent the builder from dying. This sacrifice comprises young coconuts, eggs and a small piece of clothing which are placed together in the grave. The grave construction takes place during the dry season, but other activities always have to be carried out.

### **Grave goods**

Grave goods have been described in Pasunga as a rather rare phenomenon. This is connected with the fact that all personal belongings of the dead are among the things that are inherited by one's own descendants, but daughters are excluded from this. The inheritance can either be distributed to all sons, or only to the eldest son. Overall, there is a great deal of freedom in the allocation of estates, but this can lead to conflicts between descendants. The special role of the eldest son feeds on the necessary continuity of the family, which is guaranteed by him. However, at the request expressed by the person to be buried, it is also possible to have personal possessions such as daggers or jewellery buried in the grave. Jewellery or similar objects are mainly given to richer people, while poorer people are buried only in *Ikat*. In addition, it was described that particularly valuable stone slabs (plates) belonging to rich families were also added long ago. These were often decorated with a gecko motif, which can also be found on a stele in Pasunga. Chinese dishes were also once available, although they were described as stolen.

### **Houses and graves**

In some houses, graves outside the village may also be part of the property. The number of graves per family and house depends on the number of children, since they may only be buried in a grave under certain conditions (single and without children themselves).

### **The grave types and the size of the graves**

Essentially, a distinction can be made in Pasunga between simple burials in the earth and those in megalithic tombs. Burials are carried out when the family – especially the descendants who in doubt have to pay for the grave of their parents – do not have sufficient money or resources to build a megalithic grave. However, in this case it is assumed that when the descendants are richer again, they will first build a suitable grave for their ancestors to be able to reburial them. Like all other burials, this would then take place in the ancestral village of the persons concerned, whereby the woman is buried with her husband. In the context of this ceremony, animals must be slaughtered, as with any other grave construction. In general, the megalithic graves can be used again until they are full and a new one has to be built. The large grave types are regarded as a sign of a family's prosperity. In particular the wealth of horses, buffaloes and pigs is connected with it. The same mechanisms also apply to house construction. In general, however, all grave types are open to all families, whereby graves made of stone are regarded as better than graves made of cement. The oldest grave types have been described as those to which a stela has been added. These are also very prestigious tombs linked to the fame of the buried and his ancestors.

### **Location of the monuments**

In Pasunga, most of the tombs are located within the village itself, with most of them in the central area. This was justified by the necessary location in front of the houses. However, changes in the location of the graves have been described. Thus, since 1960, when the village as a whole was adapted in its form, some tombs were moved. How many graves this concerns, could not be determined in the course of the interview. Tombs built before this time were allowed to be adjusted in their

position. This also applies to graves where for various reasons an old grave has to be removed and a new one built. However, it is not possible to move the oldest tombs (the ‘royal tombs’); rather, they must remain in their old location.

**Worship and rituals**

The laying down of rice, betel nuts and other food was described as a common way of acting at the grave in times when rich families lived in the village. This had to be done not only by the close relatives, but rather it could involve the whole family. For smaller sacrifices, round attachments on the posts of the houses are used. Here rice and betel are sacrificed for the ancestors. The four main pillars of the houses stand for the married couple: two for the woman and two for the man. In addition, it should be possible to send messages to the ancestors via these four posts. From this thought results the storage of gifts to the spirits at the post. These elements are called the ‘altar’ and must be preserved from generation to generation. A special place within the village, particularly important before the spread of Christianity, was described as even more closely linked to the *Marapu* faith. This place is said to have been fenced in and a crossing was not allowed. The arrival of Christianity in the village was around 1960: since then, the ancient rituals in particular have significantly changed and are partly carried out with the participation of Christian priests.

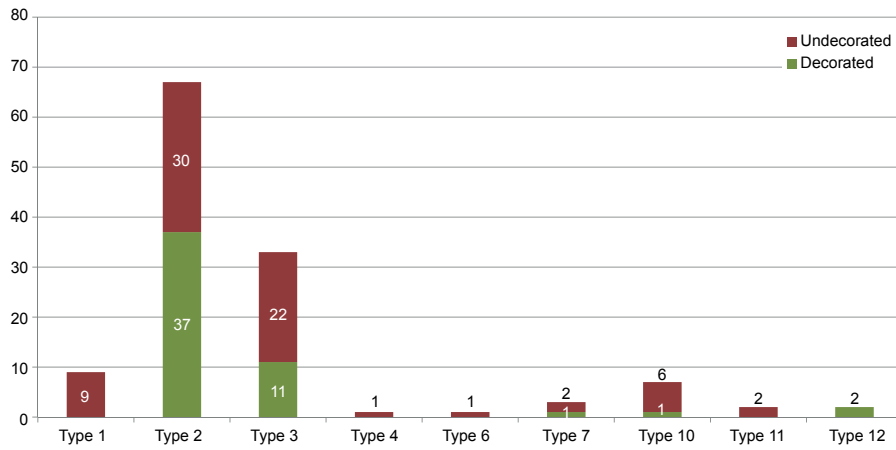


Fig. 45: The different grave types represented in Pasunga.

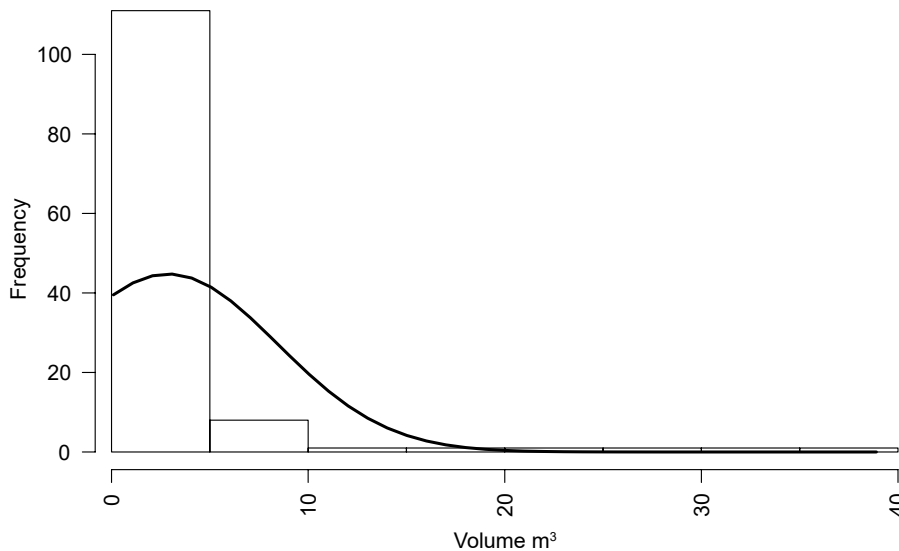


Fig. 46: Histogram of the volume (m³) of the tombs in Pasunga.

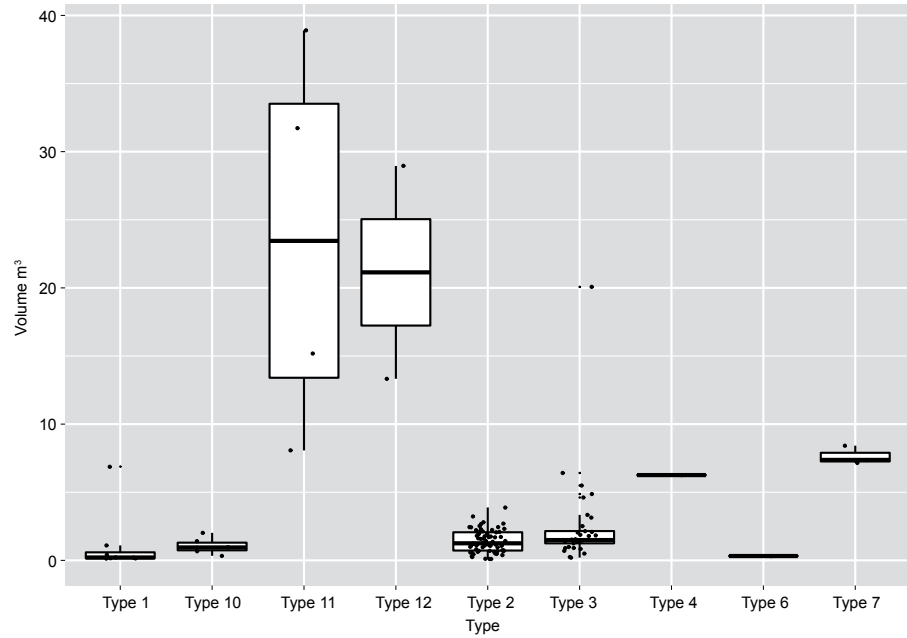


Fig. 47a: Boxplot of the volume ( $m^3$ ) of the tombs in Pasunga with consideration of the type with outliers.

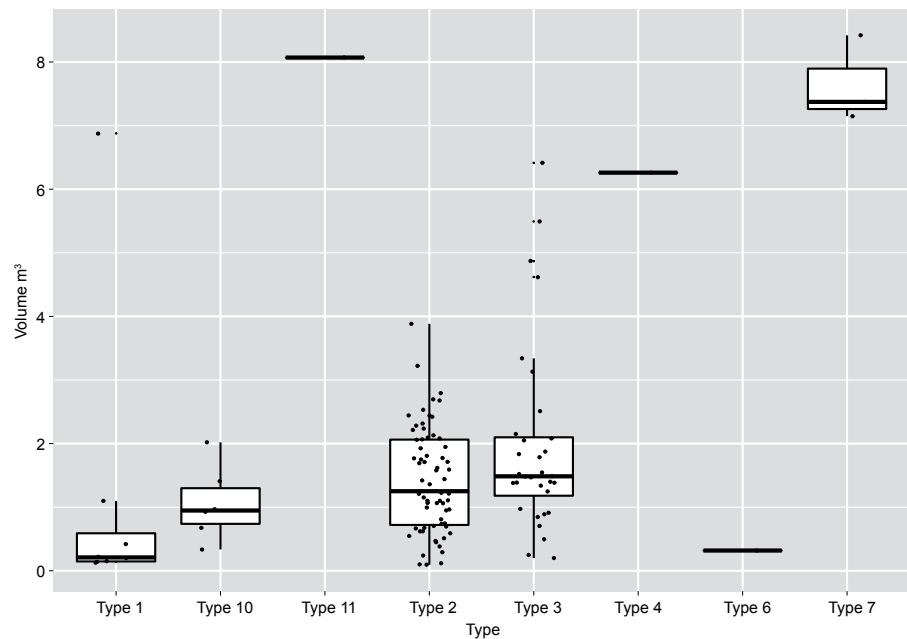
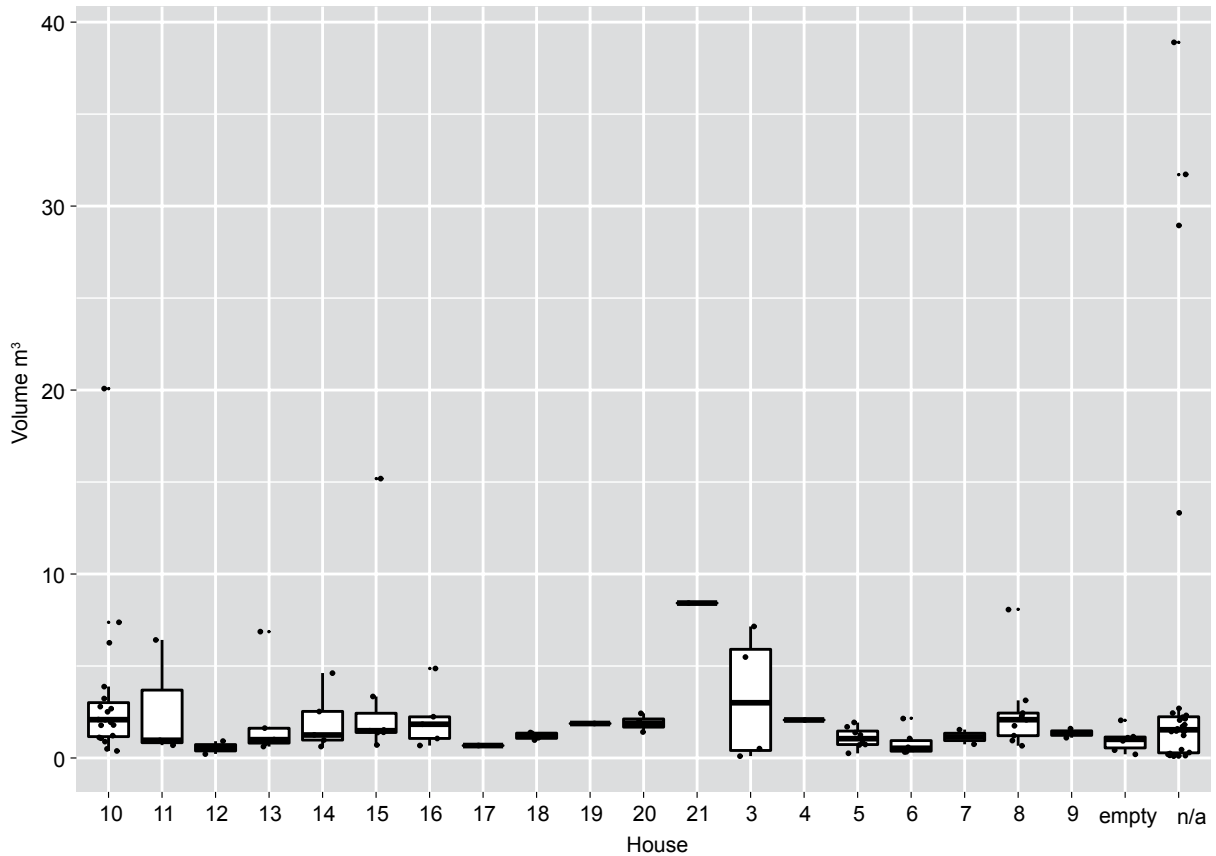


Fig. 47b: Boxplot of the volume ( $m^3$ ) of the tombs in Pasunga with consideration of the type without outliers.

### The quarry areas

In the course of the interview, a concrete tomb was described as an example. This is a grave belonging to the family of the interviewee. The tomb was built about 15 years ago and included the help of more than 1,000 people. These included the families living in Pasunga and the associated farmhouses. However, the number of 1,000 participants refers to the entire period: only 300 people may have been present at the same time. The stones were obtained from a quarry area about 20km away from Pasunga, at Maderi. This extraction area was chosen due to the better quality of the stones. The price of the stones was estimated at 1,500,000 Indonesian rupiah. In the course of a week, the time it took to transport the stones, a total of 50 animals were slaughtered, including buffalo and pigs. These slaughters took place





for ritual reasons, but also to supply the workers. In the village itself, another ten buffalo were killed on arrival of the stones.

### 5.1.6.3 Statistics: grave types and their affiliation

Altogether 126 grave monuments can be found in Pasunga, eleven of which belong to the old royal tombs. Seven of these graves can be attributed to the closed dolmens. Finally, four graves are among the large capstones resting on pillars. The actual dolmen are located under the capstone (type 11) in two cases, but in two cases on the capstone as part of a complex structure (type 12). The range of newer graves in the central area of the village, on the other hand, is greater (Fig. 45).

Remarkable is the small number of simple stone slabs (type 1,  $n=9$ ), while the most numerous types are older (type 2,  $n=67$ ) and newer (type 3,  $n=33$ ) dolmens. Another common type of dolmen are those with indicated legs (type 10,  $n=7$ ), open dolmens (type 6,  $n=1$ ) and tiled, modern dolmens (type 7,  $n=3$ ). Finally, there are two graves with supporting legs (type 4 and 11). Regarding the size distribution it is noticeable that some few graves ( $n=6$ ) have volumes of over  $10\text{m}^3$  or over  $20\text{m}^3$  ( $n=4$ ). These extreme values within the material, which mainly coincide with the old royal graves, influence the distribution curve quite clearly (Fig. 46).

When this data is included, a distribution is recognisable that does not correspond to a normal distribution. To a much lesser extent, a similar distribution can be seen when the respective tombs are excluded. The maximum volume of the right-skewed distribution is then  $8\text{m}^3$  and is also not normally distributed.

Overall, in both distribution curves the strong overweight of graves with a volume between  $1$  and  $2\text{m}^3$  is noticeable. This can be seen when looking at the volume broken down by type. Considering the particularly large tombs, the

Fig. 48: Boxplot of the volume ( $\text{m}^3$ ) of the tombs in Pasunga with consideration of the house affiliation.

reduction of large volumes to a few types is immediately noticeable (Fig. 47a and b). The remaining part of the tombs is completely on a level below 10m<sup>3</sup>. If the aforementioned graves (types 11 and 12) are not taken into account, the range of volumes of the individual types becomes clearer (Fig. 47b).

It can be seen that especially the dolmen types (2, 3 and 10) have a quite wide dispersion. This applies in particular to the newer closed dolmens (type 3), which have volumes between 0 and 6m<sup>3</sup>. This means that some of them have significantly larger exemplars than the dolmens, which are made of stone. This is also evident in the tiled dolmens, which are made of cement (type 7). This rare type has large volumes between 7 and 9m<sup>3</sup>. The simple stone graves (type 1) are characterised by a small volume except for one outlier.

The evaluation of the volumes of the tombs per house shows a relatively even distribution. However, the large old tombs of Pasunga could not be assigned to a specific house. However, large monuments over 10m<sup>3</sup> can be found in houses 10 and 15 (Fig. 48).

It emerges that house 10 is indeed one of the houses with the highest number of graves, which also has a quite wide size range and some outliers. House 15 has

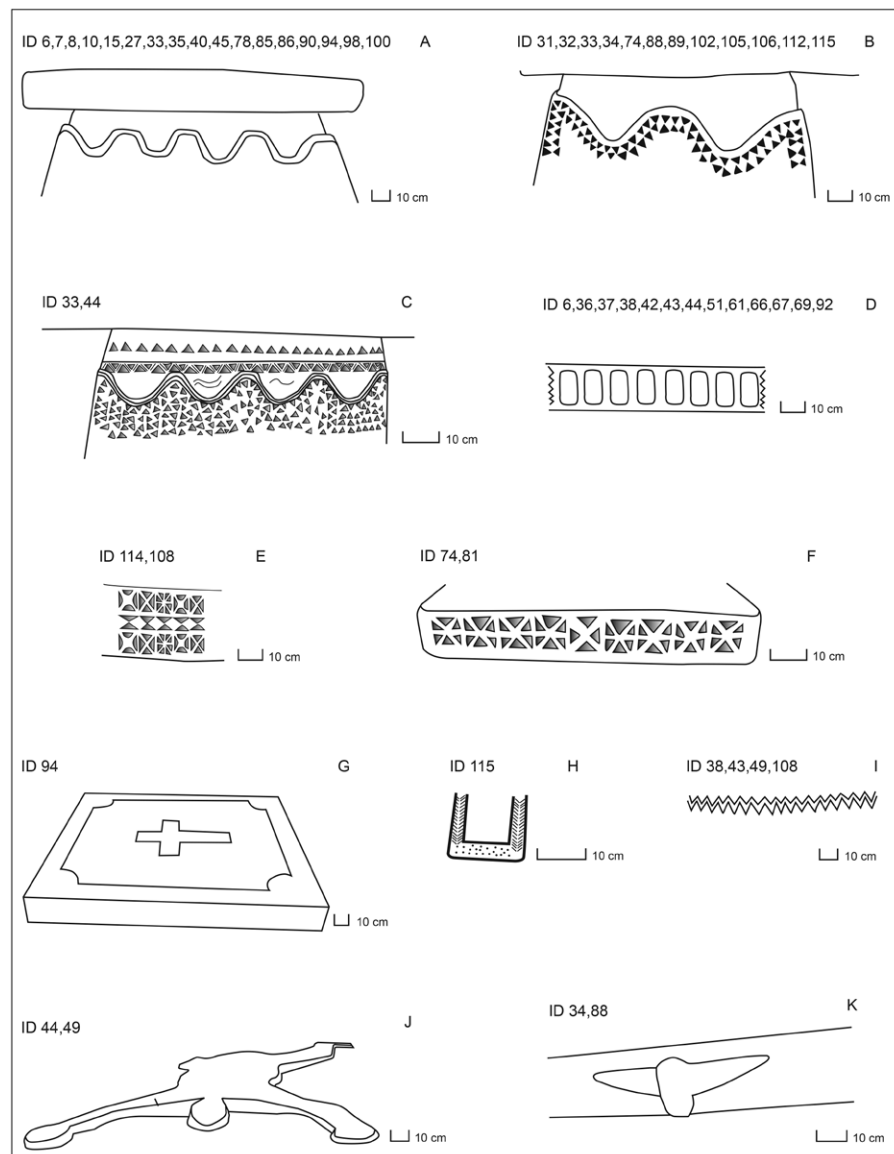


Fig. 49: The different sculpted and incised ornamentations occurring in Pasunga, excluding the 'royal tombs'.

some graves, although they are relatively small, aside from the mentioned outlier. In addition, there are houses that only have a few tombs, but they have a wide range (cf. houses 3 and 11). Other houses have a clearly low burial volume (cf. houses 12 and 20). The total number of graves per house varies between one and 19 (house 10). However, the most common numbers are between one and four graves. These can comprise large and small graves, or only small ones.

The orientation of the graves in Sumba is extremely uniform and follows only two orientations. Both NW-SE and NE-SW orientation is available, the frequencies of both variants are almost the same (n=77 and 82). The orientation of the graves follows the general structure of the village.

#### 5.1.6.4 Ornamentation

Decorations on the graves were described as particularly expensive for the families concerned, whereby not everyone is able to have them applied to their monuments. Meaningful symbols are representations of geckos, or also those of humans on the graves (cf. ID 44/49). These are symbols for the power of men. Overall, 42% (n=52) of the graves in Pasunga are decorated, with differences between the grave types (compare Fig. 45). The rarely or very rarely occurring simple stone slabs (type 1) and capstones on four or six legs (type 4 and 11) are not decorated at all. Decorations can be found mainly on the closed dolmens of old and new construction type (n=48; 92%). Altogether four further decorated graves belong to the large royal graves (type 12), as well as to the tiled dolmens (type 7) and the dolmens with indicated legs (type 10).

The two most common patterns that typically occur on closed dolmens are sculpted wavy lines on the lower part of the dolmens. These can occur in simple form (Fig. 49 A) or in combination with rows of incised triangles (Fig. 49 B). In two cases, these basic motifs are combined in a complex way with other patterns to create a complex ornamentation (Fig. 49 C). Engraved ovals or circles that are found in a row on the narrow and long sides of the capstones are also common (Fig. 49 D). Other carved patterns are composed of the same type of triangles, which can also be found in combination with sculpted wave patterns. In these cases, the triangles are assembled into squares located on the sides of the capstone (Fig. 49 E/F). Finer engravings are rather unusual in Pasunga as a whole. In some cases – for example, simple zig-zag scratches and in one case a horn – representation with line and dot fills can be found (Fig. 49 H/I). Finally, various types of sculpted ornamentations can be found in the material, which are attached to and on the capstones. These include human representations ‘lying’ on the capstone, as well as buffalo horns on the narrow side of the capstone (Fig. 49 J/K). Finally, a cross is shown on a stone slab (Fig. 49 G). In Pasunga there is a richly-decorated stele, which is placed near the ritual area. On the stele are carved wave and zig-zag motifs, as well as *Mamuli* representations. Geckos and probably anthropomorphic representations can also be found. Furthermore, at the old royal graves there are very complex decorations, which are composed of very different motives. These are primarily the representation of humans, animals (e.g. horses or buffalo), as well as ritual symbols. These are integrated in various forms of wave ornamentation and geometric patterns.

#### 5.1.6.5 Summary

In many respects, Pasunga demonstrates its outstanding function as one of the important central villages. The large number of megalithic tombs, the extension of the village area and the presence of the old royal tombs are clear signs of this. The village also has an important central square (cf. village plan), which is also very

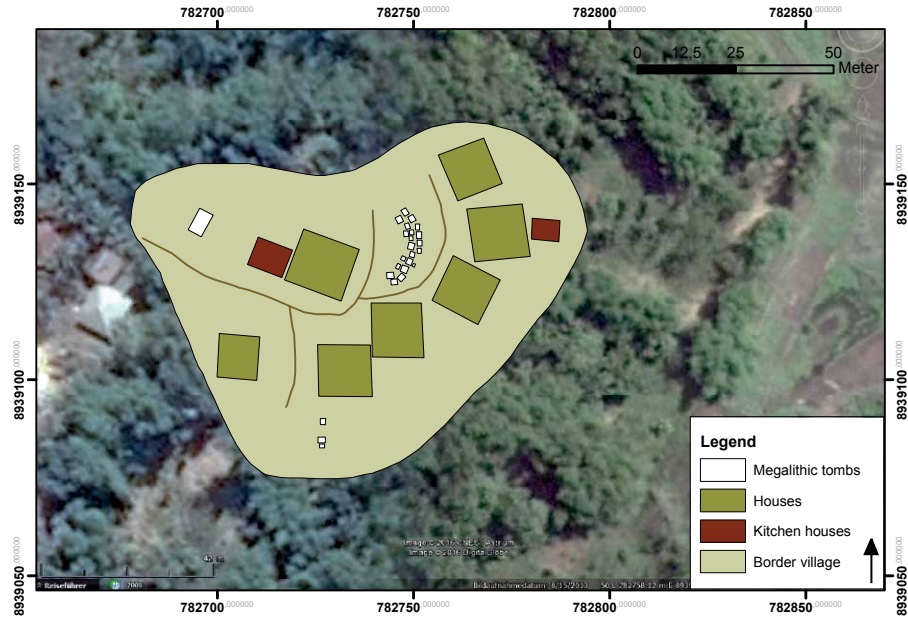


Fig. 50: The village of Prairita, north-east of Pasunga (satellite image: Google Earth).

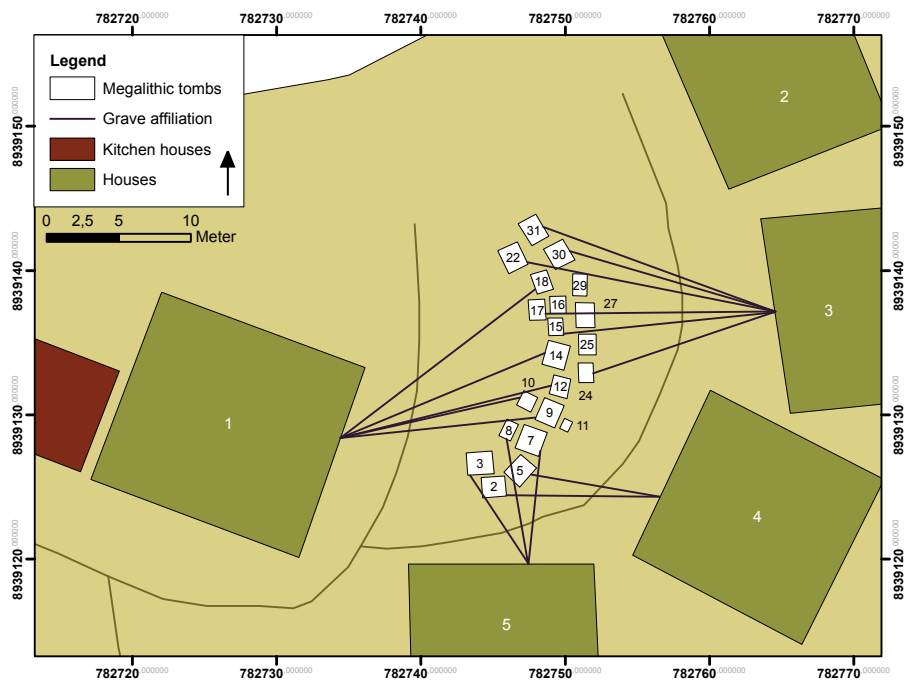


Fig. 51: The northern main part of the village Prairita.

important for the surrounding villages (cf. Prairita). The megalithic tombs have a wide range of grave types and volumes, reflecting the broad economic differentiation within the village. This becomes clear when the number and the unusually wide distribution of the tombs belonging to the houses over the burial areas are considered (cf. village plan). The wealth of graves in Pasunga was highlighted as a clear sign of prosperity within the family. The patterns reflect a representative pattern of ornamentation common in Anakalang. Some patterns are combined to characteristic decorations, which can also be found in other villages of Anakalang.

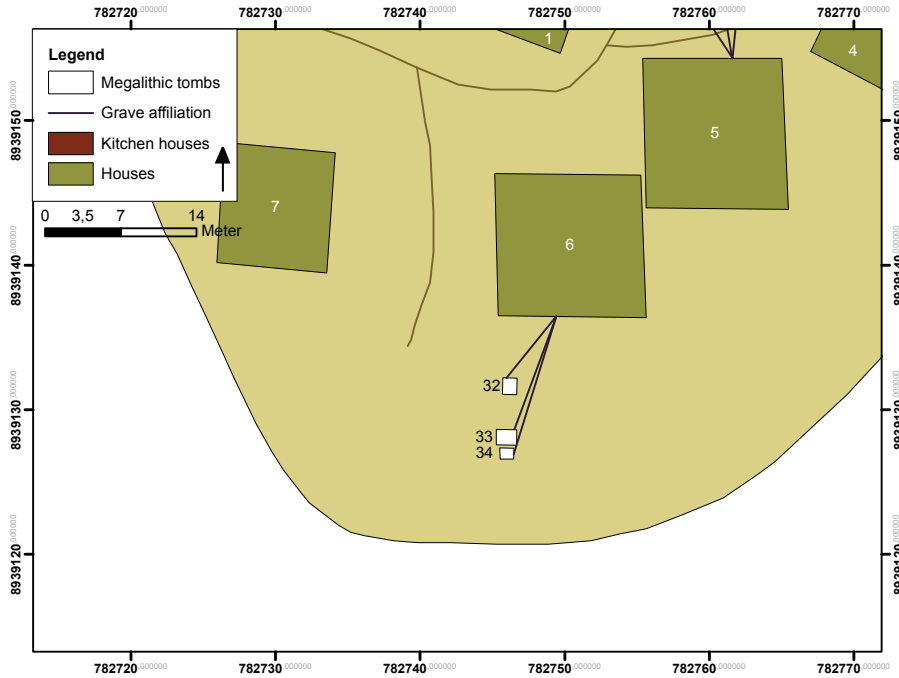


Fig. 52: The southern part of the village Prairita.

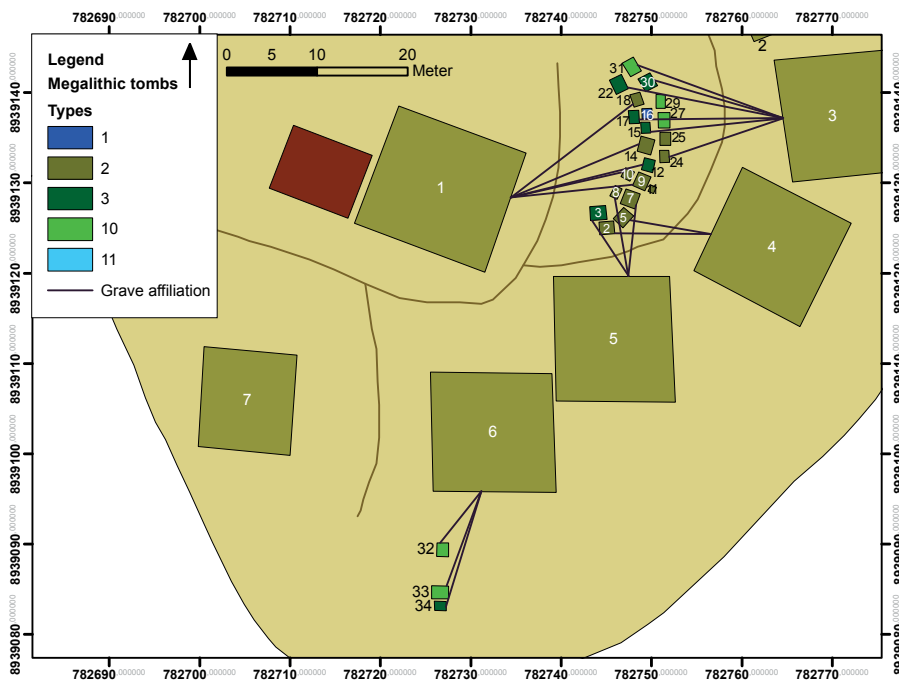


Fig. 53: The spatial distribution of the different grave types in Prairita.

### 5.1.7 Prairita (Anakalang)

Prairita is located in Anakalang in the immediate vicinity of the village of Pasunga. It is directly connected to that in north-east direction. The village is closely related to the clan of Pasunga and shares the ceremonial places with it. Like Pasunga, Prairita lies in a concentration of different villages in a small area. Prairita has a rather round structure, but due to its small size of only 0.7ha the structure is loose (Fig. 50).

### 5.1.7.1 Village plan

Typical round structures such as those found in Waikabubak are missing. In the village are two clans, after which the village is divided. Only houses 6 and 7 belong to the Prairita clan, while houses 1 to 5 belong to the Galubua clan. However, a clear spatial separation only exists in the case of megalithic tombs. The village has no ritual and sacred area, and also no own *Marapu* hut. These are used in the village of Pasunga, on which there is strong dependence. Most of the graves belonging to the Galubua clan are grouped clustered in the centre of the village. The tombs are arched between the houses belonging to the clan. The graves are roughly located near the house to which they belong (Fig. 51).

What is striking is that house 2 has no graves in Prairita. It emerges that many megalithic tombs are belonging to house 3, which together with house 1 is the only house with an adjoining kitchen. The second clan in the village can only be assigned to three tombs, which are also located in the immediate vicinity of the main house (Fig. 52).

The location of the central Prairitas tomb cluster and the fact that these tombs belong to the three houses nearby result in a mixture of the different

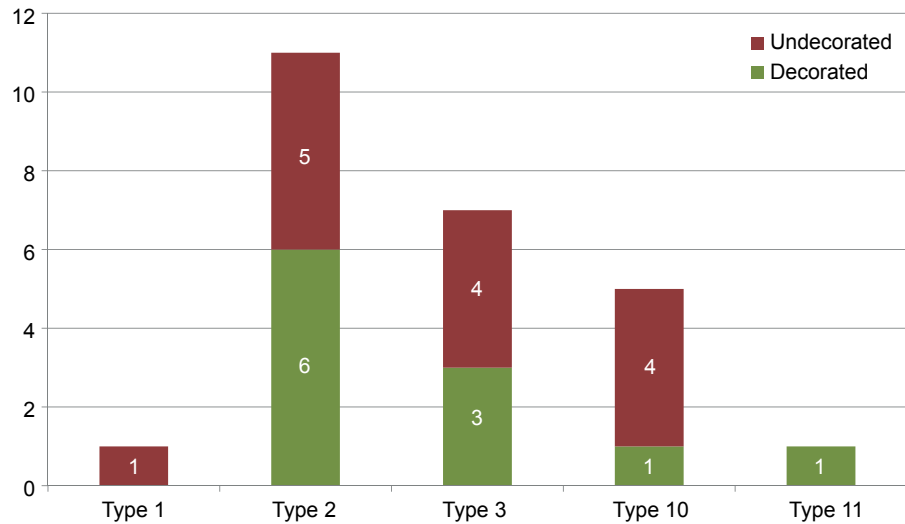


Fig. 54: The different grave types represented in Prairita.

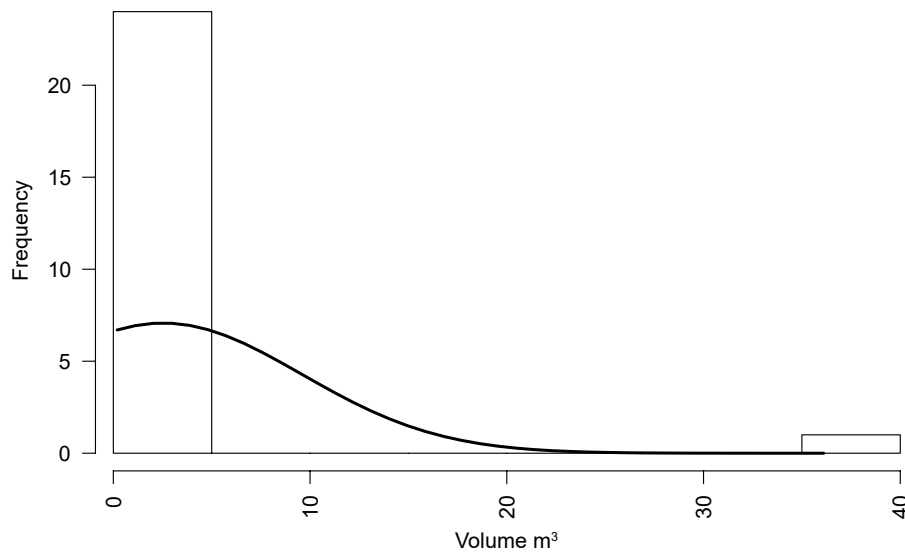


Fig. 55: Histogram of the volume (m³) of the tombs in Prairita.

tomb types (Fig. 53). The central cluster, consisting of different dolmen types, indicates a mixing of the individual types, whereby the older dolmens (type 2) are to be found mainly in southern location. This indicates that the cluster has been gradually expanded to the north, as newer concrete dolmens (type 3) can also be found here.

### 5.1.7.2 Interviews

No independent interview was conducted in Prairita.

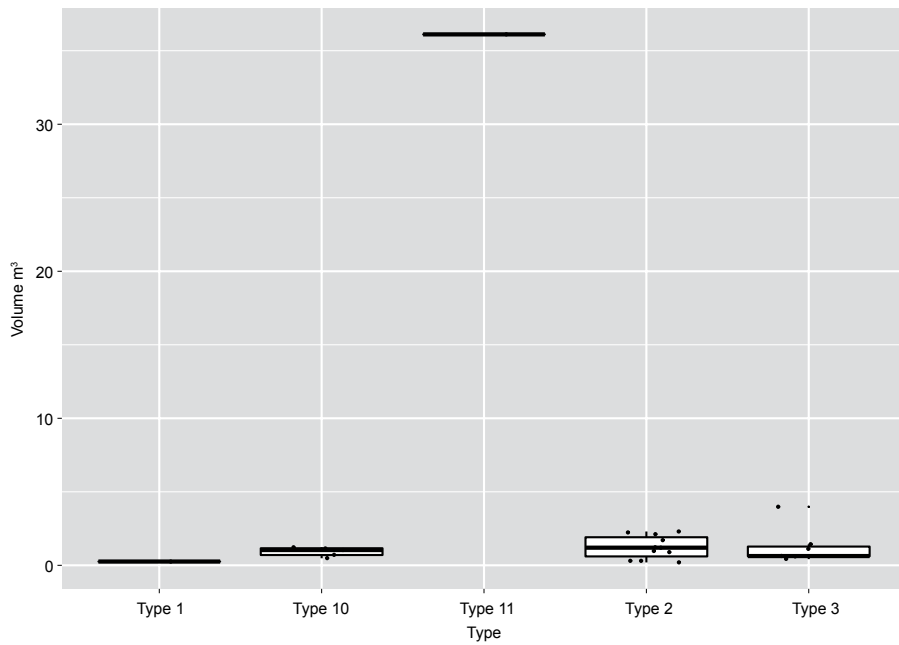


Fig. 56: Boxplot of the volume (m<sup>3</sup>) of the tombs in Prairita with consideration of the type.

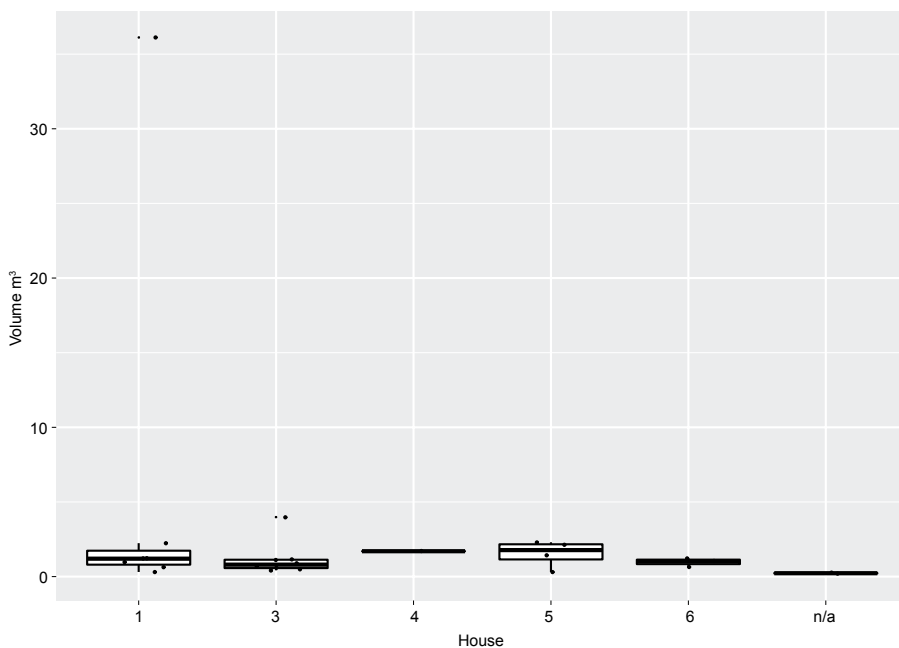


Fig. 57: Boxplot of the volume (m<sup>3</sup>) of the tombs in Prairita with consideration of the house affiliation.

### 5.1.7.3 Statistics: grave types and their affiliation

A total of 25 tombs were documented in Prairita, which can be assigned to five different types (Fig. 54).

With eleven graves, the closed dolmens made of stone are the most common type of grave. Similarly, closed dolmens of cement (type 3,  $n=7$ ), as well as dolmens with indicated legs (type 10,  $n=5$ ) occur. Only once in the village are represented a simple stone slab, as well as a capstone lying on pillars (type 11). The size distribution of the graves is very even except for one outlier. This tomb (ID 01) has a volume of  $36\text{m}^3$  and is responsible for the non-normal distribution. All other graves are within a span of  $0.30$  and  $4\text{m}^3$ . This can be seen very clearly when looking at the distribution curve (Fig. 55).

The fact that the different grave types generally correspond to a uniform design is also shown by the plotting of the volume against the type of grave (Fig. 56). It should be noted that one of the cement graves (type 3) has a larger volume. The outlier is a capstone lying on pillars. If this outlier is removed from the data set, a normal distribution appears after the KS-test. The size variance within the other grave types also becomes clearer. Graves built of stone are generally built larger than those made of cement. Types 3 and 10 have a very uniform spectrum, while the simple stone slab, as expected, is kept very small.

When considering the belonging of the graves and their volumes to individuals or houses, again above all an outlier is the grave that determines the overall picture. This tomb belongs to house 1 and was built for the grandparents of the current

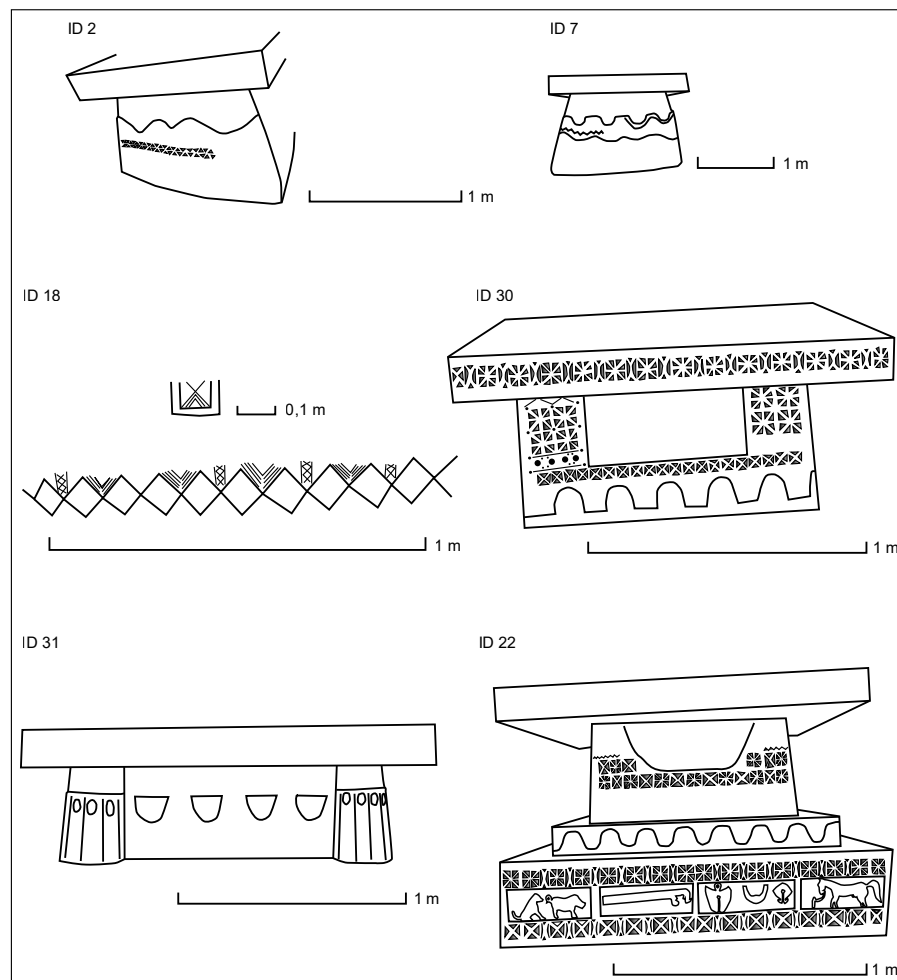


Fig. 58: The different sculpted and incised ornamentations occurring in Prairita.



inhabitant. If the outlier is excluded from the analyses, the image becomes more differentiated (Fig. 57).

This shows that house 1 has the second largest number of graves, whose volume is similar to that of the other houses. The house with the highest number of monuments is house 3, which, also except for one outlier, has rather smaller graves. House 5 has the widest range of grave sizes. Houses 6 and 4 have only a few tombs (3 and 1 respectively), which are relatively small in the case of house 6 and quite large in the case of house 4. A very wide range results when looking at the burial volumes of the individual builders. Only one family (Umbu Gohi; belonging to house 3) can be assigned more than one tomb. All other burial sites ultimately show considerable differences in size.

The orientation of the graves is quite high, measured by the small number of plants. The largest group of graves with nine exemplars is oriented towards N-S, while all other orientations occur only in small numbers. These include an orientation according to NE-SW ( $n=5$ ), E-W ( $n=4$ ), NW-SE ( $n=3$ ), NNE-SSW ( $n=2$ ), as well as NNW-SSE and ENE-WSW with one grave each.

#### 5.1.7.4 Ornamentation

Eleven (44%) of the 25 tombs in Prairita are decorated. All grave types – aside from the only simple stone slab – are partially decorated (compare Fig. 54). Most decorated tombs are of type 2 (over 50%), but types 3, 10 and 11 also have decorated exemplars. By far the most common ornamental motif are sculpted wavy lines attached to the lower part of the dolmen (Fig. 58, e.g. ID 2 and 7).

Such wavy lines occur in slightly modified, semicircular form (e.g. ID 30). Triangular patterns added to squares occur in combination with these in three cases (ID 2, 22 and 30). In one case, these patterns are supplemented with zoomorphic motifs, as well as the representation of *Mamuli*, *Tarega*, *Maraga*, and drum representations (ID 22). Carved zig-zag lines also occur in two cases in combination with plastic wave patterns (ID 7 and 9). The only more complex engraved ornamentation is found on tomb 18, where the pattern comprises a combination of angular stacks, zig-zag lines and a *Tarega* representation. Overall, the variability

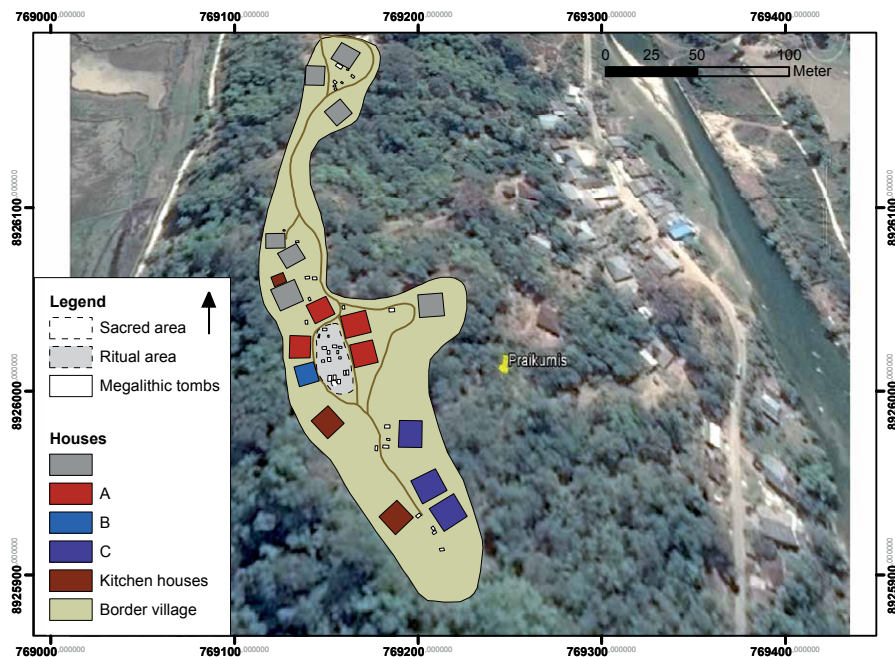


Fig. 59: The village Praikumis. The clan affiliation of the individual houses is marked in color. Houses without a clear affiliation are depicted in grey (satellite image: Google Earth).

of the patterns in Prairita is not very broad and comprises a combination of a few motif types

### 5.1.7.5 Summary

Overall, the strong dependence on Pasunga seems to be reflected as the main village and the minor importance of Prairita in the megalithic tombs, but also in the village complex. The social structure of the village is very simple, with the lack of all of the collective sites important for traditional social structures (*Marapu* hut, ritual area) clearly showing the dependence on Pasunga. In contrast to Pasunga, there are only a few independent kitchen houses in the village. The fact that these are located in the two houses with the most and largest megalithic tombs allows the assumption that there is an economic imbalance. Nevertheless, the distribution of the grave sizes is normal and shows the even access to the grave monuments. However, it is to be noted here restrictively that house 2 has no graves within the village. However, this does not rule out the possibility that the family in question has graves in other places. The village has a relatively strong degree of grave decorations. The patterns are very similar in appearance and combination to those of Pasunga.

### 5.1.8 Praikumis (Wanokaka)

Praikumis is an ancestral village located in the Wanokaka district in Southwest Sumba. The village is situated 3.7 kilometres from the coast on a river, situated on a hill on its western bank. Between the village and the river there is a modern village, which is directly connected to Praikumis by paths and a road. Praikumis is home to three clans (different names have not been named), whose social role is very different. Clan A is probably the oldest clan has been described as the ‘owner of rituals’. This refers above all to the knowledge of ritual structures and the ability to align them according to the rules. Clan B acts as a performer of the rituals, is super-

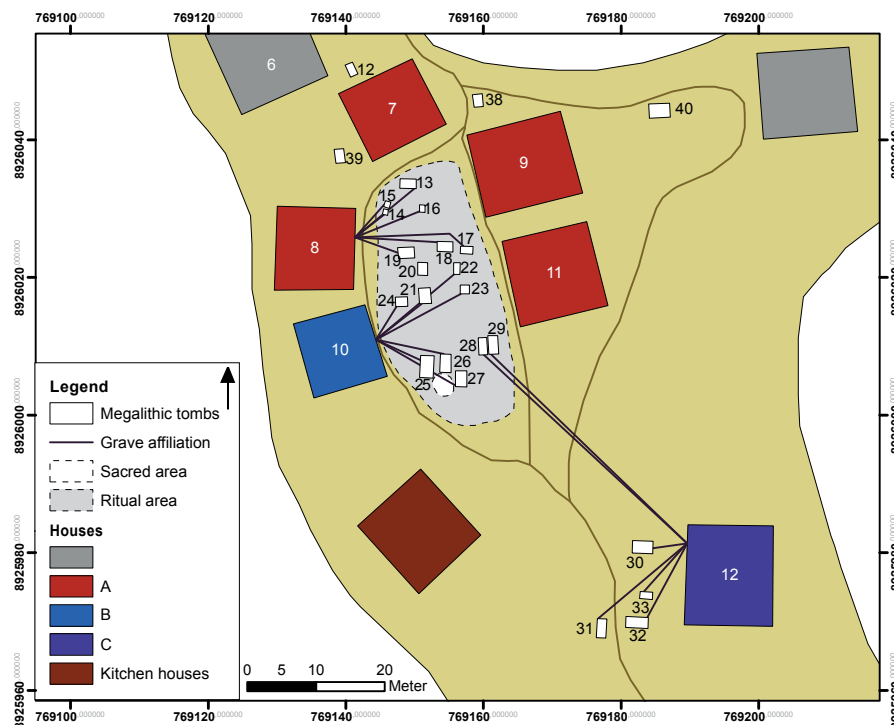


Fig. 60: The central place of Praikumis with the holy and ritual area, as well as different megalithic tombs. The clan affiliation of the individual houses is marked in color. Houses without a clear affiliation are depicted in grey.

vised as with the concrete execution. Clan C, on the other hand, has the strongest influence within civil society outside the ritual spheres. This clan will participate in rituals, although it will not organise them or similar. Overall, the village has a fairly long and loose structure (Fig. 59).

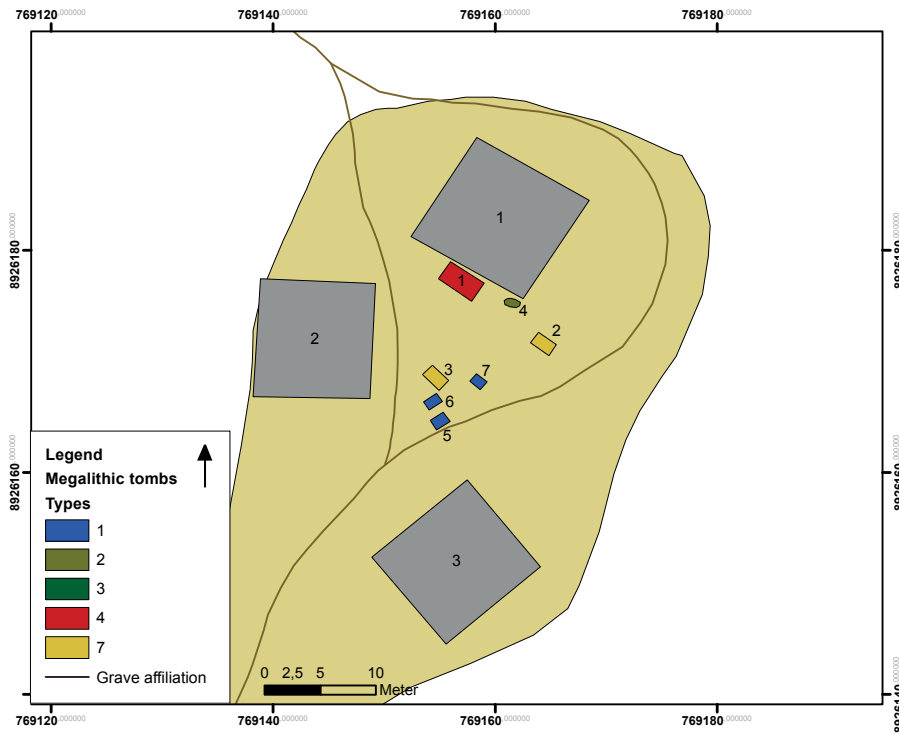


Fig. 61: The grave types located in the northern area of Praikumis.

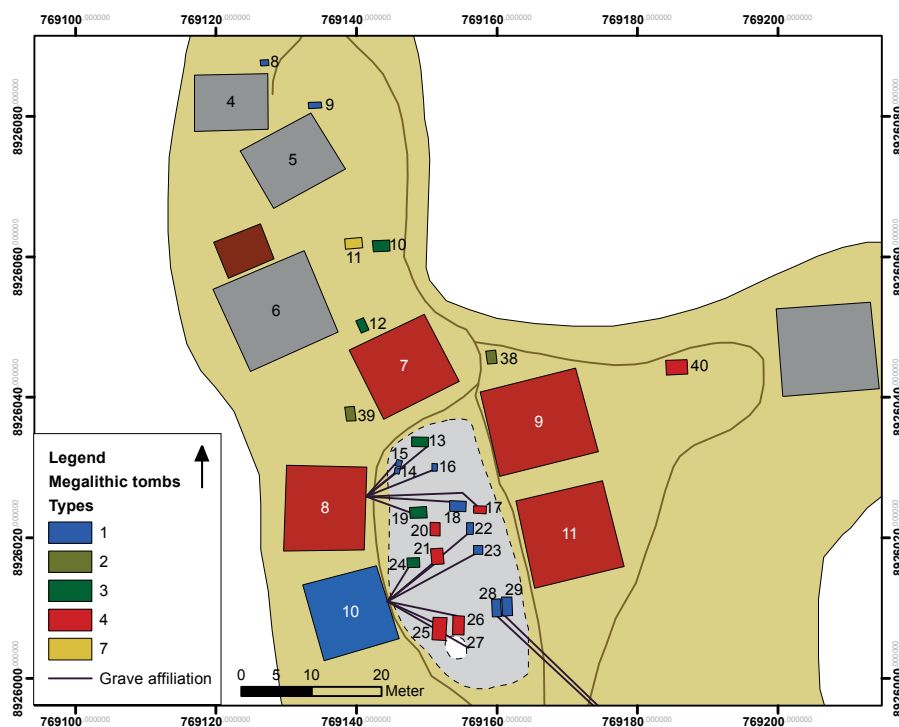


Fig. 62: The tombs located in the central area of Praikumis and their type.

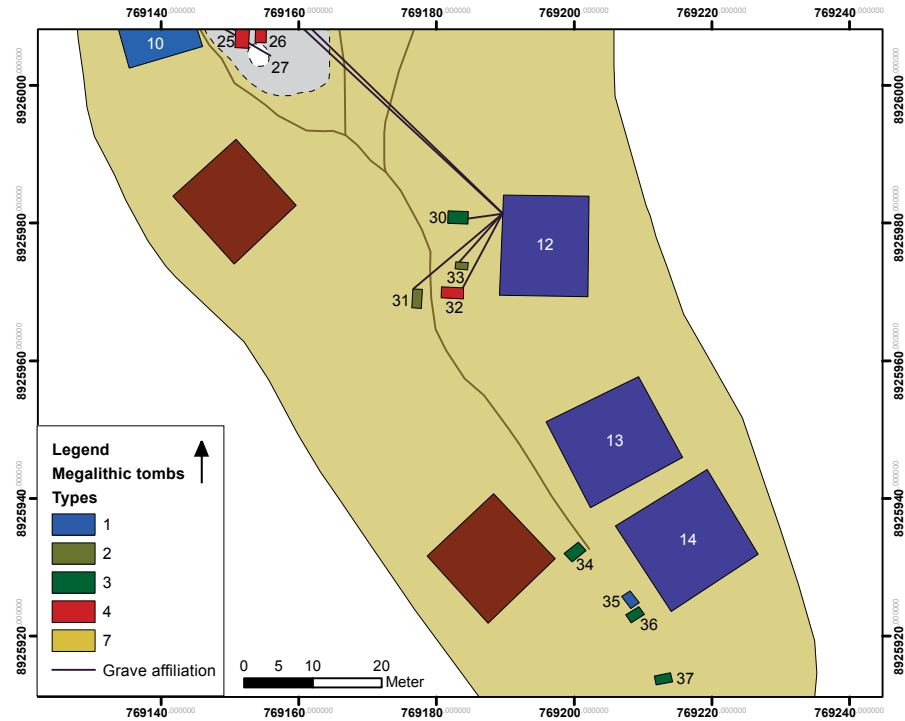


Fig. 63: The grave types located in the south-eastern part of Praikumis.

### 5.1.8.1 Village plan

The village area, which covers a total of about 1.6ha, extends in NW-SE direction over a length of about 300m. Within the village there are fifteen houses and some kitchen and outbuildings that can be attributed to the three clans in the village. The central square is halfway along the village. The two older clans, A and B, are located in the central square, while Clan C – probably the youngest clan – lives a little further south-east. Access to the ritual area with the megalithic tombs and the sacred area of the village is shared by clan A and B only. Except for two tombs, all graves there can be assigned to them (Fig. 60).

In addition to very old, already collapsed tombs, this area also contains the place used for rituals and celebrations. There is also a scaffolding for the drums. The rest of the village is sparsely populated and far apart. Thus, the north-western end forms a closed area with three other houses, in which burial grounds can also be found. Accordingly, there is not only one central place for the construction of the tombs. Rather, the position of this depends on the resident families.

The tombs in this part of the village can therefore be assigned to different types, reflecting the different construction activities of the families represented here (Fig. 61). These include both simple stone slabs (type 1) and the more complex capstones lying on pillars (type 4). A temporal depth is also present through the presence of tiled dolmens, as well as tombs made of stone.

The central area of the village contains the ritual and sacred area of Praikumis (Fig. 62). There are relatively many graves of type 4 in this area, although they are also found in other parts of the village (Fig. 63), whereby a spatial restriction cannot be assumed here. In addition to these monuments, simple stone slabs and closed graves made of concrete have also been documented. It is therefore not necessarily to be assumed that only the older tombs can be found in this area. Rather, the variability in grave types reflects the construction activities of the two houses responsible for the construction of the graves in this area.

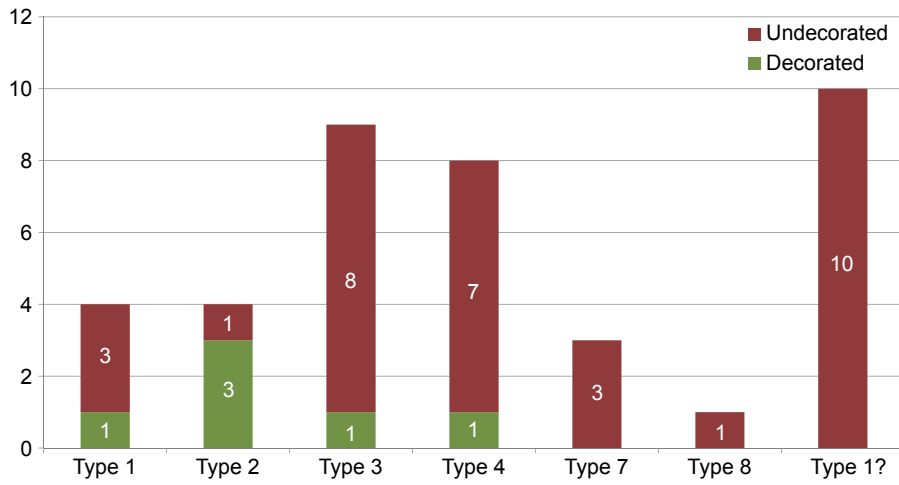


Fig. 64: The different grave types represented in Praikumis.

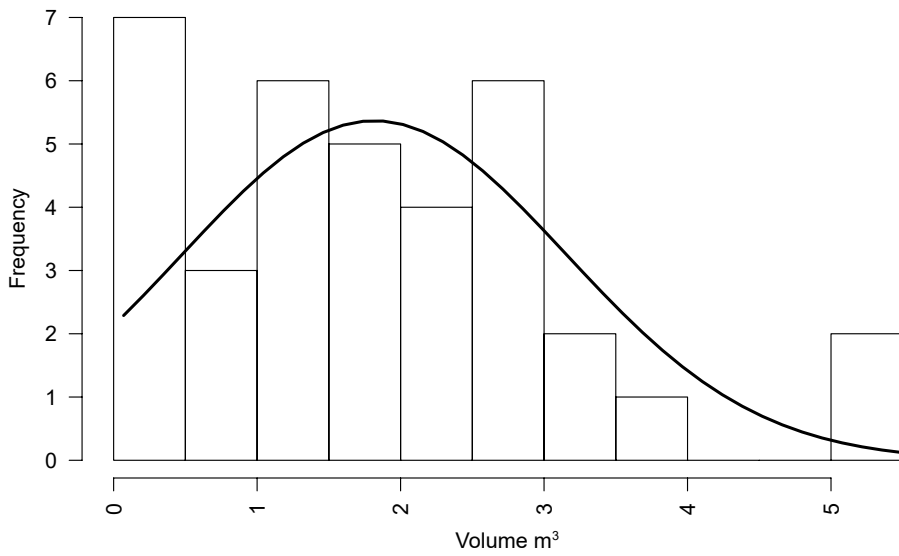


Fig. 65: Histogram of the volume (m³) of the tombs in Praikumis.

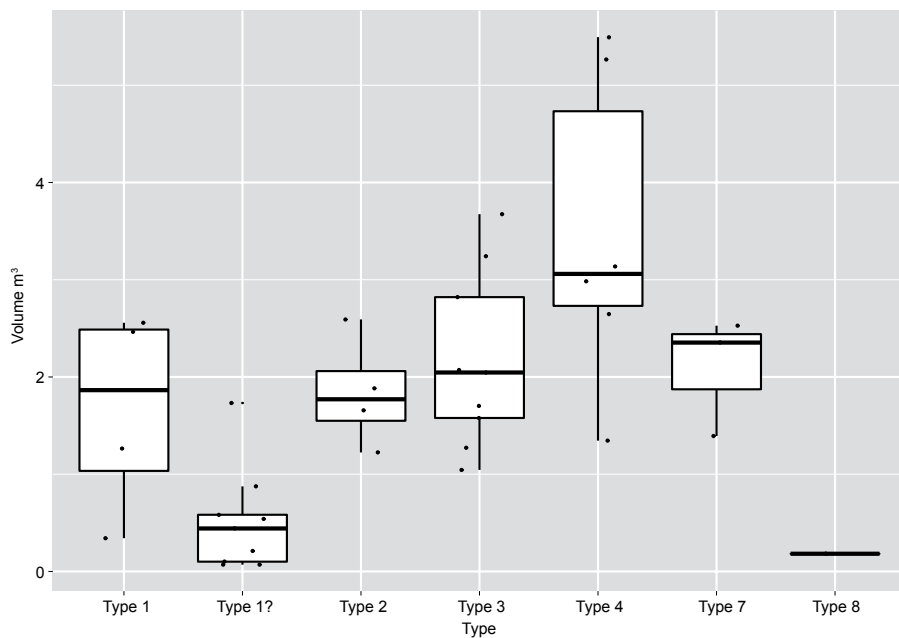


Fig. 66: Boxplot of the volume (m³) of the tombs in Praikumis with consideration of the type.

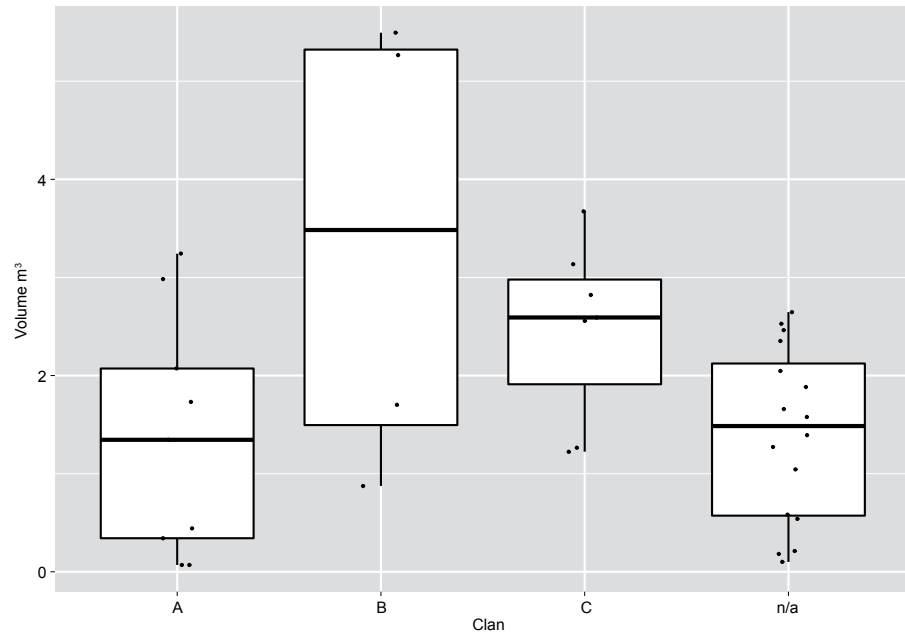


Fig. 67: Boxplot of the volume ( $m^3$ ) of the tombs in Praikumis with consideration of the clan affiliation.

### 5.1.8.2 Interviews

No independent interview was conducted in Praikumis.

### 5.1.8.3 Statistics: grave types and their affiliation

In Praikumis 40 tombs were documented within the village, scattered far across the village (cf. village plan). However, for the small number of tombs, they have an astonishing variety of types (Fig. 64).

A total of six types are represented in the spectrum, while it could not be determined whether ten stone slabs were actually gravestones or other plates. The two most common types are modern closed dolmens ( $n=9$ ; type 3) and capstones resting on pillars ( $n=8$ ; type 4). With four monuments each the second most common are simple stone slabs (type 1) and closed old dolmens (type 2). Furthermore, three tiled, modern dolmens (type 7) and finally one dolmen, which is composed of unprocessed stones (type 8) can be found in the village. This type of dolmen was described as possibly the oldest type of grave, although this assumption could not be proven and many villagers were very uncertain about their age. The overall size distribution of the tombs differs slightly from a normal distribution, but this deviation only applies to two tombs and can therefore be described as lightweight (Fig. 65).

The plotting of the grave volume against the type shows that most monuments lie within a fairly uniform range (Fig. 66). Among the larger grave types, which are outside the distribution of the remaining types, are only the modern closed dolmens, as well as the capstones provided with pillars. These are ultimately also responsible for the slight inclination of the distribution curve.

The size distribution of the graves according to the different clans also shows only minor differences (Fig. 67). The clan with the highest variance is Clan B, while Clan A and C have smaller grave volumes. The number of graves per clan is similar with 6, 7 or 9.

The orientation of the tombs is very uniform, with two main orientations. Almost half of the graves ( $n=19$ ) are oriented to NE-SW, while the other half ( $n=15$ ) is WNW-ESE oriented. Only three tombs follow an NW-SE orientation and with three graves the orientation is unclear. The orientation of the tombs differs slightly depending on their specific location within the village. All graves in and around the

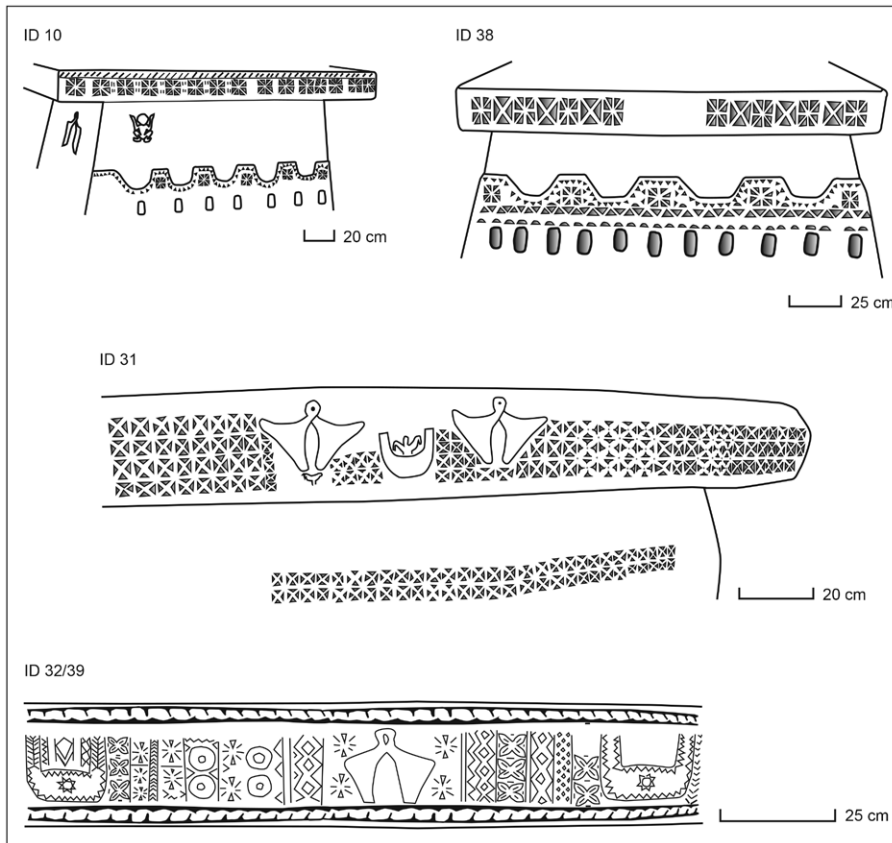


Fig. 68: The different plastic and engraved ornamentations occurring in Praikumis.

central ritual square are oriented to NE-SW or WNW-ESE. The remaining graves, scattered at the south-eastern or north-western end of the village, can also be oriented towards NW-SE.

#### 5.1.8.4 Ornamentation

The tombs of Praikumis show a very low frequency of decorations. Only six of the 40 tombs are ornamented, which is only 15%. Most of the decorated tombs ( $n=3$ ) are of type 2, *i.e.* the older closed dolmens. Furthermore, a simple tomb slab, a modern closed dolmen, as well as one of the capstones lying on pillars are decorated. Only incised motifs are used as decorations. Although the individual arrangement and combination of individual pattern elements on the graves differ from each other, the basis of possible patterns can be limited. The use of a wave-shaped arrangement followed by other elements on the subparts of closed dolmens is common (cf. ID 10 and 38, Fig. 68).

A decoration pattern of the capstones, which is frequently found in Praikumis, are triangles that form squares (cf. ID 10, 31, 38). The same motif can be found on the lower parts of the dolmens. In combination with these motifs, round or oval engravings also appear in two cases on the lower parts (cf. ID 10 and 38). A typical combination of elements is the use of wavy lines, triangular elements and oval elements. Another focus of the decorative selection is the manifold use of specific ritual motifs. These include *Maraga* motifs found on several tombs (cf. ID 10, 31, 32) and described as female fertility symbols. However, *Tarega* motifs (cf. ID 10, 31) as the male equivalent are also available. Furthermore, these motifs are combined with *Mamuli* and drum symbols (ID 32 and 39).

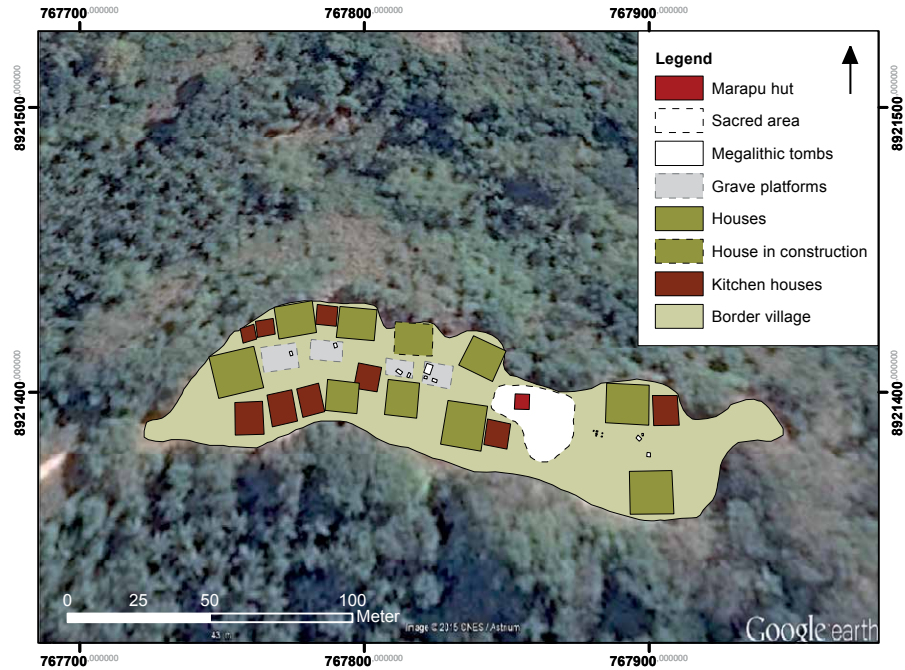


Fig. 69: The ancestral village of Waiwang (satellite image: Google Earth).

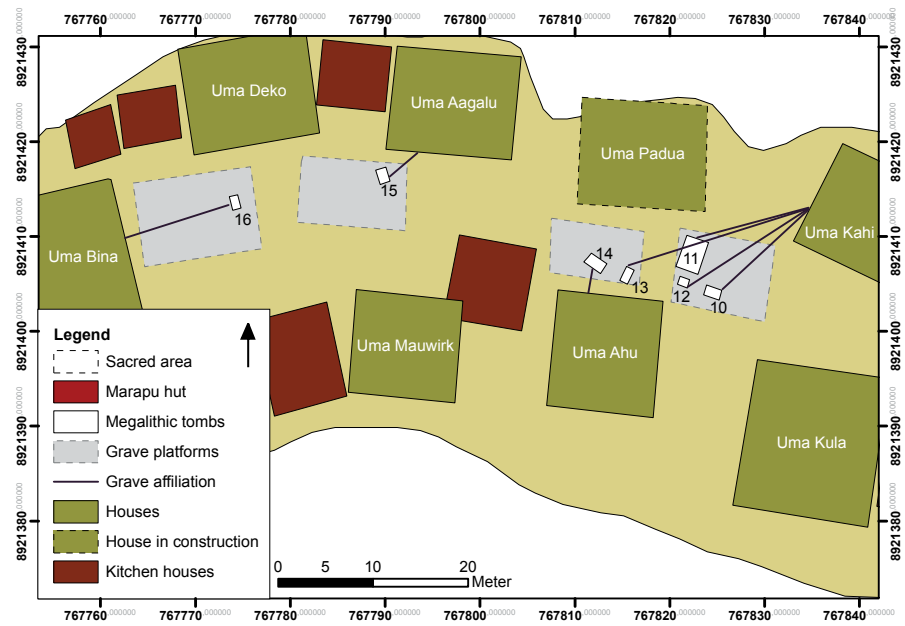


Fig. 70: The central area of Waiwang with most of the tombs and the ritual area.

### 5.1.8.5 Summary

In summary, Praikumis is a village with rather low degree of megalithic-building activities. Therefore, the number and the size of the graves are rather small. There is a strong degree of uniformity in the orientation and size distribution of the graves. However, this does not apply to the grave types, whereby a surprising variety can be noted here. All clans living in the village seem to have a similar access to tombs, as can be seen in the relatively small differences in the grave volume, as well as the number of graves per clan.



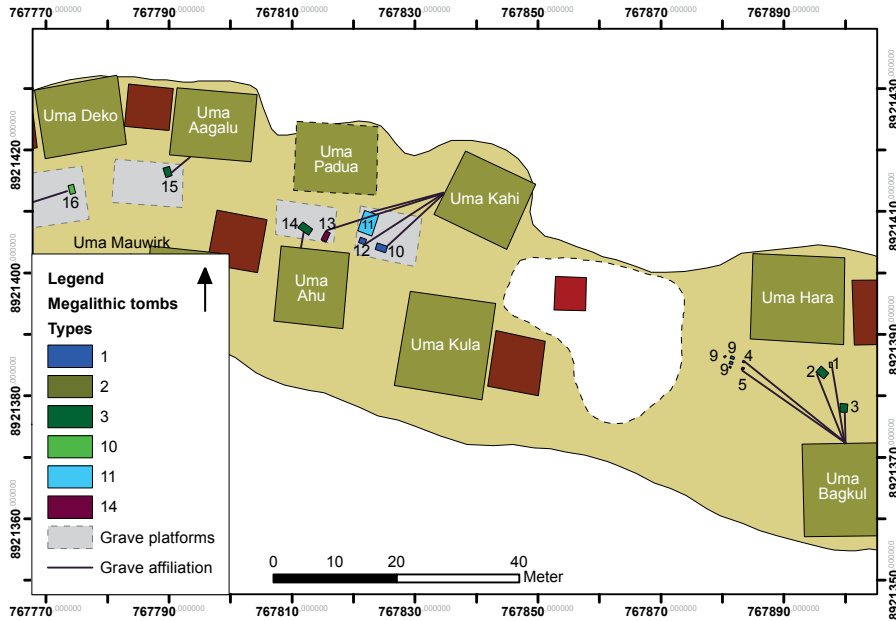


Fig. 71: The spatial distribution of the different grave types in Waiwuang.

### 5.1.9 Waiwuang (Wanokaka)

One of the research areas on Sumba is Wanokaka, a district in the south-west of the island. Wanokaka is characterised by its coastal location and very fertile soil, which is extensively used for rice cultivation and the keeping of water buffaloes. The villages are sometimes located high up on the hills. Waiwuang is located directly on the southern coast of Sumba at a relatively high altitude. The village can be divided into two twin parts – Waiwuang bawa (lower part) and Waiwuang atas (upper part) – which together cover an area of about 0.8ha (Fig. 69).

The villages are connected by their ancestors, two brothers who each founded a part of the village. Accordingly, the inhabitants of both parts of the village belong to the same clan, the Waiwuang clan. In the upper part of the village there are fifteen houses, while the lower part has thirteen houses. The data collection took place in the upper part, where the main house ('Uma Kelada') is also being rebuilt. The total number of inhabitants was estimated at around 300, with four to ten members per family. The organisation of village life and especially of rituals and feasting activities takes place on a common basis. This is illustrated by the construction projects on the main building. It was said that the work was shared by all residents and that discussions on planning and organisation included all families. The seventeen families equally involved in the work and organisation live in farmhouses outside the actual village. The reason for this distance is the better quality of the soil in the wider area of the settlement. Both parts of the village have a total of six *Ratos*, which organise and carry out ceremonies together, as well as the new building of the house. The full number of ratios for these activities is always necessary.

#### 5.1.9.1 Village plan

The course of the village and the arrangement of the houses in Waiwuang follows a rough east-west orientation. The houses are built in two opposite rows, between which are the tombs and the paths through the village. Between or next to the houses are the kitchens. The building under reconstruction is one of the two mother houses. The graves are always in close proximity to the homes of the families who built them (Fig. 70).

In most cases, the graves are even located directly in front of the houses concerned. As also becomes clear in the statistical evaluation, the plan shows the imbalance between the allocation of the graves to individual houses. The sacred area of the village lies in the eastern area and is decentralised but easily accessible.

The few graves in Waiwuang do not follow a spatial separation according to the specific types (Fig. 71).

### **5.1.9.2 Interviews**

The interview was conducted on 15.09. with four different *Ratos* of the village and lasted 73:56 minutes. The questions were often answered together and after a short discussion between the participants. Several villagers were also present and involved in the conversation.

#### **Specialists**

The extraction of stones for the tombs, as well as the application of ornaments on the stones is usually carried out by experts who are particularly familiar with this work. However, no specific profession is to be assumed, as the persons concerned also perform normal activities in agriculture. It was stated that in Waiwuang itself only one person can be found who is specialised in decorations. He teaches his children the craft and passes on the necessary knowledge.

#### **Funerals: rules and taboos**

In Waiwuang, unlike some other areas and villages, parents and their children are allowed to be buried together in a grave. It is irrelevant whether the children were married or unmarried. Since grandchildren can also be buried in the same grave, entire families may be laid to rest together in one grave. Therefore, more than two people can regularly be buried in a grave. The interior of the graves is architecturally divided to separate the multiple burials according to certain rules. The tomb is divided by low stone walls, with women on one side and men on the other. All of the dead are buried in a sleeping position according to an old tradition that was already maintained and taken over by the ancestors.

#### **Grave goods**

The burial can take place with the addition of grave goods; however, the selection of such is rather small. While the funeral takes place with the addition of a cloth or a blanket, knives, betel bags or jewellery can also be provided. There is a freedom of choice as to whether such objects are to be inherited or buried as well.

#### **Houses and graves**

During the interview it became clear that the graves are directly connected with certain houses and thus with certain families. A house can only have one, but also two or more graves. For example, a tomb monument can belong to several houses if the families are closely related and are therefore buried together in one tomb. The order of burials is determined exclusively by the time of death. Before the funeral, the deceased is laid out in the house for three to five days, while the grave is erected at the same time. The construction process is carried out with the sympathy and help of the other families in the village.

#### **The grave types and the size of the graves**

Only three types of graves were represented in the settlement: closed simple dolmens, stone slabs and in one case a large capstone on pillars. When asked if this type was

intended for *Ratos* – for example – it was stated that essentially every inhabitant of the village may build any type of tomb. There are no restrictions regarding the type or size of the tombs. In particular, the size was described as dependent on other factors. However, it was stressed that permission would have to be obtained for the construction of funerary monuments. This is caught up with the *Ratos*, who in a figurative sense are regarded as the father and mother of the village because they live in the main house. This rule is independent of the type or size of the planned grave: permission must always be asked. In addition to the megalithic grave types of stone or cement mentioned above, there are simple earth graves that are dug without any gravestones. This type of grave is only used if the family of the deceased does not yet possess or cannot erect a grave monument. In this case, a reburial takes place in case of the construction of a megalithic tomb. These burials take place in the village around the megalithic tombs and can possibly be used again if another person dies who has no place in a megalithic tomb. The size of the burial monuments was described as dependent on economic factors. The greater the economic potential, the larger the tombs could be built. A connection between the size of the grave and factors such as sex, age or simply height was clearly negated.

**Location of the monuments**

Waiwuang’s tomb monuments are located exclusively within the two twin-villages. As stated in the interview, another 17 garden houses from the outer perimeter belong to the village. They are forbidden to bury their dead near their property. The reason given for this strict regulation was that the relatives had to be taken back to the main village and the main house. Within the village the graves are spread over both parts of the settlement. There is no central burial ground that is only available for use. As to the exact location of the graves, it was stated that the monuments are usually built in front of the house in which the relatives live and in which the deceased also lived. The burial of relatives in front of their families’ houses thus facilitates the maintenance of contact with each other.

**Worship and rituals**

One of the characteristic statements about the ritual structures of the village of Waiwuang is the cooperation with its twin village. This concerns rituals such as the reconstruction of the *Marapu* house and the use of the specific *Marapu* hut, which

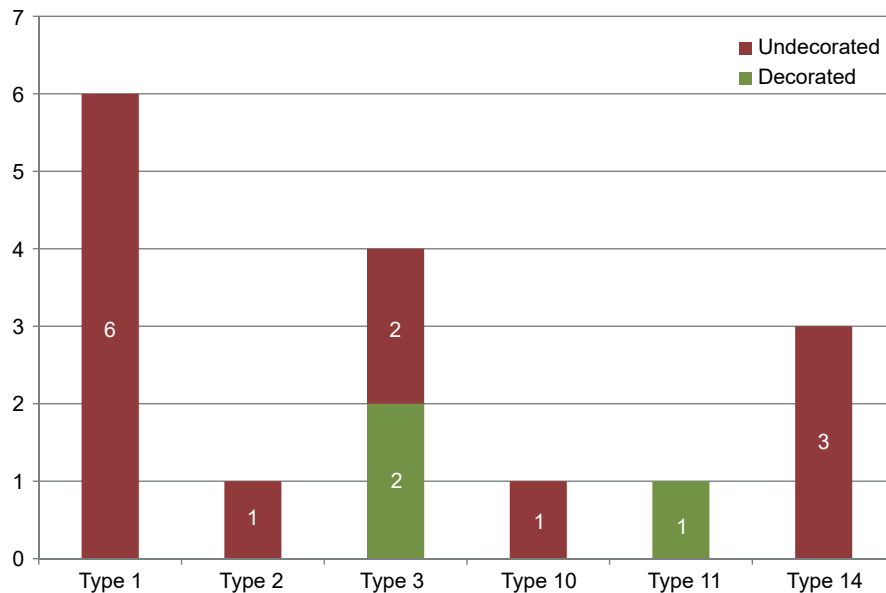


Fig. 72: The different grave types represented in Waiwuang.

Fig. 73: Histogram of the volume (m<sup>3</sup>) of the tombs in Waiwuang.

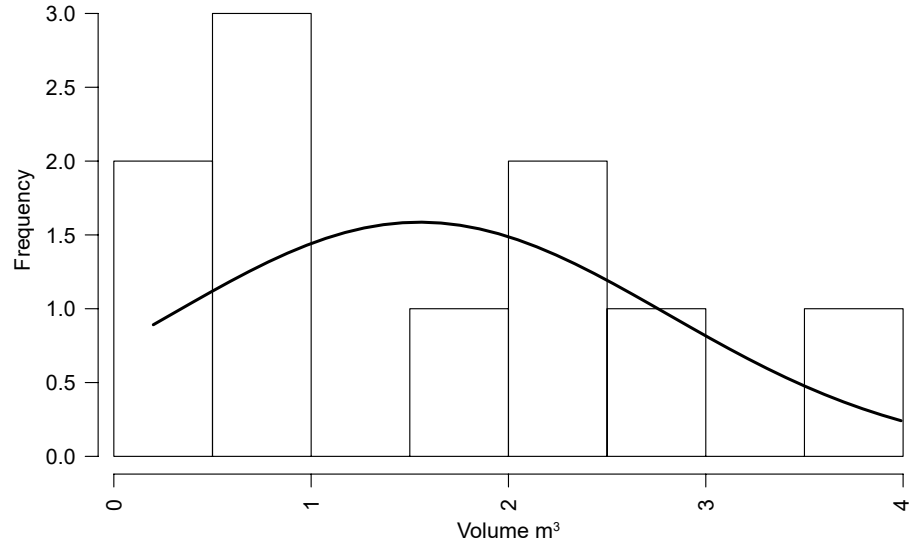
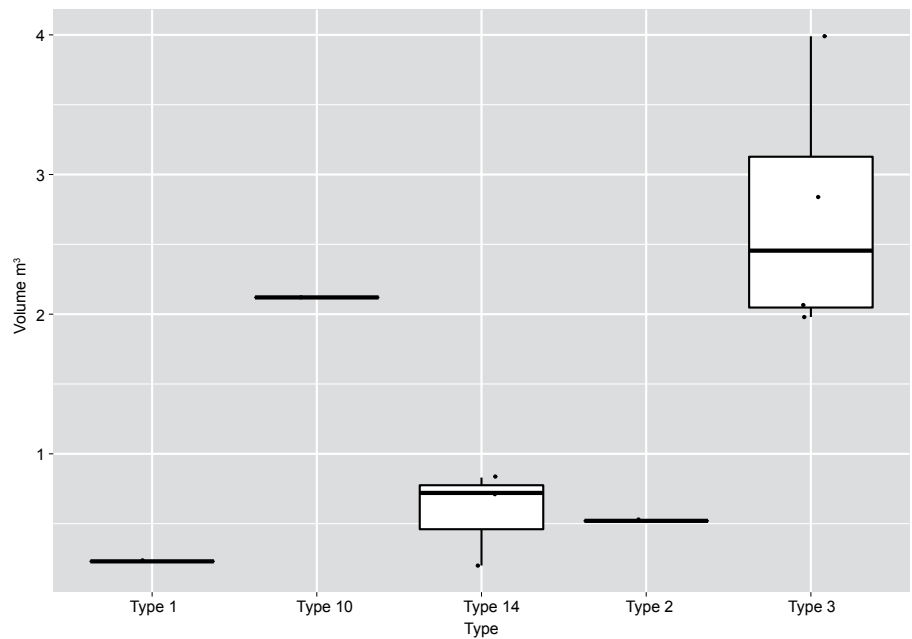


Fig. 74: Boxplot of the volume (m<sup>3</sup>) of the tombs in Waiwuang with consideration of the type.



plays an important role in rituals and feasting activities. The *Marapu* symbol of the village are a pair of chickens, male and female.

### The quarry areas

During the interview it was stated that two different extraction areas are used. The first of these areas is located near Tarimbang, in the south-eastern coastal area of Sumba, about 60km as the crow flies from Waiwuang. The second quarry area is near Mamodu, also in Wanokaka and only 10km away. Although both areas are used for stone extraction, the source at Tarimbang is of better quality and preferred. However, the long transport route is long and the use of the stones from this area is correspondingly more expensive and more complex. Both areas are still used, but only a quarried stone was ready for further processing in the area of the village. This stone lay in front of the village and was to be dragged in as soon as the person to

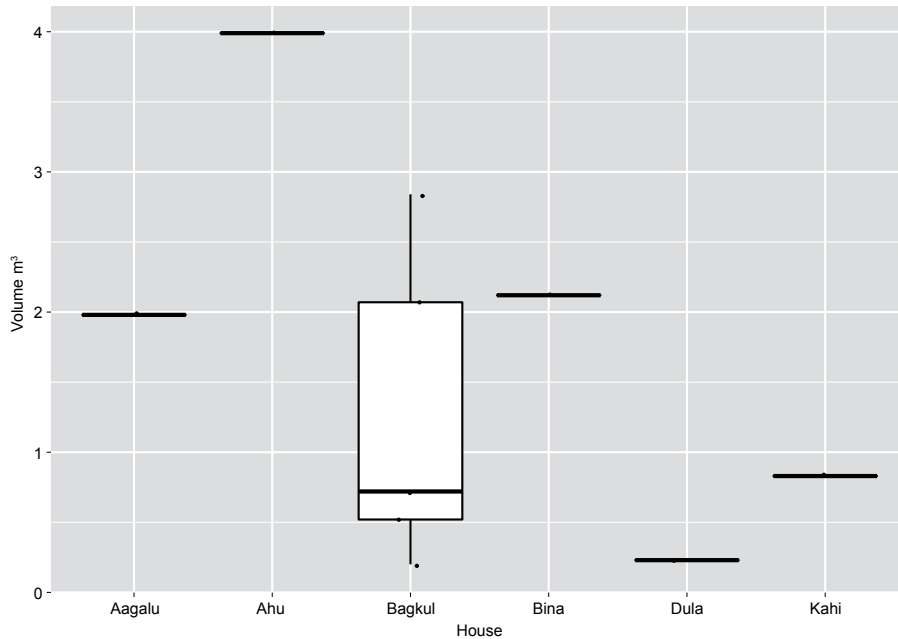


Fig. 75: Boxplot of the volume ( $m^3$ ) of the tombs in Waiwuang with consideration of the house affiliation.

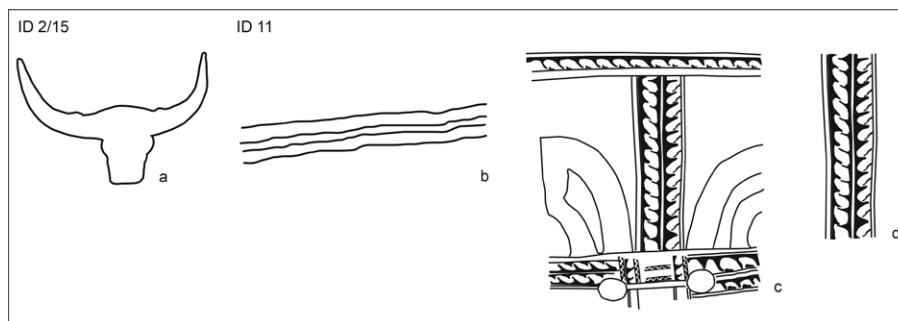


Fig. 76: The different sculpted and incised ornamentations occurring in Waiwuang.

be buried would have died. In addition, both stone and cement are used for further processing, mainly due to the economic means available for construction.

### 5.1.9.3 Statistics: grave types and their affiliation

Most of the tombs ( $n=4$ ) can be assigned to type 3, closed modern dolmens. Graves 2, 3, 14 and 15 can be attributed to this type: graves of type 1 and 14 are the second most common (graves 9, 10, 12), while type 14 (graves 4, 5, 13) describes capstones resting on a stone heap (Fig. 72).

Overall, the volume of the tombs in Waiwuang follows a normal distribution without stronger outliers (Fig. 73).

Differences are to be found above all between the different grave types. Types 1 and 14 have only small volumes (Fig. 74). More complex grave types (types 2, 3 and 10) are characterised by a wider range of sizes.

The different families also have graves of very different sizes (Fig. 75). Whether these differences are statistically significant cannot be said due to the small number of graves. Most of the houses could only be assigned a tomb, which is either large or small. Only Uma Bagkul and Uma Kahi have several tombs and thus have a larger span. Uma Bagkul could be assigned both larger dolmens and small slab graves. This is also the case with Uma Kahi, but the largest tomb of the village (ID 11) could be assigned to this house, which could not be surveyed.

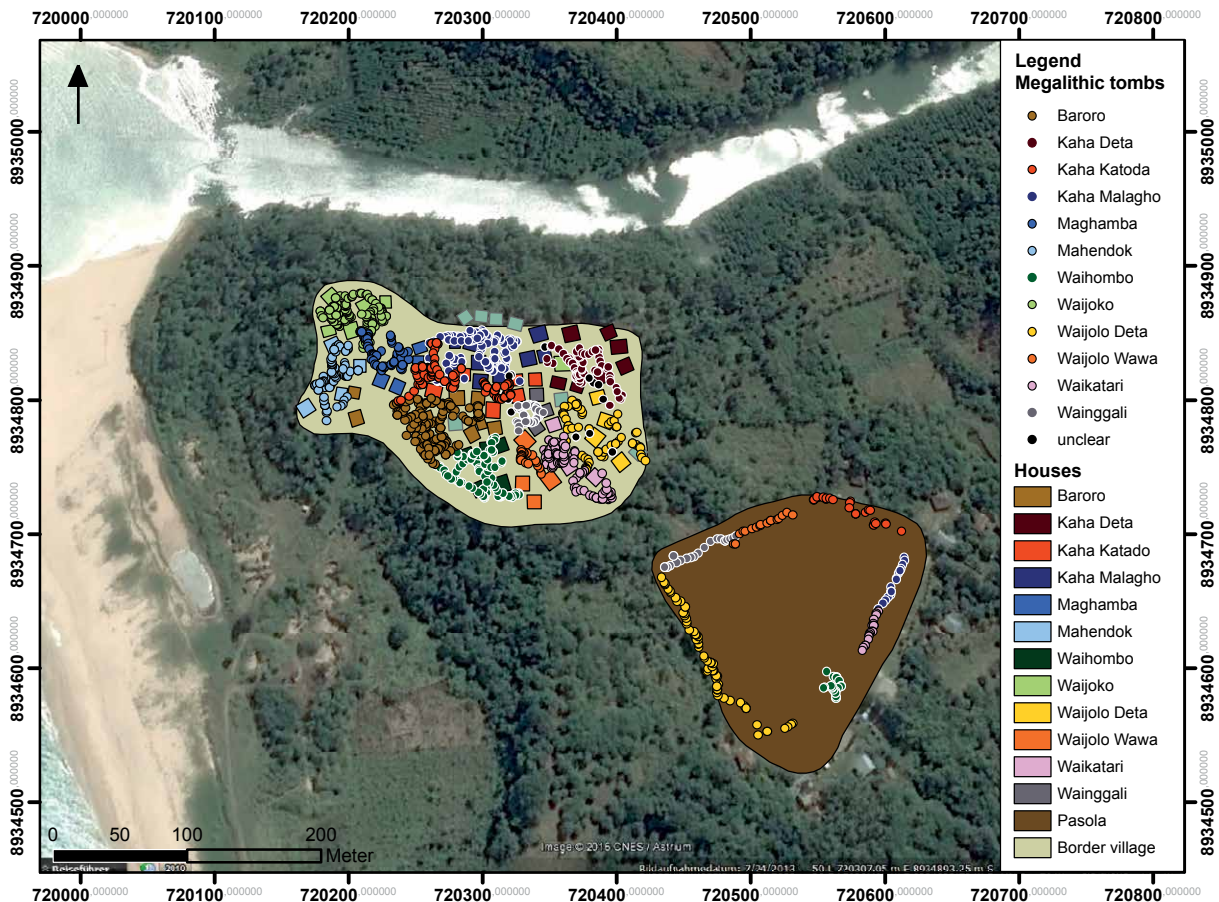
The orientation of the graves follows a rather uniform pattern. Most of the tombs (n=9) are either N-S or E-W oriented. Three more graves slightly deviate from an N-S orientation, while another grave is SE-NW oriented.

### 5.1.9.4 Ornamentation

In Waiwuang, only three out of thirteen graves are decorated.

On two of these graves (ID 2 and 15) buffalo skulls (Fig. 76 A) have been carved out of the lower part of the tombs. In both cases these decorations are on the narrow sides: in one case, only on one side (ID 15) and in the other case on both sides (ID 2). Both graves are modern, closed dolmens (type 3). The last decorated tomb (ID 11) is a capstone resting on pillars (type 11) with dolmens underneath. The capstone itself has a simple groove pattern around the sides (Fig. 76 B). While five of the legs are undecorated, the last leg has an elaborate and complex decoration (Fig. 76 C/D). The decoration contains various elements such as a zig-zag line, wavy patterns, as well as the indicated legs of animals. In the course of the interview it was mentioned that the choice of motifs for a tomb monument is free. Usual motives in the village are above all animal representations, so the attachment of representations of buffaloes, horses, pigs or dogs was described. The representation of these motives does not depend on the actual possession of the mentioned goods, but can be used by everyone. The decoration with wave and zig-zag patterns follows above all of the stylistic representation of life cycles and the symbolic ups and downs of life. Ultimately, these ornaments are intended purely as ornaments and are less connected with the representation of real property or status.

Fig. 77: The village of Wainyapu with the Pasola field to the south-west. The clan affiliation of the individual houses is marked in color (satellite image: Google Earth).



### 5.1.9.5 Summary

The interview and analyses of the tombs in Waiwuang show a relative unequal distribution within the village. While different grave types exist and may also be built by all inhabitants, economic differences were given as the reason for the construction of specific grave types. This can be seen in the assignment of the tombs to the houses, *i.e.* families. Not all families own megalithic tombs, the tombs are concentrated in a few houses. These have either only a small or larger complex or, as in two cases, a larger number of tombs. These are both large and small graves. It seems that these two houses were able to build more graves than were absolutely necessary

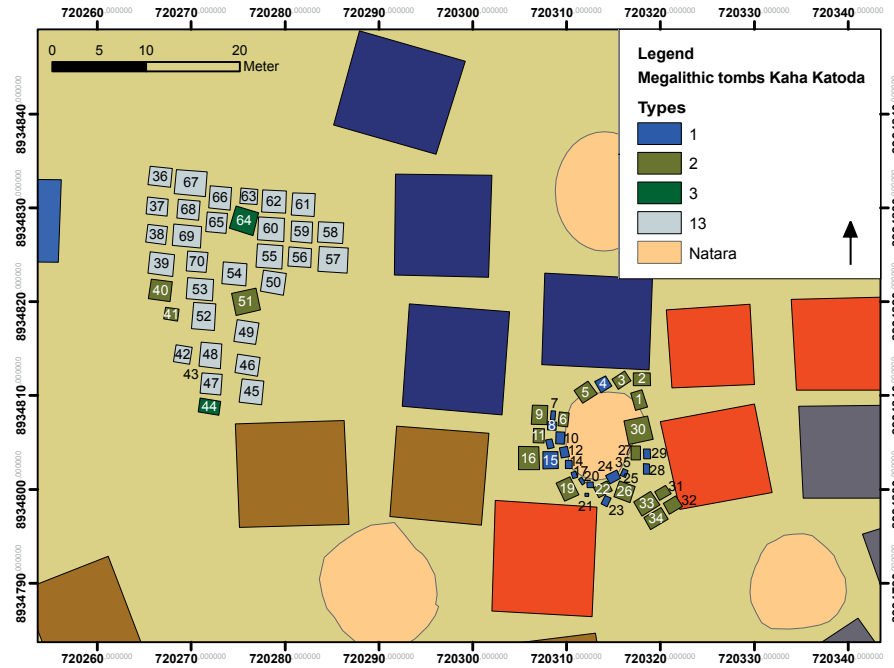


Fig. 78: The tombs and their type of the clan Kaha Katoda in Wainyapu. The clan affiliation of the individual houses is marked in color.

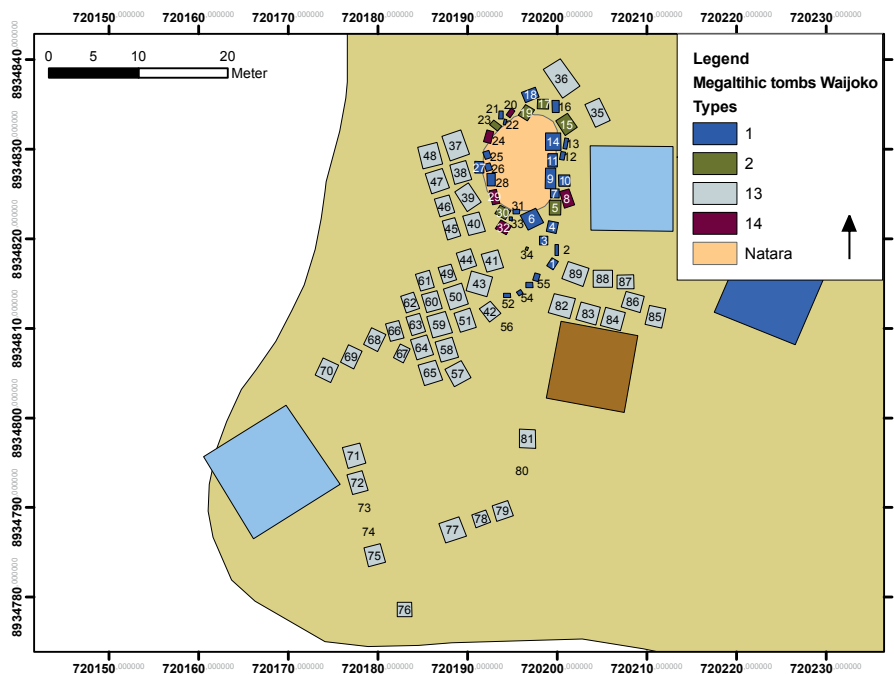


Fig. 79: The tombs and their type of the clan Wajoko in Wainyapu. The clan affiliation of the individual houses is marked in color.

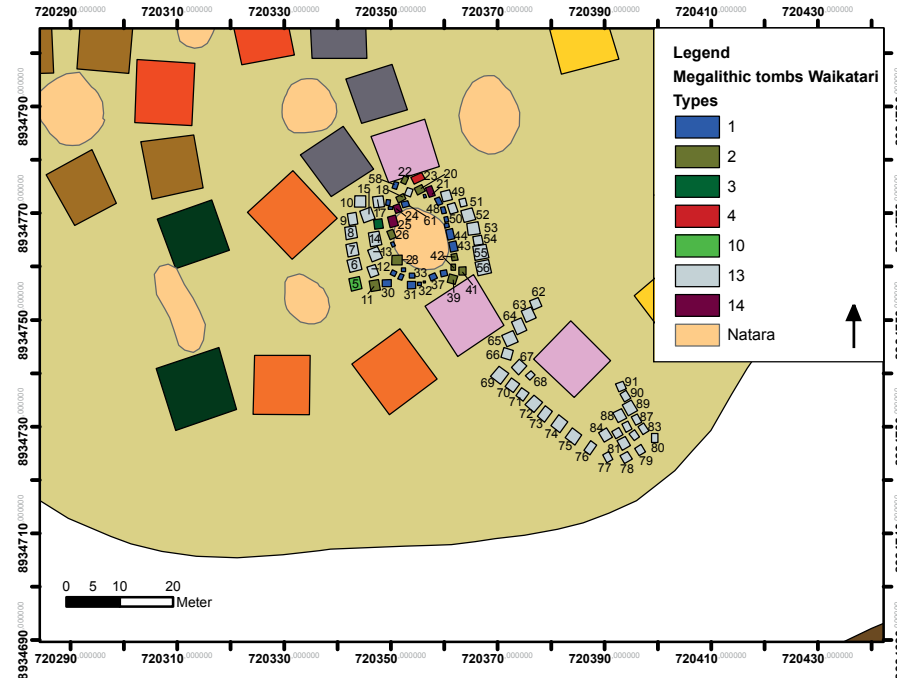


Fig. 80: The tombs and their type of the clan Waikatari in Wainyapu. The clan affiliation of the individual houses is marked in color.

and, in the course of the building history, were able to increase in terms of the size of the tombs. Two of the three decorated graves also belong to these two houses. There is therefore a clear imbalance, but this is not due to restrictive access to graves. A certain equality can be seen in the very uniform size of the houses.

### 5.1.10 Wainyapu (Kodi)

On the west coast of Sumba lies the ancestral village Wainyapu in direct proximity to the beach. To the north of the village, there is a river that is difficult to cross when the water level is high. North of Wainyapu, there are other villages located along the coast.

#### 5.1.10.1 Village plan

Wainyapu covers a total area of approximately 3.2ha, with the *Pasola* field to the south-east occupying a further 2.75ha. The annual *Pasola* festival takes place here with extensive games and rituals. In addition, the quarry area belonging to Wainyapu is located south-west of the village (Fig. 77 and 81).

The village area is elongated, roundish and extends roughly to the north-west. There are 37 houses and 30 house ruins in the village, belonging to twelve clans living in Wainyapu. The houses belonging to a clan are usually close together and group themselves at least partly around the *Natara* (ritual area) of the clan. Each of the clans has a *Natara* that is always roundish. Around this area are the ancestral tombs of the clan, where rituals related to the clan are performed. Thus, these places have a high practical and spiritual significance. The number of houses and house ruins varies according to clan: the smaller clans have between three and four houses and house ruins (e.g. Waijolo Wawa and Wainggali) and the larger ones between seven and eight (e.g. Waikatari and Kaha Deta). A detailed examination of the individual clans shows that only some of the tombs lie around the *Natara*. Other graves are relatively close to them in other burial areas (Figs. 78 to 80). This results in a clear separation of the different types, which is determined by their proximity



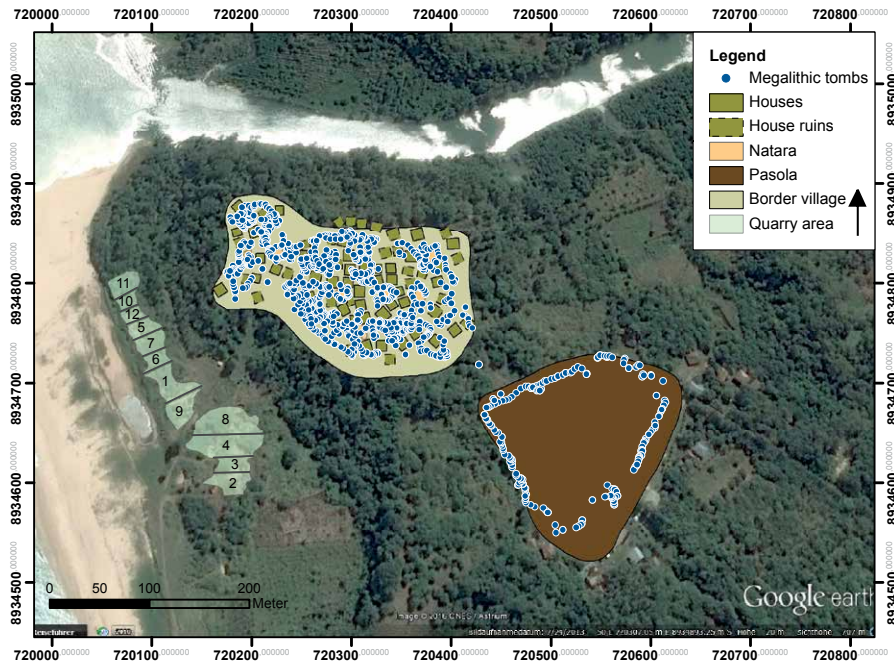


Fig. 81: The quarry area Wainyapu in direct proximity to the village and the beach. The subdivision of the quarry area by clan is as follows:  
 1. Waijolo Wawa; 2. Waikatari; 3. Waijolo Deta; 4. Kaha Deta; 5. Kaha Malagho; 6. Kaha Katoda; 7. Wainggali; 8. Waihombo; 9. Baroro; 10. Mahendok; 11. Waijoko; 12. Maghamba (satellite image: Google Earth).

to the respective *Natara*. For example, graves of types 1, 2 or 14 always lie directly around them. These simple stone slabs and closed dolmens are the older grave types and were laid directly around the *Natara*. The later extensions of the original grave areas include a large number of concrete dolmens (types 3 and 13), some of which reach larger dimensions.

Overall Wainyapu is very densely populated and exhibits a large number of densely clustered tombs. Therefore, further megalithic tombs were built around the *Pasola* field. Among the clans represented there are Waijolo Wawa, Waikatari, Kaha Katoda, Wainggali, Waijolo Deta, Waihombo and Kaha Malagho. However, collective structures (such as a shared ritual area with *Marapu* hut) that go beyond the unity of the clans do not exist in Wainyapu.

A comparison between the satellite image<sup>6</sup> from 2013 and the village structures explained and documented on site clearly shows how much the village is struggling with migration and decay. During the stay on site, the location of such ruins was also documented, which are no longer visible above ground. The only reference to the formerly existing houses are more or less clear open spaces in the village. These houses are no longer visible on the satellite image. Furthermore, such houses could be documented on site, which are still standing in their basic structures, but have already decayed strongly. In these cases, the maintenance of the houses by the responsible *Umas* is no longer guaranteed, possibly due to a lack of interest or financial problems. During the interview, it was said that if the necessary restoration work is not done, a house will decay in about 20 to 30 years. It is clear that especially at the edges of the village the structures have already changed a lot. The clans Kaha Deta and Waihombo have the most house ruins with a decay rate of 71% and 60%, respectively, although both clans owned or possessed a relatively high number of houses (seven and five respectively) in Wainyapu. In the case of the clans Waijolo Deta, Mahendok, Maghamba (all four houses), as well as Kaha Malagho (formerly eight houses) 50% of the houses are already decaying or no longer existing. The Baroro (two of eight houses), Kaha Katoda (two of six houses) and Waijolo Wawa (one out of four houses) clan have a significantly lower rate of house ruins. Only the

6 Google Earth; Image © 2016 CNES/Astrium.

clans Wainggali and Waikatari each own three houses in Wainyapu, none of which can be classified as ruins.

#### 5.1.10.2 Quarry area

The quarry area used in Wainyapu is very close to the beach (approximately 500 metres). The quarry area is divided according to the clans' resident in Wainyapu, whereby each of these clans owns a piece of the area (Fig. 81).

Within the framework of their own area, clan members can quarry stones freely, whereby of course the workers have to be paid. The surface area of the clans varies. The largest shares are held by the clans Wainggali, Kaha Katoda and Waijolo Wawa. Members of clans who are not resident in Wainyapu have to pay for the use of the quarry. All organisational factors are regulated by the clans Kaha Malagho, Wainggali and Waijolo, which were described as particularly influential and significant. The proportion of the total area of the quarry per clan differed considerably. However, the subdivision shown should be seen primarily as an approximation, as there are no clear boundaries between the surfaces. The extraction itself should take three months for a stone of average size. The transport takes only one day with the help of a lorry, while the erection of the stones takes about one week.

#### 5.1.10.3 Interviews

The interview was recorded on 22.08.2015 in one of Wainyapu's main buildings and lasted 114:42 minutes. The interviewee was a member of the Wainjolo Wawa clan. During the interview there were other people present at times, but they only sometimes took part in the interview. The interviewee was also the oldest descendant of the ancestral house, so he was responsible for its maintenance and care, and the house itself is considered the property of the entire clan.

#### The village

There are twelve clans in Wainyapu:

1. Waijolo Wawa
2. Waikatari
3. Waijolo Deta
4. Kaha Deta
5. Kaha Malagho
6. Kaha Katoda
7. Wainggali
8. Waihombo
9. Baroro
10. Mahendok
11. Vaiyoko
12. Maghamba

Although Wainyapu is a traditionally-influential and large village, the number of inhabitants is falling because many young people are leaving the village. This is mainly related to educational opportunities. Many are studying in Bali or Java or looking for work in similar areas. This development is also evident in the condition of the houses. In particular, some of the main buildings can no longer be maintained. This is also due to the fact that the entire family or clan must be involved in all actions, whereby often no concrete measures come about. While in the past Wainyapu changed from a small village into a large, central village, today this development is declining. Some of the families have farmhouses and thus leave the ancestral houses in the village. These farmhouses are two to five or ten kilometres

from Wainyapu. Although these families will return to Wainyapu for important festivals and use the houses there, they are not used most of the time and are increasingly decaying. During the interview it was estimated that over 90% of the families associated with Wainyapu live in farmhouses outside the village. In addition to agriculture, fishing is also practised, albeit more as a sideline. The cultivation includes rice, cereals, corn and cassava and takes place once a year during the rainy season. Beans and nuts are also grown. Animal husbandry includes horses, pigs and goats as well as water buffaloes. However, owning water buffaloes is not necessarily common and not the case for most families. Very few families own one or even up to three water buffalo. A general lack of buffaloes was explained by the sometimes very high number of slaughtered animals and their slow reproduction rate. In order to maintain your one's status, the person may have to buy buffalo for rituals and celebrations. The cost of such an animal was given with a range between 15 and 30 million Indonesian rupees. Fundamental changes took place with the turn of the inhabitants to Christianity from 1942. Today, 99% of the inhabitants of Wainyapu are said to be Christians. Above all, old people are still followers of the *Marapu* faith. However, it was also noted that despite this radical change, the old traditions have remained fundamentally the same. Thus, the *Pasola* festival is celebrated by all people together, with the participation of traditional *Ratos*. The decisions concerning this are made by men, with the age of the men playing an important role.

### **Specialists**

No specialists were mentioned in Wainyapu.

### **Funerals: rules and taboos**

Before the funeral, the dead are laid out in the family home for several days and up to one week. This time is used for the preparation of the funeral. Accordingly, the animals required for slaughter are brought here and relatives from other villages are able to arrive. In the course of preparations, the deceased person is also wrapped in *Ikat*, in a seated position, based on the position of an embryo. After the funeral, the deceased is released from the seated position to be released into the second life. The position in the grave itself is then stretched out on the right side. This position follows a sleeping position. Man and woman are buried together without a physical separation in the burial chamber. While children have to build their own grave, it is possible to bury grandchildren together with their grandparents. These rules date back to pre-Christian times and are retained even for families that have already been converted. These rules also follow restrictions that already apply during one's lifetime. Adults, and especially children who are already married, are not allowed to sleep in the same room as their parents, whereas in the case of grandparents this is possible. The care of the graves is the responsibility of the children or the eldest son in particular. The grandparents' graves are also the responsibility of the family and the clan in the broader sense, whereby here changes and repairs represent a joint task and competence.

### **Grave goods**

Regarding possible grave goods, a general openness and dependence on the specific ideas of the individual families was emphasised. The only property that is specially made for the funeral and then buried with the dead is the *Ikat* in which the deceased person is wrapped. In principle, valuables such as jewellery or weapons may be placed in the grave, but these are normally inherited by the children of the deceased. Deposition in the grave is only possible if expressly requested.

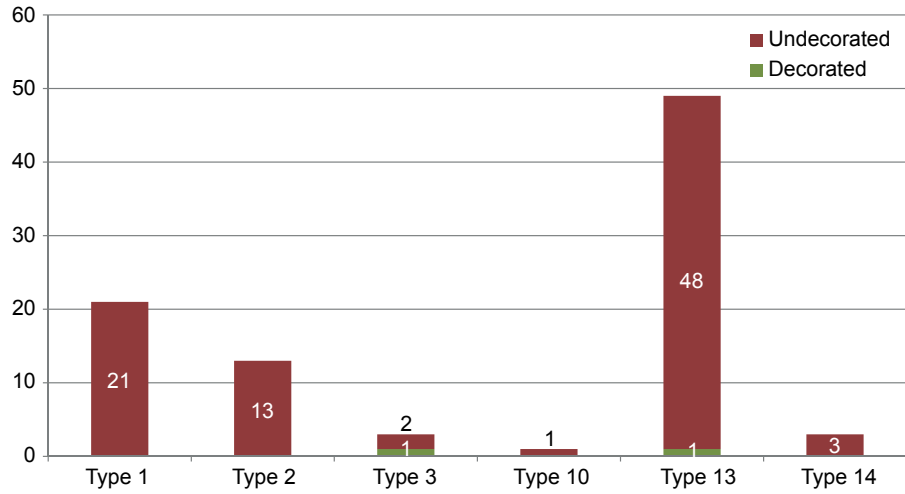


Fig. 82: The different grave types of the Waikatari clan (Wainyapu).

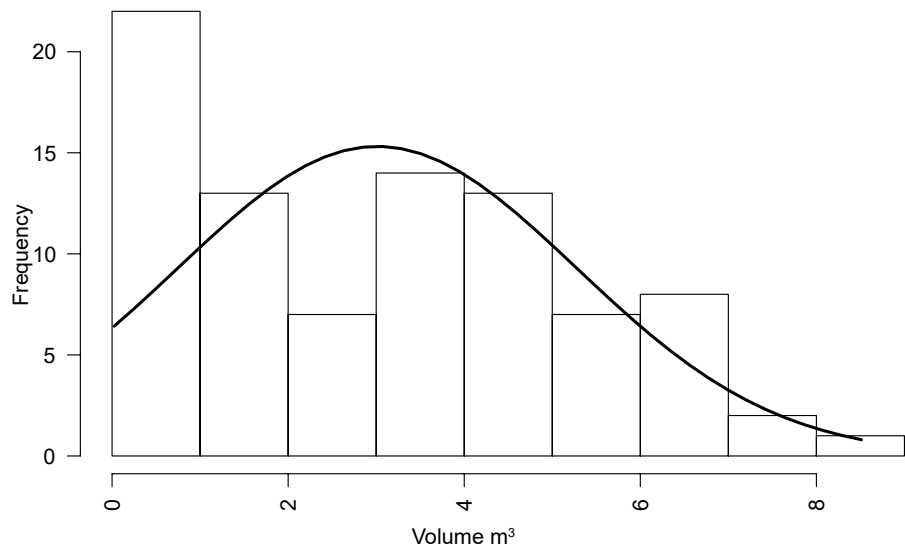


Fig. 83: Histogram of the volume (m<sup>3</sup>) of the tombs of the Waikatari clan (Wainyapu).

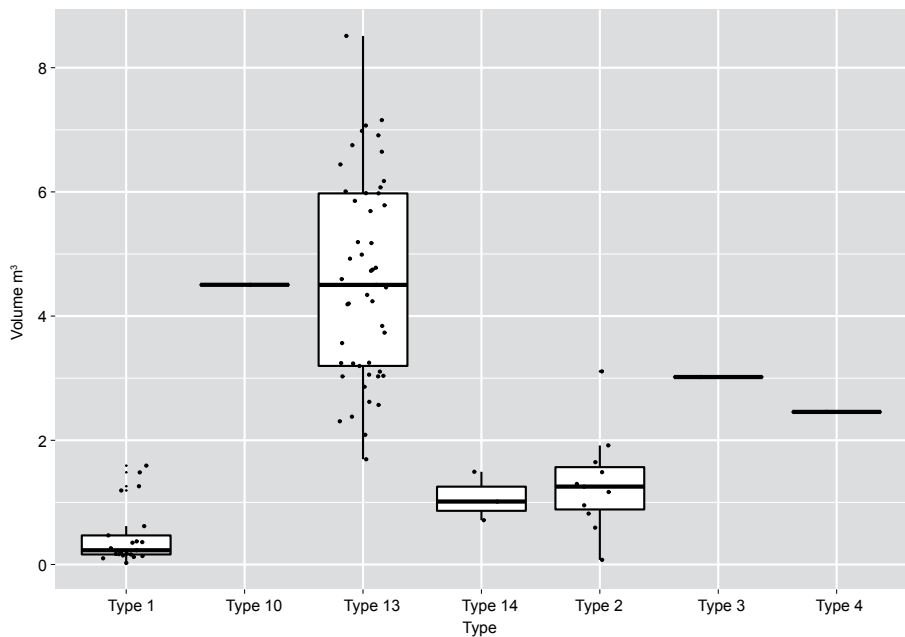


Fig. 84: Boxplot of the volume (m<sup>3</sup>) of the tombs of the Waikatari clan (Wainyapu) with consideration of the type.

### The grave types and the size of the graves

In addition to the usual burial in megalithic tombs, simple burials were also mentioned, which can occur in two cases. A first reason can be the lack of economic basis for the complex construction of a megalithic tomb. If a family is too poor, there are not enough pigs and buffalo to provide the necessary rituals and feasting activities. A second reason can be a surprising death or a lack of preparation. In this case, the grave was not completed before death, requiring some kind of intermediate burial. In both cases, burial in the ground is only intended as a temporary option until the necessary resources could be organised or all necessary preparations, including the grave construction, were completed. It has been said that this can take 10 to 15 years.

The sum for a tombstone was estimated at 60 to 70 million Indonesian rupees (approximately 3500-4300 euros). This number refers to a stone of average size, whereby especially small or large stones have to be adjusted in price. Therefore, the size is directly related to the wealth of the family concerned. In addition, the size is also influenced by the willingness of the family and acquaintances who can support the builder in the construction process. This form of support will then be repaid if necessary.

### Location of the monuments

The distribution of the graves inside and outside Wainypau was described as a direct consequence of the dense development of the village and the resulting lack of space. In addition to the space available on the *Pasola* field, the farmhouses belonging to Wainyapu are also used for the construction of the megalithic tombs.

### 5.1.10.4 Statistics: grave types and their affiliation

#### Clan Waikatari

The 91 tombs of the Waikatari clan can be divided into six different types (Fig. 82).

The largest part (n=49; type 13) belongs to the dolmens with access at one of the narrow sides. The second largest group are the simple stone slabs (n=21; type 1), which in a broader sense also include the slabs resting on rubble (n=3; type 14). Further dolmen types are the rarely occurring closed dolmen made of stone (n=13; type 2), closed dolmen of cement (n=3; type 3) and finally a closed

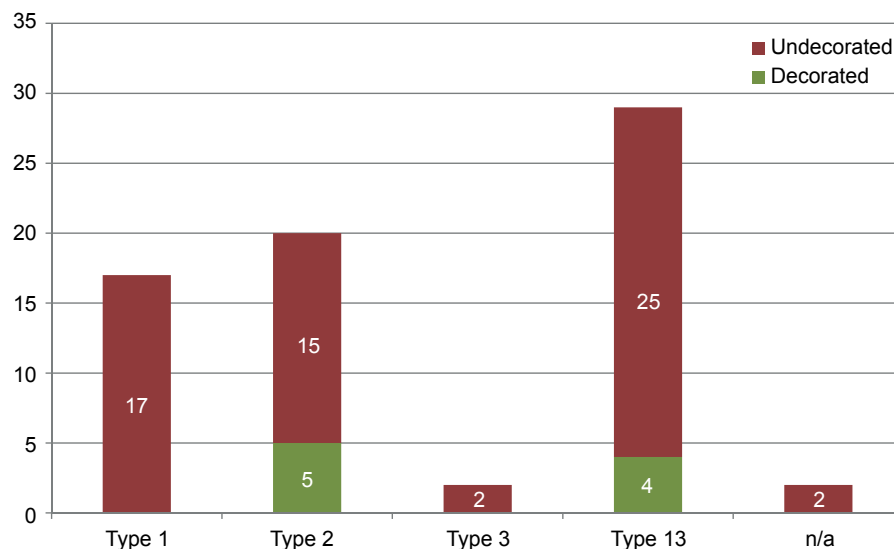


Fig. 85: The different grave types of the Kaha Katoda clan (Wainyapu).

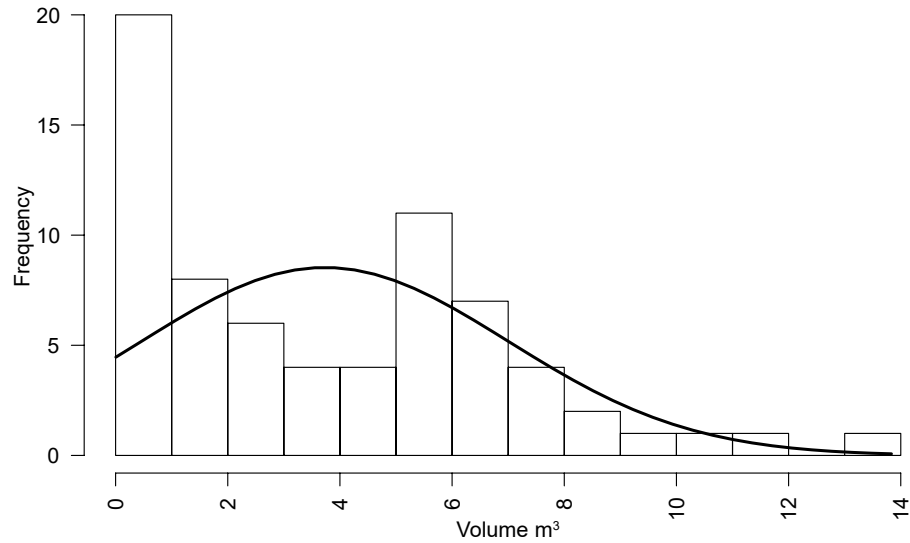


Fig. 86: Histogram of the volume ( $m^3$ ) of the tombs of the Kaha Katoda clan (Wainyapu).

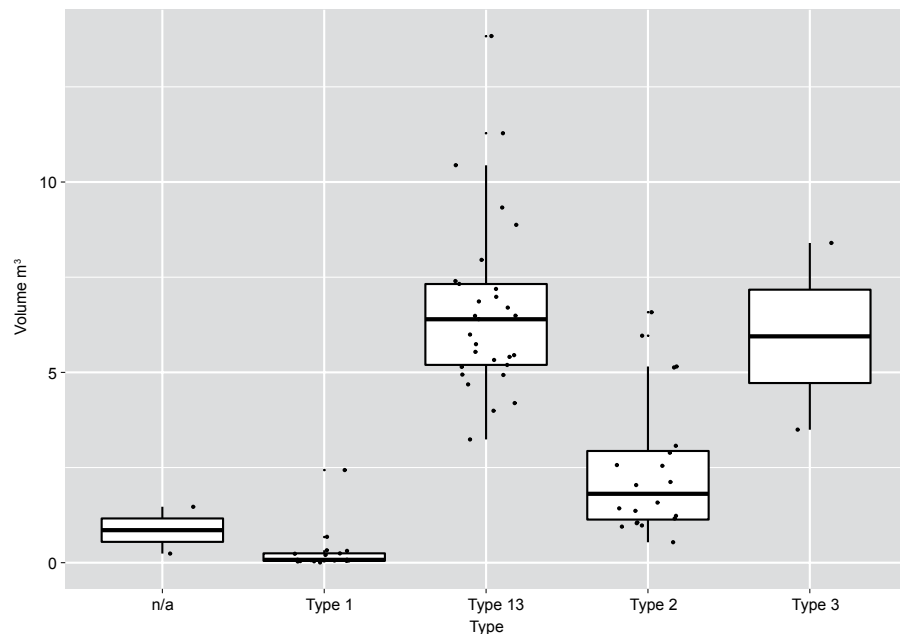


Fig. 87: Boxplot of the volume ( $m^3$ ) of the tombs of the Kaha Katoda clan (Wainyapu) with consideration of the type.

dolmen with indicated legs (type 10). The volume of these graves follows a normal distribution after the KS test, but not after the Shapiro test, but only shows an outlier of over  $8m^3$  (Fig. 83).

This belongs to grave type 13, which is often bricked or made of cement, whereby the construction of large graves is made easier. This design is also reflected in the boxplot according to the different grave types (Fig. 84). Thus, apart from the usually small simple slab graves (types 1 and 14), only the dolmens made of stone have a small volume span. It is shown that tomb type 13 is characteristic of the clan and is built frequently and with a wide range of variations.

The orientation of the grave types is very variable. Although many of the graves are aligned according to NW-SE or NNW-SSE ( $n=19$  or  $33$ ), there are five other forms of orientation. The most common orientation is NNE-SSW or NE-SW ( $n=11$  or  $7$ ). Graves facing E-W are also more frequent ( $n=8$ ). Orientations according to N-S ( $n=4$ ), ENE-WSW ( $n=5$ ) and ESE-WNW ( $n=1$ ) are relatively rare.

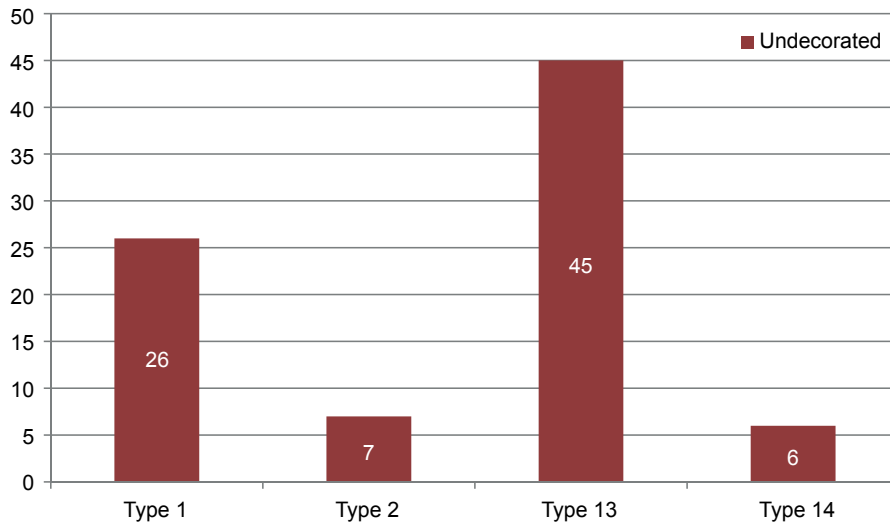


Fig. 88: The different grave types of the Wajoko clan (Wainyapu).

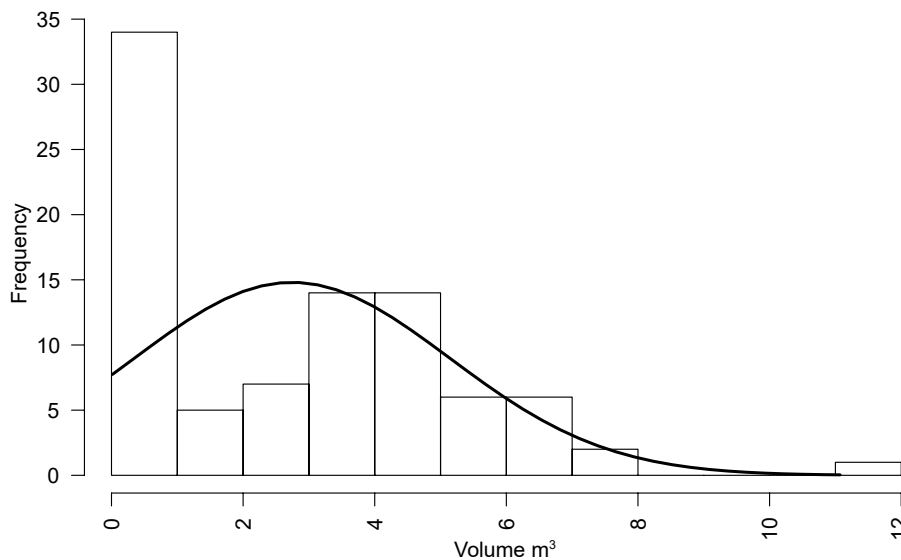


Fig. 89: Histogram of the volume (m<sup>3</sup>) of the tombs of the Wajoko clan (Wainyapu).

**Clan Kaha Katoda**

In Kaha Katoda, a total of 70 graves contain only four types of graves and two graves of unidentifiable type (Fig. 85).

The largest group are the dolmens with an opening (n=29). These are closely followed by the closed dolmens made of stone (n=20) and the simple stone slabs (n=17). Only in two cases are closed dolmens made of cement. These graves also follow a normal distribution after the KS test, but not after the Shapiro test. The distribution curve shows two peaks at 0-2m<sup>3</sup> and 3-5m<sup>3</sup> (Fig. 86).

Overall, however, the maximum volume of over 12m<sup>3</sup> is significantly higher than in the Waikatari clan. Again, in this case the graves belong to type 13, which has a wide range of design. However, in this case, larger domes made of stone (type 2) are also present. The type has a significantly larger size range than the corresponding graves of the previous clan (Fig. 87). The small dimensions of the stone slabs, on the other hand, correspond to the usual picture.

Furthermore, the orientation of the graves resembles the variability of the Waikatari clan already presented. Again, there is a clear focus on an orientation according to NW-SE and NNW-SSE (n=3 and 19 respectively). Alignment to N-S (n=14)

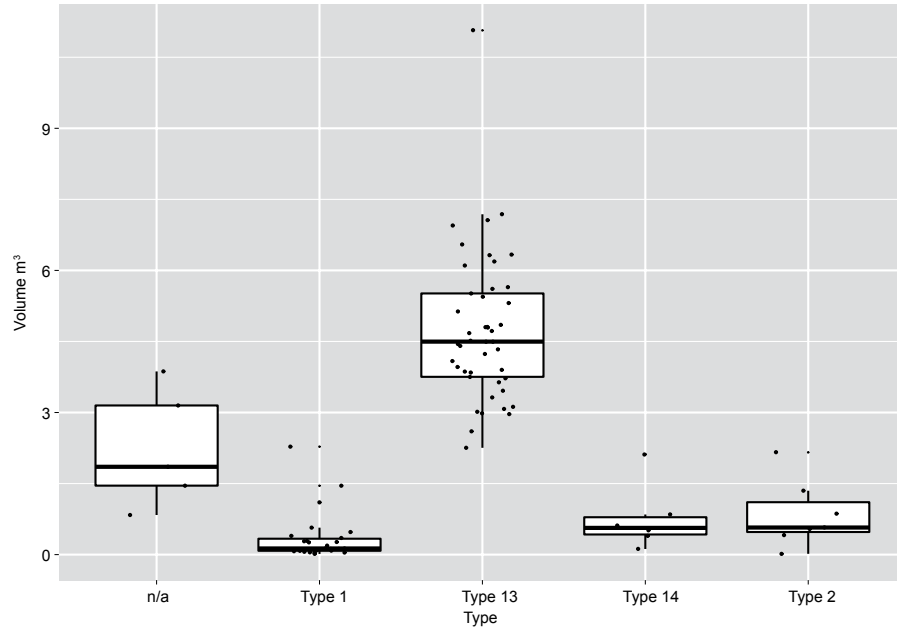


Fig. 90: Boxplot of the volume ( $m^3$ ) of the tombs of the Waijoko clan (Wainyapu) with consideration of the type.

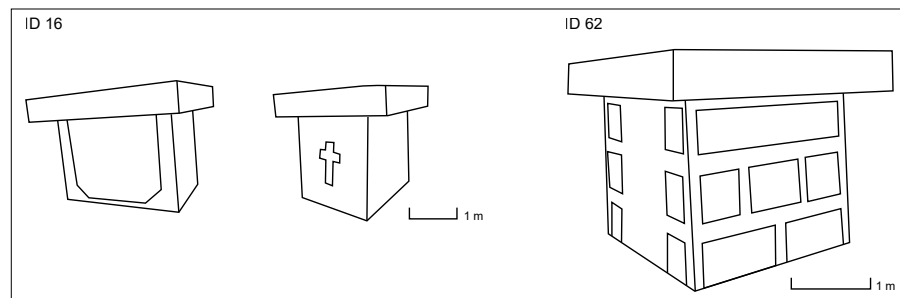


Fig. 91: The different sculpted and incised ornamentations occurring of the Waikatari clan (Wainyapu).

is very common in this case. Overall, orientations according to NNE-SSW, NE-SW and ENE-WSW ( $n=2, 10, 11$ ) are less common. In contrast to the Waikatari clan there are only a few graves aligned to E-W ( $n=5$ ).

### Clan Wainjoko

The graves of the Wainjoko clan, which can be determined in their type, almost half of the 89 graves can be assigned to the dolmens with opening (type 13,  $n=45$ ) (Fig. 88).

The second largest group are the simple stone slabs ( $n=26$ ) and the slabs resting on rubble ( $n=6$ ). Rarely are the closed dolmens made of stone ( $n=7$ ). The Wainjoko clan is the only one of the clans presented here in Wainyapu whose grave volume differs from a normal distribution. While the curve again has two peaks in the ranges between 0 and one  $m^3$  and 3 and 5  $m^3$ , a single outlier is responsible for the uneven distribution (Fig. 89).

Again, in this case, the grave can be classified as type 13, which also has a wide span and a large number of graves. As the only other type of dolmen, the stone dolmens are relatively rare and small (Fig. 90). As in the other two examples, the tombstone slabs with and without underlying stone packing are characterised by a small span of size and at the same time a large number.

The orientation of the graves of the Wainjoko clan corresponds as far as possible to that of the Waikatari clan. The focus is on orientations according to ESE-WNW, NW-SE and NNW-SSE ( $n=7, 10, 26$ ). Orientation to N-S ( $n=14$ ) is also more common. Rare are all north-eastern orientations, which affect altogether only eighteen graves.



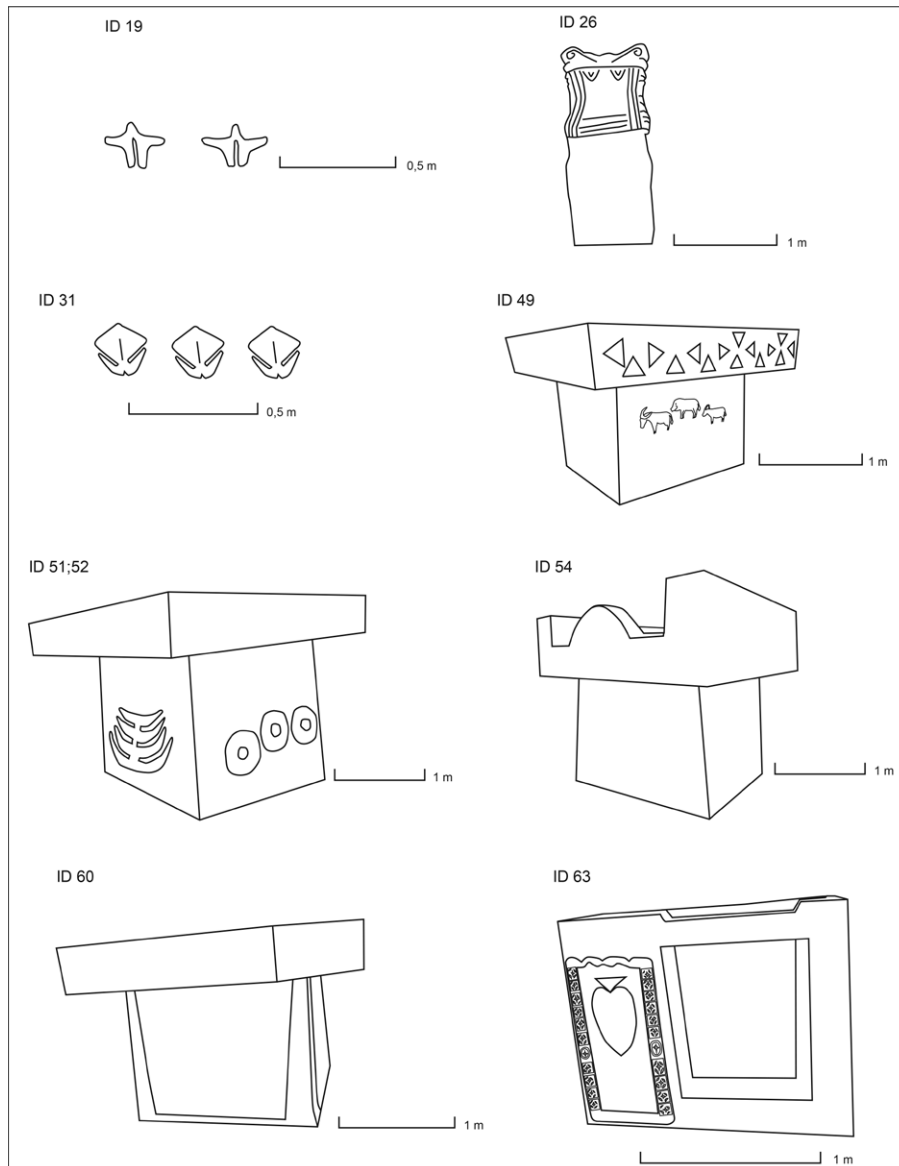


Fig. 92: The different sculpted and inscribed ornamentations occurring of the Kaha Katoda clan (Wainyapu).

### 5.1.10.5 Ornamentation

Of the three clans documented in Wainypau, only two had decorations on their graves, while the Wainjoko clan had none.

#### Clan Waikatari

Only two of the 91 tombs (2%) of the Waikatari clan in Wainyapu have decorations (Fig. 91). In one case (ID 16) this is a cross which is combined with a frame and is attached to the lower part of the dolmen. In the second case (ID 62) it is only frames worked out of the stone. The graves belong to types 3 and 13.

#### Clan Kaha Katoda

The tombs of Kaha Katoda are more often ornamented. Ten of the 70 graves (14%) have decorations. There is a wide variety of patterns and motifs (Fig. 92). All patterns

have been carved out of the stone and lie, with two exceptions, on the lower part of the graves. As in the Waikatari clan there is a simple frame (ID 60). In one case, the capstone is also provided with a structure (ID 54). All other patterns follow an iconographic style. Representations of *Mamuli* (ID 31), *Maraga* (ID 19), *Tabelo* (ID 63), as well as a drum representation (ID 51) can be found. However, water buffaloes are also thematised in the form of horn representations (ID 51 and 52), as well as animal representations (ID 49). Finally, there is also a stele (ID 26), which is characterised by simpler incised representations. The occurrence of the patterns is almost balanced either on grave type 2 (n=5) or on type 13 (n=4).

Clan	Houses/house ruins	Megalithic tombs	Burials Pasola	Size quarrying area (m <sup>2</sup> )
Waijolo Wawa	4	19	yes	~892
Waikatari	3	73	yes	~735
Waijolo Deta	4	45	yes	~485
Kaha Deta	7	48	no	~1452
<b>Kaha Malagho</b>	<b>8</b>	<b>216</b>	<b>yes</b>	<b>~451</b>
Kaha Katoda	6	64	yes	~347
<b>Waingali</b>	<b>3</b>	<b>17</b>	<b>yes</b>	<b>~510</b>
Waihombo	5	80	yes	~1467
Baroro	8	129	no	~670
Mahendok	4	53	no	~261
<b>Wainjoko</b>	<b>6</b>	<b>103</b>	<b>no</b>	<b>~549</b>
Maghamba	4	46	no	~293

Tab. 2: Comparison of the distribution of different factors per clan in Wainyapu.

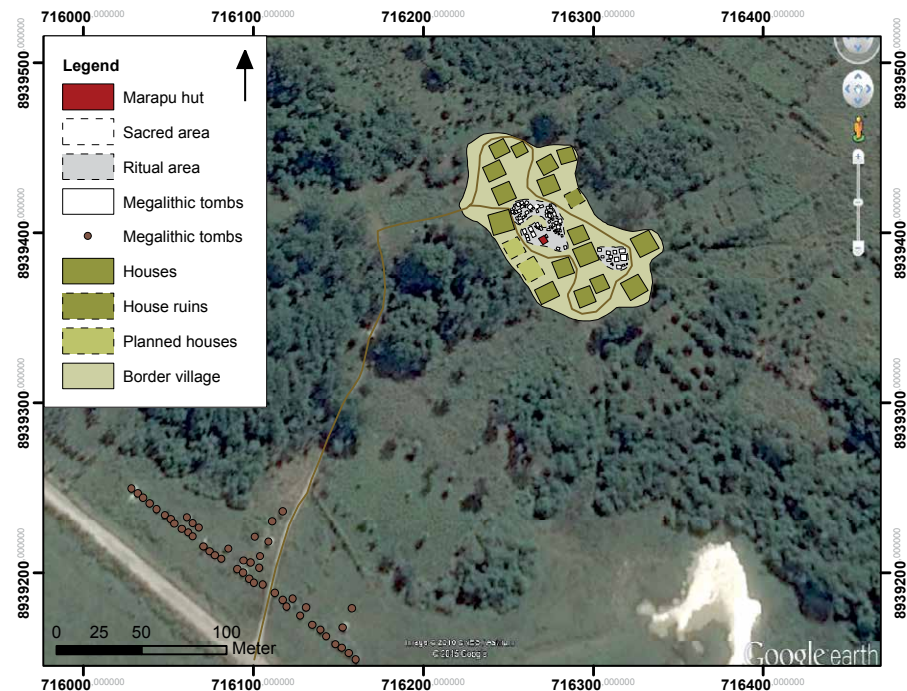


Fig. 93: The village of Toda and the graves along the way leading towards the village. The affiliation to houses could not be documented for these tombs (satellite image: Google Earth).

### 5.1.10.6 Summary

During the interview the following clans were mentioned as particularly important: Wainggali, Kaha Malagho and Waijoko. In fact, the importance of these clans is not reflected in the number of graves, access to burial grounds at the *Pasola* field, the size of the quarry area and the number of houses. Kaha Malagho with 216 and Waijoko with 103 have a large number of tombs, but Wainggali has only seventeen. Furthermore, this clan has only a small number of houses, and the Waijoko clan has no graves at the *Pasola* field. The overview of all of these factors shows that the actual importance of the clans in Wainyapu cannot simply be read from certain material factors (Tab. 2).

The size of the extraction areas does not seem to be relevant either. The meaning of these clans, described as influential and important, must therefore be internalised and present in other forms without having a direct correspondence in the materialised aspects mentioned. The overall importance of Wainyapu can be seen very clearly in the size of the village, the *Pasola* field, as well as in the large quarry area, which is of high quality. As an ancestral village, Wainyapu is clearly a central place, which still holds strong importance for many surrounding farmhouses and other villages. However, the decay of the village is clearly visible. Although two of the most important clans are only affected to a lesser extent (Wainjoko and Wainggali), the Kaha Malagho clan has a 50% decline rate. This indicates that the cooperation and resources necessary to maintain the houses still function as far as possible within two of the three clans. This is in contrast to the third important clan, as well as a total of six of the twelve clans, which have an expiration rate of at least 50% of the houses. At this point the still existing importance of the influential clans becomes apparently clear.

Within the village the investigated clans, to which the influential Wainjoko clan belongs, show that in principle they have access to all grave types. However, it should be noted that this was the only clan whose burial volumes did not correspond to a normal distribution. Overall, the graves of the three clans are very similar. Therefore, the orientations are variable and above all adapted to the situation at the *Natara*. Decorations are very rare and not iconographic in many cases.



Fig. 94: The central village area of Toda with the ritual area and some of the tombs.

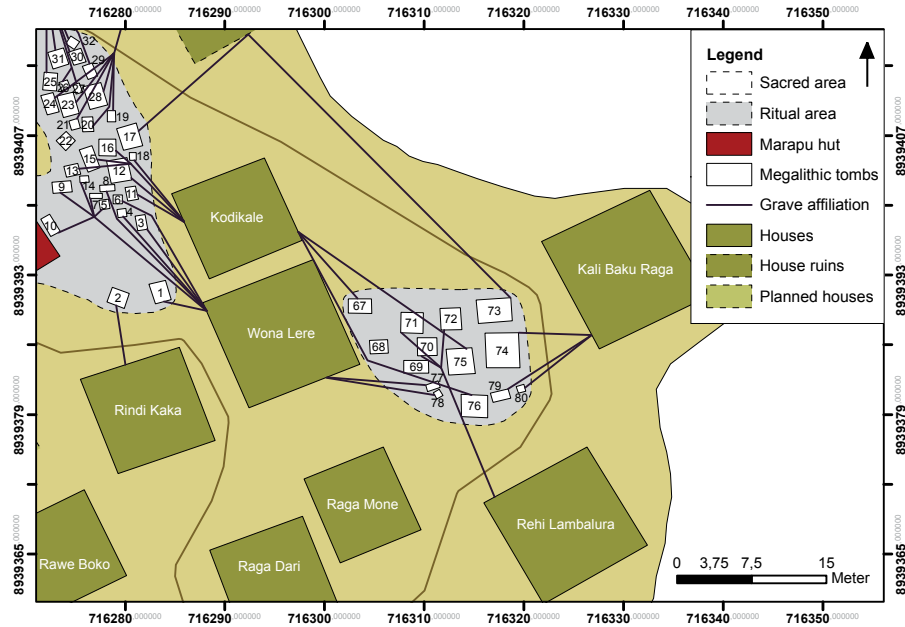


Fig. 95: The second grave cluster in Toda with the surrounding houses.

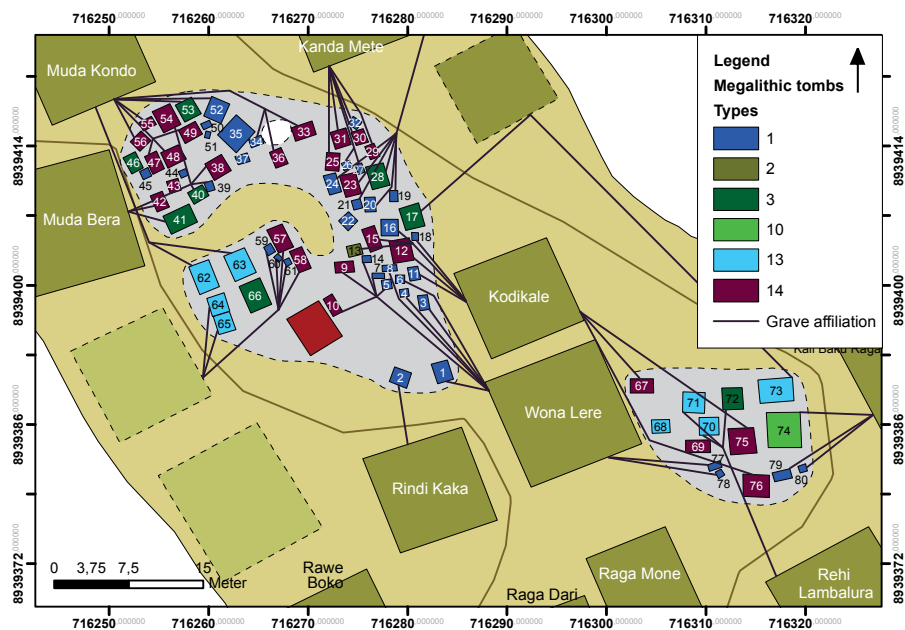


Fig. 96: The spatial distribution of the different grave types in Toda.

### 5.1.11 Toda (Kodi)

Toda is located in Southwest Sumba Regency, in the Kodi area on the west coast of the island. Toda is an ancestral village and covers approximately 0.76ha (Fig. 93). Other farmhouses in the immediate vicinity can be added to the settlement. The village comprises eighteen houses, each inhabited by a (core)family. The ancestral houses are located in the centre of the village, while the normal houses are located on the periphery. The *Marapu* hut is also located in the central area of the settlement. The number of persons per house was given as 10 to 14. All of the families in the village belong to the same clan. Due to this fact no marriage is allowed within the village. The village has a *Rato*, descended from the oldest family in the village. He is also a *Toko*, but also a farmer like the other villagers.

### 5.1.11.1 Village plan

The village branches off directly from a road along the west coast. Along this path there are a total of 51 tombs that could not be built within the village due to lack of space. The village itself is arranged around two areas with tombs and sacred areas. The much larger of these two areas includes the oldest tombs, the *Marapu* hut and sacred sites. Eleven houses are arranged around this area, including the three oldest houses (Muda Bera; Wona Lere; Muda Kondo). The second ritual area comprises far fewer and more recent tombs, some of which have not yet been completed. Some houses are also grouped around this area (Fig. 94).

There are also plans to rebuild two houses whose families live in farmhouses outside the village. Finally, there is a ruin in the village whose reconstruction is not imminent. The examination of the grave affiliation shows an imbalance between the individual houses or families. Most of the tombs can be assigned to one of the surrounding houses. The houses, which also include the oldest houses of the settlement, have direct visual contact to the sacred areas and tombs. Only a few graves were attributed to the surrounding houses (Fig. 95).

However, this may also be due to connections between families. If one of the houses is a main house and one of the surrounding houses is only a second house of the same family, the graves will always be assigned to the first house. Nevertheless, there is an imbalance which will be explained in further detail later.

The two grave clusters present in Toda show a clear mixing of the represented grave types, which include both older exemplars and newer graves made of concrete (Fig. 96). In particular, no difference can be seen between the area near the sacred area and the *Marapu* hut. Here, as in the rest of the grave clusters, there are simple stone slabs (type 1), grave slabs resting on gravel fills (type 14), and dolmens of a newer type (type 3). The same applies to the smaller cluster of graves to the south-east. This second cluster represents above all a spatial extension of the existing free place, which was used both by the families of the ancestral houses, and by the secondary houses, which were established further outside in the village area.

### 5.1.11.2 Interviews

The interview took place on 23.08.2015 in Wona Lere, one of Toda's main buildings, and lasted 67:42 minutes. Three people were mainly involved in the discussions and responses. However, as most of the time other people were present, some of the bystanders objected.

#### Specialists

Specialists were not mentioned in the interview.

#### Funerals: rules and taboos

The usual burial rule in Toda is quite open and formed in its basis by the burial of a married couple. Unmarried children and grandchildren can be buried in this tomb, but not married children. The usual number of buried individuals in a burial site is four to five. The position of the individuals in the grave follows a sleeping position. A special custom described in Toda is the playing of gongs in the event of death. However, this depends on the individual families, as the gongs can only be played if a buffalo and pigs are slaughtered. Therefore, if a family does not own or cannot lend animals, the gong is not played. The time that the dead are kept in the house also depends on the availability of animals for slaughter and thus on the wealth of the family. However, three nights followed by the burial itself and slaughter of pigs were described as sufficient for poorer people. Rich families, on the other hand, can slaughter buffalo, play music and lay the deceased person out indoors for up to

a week. Another difference between richer and poorer families is the extension of the construction process. Only richer families can take up to a year to build, while poorer families would complete the construction very quickly.

### **Grave goods**

The only common burial object described in Toda is the *Ikat*, in which the deceased person is wrapped during the burial and placed in the grave. Other burial objects were not mentioned. This is true for *Marapu* believers and Christians alike.

### **Houses and graves**

All tombs in Toda could be assigned to certain houses, whereby it was clear which were the oldest houses and which were the oldest tombs of the village. These tombs were built about 24 generations ago and can be attributed to the first settlers.

### **The grave types and the size of the graves**

Besides the dolmens and simple stone slabs as burial monuments, a third type of megalithic monuments was mentioned. This monument comprises twelve individual stones, each of which bears the name of a month. However, since the stones were stolen, the monument could not be recorded. The months are determined and counted by the position of the moon.

In addition to the megalithic graves, a burial in the ground is also possible, although this is rather unusual. For example, it was noted that a burial in a stone house is customary for all persons. The reason for a simple ground burial is the family's economic problems. When asked why there are large and small graves, economic factors were stated as decisive. Poorer families will build small tombs, while richer families will have large graves. This is not least given that a buffalo and pigs have to be killed for a large stone, as the people involved have to be supplied during the feasting activities and before the construction work.

### **Location of the monuments**

The location of the monuments is based on the oldest settlement area of the village. However, no further information on the situation has been provided.

### **Worship and rituals**

No information was given on specific rituals on the stones themselves. The central area for ritual acts is located near the older stone graves of the village in the central area (see village map). Buffalo and pigs are slaughtered there for ceremonies. At the time of the visit, the *Marapu* hut was to be rebuilt. Ultimately, pigs would have to be slaughtered and the whole village would work together.

### **The quarry areas**

The quarry area of the village was described as being about 10 kilometres away. The long distance was also described as a special challenge, as pigs would have to be slaughtered every day during transport. With larger stones the effort adds up, because more people are needed for the transport, who also have to be fed. The availability of buffalo and pigs in general was described as significantly reduced. Therefore, the ability to use real stones for the construction of tombs has decreased. Cement is therefore used by poorer families in particular as a substitute raw material. The *Marapu* faith and the intensity of man's connection to nature were also described as decisive factors in the use of stone. In particular, the ability to pull large stones is closely linked to the old faith, since only the *Ratos* were able to ask for assistance for transport.

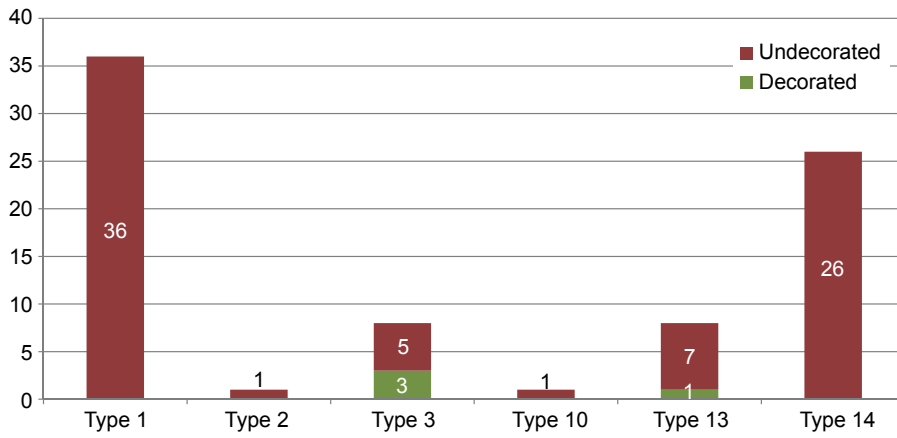


Fig. 97: The different grave types represented in Toda.

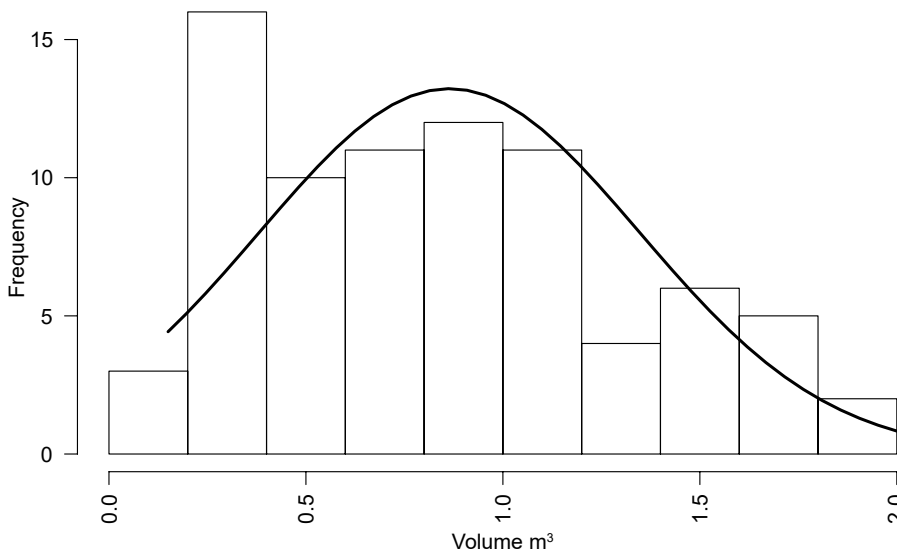


Fig. 98: Histogram of the volume (m³) of the tombs in Toda.

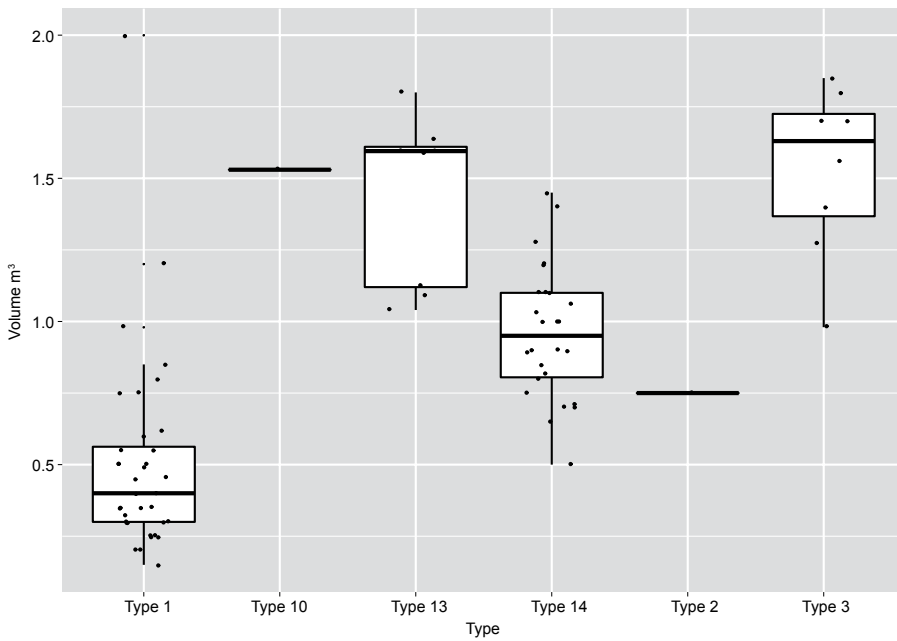


Fig. 99: Boxplot of the volume (m³) of the tombs in Toda with consideration of the type.

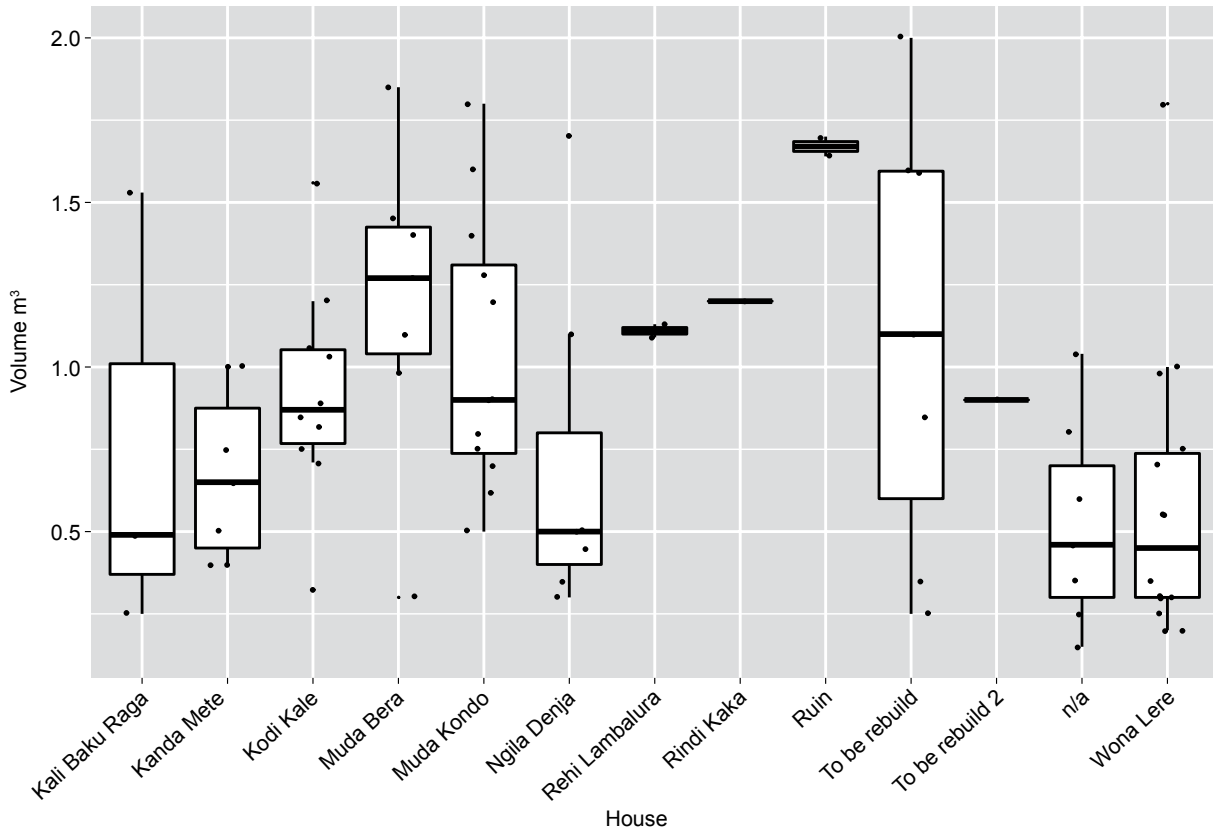


Fig. 100: Boxplot of the volume ( $m^3$ ) of the tombs in Toda with consideration of the house affiliation.

### 5.1.11.3 Statistics: grave types and their affiliation

Most of the 80 tombs in Toda are represented by simple forms (Fig. 97). This includes a total of 36 simple slab graves (type 1) and 26 slabs resting on rubble (type 13). The third largest group are closed dolmens of stone and concrete ( $n=9$ ) and closed dolmens with doors ( $n=8$ ). The only more complex or out of the pattern falling grave type is a closed dolmen with indicated legs (type 10). Thus, the variety of grave types is not particularly high and lies mainly on simple types.

The size of the graves follows a clear normal distribution (Fig. 98). Especially regarding the simpler grave types (type 1 and 14), there is a great variability in the size of the grave (Fig. 99). Simply slab graves are, with one exception, the smallest graves in Toda. Slab stones resting on a rockfill (type 14) represent the middle area of the volume span. Due to their size, closed dolmens without (type 3) and with door (type 13), as well as with indicated legs (type 10), stand out.

However, a differentiation of the grave sizes in relation to the house affiliation is more clearly recognisable (Fig. 100). Most of the houses in the village have burial monuments, but the number and size of the graves vary considerably. While only one or two graves can be assigned to some houses, the majority of the graves are distributed over only seven houses or families. In four cases seven graves and in one case 10, 12 and 14 graves can be attributed to these houses. Seven of the graves could not be assigned. The distribution of the grave types and their volumes are very different. While houses with only one or two tombs in some cases have only simple slab graves with a small volume, the house Rehi Lambalura can be assigned two dolmens of medium size. The distribution of houses with a large number of tombs also differs. Thus, the house Wona Lere can be assigned a total of fourteen tombs; however, this number consists mainly of slab stones with ( $n=2$ ) and without underlying stone packings ( $n=11$ ), while only one dolmen belongs to the house. According-



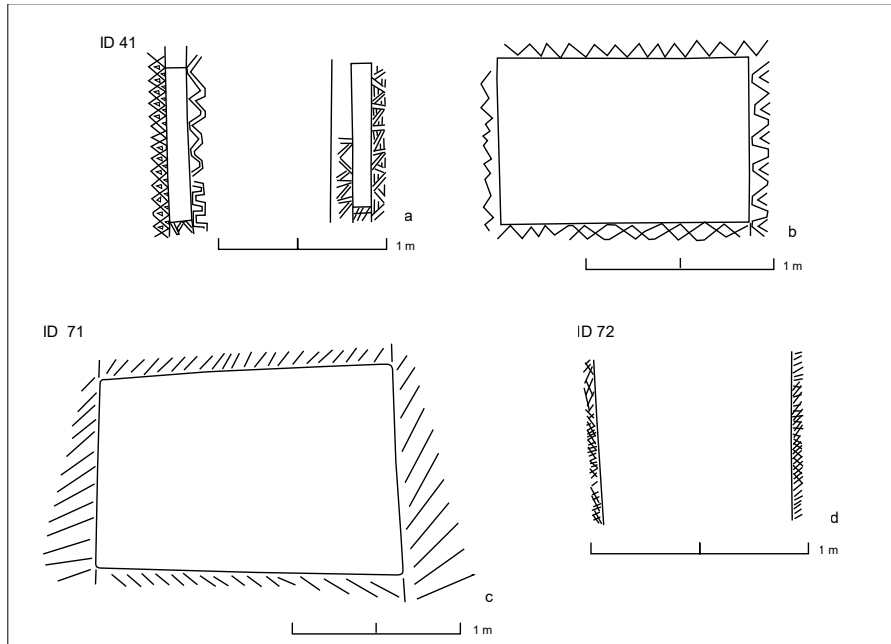


Fig. 101: The different incised ornamentations occurring in Toda.

ly, the volume of the graves, except for one outlier, is rather small. The composition of the monuments belonging to Muda Kondo varies greatly. These include only two simple slab stones and a total of three dolmens. The volume of the individual tombs is correspondingly larger.

The orientation of the tombs also follows very uniform patterns. Almost half of the graves (n=38) are NNE-SSW oriented. Another fourteen graves are NE-SW oriented, while only relatively few of the tombs are oriented to N-S (n=11) or E-W (n=13). The remaining four graves are designed according to NW-SE.

#### 5.1.11.4 Ornamentation

Only four of the 80 existing tombs are decorated (Fig. 101). These included three closed dolmens (type 3) and one closed dolmen with door (type 13). Three of the existing decorations are circumferential border decorations of the long sides of the lower parts of the dolmen. In all cases, these decorations can be assigned to incised hatchings or zig-zag patterns. The execution of the patterns appears rather inaccurate or marked by a certain disorder (cf. pattern grave 72). The only complex pattern can be found on one of the long sides of tomb 41, the ornamentation comprises engraved geometric figures which are arranged in two blocks on both sides of the surface. The motifs are not unlike the other ornaments, they consist mainly of variations of zig-zag patterns or a geometric variation of a wave pattern. The low density of decorated graves is due to the general ban on decorating within the village, which was mentioned in the course of the interview. This ban was described as a legacy of the ancestors. The only ornaments of the village are small wooden carved birds and other symbols of the *Marapu* faith.

#### 5.1.11.5 Summary

While Toda's megalithic tombs are characterised by a strong degree of uniformity, differences in access to grave types and sizes can be observed in relation to the different houses. This can already be seen when looking at the village plan and the assignment of the individual tombs to the main buildings. Here it becomes clear that some houses own many, others only one or two tombs. This is a clear imbalance,

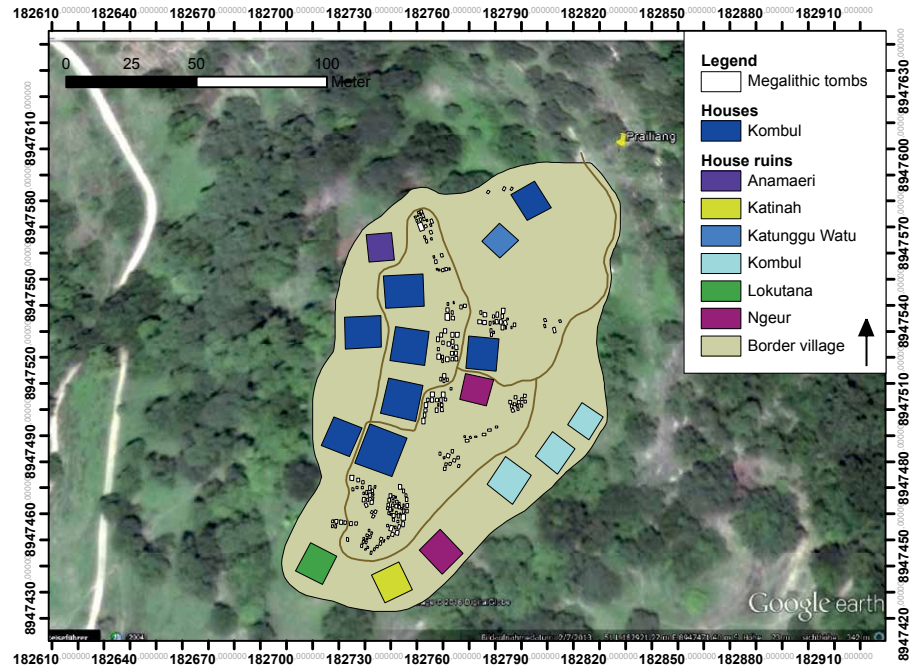


Fig. 102: The ancestral village Prailiang. The clan affiliation of the individual houses is marked in color (satellite image: Google Earth).

which is additionally emphasised by the size of the graves. Although the graves follow a normal distribution and are relatively uniform in shape and size, the affiliation of the larger and smaller graves per house shows inequalities. As the older houses of the village have more tombs, these are also characterised by a greater variance in volume. In this respect, concrete access to many and representatively higher-quality monuments is obviously unequal and easier to achieve for economically strong families. This can also be compared with the more elaborate burial rites for economically well-off families who can afford to play gongs for burial by slaughtering a water buffalo. However, it must be made clear that no rules or institutionalised restrictions between families are responsible for the differences described, so access to megalithic architecture is generally open and free.

### 5.1.12 Prailiang (Northeast Sumba)

Prailiang is a village in the north-east of Sumba. The populated area lies in direct proximity to a small river course in the coastal area. The village is part of the eastern part of Sumba, although it is remote from the more densely-populated areas of this part of the island. The distance to the capital Waingapu is 4km and the distance to the traditionally important royal villages Rendes is 50km. Prailiang covers an area of approximately 1.48ha, of which only part is built up (Fig. 102).

#### 5.1.12.1 Village plan

The village plan shows both the houses still standing today and those whose location could only be determined approximately by the memories of the interviewee. This affects a total of nine ruins, whereas eight houses are still standing. However, these ruins represent only five of the eleven former clans, whereby it can be assumed that there are other former house sites whose location can no longer be determined. The oldest house is the Uma Bakul (Lota Lapu), which today is inhabited by a family of four people. The basic outline of the village is oval in shape and geographically

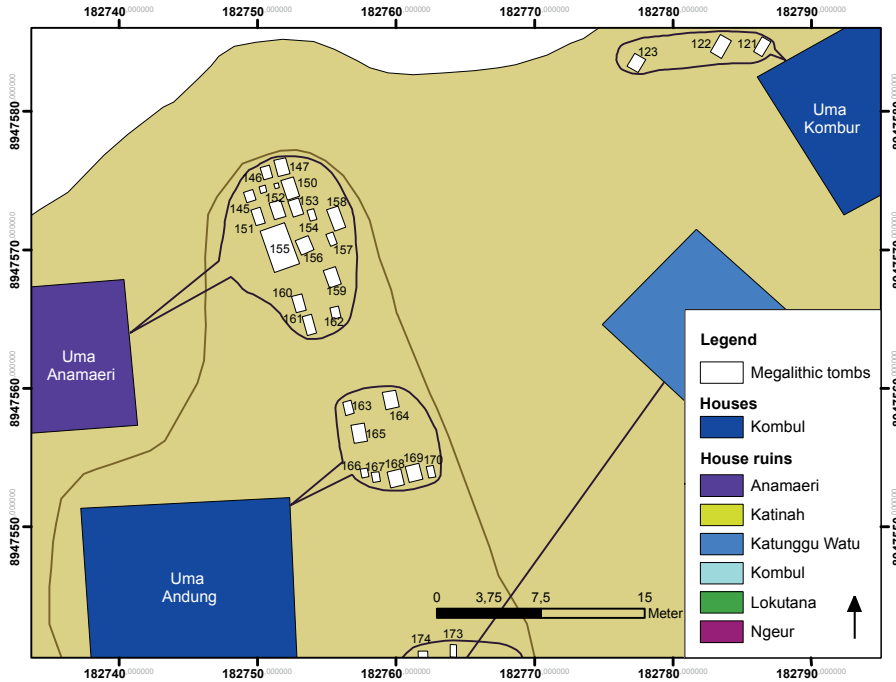


Fig. 103: The northern area of Prailiang. The clan affiliation of the individual houses is marked in color.

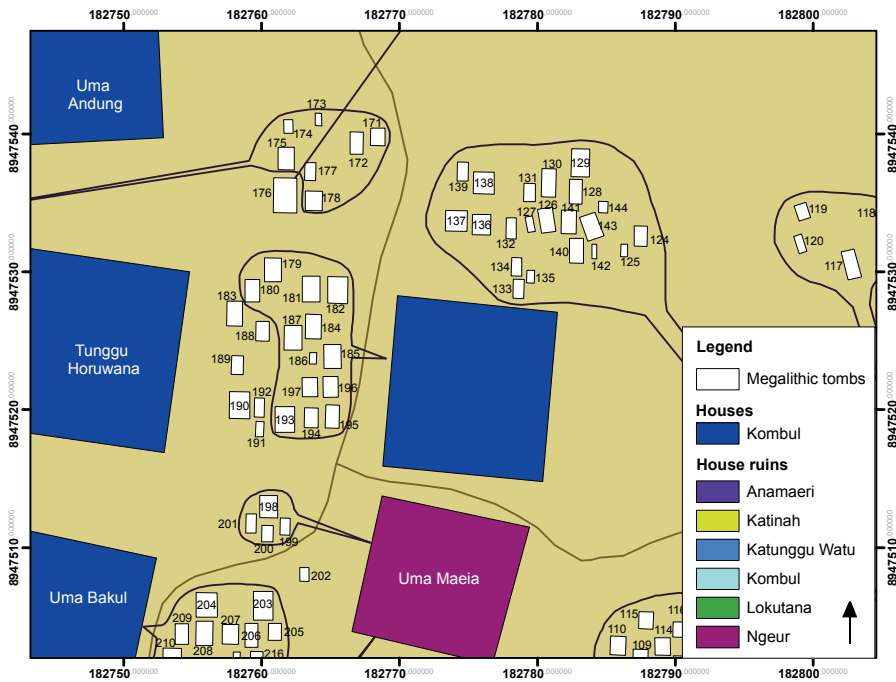


Fig. 104: The central area of Prailiang. The clan affiliation of the individual houses is marked in color.

oriented to the shape of the hill on which it was built for the purpose of an easily defended location. Almost all of the remaining houses are in the central village area and belong to the Kombul clan, which is also the oldest local clan. There is no *Marapu*



Fig. 105: The southern area of Prailiang. The clan affiliation of the individual houses is marked in color.

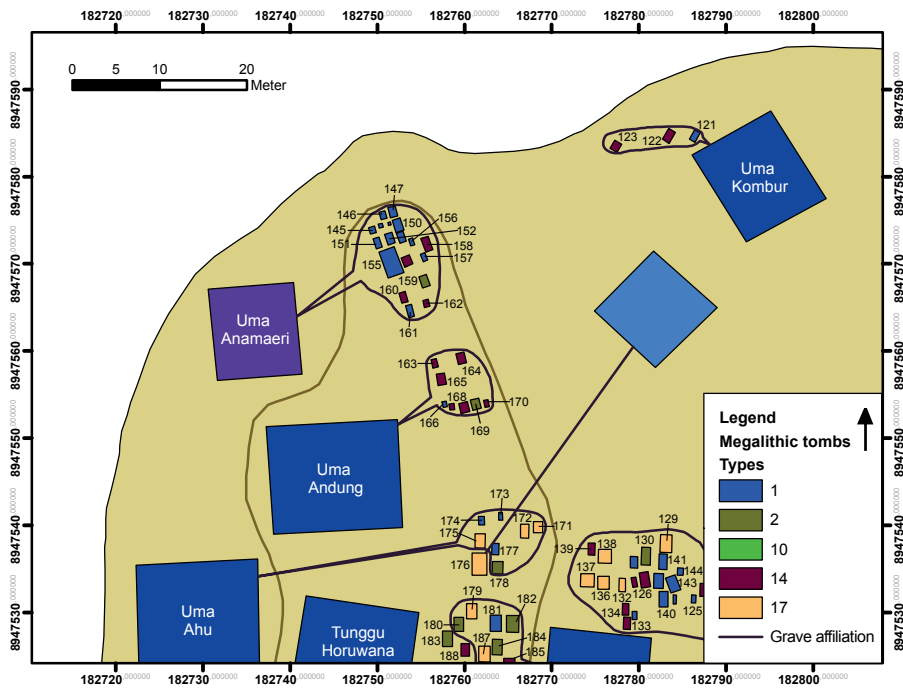


Fig. 106: The grave types located in the northern area of Prailiang.

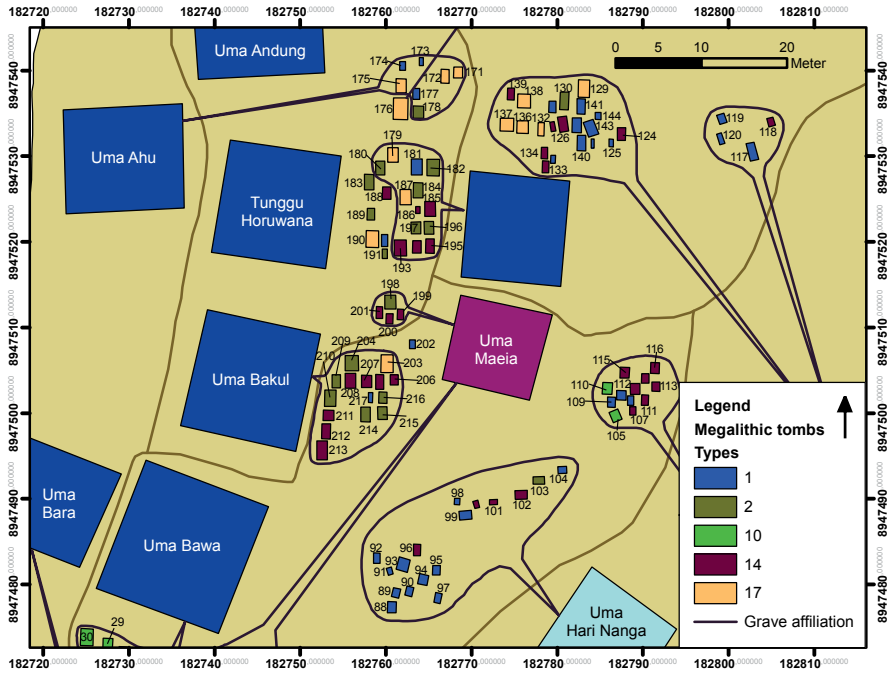


Fig. 107: The grave types located in the central area of Prailiang.

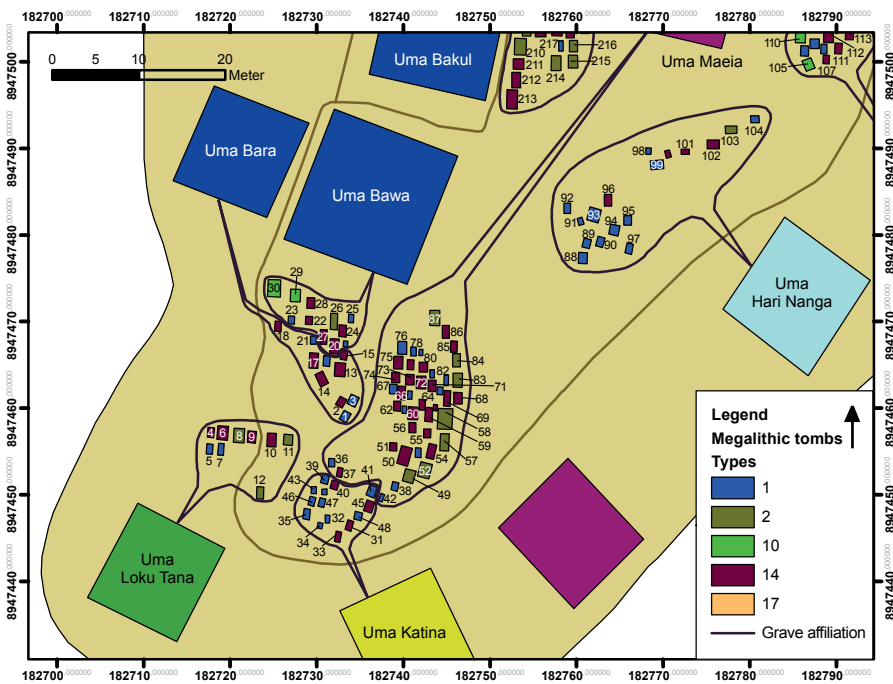


Fig. 108: The grave types located in the southern area of Prailiang.

hut and no central sacred area in the village. The tombs are not centrally located either, but rather they are spread over the village in a total of thirteen clusters. Nevertheless, the most central square, at least concerning the village preserved today, can be defined as the almost north-south area around grave clusters 10 to 13. The graves' affiliation to clans can largely be defined uniformly for the entire grave cluster. This applies to clusters 2, 3, 4, 5, 6, 7, 8, 9, 12 and 13. There is a tomb of the Katunggu Watu clan within cluster ten, which can be attributed to the Kombul clan in total. Cluster 11 contains six tombs of the Ambaleling clan, whose former houses could no longer be located. Cluster 1, which is very large in total, contains tombs that have been assigned to five houses of four clans (detail Figs. 103 to 105). Most of the clusters are also located in the immediate vicinity of the house assigned to them. This is only not the case for part of cluster 1 and cluster 7.

There are differences regarding the different grave types represented in the grave clusters (Figs. 106 to 108). Graves of type 17 (higher dolmens) can only be found in clusters 7, 10, 11 and 12 in the central village area. All other clusters have only type 1 and 14 gravestones, as well as simple closed dolmens (type 2). Especially in clusters 10-12 there are very few simple stone slabs (type 1), whereby here we can speak of a concentration of grave types considered to be of higher value. The prominent position of these graves in front of the most important ancestral houses reinforces this impression.

### 5.1.12.2 Interviews

The interview took place on 29.08.2015 in the house of the informant and lasted 60:32 minutes. The informant is one of the last villagers and lives from his activities as a farmer and fisherman. Water has to be fetched from the river from a distance of five kilometres, as was reported during the interview.

#### The village

The oldest family inhabiting the house was called the main family, resulting from the status inherited over generations. However, it has been said that there are indeed no further differences between this family and the other families in the village. The last house was renovated in 2014 and is said to have been helped by more than 100 people. The age of the village was estimated to be at least six to seven generations. As already mentioned, twelve clans are resident:

1. Kombul
2. Ngeur
3. Katunggu Watu
4. Anamaeri
5. Ambaleling
6. Katinah
7. Lukutama
8. Panoka
9. Makatajiang
10. Kanilu
11. Kaba
12. Anamburung

While the number of villagers is decreasing, the population that can be attributed to the village in the broader sense is increasing. This is due to the growing population in the farmhouses, who return to the village for ceremonies.

### **Specialists**

The only specialised activity described was the formerly existing ornamentations on a few tombs. This was carried out by people from Rende, because no one was qualified person within the village.

### **Funerals: rules and taboos**

To a great extent, the graves in Prailiang are collective burials in which several generations can be buried together. Thus, next to the couple who built the tomb, grandchildren may be buried together with their grandparents. This applies only to a limited extent to the children of the couple. They may only lie in the same grave if they were not yet married. In principle, there is no limit to the number of generations that share a megalithic tomb. This depends on whether future generations can erect a tomb themselves, or are dependent on a burial in an existing tomb. However, the taboo according to which married men and women may have to build a new grave must be observed. One such case was described during the interview. It was said that a person who lived outside the settlement in a farmhouse died a year or two ago. The dead man was nevertheless taken to the village for burial, where a burial took place in the grandparents' grave, because the family could not erect a new grave. The dead in Prailiang are wrapped up in *Ikat* before burial and held in a crouched position. In the grave itself, the dead are then buried lying on the left side. This has been described as a tradition of the village and is done by all villagers, regardless of their faith.

### **Grave goods**

No specific grave goods were described in Prailiang.

### **The grave types and the size of the graves**

The grave types were described in the course of the interview as a result of varying economic foundations. The large tombs and capstones resting on stone slabs, can clearly be attributed to the rich families of the village. However, the majority of the graves – which comprise simple or more complex stone slabs – belong to the economically-weaker families of the village. This grave form was described as the usual variant. No cement may be used for any of these types. At this point a taboo was mentioned which has existed since the time of the ancestors. In this context, the use of cement was equated with a decline in the value of cultural aspects. A mixture of eggs, ash, limestone and leaves, which should have a similar appearance to cement, is used to close any holes or similar in the graves.

Like the choice of type, the size of the graves in Prailiang was described as dependent on the economic possibilities of the building family. Therefore, small graves are to be assigned to the poorer families, while larger graves are common for richer families. This also applies within the same type, so especially large simple slabs are a sign of a family that is economically better off, but could not build another type of grave.

### **Location of the monuments**

All tombs are located within the village in direct proximity to the houses or formerly existing houses to which they belong. This pattern can also be maintained due to the generous space within the village, whereby the close connection between families and their graves is the decisive factor for the location of the graves.

### **Worship and rituals**

In Prailiang no specific rituals were mentioned at the megalithic graves.

### The quarry areas

Two quarry areas, both three to four kilometres from the village, are used for the graves in Prailiang. The first of the two quarry areas is called Reti Ahu and is located on the side of the river facing the village, while the second area, Praitmanbana, is on the other side of the river. Reti Ahu was named as the qualitatively better of the two quarry areas. In this context, a case was described in which one family used the other area and a large stone broke in the course of extraction and remained in the quarry. Therefore, this area has a worse reputation in the village. The quarry areas belong to all twelve clans living in the village. Therefore, a building project does not require a permit to use these two areas for the necessary quarrying. Nevertheless, as part of the planning, a meeting takes place in which all of the families of the village take part. All logistical aspects will be discussed during this meeting. These include the transport of the stones, the provision of food and, in general, the money available for construction. This also serves to support the builder of the grave in question. For example, families can contribute pigs or chickens to help the family concerned. This support can be given back on other occasions, so this is a kind of debt system that ensures help for all families with collective benefits. In principle, all villagers can extract the stones themselves without the need for specialists. Families from four to five other villages are also invited to take part in the work. The names of these villages are Tagedu, Kalamba, Rambangaru, Mondu and Hama Praingu. Stone has generally been described as the preferred building material for megalithic tombs. This is due to the special importance of stone over cement, which also includes the necessary invocation of spirits. During the construction process a pig must be slaughtered and prayed to the *Marapu* spirits so that the stone does not break and no accidents occur.

#### 5.1.12.3 Statistics: grave types and their affiliation

Prailiang has a total of 217 graves, which, as already described, are divided over twelve burial areas. The tombs are of five different types and are undecorated without exception (Fig. 109).

The most common (n=88) are stone slabs resting on heaps of rubble (type 14). Almost as many (n=81) graves are simply slab graves (type 1). In addition to these two types, there are three different types of dolmen, but those are represented with a much smaller number. These include closed dolmens made of stone (type 2), which constitute the largest group of dolmen types with 31 monuments. The second most common type of dolmen with seventeen tombs are those graves whose lower part comprises slabs and is not made of a stone block (type 17). The plates of the long sides are lower than those of the narrow sides and thus allow a view into the inside of the grave. Only four times closed dolmens with indicated legs at the corners of the lower part (type 10) are present. The occurrence of the types does not differ clearly according to their position within the different burial complexes. In complexes with a high number of graves (e.g. complex 1) all types of graves are found, but even those with a small number of graves also contain a mixture of the different types (e.g. complex 3). Since the tomb complexes can be assigned to the different clans, it can be concluded from this fact that all clans have essentially built different types of tombs. The type composition of the different grave complexes can be read relatively clearly from the volume of the grave. It can be seen that grave complexes containing both dolmens and slab graves have a larger range of volumes. This is also the case if there are relatively few tombs within the complex (e.g. complex 10) or many tombs, albeit which comprise almost only slab stones (e.g. complex 8). The rough division



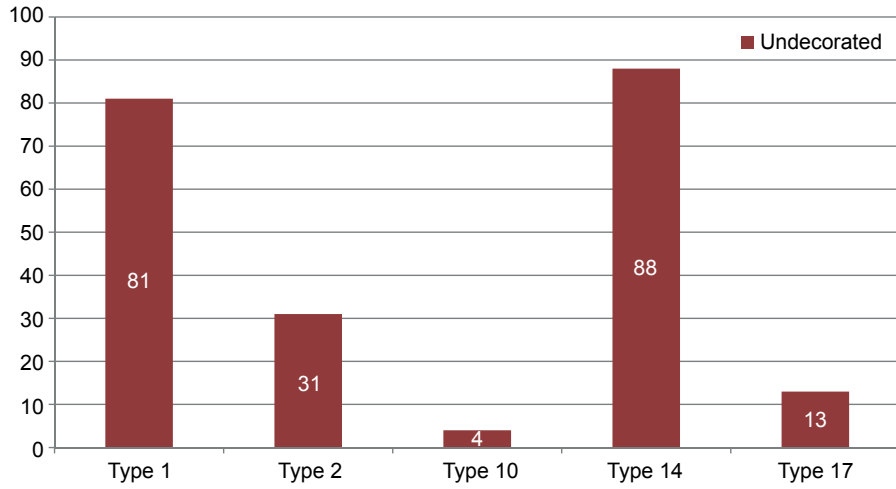


Fig. 109: The different grave types represented in Prailiang.

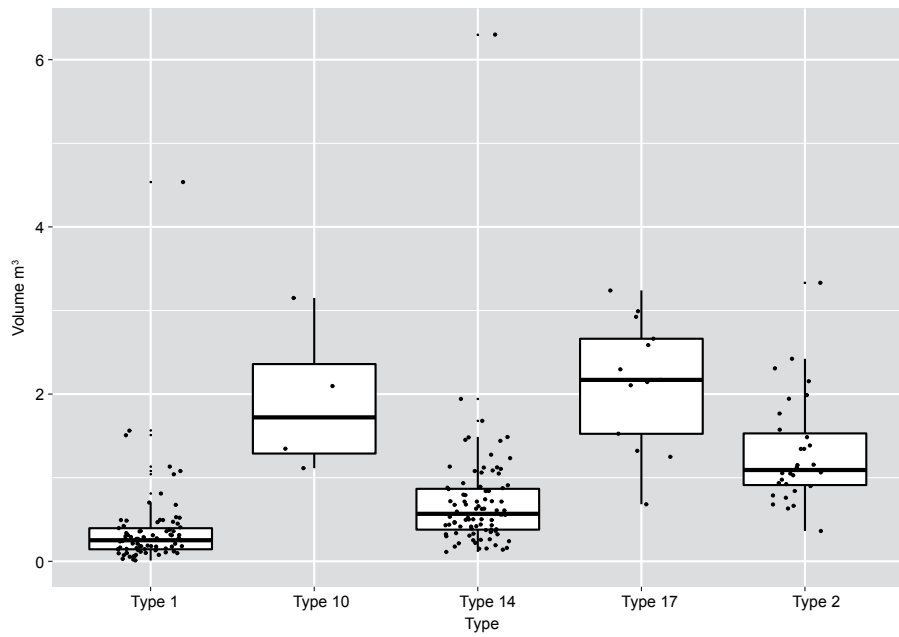


Fig. 110: Boxplot of the volume ( $m^3$ ) of the tombs in Prailiang with consideration of the type.

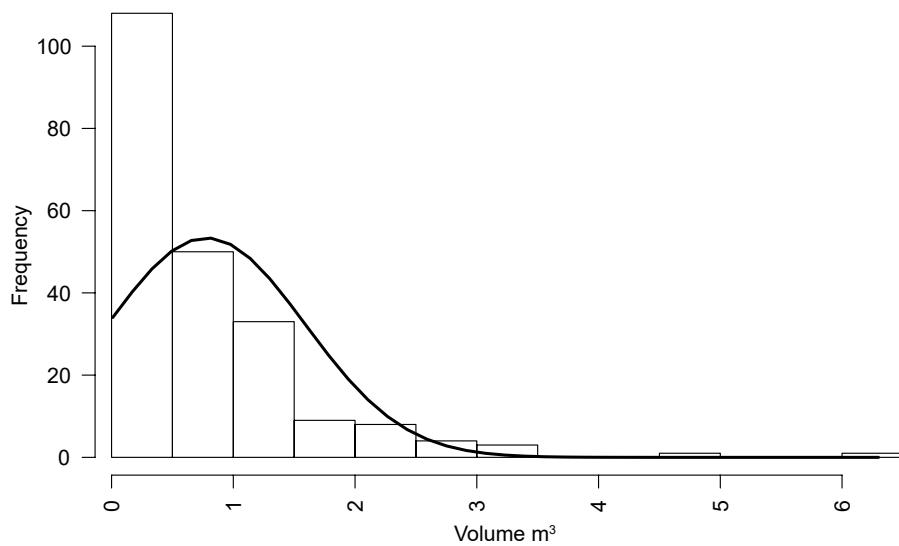


Fig. 111: Histogram of the volume ( $m^3$ ) of the tombs in Prailiang.

Fig. 112: Boxplot of the volume ( $m^3$ ) of the tombs in Prailiang with consideration of the clan affiliation.

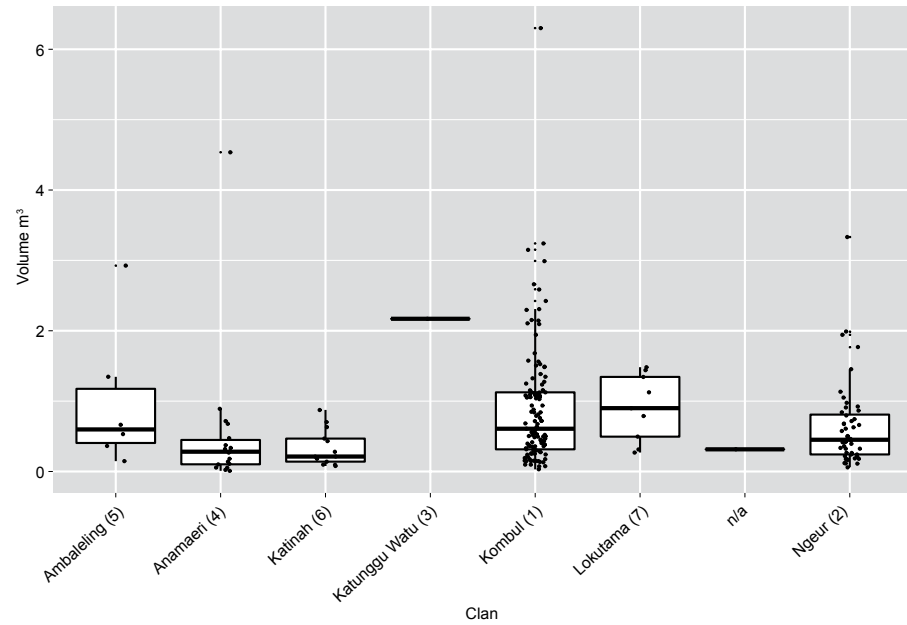
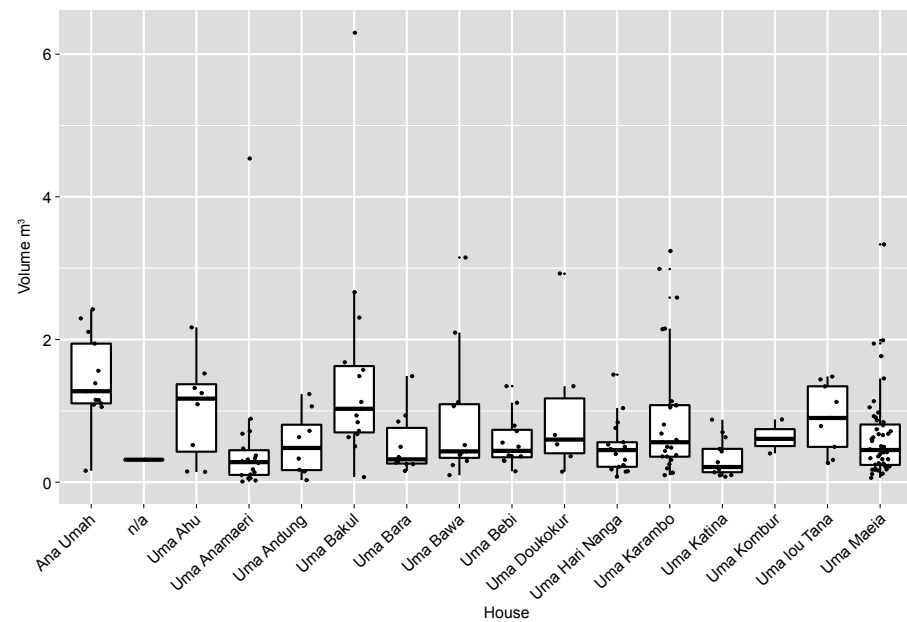


Fig. 113: Boxplot of the volume ( $m^3$ ) of the tombs in Prailiang with consideration of the house affiliation.



of the graves into two size classes can therefore be made by distinguishing dolmen and non-dolmen, which becomes particularly clear when looking at the volume by type (Fig. 110).

However, in this context two extreme outliers must also be taken into account, which can be assigned to the simple slab stones and a stone resting on rubble. The closed dolmens represent a kind of transition between the two size classes. However, the mentioned differences between the tombs are not responsible for the distribution of the tomb sizes as a whole. This is characterised by the few outliers and follows a right-skew curve and is not normally distributed (Fig. 111). Due to the small number of graves, which lie clearly beyond the mean value in Prailiang, the curve runs extremely flat to the right. Apart from a few outliers, a large proportion of the tombs must therefore be allocated to a relatively uniform range of sizes.

In fact, not all clans formerly residing in Prailiang can be assigned to tombs. On the one hand, this may have to do with tombs that have already been destroyed, while on the other hand some tombs have been erected in other villages where the clans in question are located. The assignment of the tombs to clans also shows strong imbalances (Fig. 112). Most of the monuments belong to the only clan still to be found in the village today, the Kombul clan. This clan has the widest spread in grave volumes. The second most common graves belong to the Ngeur clan, which already has a much smaller size variation. Another four clans (Ambeleling, Anamaeri, Katinah and Lokutama), to which graves can still be assigned in Prailiang, move in a similar spectrum, mainly between 0 and 1.5m<sup>3</sup>.

Regarding the houses, there are only a few outstanding differences (Fig. 113). Although some houses have significantly more tombs than others, there are only a few outliers. Again, we can speak of two rough size classes for houses. On the one hand, there are houses whose tombs reach a volume of over 2m<sup>3</sup>, with some outliers in higher areas. On the other hand, there are houses with a burial volume of between 0 and 1.5m<sup>3</sup>. The different grave types are mixed, especially the dolmen types are not limited to certain houses, whereby the differences can only be explained by the size of the graves.

The orientation of the graves in Prailiang is quite uniform. 143, and thus most of the tombs, are oriented north-south. With 30 or 39 graves, almost all other graves are oriented only slightly varying according to NE-SW or NW-SE. The only significant deviation from this pattern can be found in five tombs. These follow an east-west orientation.

#### 5.1.12.4 Ornamentation

There are no decorated tombs in Prailiang. The general presence of decoration was described as dependent on the status of the tomb builder. Regarding possible decorations, it was said that long ago, when the village was only founded, the ancestors of today's decorations applied decorations similar to those in the villages in the Rende area. These were called 'horn of the stone' and described attachments and superstructures that occur especially at the large graves (mainly type 4 and 11). The ancestor who placed this kind of decoration on his grave is called a member of a clan in Rende, probably of the royal family. It can be concluded from this that ornamentation has not been customary among families from Prailiang. However, the structures were stolen around 1970, whereby no decorated graves can be found in Prailiang today. However, there is a specific symbol for the *Marapu* faith. These include gold earrings in the form of buffalo horns worn by women dancing to feasts. These are called *Lamba* and are also associated with certain moon phases. Snake-like motifs are also used as symbols for *Marapu* spirits and are made of gold.

#### 5.1.12.5 Summary

Prailiang is situated in a quite remote area of Sumba in a relatively isolated location. This can be seen from the extremely distant well (5km) located near the river north-west of Prailiang. The choice of location on a hill is mainly due to the good defence situation, which may have been important in earlier times. The relatively isolated and arduous situation of the village can be seen today above all through the strong migration in the village area. However, the farmhouses, for which Prailiang has a central local function, should be considered. The structure of the village is marked on the one hand by the strong degree of migration, on the other hand the usual elements of other villages, like a clearly separated and inaccessible sacred area and a *Marapu* hut are missing. The structure of Prailiang and the location of the graves is rather characterised by a scattered structure, in which a differentiation according to

the different clans represented in the village is of importance. An interesting aspect are the missing ornamentations on the tombs, which used to be an important differentiating feature of individual families. This is also connected with the production of those decorations by people from Rende. A differentiation of the tombs according to houses can only be seen to a limited extent, while the clans clearly show this. Therefore, a clear dominance of the oldest clan, the Kombul clan, is to be assumed, which found its materialisation, beside the number of houses in the number and size of tombs. That the size and type of the graves in particular play an important representative role was confirmed in the interview. The missing graves of some of the clans are problematic, whereby no overall impression can arise. However, the village plan with the rather marginal location of the former houses of the other clans also shows the supremacy of the Kombul clan.

### 5.1.13 Uma Bara (Eastern Sumba)

The village of Uma Bara is located in the eastern part of Sumba on a river. In the same area there are also a number of other villages that are concentrated around the fertile area. Outside it there are only areas for livestock farming. South of Uma Bara lies the village of Pau, which is a kind of twin village and is also under the influence of the former royal family Uma Baras. De facto both villages form a unit; however, all following results refer only to Uma Bara.

#### 5.1.13.1 Village plan

Within Uma Bara, there is only one clan, the Watu Pelit clan. All thirteen houses and families in the village can be assigned to it. Together with Pau, who de facto forms a unit with Uma Bara, there are 29 houses that all belong to the same clan. The total area of the village is 1.92ha and follows an east-west orientation (Fig. 114).

In the western part of the village there are the graves, which are located in a central burial area. This is not spatially marked, but includes most graves of the village. Another burial ground is to be found in Pau. Here, only slaves who did not

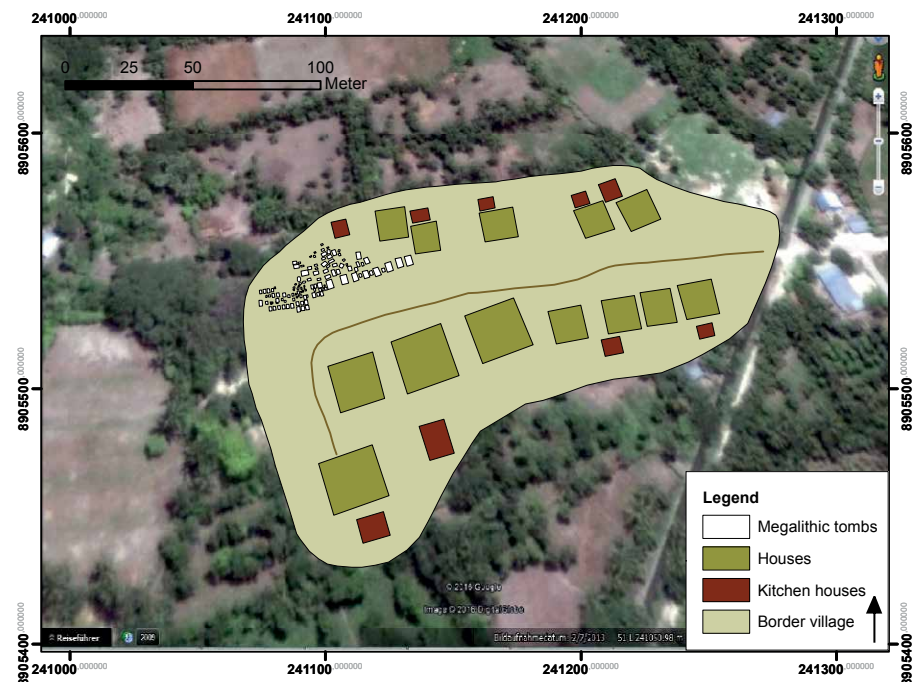


Fig. 114: The ancestral village of Uma Bara (satellite image: Google Earth).

belong to the royal court were buried. The burial area in Uma Bara itself is also oriented east-west. There are no sacred or ritual areas and no *Marapu* hut (Fig. 115).

The central place of the village is only grown with a few trees. The houses are located in the northern as well as in the southern area of the village and are arranged to the east and west. Thus, there is no house circle as it is usual in other villages. There are still some kitchens in front of and behind the individual houses, numbering nine overall. The difference in size between the houses in Uma Bara is striking: while all northern and the four south-eastern houses have an area between 115 and 185m<sup>2</sup>, the four south-western houses have an area between 344 and 474m<sup>2</sup>. The houses are located in different areas of the village and can be assigned to the descendants of the former slave families as well as to the former royal family. Most of the graves could not be attributed to a specific house. Only the large royal tombs can be assigned to the main house of the village, which belongs to the former royal family.

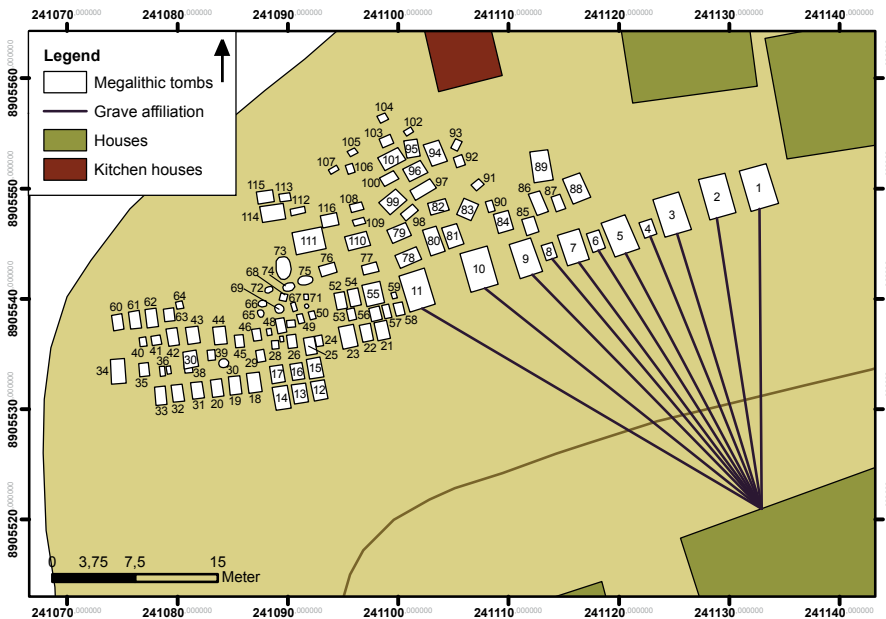


Fig. 115: The central area of the village Uma Bara.

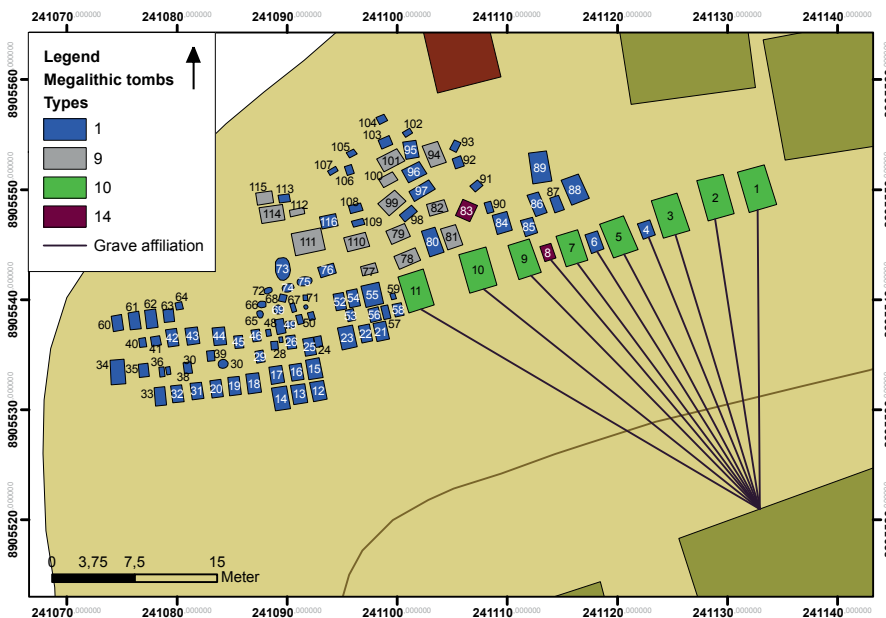


Fig. 116: The spatial distribution of the different grave types in Uma Bara.

In Uma Bara there is a clear spatial distinction between the existing grave types, which is connected with the distinction between the former royal family and the former slave families (Fig. 116). The tombs of the former royal family (type 10) are lined up in a line along the central square within the village, giving a prominent view of these tombs. This situation illustrates the prominent position of the family concerned, which is further emphasised by the incomparably larger dimensions of the tombs (cf. chapter 5.1.13.4). All other graves are located to the west and north of the large tombs. While most of the graves comprise simple stone slabs (type 1), north of the king's graves some grave slabs are to be found on smaller piles of rubble (type 9). These are located in a spatially limited area, which was named during the documentation of the graves as one of the oldest burial areas of the village.

### 5.1.13.2 Interviews

The interview took place on 31.08.2015 in Uma Bara (main building) and lasted 60:42 minutes. The interview was conducted together with a group of descendants of the former slave families. This led to some lively discussions on aspects of megalithic construction.

#### The village

The influence of the royal family extends only to the villages Uma Bara and Pau, in other villages of Eastern Sumba other royal families ruled, whose descendants still live in the villages today. The traditional sharp separation between the slave and royal families is partly still valid today. Thus, it was described that the former members of the slave families may not go to universities. This is related to the fear of dwindling influence with a higher level of education. The marriage rules are formally open to the descendants of slaves, so in principle marriages outside the village with partners in higher and lower social positions are possible. However, contrary to the theoretical possibility, this is not common because such a connection would damage the reputation of the families concerned. Furthermore, the land cultivated by the members of this group belongs to the former royal family. The proceeds can be used by the families working the land. A total of 250 people live in Uma Bara and Pau.

#### Specialists

The ornamentation of the royal tombs, which comprise complex anthropomorphic and zoomorphic representations, were described as work made by a specialist. One of these specialists still lives in the village. This man is a specialist in stone working, as well as a normal farmer. Other specialists were not mentioned, although it can be assumed that they are also normally active as farmers.

#### Funerals: rules and taboos

Altogether, there are eight royal tombs in Uma Bara, which are briefly described below. The graves are not single graves; rather, the partly different women of kings are buried with them in the graves. The name of the royal family is Uumbu Giku.

**Tomb 1:** Brother of today's king: The tomb is kept simple and has simple, undecorated structures on the capstone. The underlying dolmen is also undecorated except for the extension on the capstone.

**Tomb 2:** Brother of today's king: like tomb 1

**Tomb 3:** Wife of today's king: like tomb 1



Fig. 117: Grave 5 in Uma Bara  
(photo: Maria Wunderlich).



Fig. 118: Grave 9 in Uma Bara  
(photo: Maria Wunderlich).

**Tomb 5:** Son of the first king. The tomb is elaborately decorated and on one narrow side there is a stela (Fig. 117). House decorations and anthropomorphic representations are attached to the capstone. The stela has cock representations, as well as anthropomorphic representations. There is also an image of a warrior.

**Tomb 7:** Brother of today's king. On the capstone is a vividly worked-out rider representation, as well as a pig and a cock to see. A crocodile, a turtle, as well as a human representation are attached to the stela standing at the narrow side.

**Tomb 9:** Grandchild of the first king; brother of today's king. The stela of the tomb is richly decorated with anthropomorphic depictions and *Mamuli* symbols (Fig. 118). There is also a representation of a cock, as well as pictures of a person riding on a buffalo and a horse. On the other narrow side there is a sculpturally elaborated warrior representation. A richly-decorated moulding is also found on the cover plate. It contains depictions of seated, riding and weaving persons.

**Tomb 10:** Son of the first king: like tomb 1

**Tomb 11:** The first king: a sculpture on the capstone contains a water buffalo, a turtle, a crocodile, as well as a warrior representation. On the cover plate of the underlying dolmen there is also a plastically designed crocodile. The lower part of the stela shows women and a horseman. The upper part contains complex depictions of everyday activities, such as construction and weaving work.

### **Grave goods**

No usual grave goods were described in the course of the interview. This also applies to the great royal tombs.

### **Houses and graves**

The assignment of the individual graves to houses is largely unclear in Uma Bara. Furthermore, the royal tombs are all assigned to the ancestral house of the village.

### **The grave types and the size of the graves**

Essentially two types can be distinguished: simple gravestones and the large open dolmen graves. In the case of the latter, extensive work was carried out on the graves at the time of the village visit. The tombs made of stone were to be rebuilt from cement. This type of tomb may only be built by the royal family in Uma Bara, while all other families only build simple slab tombs.

The size of the grave also follows the same mechanisms as the choice of types for graves. If any of the other families, especially descendants of the former slaves, were economically able to build a large grave, this would not be permitted. Accordingly, there are no or only very few graves with a size between the simple slab graves and the royal graves.

### **Location of the monuments**

The monuments in Uma Bara can only be found within the village in a limited area. Probably the oldest monuments are located in the north-east of the burial area. The newer monuments can be found behind the royal tombs to the south-west.

### **Worship and rituals**

No special annual rituals or ceremonies take place at the graves after the construction of the tombs. Only in the first week after construction do prayers take place at the grave. During this time, the bag used for the storage of betel of the deceased person is also thrown away in a certain place to bring it into the second life.

### **The quarry areas**

For the graves in Uma Bara two possible quarry areas were mentioned. The name of the first of these two areas is Parawat. This area is about three kilometres from the village. The second area used is Kanaka, about five kilometres away. However, it is unclear for many graves from which quarrying area the stones originate. This was especially the case with the older tombs. However, for both quarry areas it was stated that they are owned by the royal family and the use of the areas can only take place with a permit.

### **5.1.13.3 Statistics: grave types and their affiliation**

In Uma Bara there are four types of graves, which can be strictly separated according to their use by royal families and former slaves (Fig. 119).



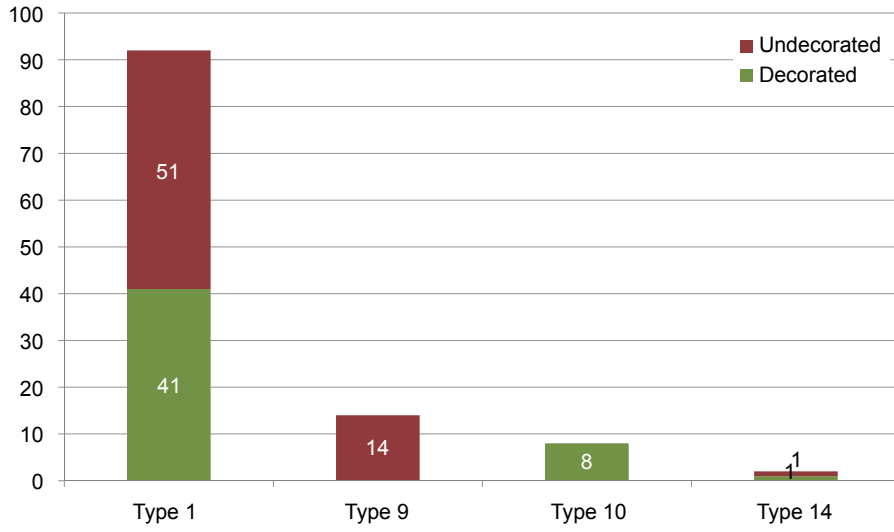


Fig. 119: The different grave types represented in Uma Bara.

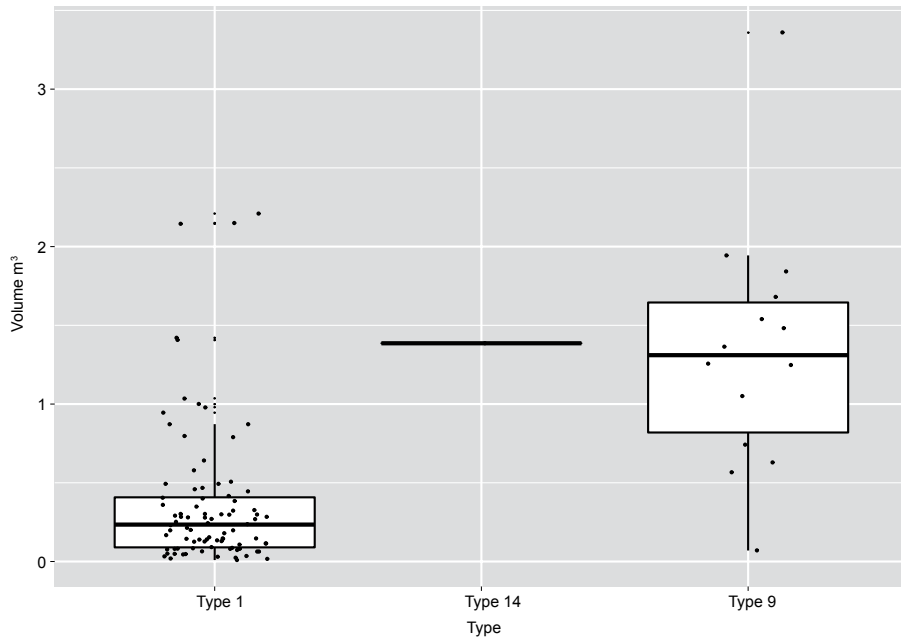


Fig. 120: Boxplot of the volume ( $m^3$ ) of the tombs in Uma Bara with consideration of the type (excluding graves of type 11).

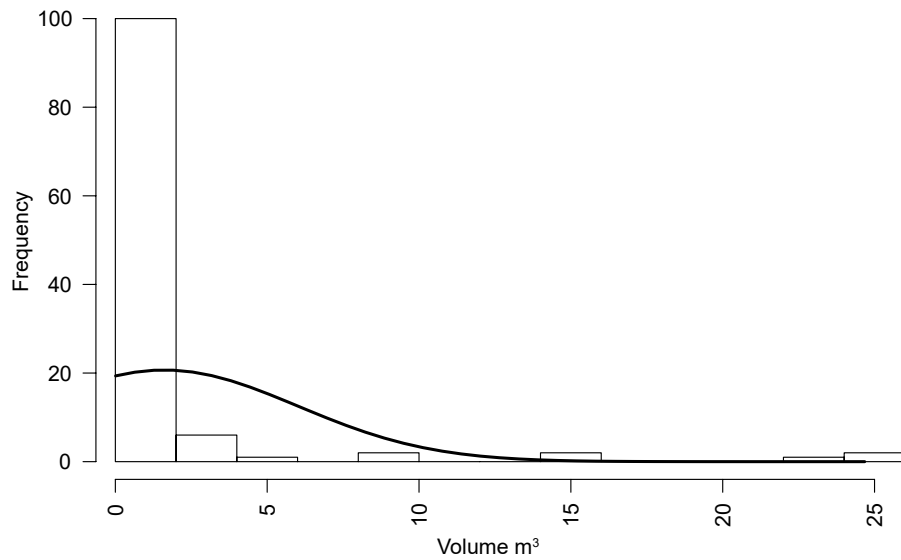


Fig. 121: Histogram of the volume ( $m^3$ ) of the tombs in Uma Bara.

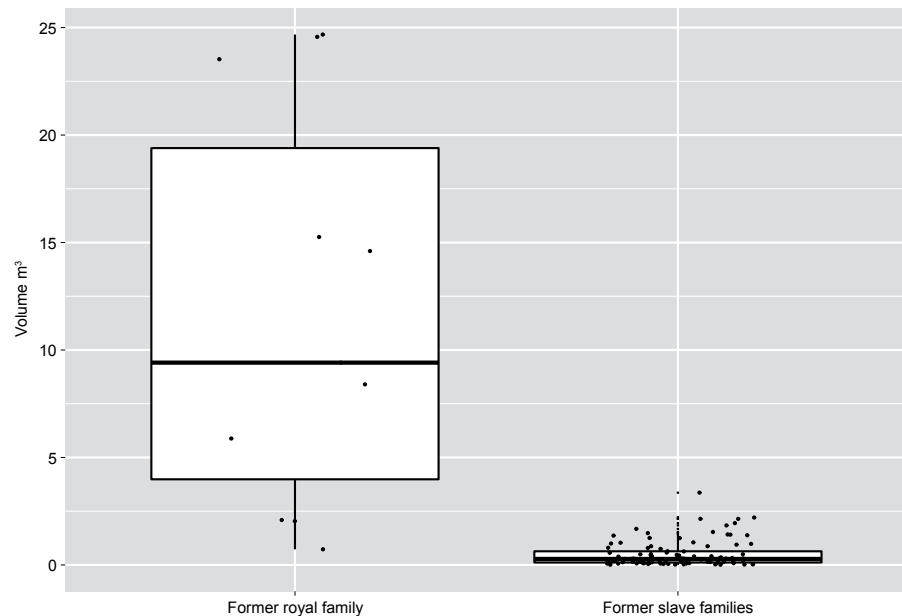


Fig. 122: Boxplot of the volume ( $m^3$ ) of the tombs in Uma Bara with consideration of the family affiliation.

The only type of tomb used by the royal family is the large tomb slabs on pillars (type 11). Three types of graves are used for the former slave families. These include the simple stone slabs (type 1), stone slabs resting on rubble (type 14), and graves only partially resting on rubble (type 9) (Fig. 120).

Graves of type 11 have a volume between 5 and  $25m^3$  taking into account the entire size of the tomb. All other graves have a volume between 0 and  $3m^3$ , with a clear emphasis between 0 and  $1m^3$ . This causes a strong unequal distribution, which requires a clear focus on the small tombs (Fig. 121).

However, even if the largest burial sites are not taken into account, there is still a slight unequal distribution, albeit which is much less pronounced. Overall, a clear imbalance in favour of the royal family can be seen regarding the size distribution of the tombs in Uma Bara (Fig. 122), which can be explained by the predominant occurrence of tomb type 11.

Altogether there are only four different orientations in Uma Bara. This is mainly an alignment according to NW-SE ( $n=81$ ). The second most common orientation is after NE-SW ( $n=28$ ). Graves aligned in this way only occur in the north-eastern burial area, which was described as the probably older part of the graves. Only very few graves are oriented to N-S ( $n=3$ ) or E-W ( $n=4$ ).

#### 5.1.13.4 Ornamentation

Altogether 50 of the 114 tombs in Uma Bara are decorated. These are 41 of the 92 simple tombstone slabs, as well as all of the large tombstones standing on pillars (type 11). One of the two graves of type 14 is decorated with motifs. The ornamentation of the graves consists almost exclusively of variously complex sculpted structures on the stone slabs.

Half ( $n=4$ ) of the large royal tombs are provided with complex structures (Fig. 123; ID 1;2;3;10). In addition, four of these eight systems are equipped with columns with very complex patterns. These comprise anthropomorphic and zoomorphic motifs, but houses are also depicted in sculptures. The significance of these ornaments was explained during the interview in Uma Bara. Zoomorphic representations include crocodiles, turtles, pigs and buffalo. Human representations symbolise the royal family itself. On the one hand, people are depicted in specific poses, but there are also everyday depictions, such as *Ikat's* weaving. The depictions of animals refer to

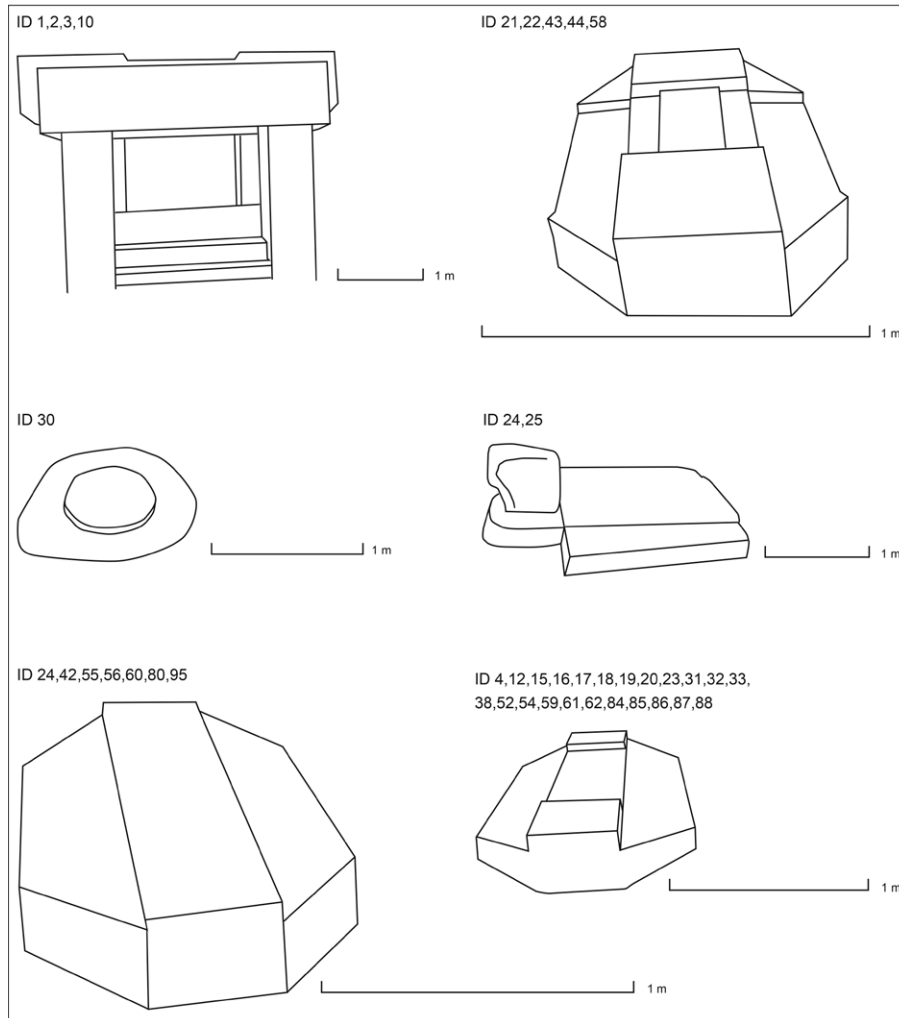


Fig. 123: The different sculpted ornamentations occurring in Uma Bara excluding the complex ornamentations of royal tombs.

the symbolic display of the power of the family. Crocodiles stand for the men, while the turtle stands for the power of the queen or women. The buffalo represent the water buffalo owned by the royal family, which in turn is a symbol of this family's wealth. Furthermore, the graves of the former slaves are often decorated, whereby sculpted constructions are present. These occur in simple (Fig. 123; ID 24, *etc.*), graded (Fig. 123; ID 4, *etc.*) and complex versions (Fig. 123; ID 21, *etc.*). Apart from these ornaments, there are only three other tombs with different ornaments. Grave 30 belongs to it, whereby the stone slab is held in the form of a drum representation. Graves 24 and 25 have a small standing stone on one narrow side. No specific symbolism was mentioned in relation to these graves.

### 5.1.13.5 Summary

In Uma Bara, several factors stand out as characteristic. Thus, contrary to the usual forms, the village structure is characterised by decentralisation. Although the two rows of houses form an area within the village area, this is not used for central, collectively used squares (ritual or sacred areas). The otherwise important *Marapu* hut is also missing in this case. The differences in size of the houses in Uma Bara are

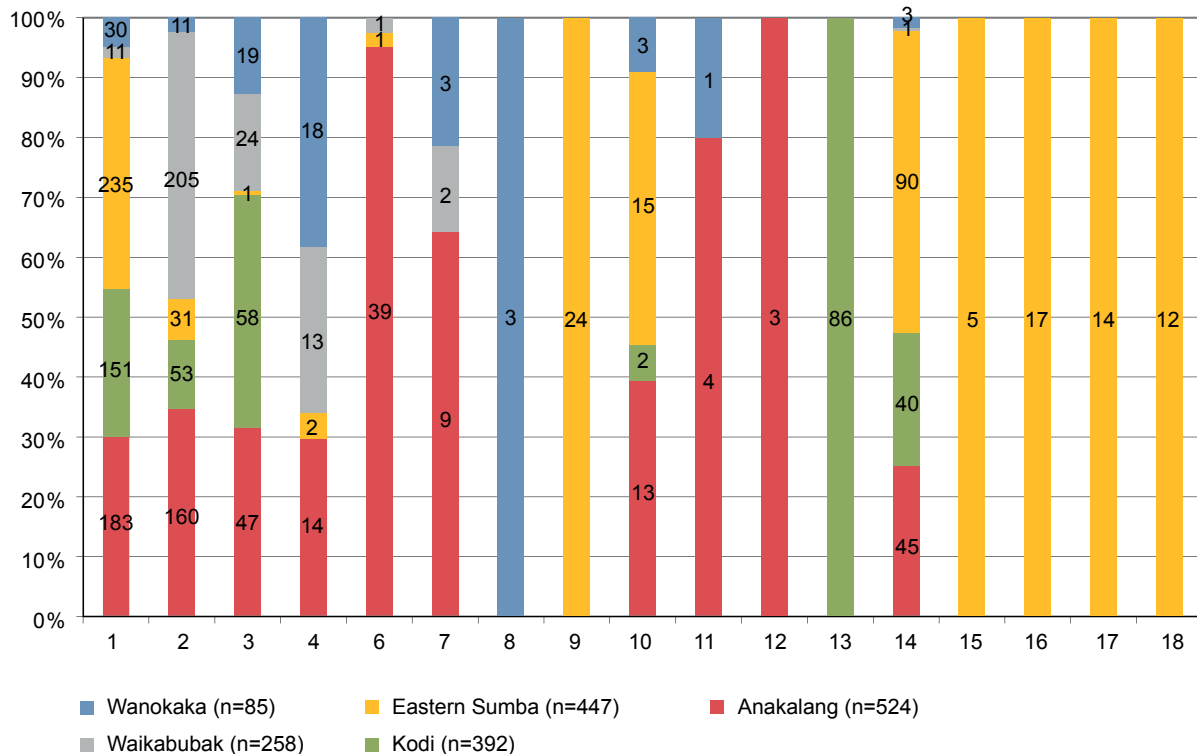
also striking. These differences can be traced back to the respective belonging to the former royal families or slave families. This materialisation of the traditional social hierarchy is reflected in the graves. These are characterised by significant differences in size, which refer to the different grave types. The type of grave depends on the social position of the dead and serves to reflect their social position (cf. interview). Funeral customs are thus marked by strict rules and taboos that reflect the social differentiation that exists in normal life. The same applies to the decoration of the tombs. Only graves of type 11 have iconographic motifs. These include – for example – animal representations and the decoration of the stelae. On the graves of former slave families, on the other hand, there are only plastic decorations that have no iconographic significance.

### 5.1.14 Comparative analyses

The following chapter gives an overview of similarities and differences between the tombs, their ornamentation and the economic situation in the different study regions in Sumba. A total of 20 villages are included in these comparisons, although the number of villages documented in the regions varies. In Anakalang, Eastern Sumba (and Prailiang) and in Wanokaka four villages each, in Kodi only three and in Waikabubak five villages could be documented. The following comparisons of tombs and ornaments/stelae include all tombs documented in these villages (n=1764). Again, the number of graves in the regions is also very different (cf. Tab. 3).

Economic data could not be included for all villages and regions. This is because the necessary data was not recorded during field work, as this is not the focus of the work. Some additional information is available in connection with further studies (cf. Adams 2007) and in the form of freely accessible economic data. It should be noted that the available economic data in particular are only a short excerpt and do not reflect chronological depth and related developments.

Fig. 124: The grave types occurring in the different study regions of Sumba.



Region	0-0.1m <sup>3</sup>	0.1-1m <sup>3</sup>	1-3m <sup>3</sup>	3-5m <sup>3</sup>	5-7m <sup>3</sup>	7-10m <sup>3</sup>	10-20m <sup>3</sup>	20-40m <sup>3</sup>	>40m <sup>3</sup>
Anakalang (n=515)	91	256	121	16	6	10	9	6	
Kodi (n=394)	25	146	95	65	47	12	4		
Eastern Sumba (n=272)	75	308	85	9	4	5	3	16	1
Waikabubak (n=272)	2	127	96	25	12	9	1		
Wanokaka (n=77)	2	17	48	7	3				

#### 5.1.14.1 The tombs: types, size and orientation

The regional characteristics and composition of the grave types, the size of the monuments and their orientation differ considerably in some cases. Figure 124 provides an overview of the different types and their occurrence in the study areas.

It is clear that some types of graves are found in all regions, while others are only occurring isolated. While there is a uniform repertoire of grave forms, regional preferences and variations are clearly discernible. The standard repertoire of grave forms includes types 1, 2 and 3, i.e. simple stone slabs, as well as closed dolmens made of stone respectively concrete. The dolmen types are very rare in Eastern Sumba, so they do not correspond to the standard type. Exactly the opposite is the case in Waikabubak, where the simple closed dolmens are used in large numbers, whereas simple stone slabs are used very rarely. It is clear that some grave types represent exclusively regional characteristics (types 8, 12, 13, 15-18). These monuments differed partly only by individual attributes (e.g. a dolmen with a kind of door on a narrow side; type 13) from the usual types. On the one hand it is interesting that all regions except Waikabubak have their own grave type: in the case of Eastern Sumba even five different grave types. On the other hand, Anakalang is the only region that has all grave types that are not found exclusively in one region. This is not the case in any other region. In some regions the grave types are more similar than in others. The greatest similarity in distribution is shown by Anakalang and Wanokaka, which have a focus on simple tombstones, but otherwise have a high variability of types. The clear emphasis on closed stone dolmens in and around Waikabubak is unique. Kodi, like Anakalang and Wanokaka, is characterised by a high number of simple stone slabs, but otherwise by less diversity of grave types than these regions. Finally, Eastern Sumba is characterised by the aforementioned high number of grave types only occurring there, as well as a very high number of simple stone slabs, which convey a uniform picture.

The size of the tombs also shows clear differences between the study areas (Tab. 3), some of which are directly linked to the different distribution of the grave types.

The highest number of small tombs (mainly type 1; 0-1m<sup>3</sup>) can be found in Anakalang (67.4%) and Eastern Sumba (76.6%). Almost half of all tombs in Kodi (43.8%) and Waikabubak (47.7%) can still be attributed to this area. In Wanokaka only 27.1% of the stock of burial monuments comprises the smallest categories, while here the majority (82.8%) of the tombs are in a medium size range (1-7m<sup>3</sup>). The share of this size class is significantly lower in the other areas and also varies depending on the region. Waikabubak and Kodi show quite similar values by half of the total number of tombs (49.2 and 53.1% respectively). However, in Eastern Sumba and Anakalang, the percentage of medium-sized graves is significantly lower at only 28 and 19.6% respectively. Grave sites between 7 and 10m<sup>3</sup> can already be counted among the larger monuments. Already in this size class there are no more tombs

Tab. 3: The total number and the number of megalithic tombs per volume class (0-40m<sup>3</sup>) in the different study areas in Sumba.

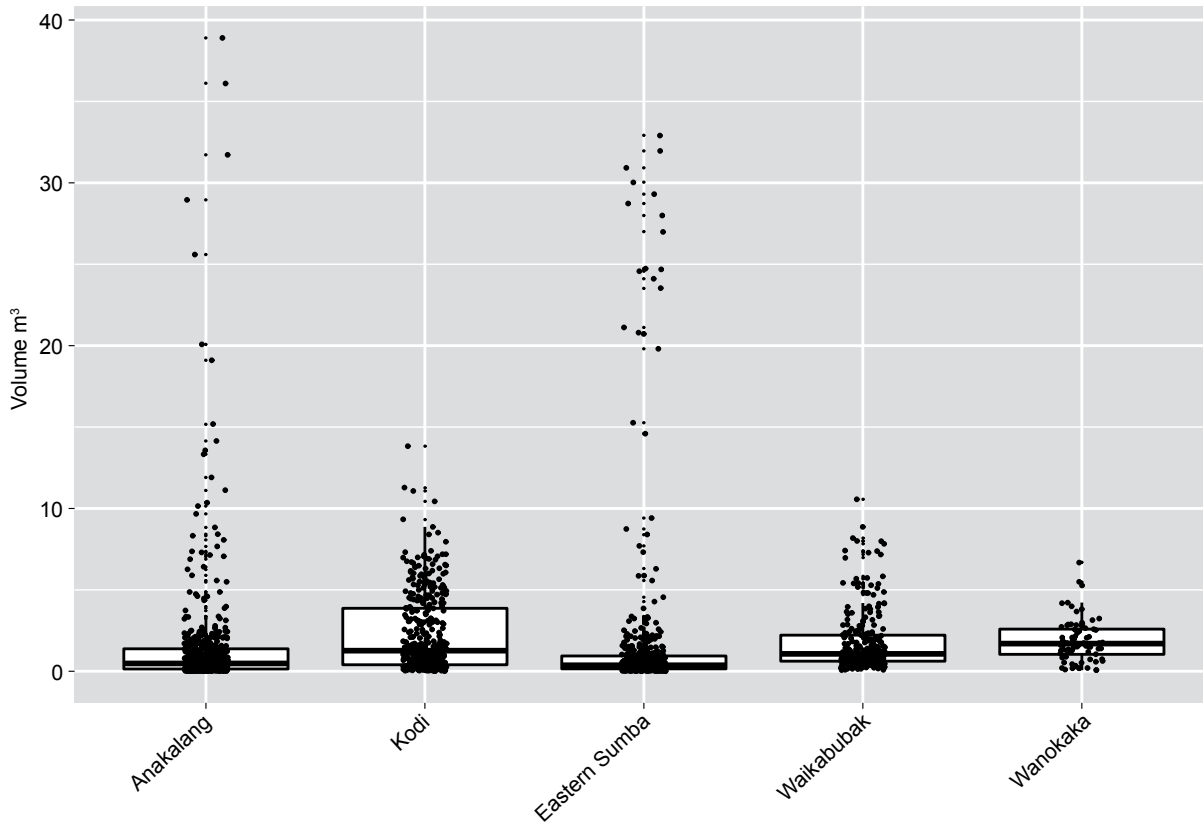


Fig. 125: Boxplot of the volume ( $m^3$ ) of the tombs in Sumba with consideration of the different regions.

in Wanokaka, while their share in Waikabubak and Kodi is low (3.3 and 3% respectively). In Anakalang and especially Eastern Sumba their share is negligible (1.9 and 1% respectively). Among the large monuments are those between 10 and 20 $m^3$ , whereby the largest monuments are between 20 and 40 $m^3$  in size. A few exemplars can still be found in Waikabubak and Kodi, while these tombs account for 3% of the total number in Anakalang and 4% in Eastern Sumba (Fig. 125).

In summary, there are some interesting differences between the regions. The distributions in Anakalang and Eastern Sumba are particularly remarkable. Here a very high number of monuments can only be assigned to the smallest size class, while the middle and larger graves are only relatively rarely represented. Although large monuments make up only a small percentage, they are found much more frequently than in all other regions of Sumba. Especially Wanokaka represents the opposite of this distribution. Only a few small, no large and a high number of medium-sized graves can be found here. Waikabubak and Kodi can be classified between these two extremes and show a relatively even distribution of small and medium graves. Large graves are also rarely found here. In most cases, the size distribution within the regions in the different villages is largely similar. In Anakalang and Eastern Sumba the distributions show a clear emphasis on the low volume range and a partly quite high number of outliers (e.g. Pasunga and Prayawang). An exception is the village Gallubakul in Anakalang, which has a clearly balanced distribution with few graves. In Kodi and Waikabubak the overall distributions are more varied and have a fairly wide range. In Wanokaka, the distribution of the grave sizes of the individual villages is most similar and has the smallest number of outliers.

Finally, the orientation of the tombs is of interest for an island-wide comparison (Fig. 126). In the orientation of their graves, Anakalang and Eastern Sumba appear

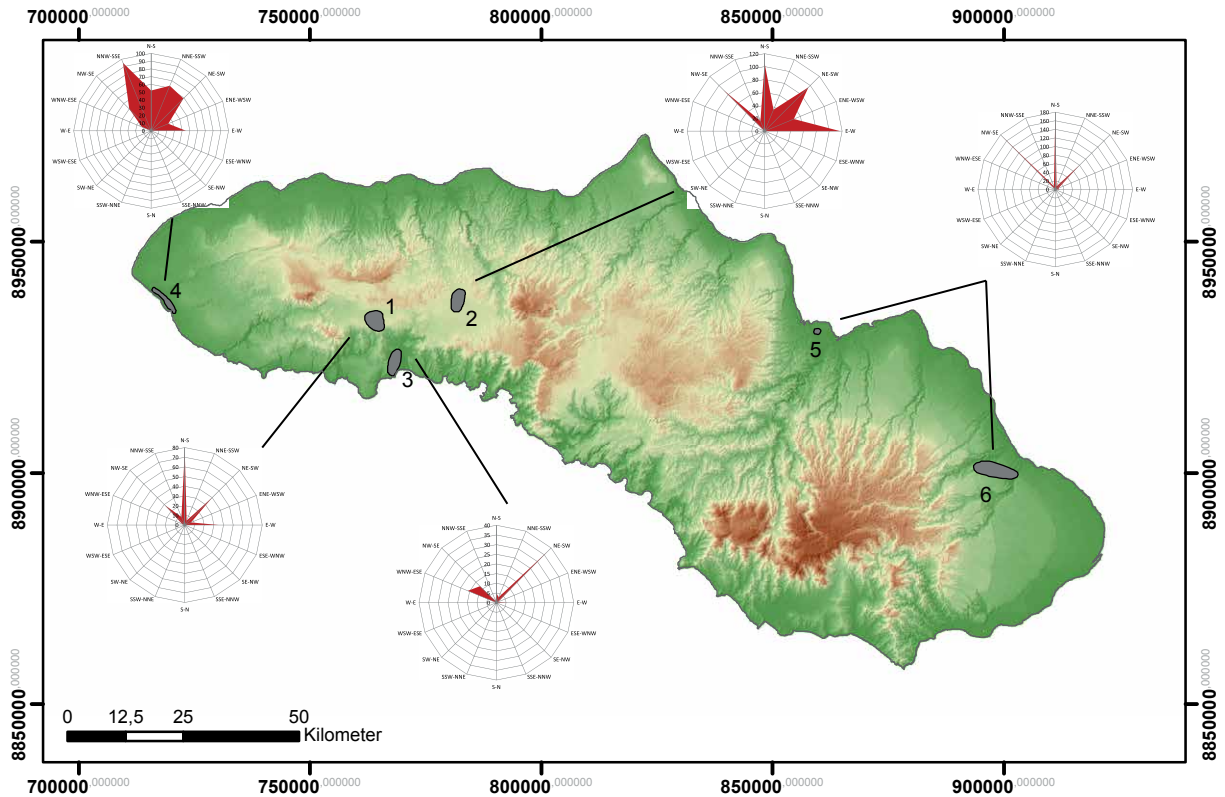


Fig. 126: The orientations of the tombs in the different study regions of Sumba. 1. Waikabubak 2: Anakalang 3: Wanokaka 4: Kodi 5: Northeast Sumba 6: Eastern Sumba.

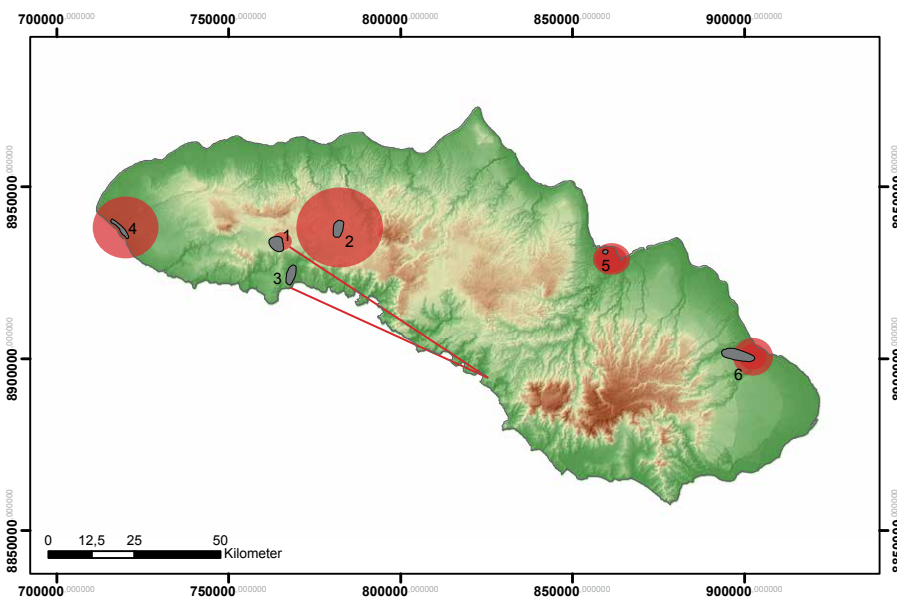


Fig. 127: The quarry areas used in the different study regions of Sumba. 1. Waikabubak 2: Anakalang 3: Wanokaka 4: Kodi 5: Northeast Sumba 6: Eastern Sumba.

quite similar, where the focus is on N-S and NW-SE oriented graves. In addition, Anakalang is the only region with a high number of E-W directed monuments. An astonishingly high number of graves being deviant from the standard orientation, like NNW-SSE, can be found in Kodi. This is where the greatest variety of orientations can be found. This could also be connected with the usual arrangement around the round-oval *Nataras* (see Wainyapu). In Waikabubak, more stringent arrangements are more common, whereby the orientations here are usually more uniform.

Fig. 128: The proportion of decorated (blue) and undecorated (red) megalithic tombs in the study regions of Sumba. 1: Waikabubak 2: Anakalang 3: Wanokaka 4: Kodi 5: Northeast Sumba 6: Eastern Sumba.

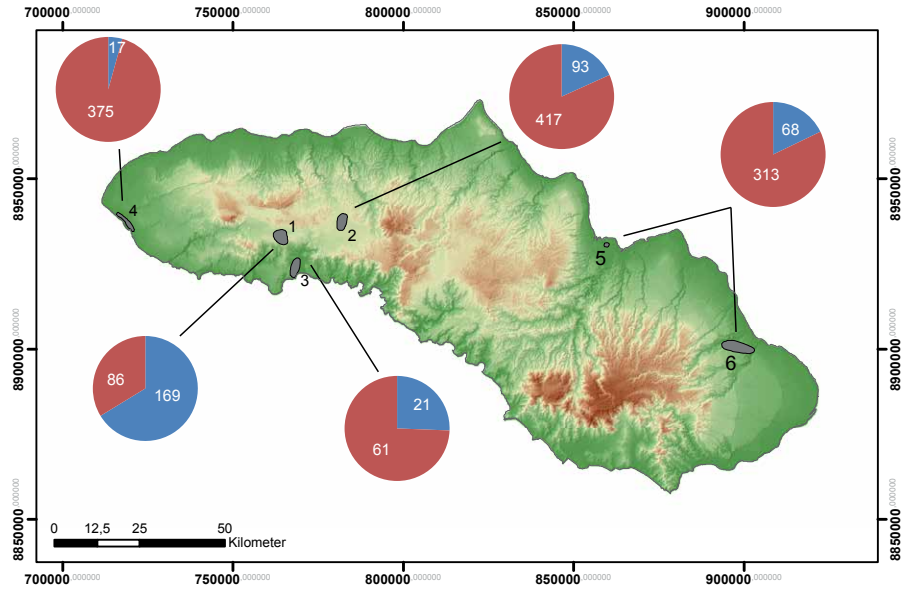
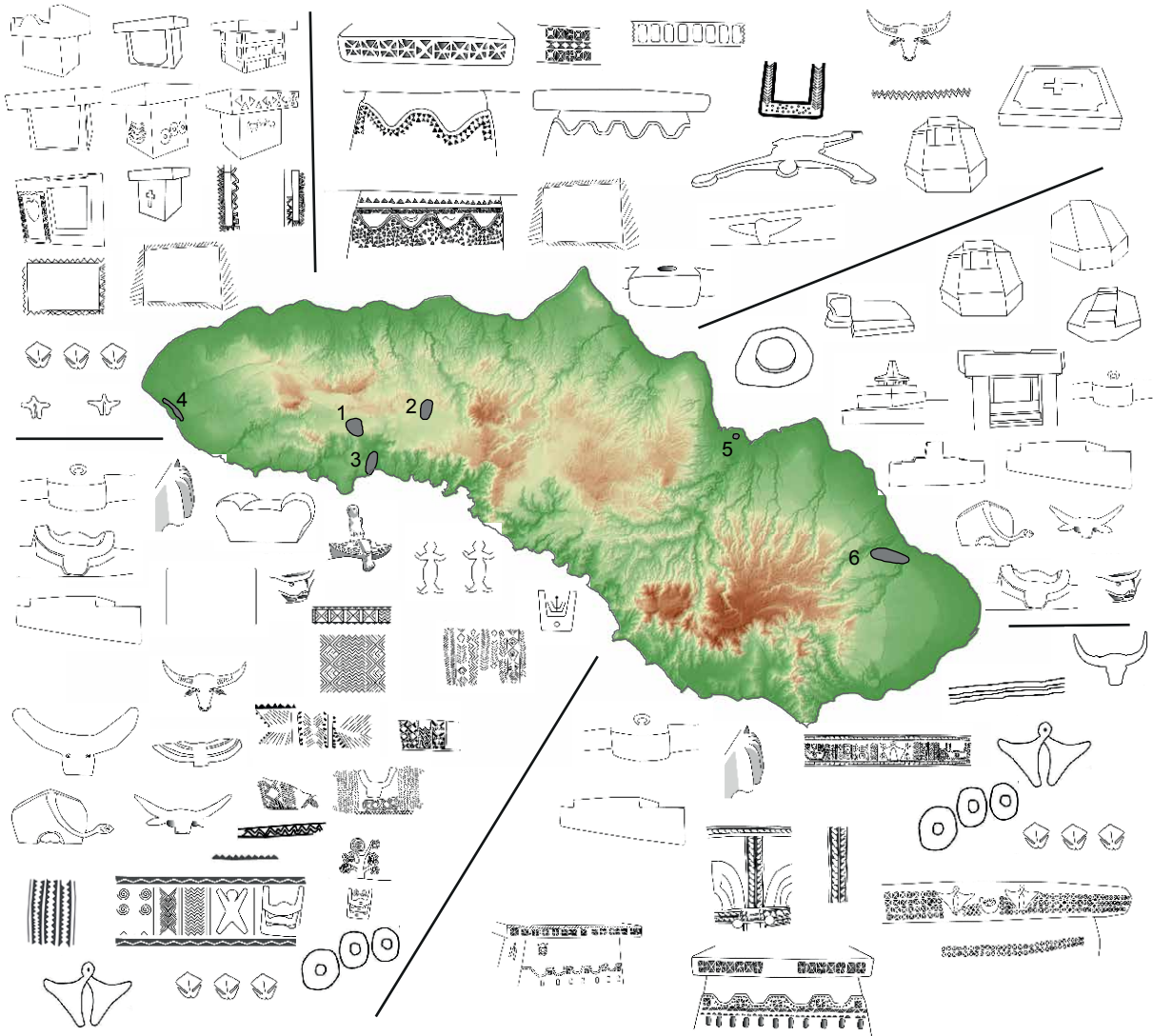


Fig. 129 (below): The different sculpted and incised ornamentations occurring in Sumba. 1: Waikabubak 2: Anakalang 3: Wanokaka 4: Kodi 5: Northeast Sumba 6: Eastern Sumba.





Both Waikabubak and Wanokaka have a much smaller variety of grave orientations, albeit with different emphases.

#### 5.1.14.2 The quarry areas

In principle, the use of nearby quarry areas is possible in all investigated regions of Sumba, as either local sandstone or concrete is used for burial construction. Nevertheless, there are differences in the inclusion of supra-regional quarry areas (Fig. 127).

In Eastern Sumba, both areas investigated have a small radius, which was described in the interviews as the usual environment from which the stones used for megalithic construction originate. In the western part of the island the stones come from a wider radius. In Kodi, this radius is only slightly larger than in the east; for example, stones extracted in Wainyapu are also used for other villages. On the other hand, Anakalang has a quite wide radius. However, this is also due to the reduced availability of suitable quarry areas. While in Waikabubak in particular the origin from very nearby areas has generally been described, an interesting exception has to be added here. A quarry in Tarimbang in the southern part of the island was used by particularly wealthy families. This was also reported in Wanokaka. Most of the stones were transported by sea. However, it cannot be expressly excluded that this area was also used by the other regions, but this was not reminded or mentioned by the interviewees.

#### 5.1.14.3 The ornamentation and stelae

In addition to the already-described factors, decorations and the presence of stelae are also an important attribute of megalithic monuments in Sumba. The entire data set from Sumba is only used to distinguish between the number of decorated and undecorated graves per region. For the overview of the available motifs and stelae only the detailed data sets of the ten villages described above could be considered.

##### Ornamentation

In Sumba, ornamentation is only found in the minority of tombs (22.2%). Here again, regional differences are discernible (Fig. 128), albeit much less than regarding grave types and sizes.

Kodi has the lowest number of ornamented graves with only 4.4%. In Anakalang and Eastern Sumba the proportion of decorated graves is 17.9 and 16.8%, respectively, while in Wanokaka it is only slightly higher at 23.3%. A clear exception is the Waikabubak region, where 65% of the tombs are decorated. However, it must be noted that many of these ornaments comprise relatively simple attachments on the capstones.

Overall, regional differences in the use of specific symbols and patterns on the megalithic graves are clearly visible (Fig. 129).

In Kodi, the area with the lowest percentage of decorated graves, the variety of patterns is rather small. The ornaments can be found mainly in the area of the lower parts of closed dolmens and are partly engraved, partly worked out of the stone. Usually they are very simple motifs such as frames, surrounding zig-zag lines or triangular ornaments. Specific symbols such as Christian crosses or *Maraga*, Tabela and *Mamuli* signs (cf. Fig. 27) can also be found, albeit rather rarely. Furthermore, animal representations are only sparsely represented. Very typical in all regions except Kodi are various representations of buffalo heads. These are available in incised and sculpted versions. Buffalo heads worked out plastically can usually be found on the narrow sides of the capstones. Engraved buffalo depictions can often be found on the broad sides of the lower parts of the monuments. In Waikabubak in particular, special subforms of this type of pattern can be found, which are unique

in the regions considered. This includes a triple-horned representation, as well as a special form of the sculpted variant in connection with an anthropomorphic figure. A split representation of a buffalo is also documented in Eastern Sumba, with the back part on one side and the head on the other side of the grave. Waikabubak is also characterised by a considerable variety of incised decorations, some of which are combined to form complex compositions. These compositions contain frequently recurring, symbolic elements such as zig-zag and wave patterns, ritual symbols (*Mamuli*, etc.) and tree representations. However, ritual symbols in particular also occur as individual representations; for example, in combination with drum representations. Overall, however, the complex compositions of incised ornaments in particular are less common and can be found above all in connection with certain grave types (type 4). Significantly more frequent and in connection with different dolmen types are simple, plastic attachments and extensions on the capstones. These are also present in Wanokaka, Anakalang and Eastern Sumba, albeit to a lesser extent in variability and frequency. Most of these sculpted attributes are kept relatively simple, although in some cases whole houses were also worked out from the cover plate of tombs. Sculptural forms of various kinds occur above all in Eastern Sumba. Here the simple stone slabs are also designed in this way and in different gradations. These simple grave types are partly similar to the larger grave types, whose overlying stone slabs are partly of the same design, although they take on much larger dimensions. Ritual symbols and other incised ornaments are almost never found in Eastern Sumba. An exception are the royal tombs – some of which are richly decorated – which display a rich ritual and artistic variety of patterns. By contrast, in Anakalang, there are only a few simple sculptural forms, such as attachments and extensions of the capstones. Decorations carved or worked into the stone predominate here. However, the focus is on simple geometric patterns. These include circumferential ovals and circles, flat triangles and squares composed of triangles. Other patterns include relatively abstract zoomorphic and anthropomorphic representations, most of which are sculptural. A special and recurring category are plastic, circumferential wave patterns on the bottoms of closed dolmens. Such sculpted waves can occur alone, in connection with simple triangle rows (which then orient themselves at the waves), or in connection with complex compositions. These wave patterns (mostly in angular form), as well as the quadrilaterals, which are composed of triangles, find a remarkable parallel in Wanokaka. Both types of patterns are mostly found on the same graves, on the upper and lower part of the dolmens. These ornaments are partly accompanied by ritual symbols, which are generally frequently used in Wanokaka. They are also found, quite similar to Waikabubak, in connection with relatively complex compositions of wave and zig-zag patterns.

In Sumba there are some interesting differences and similarities concerning the general decoration of the tombs, as well as the choice of patterns. Waikabubak occupies a special position regarding both aspects. As the only region with a higher percentage of decorated graves, a much higher variety of ornaments can be found here. To a certain extent this is certainly to be expected, but the sometimes-high complexity of the ornaments and the variety of unique patterns is remarkable. This diversity also means that there are parallels to almost all other regions in the form of a shared selection and use of specific ornaments. It is clear that especially the ritual symbols can be found in all regions and thus their significance in connection with megalithic tombs is clearly expressed. Interestingly, however, regional differences can already be seen in the depictions of water buffaloes, which are very important for the construction process itself. This pattern is rather insignificant in Kodi and also quite rare in Eastern Sumba. Apart from partially-standardised decorations such as simple motifs, as buffalo representations, etc., there is a particularly apparent parallel between Anakalang and Wanokaka.

Anakalang (n=4)	1	5	4	7
Kodi (n=3)	3			3
Eastern Sumba (n=4)	9	18	4	31
Waikabubak (n=5)	1			1
Wanokaka (n=4)	2			2

*Tab. 4: The number of stelae per village within the study regions. The left row shows the number of villages visited per region; the other rows indicate the number of stelae per village (if stelaes were present).*



*Fig. 130: A dolmen enclosed by two stelae in Wainyapu, Kodi (photo: Knut Rassmann).*

### Stelae

Besides the tombs themselves, stelae are a rare but usually very elaborate element of megalithic architecture. There are clear regional differences in the quantity of stelae (Tab. 4). This results in a clear imbalance between its occurrence in Eastern Sumba and Anakalang and the rest of the central and western parts of the island.

Stelae are rarely found as a single element in all regions, but above all in connection with tombs. The stelae, which are not directly connected to a tomb, can always be found in the burial areas and the ritual areas of the villages. The primary occurrence of the stelae in individual areas such as Anakalang and Eastern Sumba is certainly connected with the presence of the large royal tombs, which can be found above all in these two regions. Smaller grave types, such as simple dolmens and especially simple stone slabs, almost never have accompanying stelae. An exception is a closed dolmen in Wainyapu, Kodi, which is surrounded by two stelae (Fig. 130).

Above all, stelae can be found in connection with the large capstones supported by stone pillars, which in the eastern part of Sumba in particular are reserved exclusively for the former royal families (cf. Uma Bara). Overall, the design of the stelae appears to be very varied; for example, many of them have an elaborate silhouette that can emulate wave patterns. Ultimately there are clear differences between Eastern Sumba and the rest of the island area. In Kodi the steles are kept very simple and have only a silhouette and simple zig-zag lines as decoration. This correlates with the general unusualness and simplicity of the decorations in this region. The situation is similar in Waikabubak, where only a single stele in Bondo Ede could be documented. This was held in the form of the *Maraga* symbol and also featured the same as an elaborate decoration. In Wanokaka the documented stelae are quite

similar. In Mamodu, two stelae had simple but flat zig-zag patterns on the one hand, and wave patterns on the other. Finally, a stele shows a sculptural representation of a human being. In Anakalang only one stele in Pasunga could be documented. This was decorated with triangular and diamond patterns, as well as zig-zag lines. In addition, the representation of a zoomorphic figure – which can also be found on tombs (ID 44 and 49) – is shown here. The stelae in Eastern Sumba are much richer decorated and overall more diverse. Simple symbols and decorations such as wavy patterns are rare, in one case *Mamuli* symbols are shown on a stele. The focus here

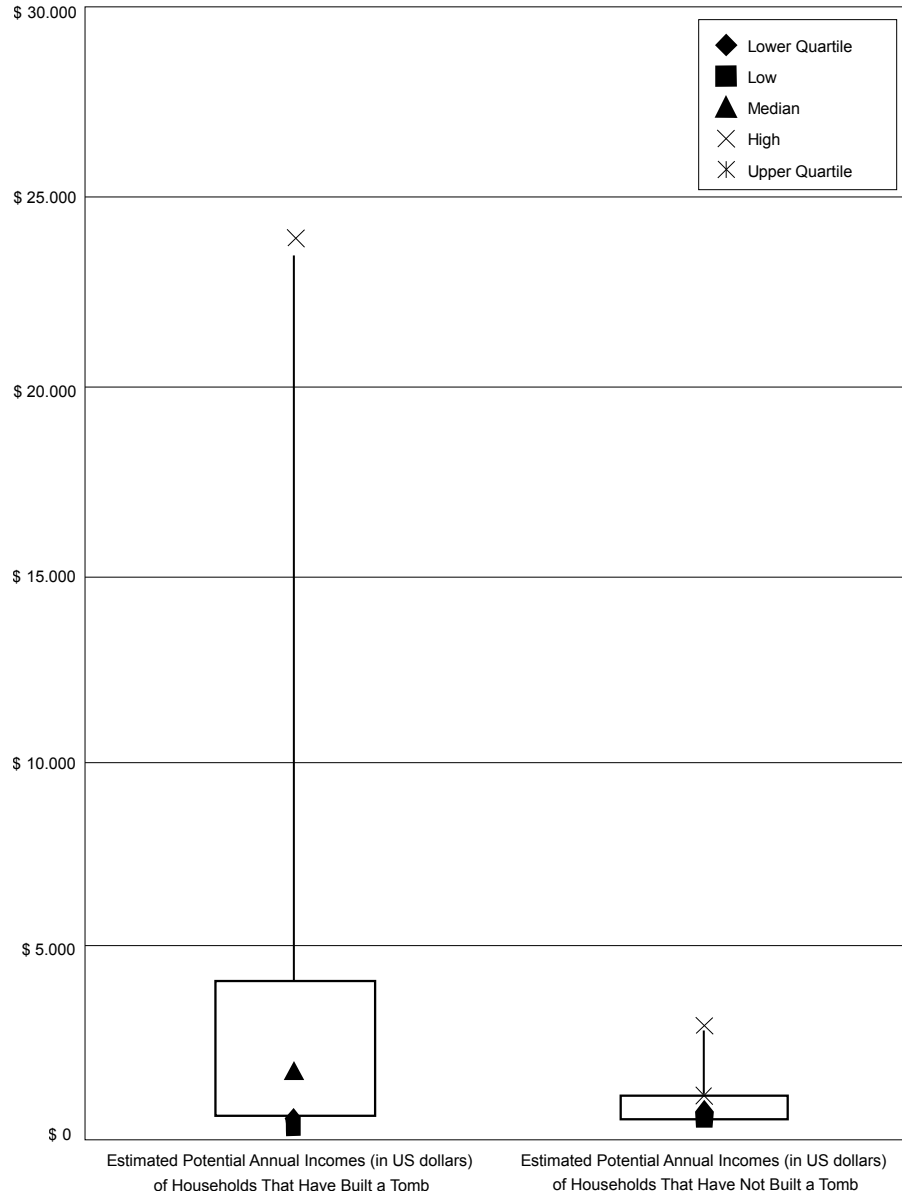


Fig. 131: The income of households in Kodi who have or have not built megalithic tombs (Adams 2007, fig.5.26).

Tab. 5: Regional economic data for the year 2015; Sumba Barat: Western Sumba (Waikabubak/Wanokaka); Sumba Tengah: Central Sumba (Anakalang); Sumba Timur: Eastern Sumba; Sumba Barat Daya: Southwest Sumba (Kodi).

	Sumba Barat	Sumba Tengah	Sumba Timur	Sumba Barat Daya
Regional BIP (2015)	1.642,63	828,88	4.561,32	2.691,69
Economic growth rate	4,82	4,79	5,04	4,62

is clearly on human and animal representations. Humans occur individually and in interaction and have, among other things, clear attributes of warriors. Furthermore, symbolic animal representations can be found. These include animals important for the feasting activities, such as pigs and buffalo, on the one hand, and animals directly associated with the royal families and symbolising the power of men and women (cf. description by Uma Bara), on the other. These include the depictions of crocodiles and turtles.

The diversity of the stelae in East and West Sumba can be perfectly reconciled with other factors. As described, the stelae are mainly bound to grave types that occur more frequently in the east and are clearly linked to a strict and impermeable social hierarchy there. The ornaments serve to illustrate these relations of power.

#### 5.1.14.4 Economic data

While data on the general economic situation of individual households are not available comprehensive, data on Kodi can be included in an overview. This shows that there is a moderate correlation between the annual income of a household and the construction of a megalithic tomb (Fig. 131).

Economic data on the individual regions are limited, but are of course only an excerpt and cannot be linked to individual villages or households. However, the difference between the west and east of the island, visible in the tombs and ornamentation, is clearly reflected in the growth rates and regional GDP (Tab. 5). Both the economic growth rate and regional GDP are highest in Eastern Sumba. In the western part of the island both factors are quite similar in all regions. Regional GDP in Central Sumba, Anakalang, is significantly lower than in all other regions. This region, together with Southwest Sumba, has the highest share in the agricultural sector of total income (41.1% and 42.8% respectively). Eastern Sumba, on the other hand, has a much smaller share of this sector in total income (26.6%).<sup>7</sup>

#### 5.1.15 Megalith-building traditions in Sumba: modelling

The construction of megalithic monuments in Sumba is exclusively linked to the underlying burial function. In various interviews it was highlighted that only a burial in a megalithic tomb is considered appropriate and permanent. Simple earth graves were mentioned as the only other form of burial. However, these were equated with burials actually customary for animals and were thus clearly characterised as inferior. The primary reason for such a burial is that it was not possible to use a megalithic tomb at the time of death, *e.g.* due to a sudden death or the economic impossibility. A temporary burial in another megalithic tomb or a temporary earth burial was described as possible solutions for such problems. However, a burial in a megalithic tomb remains the goal for all persons. This can be seen in the east of the island, where even simple tombstones lying on the ground are recognised as tombs. Megalithic construction is embedded in specific social structures and practices, which are described below and analysed against the background of the theoretical approaches described in chapter 3.

Since the mechanisms underlying the megalithic construction are very different in the west and east of Sumba, the modelling is carried out separately for both regions.

The importance of collective, communal and cooperative structures in the western part of the island can be found on several social and action-oriented levels

<sup>7</sup> Origin of the data: Statistics Daerah Kabupaten Sumba Tengah; Barat; Timur and Barat Daya. <https://sumbaratkab.bps.go.id/index.php>.

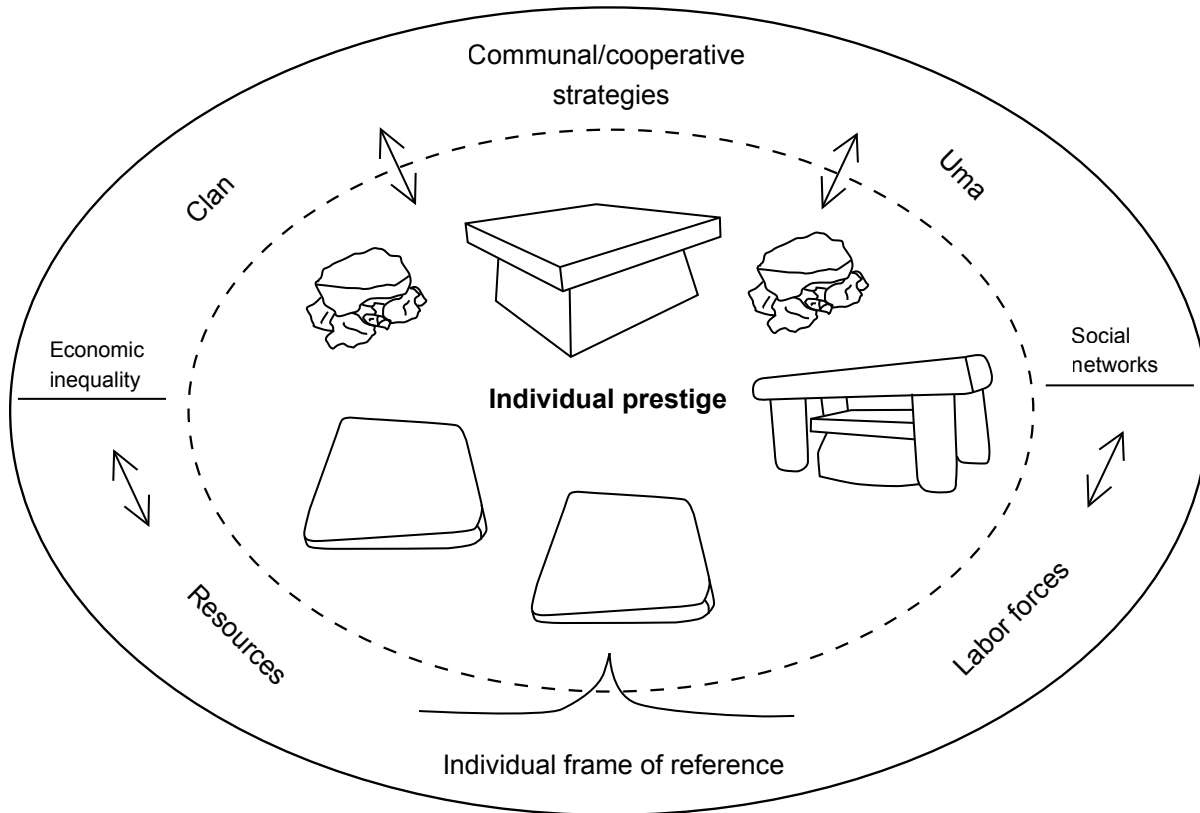
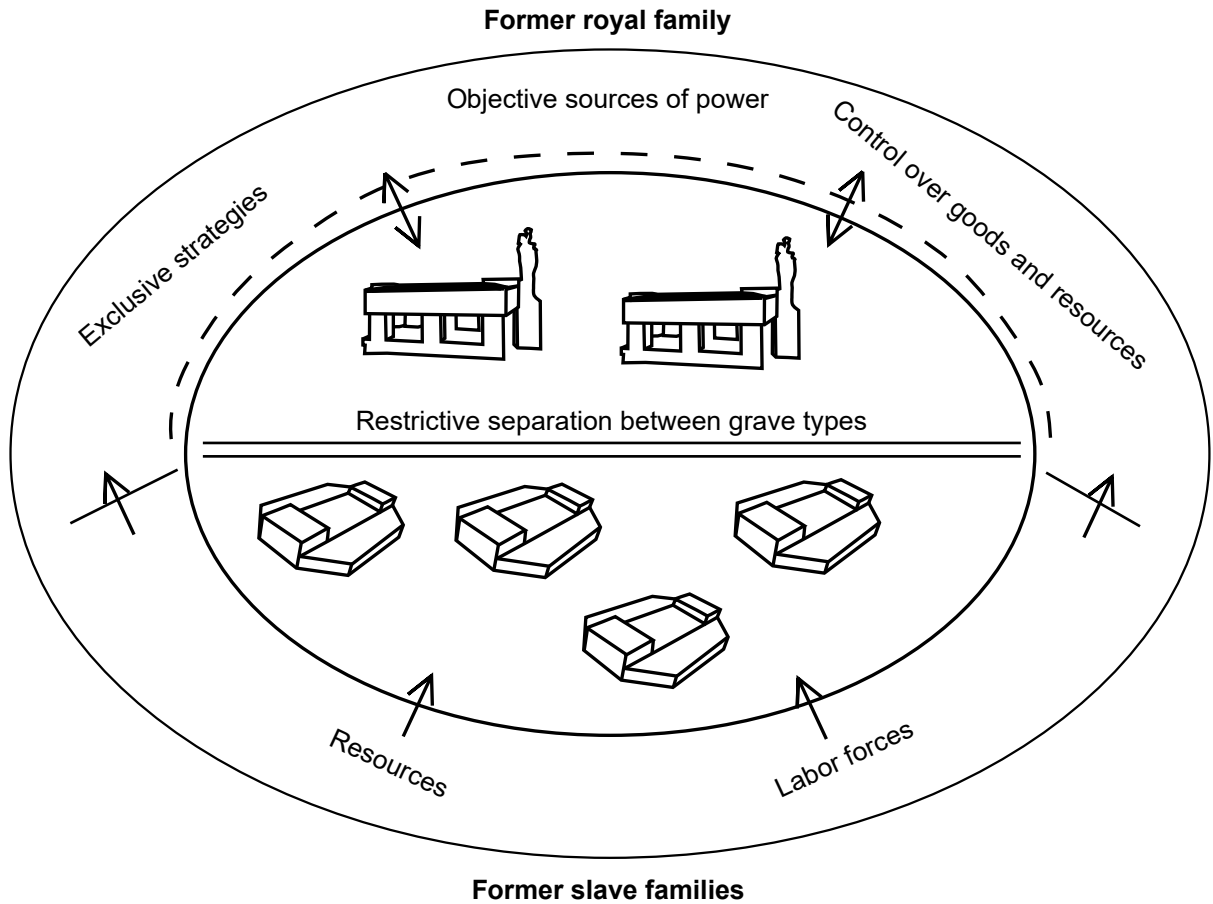


Fig. 132: Model of the megalithic building traditions in Western Sumba (excluding Anakalang).

and can only be emphasised in its importance. There are functioning control systems and a collective reference framework for economic activities. The social units of the clans and *Umas* are important in terms of availability and support by workers in tasks such as field work, house building, the provision of bride prices, the organisation of feasting activities and megalith building (Fig. 132).

In the interviews, megalith building was repeatedly described as fundamentally dependent on the support of relatives, friends and members of one's own clan. They contribute resources for the supply during the construction works and the feasts accompanying the erection of the grave, as well as their own labour force. Therefore, all members of the social groups are highly dependent on each other, which favours the continued existence of collective and communal structures. Regarding cooperative structures, the importance of reciprocity (through feasting activities and debt relationships), specific reward systems (construction of large graves; participation in debt systems behave recursively), personal reputation (at the level of the *Umas* and clans), as well as specific retribution systems (no right to vote in village councils; burial in a non-megalithic tomb) can be clearly understood. In all of these factors, megalithic construction, although not being the only relevant aspect, is of fundamental importance in conjunction with other aspects. Thus, the construction of megalithic tombs is in itself a result of cooperative structures, but behaves retroactively strengthening for their preservation. In Wanokaka and Kodi in particular, the importance of communal strategies is significant in the presence of representative elements (presentation of jaws and skull of slaughtered animals on the house). In some cases, freely available resources exist, but they do not exclude an uneven distribution of goods (especially the ownership of water buffaloes is not evenly distributed). To a very limited extent, anarchistic structures seem to continue to have significance in Sumba. For example, in Wanokaka, power is expressly distributed among different clans. This includes a rigorous assignment



of different tasks to individual clans (cf. Gunawan 2000, 262). A specific separation of the spheres of influence of the different clans also creates an effective control mechanism. From this strict separation arises the characterisation of the local communities as largely akephal in relation to the position of the clans as the most influential social unit (Gunawan 2000, 30). Regarding clans and *Umas* in Western Sumba, a fairly strong degree of decentralised organisation can still be observed. Although ancestral villages exist, which play a special role in rituals, they have no authority over other villages and are rather dependent on the material and personnel support of their satellite villages (e.g. regarding construction work on houses). Furthermore, specific mechanisms exist to limit the influence of individuals. This includes the possibility of replacing clan speakers if they are unsuitable. During the interview in Wainyapu it was also described that meetings of clan members may be attended by persons who have proven themselves through their particular suitability. This includes factors explicitly oriented towards collective interests such as the support of other clan members in feasting activities or participation in the restoration of ancestral houses. Furthermore, due to the not insignificant influence of the nation-state administration and the sometimes-strong inequality regarding material and relational factors, Sumba cannot under any circumstances be described as an anarchistic society. However, it is interesting that Wanokaka in particular, as the region bears individual traits of anarchistic organisational structures, most strongly follows a uniform framework in megalith building with a high number of tombs of the middle size class. Kodi and Waikabubak represent a kind of intermediate stage in which a high proportion of small graves indicate existing economic inequality, but the proportion of medium-sized graves is still high. However, it should be noted that the number and size of megalithic tombs cannot always be directly reconciled

Fig. 133: Model of the megalithic building traditions in Eastern Sumba.

with the importance of the individual clans, as the example of Wainyapu shows. In this example, only two of the three clans described as particularly important have a high number of graves. However, since the importance of a clan within an ancestral village is mainly based on the assumed importance of the ancestors, economic differences can be reflected here, which only developed later.

The east of Sumba, on the other hand, is characterised by strongly hierarchised social structures, which once included a royal family and a slave class. These structures still have an effect today, even though slavery and the royal family were abolished. What has remained is a social structure in which control over important resources (especially buffalo and horse stables) is still held by the former royal family. Accordingly, exclusionary strategies based on the retention of power through the control of resources hold strong importance (Fig. 133).

Regarding the megalithic tombs, it can be seen that the hierarchical social structures are expressed in a highly-restrictive form of burial construction. These restrictive structures can be seen above all in the few existing grave types and their clear classification according to social groups, as well as in the very limited use of ornaments. Only the royal tombs are provided with complex patterns and stelae, which at the same time serve as symbols for the power and wealth of the tomb builders. The choice of motifs is based, among other things, on the significant resources such as water buffalo, whereby a materialisation of the objective sources of power can be recognised from the ornamentation. However, in the west of the island, ornaments are used in a much more open frame and are characterised by a significantly increased variety. Recurring symbols such as *Maraga* and *Tabelo* patterns can be repeatedly found on the graves as part of ritual communication. The size of the houses partly proves to be a meaningful factor in relation to the representation of social structures. For example, in Uma Bara, Eastern Sumba, there are clear differences in house sizes that correlate with the grave types and the size of the tombs. In Prairita, Anakalang, there is also a statistically significant correlation between the size of the houses and the total volume of the tombs that can be assigned to them. However, this is not the case in Western Sumba. The considerable and institutionalised social inequality (dependency systems and royal families) described in Anakalang and Eastern Sumba in the interviews and documented by Adams (2007) are very clearly reflected in the distribution curves of the grave volumes, as well as in the described type distribution.

The use of megalithic tombs in the sense of a culture of remembrance is less clear. A fundamental distinction must be made between the west and east of the island. In the west of the island, some of the megalithic tombs are directly integrated into specifically-connoted areas within the villages. Thus, the sacred and ritual places are always surrounded by the graves, whereby a direct (also spatial) connection between the two factors arises. The graves are indirectly involved in ritual activities: on the one hand, through the laying down of betel described in some interviews, the placement of candles on the cover plates; and on the other hand in passive form as a storage area for ritual celebrations.

Thus, megalithic construction in Sumba can be seen as a materialisation of different aspects.

1. Differences in economic wealth are materialised by the megalithic graves. This is done by selecting the type (Anakalang, Kodi, Waikabubak and Wanokaka), the length of the construction period (Kodi) and the use of stones from specific quarry areas (Waikabubak). Especially in the case of larger graves, these elements are emphasised when specific symbols (e.g. buffalo representations) are used. Therefore, megalithic graves fulfil the basic function of materialising the economic prosperity and social standing of the builder on an individual level.



2. Traditionally strong and institutionalised inequality is clearly reflected in the use of exceptional grave types. In Eastern Sumba, restrictions on the selection of grave types are to be mentioned, which have not been documented in this form in any other region. In this case, the megalithic tombs directly reflect the individual social position of the builder. In Anakalang there are still old royal tombs, but they are no longer built today and are more of a testimony to the past. Nevertheless, in this case many of the old power relations will still have a high significance. The presence of stelae and their decorations also serve as the supporting symbolism of these social inequalities. In Western Sumba the more egalitarian conditions (especially in Kodi and Wanokaka) are reflected in the normally distributed curves of the grave volumes.
3. A specific landscape constructions with the help of megalithic tombs – for example, in the sense of a waymarking or a clear separation of ritually connotated spaces outside the villages – seem to be less important. On the other hand, a structuring of the social space within the villages is present (see point 1).
4. Overall, a clear impact of the social structure and basic practices (exclusive vs. inclusive; collective vs. individual) existing in the respective community on the megalithic monuments is evident. In Western Sumba, interdependence is quite high due to the existence of control mechanism and a strong emphasis on collective, communal and cooperative aspects. However, at the same time, there is a strong emphasis on competitive elements. This is expressed both within and between social groups and materialises – for example – through differences in grave types and sizes. In the east of the island, resource control and exclusionary practices prevail. Megalithic graves thus serve at the communal level as a material form for the social courses of action considered important, the social frame of reference and economic and social inequalities.
5. The importance of relational, collective aspects is emphasised by the central location within the villages and the connection with collective elements (ritual areas). Megalithic tombs were described in the interviews not only as the property of their builder, but of the entire clan involved in the construction process. This is reflected in the association of the graves with the ancestral houses of the *Umas*. Although the builder of the tomb may not be a resident of this house, there is a link to the entire *Uma*. Thus, megalithic tombs have a representative function at collective level, especially in comparison with other local *Umas*. The integration of the graves into the framework of ritual areas (which are subject to collective use) is significantly omitted in Eastern Sumba.
6. Feasting activities and social cohesion are factors that interfere with the underlying actions and have a high significance in this context.
7. Anakalang assumes a kind of intermediate position within these spans. The region shares some characteristics with Eastern Sumba, but also has clear links to the western part of the island (e.g. similarities in ornamental patterns to Wanokaka; location near the ritual area).
8. The inclusion of Christianity as a substitute or complement to the traditional *Marapu* faith is reflected in the development of new types that make a clear reference through the use of Christian symbolism (images of Jesus; crosses).

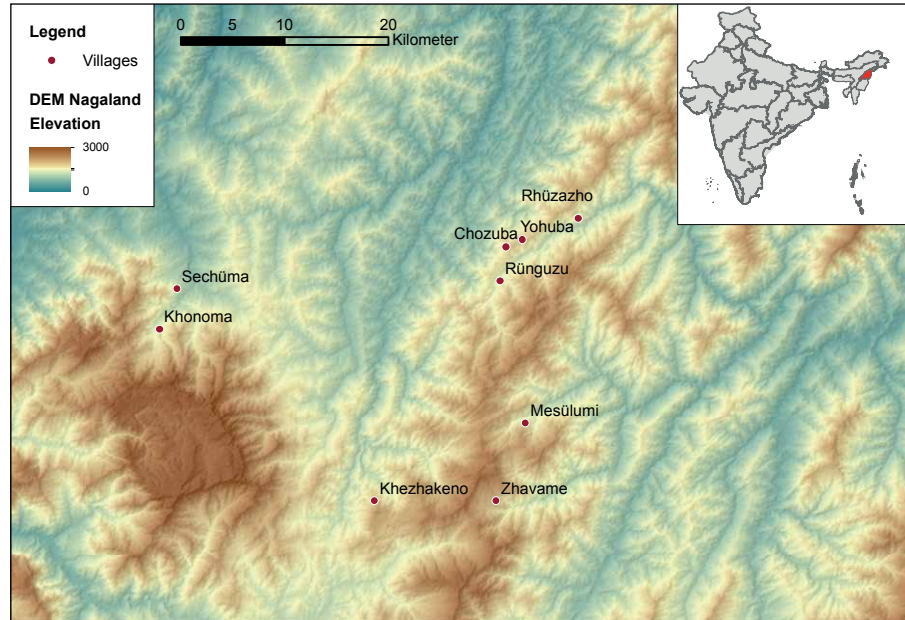


Fig. 134: The Angami and Chakhesang villages in Nagaland, Northeast India, visited during field work in 2016.

## 5.2 Ethnoarchaeological case study 2: Nagaland

The state of Nagaland is located in the north-eastern part of India and is part of the so-called Seven Sister States and covers an area of approximately 16,579 km<sup>2</sup>. Nagaland is almost entirely dominated by mountainous landscapes bordered to the west by the plains of Assam and the valley of Brahmaputra. South of Nagaland is the state of Manipur, where Naga groups also live. Myanmar borders Nagaland to the east. The climate of Nagaland is less affected by the monsoon than the rest of India, but is characterised by rather cold winters due to the Himalayan massif and the high location of the villages. The remote location within a massive mountain landscape also caused a long isolation of the Naga communities, in which the traditional culture and way of life was largely isolated (Nienu 2015, 1-5). The term 'Naga' ultimately refers to a number of different subgroups living in different Indian states, as well as Myanmar. The term 'Naga' was probably introduced by outsiders, although the exact origins of this term are unclear. The individual Naga communities themselves had differentiated proper names, which are still used today in combination with the term 'Naga' (e.g. Angami-Naga or Ao-Naga). Common to these groups is partly a shared idea of migration movements, myths of origin (e.g. Angami- and Chakhesang-Naga) and similarities of material culture. Altogether there are at least 32 different Naga groups, which, despite some similarities, also show a high differentiation from each other by themselves. Although all of these groups speak Tibetan-Burmanese languages, a large number of independent languages and dialects have emerged within the Naga. Nagamese is used as a lingua franca to ensure communication between the individual groups (Joshi 2008, 36-38).

As in the case of Sumba, the data collected during the field work in 2016 make up the largest part of the second ethnoarchaeological case study to be presented here. Only villages attributable to Angami- and Chakhesang-Naga are taken into account (Fig. 134). Again, the data collected are concerned with the megalithic monuments; however, data on the *Feasts of Merit* were also collected where possible due to the close interdependence. Again, in the case of Nagaland, the methodology is described in detail according to the brief description in chapter 5.2.3.

## 5.2.1 Brief characteristics

In order to place the traditional and increasingly disappearing practice of erecting megalithic monuments in Angami and Chakhesang communities within a superordinate framework and its contextual expression, an overview of some fundamental aspects of them is given below. This includes a brief outline of the historical background, the social and political organisation, as well as the economy and settlement system.

### 5.2.1.1 Historical background

Due to Nagaland's remoteness in general and the individual groups from each other, much of Nagaland's early history remains unclear. Although archaeological field research within Nagaland has increased in recent decades (see chapter 5.2.2.2), the question of the origin of the Naga groups in particular is unclear. Within the individual Naga groups, legends concerning the origin of the Naga as well as genealogical relationships have been passed down over the course of many generations (Thong 2012, 71-72). Nevertheless, the first written treatises can only be found in the 19<sup>th</sup> century with the arrival of the British colonial power, as well as American Baptist missionaries in the form of external attributions (cf. chapter 5.2.2.2).

Where exactly the term 'Naga' comes from is still another unanswered question. However, it is certain that the name Naga was widely used mainly by British traders and later by colonial officials. Initial contacts beyond the previously established relationships between communities living in Assam and individual Naga groups were made with the arrival of the East India Company in Assam and can be dated to 1832 (Nienu 2015, 91, Thong 2012, 159). These early contacts were part of the British control system in Assam that took place after the First Anglo-Burmese War in 1824-26. In 1858 the British government finally took control of all of India and the British colonial power in India emerged. While colonial officials and missionaries had opened most of India and Burma for their purposes by the end of the 19<sup>th</sup> century, Nagaland remained largely out of their control due to inaccessibility (Nienu 2015, 86-89).

The following decades under the colonial rule and the efforts of Christian missionaries led to an increasing Christianisation of the Naga societies, which at the same time caused some of the older traditions to be abandoned. Nevertheless, Nagaland remained largely isolated from the outside world, whereby to this day the majority of the population is supplied exclusively by subsistence agriculture (cf. Oving 2012, 20-21). The unrest before and after the Second World War and the independence aspirations of India finally led to a declaration of independence of the Naga in 1947. The subsequent rejection of the recognition of such a state by the newly formed Indian state led to the outbreak of violent struggles that led to a war between India and Naga groups. The armed conflicts could only be partially resolved in 1963, when Nagaland was finally recognised as an independent federal state within the Indian Union. In the following decades there were repeated regional unrest and battles between the Indian army and Naga groups, which were still striving for the independence of the state. The continuous conflicts, which could not be completely resolved until today, also led to the fact that until recently Nagaland could only be entered under certain conditions, whereby the areas in Nagaland remained in relative seclusion for a long time (Joshi 2008, 43-45).

### 5.2.1.2 Social organisation

The basic unity within the social organisation of Naga communities is the nuclear family. This comprises a married couple and their children as an independent

household. The family is embedded in a lineage and clan system, which refers to a common ancestor. The clan is patrilinear defined in all Naga groups. While traditionally the common ancestor and thus the fundamental reference lies on the paternal side of the family, the maternal side is also considered in the form of a dual kinship system and includes a comprehensive terminology that distinguishes conceptually between maternal and paternal relatives (Nienu 2015, 103-104).

Within the clan there are different reference levels, each of which forms an independent group within the extensive clan. In the case of the Chakhesang-Naga, the smallest group within the lineage is the *Kaliü* group<sup>8</sup>, whose members have a very close relationship. These include above all siblings and their children. Within this group there are rules on the inheritance of property. Another relatively small group is called *Khuza* and includes family members who refer to a known common ancestor. This group includes – for example – uncles and aunts. Finally, another level is formed by the *Thenu* group, which refers only to a distant common ancestor. This group can be quite broadly structured and may also include members of other lineages. All of these groups can be spread across different villages, but often the smallest social groups are mostly found within a village (Venuh 2014, 124-125; Lohe 2011, 90-91).

The clan itself serves as a basic functional unit and comprises a complex system of rights and obligations. Within the clan there are various cooperations, whereby every clan member is expected to participate and their organisation and coordination is usually carried out by the clan elders. The cooperation within the clan extends to different areas of daily life. This includes assistance in working the fields, but also in the event of unforeseen events such as fires or disease outbreaks. One of the basic functions of the clan is the provision of social security in economic and physical matters. In addition, each clan has collective land areas, consisting of cultivated and forest areas. Finally, the clan performs administrative tasks, which are not a matter for the entire village, whereby leadership roles fall to the clan elders (cf. chapter 5.2.1.3; Lohe 2011, 87-90).

While families, lineages and clans represent a social group defined by a common origin and family references, there are other social institutions that also played an important role within the villages. These groups are strongly characterised by their function as resources for cooperative and collective structures, which held strong importance for daily interaction. Some of these groups have lost importance today, while families and clans are still present and socially relevant. Within a *Khel* (district within a village; cf. chapter 5.2.1.6) traditionally different working groups were found, which were defined by age groups and often included both women and men, at least in case of the Chakhesang-Naga. Like the *Morungs*, some of these groups no longer exist. Since *Khels* primarily represent a spatial unit, several clans or even only one clan can be resident within a *Khel*, which cooperate with each other regarding different aspects. These groups are mainly responsible for carrying out agricultural activities. In addition, these important social units appeared at feasts or communal activities; for example, as dance or singing groups. The *Morungs* – which no longer exist today – held fundamental importance for the development and social bonding within these groups. They served as an institution for the education of adolescent boys and girls and the transfer of knowledge and skills (Venuh 2014, 135-136).

Although social relations within each village have traditionally been of the utmost importance and relevance, relationships with other villages were also important. The main reason for this is the scattering of the individual clans across different villages and districts within Nagaland, as well as across different states (above all Manipur). This spread is mainly due to constant migration movements

---

8 This group can comprise several core families and represents a functional unit, especially regarding inheritance law.

and marriage relations, which were still common before the British colonial government. These relationships include not only kinship, but also links of common possessions in the form of land that can be part of a lineage. In the case of the village of Chizami (Phek district), the relationships of the nineteen clans living there include fourteen other villages located in Phek, Kohima and Manipur. All of these villages are connected by a divided lineage and meet on certain festive occasions (Lohe 2011, 92-99).

### 5.2.1.3 Traditional religion

The conversion of the Naga communities to Christianity began around 1847 under the influence of European and American missionary attempts and now covers at least 95% of the population in Nagaland. Problematic in describing the original belief system is the fact that the knowledge of spiritual aspects was almost exclusively held by the priests (*Mewuo* or *Thüvo*), who converted as well. This ended the transmission of religious knowledge, whereby only little information on the traditional belief system is available today (Nienu 2015, 135-137).

Essentially, the traditional belief of the Naga communities was based on a closely intertwined relationship between the physical (especially plants and animals), human and spiritual worlds. Starting from a creator figure that can be male or female, there was a belief in a multitude of spirits. These are subdivided into good and bad spirits, whereby above all of the good spirits, *e.g.* in the context of feasting activities, were called. Parts of the environment, such as mountains, rivers, forests and springs, were regarded as the seat of the spirits and thus as part of the spiritual world. Sacrifices in the form of leaves, food or animals to the evil spirits should prevent them from inflicting damage. Diseases, accidents and natural disasters in particular were regarded as the work of these spirits. The worship of ancestors was also an important part of the traditional religion and was – for example – invoked during the *Feasts of Merit*. Traditional religion was also associated with a multitude of rules and taboos that were intended to regulate social cooperation and that threatened misfortune for the person concerned and his family if they were violated. Part of the traditional religious structure were also various ritual festivities carried out by the priests. These include feasts on certain occasions, such as house building or hunting, feasts associated with deaths and feasts that marked the agricultural year. All of these activities included the entire village community. The *Feasts of Merit* are to be distinguished from these, which were performed individually by individual families and whose rituals were only partially performed by priests. The *Feasts of Merit* can be described as specific feasting activities, which essentially served to gain social prestige and influence (Nienu 2015, 139-150; Lohe 2011, 115-125).

In the course of Christianisation, in contrast to Sumba, there were only very few mergers of traditional and Christian religious elements. One example is the coincidence of the traditional feast of *Erünye* with Christmas. Both feasts are partly celebrated together. However, most of the traditional customs and knowledge of them have disappeared in recent decades (Lohe 2011, 156-157).

### 5.2.1.4 Political organisation

Within the traditional political organisation of the Naga, each village formed an independent unit, which did not need another level of reference in connection with other villages. This also applies to cases where members of the same clan were represented in several villages. However, in terms of influential social positions, there are fundamental differences between the different Naga groups. Groups such as the Konyak-Naga – for example – had so-called *Angs* who, as decision-makers, had a

considerable influence on issues and affairs that affected the entire village (see von Fürer-Haimendorf 1939).

However, within the group of the Chakhesang-Naga, such positions were not found. In this case, administrative decisions were made by a group of men from the village, the only specific positions among whom were the priests of the village. These fulfilled a kind of spiritual leadership position and played an important role in all ceremonies and feasts. Overall, priests traditionally held one of the most important social positions and were mainly responsible for monitoring the progress of agricultural activities. These activities were accompanied in Naga societies by a fixed calendar of ceremonial activities and festivals, for the correct execution of which the priests of the village were responsible (Ovung 2012, 125-126).

In the case of collective decision-making that affected the village as a whole – for example, in cases of crime, disputes or war – the priests and above all the clan elders were involved. Men of high social standing were also influential and entitled to a say. This group – which was also not institutionally structured – usually comprised feast givers (connected to the *Feasts of Merit*) and persons known for their wisdom or special abilities (Venuh 2014, 127-128). This group of people had a considerable influence on day-to-day political events and could also use their influence for their own purposes. Traditionally, the determining factor for political influence within the Naga villages was the age of the person concerned. Although this is still a highly valued factor today, young people are also increasingly involved in politics. Women are still largely exempt from direct political influence. Furthermore, economic factors and educational attainment traditionally and currently play an important role in the selection of persons for political offices (Ovung 2012, 116-120).

### 5.2.1.5 Economic system

The current economic system in Nagaland is unanimously described as largely unchanged since British colonial rule, possibly even before (Nienu 2015, 220). The economic system of the Naga can be divided into two basic methods: on the one hand the cultivation of rice on terraced fields is to be mentioned, while on the other hand shifting cultivation (*Jhum*) is also common. A piece of the forest around the villages is cleared and burned down in April. The remaining ash is used to enrich the soil where rice and other fruits are grown. The fields are abandoned after two harvests at the latest to use a new piece of forest area. The entire cycle lasts approximately 10-15 years. Only after this period is a piece of land already used for cultivation is visited again (Nienu 2015, 230-232).

According to Hutton (1969), some of the Angami practised wet rice cultivation, while other groups only used shifting field cultivation or dry rice cultivation. In the case of wet rice cultivation, an irrigation system consisting of canals and bamboo pipes was previously installed. These fields, described as particularly valuable in Hutton's monograph, are strictly private property and linked to individual persons or households. In the case of shifting field cultivation, rice was also planted, but also millet, maize and Job's tears. The cultivation was carried out for two years, followed by a long fallow phase. In addition to the main crops mentioned above, other plants and vegetables such as beans, chillies and spinach were often found. Regarding domesticated animals, *Mithun* (*Bos frontalis*) is to be mentioned on the one hand, which did not occur most frequently in terms of numbers, but to which the highest importance was attached. The high value of the animals was expressed in their exclusive use for feasting activities and as merchandise. In addition, cattle, pigs and dogs were kept, all of which were also used as food (Hutton 1969, 72-80). In the case of the Sema-Naga, it was reported that only a few groups settling near the Angami-Naga had also adapted terrace farming. In these groups, the focus was on



Fig. 135: View of the terrace fields for the cultivation of rice near Khonoma (photo: Maria Wunderlich).

shifting cultivation, which envisaged cultivation for two years and a fallow phase of up to seven years. The occurrence and importance of domesticated animals in the Sema-Naga groups has been described as identical to that of the Angami-Naga (Hutton 1921a, 59-62). In particular regarding the importance of *Mithun*, differences in the Ao-Naga were described by Mills (1926). *Mithun* played a much smaller role in these communities and was very rarely owned by individual households. Cattle, goats, pigs, dogs and, in small numbers, sheep (Mills 1926, 132-133) were frequent and significant. For the Ao-Naga, shifting cultivation was also described as the most common cultivation method, with cooperative efforts of clearance and cultivation being mentioned as particularly important (Mills 1926, 107-110). In all Naga groups, hunting and fishing were also described as important parts of the economy.

Although positions in administration and in cities became increasingly important, especially after the emergence of the state of Nagaland in 1963, the economy is still characterised by a subsistence economy organised within the individual villages. The cultivation of rice, millet and Job's tears still serves the basic supply of food, which is supplemented by the cultivation of various cereals, vegetables, root vegetables and tubers. The organisation of economic activities is characterised by cooperative, reciprocal and group-related structures and practices. The clans and *Khels* play a special role within the individual villages. These structures are linked to an exchange of time and labour, which make up for the greatest possible lack of specialised groups. The ratio between land for shifting cultivation and for terrace cultivation is approximately 80% to 15% (Nienu 2015, 220-223). Cooperative efforts hold the utmost importance, both regarding the creation of terrace fields and the preparation of rotating fields, although land rights and membership of individual persons or groups vary greatly. These factors are briefly outlined below using an example from the study area.

The land available in Chizami, Phek, can be divided into two categories. On the one hand, there is cultivated land, which is used for cultivation and belongs to



Fig. 136: The Angami-Naga village of Khonoma. The exposed location on a hill as well as the surrounding terrace fields can be seen (photo: Maria Wunderlich).

certain social groups. A distinction can be made between areas used for the cultivation of dry rice (*Ketsholo*) and wet rice (*Kedalo*) (Fig. 135).

Both field types are the property of individual households. Finally, areas cultivated or released for cultivation still include forest areas in which shifting cultivation is carried out. These areas are to be assigned in collective form to a certain lineage (*Cükie*). The clearance of the land used for two years at a time is carried out collectively and the land is then distributed evenly among all households involved. Forest areas used for the production of timber and firewood are also linked to this social unit (*Cükhelo*). The second category of land is forest land that has not been cleared for cultivation and is used, among other things, for its water sources. Part of this land belongs to the different clans living in the village, while another part belongs to the whole village. These areas are also used as pastures for *Mithun* (Lohe 2011, 175-182). Always connected to individual households are the gardens of varying intensity, in which the cultivation of vegetables is also carried out. The frequency and size of these gardens is linked to the general availability of land. The gardens are managed and used exclusively by their respective owners (usually a household) (Nienu 2015, 235).

### 5.2.1.6 The villages

Due to the mountain landscape in which Nagaland is embedded, the way of settlement is strongly oriented towards adaptation to this landscape form. The villages are regularly located at altitudes between 1000 and 2000m above sea level (Fig. 136). Although all villages are located close to water sources and rivers, the position of the villages at relative altitudes has some important reasons. The high location of the villages and the creation of the economic zones around them require a strong degree of protection against flood events and the spread of insects, some of which transmit disease, near the rivers. In addition, the location on or near



hilltops offers an easily defensible location for the villages, which was particularly important in times when wars between villages were more frequently occurring. The boundaries of the villages and their economic areas are clearly defined and do not overlap with those of the neighbouring villages. Essentially, each village is still economically and politically self-sufficient and includes several zones (Nienu 2015, 200-203; Lohe 2011, 4).

The primary zone of the villages contains the inhabited area and its periphery. The inhabited area of the village includes houses, farmhouses, dwellings for animals kept in the village, as well as public places where sports events, feasting activities and ritual acts take place. In addition, there are areas near the residential buildings that are used for economic activities such as drying the harvest or weaving. Usually Naga villages were surrounded by ramparts or ditches and had elaborately decorated gates. Many of these gates can still be found within the villages today, but due to the increase in population they are often located within the inhabited area. The outskirts of the village are directly adjacent to the village borders. In this zone the important resources of the village are to be found, which are accessible to all villagers. These resources usually include water sources and forest areas used for the production of firewood. Furthermore, this area is or was partly used as grazing ground for animals, as well as in earlier times as a kind of buffer in case of attacks (Nienu 2015, 207-214).

In the case of the Angami- and Chakhesang-Naga the village can be divided into different quarters, which are called *Khel* or *Kedo*.<sup>9</sup> Everyday life takes place within these quarters. The *Khels* are not defined by kinship, but exclusively by spatial boundaries. Within a *Khel*, different clans can be resident, which have a common ancestor in themselves, but are closely bound to the other clans resident in the *Khel* in daily life. Accordingly, the *Khels* represent a heterogeneous collective comprising different clans, lineages and families (Venuh 2014, 124). The clans within a *Khel* work closely together to build houses, prepare and work the fields, and extract and transport important raw materials. In addition, each *Khel* traditionally contained *Morungs*, which served the education and socialisation of the younger generations. Within the *Morungs*, the girls and boys were organised according to their age groups, who were then jointly responsible for various cooperative tasks (Lohe 2011, 40-41). Furthermore, within the different *Khels* there are stone monuments of various forms, which were used as a platform for collective meetings and decision-making (Nienu 2015, 214).

The secondary zone is the main economic zone used exclusively for the cultivation of crops. In this area are the terrace fields of the Angami- and Chakhesang-Naga, as well as the areas used for shifting cultivation. Finally, the tertiary zone is defined by a forest that belongs to the entire village (see chapter 5.2.1.4). This area serves as a resource for required raw materials (e.g. for house construction). Furthermore, these areas are used for hunting and gathering activities (Nienu 2015, 200-203).

### 5.2.1.7 Burial rites

The ethnographic documentation of the burial rites of different Naga groups points to a great diversity of these, which were only partly connected with the erection of megalithic monuments. At the time of the English colonial government of Nagaland, cremation of the corpses was unusual for all groups and was rejected, but inhumations in very different forms occurred. Regarding some communities of the Konyak-Naga, burials in seated position in baskets were documented, while the Ao-Naga and Konyak-Naga – among others – buried the dead within stone

9 Both expressions denote the same, but originate from different dialects. In the following, only the term *Khel* is used to simplify matters.

platforms. In some cases, the head of the individuals to be buried was removed and buried in a small stone box. In addition, earth burials in wooden coffins, as well as body burials in stone cists occurred – for example – with the Lhota and Angami-Naga (Hutton 1965, 30-31).

Regarding the burial customs of the Angami-Naga, recent excavations have given further insights. In Jotsoma and Chiethu two completely different types of burial could be documented ethnoarchaeologically. In the course of excavations, stone cists were uncovered, which were laid out underground and contained complete individual burials. The dimensions of the graves were very different, with two stone cists lying directly next to each other. As a second form of burial, a completely different custom could be documented. It has been described that the bodies of the deceased were left unprotected on a wooden platform outdoors for several weeks or months to bury the bones and remains in urns afterwards (Jamir 2015, 611-615). Overall, the traditional burial customs of the Angami-Naga were differentiated regarding different groups of people (such as warriors, priests, feast givers, *etc.*) and differed – for example – according to location (inside or outside the village) and coverage of the tomb (by a stone or wood) (Jamir 2015, 622-624). Accordingly, burials in connection with stone monuments were common in different Naga groups, with considerable differences between and within the different groups. These burial rites were replaced by Christian-influenced burials, which are no longer connected with stone monuments. No graves were documented in the course of the field work; rather, only seating platforms and erected stones were present here.

## 5.2.2 History of research and source criticism

In the following, the source-critical factors and an overview of Nagaland's research history are briefly outlined. In the following, the information collected during a stay in the archives of the Pitt Rivers Museum Oxford<sup>10</sup> on the *Feasts of Merit*, the megalithic monuments and related specific material culture is presented.

### 5.2.2.1 Source criticism

Fundamental problems in connection with ethnographic research in former colonial contexts have already been described in chapter 5.1. Of course, they are important for the former Dutch colonies in Southeast Asia as well as for former English colonies in South Asia.

In particular, some source-critical factors must be taken into account when using ethnographic descriptions of the Naga published in the 1920s-1940s. Ethnographic descriptions of specific groups are often intended as holistic, objective reports. A first problem of these representations is that almost all informants were male and that the female view of social contexts is represented exclusively from the outside. In addition, socially influential positions were only filled by men, so a one-sided description in this respect was unavoidable (Schäffler 2006, 90-96). Some aspects of these older ethnographic descriptions are no longer relevant. Since the increasing Christianisation and connection of the Naga to Indian and European social concepts, some traditional practices have become increasingly insignificant (Channa 1992b, 2-7). However, this does not apply to all traditional aspects of Naga culture. In modern Angami villages – for example – there are still megalithic monuments that continue to play a major role in the self-confidence of the community. Thus, the megaliths are

---

10 Photographs and manuscripts by Henry Balfour, Ursula Violet Graham Betts (née Bower), Milada Ganguli, John Henry Hutton and Philip Mills could be viewed in the archives of the Pitt Rivers Museum Oxford and the British Library London between 4<sup>th</sup> and 14<sup>th</sup> August 2014.

prominently visible within the village and are integrated into everyday activities as recreation places, *etc.* (Majumdar 1992, 50-51).

### 5.2.2.2 History of research

Among the earliest scientific papers on the different Naga groups are the ethnographic studies published mainly in the 1930s and 1940s by British colonial officials. This early research was related to the approach of Rescue Anthropology, which aimed at documenting societies threatened by the disappearance of traditional practices and elements within a very short time. J. H. H. Hutton, who was appointed by the British colonial government as chief administrative officer, played a key role in this context (MacFarlane 2008, 24-25). He wrote influential monographs on the tribes of the Sema-Naga (1921a) and the Angami-Naga (1921b; reprinted 1969). Cooperations developed shortly thereafter with J. P. Mills, who was also employed as an administrative officer and who investigated the structures of the tribes of the Lhota-Naga (1922), the Ao-Naga (1926), and the Rengma-Naga (1937) and published them in the form of monographs. The research in Assam was also supported by Henry Balfour, who was curator of the Pitt Rivers Museum in Oxford at the time and founded the Naga collection there and was involved in the monographs mentioned. Finally, C. von Fürer-Haimendorf (1946), who turned to the more northern and remote settlement areas of the Konyak-Naga, should be mentioned in this context. Research at Naga communities in Manipur was done earlier by T. C. Hodson (1911). Overall, there is an extensive body of early ethnographic research activities directly related to the administrative activities of the British colonial government in Northeast India. The main focus of the collection, which was founded in the 1920s in Oxford, still exists today and was used to inspect the archive holdings.

The development towards an independent Indian research tradition in Northeast India can be seen from the 1970s and 1980s at the latest, when Nagaland was already recognised as an independent federal state within the Indian nation-state. Some of the works thus created explicitly deal with British colonial rule and the historical formation of Nagaland (*e.g.* Mao 1993; Sema 1986; Alemchiba 1970). Other authors put a stronger focus on socio-cultural aspects of individual Naga societies. The earliest work written by an author of Naga origin is T. Ao (1957), who dealt with the legal system of the Ao-Naga. M. Horam (1977) dealt with the Tangkhul-Naga and the increasing social change within these communities and concentrated on economic, political and social changes. A similar approach is followed by J. Athickal (1992)'s work 'Maram Naga. A socio-cultural study', in which he placed a strong focus on the influence of Christianisation in these communities located in Manipur. A unique sociological study in this form, dealing exclusively with the structures within a single village, was presented by K. Lohe in 2011. However, wider works dealing with the modern changes within the socio-cultural world in Nagaland (Anand 1967), the origin of the Naga (Shimray 1986) or its changing economic system (Channa 1992b) also appeared in increasing numbers. A comprehensive work on the different Naga groups, their cultural heritage and their oral tradition also appeared in 2014 and was written by N. Venuh.

Furthermore, regarding archaeological and ethnoarchaeological studies a strong increase of publications can be observed within the last decades. Examples include publications on megalithic-building traditions in India (Basa *et al.* 2005) and ethnoarchaeological research in India (Sengupta *et al.* 2006).

### 5.2.2.3 Archive holdings

Different series of feasts, summarised under the term *Feasts of Merit*, have already been described by British ethnographers and government officials in Assam and

Nagaland. These series differ between the individual tribes or communities, whereby a summary will be given for the Angami, the Lhota and the Rengma-Naga. With regard of the megalithic monuments, a basic distinction can be made between funerary and commemorative monuments.<sup>11</sup> In summary, the erection of stones can be seen as a marker of the social status and prosperity of the donor. The stones serve both commemorative and representative purposes (Rao 1991).

#### ***Feasts of Merit: Angami-Naga***

In his monograph, Hutton also describes the Angami feasts, which serve to gain social prestige. As is the case with all *Feasts of Merit*, these celebrations serve to increase the status or prestige of the feast giver. The costs for the organiser increase with each new feast. Altogether there are six feasts, of which the first three, which are quite unimportant, can be repeated as often as desired. These first feasts are held after a good harvest and especially for clan members or relatives and only include the slaughtering of one cattle at a time. After these celebrations have been held, no special privileges are granted to make what has been achieved visible to the community members. This will take place from the fourth feast onwards, which requires the provision of two baskets of rice, four bulls and two pigs. The donor's house can be marked with bamboo and grass below. This feast, like the fifth, must be repeated at least twice to enable the next higher feast to be held. In the course of the fifth feast (*Zhato*), the expenses for the donor increase once again. However, after the feast, he has the right to decorate his house with horns and wear specific garments. The last feast finally includes the erection of two wooden posts, one of which symbolises the man and one the woman. The names of the donor and his wife are also noted on the post. Only this last feast gives the donor the right to erect monoliths. This is done in connection with the *Ketseshe/Chisü*-feast, which requires eight baskets of rice, twelve bulls and eight pigs (Hutton 1969, 230-232).

#### ***Feasts of Merit: Lhota-Naga***

As is usual with the Angami, the four-stage fixed sequence of the Lhota-Naga is characterised by increasing financial expenditure. The status conferred on the donor increases with each feast; moreover, wearing special clothing is also a visible status indicator (Mills 1922, 136).

#### ***Feasts of Merit: Rengma-Naga***

Mills (1937) writes about the organisation of the *Feasts of Merit* that these are an indispensable endeavour of all clan members. However, in addition to the individual significance of these feasts, there is also a community significance. Celebrations are used to strengthen kinship and friendship. It also promotes the distribution of wealth in the form of rice and meat. As with the other Naga groups, Rengma's *Feasts of Merit* are subdivided into levels, whose effort increases, especially regarding the animals to be sacrificed. In addition to the privilege of providing the donors own house with specific ornamentations, the wearing of jewellery and clothing is a visible status indicator of Rengma (Mills 1937, 181-195).

#### ***Feasts of Merit: Sengma-Naga***

A complete feast series is also documented by the Sengma-Naga on the Assamese-Burmese border region (Stonor 1950). The series comprises five feasts, of which the third is a repetition of the second and the fourth a repetition of the third feast. All feasts

---

11 Another type of monument are the meeting places, which could also be documented in the course of the field work. These are neither funerary nor memorial monuments, but are strongly functional.

have in common a high consumption of rice and rice beer, with which the guests are entertained. The required rice is only provided by the donor at the last feast. At the first and second festivals, two friends of the feast giver participate in the expenses: at the third and fourth festivals, beer is contributed by clan members. In addition to the rice, the donor must provide livestock for slaughter. These include cattle, pigs and *Mithun*. Starting with four pigs each for the first and second feast, the expenditure increases to one cattle, pig and *Mithun* for the third feast. For the fourth feast one pig and three *Mithun* are needed, while the fifth and last feast only requires two *Mithun*.<sup>12</sup> Different privileges are granted during the feasts. After the first stage, clothes with red and blue stripes may be worn and a small round porch may be attached to the house. After the third feast it is allowed to wear black clothes with red stripes and *Mithun* symbols. The feast givers wife may now wear a certain skirt and hems, as well as jewellery with carnelian, crystal and shells. The host himself may attach two feathers of the hornbill to his headgear and wear them at festivities. This headdress will be extended by another feather after the fourth feast. At the end of the feasting series is the right to wear a form of clothing of the Ao-Naga, *Tsung-kotepsu*. The application of house ornaments is also usual after the fourth feast. The jewellery comprises bamboo, which is attached to the roof of the house, as well as coarser husk models (Stonor 1950, 1-3).

### **Monument types and expenditure of work: Angami-Naga**

The Angami-Naga are sometimes regarded as the group with the most intensive megalithic-building activities. The meaning of megaliths can include both a memorial to the dead and a symbol of the social achievements of the living. Thus, the megaliths serve above all of the increase of the prestige of the respective builders. Mainly occurring types are simple standing stones, which are set up individually, in pairs or in smaller groups and vary in size and form. Some menhirs are also built on stone platforms. The construction of two menhirs can be seen as the first in a specific series of activities related to the megalithic structure. The number of menhirs can be increased to 8-10 in the course of the following festivals. The basic distinction between commemorative monuments and tombs is expressed in specific types of monuments. The menhirs mentioned above are the main memorial stones. As graves low stone platforms are built over the grave, which can also serve as a resting place. These tombs are partly decorated with smaller stones, which represent on the one hand the number of affairs of a man and on the other hand the number of captured heads. Even after the ceremony, a close connection of the relatives to the stone can be observed in some cases. Thus, the stone can be regarded as a source of wealth or fertile fields (von Fürer-Haimendorf 1946, 24-25; 1939, 215-222). There is a direct connection between the construction of a megalithic monument and the alignment of the *Feasts of Merit* described above. Only a few ethnographic observations are available regarding the effort of building a stone platform or a menhir. In addition to the considerable time required for the festivities and accompanying ritual activities, the transport and erection of the stones is also regulated by some specifications. One construction of a megalithic monument near Kohima described by Fürer-Haimendorf began at sunrise and only ended in the evening. The group involved was led to the stone with the sun fully up and could start the transport. This was accompanied by smaller rituals and the presence of spectators. 30-40 people were actively involved in pulling the stone. The stones were finally erected at sunset (von Fürer-Haimendorf 1946, 21-30). Another event observed by Hutton was held with the help of over 100 people responsible only for pulling the stone (Hutton

12 Whether these concrete numbers are correct can no longer be determined. In the context of the specially conducted interviews, only estimates of the resource expenditure were given, since exact numbers could no longer be given.

1969, 232-233). Since for whole day field work was not allowed for the community involved and only men were involved in the active stone transport, a considerable proportion of the community was dissuaded from all other tasks by the construction of a megalithic monument. This means a considerable amount of work, especially in smaller communities. Information on the participation of people in various construction projects can also be obtained via photographic documentation. Photos of the transport of two menhirs and two wooden posts are handed down by Hutton. The photographs in question date from the 1920s and show at least 50 people taking part in a *Lisü* feast and moving Y-shaped timber posts through a village. The pictures concerning the stone transport show two different ceremonies. The first one takes place in Kohima and has at least 50 active participants, while at the edge of the procession spectators are recognisable. The exact location of the second stone transport is not known. The photographs show at least 50-100 participants and some spectators on the side. Both occasions have in common that only men were involved in pulling the wooden posts or the stones. In the case of the female, smaller post, these were also adolescents, but also only of male gender. It seems that only adult men were directly involved in the stone transport.

#### **Monument types and expenditure of work: Lhota-Naga**

J. P. Mills (1922) wrote only a little about the construction of megalithic monuments of the Lhota-Naga in his ethnographic reports. In this case, again the erection of monuments must not be carried out before the end of the fixed feasting series. The stone ceremony itself is accompanied by some rules and taboos. The feast giver must build a small hut behind his house at the beginning of the ceremony and may not receive strangers in his house. After selecting the stone from a radius of up to two miles away, some formal activities take place. These include the preparation of the transport route and the holding of the first major feast. For the stone transport a bamboo scaffold is built by the men of the village concerned. The stone transport and erection takes two days and is carried out exclusively with the help of the village's adult men. During the first day, the stone is transported to the feast givers house and left there until the next day. On the second day, the stone is finally erected. On both evenings, large feasts take place involving the entire village (Mills 1922, 141-144).

#### **Monument types and expenditure of work: Rengma-Naga**

In his ethnography of the Rengma-Naga, Mills (1937) makes a fundamental distinction between the stone monuments of the eastern and western Rengma groups. The eastern Rengma groups erect stone monuments exclusively in connection with funeral ceremonies. The graves are mostly individual burials, whereby tombs that could be assigned to a clan as a whole are unusual. The funeral rites of these groups include a two-day sequence of activities. On the first day, only a simple earth grave is dug into which few grave goods are placed. After the funeral on the first day, the stone monument is erected the following day. These stone platforms of various sizes are located on the paths leading from the fields to the village. If a man has held certain *Feasts of Merit*, a smaller stone is additionally erected on the platform (Mills 1937, 219-222). Western Rengma groups have two types of stone monuments that do not serve burial purposes. A simpler type of monument is semicircular stone platforms ('*binviye*'), whose outer wall comprises vertically- and horizontally-laid stones. These platforms are meant to sit and should remind of their builder, or his father. The erection takes place with the help of the male clan members, as well as one's own family members and is not accompanied by larger ceremonial. The construction process must be completed within one day. The erection of monoliths ('*tso-külo*') is more complex and associated with greater social prestige. This ceremony can only be held after the complete series of *Feasts of Merit* and includes the erection

of a stone for the man, his wife and possibly the children of the couple. A few days before the ceremony the selected stone is prepared and the sledges are built. Before and during the ceremony, the feast giver and his wife are tabooed. After a sacrifice the day before, the men of the village gather in full ornament, whereas women may only participate as spectators. The transport is run by an old man who has to wear the full insignia of a warrior. After the stones have been erected, a stone platform is erected around the monument. Finally, there is a major feast (Mills 1937, 195-199). In connection with burial rites, common burial grounds of the clan ('*skar-tso*') are built by the western Rengma groups. These places are large stone platforms, which are extended with each new death. However, due to erosion, the burial site is only slightly enlarged. The graves themselves are laid under the slabs and covered with smaller stones. While spears and *daos* (similar to machetes) are common grave goods for men, women do not receive any special burial objects (Mills 1937, 215-219).

### **Restrictions in access to the monuments**

Restrictions regarding the erection of megalithic monuments, as well as participation in related feasting activities are documented in all of the Naga groups discussed here. There were considerable restrictions in the transport and erection of stones and posts. In principle, only men were allowed to hold feasts. The construction work itself was also carried out in all cases exclusively by men. Further restrictions such as the exclusion of children and young people could exist. The *Kiengas* and *Morung* communities also played a special role. These self-contained and generation-specific groups then functioned in a special expert role and represent a considerable restriction on access for the remaining community members. Contrary to the relative one-sidedness of these concepts, the restrictions described above have been relaxed in certain aspects. It was customary to erect both a male and a female part for certain building projects, such as the Y-post erected for the *Lisü* feast, but also menhirs. The posts as well as the menhirs of the women were smaller. In addition, the privileges obtained by organising feasts also applied to the woman or the entire family of the feast giver. This applies in particular to the privilege of wearing specific clothing or jewellery.

### **Spatial distribution: Angami-Naga**

The spatial distribution of the Angami monuments differs according to the type of monument. Thus, graves were erected both inside and outside the villages. Commemorative monuments, on the other hand, were built exclusively in the outer areas of the villages, since here a permanent memory could also take place by strangers. Monoliths were also erected in both areas (Hutton 1969, 49-50).

### **Spatial distribution: Rengma-Naga**

The graves of the eastern Rengma groups were erected exclusively in the villages in the immediate vicinity of the house of the deceased, while the associated monuments can be found along the paths leading towards the fields. Clan burial grounds of western Rengma groups are placed along the village streets and commemorative monuments both inside and outside the villages (Mills 1937, 195-222).

### **Other Naga groups**

No further differentiable photographic references to the spatial distribution of megalithic monuments suggest the primary occurrence of menhirs and stone platforms outside the villages. Picturesque documentaries of megaliths near the Maram and Mao-Naga show menhirs placed within the villages. There is not necessarily a connection to a specific house, even if the feast giver lives in the village. In both documented cases the menhirs stand on relatively free, easily accessible areas. Dolmen

and memorial stones of the Maram-Naga, on the other hand, were situated at the extreme end of the village on a hill; thus, individual differences in the placement of individual monuments cannot not be ruled out. It should also be noted that groups and clusters are formed; for example, in the group of dolmens and memorial stones of the Maram-Naga mentioned above.

### **Material culture and megalithic monuments: association with certain group members**

Associations of certain artefacts with different people are mainly associated with clothing and jewellery. References to such connections can often be found in photographs and in the ethnographic descriptions of the 20<sup>th</sup> century. With the Angami-Naga, elaborate headdress and clothing is usual as clothing worn during feasts and is also worn at stone ceremonies. However, photographs of these ceremonies show that the largest, feather-adorned headdress is worn by only some of the men participating in stone pulling. They walk together in the processions at the beginning of the rows and are not necessarily actively involved in the processions. This task is taken over above all by the men in the back, the stone near, part of the rows. They usually wear less-elaborate clothes, whereby at least the headdress is much more modest. Similar presentations can also be seen in the context of a *Lisü* feast. The captions added to these photographs suggest that certain pieces of jewellery and clothing are worn by warriors, who form the end of the procession, still behind the drawn posts. These can be distinguished from other men, who sometimes wear very elaborate feathers, as well as the young people, who also wear feathers or elaborate headdress in some cases (Photographies Hutton). Specific artefacts are also documented for the Lhota-Naga. Thus, warriors wear specific jewellery and ornaments. When carrying a megalith, men who wear more elaborate jewellery and clothing than others also go ahead in this case. Another interesting aspect is that Balfour documents a case in which at least one man involved in pulling a stone wears the head of a hornbill hanging over his back as jewellery (Photographies Hutton and Mills; Balfour 1922a and b (diaries and sketches)). For other Naga groups, special pieces of clothing and jewellery for feast participants, *etc.* are also documented (see Photographies Ganguli / Mills). A selection of feather and metal jewellery such as bracelets and necklaces, as well as elaborate clothing (Photographies Ganguli) can be seen on a wealthy woman or daughter of a rich feast giver.

### **Material culture and megalithic monuments: association with certain types of sites**

There are references to the association of some artefact types with site types, especially with menhirs and other stone monuments. For not further differentiated groups documented equipment of graves are signs and spears for men, as well as carrying baskets and spider web symbols for women. Draping rice beer containers in the stone niches is also common for stone platforms (Photographies Balfour). For the Angami, shields and cattle skulls attached to posts are common, which are set up at graves. Large wooden idols, mostly representing the deceased, are also used to decorate tombs. Finally, the deposition of branches, grasses and bamboo pipes, especially on monoliths, was documented (Photographies Hutton and Balfour).

### **Material culture and megalithic monuments: ritual function of material culture**

During feasts, funerals and stone ceremonies, the clothing of the participants in particular proves to be an important carrier of ritual function. As already described, specific garments can make the social role, or the already acquired status of the wearer visible to the outside world. In addition to clothing, jewellery, which also fulfils this function, should be mentioned here above all. That this specific function



of material culture is important for the social structure can be seen from the importance of the *Feasts of Merit* in general on the one hand, but also from the obviously structuring and ordering function of clothing and accessories on the other. This becomes visible – for example – when looking at the photos of stone ceremonies taken by J. H. Hutton. The role and social position of the participants is made clear by their external appearance and internalised jointly during the ceremony. In addition, some artefacts are functionally closely linked to ritual contexts. This applies – for example – to special spoons used for the *Lisü* feast, some of which are richly decorated. However, special grave ceramics and the use of banana leaf cups for the erection ceremony of stones (cf. Balfour 1922a and b (diaries and sketches)) must also be seen in this context.

### 5.2.3 Research area: methodology

The data collection in Nagaland took place in February and March 2016. In addition to the author, Prof. Dr. Johannes Müller (University of Kiel) and Dr. Knut Rassmann (RGK Frankfurt) were again involved in the field work. Sara Jagiolla, photographer at the Institute of Pre- and Protohistoric Archaeology Kiel, was also involved in documenting the monuments for part of the time. In addition, Prof. Dr. Toshi Jamir and Dr. Ditamulü Vasa from the University of Kohima accompanied and helped to carry out the field work. Due to the easier geographical accessibility, as well as the focus of megalithic construction activities in the respective communities, data collection was concentrated on the districts of Kohima and Phek. The focus of the fieldwork was of course on the megalithic monuments. In line with the organisation of the megalithic construction in Nagaland, the available information on the associated feasting activities was also obtained.

Kohima district belongs to the Angami-Naga group, while Phek can be counted as Chakhesang-Naga. This separation into two different groups was made relatively late around 1946 (separation of the districts in 1973); in Hutton's (1921b; second edition 1969) monograph, there is still talk of western and eastern Angami groups. A total of eleven villages could be visited during the field stay. A village – Rünguzu Nasa – was visited due to its importance for the production of pottery, although no megalithic monuments were documented here. The focus of the recording is on villages belonging to the Chakhesang-Naga. Here nine villages could be visited and their megalithic monuments documented, four of which (Khezhakeno, Mesülumi, Rüzazho and Zhavame) are described in detail below. Regarding the Angami-Naga, two villages are explained in detail below: Khonoma and Sechüma. The quality of data collection is consistent in all villages, whereby no fluctuations in the availability of data were decisive for the selection of the villages explained in further detail. The only exception is the village of Sechüma, where only a part of the megalithic monuments could be documented due to time factors. However, since it is the only village besides Khonoma that can be attributed to the Angami-Naga, it was nevertheless included in the evaluation. Regarding Khonoma and Zhavame, the location of all megalithic monuments could be documented, but due to the very high number of them only a part of the monuments was recorded in detail.

The documentation within the villages included the recording of all associated megalithic monuments. A total of twelve different monument types could be defined:

- Type 1: single standing stone (ground level) (Fig. 137)
- Type 2: row of stones; bounded by a stone frame (at ground level)
- Type 3: stone row; on stone platform (raised) (Fig. 138 and 144)
- Type 4: row of stones (at ground level)
- Type 5: tomb with monolith
- Type 6: single standing stone; on stone platform (raised) (Fig. 139)

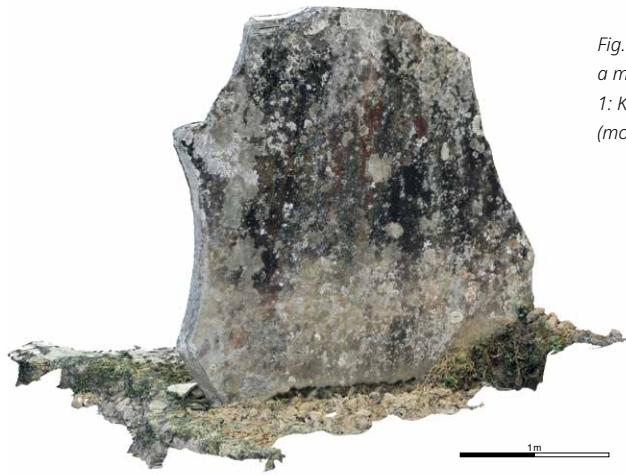


Fig. 137: Example of a monument of type 1: Khezhakeno, ID 40 (model: S. Jagiolla).



Fig. 138: Example of a monument of type 3: Mesülumi, ID 6 (model: S. Jagiolla).



Fig. 139: Example of a monument of type 6: Khezhakeno, ID 50 and 51 (model: S. Jagiolla).



Fig. 140: Example of a meeting place: Zhavame (model: S. Jagiolla).



Fig. 141: Tehuba in Khonoma, Angami-Naga (photo: Maria Wunderlich).



Fig. 142: Example of a monument of type 11: Mesülumi, ID 9 (model: S. Jagiolla).

Fig. 143: Example of a monument of type 12: Chozuba, ID 9 (model: S. Jagiolla ).



Fig. 144: Example of a smaller cluster of megalithic monuments at the terrace fields in Khezhakeno, ID 61-63 (model: S. Jagiolla).

- Type 7: stone row integrated in wall (at ground level)
- Type 8: *Kwehu*: stone circle with platform and single standing stone
- Type 9: *Tehuba*: stone circle; belonging to the whole *Khel* (Fig. 140 and 141)
- Type 10: *Pfehehou*: stone circle; belonging to a single family
- Type 11: stone platform with small stones (number of stones representing the number of affairs of the builder) (Fig. 142)
- Type 12: field of standing stones; result of a certain number of feasts (Fig. 143)

Given that the construction of megalithic monuments in Nagaland has already been abandoned, in some cases only fragmentary information is available. As a rule, only old community members remembered the corresponding feasting activities and ceremonies that had last taken place in the childhood of the persons concerned. As a result, a not insignificant part of the monuments could no longer be assigned to persons or groups and no information on the exact age of individual types could be given. A chronological breakdown of the material presented cannot therefore also be made for Nagalands.

Regarding the megalithic monuments, the type and location of the monument were documented during the field work using simple GPS markings. Like the graves documented in Sumba, the monuments examined in this way can be found in a database (Digital Appendix: databases). With the help of individual villagers, the affiliation of the individual monuments to the different clans and *Khels* could partly be recorded. However, this was not the case for all exemplars and was quite variable in relation to the different villages. As in the Sumba case study, maps (satellite images: Google Earth) of the villages and the location of the monuments inside and outside the villages were produced. These village plans can also be found as part of the text. The affiliation to individual houses could not be recorded. This is partly because the monuments could often only be linked with the clans and *Khels* and not with individuals; on the other hand, the villages in Nagaland are much larger than in Sumba.

Supporting semi-structured, guideline-based interviews were also conducted in the various villages in Nagaland (Digital Appendix: transcripts). All interviews were conducted with the help of a translator and subsequently transcribed and anonymised. As in Sumba, the villagers selected the people to talk to. In all cases, these were men, most of whom were already older. If this was the case, interlocutors were selected who as children were still witnesses of monument erections and were able to describe the process accordingly.

#### 5.2.4 Khonoma (Angami-Naga)

Khonoma is a village belonging to the western Angami groups, which is also a central and famous place due to historical events. Khonoma is one of the largest Angami villages and is only 8.7km away from Kohima as the crow flies. Thus, the village is located in the relatively easily accessible part of Nagaland, far to the west. The village is situated, as usual in Nagaland, on a hill in 1530m height. The mountain on which the village is located lies on a valley running north-east, in which there are large areas of rice fields. The surrounding forest areas are also used for *Jhum* cultivation. Khonoma is more touristic than other Angami and Chakhesang villages. This is due on the one hand to the good connection of the village to well navigable roads, and on the other hand to the historical importance of the village.

There are three different *Khels* in the village:

1. N-Khel
2. S-Khel
3. T-Khel

Of these, the N-Khel is the largest and comprises fifteen different clans. 12 to 13 clans should belong to T-Khel, whereas only ten clans were assigned to S-Khel.

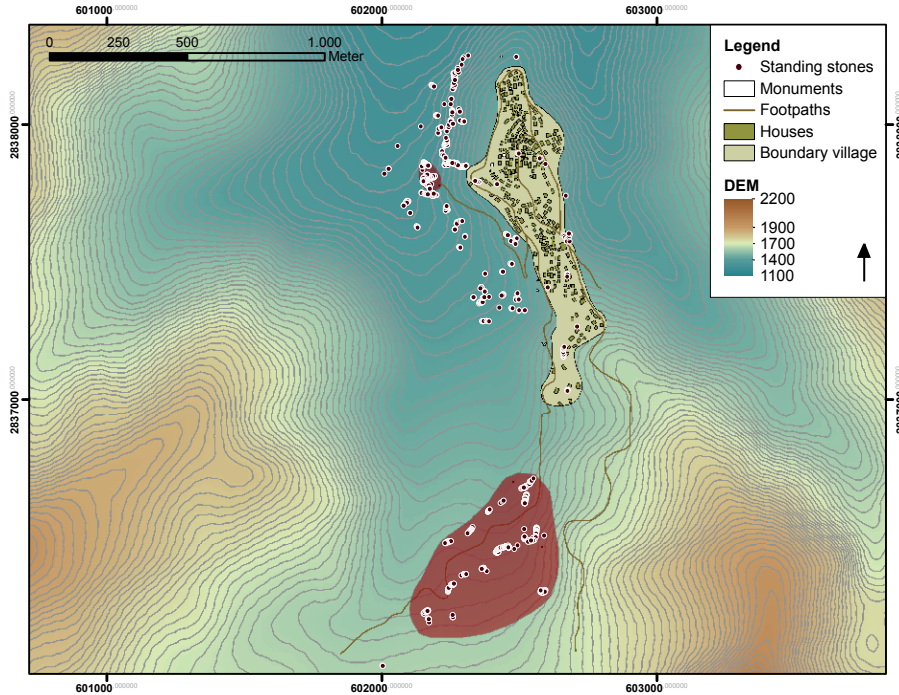


Fig. 145: Overview of the Angami village of Khonoma. The precisely documented and statistically investigated areas are highlighted. The points of the standing stones simultaneously mark the boundaries of the recording area.

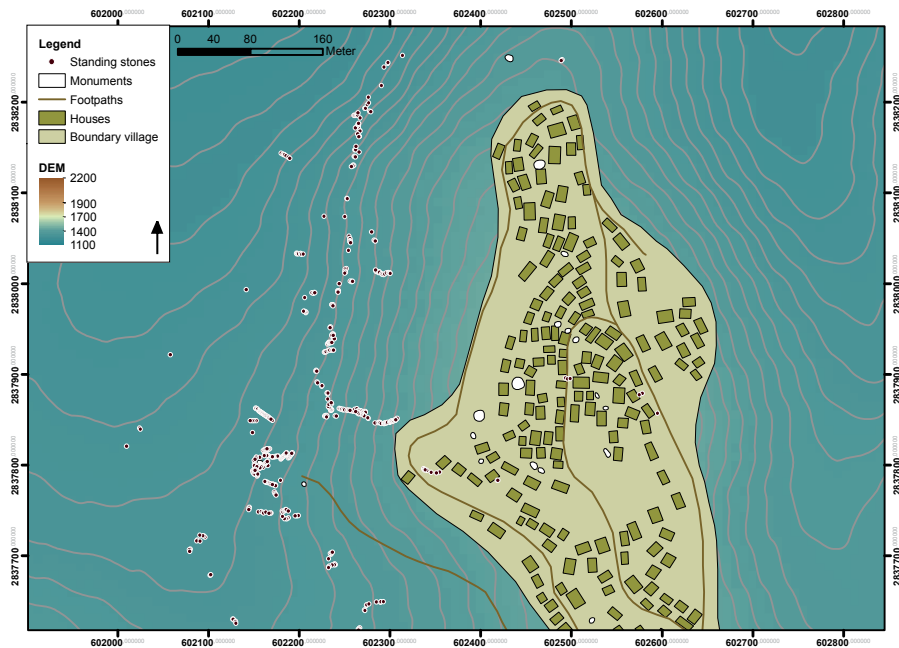


Fig. 146: Location of the seating platforms in the village of Khonoma.

### 5.2.4.1 Village plan

Khonoma extends in north-south orientation over an area of approximately 20.14ha over the top and the southern foothills of a hill (Fig. 145).

The largest area is the inhabited part of the hill in the northern area, where the older part of the village can also be found. Almost all of the circular stone platforms (Fig. 146), which can be assigned to different *Khels* and different families, are located in this area.

In this part of the village, regular meetings were held at these monuments. Only two such structures can be found in the southern part of the village, while another

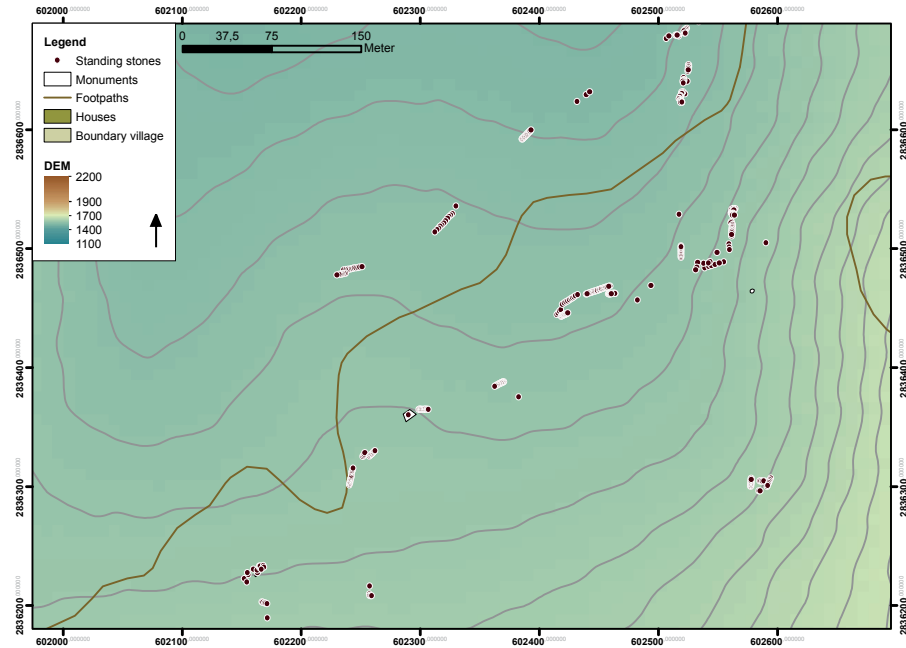


Fig. 147a: The southern distribution focus of the megalithic monuments in Khonoma.

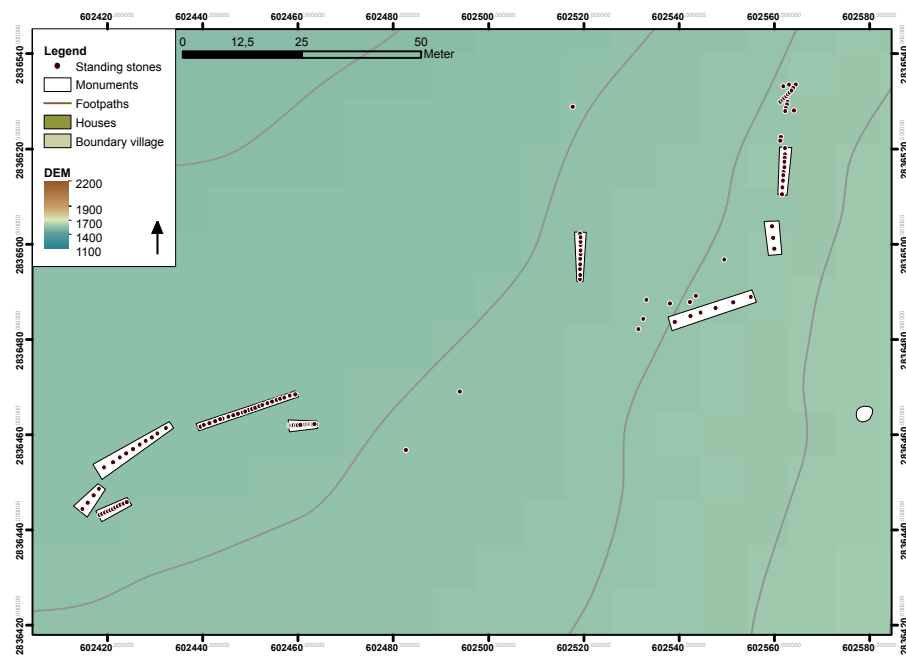


Fig. 147b: Detail of the southern distribution focus of the megalithic monuments in Khonoma.

ten platforms are located in the areas around the village. These are partly new, but for the most part already old. Standing stones, on the other hand, are rarely found within the village. These stones are partly old (although no memory of the exact age of the monuments exists) and are probably only recently located within the village area; however, some are also new and remind of certain events. These include memorial stones to the battle for Khonoma against the British, as well as stones commemorating church anniversaries and the like. Most of the megalithic monuments are located in the southern and western area outside the village. The eastern area has not been used for the construction of the monuments, as there is no suitable arable land here and accordingly no paths lead into these areas. In the western valley are the large terrace fields and traditionally the monuments were

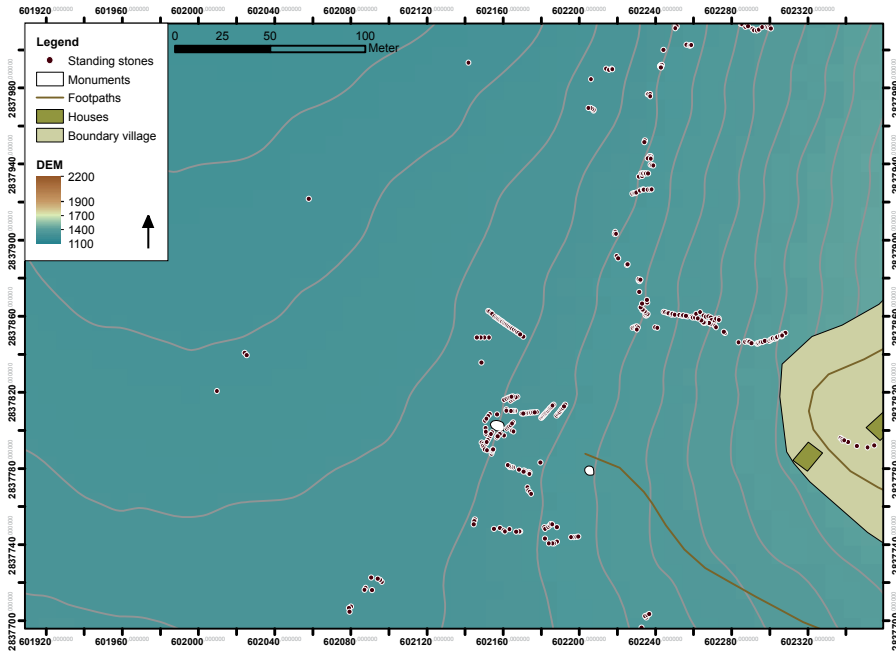


Fig. 148a: The exemplary documented distribution area of megalithic monuments in the area of the terrace fields.

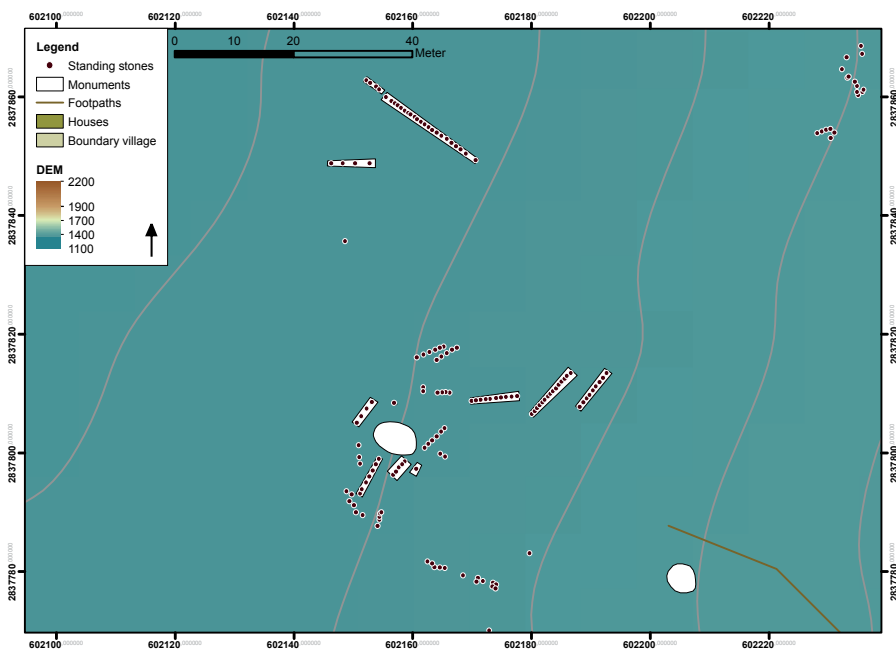


Fig. 148b: Detailed view of the exemplary documented distribution area of megalithic monuments in the area of the terrace fields.

erected along the paths that led there. This also applies to the southern area, where the fields in the forest are also located, while in the west only fields for wet rice cultivation can be found. In the south, the inventory of megalithic monuments was completely documented. Here, the spatial arrangement of the monuments clearly shows their orientation along the old food paths, but also the mutual relation of the monuments to each other (Fig. 147a and b). While some of the menhirs stand on platforms and together form a monument, many individual standing stones can also be seen in this area, each forming its own monument. Some of the platforms are also built in conspicuous proximity to each other, which then form their own small group within the distribution.

Unfortunately, most monuments in Khonoma could no longer be assigned to families and *Khels*, so it cannot be clarified whether these subgroups also reflect a social proximity. It also remains unclear whether the paths can be assigned to the different *Khels*, although this was not described in the interview. According to the interview partners, it is rather to be expected that the distribution of the monuments is mixed and depends on the availability of resources and land. In most of the terraced area, where most of the megaliths were built, only a survey could be carried out. Some of the stones actually belong to a row of stones and thus to a monument; however, this could not be documented during the field inspection. Only a smaller second area was completely documented (Fig. 148a and b).

It is striking that only two circular stone platforms were built outside the village nearby each other. The standing stones themselves can be divided into individual stones, rows of stones with and rows of stones without fixed platforms. The characteristic trapezoidal platforms can also be found here, some of which contain many stones. The distribution of the monuments in the space surrounding the village can be connected above all with the rice terraces that are located here. The rows of stones are always parallel to the long sides of the terraces. A similar arrangement can certainly be assumed for the monuments covered only by the surveys. What is particularly striking here is that the stones are distributed along the north-south axis, while concentrations along the east-west axis are weaker. Here again, the spatial distribution must be linked to the location of the old paths.

#### 5.2.4.2 Interviews

Two interviews were conducted during the stay in Khonoma. However, both interviewees had not experienced an erection of a monument themselves and could only report from their own oral tradition.

##### The village

As already described, the village comprises different *Khels* and other subdivisions. Within these subunits there is a marriage prohibition. Land ownership is generally held by families, whereas public land ownership has not been named. Like land ownership, livestock is also assigned to individual families, although in earlier times there were said to have been large differences in the quantity of livestock per family. The traditional hereditary pattern has been described as follows. The eldest son will inherit the largest field of the family, while the youngest son will inherit the parental house. All intermediary sons and daughters are dependent on the father's decision, with daughters generally inheriting almost nothing. They inherited jewellery and baskets from their mother.

##### The megalithic monuments: meaning

The question when the last stone monuments were erected in Khonoma could not be answered with certainty. Although stones were still erected on special occasions within the last 25 to 100 years, the erection of the memorial stones in connection with feasting activities came to an end with the advent of Christianity.

The description of the meaning of the monoliths in Khonoma included several aspects. On the one hand, both single standing stones and rows of menhirs are closely linked to the memory of deceased relatives of the builder. Each stone represents a deceased or the commemoration of the same. The importance of the single standing stones or menhir rows is also closely linked to the prestige, which is linked to the holding of the necessary *Feasts of Merit*. The construction of the stones symbolises the wealth of the builder, as well as the achievement of having held all necessary celebrations.



### **The megalithic monuments: builders**

The builders of the monuments are individual families regarding the standing stones as well as at the stone platforms, although mainly the male head of the household is seen as the feast giver. However, help for the workers during the construction of the monument, as well as for the provision of all necessary food for the major feasts comes from the extended family circle, as well as from the clan of the feast giver.

### **The megalithic monuments: types and size**

The most common type of monument in Khonoma are the standing stones built during the *Feasts of Merit* in memory of deceased relatives. Most of them stand on a stone platform and might only contain a single standing stone, but also more than ten stones. The shape of the trapezoidal platforms was associated with the importance of the individual stones. It was said – for example – that on the wider side there are stones for relatives who died a long time ago, while on the narrower side there are stones for those who died more recently. The size of the stones is also important here. Thus, the largest stones are always dedicated to the father of the builder, making a larger platform necessary. The size of the individual stones depends on availability and is not related to economic factors. However, it was said that the stones should generally be larger for male relatives. Even after Christianisation, menhirs were erected in Khonoma as memorial stones to special occasions such as anniversaries or in memory of the British attacks on Kohima. The second type of monument existing in Khonoma are the circular stone platforms with smaller stones meant for seating. These are also built in the course of the *Feasts of Merit*, albeit not in memory of relatives. The stone platforms serve above all as meeting places for the *Khel* of the builder and are a sign of his wealth and willingness to erect such a monument. The size of the stone platforms was described as a function of the available space within the village and topographical factors. The stone platforms are partly restored and repaired, whereby they are mostly in a very good condition.

### **The megalithic monuments: location**

The location of the monuments in Khonoma was described as free and was not dependent on the builder's own land. If land that did not belong to the family of the builder was chosen for the location of the monument, permission from the landowner had to be obtained. However, due to the partly communal character of the monuments, such a request was not rejected in principle, whereby the choice of location was free. The location of the menhirs between the fields on the food paths was mainly due to the fact that they also served as a resting place. On the platforms, men and women could place their baskets and rest on their way from the fields in the valleys to the village.

### **The megalithic monuments: activities and rituals**

No specific activities and/or rituals that took place at the megalithic monuments were described in the course of either interview. However, certain activities are naturally dictated by the importance of the monuments as places of assembly and relaxation. Many people still rest at the stone rows on their way from the fields to the village and the round seating platforms are still used as meeting and leisure areas.

### **The quarry areas**

The exact origin of the stones was unclear, but it was assumed that the stones all came from the nearby area. The stones were simply collected from the surrounding area and transported to the place of construction. The choice of the stones was independent of whose land they lay on and could be used without consideration after

consultation with the landowner. The reason for this practice was also described as the partly communal purpose of the monuments as places of rest. However, it was assumed that the construction of the monument was also based on the availability of stones in the area, as a long transport would have been very labour-intensive. The only stones that have been shaped before their use are those used for the stone platforms. It was said that they were prepared for further use with hammers.

### Feasting activities

In Khonoma the close connection between the construction of the standing stones and the organisation of large feasts was described by both interview partners. The feast, during which the stones were erected, lasted ten days, with the erection taking place on the third or fourth day. During the ten days *Mithun*, rice beer and pigs were provided for the whole village. The entire feasting sequence was described by an interviewee and is said to have included five stages of feasts. The celebrations could be started after the marriage and started with a small first feast, for which a certain amount of the harvest was provided to feed one's own family. The second feast was attended by the same group of people, while a larger quantity of food was expected. Finally, the priest of the village was invited to the third feast and the amount of resources provided increased again. Monuments could only be erected from the fourth feast onwards. It was not quite clear whether a monolithic monument or a round stone platform had to be erected in the course of the fourth and fifth feast, or whether both had to be erected during one single feast. However, both monuments were only allowed to be built after the fourth feast. The round stone platform was built in memory of the family and was also intended to cleanse the soul. After the fifth feast, the house of the feast giver could finally be decorated with horn ornaments. This decoration comprised two planks in horn form on the roof of the entrance side and was intended to enable all villagers and visitors to recognise the house as such of a feast giver. The clan of the feast giver is involved in the allocation of resources, so it has been described that the 25-30 necessary *Mithuns* are also provided by the clan. The preparation of rice beer can be carried by the entire village community. However, it was not completely clear whether all of the *Khels* living in the village would take part in the feast. In any case, one's own *Khel* will participate in several days; however, to supply all *Khels* required a very large amount of resources. Also one's own *Khel* does not have to participate in them, whereby the circle of invited guests seems to be strongly dependent on the capacities of the host and his clan. It may also be possible to invite inhabitants of other villages; for example, Jhotsoma. Resources provided by relatives or friends can also be returned on other occasions such as weddings, creating a system that is not coercive but includes regular repay-

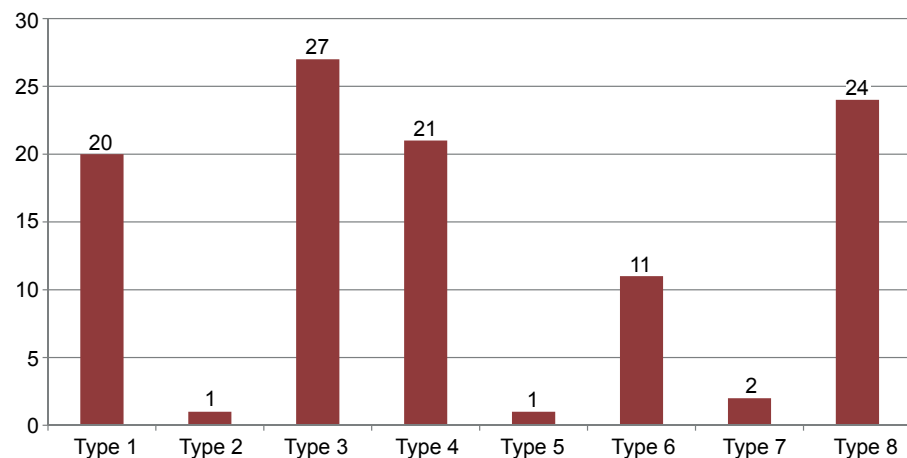


Fig. 149: The different monument types represented in Khonoma. The *Khel*-affiliation of the monuments is unclear.

ments. It was described that the feasts stopped with the assertion of Christianity because they were part of the old traditions and disappeared in their meaning.

**The graves**

The graves in Khonoma had no connection with the stone monuments of the village. Graves could be built anywhere, but there was no central cemetery. Stones were still placed in Khonoma over a simple earth grave with the coffin of the deceased. In addition, it was described that special containers of leaves were prepared and wine and rice were distributed at the grave. These traditions also changed with the spread of Christianity, which led to the creation of permanent cemeteries.

**5.2.4.3 Statistics**

Altogether 121 monuments could be documented in Khonoma, but they do not reflect the entire inventory of the village. The monuments were recorded in the southern part of the village and in a limited area of rice fields (see figs. 147 and 148).

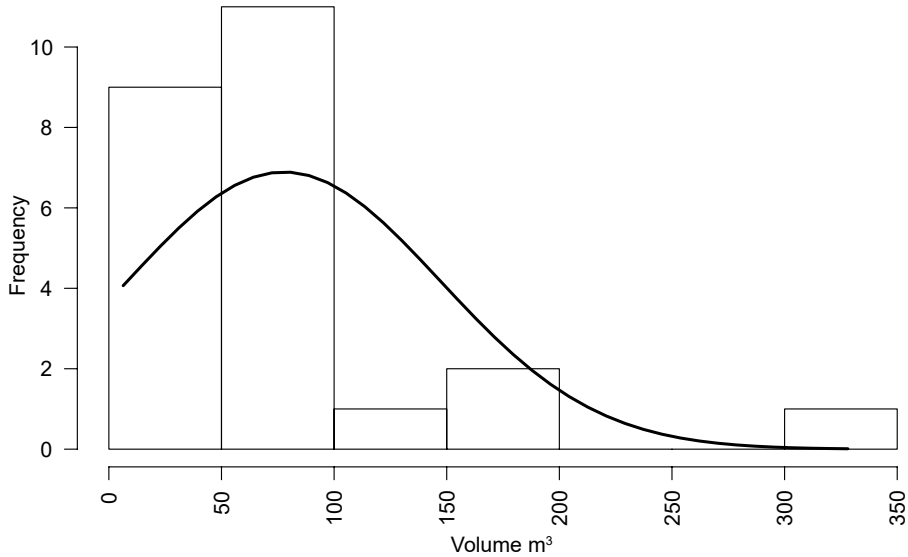


Fig. 150: Histogram of the volume (m³) of the Tehubas in Khonoma.

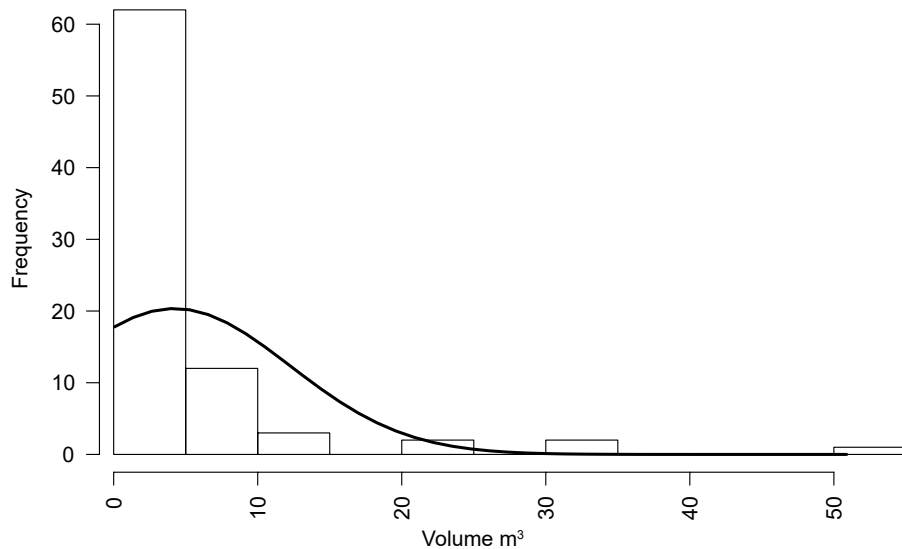


Fig. 151: Histogram of the volume (m³) of the monuments in Khonoma, excluding the seating platforms.

Fig. 152: Histogram of the volume ( $m^3$ ) of the single standing stones in Khonoma.

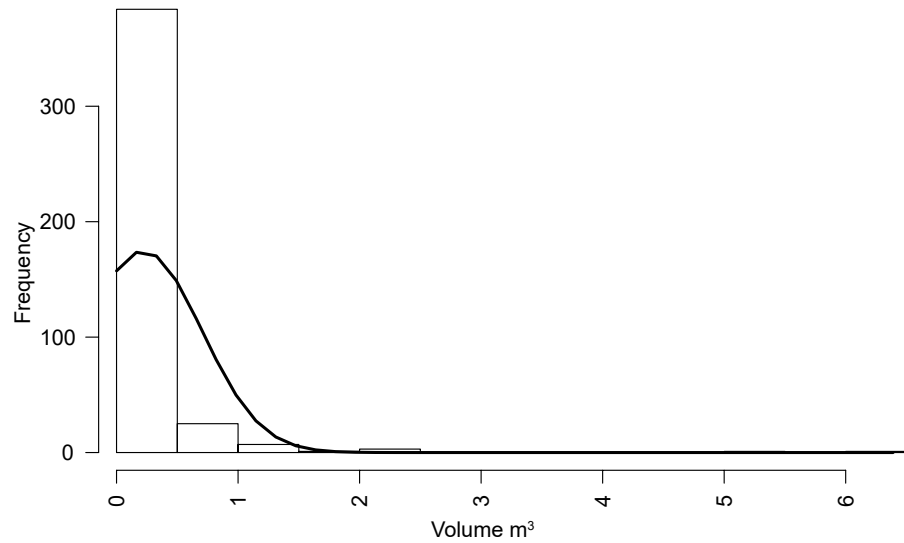
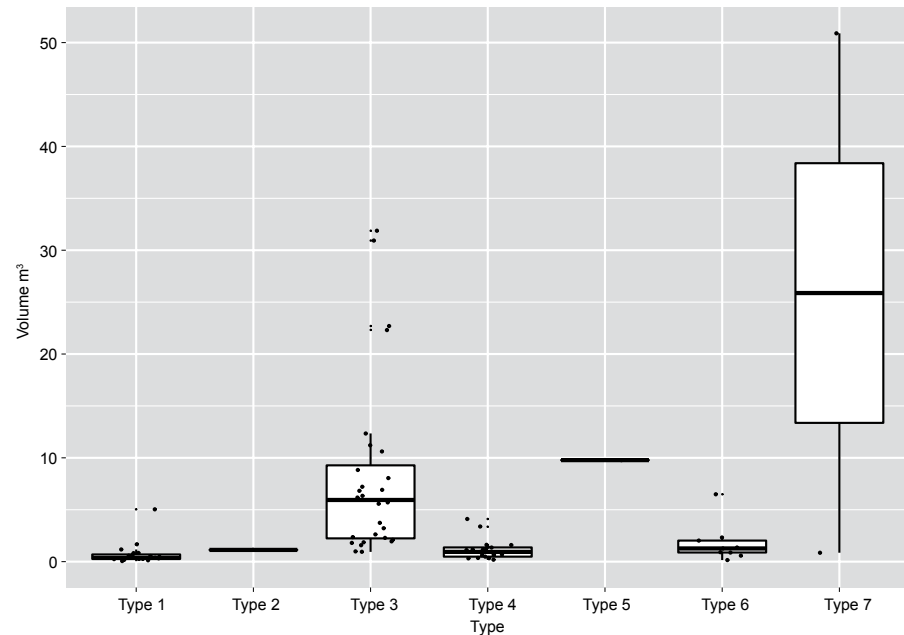


Fig. 153: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Khonoma with consideration of the type.



The monuments recorded in Khonoma can be divided into a total of eight types (Fig. 149), which occur at very different frequencies.

Essentially, Khonoma's monuments can be divided into three basic types, which include stone platforms, individual standing stones and rows of standing stones, which must be attributed to a builder. Stone rows comprise the types 2 to 4, as well as 7, whereby these occur with (type 3) and without platforms (type 4). Types 3 and 4 are very common, while types 2 and 7 are very rare. The forms of the stone rows with platform (type 3) are mostly trapezoidal, while rectangular forms are clearly in the minority. Also the second main type, single standing stones, occurs with (type 6), as well as without platform (type 1). The shape of the platform is less important, being primarily oriented towards the size and orientation of the menhir itself. The last main type are the stone platforms, called *Tehuba*, whose 24 monuments could be fully documented. All of these stone platforms are round in shape. The shape of the menhirs themselves is of course conditional and not worked over. Most stones have a roundish shape ( $n=240$ ), but square stones ( $n=144$ ) are also common.

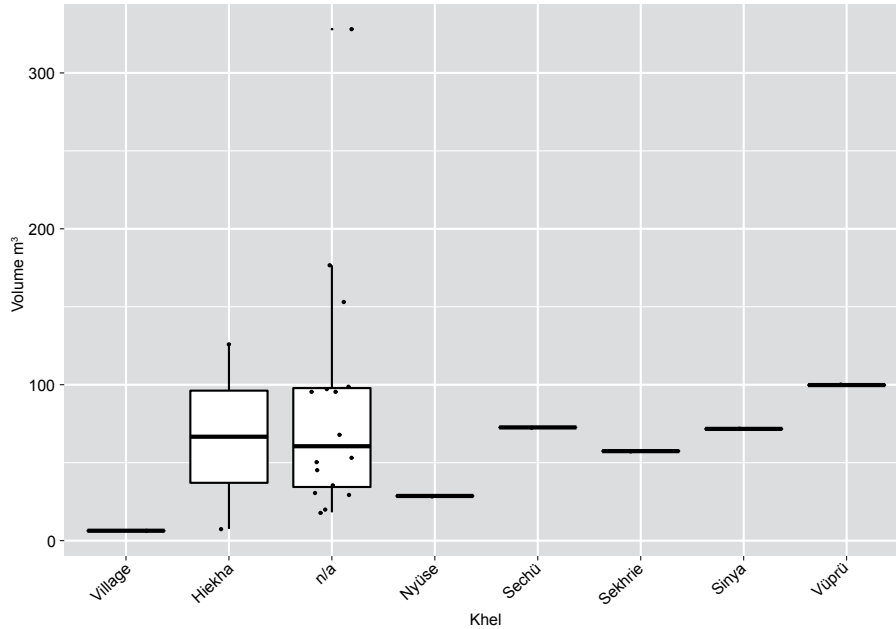


Fig. 154: Boxplot of the volume ( $m^3$ ) of the seating platforms (*Tehubas*) in Khonoma with consideration of the *Khel* affiliation.

The orientation of Khonoma's monuments draws on the one hand a strong emphasis on north-eastern ( $n=14$ ), eastern ( $n=15$ ), and east-northeast ( $n=19$ ) orientations. The orientation according to ESE-WNW ( $n=14$ ) also has a similar frequency. Only a little rarer are north-south ( $n=12$ ) or NNE-SSW structures ( $n=7$ ). Alignment according to NW-SE or NNW-SSE ( $n=4$ ) is very rare. In 27 of the 121 cases the orientation of the standing stones does not correspond to the overall orientation of the monument. Relatively common are orientations of megaliths within stone rows oriented to NNW-SSE and NW-SE, while the monument itself is oriented to NE-SW and ENE-WSW.

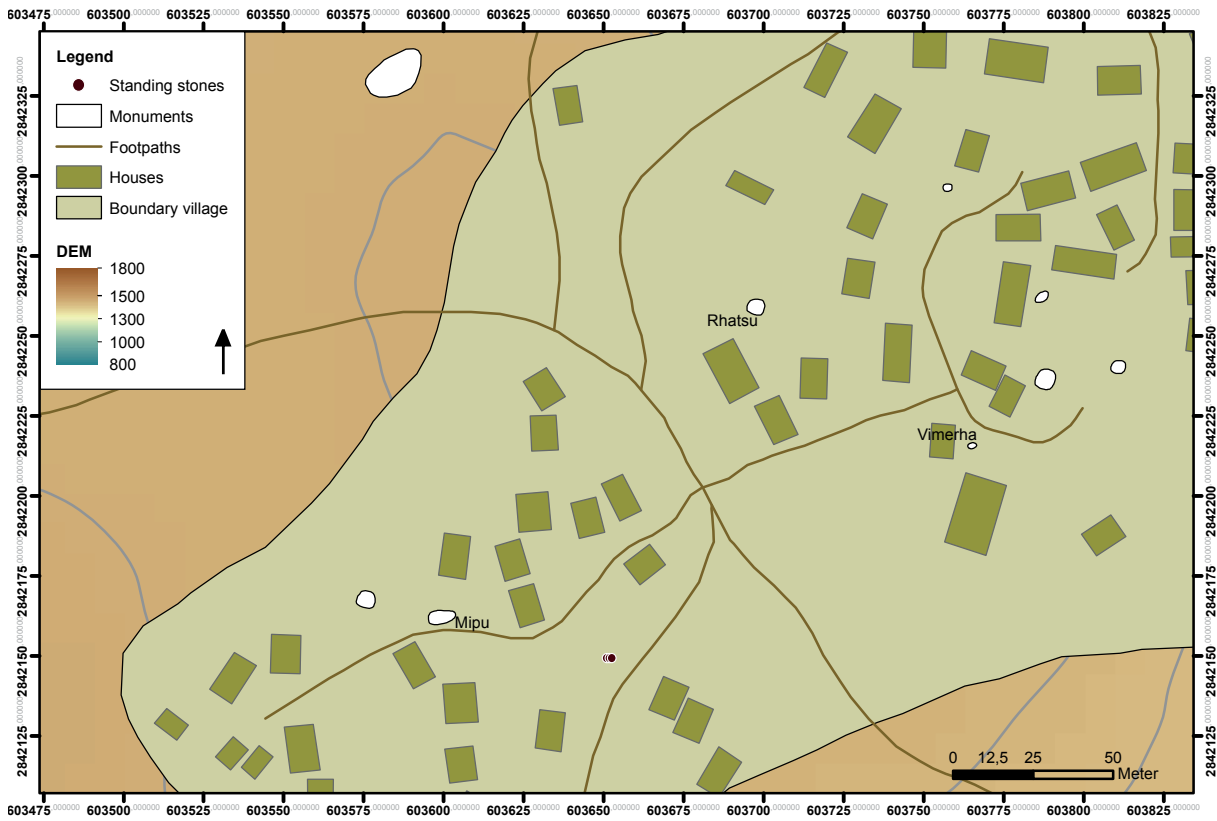
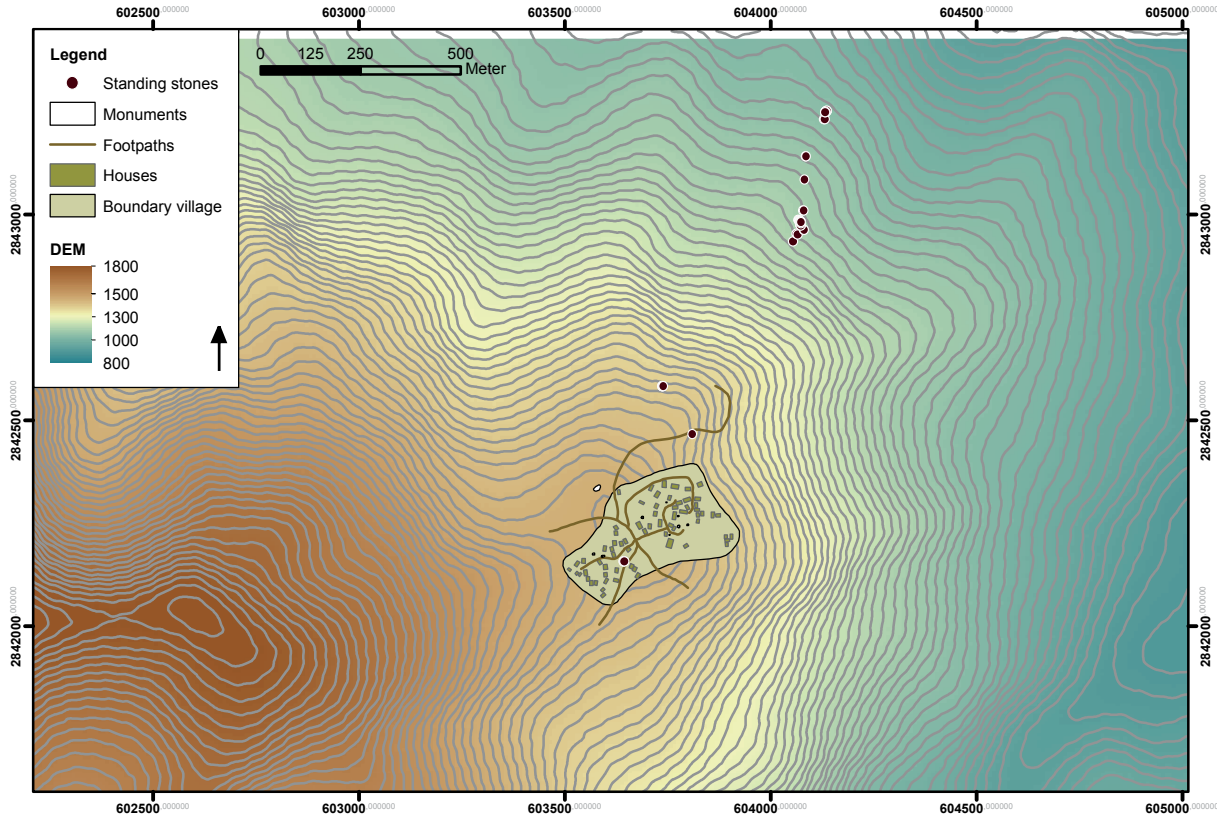
The size distribution of the standing stones, stone rows, as well as the *Tehuba* are altogether quite different. In contrast to the other types of monuments, the volumes of the *Tehuba* have a more even distribution curve (Fig. 150). Most of the stone platforms have a size of up to  $100m^3$ . There is only one strong outlier, namely a *Tehuba* with a volume of  $328m^3$ .

The standing stone monuments (excluding the *Tehuba*), on the other hand, show a clearly different histogram (Fig. 151). The distribution curve shows five outliers with a volume of more than  $15m^3$ . However, a large decrease can also be detected from a volume of more than  $5m^3$  or more than  $10m^3$ .

The distribution curves of the menhirs are quite similar (Fig. 152). Most menhirs are only between 0 and  $0.5m^3$  in size, while a very large decline in the frequency of a volume between 0.5 and  $1m^3$  can already be seen. Only fourteen of the 421 (3%) menhirs are over  $1m^3$  in size, which explains the different outliers with a volume of up to  $6m^3$ .

The volume in relation to the monument type, minus the stone platforms, is shown in Figure 153. It is clear that the stone rows naturally have a significantly larger volume, whereas those with a platform (type 3) have larger dimensions. All types, which only comprise a single standing stone, have a significantly smaller volume.

The allocation of the monuments according to their affiliation was only possible in the case of the *Tehuba*, and also there only in rare cases. This was because the villagers do not necessarily remember the builders of the monuments. The affiliation of the *Tehuba* to different *Khels* is shown in Figure 154. Only one *Khel* could



be clearly assigned to two *Tehuba*, and all others only one. The *Tehuba* reach very different sizes.

### 5.2.4.4 Summary

Despite the lack of data on some of Khonima’s megalithic monuments, the village as a whole is characterised by a rich and comprehensive database of megalithic monuments. The distribution of the survey clearly reflects the spatial structures of the terrace fields and thus underlines the practical function of the location as described in the interviews. However, it is also clear that the visibility of the monuments is important and that the location along the paths was also of representative importance.

The variability of the different types of monuments is particularly high in Khonoma. The rows of stones in particular come in very different designs and,

Fig. 155a (opposite page, above): Overview of the Angami village Sechüma.

Fig. 155b (opposite page, below): Seating platforms within the Angami village Sechüma.

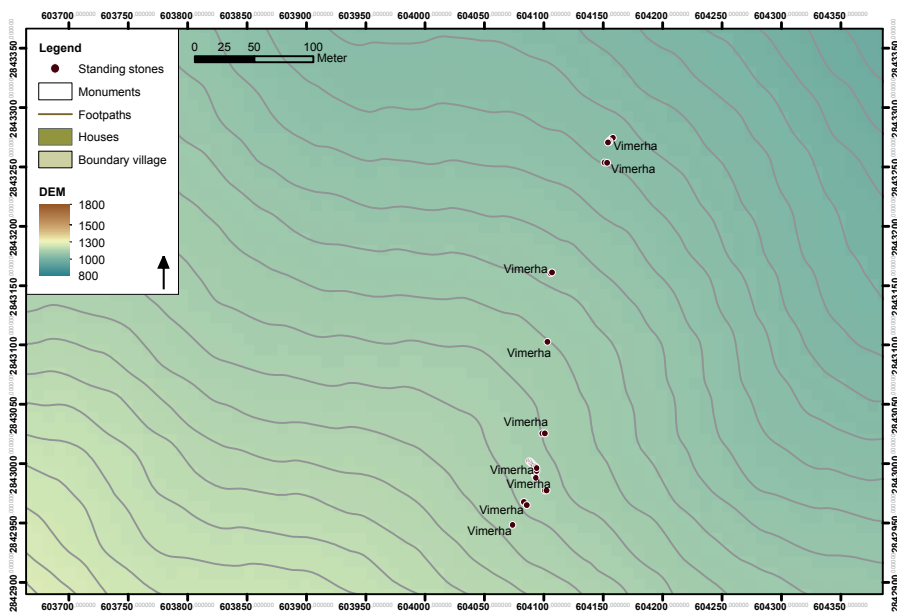


Fig. 156a: Overview of the location of megalithic monuments along the field paths in Sechüma.

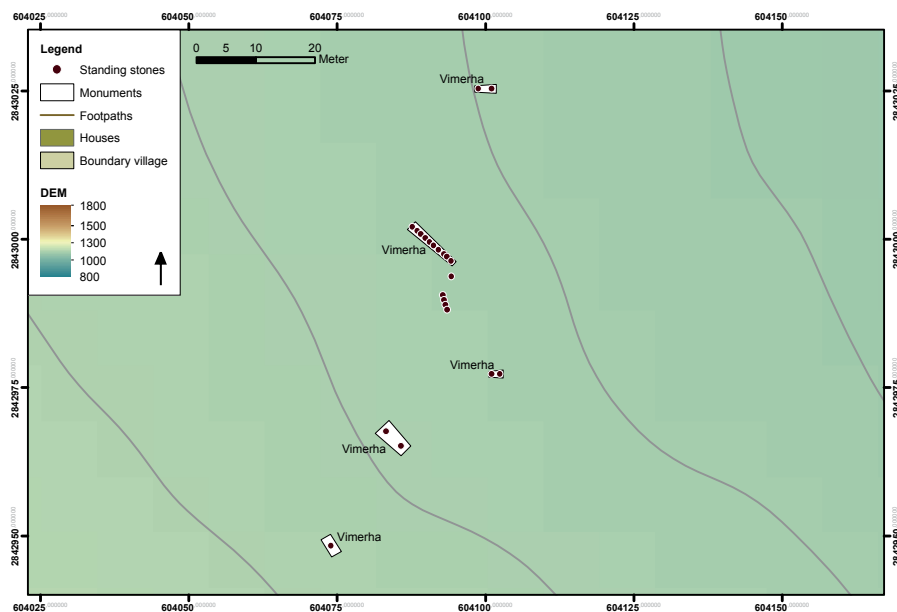


Fig. 156b: Detailed representation of the location of megalithic monuments along the field paths in Sechüma.

with four different subtypes, have the widest span in the test area. A special feature are the trapezoidal forms of the stone platforms, as well as the assignment of the position of the stones within the trapeze with the meaning of the deceased person associated with the stone described in this context.

While the megalithic stone monuments in Khonoma clearly reflect individual achievements and reference levels and can be found above all outside the village, a collective level of monuments can be found in the village itself. The collective reference level is represented by the stone platforms and stone circles (*Tehubas*) and represents a close relationship with the *Khels*, as well as assembly activities. Building these squares in the village is a practical decision, but the spatial separation between more individual and collectively connoted monuments in Khonoma is interesting. However, there are some exceptions to this rule. There are also some meeting places along the food paths. Whether the function of these places is distinguishable from that of the counterparts in the village unfortunately could no longer be ascertained.

### 5.2.5 Sechüma (Angami-Naga)

Sechüma is a village that can be attributed to the western Angami-Naga. Sechüma is located at about 1450m above sea level, only 7.8km away from Kohima and 5km away from Khonoma. Sechüma inhabitants also believe that the village is at least 600 years older than Khonoma and there was a migration movement from Sechüma to Khonoma. However, there should also be internal connections to other villages in the area.

#### 5.2.5.1 Village plan

Overall, the populated area of Sechüma covers an area of 8.4 ha (Fig. 155a and b). The village plan shows the relatively loose development in the area of the village.

The houses are located mainly along a NE-SW axis and are connected by a system of main roads. The stone platforms of the various *Khels* are also located in this area of the village. However, these are not fully recorded in the plan. A monument in question (ID 10) is also outside the village area. Although this has a rounded structure, its function is highly unclear. A total of eight of the village's stone platforms are concentrated in the eastern half of the village. Only one row of stones can be found in the village area. Standing stones, rows of stones or platforms with attached stones are located on the paths leading from the village down to the fields. Only the monuments of the oldest *Khel* (Vimerha), which lie in north-east direction, were documented. The position of the monuments near the terrace fields is clearly visible in the distribution (Fig. 156a and b). A system of paths, which has probably been in use for a long time, and on which megalithic monuments were erected in a representative location, can thus be clearly understood.

#### 5.2.5.2 Interviews

The interview was conducted on 19.02.2016 with two villagers. One of the interviewees had seen the construction of megalithic monuments as a child. Other villagers were present in the meantime, but they were not interview partners. The interview lasted 34 minutes and was translated by Dam Vasa and an English-speaking villager.

#### The village

In Sechüma a total of four *Khels* can be found, which in turn comprise different clans.



1. Vimerha-Khel
2. Rhatsu-Khel
3. Meyatsu-Khel
4. Mipu-Khel

Vimerha-Khel was described as the eldest in the village, named after one of the two sons of the founding father ('Sechü') of the village. The four *Khels* comprise 57 households, most of them (n=18) belonging to Vimerha-Khel. Rhatsu-Khel also has seventeen households, and Meyatsu and Mipu-Khel together 22 households. The *Khels* are usually to be found spatially in different areas of the village, albeit whereby no clear marking of borders takes place. Since several clans can belong to each *Khel*, and the clans usually only belong to one *Khel*, clans are also roughly divided in their spatial distribution within the village. Marriages are possible within the same *Khel*, but never within the same clan. Another important social unit that has been described are the age groups within a *Khel*, to which boys from a certain age belong. These groups are divided as follows and are composed of all clans belonging to a *Khel*:

1. 13-18 years
2. 18-25 years
3. 25-30 years
4. 30-35/40 years

The age groups also undertake joint work such as the construction of *Morungs*, or even the construction of the traditional gates. In doing so, a constantly existing basic mood of competition between the different age groups was described. This refers to the different age groups of the same rank of the different *Khels*.

#### **The megalithic monuments: meaning**

The importance of the stone monuments, including the monoliths as well as the stone platforms, refers above all to their function as a place of remembrance or memory for certain persons who have already died. These deceased persons will usually be family members of the person who erected the monument.

#### **The megalithic monuments: builders**

During the recording in Sechüma it quickly became clear that although the *Khel* to whom the monuments were built was always remembered, the name or surname of the monuments builders was not. The main reason for this was the old age of the monuments, which had largely been forgotten.

#### **The megalithic monuments: types and size**

Essentially there are two different types of monuments in Sechüma: stone platforms and standing stones. Stone platforms have a collective meaning, since they are assigned to and used by the entire *Khel*, even if they were established by a certain family. The use refers primarily to a function as a meeting place where important decisions concerning the *Khel* can be made. The second type are monuments, which are much more strongly assigned to individual families or individuals. Standing stones or monuments consisting of several standing stones are again composed of different types, but do not fulfil any specific function. They serve as memorial monuments for relatives who have already died. The size of both types of monuments was described as dependent on the available space, resources and manpower. However, it should be emphasised – especially regarding the stones – that large stones are a reason for pride, and therefore the use of particularly large stones is very desirable.

**The megalithic monuments: location**

No specific information has been given on the location of the monuments; however, the concentration of stone platforms in the village as already described for the village plan is clearly noticeable, while the standing stones can be found mainly outside the village area. The main reason for this will be the different use of both types of monuments.

**The megalithic monuments: activities and rituals**

Regarding rituals and activities at the megalithic monuments, it was said that before the majority of the population was Christianised, every year families went to their monuments as part of feasting activities and performed specific rituals there. These rituals included minor sacrifices, but the details are no longer known.

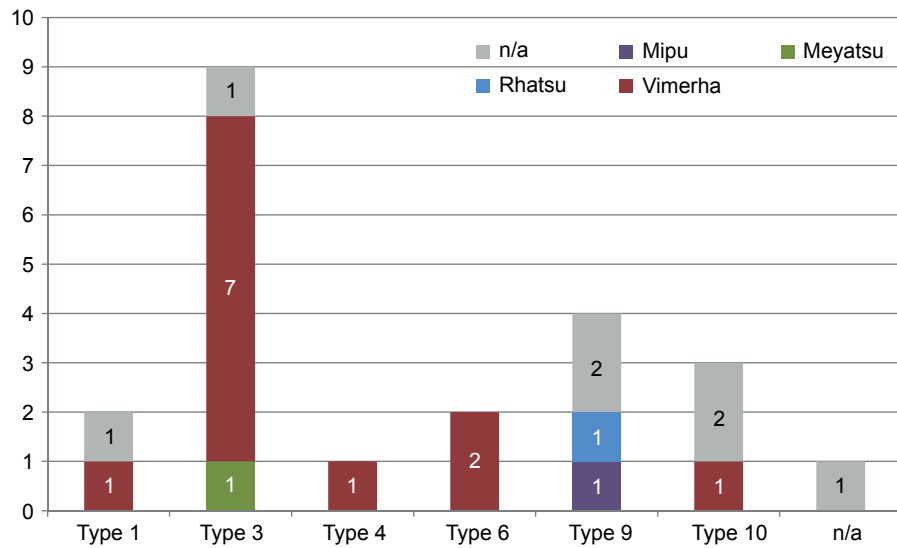


Fig. 157: The different monument types represented in Sechüma with consideration of the Khel affiliation.

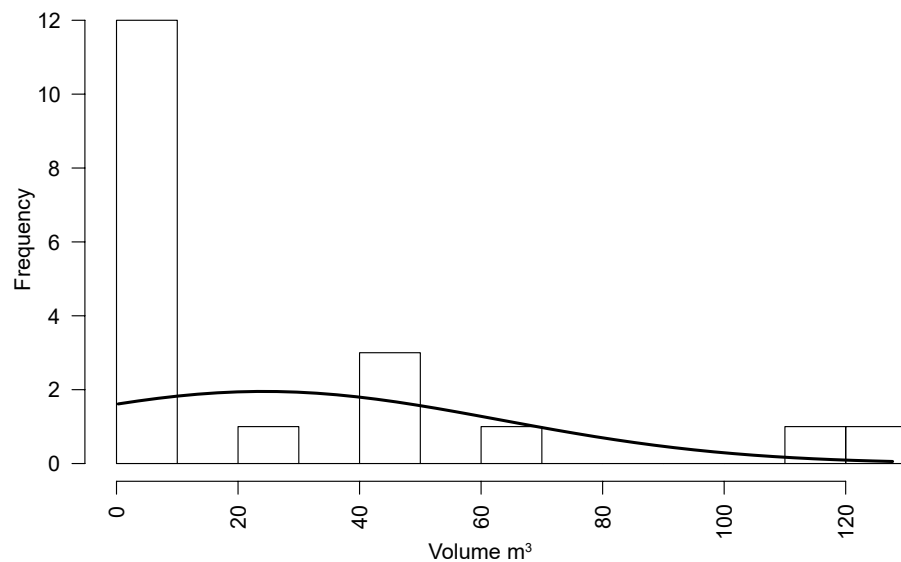


Fig. 158: Histogram of the volume (m³) of the monuments in Sechüma.

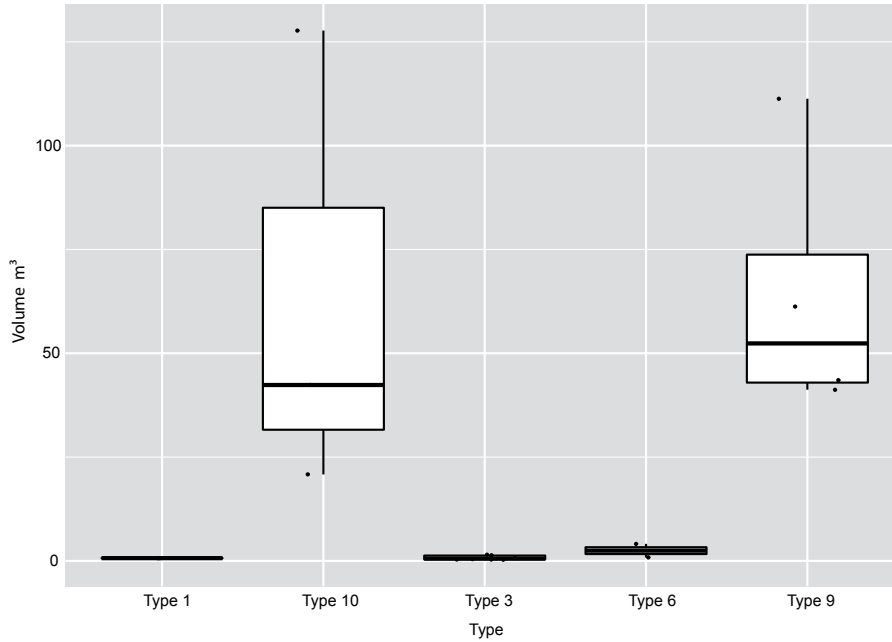


Fig. 159: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Sechüma with consideration of the type.

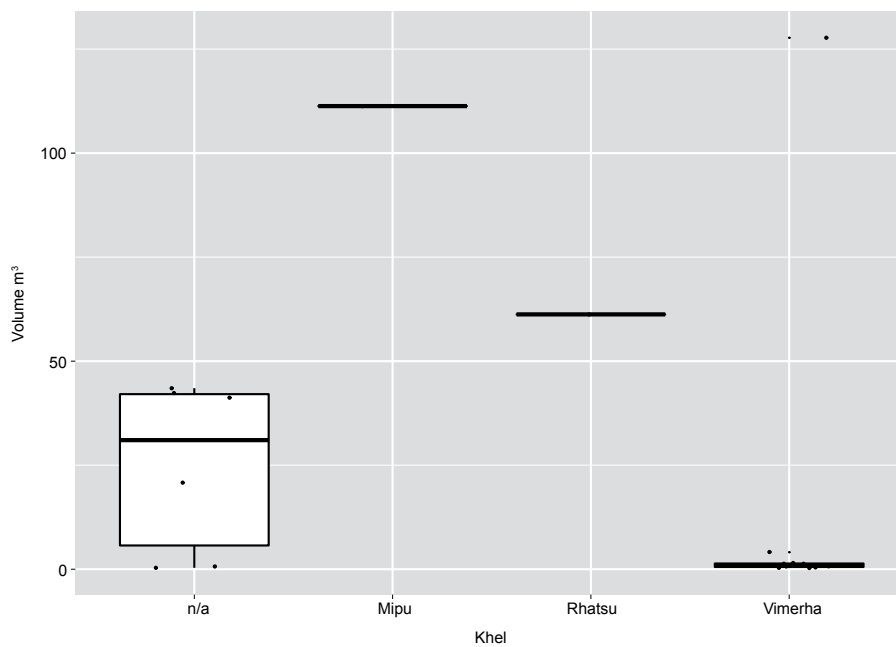


Fig. 160: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Sechüma with consideration of the Khel affiliation.

### The quarry areas

Near Sechüma two quarry areas were mentioned, which are located on both sides of the hill on which the village lies. The northern side was described as the qualitatively better side.

### Feasting activities

In addition to the annual feasts related mainly to agricultural activities, the *Feasts of Merit* were described as a particularly important institution in the past. This feast series comprises a total of six feasts, which can be divided into two groups. The first three are grouped under the local expression 'Cha', the last three under the expression 'Jha'. The last celebration is called 'Lisü' and allows the feast giver to place a

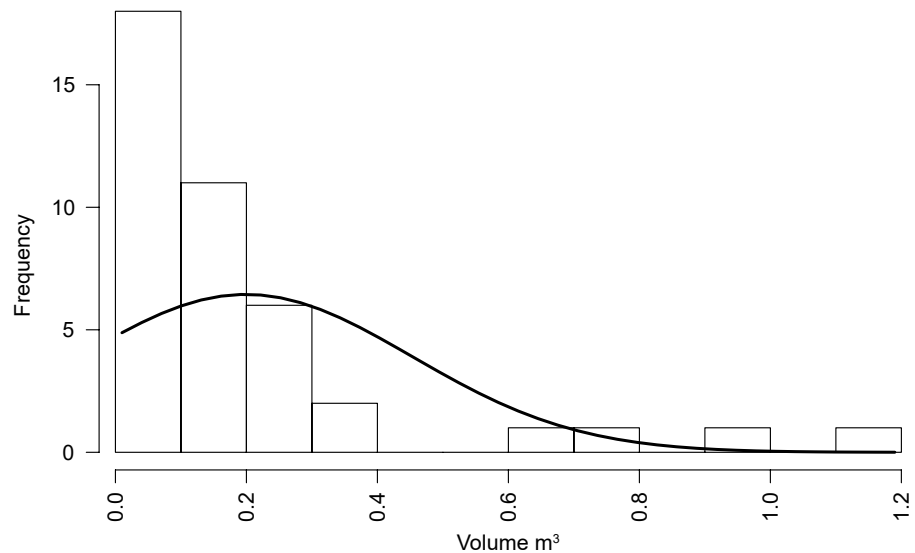


Fig. 161: Histogram of the volume (m<sup>3</sup>) of the single standing stones in Sechüma.

certain decoration on his house. The wood is placed on the veranda of the house. This decoration differs in particular from those that are common in other villages in the region. However, whether someone has reached the highest possible stage in the execution of the *Feasts of Merit* remains unclear due to the houses burned down in the course of the civil war. The completion of the feast series also allows the corresponding family to erect standing stones or stone platforms. Once a series has been completed, the same feast series can also be started anew.

### The graves

No specific information was given on the burial rite in Sechüma.

### 5.2.5.3 Statistics

As already mentioned, there are two completely different types of monuments in Sechüma (Fig. 157).

The stone platforms include types 9 and 10, which can be found a total of seven times in Sechüma. *Tehubas* (n=4), which are assigned to the entire *Khel*, easily outweigh the *Pfehous* (n=3), which belong to a specific family. Both types occur exclusively or predominantly in round form, whereas only one *Tehuba* was kept in angular form. Megalithic monuments are available in three forms. These include single standing stones (type 1, n=2), single standing stones on platforms (type 6, n=2), and rows of menhirs on platforms (type 3, n=8). The monuments as a whole have angular and trapezoidal contours, trapezoidal contours being particularly common on the larger platforms. The menhirs themselves are round or angular in shape, the number is balanced and the stones are not shaped but rather left in their natural state.

The design of the monuments as a whole is diverse, although the orientation of the menhirs in Sechüma follows exclusively the orientation of the platforms. The monuments are often aligned according to E-W (n=5) or ESE-WNW (n=3). In two cases, orientation according to NNE-SSW and WSW-ENE occurs. Finally, one monument is aligned to NNW-SSE and one to NW-SE.

The volume of monuments in Sechüma (including platforms and stone platforms) follows a fairly broad distribution that is not normally distributed (Fig. 158). The volume between 0 and 120m<sup>3</sup> shows how varied the span of the standing stone monuments in particular can be.

There is a clear difference between the individual types (Fig. 159). Both variants of the stone platforms show by far the largest span, whereby only very few exemplars are present. The single standing stones, with or without platforms are very small in comparison.

This also explains the distribution according to the different *Khels* (Fig. 160). In this boxplot some stone platforms with large volumes can be seen, which cannot be clearly assigned to any *Khel*. However, it can also be seen that all of the *Khels* have a monument which can be identified as a stone platform due to its large volume. Vimerha-Khel has the largest number of monuments belonging to the three megalithic types mentioned. These monuments could not be recorded for the other *Khels*, whereby the image to be recognised does not correspond to the complete data set.

The histogram of the menhirs shows a fairly even distribution, which is not normally distributed, but only contains a few outliers (Fig. 161).

#### 5.2.5.4 Summary

Sechüma shows a basic division of the megalithic monuments, which is typical in itself. The large stone platforms that every *Khel* has and which serve as meeting places for the *Khels* should be mentioned here. These monuments are clearly collective in character, construction and association. On the other hand, there is the larger group of standing stones. These are spatially strictly localised according to their affiliation to one of the four *Khels*. The arrangement of the monuments follows the old paths to the fields. The two basic characteristics of these monuments become clear. On the one hand, they serve as resting places for the villagers returning from the fields. On the other hand, this location is very representative, as it always reminds the builder and the people to whom the menhirs are dedicated. The size of the individual menhirs was described as dependent on natural factors. However, the existing

Fig. 162: Overview of the Chakhesang village Khezhakeno.

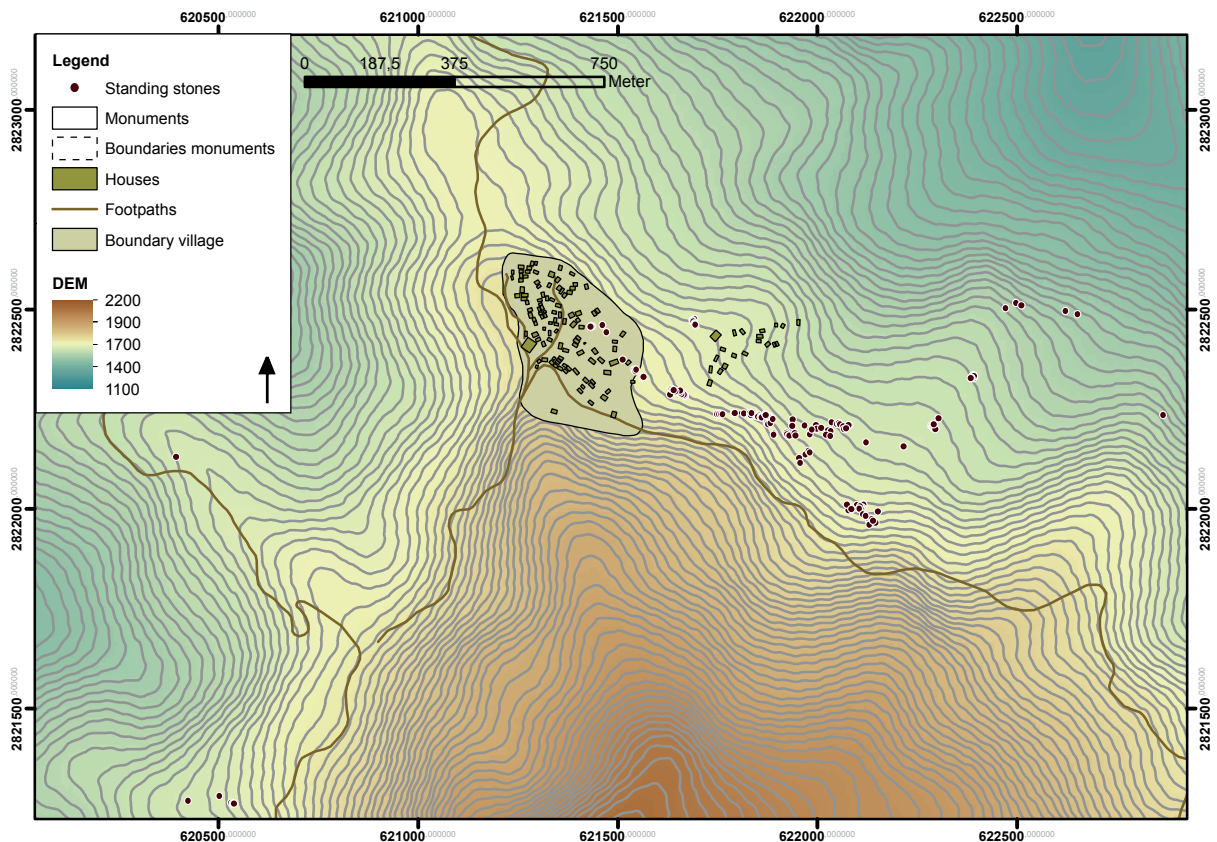


Fig. 163a: Detailed plan of the location of megalithic monuments at the borders of Khezhakeno.

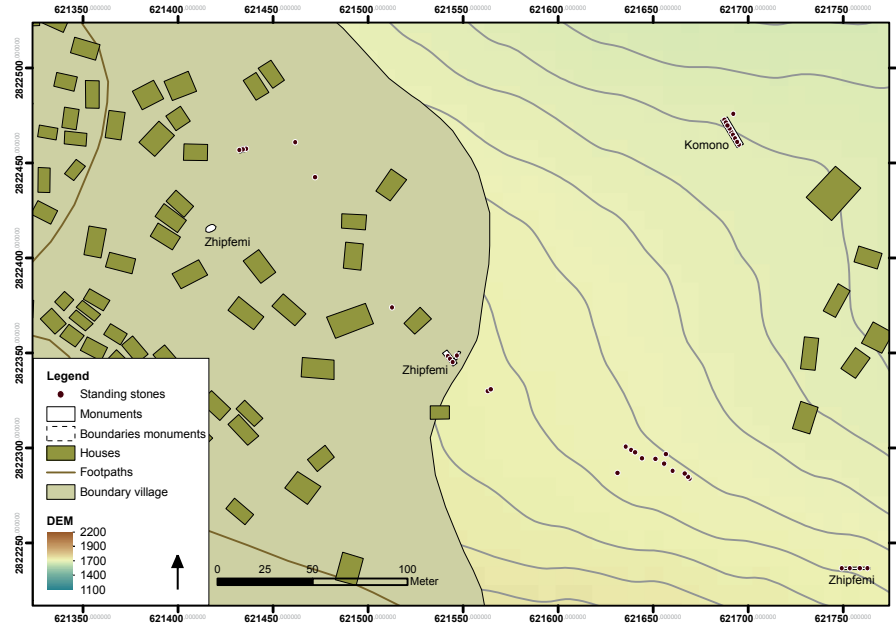
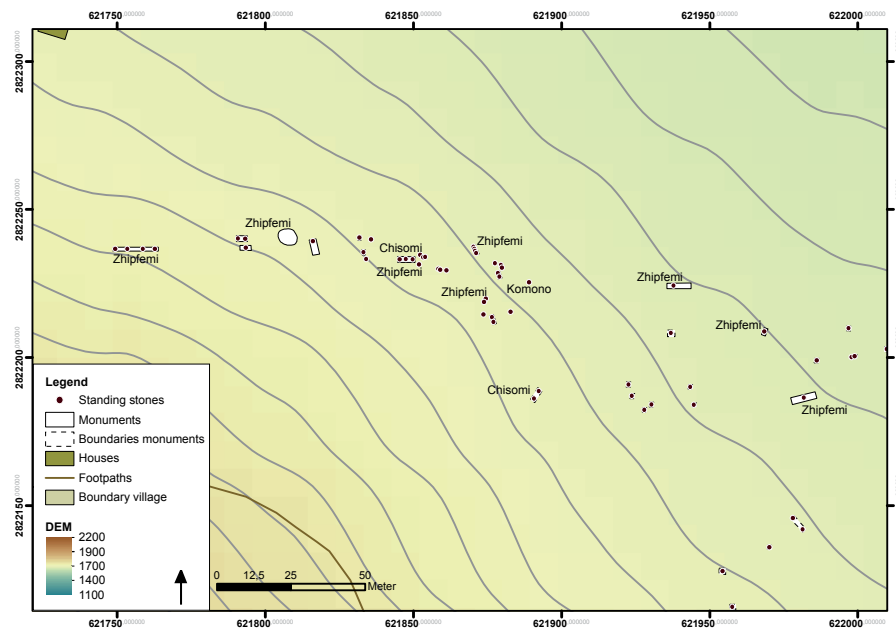


Fig. 163b: Detailed plan of the location of megalithic monuments belonging to the different Khels around Khezhakeno.



variation also shows that there was a desire to use stones as large as possible. At the same time, this meant a considerable additional effort in transport and thus also in the provision of the resources required for food. Even more important for the status of the builder of megalithic monuments are the *Feasts of Merit* associated with the construction. The extent of these could be freely arranged and these feasts clearly served the display of wealth.

### 5.2.6 Khezhakeno (Chakhesang-Naga)

Khezhakeno is a Chakhesang village located directly on the southern border of Phek. The village is located in the immediate vicinity of Manipur and the local Naga groups. It is a medium-sized village that has undergone a transformation in recent decades.

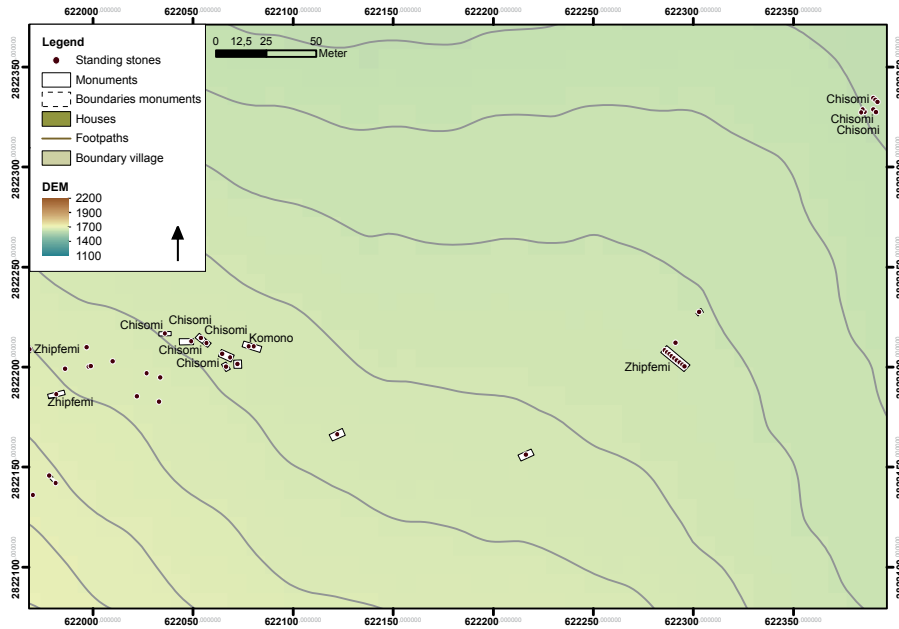


Fig. 163c: Detailed plan of the location of megalithic monuments belonging to the different *Khels* around Khezhakeno.

The traditional houses are no longer preserved in the village. Within Khezhakeno there are three *Khels*:

1. Chisomi-Khel (upper Khel)
2. Zhipfemi-Khel (middle Khel)
3. Komono-Khel (lower Khel)

### 5.2.6.1 Village plan

Khezhakeno is a village stretching over 11.45ha to NW-SE at 1700m above sea level (Fig. 162).

Outside the village there is a second, much smaller cluster of houses to the east. These houses still belong to Khezhakeno, despite their demarcated location. Another small concentration of other buildings can be found along the path to the north. Khezhakeno itself is not very populated and a small village. In addition to the path running north, two other main paths lead south or south-west and south-east. Most of the rice terraces are to the east of the village, while forest areas are to the west and south. The megalithic monuments are located mainly on an axis running to the east, which is oriented on the course of the rice terraces and branches off to the south-east as well as to the north-east (Fig. 163a-c).

The most distant monuments are about one kilometre from the centre of the village. In the village itself there are only a few monuments, including a stone platform of the Zhipfemi-Khel, as well as three individual standing stones and a smaller row of stones of unknown affiliation. Directly at the village border there is a menhir on a platform and another row of stones, which also belong to the Zhipfemi-Khel. Overall, Khezhakeno has a very high number of individual standing stones with and without stone platforms. The existing rows of stones are mixed and not limited to one location within the overall distribution. Especially the long platforms clearly show how the alignment of the monuments depends on the course of the terrace fields.

Although for a relatively high number of monuments the affiliation to the different *Khels* was no longer clear, individual clusterings as well as mixed groups can be seen in the location of the monuments. An example of a mixed group of

monuments from different *Khel* is shown in Figure 163b, where two monuments are located to the east of the village (see Fig. 162).

### 5.2.6.2 Interviews

The interviews in Khezhakeno were conducted between March 7 and 9, 2016. Part of the interviews took place during the field work and comprises short conversation sections that were recorded. Mostly all of the accompanying persons spoke. The main interview was conducted on the evening of March 8 and the morning of March 9. The informant was one of the companions during the recording of the megalithic monuments and had witnessed the construction of a megalith as a teenager. The translation was done by the nephew of the informant, because the dialect in Khezhakeno is difficult to understand for other groups. The second interview was conducted in a smaller group to clarify missing information and disagreement between the informants. The interview on 8<sup>th</sup> March lasted 1:57:37 min. and on 9<sup>th</sup> March 47:22 min.

#### The village

During the interview, the traditional priests in Khezhakeno were discussed. A distinction is made between the *Khrü* and the *Mewo*. Each clan of the village had its own *Khrü*, which represents a simple priest. They assisted *Mewo*, the main priest of the village. *Mewo*'s positions were usually inherited and were open to women on the condition that no suitable man was available. *Mewo* had authority over the different *Khrü*, who in turn had some control over the affairs of the individual clans. Decisions regarding communal works, such as terrace cultivation, *etc.*, were made by the priests with the involvement of the main priest. The position of clan priests was described as not primarily hereditary. Although a child of *Khrü* can take over this position as successor, personal aptitude has been described as a prerequisite. This is related to the responsibility and control of priests over clan affairs.

#### The megalithic monuments: meaning

The traditional strong importance of the megalithic monuments and the individual stones became clear in the interview. No one was allowed to move or damage another person's stone. This was an absolute prohibition and was described as connected with the different rituals performed on the stones. Even in armed conflicts, the stones could not be damaged by the other party. Should this happen, a high compensation was demanded from the party concerned.

However, the importance of the stones increasingly disappeared with the Christianisation of the village. Therefore, no more new stones were erected and the rules for the care of the monuments lost importance.

#### The megalithic monuments: builders

Couples were named as usual builders of megalithic monuments in Khezhakeno. A single man was not allowed to build a stone or hold a feast. Following this rule, it was also the couple who had to choose a stone and perform the necessary rituals together.

#### The megalithic monuments: types and size

The size of the stones used for the monuments was considered insignificant in Khezhakeno. Although large stones were considered particularly desirable and were also specifically sought, there was no urgency to use them. Moreover, the size of the stone had no influence on the process of construction and the partic-



ipation of the village in it. Even with a very small stone, the entire village would be helpful in pulling it.

Uncertainty existed during the interviews regarding a possible connection between the number of children, and in particular the sons, as well as the number of stones. An informant said that a couple with one or more sons was only allowed to build one stone and never more. If a couple had no sons, *i.e.* had no children or only daughters, they could build as many stones as they wanted and as the couple's wealth allowed.

### **The megalithic monuments: location**

Regarding the location of the monuments, it was said in the interview that there are no specific rules for the placement of a stone. In principle, all areas surrounding the village are open to the location. However, when choosing a place, care was taken to ensure that the stones were seen by as many people as possible. Therefore, a location on the paths leading to the fields was preferred, as here the villagers would see the monument every day. This choice of place was based on the function of the stones as a reminder to the builders, which was to be guaranteed by their constant visibility.

The presence of other monuments – including one's own clan or *Khel* – was not described as a preference within the decision-making process. Even if a couple had already erected a stone, another stone did not have to be built near this first monument. Of course, the suitability of the site for the construction of further stones also played a role here. Regarding land rights, it was said that when building on land, permission had to be obtained from another person. For this permission, the builder handed over a basket of rice to the landowner.

### **The megalithic monuments: activities and rituals**

During and after the construction process, a number of different rituals and activities were named. After a couple who wanted to erect a stone selected one, the stone was cleaned by the couple. Then they touched the stone and prayed that they would be told the name of the stone. Subsequently, the stone shared its name in the dreams of the couple and whether it could be drawn or not. In case the stone wanted to remain, the couple would look for another stone. However, if it could be pulled, the couple would clean the stone with two leaves, which are said to have a medical effect. These leaves (*Thopi* and *Lenu*) were laid on the stone. No priests participated in these rituals. However, if the stone was prepared and the *Mithun* was slaughtered for the feast, the priests of the clan were also involved. The blood of the slaughtered animals was distributed on the stone, as well as a chicken laid on the stone and killed. This happened on the morning of the day the stone was erected and was followed by some words of the couple to the stone. After these rituals, the stone was finally pulled to its intended place and erected.

After the construction of the stone, there were only very limited special activities on the stones. Before Christianisation, it was customary for all of the men of the village to clean the stones once a year and keep the surrounding area free. In addition, rice beer was drunk and the ear, as well as the tail of a pig was eaten. However, this practice ended with the Christianisation of Khezhakeno.

### **The quarry areas**

Regarding the stones used for the monuments, no specific quarry area has been designated. The stones came from the surrounding rivers and forests. Therefore many different areas were considered, which were used for the search of suitable stones. If the land on which a suitable stone was found belonged to another person, the stone could still be removed without restrictions. However, it was highlighted that

forest areas in particular were traditionally collectively owned and therefore no separate permission of individual persons was required.

Although most of the stones were used directly as such, in rare cases they were also extracted. In these cases, fire and water were used to blast off rocks.

### The building process

The construction process itself was relatively short and comprised the pulling and the subsequent erection of the stone. Due to the steeply sloping paths, pulling a large stone in particular was not without danger, which is why all of the younger men were pulling at the end of the stone. Some experienced men stood partly on the stone to monitor the entire process and intervene early in case the stone slipped uncontrollably. The older and stronger men, on the other hand, worked behind the stone and had to pull the stone backwards if it was to move downhill. Since the weight of large stones was high and, should they ever slide downhill, it was difficult to control and pose a danger, this task was carried out by strong and healthy men. An estimate of the men involved in pulling the stone amounted to 100-200 persons and included all men of the village. Children also touched the ropes, whereby the whole village was involved in the process. The stone was erected on the same day. The stone was supported by stable woods so that it could not fall over. The stone platform was not built until the following day. Either the next day only the pit for the stone was dug and the same one was carefully let in, or a stone platform was built around the stone.

### Feasting activities

The following order for the *Feasts of Merit* were described in Khezhakeno:

1. *Yedeye (Miye)*
2. *Yapa (Miye)*
3. *Zatho (Zachü)*: a special scarf may be worn, and a bowl made of banana leaves is handed over to the feast giver.
4. *Tsosüde (Zachü)*: stone construction and decoration of the house with a horn. If this feast was repeated and the feast giver was therefore able to attach more than one horn to his house, it was always given to other villagers, since no more than one horn per house could be attached. In the course of the delivery of the horns, a cow was slaughtered by the person concerned and given to the owner of the horn. However, this does not apply to the stones.

All feasts took place in January, but only one feast per year was allowed. In the course of each feast *Mithun* and pigs were slaughtered and distributed to the village. Rice beer was also served. Regarding the stone construction, it was said that the

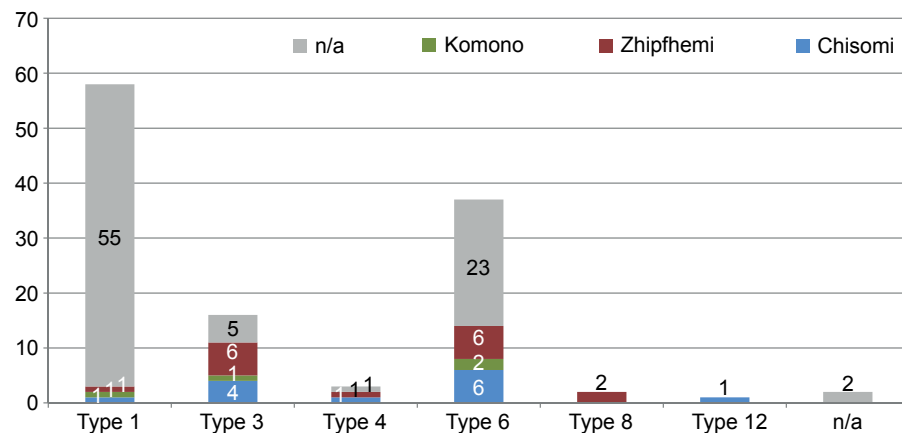


Fig. 164: The different monument types represented in Khezhakeno with consideration of the Khel affiliation.

feasts always took place on the evening before the actual construction. However, another informant contradicted this representation, stating that the celebration and the erection of the stone always took place on the same day.

The distribution of the meat followed strict rules. Thus, the first part was always handed over to *Mewo*. This handover followed a strict regulation. After the couple had placed a wooden chair in front of their house, *Mewo* would come and sit down there. Then he would be offered a basket of meat, which he refused in any case on the grounds that this share was too small. After that, the couple offered him another cut, which he could then accept. After this period, the remaining shares were finally distributed. People who had not yet given a feast themselves were assigned a part, while those who had already organised a feast were assigned two parts. If a villager had already erected a stone, three shares were given to him. The share of the slaughtered animals thus transferred directly reflected the social position of the villagers.

The necessary resources were not only provided by the couple hosting the party. While much of the necessary rice and meat was provided by the feast giver, solidarity was expected from the other villagers in this case. This solidarity was expressed through the provision of its own resources, in particular in the form of rice. In Khezhakeno it was mentioned that 50 people from the village provided their own

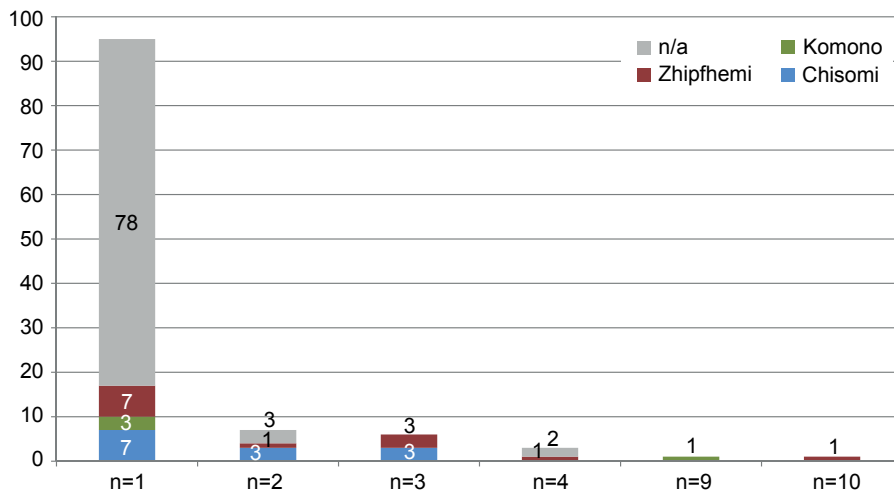


Fig. 165: The number of menhirs per monument and their affiliation with the Khels in Khezhakeno.

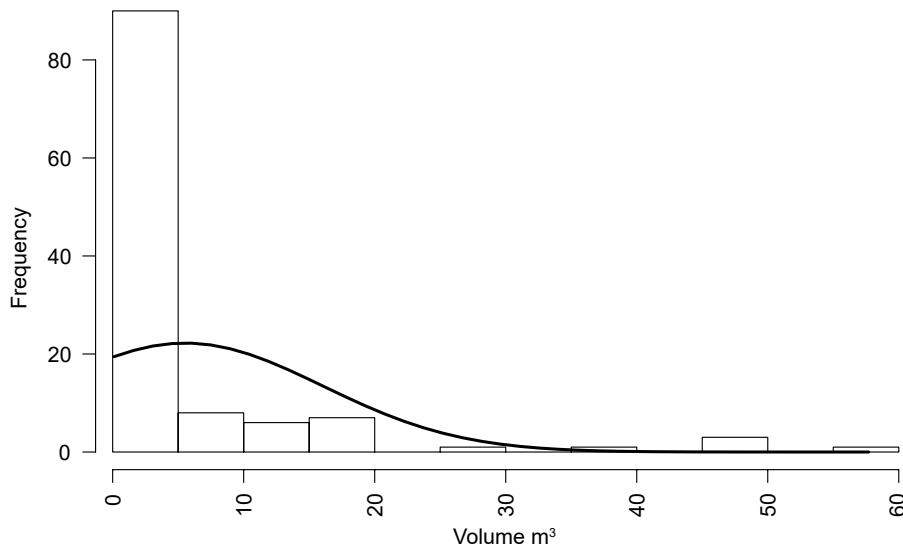


Fig. 166: Histogram of the volume (m³) of the monuments in Khezhakeno.

Fig. 167: Histogram of the volume (m<sup>3</sup>) of the single standing stones in Khezhakeno.

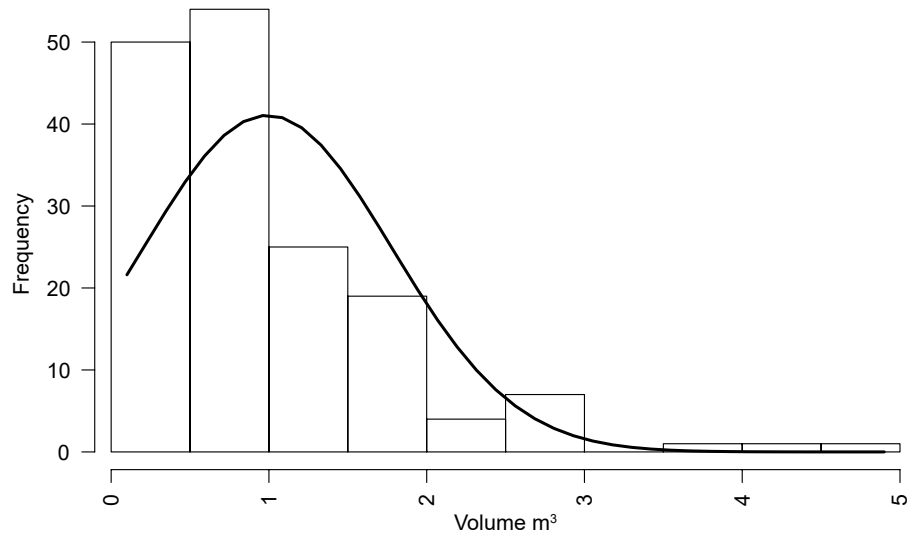
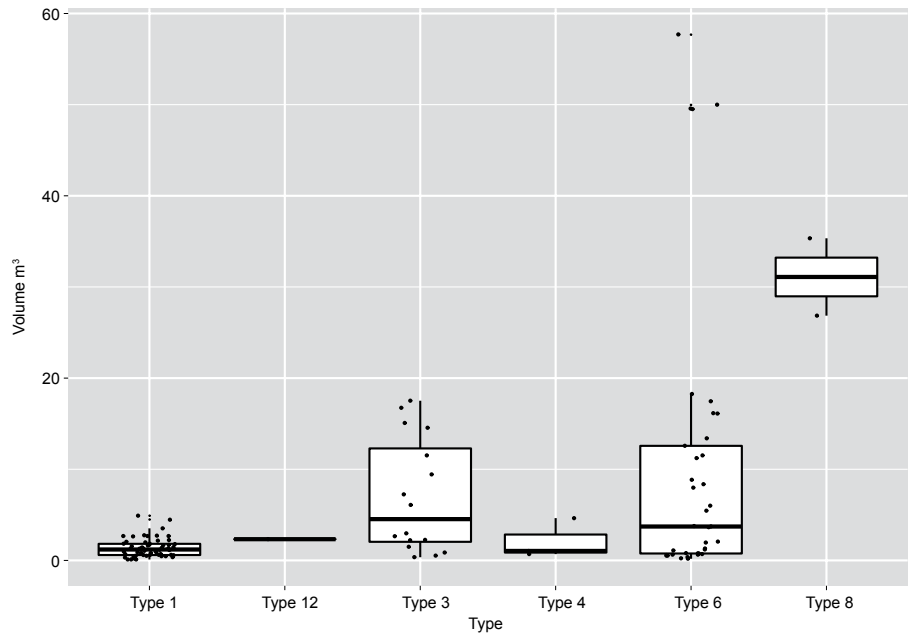


Fig. 168: Boxplot of the volume (m<sup>3</sup>) of the megalithic monuments in Khezhakeno with consideration of the type.



rice to the couple. These people were selected based on their wealth and included the entire village.

The ratio between the people within the village who had completed the fourth feast and those who did not, was given as 1 to 3, with 1/3 of the village organising this feasting series.

### 5.2.6.3 Statistics

A total of 119 megalithic monuments were documented in Khezhakeno, two of which could no longer be assigned to any type (Fig. 164). Most of the monuments (n=95, 79%) in Khezhakeno are single standing stones with or without platforms. However, stone platforms are in the minority: a total of 37 of the detached menhirs have one, while the remaining menhirs are laid out at ground level. Stone rows are relatively rare, although in this case examples with a stone platform are more frequent than without one. The number of rows of stones with stone platforms amounts to 16,

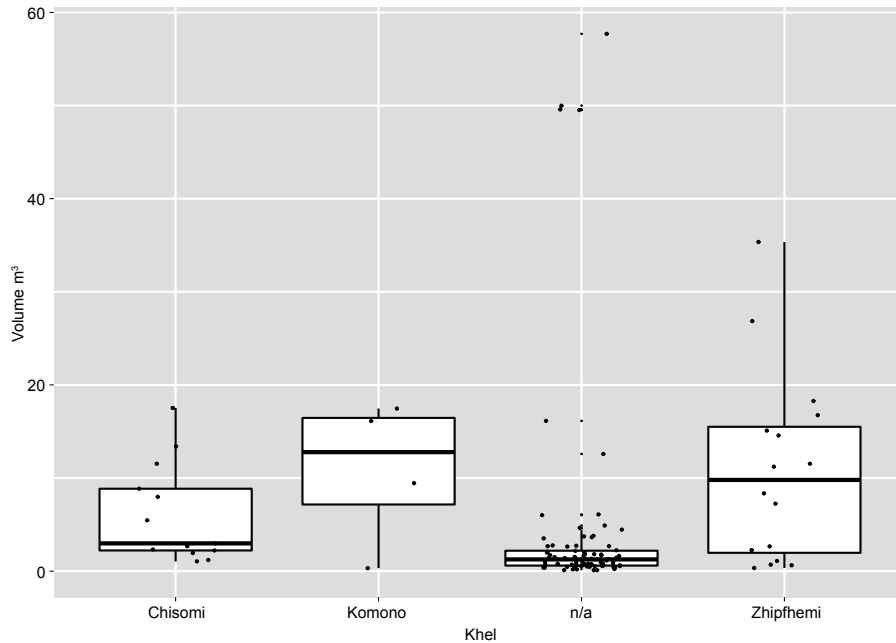


Fig. 169: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Khezhakeno with consideration of the Khel affiliation.

while only three rows of stones at ground level were documented. In one case there is a field of menhirs, which indicates a high number of feasts. Finally, there are two stone platforms of type 8 and two monuments that cannot be further defined.

Orientation was recorded for a total of 111 of the monuments. The orientation of the rows of stones without platform almost always corresponds (one exception) to that of the entire monument. This is different in the case of the presence of platforms. Thus, the vast majority of stone rows with stone platforms are oriented in the opposite direction (55%). This is also the case for the individual menhirs on platforms, although it does not correspond to the majority (35%). Overall, the orientations of the monuments show quite a high variability. Most of the monuments ( $n=23$ ) are oriented towards NW-SE, and nine more towards NNW-SSE and WNW-ESE. The second largest group is oriented after NE-SW ( $n=15$ ) or after NNE-SSW ( $n=13$ ) and ENE-WSW ( $n=13$ ). Alignment to N-S ( $n=$ ) and E-W ( $n=$ ) is also represented. Overall, the orientations according to NE-SW and NW-SE, including the variants of this basic orientation, are the most common.

The number of standing stones per monument, as well as the affiliation of the monuments to the different *Khels* follows a very unequal distribution (Fig. 165).

The problem here is that a large part of the monuments could no longer be assigned to a *Khel* at the time of recording. This concerns 83 and thus 75% of the monuments. An equal percentage of the monuments assigned to Chisomi and Zhipfemi-Khel at the time of recording is 11% each. Komono-Khel has only 3% ( $n=4$ ) of the monuments, but the large proportion of monuments that do not require further differentiation must be taken into account. The Zhipfemi-Khel has the widest spread of different monument sizes in relation to the number of stones used. The largest monument with ten erected stones can also be attributed to it. The Komono-Khel has mainly small monuments with only one menhir ( $n=3$ ), as well as an especially large one with nine stones.

According to the different number of stones per monument, the total volume of the monuments in Khezhakeno is also unequally distributed (Fig. 166). Most of the megalithic monuments have a volume between 0 and  $10m^3$ . Although total volumes of up to  $60m^3$  are represented, these are only very rare and mostly only represented by one or two monuments. The volume of the individual stones shows a more even distribution curve (Fig. 167). The most common stone sizes are between 0 and  $1m^3$ ,

although sizes up to  $3\text{m}^3$  are still relatively common. Volumes of up to  $5\text{m}^3$  of a single stone are represented, but also very rare. Both distribution curves are not distributed normally.

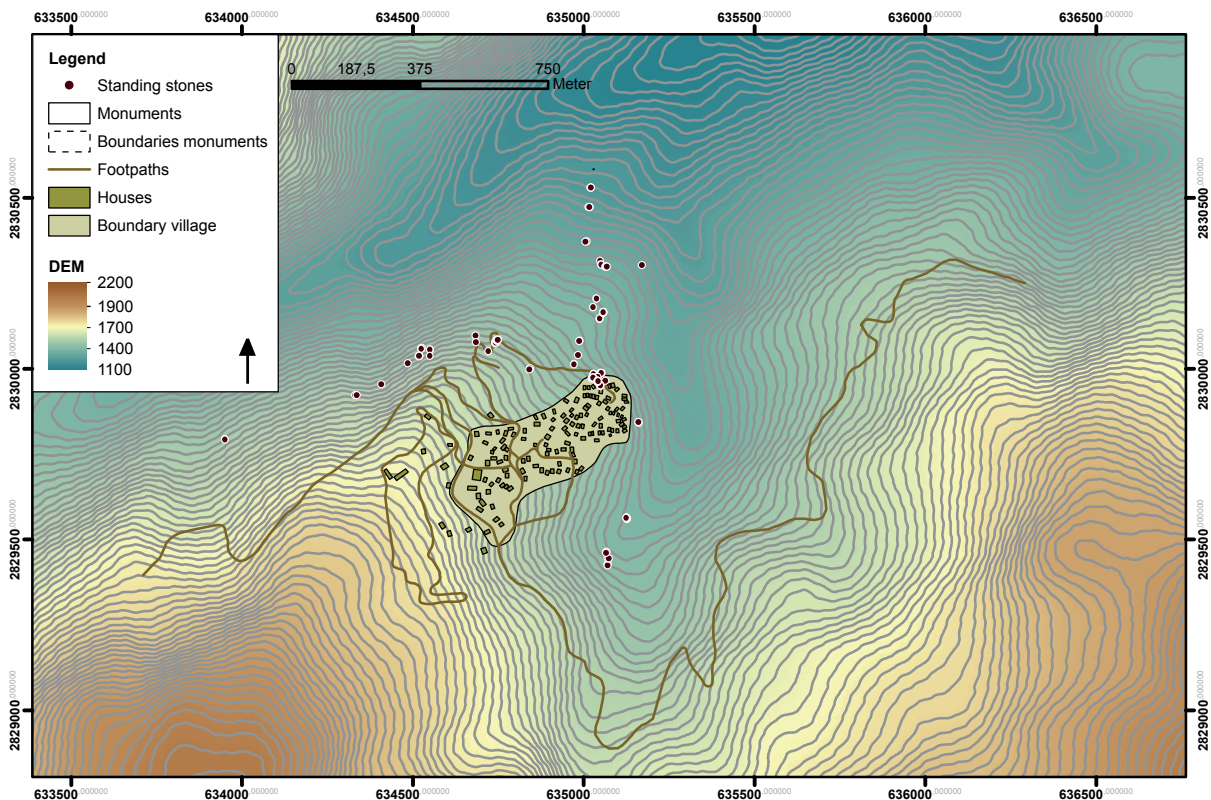
The size distribution is related to the unequal size of the individual monument types (Fig. 168). It is clear that types 6 and 8 are responsible for the outliers within the data distribution. Type 8 is represented by the two stone platforms and, unlike all other types, is a collectively occupied monument that was built in collaboration. Type 6, on the other hand, are the rows of stones with platforms and can be attributed to individual persons and *Khels*. As is also evident regarding type 3 (single standing stone with platform), the platform itself is decisive for the total volume. The rows of stones without platform (type 4) have no larger span in terms of total volume than the individual menhirs.

Regarding the total volume per *Khel*, reference is made to the high number of monuments that cannot be allocated (Fig. 169). Nevertheless, it is shown that the *Khel* with the smallest number of monuments (Komono-Khel) actually has a similar range as the Chisomi-Khel, which has a much larger number of monuments. The Zhipfemi-Khel shows both a high number and a high size variation of the megalithic monuments.

#### 5.2.6.4 Summary

The detailed information available to Khezhakeno regarding the course of the megalith building and the feasting activities impressively show how varied the accompanying rituals and role assignments within this process were. The social status of individuals is directly reflected in the sequence of feasting activities and the use of the house horns. The statements made in the interviews on the location of the monuments are clearly reflected in the map of the village and its surrounding. The location of the paths served the memory of the builders and the permanent visi-

Fig. 170: Overview of the Chakhesang village Mesülumi.



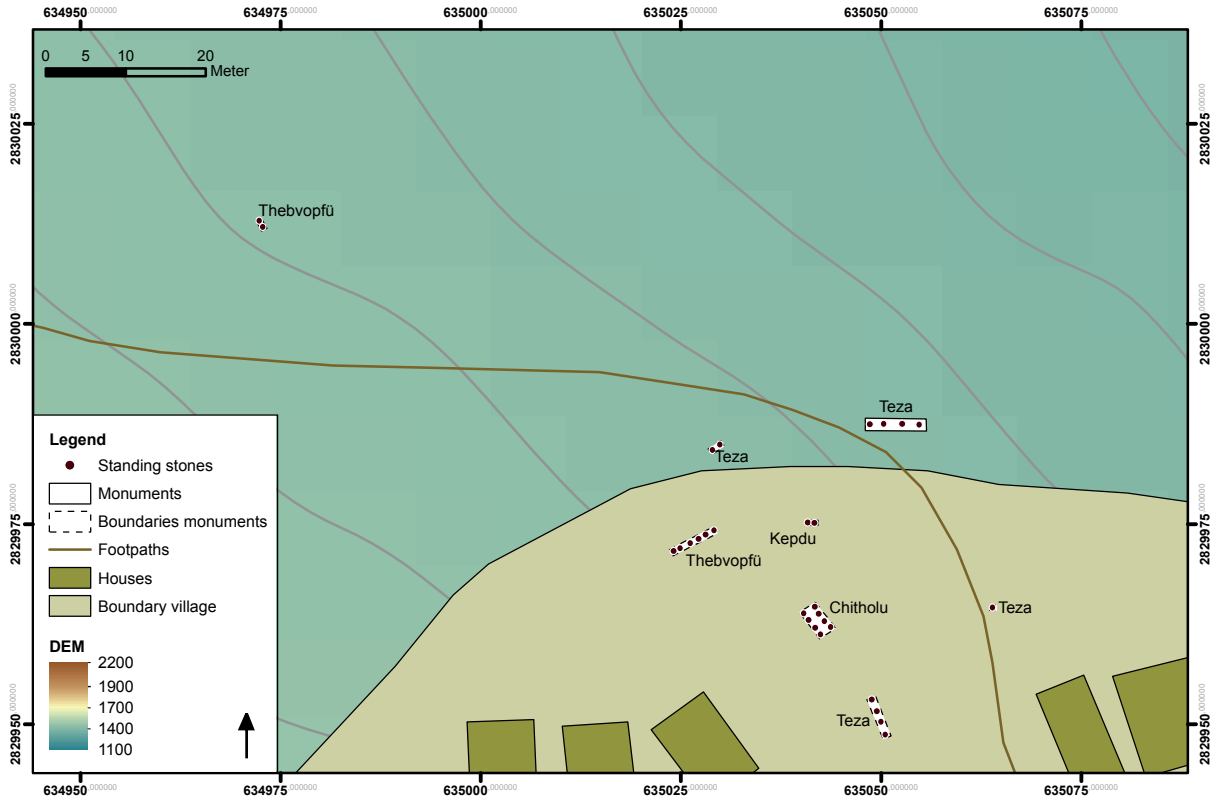


Fig. 171: The megalithic monuments situated within the village area of Mesülumi.

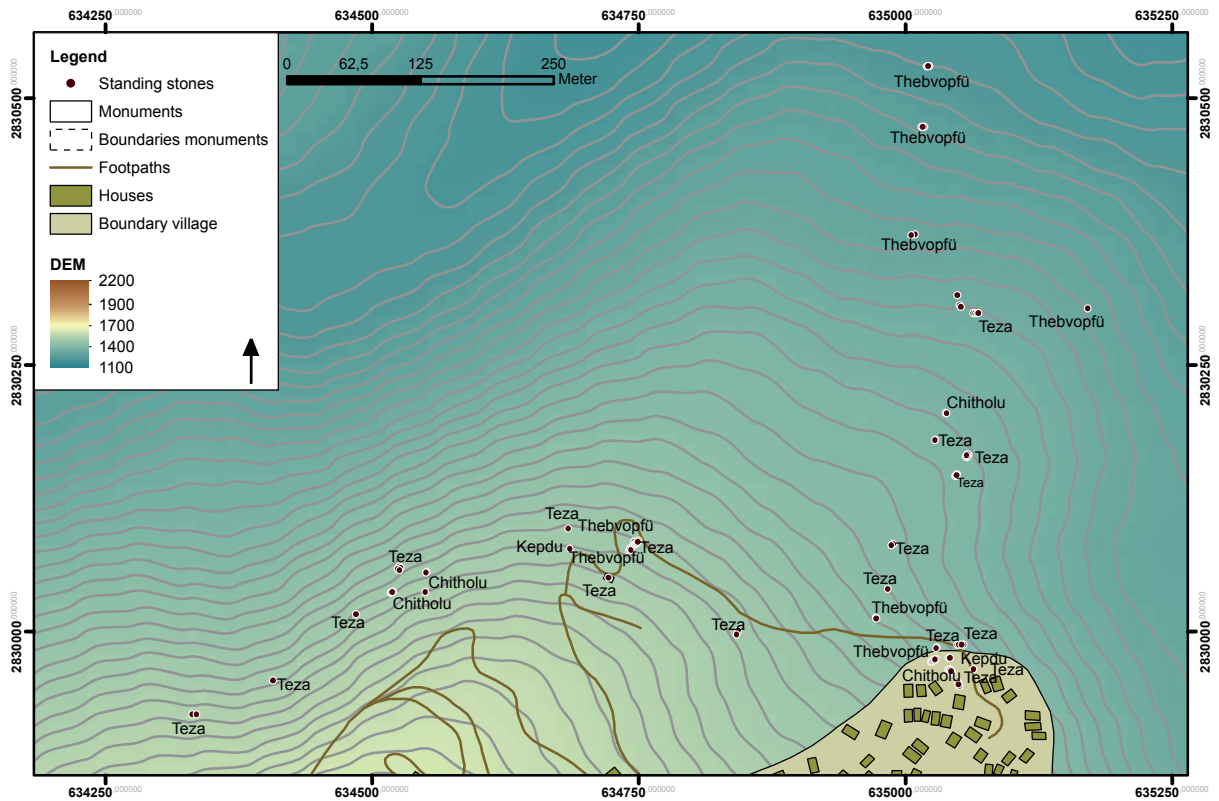


Fig. 172a: Overview of the megalithic monuments located north of Mesülumi.

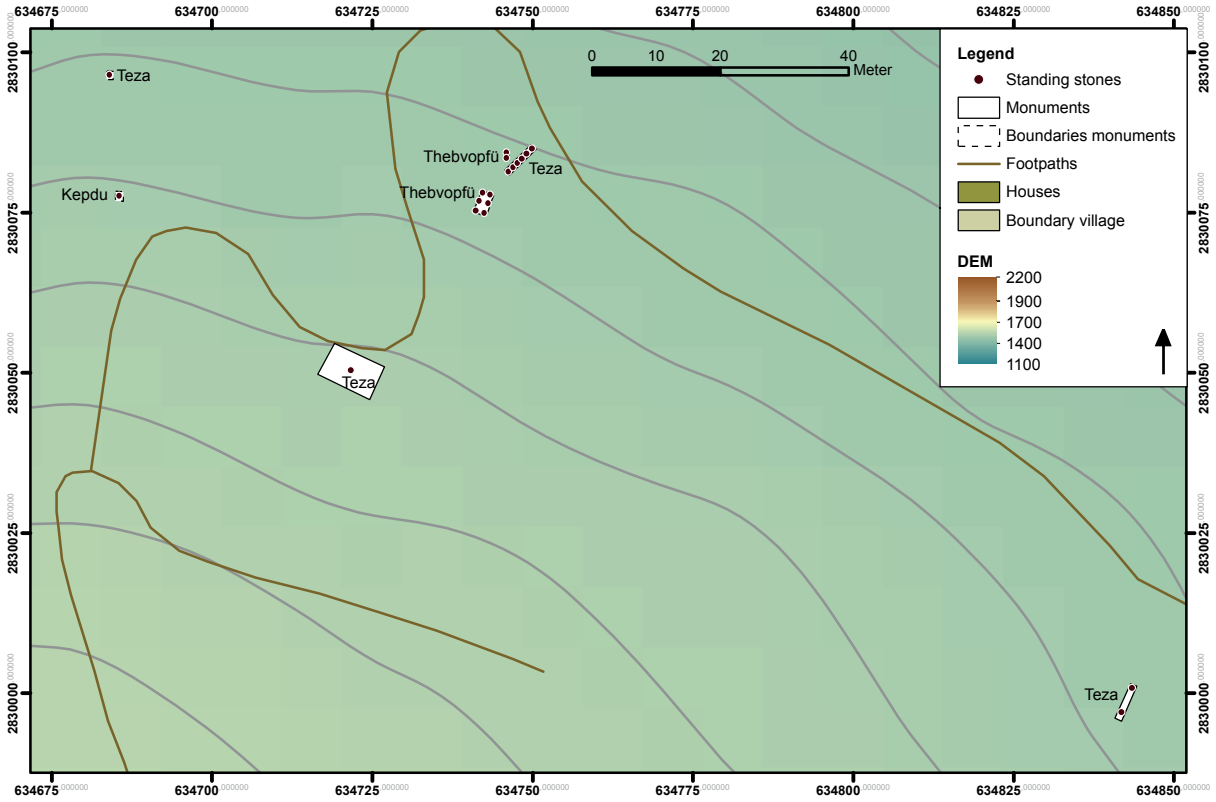


Fig. 172b: Detailed view of the megalithic monuments located north-west of Mesülumi.

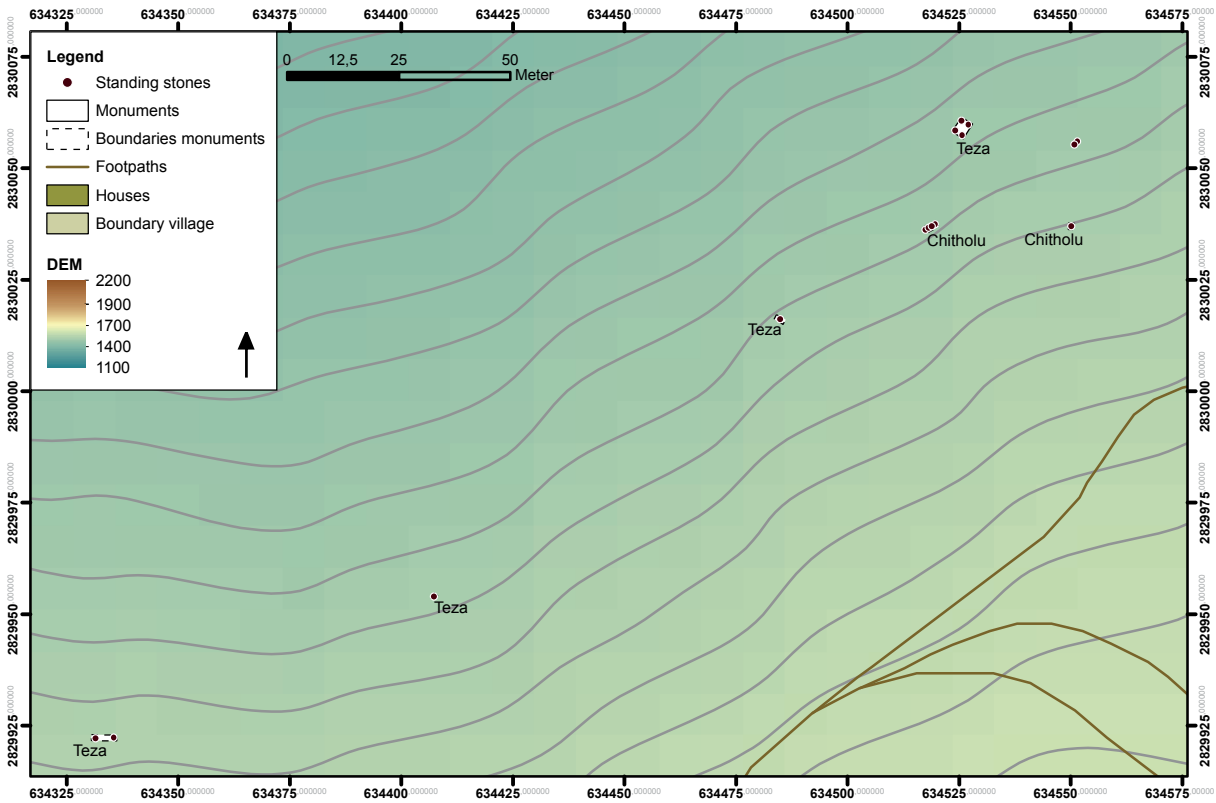


Fig. 172c: Detailed view of the megalithic monuments located north-west of Mesülumi.



bility of the monuments. The fact that there is a clear collective reference of the monuments is demonstrated by the partially-mixed clusters of monuments, as well as by the collective efforts of the resource expenditure to construct them. It holds strong interest that the expected solidarity with the feast giver mainly affected rich villagers, who made their wealth available for redistribution within this framework. The fact that economic differences affected the megalithic construction is shown by the ratio of the house horns, which was 1:3. In addition, the number per *Khel*, as well as the number of stones per monument is very different, whereby also here economic inequalities become visible.

## 5.2.7 Mesülumi (Chakhesang-Naga)

Mesülumi is a Chakhesang village located in the southern part of the tribal area, only 10km from the border to Manipur. The following *Khels* and following clans belong to the village:

### *Khels*

1. Christian-Khel
2. Kepolu-Khel
3. Chitholu-Khel
4. Punchunkepfü-Khel
5. Thebvopfü -Khel
6. Teza-Khel

### Clans

1. Lachü
2. Lasuh
3. Puro
4. Keyho
5. Thele
6. Tsido
7. Letro
8. Venuh.

### 5.2.7.1 Village plan

Mesülumi covers an area of 12.62ha at an altitude of 1550m above sea level. The agricultural areas are mainly to the north and east of the village (Fig. 170), while the southern and western areas are dominated by forests, which are also used as an economic zone.

The economic areas to the north and east of the village are dominated by terraced fields used for rice cultivation. Some of the megalithic monuments are located along the paths that lead to these areas, but some are also located in forested areas. Only in the north-easternmost part of the village are some monuments within the village area (Fig. 171).

However, it is unclear whether these monuments came into the same area only through the growth of the village or if were built there from the beginning. The monuments are a mixture of individual standing stones, as well as rows of stones, which can be assigned to a total of four different *Khels*. Stone platforms in every form are missing in Mesülumi. These would have been most likely to be found within the village area. Overall, only a few monuments are located in the southern area, although these can be assigned to different *Khels*. Most of the monuments are located in the north and west of the village. The distribution of the monuments follows the course of the slope on which the terrace fields lie (Fig. 172a-c).

Again, in this area, the monuments belong to different *Khels*, although it seems that monuments belonging to the same *Khel* are located in smaller clusters (cf. monuments of *Khels* Teza and Thebvopfü). Most of the megalithic monuments leading to the west can be attributed to the Teza-Khel, although a mixture with other *Khels* can also be observed. In Mesülumi there are no concentrations of megalithic monuments that could only be assigned to one *Khel*. Rather, it appears that each *Khel* had the right to use all areas for the construction of monuments, although small accumulations of exemplars belonging to the same *Khel* do exist.

### 5.2.7.2 Interviews

The interview in Mesülumi took place on March 10<sup>th</sup> with four interview partners and lasted 78:52 minutes.

#### The village

Mesülumi is one of the few Chakhesang villages that still partly belongs to the traditional religion. The conversation took place with a priest of the village, as well as followers of just this old religion. According to the priest, the village was founded in the 14<sup>th</sup> or 15<sup>th</sup> century. One of the first clans settling in the village is said to have been the Lachü clan, which was followed in the first settlement phase by the remaining clans. The only *Khel* who at the time of the interview was still more or less completely attached to the old faith was Teza-Khel. Like other Chakhesang villages, Mesülumi was burned down by the Indian army in 1964 during the civil war, but the lower side of the village was largely spared. The old faith was called '*Lhikere Menu Kezüme*' in the village dialect. One of the main duties of a priest was the public announcement of the feasts, whereby on this day nobody goes to the fields. Furthermore, the dates for sowing are also announced by the priest. The announcement takes place on a small platform within the village. In the course of the *Feasts of Merit*, as well as the agricultural feasts, the priest will also taste the prepared food and drinks and bless them before they are distributed. If a stone is about to be pulled, the priest will also perform some rituals on the same day so that the stone does not break during transport. The priest's wife also has a meaning in the course of these tasks and performs some of the rituals together with him. However, besides these special tasks priests have always been farmers, like all of the other villagers. The position of the



Fig. 173: Example of Chakhesang horn ornaments and decorations of the house front, which may be attached to the house after certain feasts have been held (photo: Maria Wunderlich).

priest was described as hereditary, with the tasks and duties being passed on from father to son. Overall, there were four different priests in Mesülumi with different areas of responsibility. Nowadays there is only one priest left who combines all of the necessary tasks.

The four traditional priesthoods included:

1. Erhikekhwe: Priest of War
2. Dzühkhukhwe: Priest of the Fountains
3. Taketa: Priest of the Agricultural Cycle
4. Methitrü: Priest who determines the time of sowing

**The megalithic monuments: types and size**

The memory of the megalithic monuments in Mesülumi was only partly available. It was said that the last stone was erected around 1967/1968, but there was disagreement about the year. Two of those present persons experienced this feast and were about 10 years old at that time. The last builder of a monument was the father of one of the interview partners.

A basic distinction can be drawn between the single standing stones, as well as the stone rows and fields. The number of stones depends on the number of *Feasts of Merit*. However, on the other hand, the number of stones erected by the father of the feast giver is also important. It was noted that the number of stones of the sons should not exceed that of the fathers. However, another stone can be erected by the son for the monument of the father, whereby the number of stones is equal again. This also results in odd numbers of menhirs, which in other cases would be rather unusual, because mostly pairs of stones are erected.

**The megalithic monuments: activities and rituals**

During the interview it was described that the unbroken stones were alive, while those that are broken are already dead. It has also been described that the ancestors are connected to these stones. This is why the builder of megalithic monuments still performs rituals even after construction. Once a year in the course of a feast, the latter goes to the stone and lays a special plant on the stone and also spills rice beer there. In the course of this ritual, the monument is also cleaned of vegetation. If the builder has died, this duty is not transferred to the children; rather, they only go to the monument if they want to ask for a blessing.

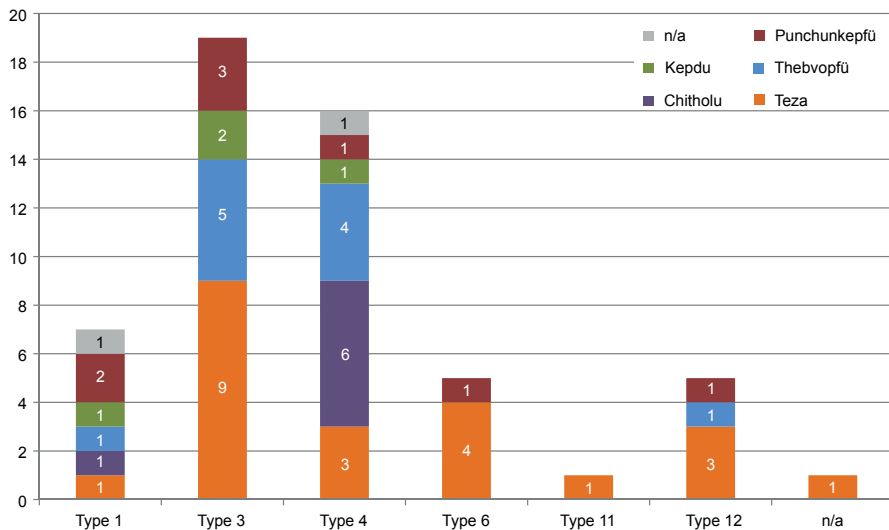


Fig. 174: The different monument types represented in Mesülumi with consideration of the Khel affiliation.

Fig. 175: The number of menhirs per monument and their affiliation with the Khels in Mesülumi.

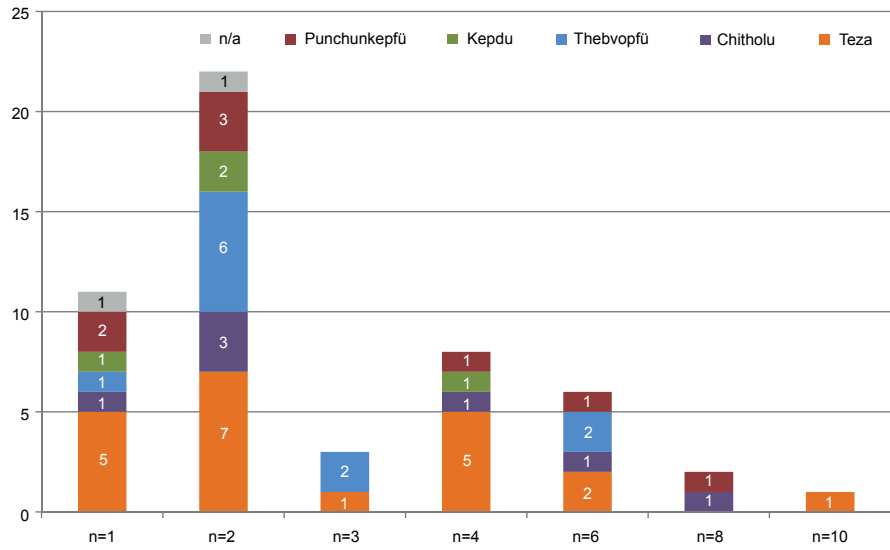


Fig. 176: Histogram of the volume (m³) of the monuments in Mesülumi.

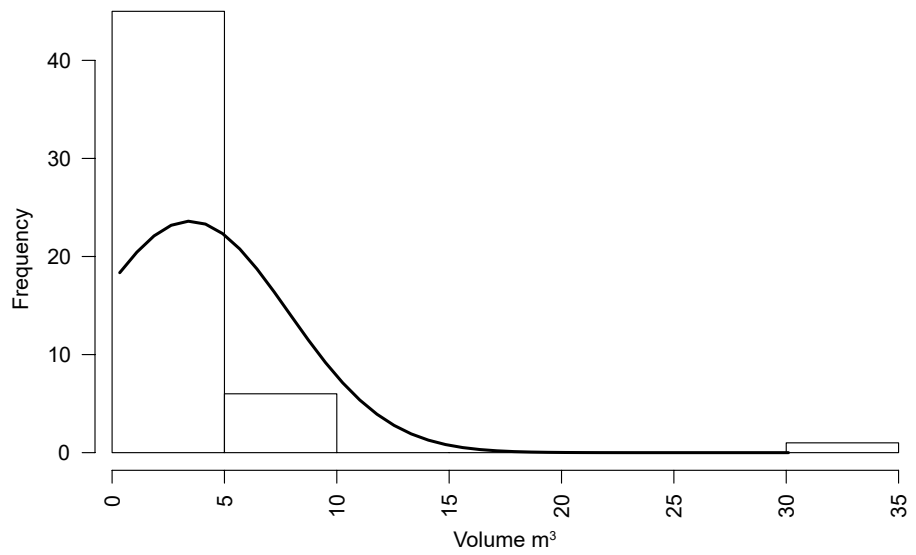
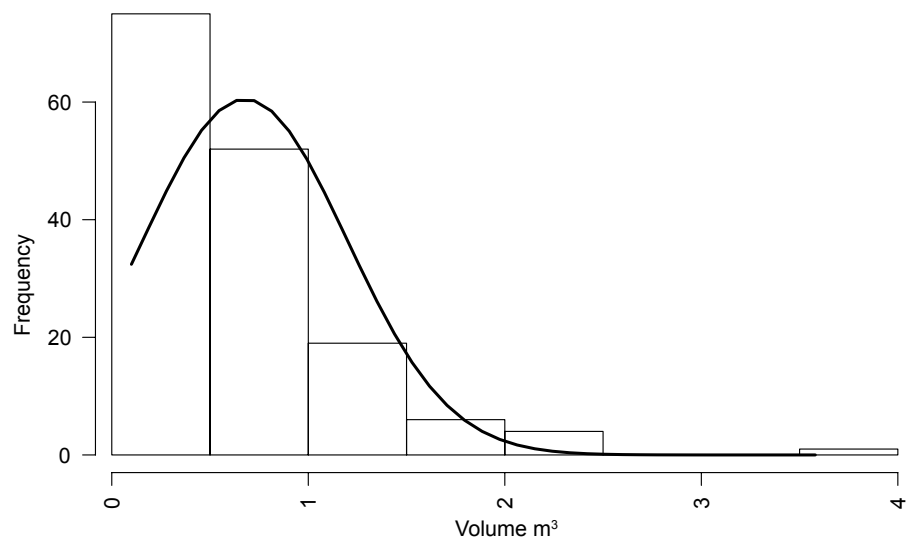


Fig. 177: Histogram of the volume (m³) of the single standing stones in Mesülumi.



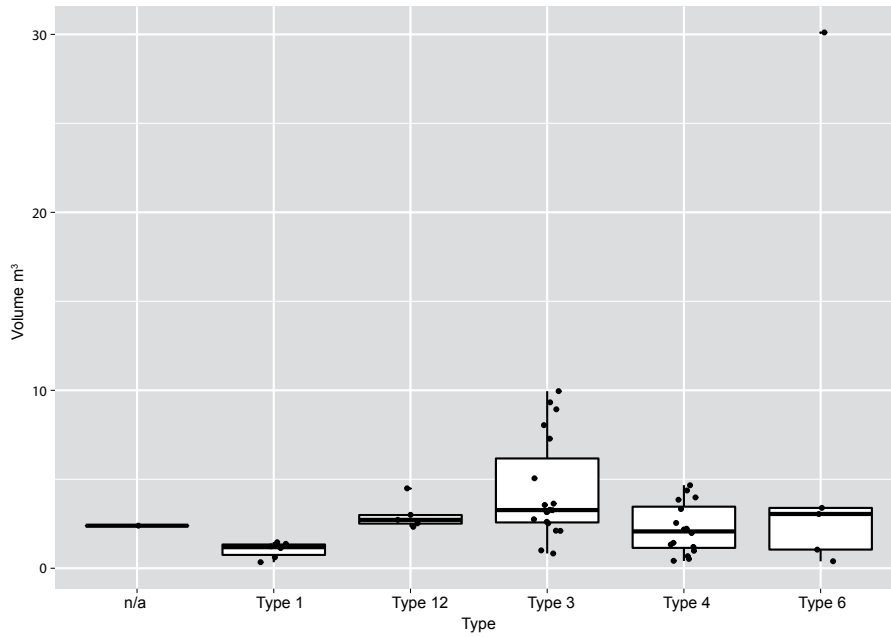


Fig. 178: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Mesülumi with consideration of the type.

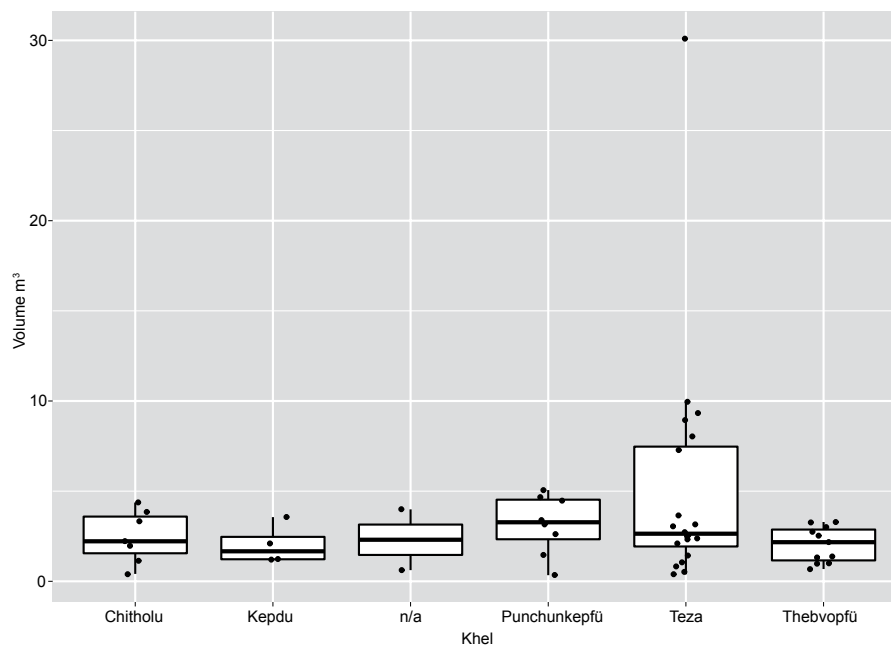


Fig. 179: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Mesülumi with consideration of the Khel affiliation.

### The quarry areas

For the stones used in Mesülumi, there was no special quarry area. The stones are supposed to come from the area where the builders were looking for the best stones. Landscape factors such as mountains or river courses did not play a special role.

### The building process

Before the construction of the monuments began, the stones considered alive were chosen by dreams. The stones were selected in advance and depending on whether the stone had a good or a bad name in the following night, the stone could be used further. In the course of the interview it was described that while the stone was being pulled, some people would be placed behind the stone, and some people in

front of the stone. This served the purpose that these pulls – if necessary – could brake the stone if it became too fast.

### Feasting activities

The following feasts are part of the agricultural calendar year:

1. Rūnye (December): after the harvest
2. Tekrūnye (January): before sowing
3. Mewunye (March): after sowing
4. Tsakhanye (April): after collecting firewood
5. Ethsūzenye (July/August): after millet has been harvested and the jungle has been cleared
6. Enonye: priests prevent harvest infestation
7. Buthsūketo: after the harvest has been harvested and stowed away

All of these feasts last at least 3-4 days, but up to one week.

The second type of festival are the *Feasts of Merit*, which are not organised by the whole village, but by individual families. These festivals take place in December and January, during the Rūnye and Tekrūnye festivals. For each *Feast of Merit*, the whole village is invited to two feasts. Beforehand, the whole village must be supplied with meat, whereby two kilos are calculated per household. When the village was invited to two feasts, a *Feast of Merit* was completed. It is therefore possible to organise two *Feasts of Merit* in two months in one year, but if this does not happen, one year will have to be waited for. Upon completion of the first *Feast of Merit*, the feast giver may decorate his house with a simple horn, while a horn decorated with a hole is the symbol for the second *Feast of Merit* (Fig. 173).

Finally, after the third party, a stone may be erected. There are two variants for the exact course of the individual celebrations, namely a simple and a complicated one. The simple variant comprises nine days of festive activities, while the more complex variant extends to 29 days. The house horns of the complicated variant were described as larger and more elaborately manufactured. Another difference between the two feasts is the number of house posts that may be erected below. In case of a simple variant there are three and at a difficult variant five.

### 5.2.7.3 Statistics

A total of 54 monuments could be documented in Mesūlumi, which can be classified into six types (Fig. 174).

These include individual standing stones without (type 1) and with platforms (type 6) in relatively small numbers. Also rare are multi-rowed menhir fields that symbolise different feasts of a single person (type 12). A very common type in Mesūlumi are stone rows, which are also available with (type 3) and without platforms (type 4). Only in one case have small stones been documented on a platform that stand for the affairs of a deceased person (type 11). It is remarkable that the monuments, which are provided with platforms, were not built by all *Khels* resident in Mesūlumi. This is the case for the platformless monuments. The only *Khel* to which all existing monument types could be assigned is the Teza-Khel. Members of this *Khel* also built the largest number of monuments (22 out of 54). A similar trend can be seen in the number of stones per monument of the different *Khels* (Fig. 175). Here again, the Teza-Khel is the most extensive and has the only monument with ten stones. Especially monuments with few stones are much more mixed and show a participation of all *Khels* of the village.

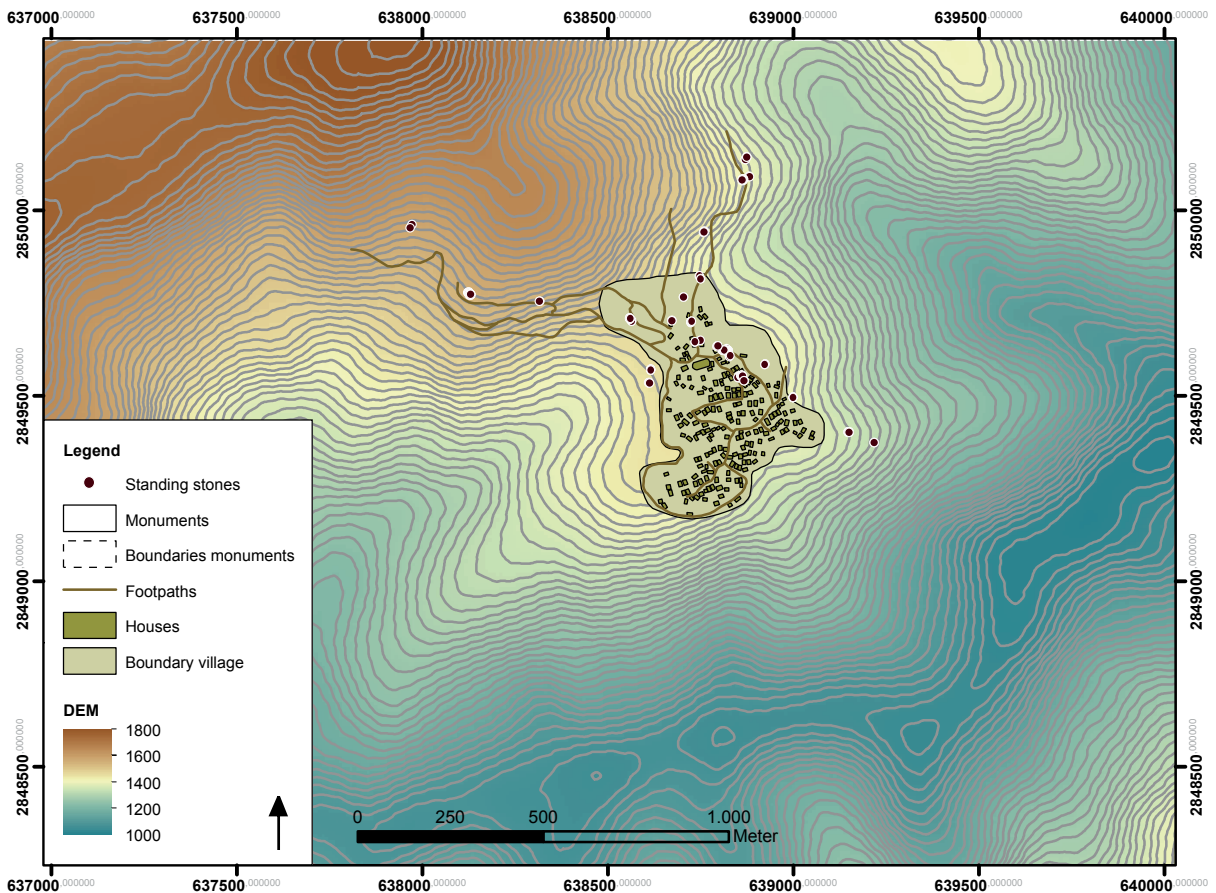
The orientation of the monuments in Mesūlumi has some focal points, although it seems very variable overall. Monuments oriented according to ESE-WNW (n=13) make up the largest proportion, closely followed by NW-SE

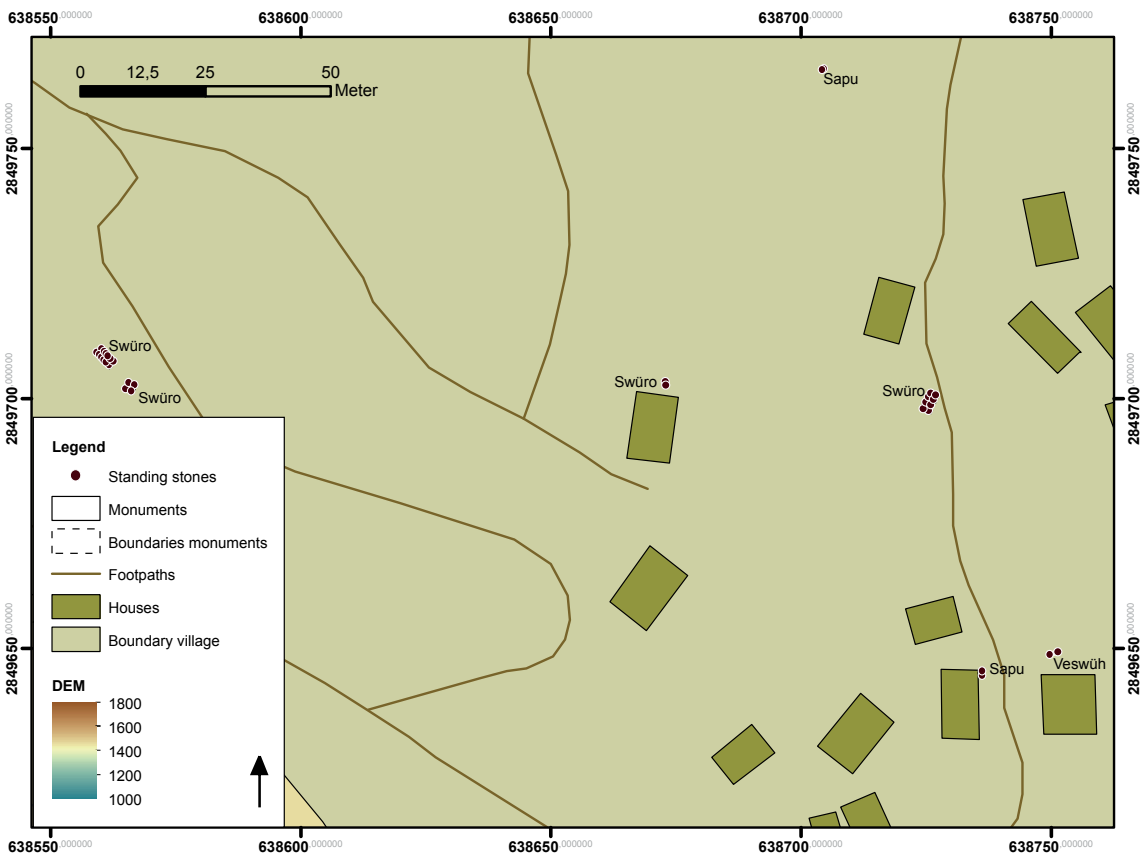
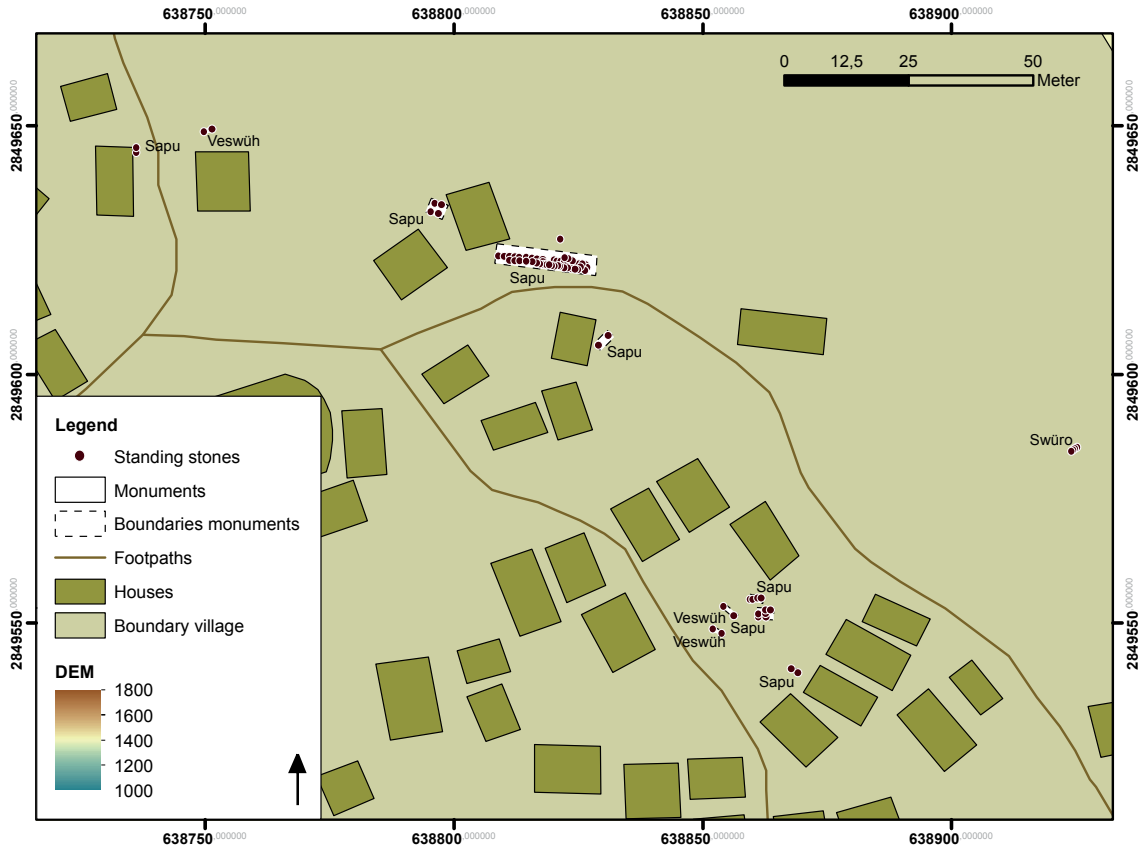
(n=9). An orientation to N-S is available a total of eight times. Alignment to NNW-SSE (n=7), ENE-WSW (n=7) and NE-SW (n=6) is also not uncommon. Orientations according to NNE-SSW (n=3), WNW-ESE (n=1) and E-W (n=1) are rare. In most cases, stones and monuments have the same orientation: the orientation of the standing stones does not correspond to that of the monuments in only nine out of 54 cases. Accordingly, the orientation of the menhirs is as diverse as that of the monuments. However, orientations according to E-W (n=33) are relatively common, while those according to N-S (n=22) are rarer overall.

The distribution of the volume of the stones and monuments as a whole does not correspond to a normal distribution in both cases and shows significant deviations from the curve (Fig. 176). However, it becomes clear that the deviations in the monuments are rarer, but stronger, while those of the menhirs cluster closer to the expected values of a normal distribution. The strongest outlier of the monuments is actually a single stone standing on a very large platform (8.44x5.20x0.61m). Apart from this, the distribution curve is very flat and focuses on small monuments with a volume between 0 and 5m<sup>3</sup>, which make up by far the largest overall proportion. The distribution curve of the menhirs is much more differentiated (Fig. 177). Although this curve also runs clearly in favour of the small stones, a larger number of larger stones have also been used, which influence the course of the curve.

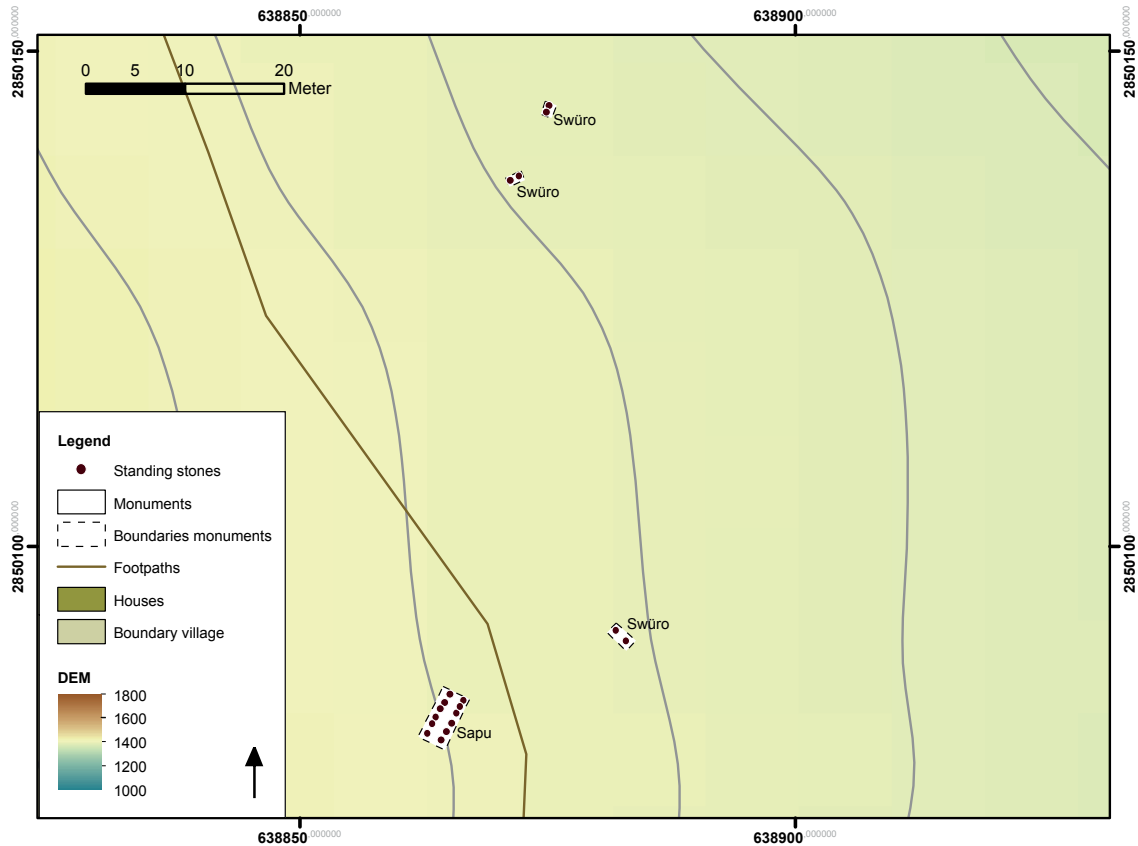
The breakdown of volume by monument type clearly shows the differences between the types (Fig. 178). In general, the rows of stones have a larger volume than the individual standing stones with and without platform. However, the presence or absence of the platforms can also be seen quite clearly in the boxplot diagram (cf. types 3 and 4). The menhir fields have a medium volume.

Fig. 180: Overview of the Chakhesang village Rüzazho.









The boxplot differentiated by *Khels* also shows some differences that have already been indicated (Fig. 179). The number and volume of monuments per *Khel* differs considerably in some cases. In relation to both factors, Teza-Khel is clearly in first place. Thebvopfü-Khel has relatively many, but small monuments, whereas PUNCHUNKEPÜ-Khel has fewer but larger monuments. Kepolu-Khel has only a few and small monuments. Finally, the Chitholu-Khel also has relatively large monuments, but also in small numbers.

#### 5.2.7.4 Summary

Despite the fact that followers of the traditional faith were still present in Mesülumi, the memory of the megalithic monuments was not much better preserved here than in the other villages visited. Despite their religious affiliation within the Teza-Khel, megalithic monuments are no longer erected in this case either. It also remains unclear whether a significantly longer construction period of megalithic monuments has taken place within this *Khel*. This would partly explain the data structures, which show a strong weighting of the Teza-Khel regarding the number of monuments, as well as the number of stones per monument. This weighting in turn points to increased fixed activity within this *Khel*.

The monuments themselves were only characterised by a small variation in type. However, the menhirs show a rather uneven size distribution regarding the volumes. The variation, which is less pronounced in monuments, is quite strong in Mesülumi in terms of feasting activities. These have a high variability with their different types of execution, which allowed the village members to represent a strong differentiation of the personal achievements based on the celebrations. This representation materialised in the house posts, house horns, as well as the megalithic monuments.

Fig. 181a (opposite page, above): The monuments located in the central area of the village area of Rüzazho.

Fig. 181b (opposite page, below): The monuments located in the northern part of the village area of Rüzazho.

Fig. 181c: Detailed view of some of the monuments located outside the village area of Rüzazho.

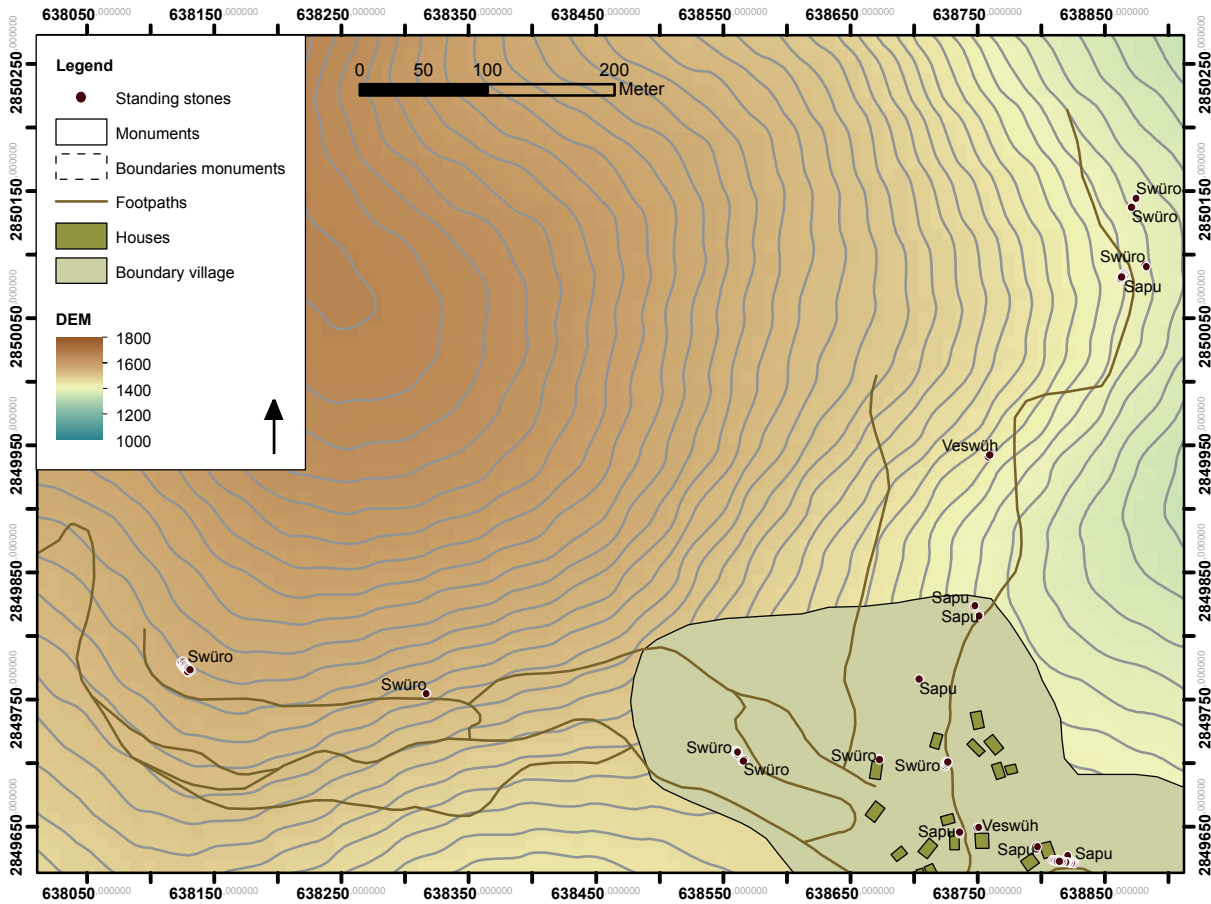


Fig. 182: The megalithic monuments located outside the village of Rüzazho.

## 5.2.8 Rüzazho (Chakhesang-Naga)

Rüzazho lies in the north-western area of the Chakhesang area at an altitude of 1470m above sea level. The mountain range on which the village is located runs in a north-eastern direction and is bordered to the west by a river.

Three *Khels* are located in Rüzazho, each of which comprises different clans.

1. Veswüh-Khel: Sahi, Zuvenu, Khüsoh, Pohokrü
2. Sapu-Khel: Kapo, Yisühpa, Sapu, Süzü
3. Swüro-Khel: Thüvonu, Hunürutso, Puhukrhü, Shijoh, Nakro

### 5.2.8.1 Village plan

Rüzazho is a village, which today covers an area of 21.34ha (Fig. 180). The village stretches roughly to the north-northwest and follows the course of the hilltop on which it lies.

The area of the village comprises densely built-up areas in the central and southern areas, in which a large number of residential buildings can be found. In the central area there is also a church. In the northern area the village is less densely populated. This can also be related to the hillside location in this area. The location of the monuments is also concentrated in the northern area. However, the location of a total of 20 monuments cannot be reconstructed, whereby the southern area may be underrepresented. The monuments are situated on three paths that all lead downhill to the fields that belong to the secondary economic zone of the village.

There are also some monuments in the built-up area of the village (Fig. 181a-c), all in the northern part of the village.

There are only three monuments on a south-easterly route, most of them on north-eastern and north-western routes (Fig. 182). There are some differences regarding the location of the monuments and their affiliation to the different *Khels*. The monuments of the Swüro-Khel are located on the north-western access road, but also mixed with the other *Khels* in the village centre. All three *Khels* have monuments there, as well as on the roads to the north-east and south-east. The concentration of monuments of the Sapu-Khel in the centre of today's village is also remarkable. The monuments of the Veswüh-Khel are not concentrated anywhere.

### 5.2.8.2 Interviews

The interview was conducted on 01.03.2016 with six different people from two of the existing *Khels* in Rüzazho. Other villagers were present in the meantime, but they were not interview partners. The interview lasted 1:24:09 minutes and was translated by Dam Vasa. The interview took place during a break during the recording of the monuments (at Monument 30). The answers often took place under discussion, but it was mainly the older men who spoke, while younger men were more likely to listen.

#### The village

Besides the basic distinction between the three *Khels* in Rüzazho, different clans were also described, which can be assigned to the *Khels*. In addition, specific social roles are traditionally mentioned in Rüzazho. These include tigermen, albeit which did not play an important role in megalith construction. Tigermen are said to have made predictions from their dreams. It was said that there are still tigermen in the village today, but they do not reveal their identity. Healers, called *Ehemu*, were also present in the village. These were mainly women. Besides there were also several *Thevos*, who came from the different *Khels*. These meet at regular intervals, about five to six times a year, within the village. However, meetings with *Thevos* outside the village were not remembered. The role of *Thevo* can be inherited. *Thevos* women could also take over the role when their husbands had passed away. A system existed in Rüzazho in which the main responsibility for rituals lay annually with one of the *Thevos*. The old religion was called 'Ukrüna'. In the old religion it was forbidden to hunt and eat certain birds.

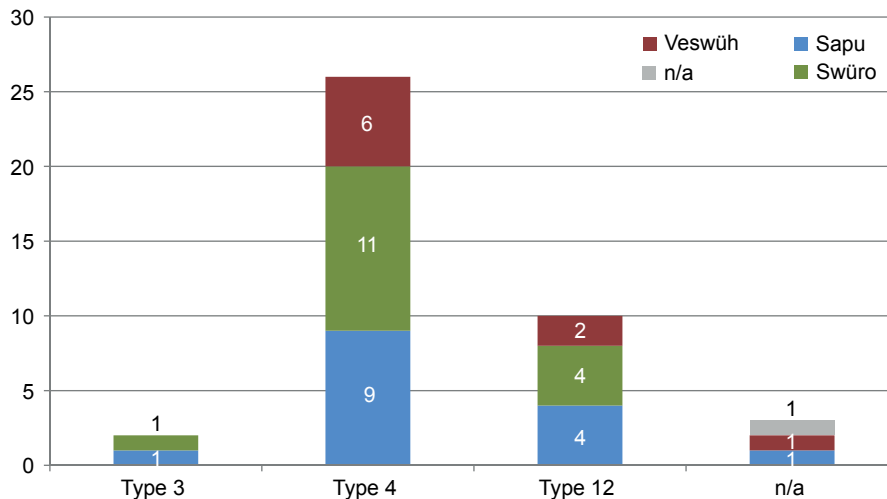


Fig. 183: The different monument types represented in Rüzazho with consideration of the *Khel* affiliation.

Fig. 184: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Rüzazho with consideration of the type.

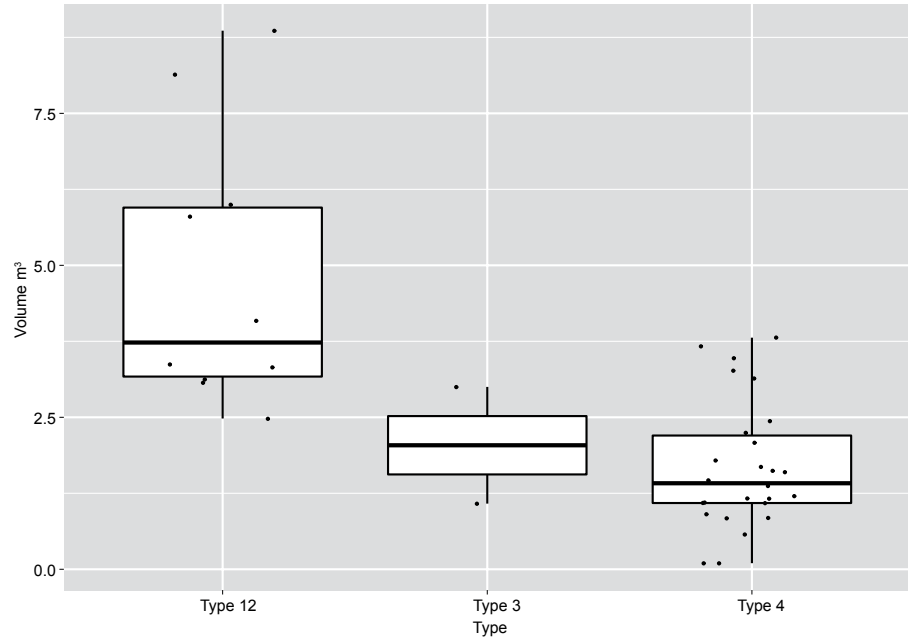


Fig. 185: Histogram of the volume ( $m^3$ ) of the monuments in Rüzazho.

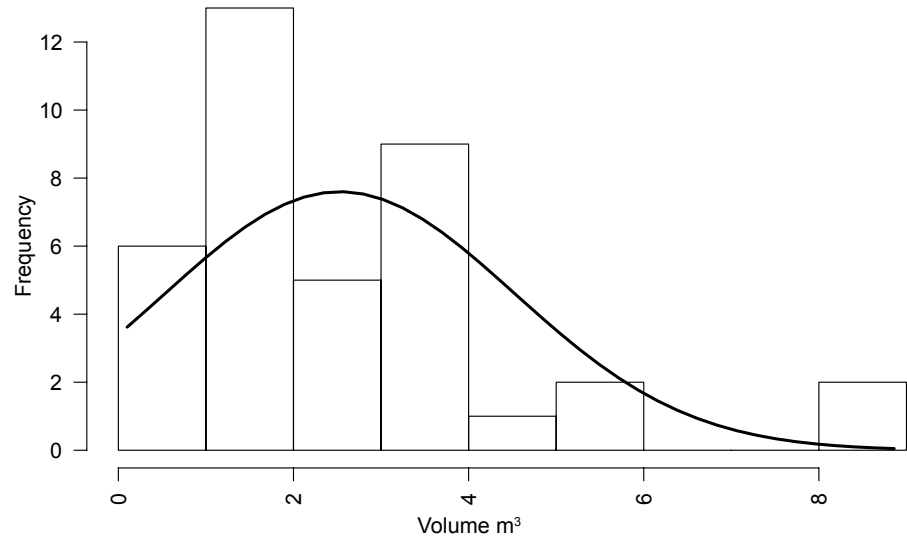
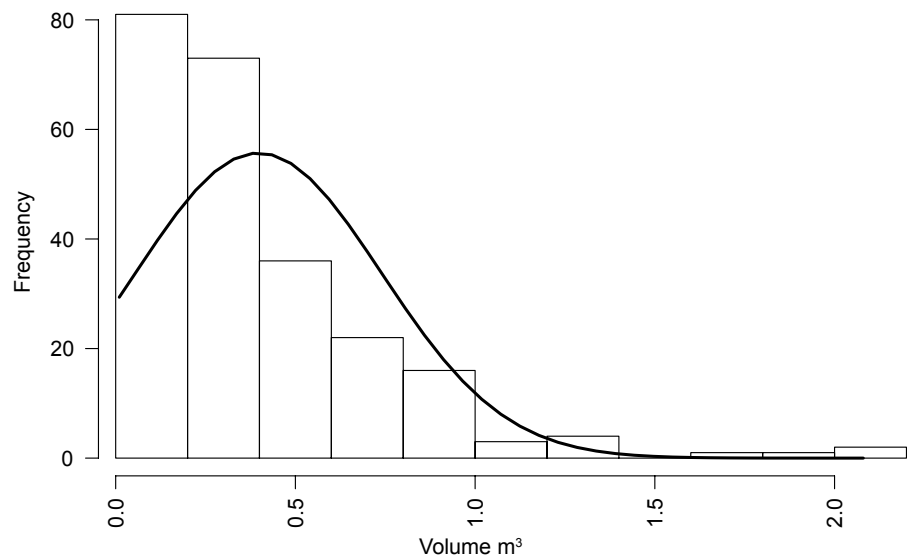


Fig. 186: Histogram of the volume ( $m^3$ ) of the single standing stones in Rüzazho.



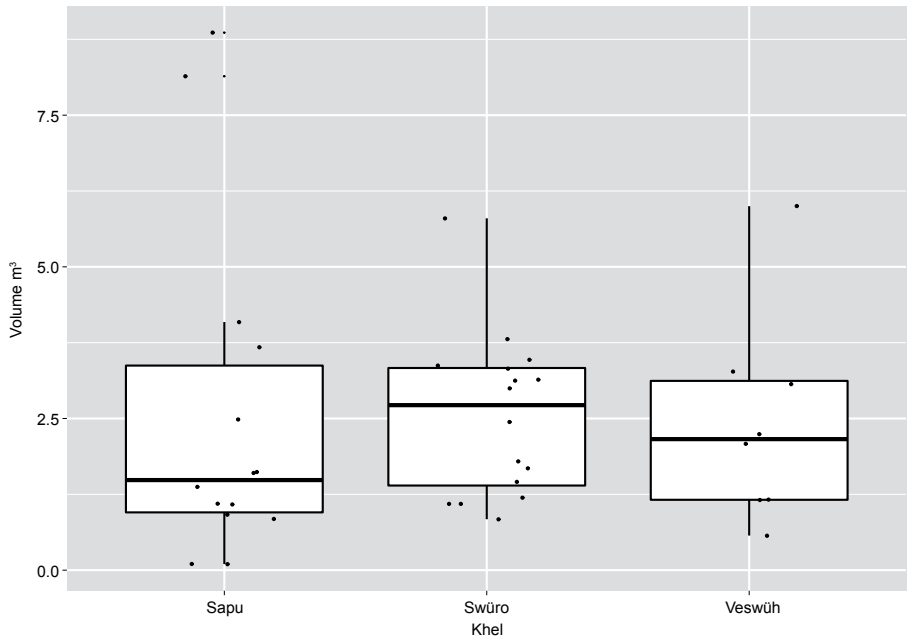


Fig. 187: Boxplot of the volume (m<sup>3</sup>) of the megalithic monuments in Rüzazho with consideration of the Khel affiliation.

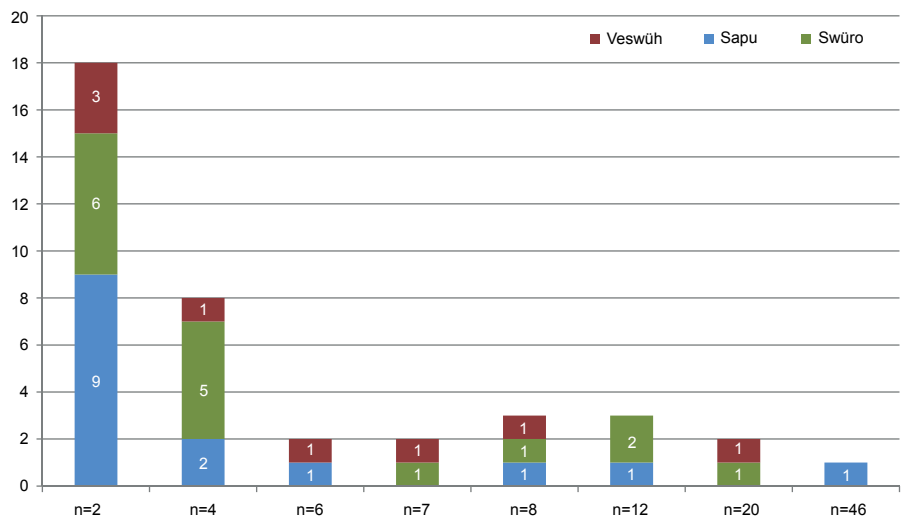


Fig. 188: The number of menhirs per monument and their affiliation with the Khels in Rüzazho.

**The megalithic monuments: meaning**

The main significance of the megalithic monuments lay in their function as a reminder of the feasts in the village. Today’s importance has greatly diminished over the course of generations. Although the stones are still often cleaned and kept free of vegetation, the memory of many of the builders is already lost. It is highlighted that the stones represent the history of grandparents, but no longer that of children and especially grandchildren. One of the interviewees recalled a construction process that had taken place in his youth, about 60 years ago. However, the rituals that took place during the construction were not performed by the *Thevos* of the village, but by other persons. These rituals include – for example – cutting and distributing the meat to the people involved in the building process. The selection of the firewood used during the rituals and the distribution of the rice beer were also done by this person. The distribution of the meat took place in the feast givers house. While pulling the stone itself, the male stone was always transported first, then the female stone. It was also said that stones of two different persons could be pulled in one day:

in this case, the men of the village would split up. If only a stone of one person was moved, 500-600 persons could participate.

### The megalithic monuments: builders

The monuments are built by individuals and – in a broader sense – their families. The resources required for the feasting activities are provided only by this person, whereas the clan and *Khel* have no further significance. Certain cattle – called *Thoto* – hold strong importance, while *Mithun* was described as less important in this context.

### The megalithic monuments: activities and rituals

Only the laying of flowers was described in activities that still took place at the monuments after the construction. The type of flowers did not matter.

### The quarry areas

The stones used in Rüzazho came mainly from a river nearby. The stones were then transported up the mountain from the river.

### The building process

The way to perform the feast accompanying the erection of a megalithic monument in Rüzazho, existed only in one form, called *Zhothona*. The intention to erect a monument was usually announced publicly. It could also happen that the village requires rich families to build such a monument. At the beginning there was the selection of the stone, which can take months in some cases. One or more stones were selected, and waited for good or bad dreams, which betray whether the stone is suitable. These dreams are dreamed by those close to the builder, but not by the builder himself. Even if a stone is damaged, a new one will be selected. Accordingly, the selection of the stones sometimes takes a lot of time. Overall, the feasts lasts for 30 days. The festivities/activities assigned to certain days include the construction of the sledge or the collection of the firewood. For all of the specific activities, smaller feasts are held throughout the day.

The order of the dragging itself was as follows:

1. Headhunters
2. Hunters
3. Men with many affairs

After these followed the normal people and the children. The best headhunters were also allowed to stand on the stone and call out war calls. In case the stone was difficult to pull, the person responsible for rituals had to perform a certain ritual on the stone. At the end, there is a major feast for the whole village, which lasts five days. However, all other days are reserved for certain groups of people.

### Feasting activities

During the year different feasts take place in Rüzazho. The feast in which the stone pulling takes place is called *Sukrunye*. This feast takes place before sowing. *Sukrunye* is part of a series of six feasts that accompany the agricultural year and begin in December.

1. Thürinye (December): the first festival takes place after the harvest and the transport of the harvest to the village.
2. Sukrunye (January): before sowing; connection to megalith building
3. Ngunye (February)
4. Tsatenye (April)

Fig. 189a (opposite page, above): Overview of the Chakhesang village of Zhavame.

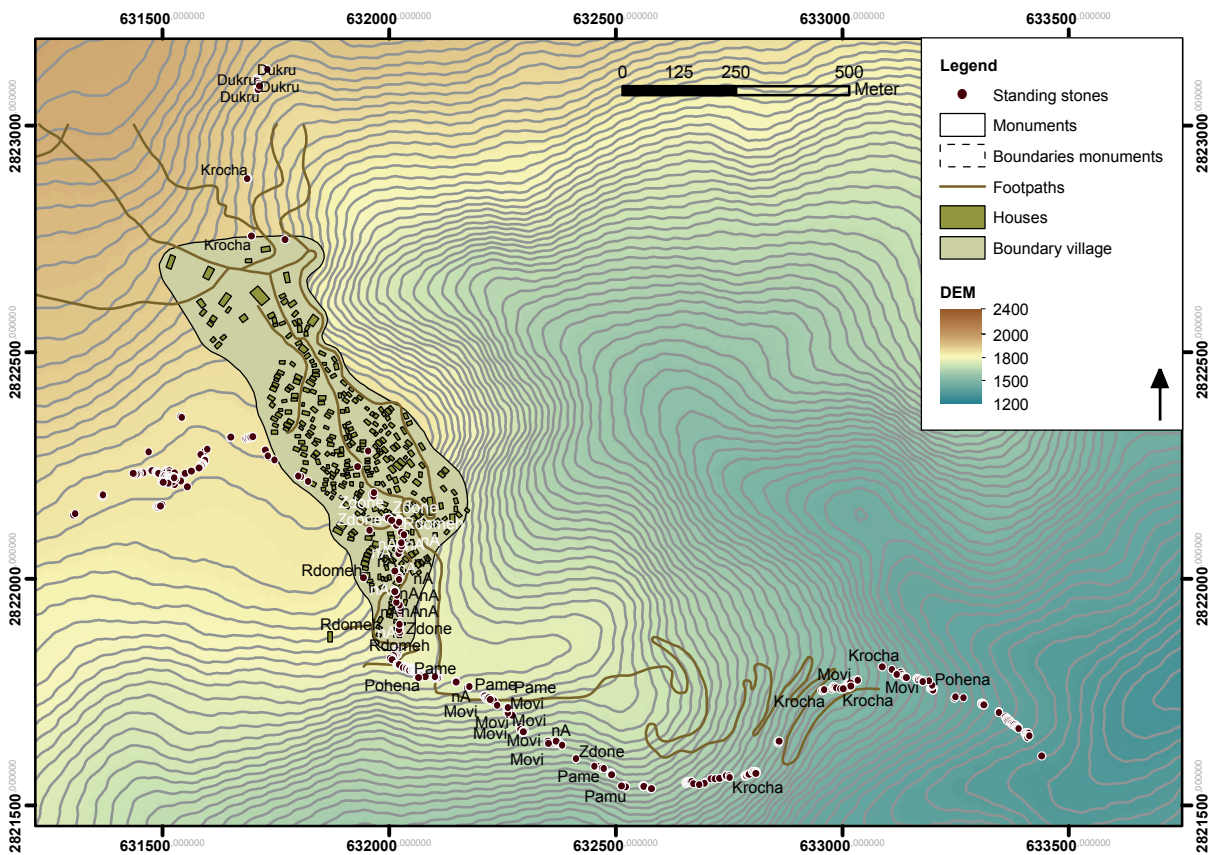
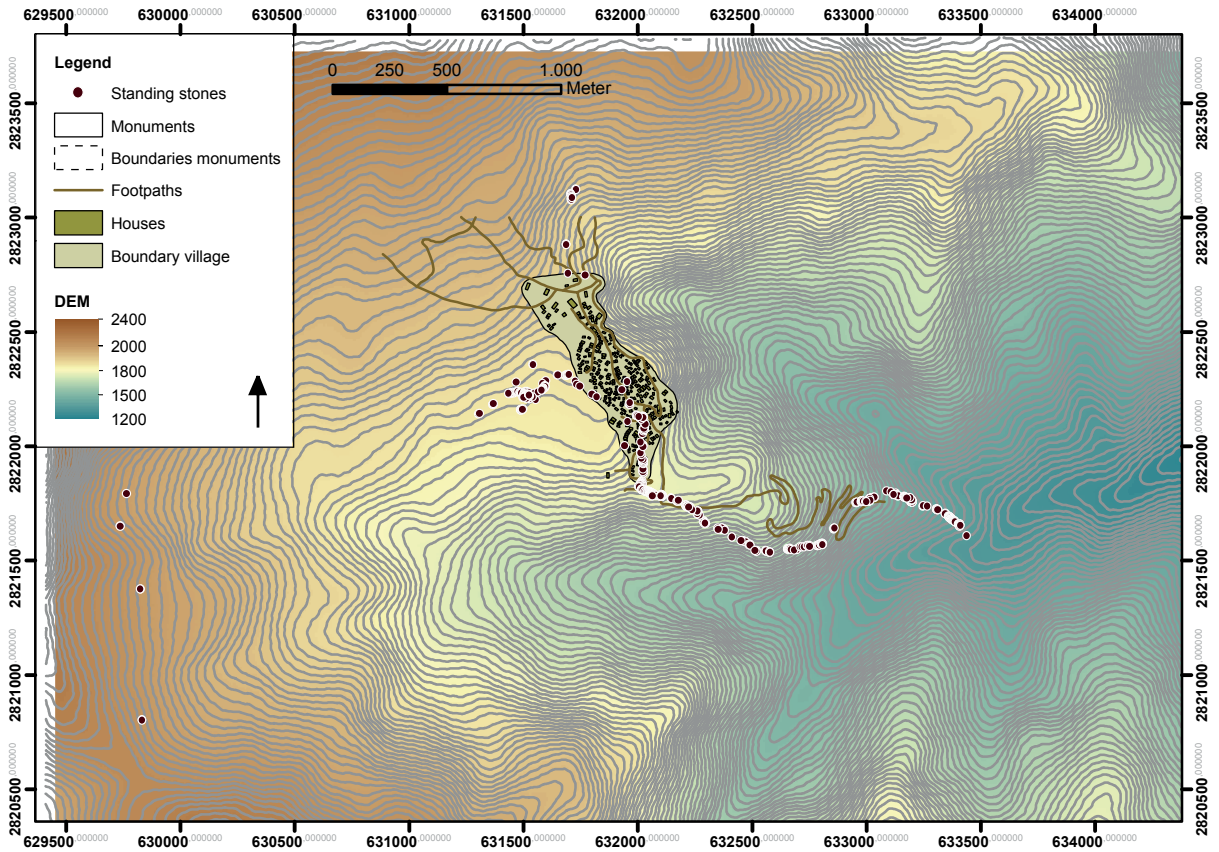
Fig. 189b (opposite page, below): Overview of the Chakhesang village of Zhavame and the megalithic monuments and their *Khel*-affiliation.

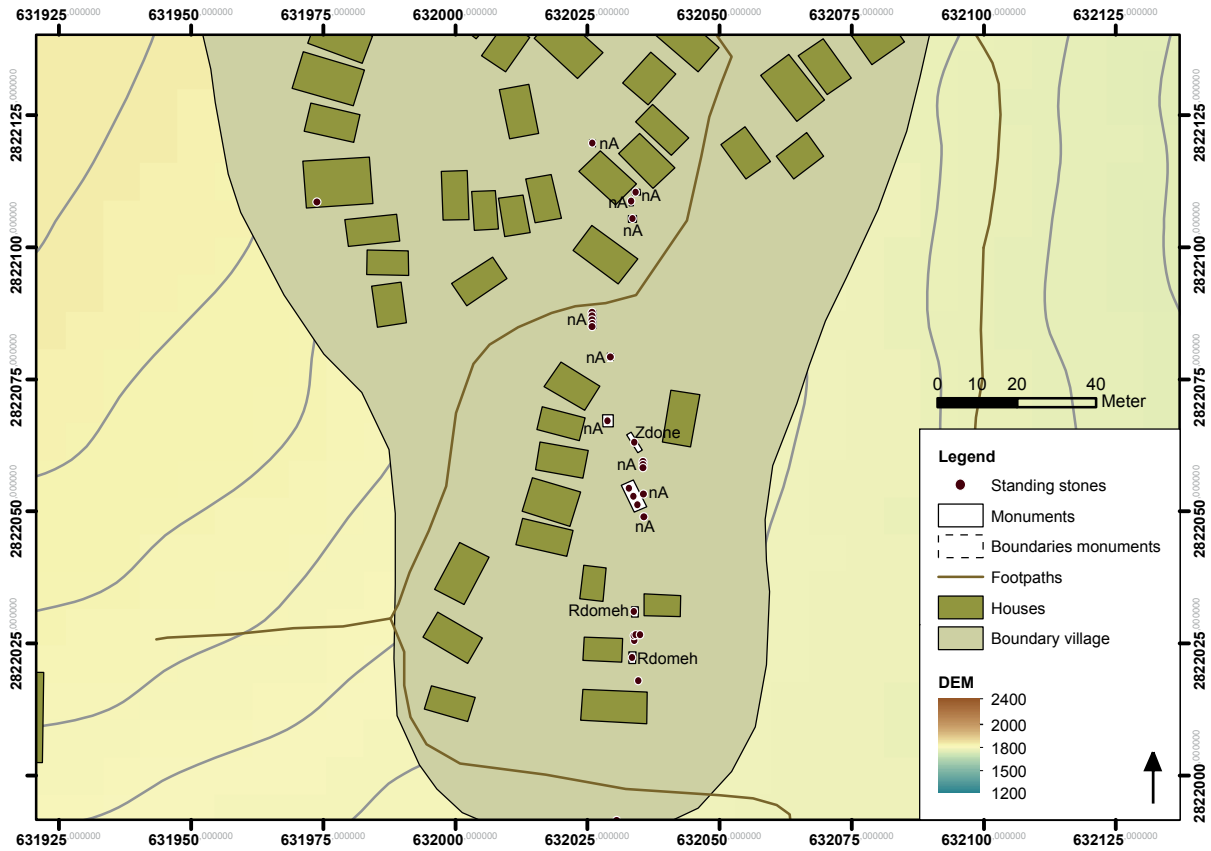
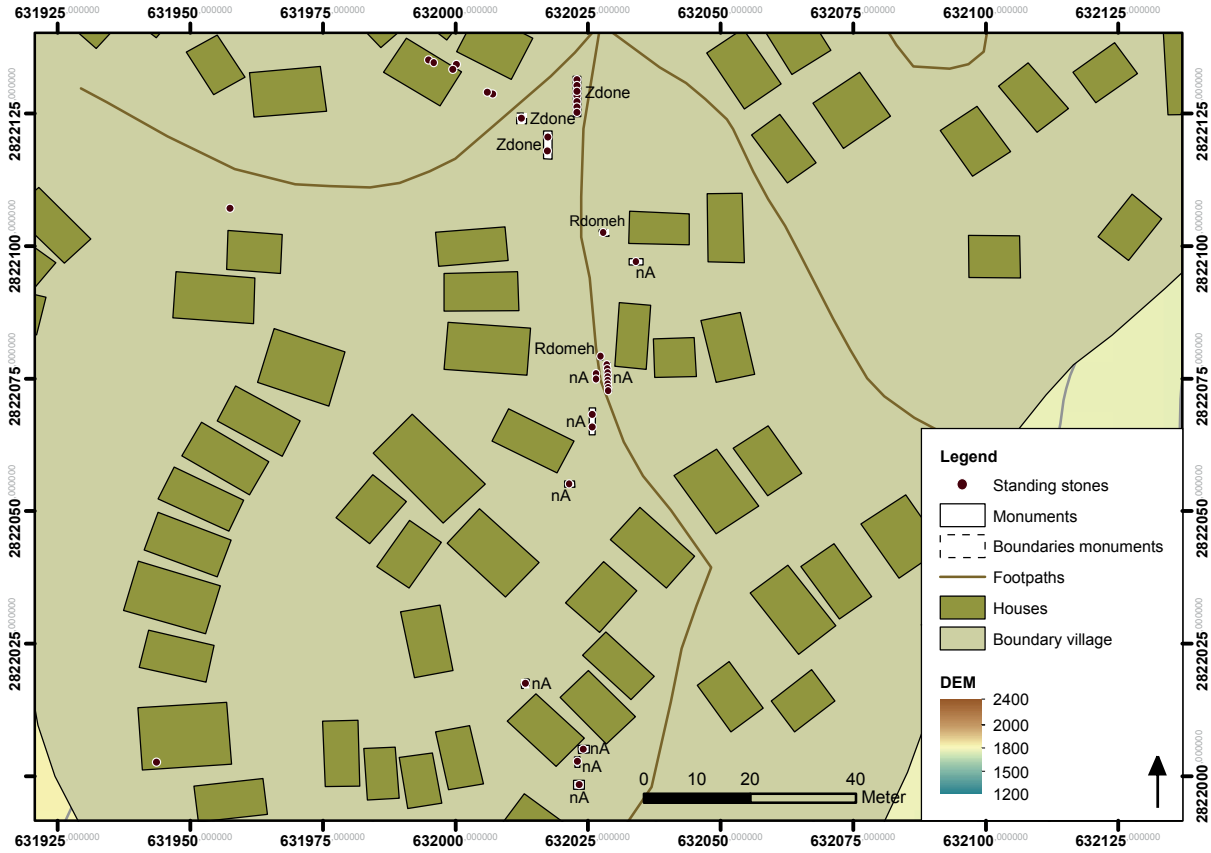
Fig. 190a (page 238, above): The megalithic monuments located in the southern part of the village Zhavame.

Fig. 190b (page 238, below): The megalithic monuments located in the southernmost part of the village Zhavame.

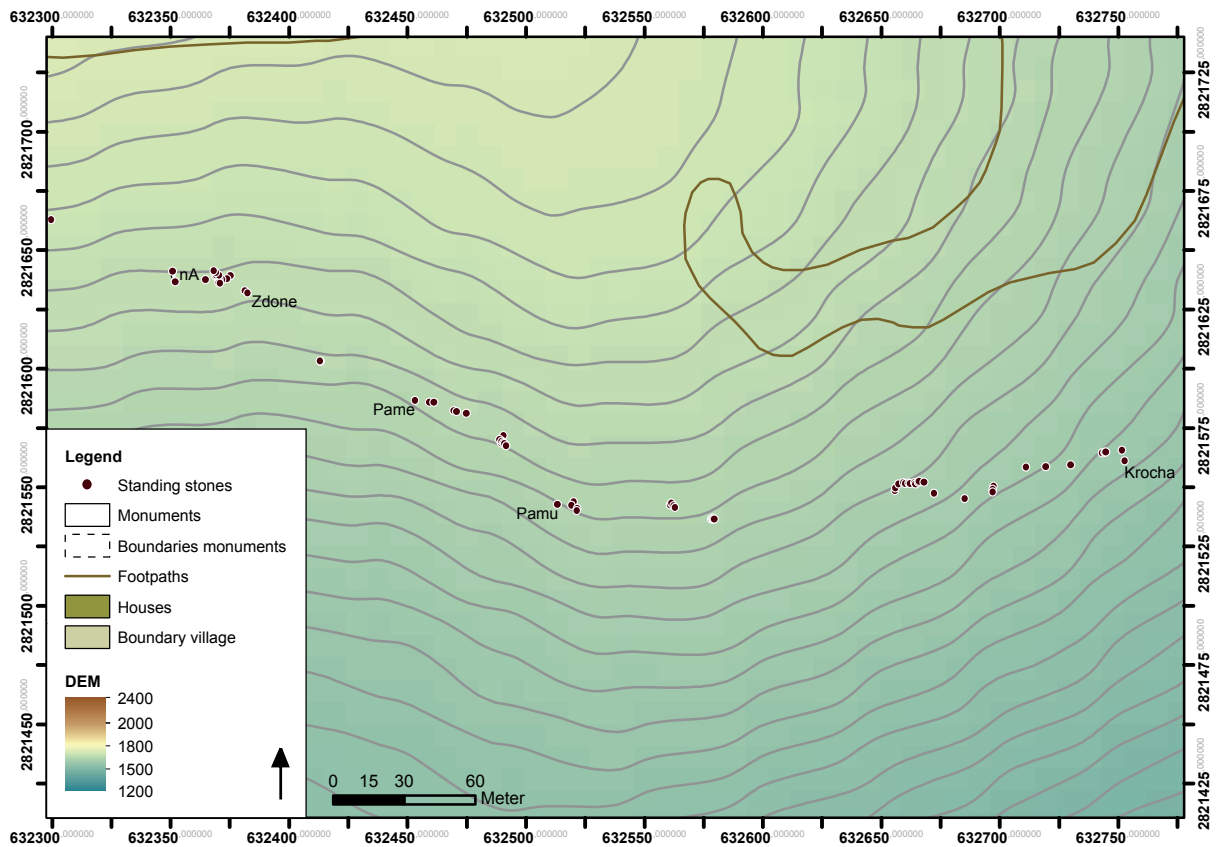
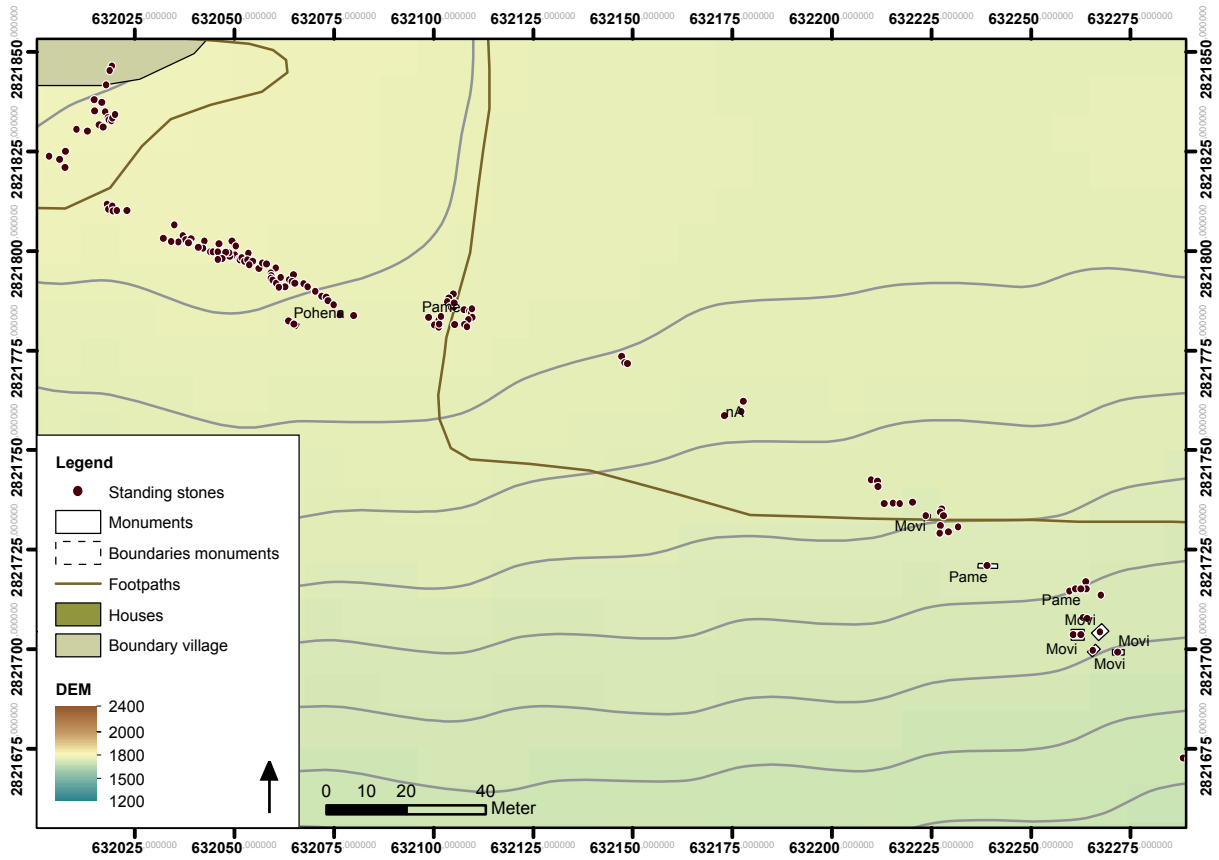
Fig. 191a (page 239, above): The megalithic monuments nearby Zhavame leading in south-eastern direction to the terrace fields.

Fig. 191b (page 239, below): The megalithic monuments leading out of Zhavame in south-eastern direction.









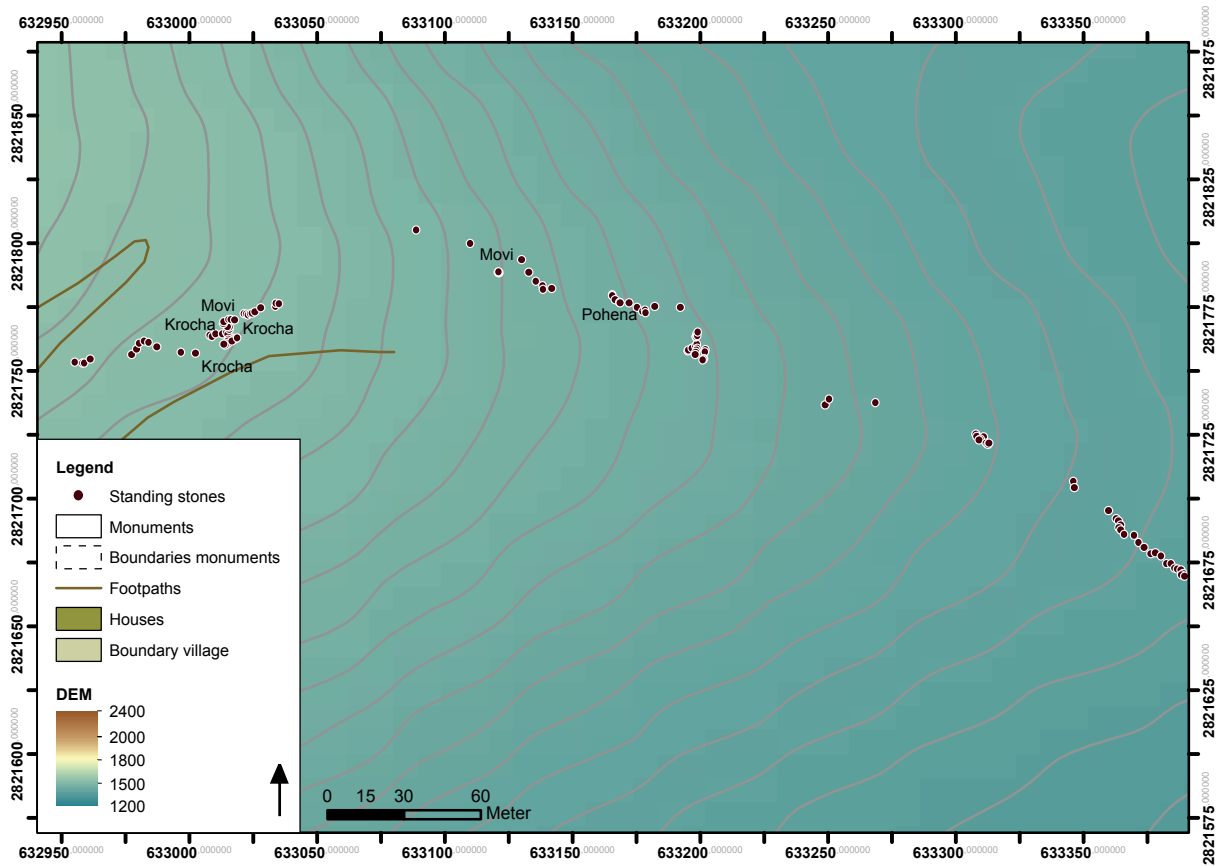


Fig. 191c: The megalithic monuments within the terrace fields of Zhovame.

5. Khothonye (July)
6. Shodanye (August)

### The graves

In former times, the most common form of burial was in a stretched position. Secondary burials were not mentioned. The deceased were buried in individual graves facing north-south.

### 5.2.8.3 Statistics

In Rüzazho there are only three different types of 41 monuments (Fig. 183).

These include stone rows with (type 3, n=2) and without platform (type 4, n=26). Finally, stone fields are also present (type 12, n=10). The types are not dependent on the *Khel*; rather, all *Khels* have different types of monuments. The volume of the stone rows with and without platform is very similar, although the very small number of monuments with platform must be considered (Fig. 184).

The range of the volume of the stone rows without platform is relatively large, whereby the number of standing stones per monument is decisive in this case. As a rule, monuments of type 12 have a larger volume. This is associated with the usual large number of stones. Overall, the distribution curve shows only two outliers influencing a normal distribution of the size of the monuments (Fig. 185). The distribution curve of the menhirs' volume shows that most of the menhirs are in a very similar size range (Fig. 186). Most menhirs have a volume below one m<sup>3</sup>, whereas only eleven of the stones have a larger volume. Due to these outliers, the volume of menhirs is not normally distributed.

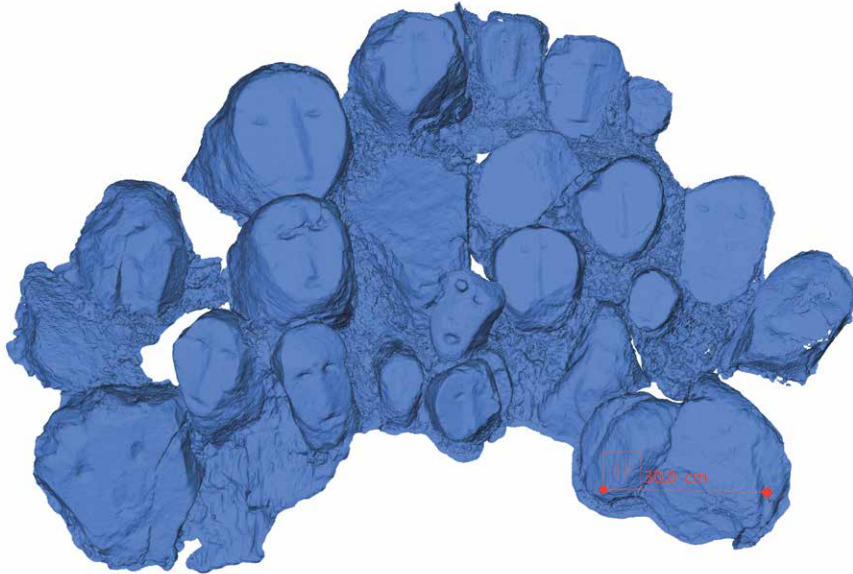


Fig. 192: The head-stones of Zhavame (3D model: Sara Jagiolla).

The number of menhirs per row of stones varies, but depends on the number of feasts that were given. For this reason, an even number of menhirs were usually erected (see Fig. 188). A peak in the number of menhirs per monument is found in two menhirs ( $n=18$ ). Also more common are four erected stones ( $n=8$ ), while all other variants occur in only one to three cases. The volume of the monuments is strongly influenced by the number of megaliths. Particularly large stones can only be found in monuments with between two and eight stones. The two stones with a volume of over  $2\text{m}^3$  can be found in monuments that comprise only two stones. The stones are mainly round in shape ( $n=213$ ). In relation to the large number of menhirs ( $n=241$ ) only very few square examples are represented ( $n=25$ ), while pointed stones were almost never used ( $n=2$ ).

Taking into account differences in the construction activity of the different *Khels*, some characteristics stand out. For example, the Veswüh-Khel built a smaller number of monuments, albeit whose volume resembles the span of the other two *Khels* (Fig. 187).

The other *Khels* have a higher number of monuments. The span of the Swüro-Khel and the Veswüh-Khel is very similar, with the Swüro-Khel having erected significantly more monuments ( $n=14$  to 8). Again, this distribution is closely related to the size of the rows of stones, *i.e.* the number of menhirs per monument (Fig. 188). Only the *Khels* with a larger number of monuments have built monuments with a higher number of menhirs.

Overall, the monuments of Rüzazho show a great variety of possible forms of orientation. The alignment of 38 of the 41 monuments could be determined. Monuments oriented according to NE-SW and NNE-SSW occur eight times each. The second most frequent is an orientation according to ENE-WSW and NNW-SSE with six exemplars each. There are also some of the monuments of N-S ( $n=3$ ), E-W ( $n=3$ ) and NW-SE ( $n=3$ ) orientation. Only in one case is a monument oriented to WNW-ESE. The variations of the menhirs' orientation correspond overall to those of the monuments. The 238 stones also have eight different orientations. The largest group ( $n=72$ ) is oriented to NE-SW, while another 53 menhirs are oriented to NNE-SSW ( $n=31$ ) and ENE-WSW ( $n=22$ ). Clear orientations according to E-W ( $n=56$ ) and N-S ( $n=16$ ) are rarer or rare. Menhirs according to NW-SE ( $n=25$ ) and NNW-SSE ( $n=14$ ) are also not common. The rarest case of orientation is after WNW-ESE. Furthermore, in only three out of 41 cases the orientation of the menhirs does not correspond to that of the monuments;

thus, the standing stones are usually in the same orientation as the longitudinal axis of the monuments (this is also the case for monuments without a platform).

#### 5.2.8.4 Summary

The results from Rüzazho make clear how closely the construction of megalithic monuments is linked to the arrangement of feasts. In principle, the data show that all *Khels* have general access to the construction of these. Also no restrictions are recognisable by the type or the general size distribution. Rather, the differences refer to the number of standing stones and the number of monuments per *Khel*. At this point, economic differences are probably reflected, which led to the fact that the members of the *Khels* were not equally capable of organising feasting activities.

### 5.2.9 Zhavame (Chakhesang-Naga)

Like Khezhakeno, Zhavame is close to the southern border of the Phek district on the border with Manipur. The village is situated at an altitude of 1600m above sea level.

There are seven *Khels* in Zhavame, each corresponding to one clan:

1. Krocha-Khel
2. Dukru-Khel
3. Movi-Khel
4. Pame-Khel
5. Pohena-Khel
6. Zdone-Khel
7. Rdomeh-Khel

#### 5.2.9.1 Village plan

Zhavame is a relatively large village and covers an area of approximately 23 hectares (Fig. 189a and b). The area of the village stretches out to NW-SE and has a very low population density in the north-western part. Here are some communal buildings, such as the large main church of the village. The houses are mainly located in the middle and south-eastern part of the village area. However, there are also some isolated houses outside the north-western area, which can also be attributed to Zhavame.

The terraced fields of Zhavames can be found mainly to the east, directly adjacent to the village area, but also to the west on a smaller scale. As is common in Naga villages, Zhavame is close to a hilltop and surrounded by forests. These areas used as secondary economic areas are to be located to the north, south and east of the village.

Regarding the megalithic monuments four groupings can be recognised, which lead in their distribution to different economic areas. On the one hand, a smaller group of monuments documented in Zhavame leads east of the village area to the large cluster of terrace fields. This group consists mainly of single standing stones. A very small group of monuments, two kilometres away from the village and belonging exclusively to Pame-Khel, is set off from this distribution pattern and not oriented towards the food paths. This group of four monuments comprises three rows of stones (two each) and one single menhir. The monuments are between 150 and 500m apart from each other. Thus, it remains unclear whether these monuments actually represent a self-contained grouping. 450m north of the settlement area there is another small group consisting of a number of standing stones without a clear affiliation, a row of stones and other menhirs. All clearly identifiable monuments belong to Dukru-Khel. Between this cluster and the village area are scattered some standing

stones, which can be added to the Krocha-Khel. Only a few monuments are located in the south-eastern part of the village itself (Fig. 190a and b).

These monuments extend along the paths out of the village and are only partially clear in their affiliation. All identifiable monuments in this area belong to either Zdone-Khel or Rdomeh-Khel, whereby there is no spatial separation between monuments of these two *Khels*. It remains questionable whether the monuments were originally outside the village area and were only spatially enclosed later by the growth of the village. The largest group by far leads along the field paths from the southern end of the village in a south-easterly direction past the terrace fields through the woodlands (Fig. 191a-c).

These standing stones form an almost closed chain, which is interrupted by single larger monuments. A special feature here is that the rows of stones partly line the paths like an avenue and menhirs of probably different builders are joined together by stone frames. Of these monuments, only a very small number could actually be assigned to a specific *Khel*. These include the Pohena-Khel, the Pame-Khel, the Movi-Khel, the Zdone-Khel and more rarely the Krocha-Khel. All other menhirs were only documented in a survey.

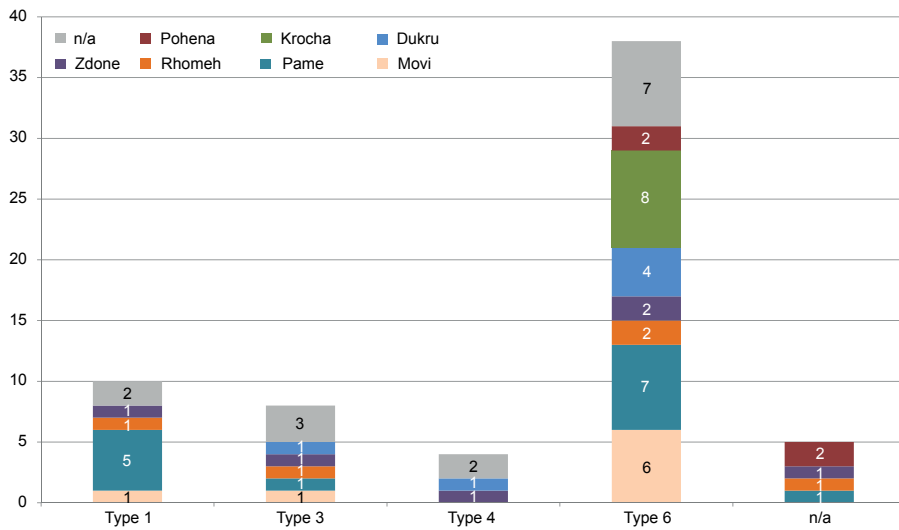


Fig. 193: The different monument types represented in Zhavame with consideration of the *Khel* affiliation.

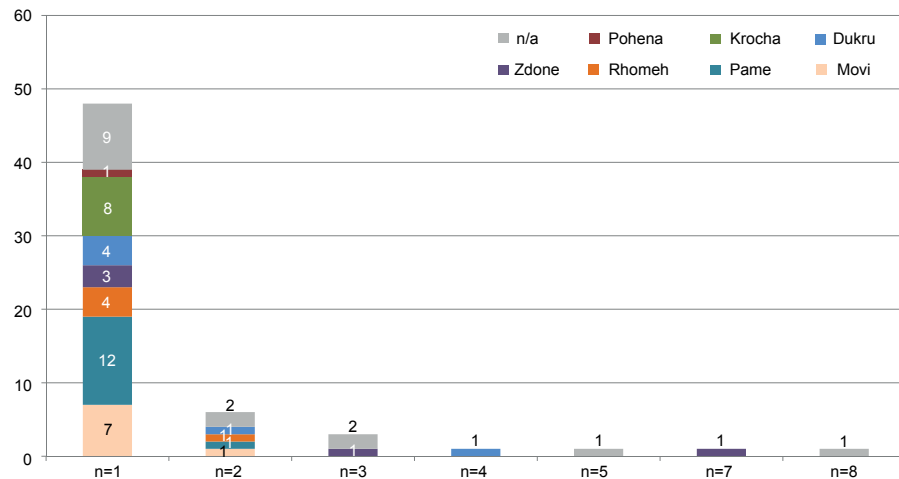


Fig. 194: The number of menhirs per monument and their affiliation with the *Khels* in Zhavame.

### 5.2.9.2 Interviews

In Zhavame an interview was conducted on 13.03.2016 and lasted 2:56:13 minutes. In addition, short conversation sections were recorded on 12.02., which took place during the documentation work near the field paths. The main interview was conducted in the village in front of the house of the deceased traditional priest. Present was a group of older men, some of whom had seen the construction of megaliths and the *Feasts of Merit*. In addition, the wife of the deceased priest was present, as well as various persons who came and went during the interview. The translation was done by Dam Vasa and another person. Due to the changing presence of different people, as well as the high number of participants during the interview, some parts of the interview are incomprehensible. In these cases, the notes taken during the interview were used to complete all of the important information.

#### The village

Within Zhavame some memories of pre-Christian structures were still present. Originally there were three priests who were recognised as priests after one year and specific rituals. Especially during the feasting activities these fulfilled some important tasks. This included the selection of the animals to be slaughtered, the distribution of the meat and the blessing before slaughter.

#### The megalithic monuments: meaning

The importance of the stones in Zhavame is derived from the direct translation of the feasting activities and the number of stones. Thus, only one stone was erected per closed feast series. The monuments then stood as a materialisation for the achievements provided by the feast giver.

#### The megalithic monuments: builders

In contrast to other villages in the study area, in Zhavame only the feast givers themselves and not their wives were regarded as builders. Accordingly, only one single stone, considered male, was ever erected. The relationship between those households that had erected a stone and those that were unable to do so could no longer be stated. Thesü Alorra and Khüsho were named as the people with the highest number of monuments built, and thus the highest number of feasts held, each of whom had erected five stones.

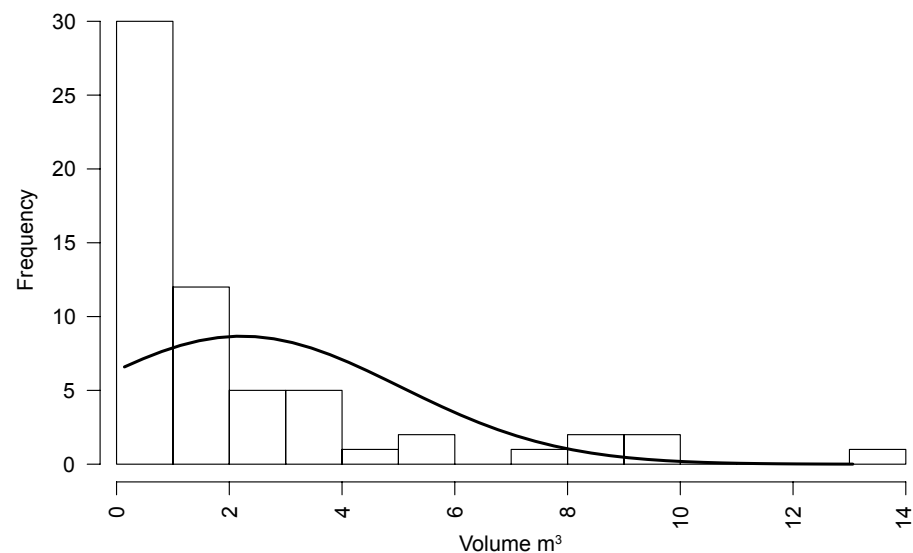


Fig. 195: Histogram of the volume (m<sup>3</sup>) of the monuments in Zhavame.

**The megalithic monuments: types and size**

The shape of the stones was not described as significant overall. However, the monuments were to be oriented to the east, in the direction of the rising sun. Although there are also different types of monuments in Zhavame, no specific attributes of them have been mentioned here. The size was also not described as significant.

A unique monument in Zhavame are stones designed as heads, which lie on a platform on one of the food paths (Fig. 192). The stones there represent the heads captured in the headhunts and reflect a stone situated in the village, as well as specific representations on the fronts of the houses.

**The megalithic monuments: location**

The location of the monument to be erected was chosen by the feast giver and followed his preferences. It was also possible to erect the monument on the land of

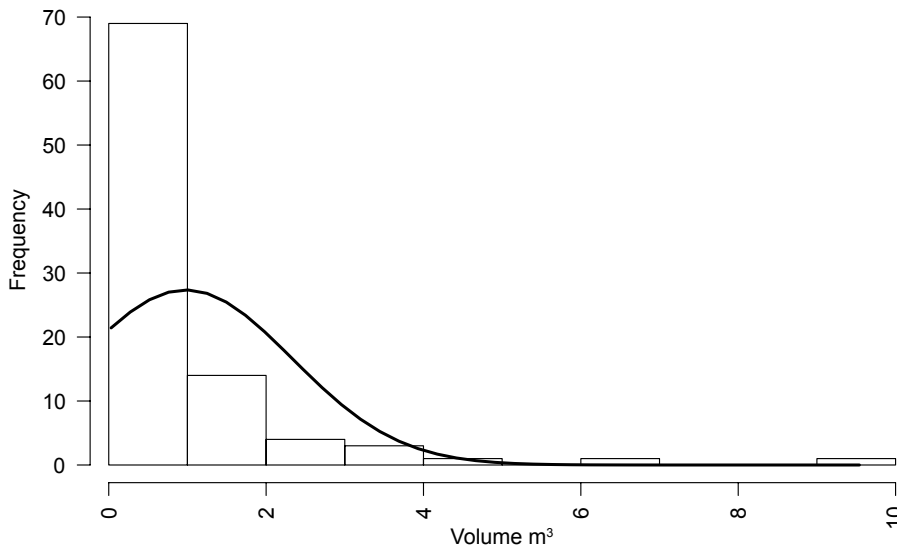


Fig. 196: Histogram of the volume (m<sup>3</sup>) of the single standing stones in Zhavame.

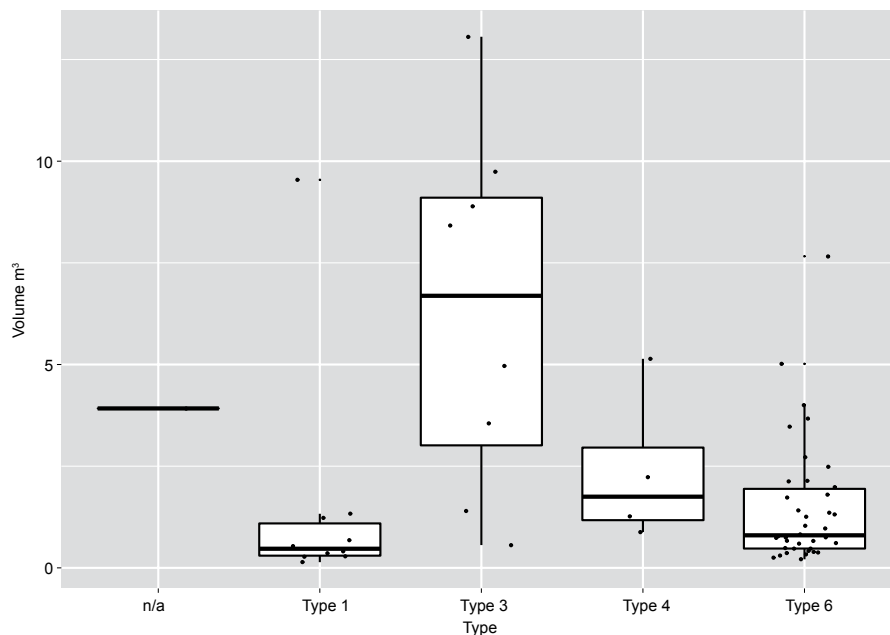


Fig. 197: Boxplot of the volume (m<sup>3</sup>) of the megalithic monuments in Zhavame with consideration of the type.

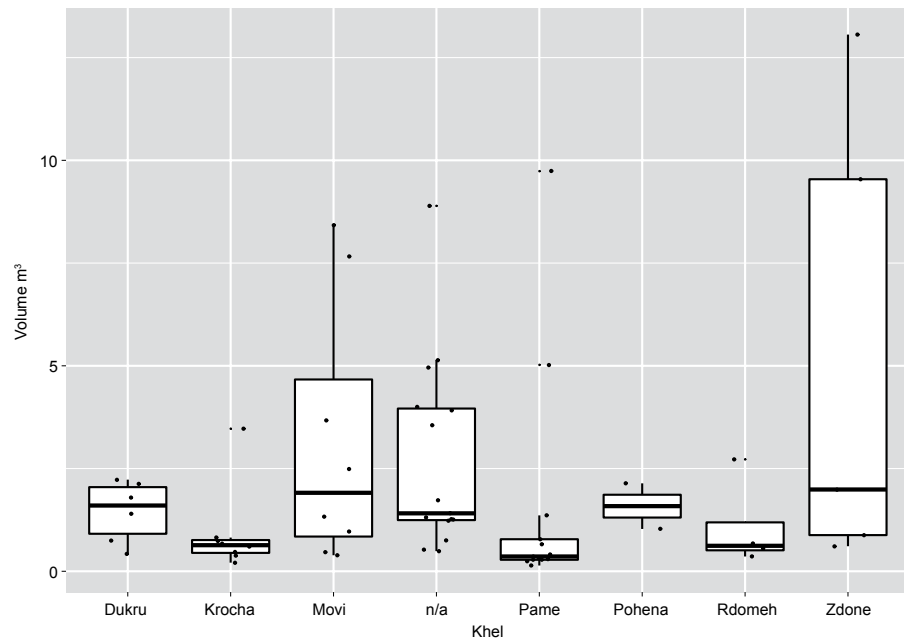


Fig. 198: Boxplot of the volume ( $m^3$ ) of the megalithic monuments in Zhavame with consideration of the *Khel* affiliation.

other persons or *Khels* and did not require any compensation in the form of duties (e.g. a cattle). The choice of the site for the construction was therefore not bound to the country of one's own *Khel*. Nevertheless, the clans and *Khels* had the opportunity to reserve a piece of land for the construction of group-related monuments. However, there was no effective mechanism that could have prevented the placement of non-group monuments in case of doubt. During the interview it was said that also individually belonging land becomes a common land in relation to the stones and thus became freely usable.

The prominent location of the sites along the paths leading to the fields, as shown in the mapping of the monuments, was explained by their visibility. The memory of the monument's builder was clearly in the foreground. In Zhavame there are very few monuments in the terrace fields. These were described as significantly older, but there were no more detailed memories of these plants.

### The quarry areas

All of the areas surrounding the village were designated as potential quarry areas. There were no restrictions on the use of stones located on the individual or collective property of other persons or groups (e.g. *Khels*).

### The building process

In the course of the construction process, both the feast giver and his wife played a central role. During the 30-day feasting activities, the couple went to the areas surrounding the village and looked for a stone to be pulled and erected at the end of the fourth feast. In this search, the two were accompanied by a *Mewü*, as well as relatives and/or friends. Then the feast giver waited for dreams that were interpreted as either positive or negative sign. In case of a good dream, the villagers set off on the 30th day for the stone to be moved to its location. The preparation of the required ropes, as well as the sledge, had already taken place after the first 10-15 days of the festivities by the men of the village and took about three to four days. After the sledge had been prepared, they returned to the feast givers house. The stone was pulled exclusively by the male villagers, with women being allowed to watch. The construction of the stone took place on the same day as the pulling.



Village	Type 1	<b>Type 6</b>	Type 2	<b>Type 3</b>	Type 4	Type 7	Type 8	Type 9	Type 10	Type 12	Type 5	Type 11	n/a
Khonoma (n=120)	20/17%	<b>11/9%</b>	1/1%	<b>27/23%</b>	21/10%	2/2%	24/24%				1/1%		13/13%
Sechüma (n=23)	2/9%	<b>2/9%</b>		<b>9/39%</b>	1/4%			4/18%	3/13%				2/8%
Chozuba (n=39)	1/3%			<b>1/3%</b>	16/40%		14/36%			2/5%		1/3%	4/10%
Khezhakeno (n=119)	58/49%	<b>37/32%</b>		<b>16/13%</b>	3/3%		2/1%			1/1%			2/1%
Khusomi (n=6)	1/17%				3/50%					2/33%			
Mesülumi (n=54)	7/13%	<b>5/9%</b>		<b>19/35%</b>	16/29%					5/9%		1/2%	1/3%
Rünguzu (n=21)				<b>3/14%</b>	11/52%				2/10%	4/19%			1/5%
Rüzazho (n=41)				<b>2/5%</b>	26/63%					10/24%			3/8%
Yohuba (n=31)		<b>1/3%</b>			23/74%		4/14%					1/3%	2/6%
Zhavame (n=69)	10/14%	<b>38/55%</b>		<b>8/12%</b>	4/6%								9/13%

During both activities no rice beer was allowed to be drunk; rather, this was only allowed after the construction. The feast giver was not allowed to participate in either the pulling or the erection of his stone.

### Feasting activities

The *Feasts of Merit* series described in Zhavame traditionally comprised four separate feasts, with the completion of the last feast permitting the erection of a megalithic monument. Each individual celebration covered a period of 30 days, during which all individual celebrations and activities took place at the feast givers house. In fact, the man was described as a feast giver, which meant that the *Feasts of Merit* were only male connotations. The host and his wife were not allowed to consume rice during the 30-day period. For the 30 days of the individual celebrations the following regulation of the activities applied:

- Day 1 (Morezü): slaughter of the buffalo
- Day 2 (Sorüzü): distribution of meat
- Day 3 (Sopicho): counting the heads of the slaughtered animals
- Day 4 (Zhosüra): collecting and cutting the firewood for the feast giver by the male villagers
- Day 5-10: preparation of rice beer

After this period, the feasting activities began. In the case of the fourth and last feast, this period could be extended to up to 15 days. Then the male villagers went to the stone previously selected by the feast giver and his wife and prepared the sledge for pulling it. The resources needed for the festivities were provided by the feast giver and relatives. This type of assistance implied a return by the beneficiary in the context of further celebrations. The *Feasts of Merit* also included three invitations to at least one neighbouring village.

Directly connected to the *Feasts of Merit* were also the house horns, which could be attached to the front of the house. After the end of the feast series, one of these could be attached to the house. A specific scarf, which could be worn after the completion of the feast series, was used as a further sign for the feast giver. On this were different symbols like buffalo and horse representations, house horns, as well as moon and stars, processed.

Tab. 6: The monument types of Nagaland represented in the different villages and their percentage of the total data stock. Menhirs: Types 1 and 6; stone rows: Types 2, 3, 4 and 7; stone platforms: Type 8-10; fields of stones: Type 12. Stone rows and menhirs with attached platform are highlighted in bold.

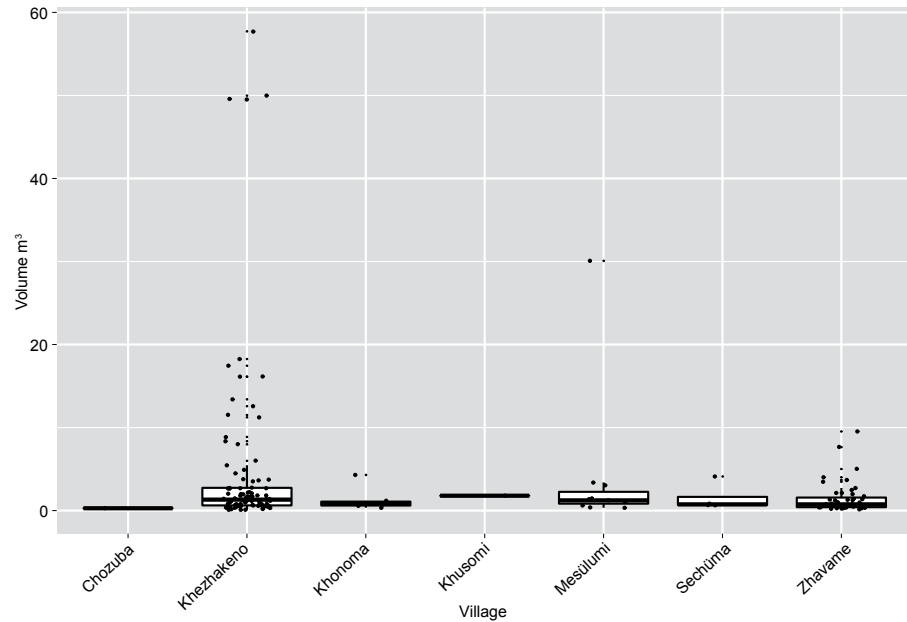


Fig. 199: Boxplot of the volume ( $m^3$ ) of single standing stones with and without platform in individual villages of Nagaland.

### 5.2.9.3 Statistics

In Zhavame 69 different monuments could be documented during the field stay, some of which could be assigned to the different *Khels* resident in Zhavame (Fig. 193). Five of these 69 monuments could no longer be assigned to a specific type.

The largest group are the single standing stones ( $n=48$ ; 69%), whereby such examples with an associated stone platform are in the majority ( $n=38$ ; 55%). The rows of stones form only a small part of the inventory in Zhavame, whereby their number amounts to 12 (18%). Of these, the majority ( $n=8$ ) of such examples are provided with a platform, but the ratio is more balanced here than with the single standing stones. Further monument types could not be documented in Zhavame. The only type of monument present in all of the *Khels* represented in the village are the single standing stones with platform (type 6). However, the number of these monuments per *Khel* differs and varies between two and eight exemplars per *Khel*. All other types are usually represented only once per *Khel*, whereby here no focal points in the preference of the *Khels* for certain types of monuments are recognisable. Zdone-Khel and Rdomeh-Khel have a particularly wide type variation. Although both *Khels* have only a small number of one or two monuments per type, a higher variability can be seen here. Conversely, the situation is the same for the Krocha-Khel, which has a relatively high number of type 6 ( $n=8$ ), but otherwise contains no other monument types.

For 60 of the monuments, it was also possible to document the orientation of the monuments themselves and of the individual stones. With two exceptions, the orientation of the stones corresponds to the overall orientation of the monument. This applies to both ground-level types and types with platforms. A special circumstance is the fact that the majority of the monuments are either N-S ( $n=23$ ; 34%) or E-W ( $n=17$ ; 25%) oriented. The following largest group within the monuments then form the orientations according to NE-SW, NNE-SSW and ENE-WSW ( $n=15$ ; 21%). Finally, the smallest group within the data set are the alignments according to NW-SE, NNW-SSE and WNW-ESE ( $n=4$ ; 6%).

Regarding the number of stones per monument, the single standing stones, which are present in all *Khels* of Zhavame (Fig. 194), are to be mentioned above all.

Also quite evenly distributed are very small rows of stones, each with only two accompanying stones. These are present in four of the six *Khels*, but the unclear

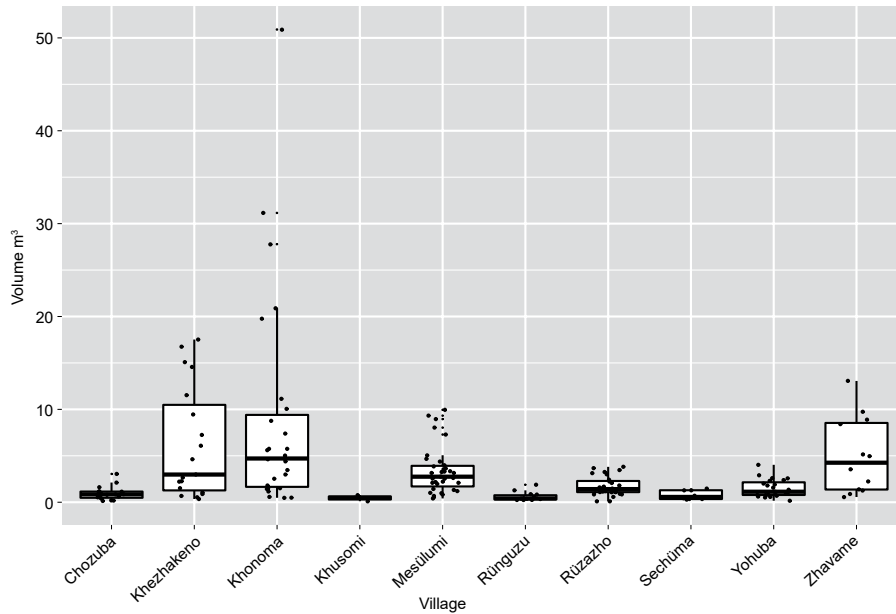


Fig. 200: Boxplot of the volume ( $m^3$ ) of different stone rows with and without platform in individual villages of Nagaland.

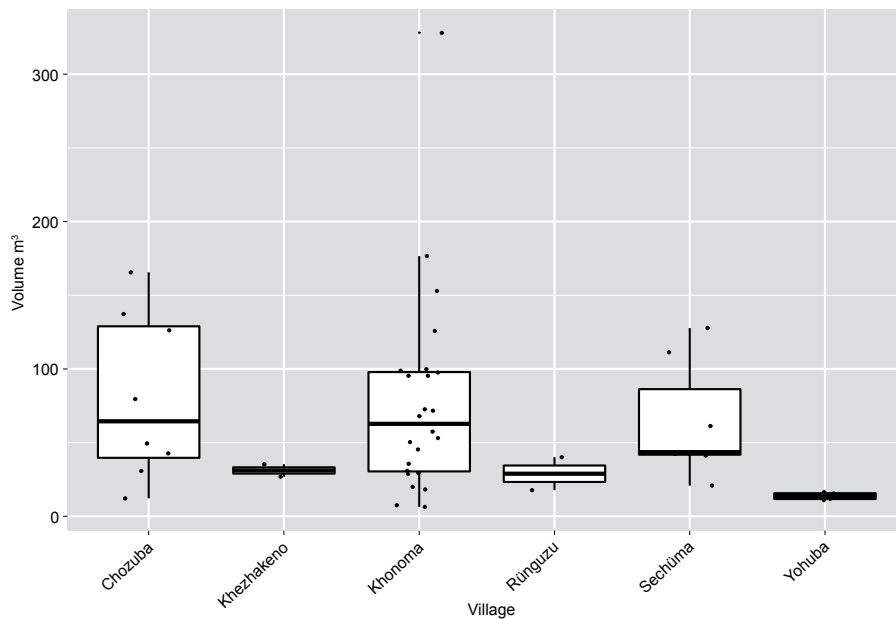


Fig. 201: Boxplot of the volume ( $m^3$ ) of seating platforms in the individual villages of Nagaland.

association of two exemplars must be taken into account. Rows with three and up to eight stones are very rare in Zhavame and are only represented seven times in the data set. Here again, the problem arises that in relation to some of these monuments the affiliation to the *Khels* is no longer clear. The only *Khels* that clearly include such monuments are Zdone-Khel and Dukru-Khel.

Due to the high occurrence of the single standing stones in Zhavame, as well as the lack of stone platforms, the distribution curve of the monument volume is quite even (Fig. 195).

The majority of the data is in a range between 0 and  $1m^3$ . After that, the distribution curve drops and all other size classes are rarely represented. The relatively flat distribution curve is due to the fact that none of the monuments reach a volume of more than  $14m^3$ , which is a rare phenomenon within the data sets analysed here. In fact, some of the outliers are not due to the presence of stone platforms, but to the unusual size of a few of the stones used. This can be seen in the histogram of the

Village	N-S	NE-SW	E-W	NW-SE	n/a
Khonoma (n=120)	12/10%	40/34%	14/13%	18/16%	35/27%
Sechüma (n=23)		4/18%	5/21%	5/21%	9/14%
Chozuba (n=39)	1/3%	10/26%	10/25%	5/15%	13/31%
Khezhakeno (n=119)	11/9%	41/37%	17/13%	41/35%	9/6%
Khusomi (n=6)	2/33%	2/34%	1/17%	1/16%	
Mesülumi (n=54)	8/15%	16/29%	1/1%	29/55%	
Rünguzu (n=21)	3/14%	12/57%	1/5%	4/19%	1/5%
Rüzazho (n=41)	3/7%	22/55%	3/7%	10/24%	3/7%
Yohuba (n=31)		13/42%	8/26%	4/13%	6/20%
Zhavame (n=69)	23/34%	15/21%	17/25%	5/6%	9/14%

Tab. 7: The orientations of the monuments documented in the different villages of Nagaland and their percentage of the total data stock. The orientations are summarized as follows: **NE-SW**= NNE-SSW, NE-SW, ENE-WSW; **NW-SE**= WNW-ESE, NW-SE, NNW-SSE.

menhirs, which is shown in Figure 196. Although most of the data is located in the range between 0 and 1m<sup>3</sup> per stone, there are also some outliers which indicate a volume of up to 10m<sup>3</sup>.

Nevertheless, the variation in size and the occurrence of outliers in Zhavame is primarily due to the presence of platforms that complement individual standing stones or rows of stones (Fig. 197). The large range of the size of the monument types 3 and 6, which are responsible for the majority of the size variance, is clearly visible here. Another striking feature is the very high number of single standing stones with an associated stone platform, which exceed the size of simple, ground-level stone rows.

Regarding the size distribution of the individual *Khels*, it is noticeable that a division of the data set into two is implied (Fig. 198). On the one hand, it can be seen that half of the *Khels* (Zdone, Movi and Pame) have very different sizes, ranging from average and smaller to exceptionally large monuments. However, the number of monuments strongly varies: above all, only a small number of monuments can be clearly assigned to Zdone-Khel. The second group of *Khels* (Dukru, Krocha, Pohena and Rdomeh), on the other hand, do not show megaliths exceeding a total volume of 2.5m<sup>3</sup>, except for two slightly larger outliers. Again, *Khels* exist that have only a very small number of monuments (e.g. Pohena), as well as those with a higher number (e.g. Dukru).

#### 5.2.9.4 Summary

Regarding Zhavame, the low variance of the monument types is particularly striking. This lack of variability also causes the relatively even size distribution of the monuments. However, regarding the individual *Khels*, there were some differences in the number and size of the monuments.

A special feature is the orientation of the monuments. Unless there were reasons for a different orientation (especially regarding the spatial conditions), these should always be oriented to the east. This corresponds to the traditional orientation of the face in the context of funerals.

Also the spatial arrangement seems more strict in Zhavame than in other villages. Thus, own clusters of the individual *Khels* are quite recognisable. This is well in line with the statement made during the interview that individual *Khels* could use certain areas for the construction of their monuments. However, the very high number of monuments that could no longer be attributed to *Khel* is problematic.

## 5.2.10 Comparative analyses

Below is a summary of the comparison of some of the fundamental factors of the aspects relevant to this work. Of course, the megalithic monuments themselves hold importance, which can be compared at the level of both the individual villages and the Angami- and Chakhesang-Naga. In addition to the individual types, the sizes of the monuments are also of interest. As already shown in the description of the individual villages, the construction of the megalithic monuments is always connected with the *Feasts of Merit*, which are also included in the comparison.

In addition to the six villages presented in detail, four other villages were included for these analyses, in which the necessary data were also recorded during the field stay. Essentially, it should be noted that the number of Chakhesang-Naga villages is eight, while only two Angami villages could be visited. This must be taken into account when comparing these two groups. Altogether 426 monuments could be included in the comparison due to the completeness of the available information, of which 349 (82%) can be assigned to the Chakhesang-Naga, and 77 (18%) to the Angami-Naga.

### 5.2.10.1 The monuments: types, size and orientation

Regarding the megalithic monument types documented in the Angami- and Chakhesang villages taken into account, fundamental differences arise, which are explained in the following.

Essentially, the recording of the twelve monument types in Nagaland can be divided into four main types. Thus, the stone platforms (type 8, 9 and 10) form one of the main types, which can be divided into such stone platforms, which are built by individual families, as well as by a collective (*Khel* or clan). The basic form and added attributes, such as a monolith on one side of the monument, can also be further differentiated. However, the function of the platforms is always the same: they serve as an important meeting place for a collective. Regarding the Angami villages, this main type accounts for 22% of the total amount of monuments. This number is in clear contrast to the analysed Chakhesang villages, in which platforms only a total share of 5% is found.

The second main type are the single standing stones, which occur either with or without stone platform (type 1 and 6). Here again, very different percentage frequencies can be seen in the two Naga groups. In the Angami-Naga, the menhirs make up 25%, while in the Chakhesang-Naga they make up 42% of the data stock.

The most varied main types are clearly the rows of stones, which could be documented in very different forms (types 2, 3, 4 and 7). Most common in both groups are the raised rows of stones on stone platforms, as well as simple types at ground level. However, there are also rows of stones bordered by stone frames and integrated into walls. In fact, the rows of stones are the only main type that are found in almost equal proportions in both groups (Angami villages: 44%; Chakhesang villages: 40%).

Finally, the stone fields consisting of a higher number of free-standing menhirs are to be mentioned as main type (type 12), although these only occur among the Chakhesang-Naga with a share of 6% of the total data stock.

These four main types make up 91% and 93% of the data in Angami and Chakhesang villages, respectively. The remaining percentage points are distributed among monuments that can no longer be determined regarding their type, as well as the graves with monoliths (type 5) and stone platforms with small stones, which represent the number of affairs of the builder (type 11).

There are some differences regarding the individual villages (Tab. 6), some of which differ from the distribution of the groups described above.

Thus, in Sechüma, contrary to the distribution in Khonoma, 48% of the monuments are single standing stones, while the proportion of platforms is relatively high at 31%. The distribution of the rows of stones in Khonoma and Sechüma is approximately the same (36 and 44% respectively). Due to the high number of monuments in comparison to Sechüma, Khonoma is the most influential factor for the overall distribution of the data.

The Chakhesang villages also show a diverse data distribution due to the higher number. The most striking feature is the fact that only four of the eight villages (Chozuba, Yohuba, Rünguzu and Khezhakeno) have stone platforms used as meeting places. Chozuba as a village falls out of the framework of the Chakhesang-Naga as a whole. There are very few standing stones (and exclusively without a suspended platform), whereas there are a very high number of stone platforms. The distribution of the rows of stones corresponds approximately to the average. The same applies to the village of Yohuba, which has an unusually high number of rows of stones. Khezhakeno and Zhavame also contradict the average in their type distribution, but in this case a particularly high quantity of single standing stones (81 or 69%) with a small quantity of stone rows (16 or 18%) are decisive for this deviation.

The total volume of single standing stones with and without platforms differs considerably between the individual villages included in the analyses (Fig. 199).

It is clear that Khezhakeno in particular has a large number of such monuments, some of which have an extraordinarily high total volume. The enormous size of the monuments in this case is mainly due to the large number of menhirs with platforms, which make up 32% of the data stock. Obviously, in this village there is an above-average interest in the construction of such, with their platforms, particularly large and impressive monuments. Zhavame, which is also similar to Khezhakeno in terms of type distribution, also has a high number with a comparatively higher volume of this monument type. Most of the villages have a comparatively small range of volumes of this type of monument, which is also due to the usually much lower percentage of single standing stones with platforms.

However, regarding the rows of stones, an increased range of the total volume of the monuments represented can be seen in all villages (Fig. 200).

This is connected on the one hand with the possibility to complete the rows of stones with a stone platform (whereby the percentage differs greatly from each other), while on the other hand the number of stones per row of stones naturally also characterises the total volume. As the number of stones can be up to 30, a scattering of the data is clearly to be expected. Again, Khezhakeno and Zhavame are villages with a large number of particularly large monuments. Interestingly, however, both villages are only in the middle range in terms of the percentage of stone rows with platform, while Khonoma, Mesülumi and Sechüma in particular, have the highest percentages in this category. In Khonoma, this circumstance is clearly visible within the boxplot, but regarding Mesülumi and especially Sechüma, this circumstance is less clearly reflected in the total volume of the monuments. Obviously in these cases the construction of monuments as large as possible in connection with the use of platforms was clearly less in the foreground of the tradition of the construction of megalithic monuments.

Finally, figure 201 shows the size distribution of the stone platforms, which could only be found in a part of the villages.

Regarding the stone platforms, a clear division of the data pool is noticeable, which suggests a distinction between villages with many and at the same time often large, as well as those with few and at the same time small stone platforms. The group, which has many and large platforms, includes the two Angami villages Khonoma and Sechüma, as well as Chozuba as the only Chakhesang village. Although all three of these villages also have platforms of the same order of magnitude as in the other villages, there are also platforms with a size of more than 300m<sup>3</sup>. The other

Chakhesang villages, which form the second group, have only very small exemplars, which also occur only in small numbers.

A strong variability of the data stock is also recognisable regarding the orientations of the megalithic monuments in the different villages (Tab. 7). Essentially, the sometimes-high percentage of no longer ascertainable orientations is problematic if monuments were already too severely damaged to be reconstructed.

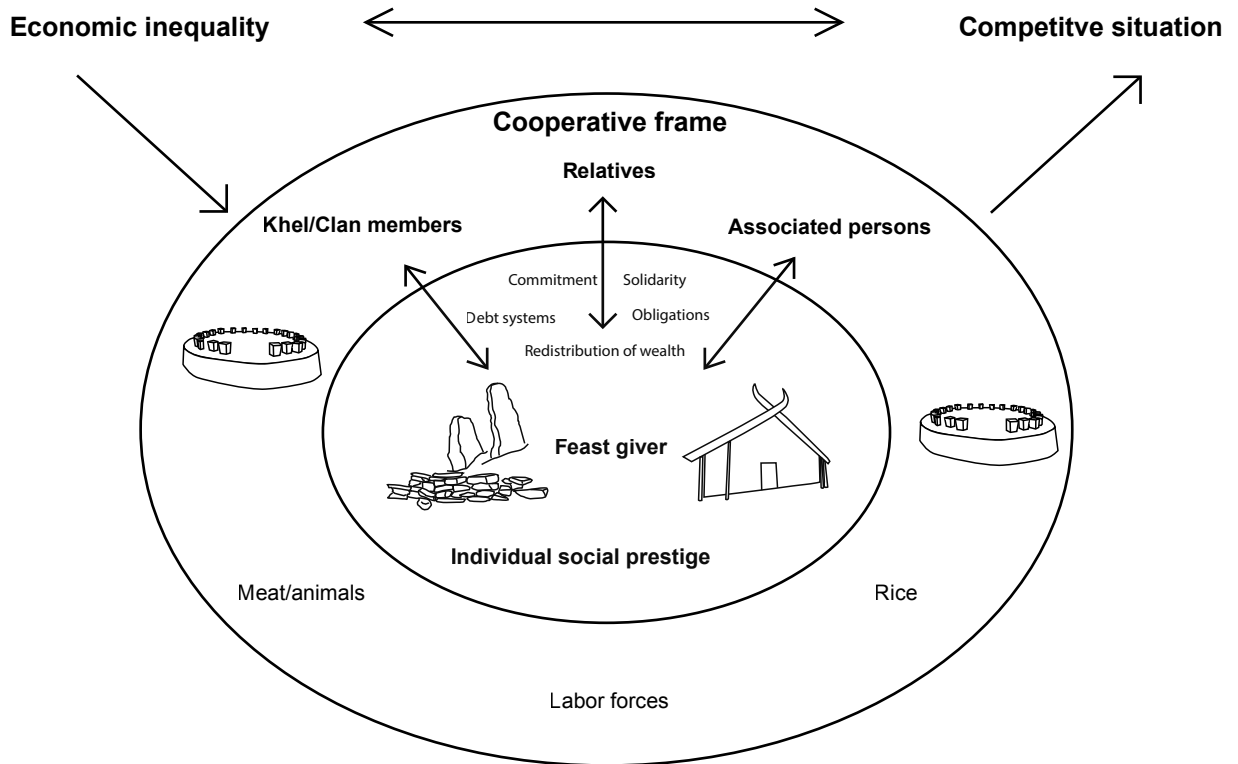
However, it can be seen that in most villages, whether Angami- or Chakhesang villages, the orientations to N-S and E-W make up the smaller part of the data set. In most cases, these orientations account for up to 25% of the total stock. The only exceptions are Zhavame (59%) and Khusomi (50%). In most cases an orientation according to NE-SW is the variant with the highest percentage, which accounts for up to 57% (Rünguzu) of the data stock.

Both the type distribution and the orientations show that the construction of megalithic monuments was largely characterised by different preferences and variations from village to village. In many cases, the orientation of the monuments is based on the natural conditions as well as the paths and fields along which they are situated. Regarding the types, an average distinction between Angami- and Chakhesang villages is possible, but the breakdown according to the individual villages shows that the choice and construction of the individual monument types is very variable and by no means follows rigid rules.

### 5.2.10.2 Feasts of Merit

The data on the *Feasts of Merit* collected during the interviews during the field stay indicate that although the basic concept is the same in every village, the concrete feasting activities are shaped and performed independently by each autonomous village community. In none of the villages was the same feasting series described, which also applies to the two Angami villages. The basic feature of the *Feasts of Merit* is the fact that the effort required in terms of the resources to be spent per fixed

Fig. 202: Model of the megalithic building traditions in Nagaland.



level increases and the time at which the celebrations are held is usually limited to a certain month of the year. As a rule, the number of persons to be invited (from one's own family to the entire *Khel* or village) as well as the number of animals to be slaughtered and the number of rice baskets to be provided increases during the feasting series. In the monographs of Hutton (1969) and Mills (1937; 1922) the feasting series for Angami, Lhota, Rengma and Sengma-Naga (Stonor 1950) were described as uniform. However, due to the interviews conducted, this circumstance cannot be confirmed. For Khonoma – for example – a feasting sequence of a total of four individual feasts was described, whereby a megalithic monument was allowed to be erected from the fourth feast onwards. This series could be continued, whereby from the fifth feast, and thus after the erection of a stone, a house horn could be installed. In Sechüma, however – which is also an Angami village and not far from Khonoma – the feasting series comprised a total of six feasts, whereby the last feast was called *Lisü* and its completion required the construction of a megalithic monument. In addition, after the sixth feast, the house of the feast giver could be decorated. In the Chakhesang villages visited, different feasting series were also described. Thus, in Khezhakeno and Zhavame four feasts were organised, whereby in Khezhakeno after the third feast a specific scarf could be worn and after the fourth feast both a megalith and a house horn could be erected. What was unique here was the statement that the richest people in the village in particular were expected to help the celebrating couple to provide the necessary resources. Usually it was said that this was the task of the family, the clan, as well as the *Khel*. In Zhavame, each individual feast lasts 30 days, and after the fourth feast the stone was allowed to be pulled. Mesülumi described a particularly complex type of *Feasts of Merit*. Although the feasting series here comprises only three consecutive celebrations, at least two separate feasts for as many people as possible belonged to each one. In Mesülumi, a distinction was also made between a simple and a complex way of passing through the *Feasts of Merit*. In the course of the simple version, each individual celebration lasted nine days, in the case of the complex version 29 days. During this time, as many individual feasts as possible should be held. This very elaborate and differentiated feasting series also finds a materialising impact that deviates from the standard. After the first feast a simple house horn could already be installed, after the second feast then a decorated house horn. After the third feast, a megalithic monument was erected.

As has already been described regarding the design of the monuments in terms of their type, orientation and size, the *Feasts of Merit* also show a great diversity in the concrete implementation of this social institution, which was fundamental in the past. The reason for this can certainly be the formerly almost completely isolated situation of the individual villages, as well as their complete orientation towards their own economic, political and social autonomy. The variability recognisable in the interviews as well as in the database indicates a shared basic function of certain social processes and forms of organisation, but also shows how much the individual communities attached importance to their independence.

### **5.2.11 Megalith-building traditions in Nagaland: modelling**

The megalithic-building traditions documented in Nagaland takes place in many aspects of uniform patterns that are visible in terms of both the ethnographic literature and in the individual villages included in the documentation. Thus, the basis for the construction of individual standing stones, as well as rows or fields of menhirs, is always the completion of the *Feasts of Merit*. These represent a fundamental mechanism of socialisation and structuring, especially in the traditionally flat hierarchical societies of the Angami- and Chakhesang-Naga. This is closely related to the



lack of institutionalised social positions. In the absence of these, the feasting activities serve as a structuring action that regulates social standing and voting rights, as well as influence within the village structures. In Angami as well as in Chakhesang villages it has been described that participation in decisions concerning the entire village depends fundamentally on the social standing of individuals. Although the priests of the village traditionally played an important role in these institutions, access for all other men within the village was fundamentally free. The position of the priests was also the only one described, at least in part, as hereditary. However, mechanisms were also described which made it possible to prevent an inheritance of this social position if the persons concerned were not personally qualified, since these positions traditionally entailed a strong degree of social responsibility.

The decision-making processes of the largely autonomously-organised villages traditionally took place to a strong degree on a collective and communal level, in which social groups such as the *Khels* or clans had decision-making rights over large parts. These very basic units were largely heterogeneous collectives, uniting different families, age groups, clans and lineages. The fundamental cooperation regarding cultivation, activities necessary for the defence of the village, as well as house building were a central point of reference within these systems, which were to fundamentally strengthen the group cohesion. Thus, most of the village was at least indirectly involved in them. However, it must be mentioned that women were largely excluded from these structures and could only exert influence indirectly through their husbands.

Megalithic construction played an essential role in these structures, because the monuments erected must be seen as a significant materialisation of the attainment of social prestige. Thus, the monuments are always the conclusion of the feasting series and, besides the house horns and specific decorations of the house fronts, are an obvious representation of personal achievements. Although the standing stones were comprehensively classified as personal monuments associated with a particular person or couple, there is a second level of collective reference. Thus, in most documented cases, at least the relatives – and often also the *Khel* and clan – were involved in the allocation of the required resources. A special feature is the strictly redistributive function described in Khezhakeno of solidarity-based participation, especially of the richer households, in the expenses of the feast giver. In this case, the redistribution of increased wealth to individuals while simultaneously benefiting the entire village society can be seen as an explicit mechanism that mitigates economic inequality. Rüzazho was the only village in which it was explicitly stated that the resources should only be provided by the feast giver. However, here the feasting series was actually shortened, whereby in the entire process less effort was necessary for the feast giver.

Although, as already mentioned, there were only a few fixed positions and social hierarchies in the Naga societies discussed here, one cannot speak of completely egalitarian structures. In the case of women in particular, considerable restrictions have been mentioned, which could, among other things, prohibit the erection of a stone. In addition, there was of course a great deal of economic inequality, which continued to find clear materialisation through the holding of the *Feasts of Merit*. The relationship between those households that could hold such feasts and those that could not, was described in a village at 1:3. Regarding the megalithic monuments, this economic inequality – which could also be partly connected with possibly insufficient support by the *Khel* and clan – was not reflected in the size of the individual stones but in relation to the number of stones, as well as the number of monuments per *Khel*. In many cases, both factors showed a very uneven distribution with respect to the individual *Khels*. These differences in distribution suggest that the different *Khels* had quite different economic bases and were more or less strongly involved in feasting activities.

In addition to the Angami- and Chakhesang-Naga, there were other Naga communities where megalithic monuments were erected. These were in some cases more strongly characterised by institutionalised social inequality, which – for example – provided for the presence of *Angs* (similar to chiefs) as a hereditary, decision-legitimate and influential position. Menhirs were also partly built in such communities, but in these cases the same followed different rules and was partly reserved only for the *Ang*.

Besides the close connection with the *Feasts of Merit*, further characteristics of the megalithic building in Nagaland are to be emphasised. The construction of the stones along the paths was consistently described as an important factor during the field work. By such a placement the commemoration of the builder was ensured, since here every day a lot of people would pass the monument. Megalithic monuments, especially in the Chakhesang villages, have been described as memorial monuments commemorating the reputation and achievements of the builder. However, in the Angami villages, a reminder function for the deceased relatives of the builder was also mentioned, which was also placed in a social order due to the size of the stones. In these cases, every stone erected stood for a deceased family member. The collective significance of the stones was also evident in the fact that the land could always be freely chosen for a megalithic monument. This concerns both the place of origin of the stone and its final positioning. Even if the area in question were privately owned, the construction of a monument has always been described as possible. In one case it was even mentioned that the land in question always becomes collective property as soon as a stone is involved, irrespective of ownership claims.

The mechanisms and characteristics of megalith construction in Nagaland presented here can be summarised as follows and referred to the theoretical approaches presented in chapter 3 (Fig. 202). In the following, reference is made exclusively to Angami and Chakhesang villages, whereby considerable differences can be observed in relation to other Naga groups.

1. Megalith building in Nagaland is strongly linked to a specific culture of memory. A collective frame of reference is given by the connection with the *Feasts of Merit*. The frame of reference within this the culture of remembrance is different among the villages. While in Angami villages every stone stands for a deceased family member of the builder, in Chakhesang villages the builder himself is remembered. Ritual factors and ritual communication are no longer significant in relation to the monuments themselves. No further activities at the monuments were described during the interviews. However, by embedding the monuments in the path system of the villages, a connection is given that enables the formation of a specifically-connoted memory space.
2. In the Angami- and Chakhesang villages there are also differences regarding the wealth of individual persons, who produced an economic inequality, sometimes considerable. This inequality was strongly related to agricultural activities, as well as the amount of land and livestock ownership. Material manifestations and representations of this inequality were quite significant. For example, the possession of resources such as rice was often kept in clearly visible places on the house. Above all, however, the *Feasts of Merit* and the megalithic building itself served as a clear materialisation of economic differences between individual households and groups. Besides the megalithic monuments themselves, the house horns, the decorations of the house fronts, as well as the privilege of wearing specific scarves or other garments are also worth mentioning.
3. Decentralised forms of organisation, such as those found in more anarchistic forms of society, have traditionally also been very important in Nagaland. The villages themselves were self-sufficiently organised and functioning units over a long time span. The importance of communal and collective structures can

also only be emphasised in this context. Thus, many activities concerning house building, agricultural activities, *etc.* were organised in working groups or in social groups such as the clans and *Khels*. Decision-making, as well as parts of the jurisdiction, were also embedded in this framework and were mostly carried out via representatives who had qualified for this function through their social standing.

4. Exclusive strategies are only partially known in Nagaland. This description is most likely to apply to the partially-hereditary priesthoods, which were relatively powerful. Regarding these social positions, the importance of symbolic sources of power should be emphasised. This encompasses the ritual knowledge handed down from generation to generation and the importance of priests; for example, during the course of the agricultural year. However, in general the focus was mainly on communal strategies that transferred social responsibility and rights to differently-scaled groups.
5. The degree to which megalithic monuments in Nagaland were decisive for the construction of the landscape varies considerably. It is clear that the location of the monuments along the paths created a link between the village, as well as the economic areas, which was mainly important as a memorial. However, a specific connotation of areas by social groups and such a use of these areas was rarely described. However, if a *Khel* or clan used a certain area for the construction of its own monuments, this is of course a restrictive strategy, which should exclude other groups if possible. Nevertheless, it was also highlighted in these cases that certain mechanisms should prevent the exclusive use of land for the erection of monuments by specific groups or individuals. There were few restrictions on the availability of resources in Nagaland. Thus, all basic resources were available in communal areas for all villagers. Although there were also land areas that could only be assigned to a clan/*Khel* or an individual, this did not apply to basic resources such as water, *etc.*, but there were also land areas that could only be assigned to a clan/*Khel* or an individual.
6. Due to the aforementioned self-sufficient organisation of the villages in Nagaland, the village communities were closely linked. This meant that important political actors, such as traditional priests, were also heavily dependent on the support of local communities. This certainly favoured the high status of collective strategies in Nagaland. Cooperative structures have benefited in particular from the reciprocal mechanisms fundamental to fixed activities. The importance of the solidarity support of feast givers, as well as the expected repayment implied thereby in the form of own sympathy was mentioned again and again. At the same time, the *Feasts of Merit* were the cornerstone of the individual's social reputation and took on a high significance. Criminal and sanctioning systems have not been further described, which makes it questionable how important they were in the social processes described. Closely interwoven with the individual's reputation was the opportunity to increasingly participate in basic bodies that made politically relevant decisions for the village. In addition, the reward system for feasting activities included the right to wear specifically-connoted garments, which also distinguished its wearer as a person of high social standing vis-à-vis strangers.

### 5.3 Ethnoarchaeological case studies: summary

The two ethnoarchaeological case studies of Sumba and Nagaland show some striking similarities, as well as differences from each other regarding megalith-building activities, which comprise tombs in Sumba and standing stones in Nagaland. Anyway, it has to be emphasised that both of these case studies show a high diversity and variability in itself. Regarding Nagaland, the changing exact execution of the *Feasts of Merit* has to be mentioned, which, albeit following a general purpose and rough framing, shows very different details and variations. For Sumba, the very strong differentiation between the west and the east of the islands has to be mentioned here. Anyway, even the communities within the eastern part of Sumba show variations with reference to the grave types, the burial rites, as well as the decoration of the tombs. Noticing this underlying variability and specific adjustment of megalith-building activities by each and every community participating. Nevertheless, some overarching influential courses of action and social mechanism can be summarised for both case studies.

Megalith-building traditions in both Nagaland and Sumba are influenced by a collective frame of reference, which is interlinking different spheres of living. In both societies there are social groups (the *Khels*, *Umas* and clans) which are fundamental to the establishment and maintenance of these cooperative structures. Further, in both Nagaland and Sumba collective frameworks comprise such different spheres and factors such as house building, agricultural activities, feasting activities and monumental construction. The diversity and importance of these cooperative structures creates a strong degree of interdependencies and thus have an influence on the maintenance of communal structures and corporate strategies. Although megalith building is itself a collective effort rooting in communal social structures, an individual attachment of the monuments to single persons or families has to be mentioned. This association and link between monuments and single individuals are accompanied by a materialisation of economic inequalities connected to megalith-building activities. Important factors in the representation of this economic inequality are the size of the tombs in Sumba and the number of standing stones in Nagaland. In both Nagaland and Sumba, megalith monuments have to be seen as a result of extensive feasting activities and the negotiating and attraction of assistance in the allocation of resources and manpower. In both cases, megaliths can be further seen as a materialisation of individual prestige, and – especially in Nagaland – they are a marker for social influence and achievement based social positions. This factor is especially important in the societies of Western Sumba and Nagaland, which are characterised by the absence of a social differentiation based on fixed hierarchies.

These are nonetheless existing in the eastern part of the island, which shows some fundamentally different aspects of megalithic monuments, which to a large extent reflect the social structure of the respective communities. Here, megalithic tombs (especially with reference to their type and attached ornamentation) are to be seen as a materialisation of fixed social hierarchies. The choice of graves is not open in these communities. Social inequality in Eastern Sumba is mainly based on objective sources of power, namely resources such as land ownership and livestock.

Despite the mentioned similarities, there are also some differences between the western part of Sumba and Nagaland. Characterised by decentralised structures and self-sufficient villages, Nagaland exhibits some features, which are typical for societies being characterised as anarchistic in political anthropology. Sumbanese villages show a much higher degree of interdependencies, with the ancestral villages functioning as central places in social and ritual manners. Nevertheless, in both case studies different social mechanism are present, which serve to prevent individuals acting in specific and influential social positions (such as priests) to misuse their

power. Social authorities can mostly be described as basing on achieved status in both cases. A further unique characteristic on megaliths in Nagaland is their function as a landscape-structuring element. The location of the megaliths along the paths leading towards the fields serves to interconnect the domestic and economic areas belonging to a village. This characteristic can be described as potentially creating social inequality. This would be the case, if the megaliths are used to create specific social domains which serve to limit access to land and resources to other groups than the one they are belonging to. Interestingly, there were specific mechanism described in Nagaland, which serve to prevent the creation of this kind of domains. Accordingly, land where megaliths are erected is in many cases automatically seen as communal land. The location of the monuments in an interconnecting way is further to be interpreted in connection with a specific culture of memory. The connoted space created by the erection of stones are creating a domain serving to illustrate and remember achievements by single individuals, as well as the groups connected to those. While Angami-Naga explicitly remember single deceased relatives of the monument builder, Chakhesang-Naga are mainly remembering the builder himself and his achievements.



## **6 The archaeological case studies: Funnel Beaker societies in present-day Northern Germany and Scania**

As a second focus of the present work, the archaeological case study and the comparison region are explained below. In both cases these are Early to Middle Neolithic societies, which are to be assigned to the superordinate context of Funnel Beaker societies. The first case study, which covers part of today's Northern Germany, is described in detail in relation to the existing megalithic tombs. In order to do justice to the chosen comprehensive approach of the work, information on settlement and economic factors was also consulted. This is followed by a regional comparison within the study area, as well as modelling. In order to put the results of these investigations into a broader context and compare them, the area of modern-day Scania was chosen as a reference region.

### **6.1 Archaeological case study 1: Funnel Beaker societies in Northern Germany**

In the period between 4100 and 2800 BCE, Funnel Beaker societies are spread over a wide area, which includes today's areas of Northern Germany, the Netherlands, Southern Scandinavia, as well as Western Poland. As mentioned at the beginning, two regions were selected as research areas. The first of these areas is in today's Northern Germany and includes the administrative districts of Stormarn, Herzogtum-Lauenburg, parts of the district of Ostholstein (all Schleswig-Holstein), as well as Nordwestmecklenburg and Ludwigslust-Parchim (both Mecklenburg-Vorpommern).

Two aspects of Funnel Beaker societies hold particular interest regarding the later evaluation. On the one hand, the settlement system and the information available on well researched settlement sites is of fundamental interest in approximating the estimate of available labour and social organisation. Second, economic markers (including subsistence strategies, flint axes, import finds and availability of raw materials) are also important in terms of megalithic construction.

According to the research questions of this work, a special focus is placed on the monumental tombs, namely the non-megalithic and megalithic tombs. These are examined regarding their chronological occurrence, their spatial distribution, as well as preserved inventories. However, a key point are the calculations of the work expenditure, which – together with other factors – are evaluated regarding their significance regarding cooperative and collective elements of Funnel Beaker megalith-building traditions.

The study area was selected primarily regarding the new research results presented by the SPP and existing studies, which considerably facilitated or sharpened the significance of the planned analyses. In addition to comprehensive studies of small geographical regions (e.g. Hinz 2014), detailed excavation results were presented, which provide a comprehensive insight into the various aspects of Funnel Beaker societies relevant to the question of this work (above all Brozio 2016; Dibbern 2016; Hage 2016). Accordingly, the chosen field of work enables a variety of analyses that would not have been possible without the previous work.

## 6.1.1 The study area

In the following, the natural structure of the study area and the history of regional research are presented. Source-critical factors are also of particular importance, which must be taken into account in particular when evaluating and interpreting the data sets presented here.

### 6.1.1.1 Landscape of the study area

The entire investigation area is strongly influenced by the last ice ages and the moraines that developed at this time. The area around Eastern Holstein is located around the Oldenburger Graben on the Wagrische Halbinsel. This hilly area is defined by processes of the Vistula period and is intersected by the lowlands of the Oldenburger Graben. The Oldenburger Graben is characterised by moorlands and silted up lakes and stretches over a length of 23km and up to 3km width (Duphorn 1995).

The south-eastern part of Schleswig-Holstein can be divided into different natural regions. In the northern and central part of the area the south-eastern hilly and lake country is to be found, which is characterised by light hills. Characterised by an end moraine range, this landscape is characterised by hills cut by streams and a lake district to the west. To the south is the Lauenburg moraine, which is characterised by sandy soils and moraine deposits. Finally, this area is bordered by the Elbe and partly shows relatively steeply sloping erosion channels. In the eastern area, the Mecklenburg landscapes are already connected, which are characterised on the one hand by the hills of the lakes and on the other by the southern lowlands (Hinz 2014, 17-18; Meyen and Schmithüsen 1953-1962).

Mecklenburg-Vorpommern can be divided into six large landscapes (Hurtig *et al.* 1957). On the one hand, the coastal area in the north-eastern part of Mecklenburg-Vorpommern is replaced by flat land with predominantly loamy soils. However, in the north-west begins the Mecklenburg Lake District, which extends to the south-east and is characterised by a young moraine landscape. Finally, in the south-western area is the foothills of the lake district, which drops down to the Elbe and finally flows into the Elbe lowlands of Mecklenburg. Nordwestmecklenburg and Ludwigslust-Parchim itself are thus characterised on the one hand by coastal landscapes and on the other by the Schwerin lake landscape. The southern part of this region is characterised on the one hand by sands and on the other hand by lowlands and hilly landscapes. Finally, to the east, there is the lake district, as well as flat-wavy landscapes along the coast (Hurtig *et al.* 1957, map 1).

### 6.1.1.2 History of research and source criticism

G. Kossinna (1910) conducted an early study of the Northern German Neolithic material, which also had a formative influence on the renaming of the previously common term 'Megalithkultur' to 'Funnel Beaker Culture' (Hinz 2014, 27). The first monograph on the material culture of the Funnel Beaker periods in the study



area was not published until 1935 by K. Langenheim, based on the inventory of three megalithic tombs from Schleswig-Holstein and forming a first chronological classification of the pottery. The most influential chronological analyses came mainly from Scandinavia in an early research phase and were formed based on settlement material (above all Mathiassen 1944; Winther 1943; 1935). The division into the individual Early and Middle Neolithic stages was also shaped by these same investigations. The chronological structure was further improved by revisions of the individual Early and Middle Neolithic stages, partly including absolute <sup>14</sup>C-dating (Koch 1998; Bagge and Kaelas 1950). Especially for the Scandinavian finds, several adaptations and revisions took place in the following decades, albeit which were often not absolutely chronologically verified. For Schleswig-Holstein, fundamental chronological investigations were carried out at the Siggeneben-Süd site (Meurers-Balke 1983), and for the Eastern Holstein area by J. Hoika (1987). This work is of fundamental importance for the Eastern Holstein area because Hoika not only reviewed the chronological classification of pottery and tried to reconcile it with Danish typologies, but also included other material groups in his investigations. C. Schirren (1997) carried out a holistic systematic investigation in the area of South-eastern Schleswig-Holstein, *i.e.* primarily the districts of Stormarn and Herzogtum-Lauenburg, which is also of fundamental importance. In this work he considered megalithic tombs, settlement features, as well as flint axe types and ceramics. These works are supplemented by the survey presented by H. Hingst (1959) for the district of Stormarn and by K. Kersten (1951) for the district of Herzogtum-Lauenburg, which naturally also contains the finds from the Funnel Beaker period. An important basis for the reconstruction of the Neolithic landscape and landscape use within the study area selected here is the pollen profile of Lake Belau presented by Wiethold (1998). M. Hinz (2014) also delivered a new and comprehensive treatment for the south-eastern region of Schleswig-Holstein. J. P. Brozio (2016) was also able to present detailed analyses of a settlement site and a passage grave, which are also of particular importance in the regional context of Eastern Holstein.

The megalithic graves of the region also represented an early research focus in the Mecklenburg area. Among the earliest and most extensive works are the works of E. Sprockhoff (1938) and E. Schuldt (1970a-d; 1969a-c). While Sprockhoff primarily recorded the existing and partially-destroyed megalithic graves, Schuldt recorded a total of 106 megalithic tombs, a large part of which (=75) was examined in further detail in the course of excavations. In addition, an evaluation of the grave inventories took place in this context. Nilius (1971) and Nagel (1991) also concentrated on the material culture of Funnel Beaker communities. Regarding Nilius, a strong reference to the already established Scandinavian models was made with a focus on the chronological classification. Studies on preserved settlements were carried out by Nagel and Wechler (1992) regarding Gristow, Kreis Vorpommern-Greifswald, Schoknecht (1991) regarding Zislow or also Schuldt (1974) regarding the Malchiner See settlement site. However, these were always studies of individual places or small regions, rather than a comprehensive presentation.

A considerable upgrading of the information available was achieved by taking the region into account in the course of the SPP 1400. In this context, the settlement system was extensively re-examined, taking into account the existence of megalithic tombs (Schafferer 2014; Rassmann and Schafferer 2012). Lorenz (2018) and Müller and Staude (2012) reassessed the chronology of Mecklenburg-Vorpommern. Hartz and Lübke (2005) also made a contribution to the fine chronological differentiation of the EN for the Eastern Holstein and Mecklenburg Bay area.

Overall, the quality and completeness of the data of Funnel Beaker period settlement sites, individual finds and graves in the investigated area is strongly limited by different source-critical factors.

As far as settlement sites are concerned, the fundamental problem arises that most of the sites addressed in this way are only known and characterised by surveys and superficial collections of finds. Although these places are listed in the official survey of the districts, no detailed data are usually available. The number of investigated Funnel Beaker settlements within the research area that could provide information on the organisation and structure of the settlements and are also relevant in relation to social-archaeological questions is still very small (cf. Chapter 6.1.2). Most of the finds recovered through the prospecting of the state offices and through collector activities are chronologically indifferent, whereby it is not possible to address the settlement sites defined in this way in an absolute chronological manner. Moreover, superficial collections do not allow any conclusions to be drawn about the exact character of the site. Therefore, it remains unanswered whether it could be a temporary or year-round used place, a specialised site or a permanent settlement, or a single farm or a larger settlement. In addition, an unequal quality of the prospecting is to be assumed. Areas such as the Putlos military training area in Eastern Holstein are unsuitable for prospecting activities due to access restrictions (Mennenga 2016, 169). Nevertheless, it should not be assumed that collectors are falsifying the data image due to the different intensity of their surveys (Hinz 2014, 192). Moreover, in forest areas an under-representation of identified settlement sites is to be assumed, since only few surface finds are present here. This also applies to the individual finds of Funnel Beaker flint axes. In areas used for agricultural purposes, the upheaval of the soil can be assumed to indicate an increased number of different finds.

Although there are also indications of megalithic graves in the form of burnt flint or parts of scattered orthostats on fields, an under-representation of megalithic tombs is to be expected in areas of intensive agricultural cultivation. On the other hand, there is a potentially increased presence of megalithic monuments in forest areas. Nevertheless, a high rate of destruction can also be assumed here, which is connected among other things with the modern use of the boulders as building material. Finally, a disturbance of the chambers of Funnel Beaker graves already took place in the Neolithic as well as in the Bronze Age. At this early point in time, the burial chambers were often disturbed by subsequent burials and removals of the chambers. Accordingly, megalithic tombs have been characterised over thousands of years by continuous interferences and an increased degree of destruction since modern times, which makes an evaluation of the current data base possible only under restrictions (cf. Hinz 2014, 192; Schirren 1997, 147-149).

## **6.1.2 Settlement sites**

The first factor to be outlined below are the settlement sites of the Funnel Beaker communities within the study area. As described above, the lack of clear settlement features, which could be documented by excavations, is fundamental here. However, the overwhelming proportion of sites defined as settlement sites has only been defined as such based on superficial collections and surveys. Due to these poor sources, which are not further relevant for the research questions of the work, this data is outlined only very briefly. Of greater importance on the one hand is the suggested change of the settlement system in the course of EN II-MN I, as well as the data that can be drawn from the settlements which were excavated at least in parts.

### **6.1.2.1 Chronology**

The most important basis in terms of research history for the establishment of the basic chronological system of the Funnel Beaker North Group, which is still used today, are the classifications of the ceramic material of Southern Scandinavian sites

cal B.C.	Periode	Nördliches Jütland	Seeland / Schonen	Südliches Jütland / Mecklenburg	Niederlande / NW Deutschland
-2100	SN 1	Frühe Dolchgruppen			
-2200	JN 3	Späte Einzelgrabgruppen			
-2300	JN 2	Mittlere Einzelgrabgruppen			
-2400	JN 1	Frühe Einzelgrabgruppen			
-2500	MN V	Store Valby		KA	Brindley 7
-2600	MN III-IV	Bundsø / Lindø		Bostholm	Brindley 6
-2700	MN II	Blandebjerg		Oldenburg	Brindley 5
-2800	MN Ib	Klintebakke		Wolkenwehe 2	Brindley 4
-2900	MN Ia	Troldebjerg			Brindley 3
-3000	FN II	Fuchsberg	Fuchsberg / Virum	Wolkenwehe 1	Brindley 1/2
-3100	FN Ib	Oxie / Volling	Oxie / Svenstorp	Satrup / Siggeneben-Süd	Spätes Swifterbant / Hazendonk 3
-3200	FN Ia	Volling	Svaleklint	Wangels / Flintbek	
-3300	End-Mesolithikum	Spätes Ertebølle			Mittleres Swifterbant
-3400					
-3500					
-3600					
-3700					
-3800					
-3900					
-4000					
-4100					
-4200					

Fig. 203: The chronological classification of the Funnel Beaker North and West Groups (Müller 2017, 14).

based mostly on settlement sites (Fig. 203). These were significantly supplemented, especially for Schleswig-Holstein, by Hoika (1994; 1987) and underwent a significant revision by Brozio (2016) and Dibbern (2016).

Essentially, the Early Neolithic pottery is decorated to a much lesser extent than its Middle Neolithic counterparts. Typical for ceramics from the EN I-II are applied or sculpted rim decorations in the form of strips or sculpted finger pinchings. Typical types of vessels are undecorated funnel-necked bowls or beakers with vertical lines around the belly, short-necked bottles with lugs, collared flasks ('Kragenflaschen') and different kinds of flask types ('Ösenkranzflaschen' and 'Dolmenflaschen') (see Hage 2016, 146; Koch 1998, 86-89; Hoika 1994, 89). Especially the decorations of Funnel Beaker pottery changed during the later EN I-II and with the transition to MN I. Thus, applied or sculpted decorations can be found within the site Satrup, which can be regarded as influential for the stage of EN Ib in Southern Jutland (Schwabedissen 1979). Funnel-necked beakers of different forms are also a common type of ceramic in the course of EN II and MN I. From the EN II onwards

at the latest, decorations applied to the whole vessel slowly become established and an increase in bowl types occurs. Among the typical decorations of the Fuchsberg phase (EN II) are different forms of impressions, stamped patterns ('Winkelverzierungen'), as well as incised blocks of lines ('Fransenverzierungen') around the neck of the vessels (cf. Hoika 1994, plates). After a smooth transition, the MN Ia/b finally is characterised by the use of ladders ('Leiterbänder') or multiple strips as an additional typical decorative element on various vessel types. These ladders, chevrons and zippers come in different stylistic variations and are executed in different techniques and often represent decorations covering a large part of the vessels. These motives are often combined with angular impressions ('Winkelstiche'), incised line decorations and impressions of various types. In addition to the continuing funnel-necked beakers, all-over decorated funnel-necked bowls are also available (Hage 2016, 148). An expansion of the repertoire of common vessel forms are pedestaled bowls ('Fruchtschalen'), ceramic spoons ('Tonlöffel') and 'display vessels' ('Prachtbecher') which are almost exclusively found in enclosures and megalithic tombs. These vessel types are usually extensively decorated as well and date to the MN I (cf. Andersen 2000). Also new are shouldered vessels ('Schulterschalen'), which can be dated typo-chronologically to the MN Ib/MN II. Mostly chronologically insignificant, but characteristic for settlement sites, are clay discs which can only be dated to the EN-MN in an undecorated form. In Oldenburg-Dannau 69, the finds of clay discs could be classified according to the period of MN I-III/IV based on the perforated and ring-shaped elements at the rim (Brozio 2016, 105). Finally, double-conical vessel types are characteristic of the MN III/IV. These are often only decorated to a comparatively small extent. This development towards a significant decrease in the variability and amount of decorations is characteristic of the transition from MN II to MN III/IV. Angular impressions ('Winkelstiche'), which are sometimes applied over large areas, are to be regarded as characteristic motives. In addition to the decorated ware, which serves as a fixed point for the typo-chronological classification presented here, there is also a large quantity of undecorated and chronologically insignificant coarse ware, especially in connection with settlement sites.

### 6.1.2.2 Scatter finds

A total of 339 settlement sites defined by surface finds can be located in the study area (Fig. 204).

In characterising the sites in Schleswig-Holstein, the survey of the respective districts (Hingst 1959; Kersten 1951), as well as the works of J.-P. Brozio (2016), M. Hinz (2014) and J. Karnatz (1987) were used. For Mecklenburg-Vorpommern, the archival holdings of the State Archaeology Department could be inspected.<sup>12</sup> Due to the fragmented sources, all classifications, with the exception of the sites examined in further detail, are to be regarded as approximations made based on the material obtained. All of these sites are collecting sites, which can usually be assigned by surface finds of lithic and ceramic find material. In 25 cases, there is also evidence of fire places.

In the Eastern Holstein area, three settlement sites can be clearly assigned to the MN and two more to the EN-MN. In the Southeast Holstein area, a total of nineteen such places can be allocated to the EN-MN, two more to the EN. Finally, in Mecklenburg-Vorpommern three sites are probably Middle Neolithic and another one Early Neolithic. However, the largest part of the known settlement sites is at best to be dated within the Funnel Beaker period (n=102), but in many cases can only be de-

<sup>12</sup> All basic data on settlement features are taken from the DenkmalGIS-database of the districts of Nordwestmecklenburg and Ludwigslust-Parchim, which could be gratefully examined in April and May 2015.

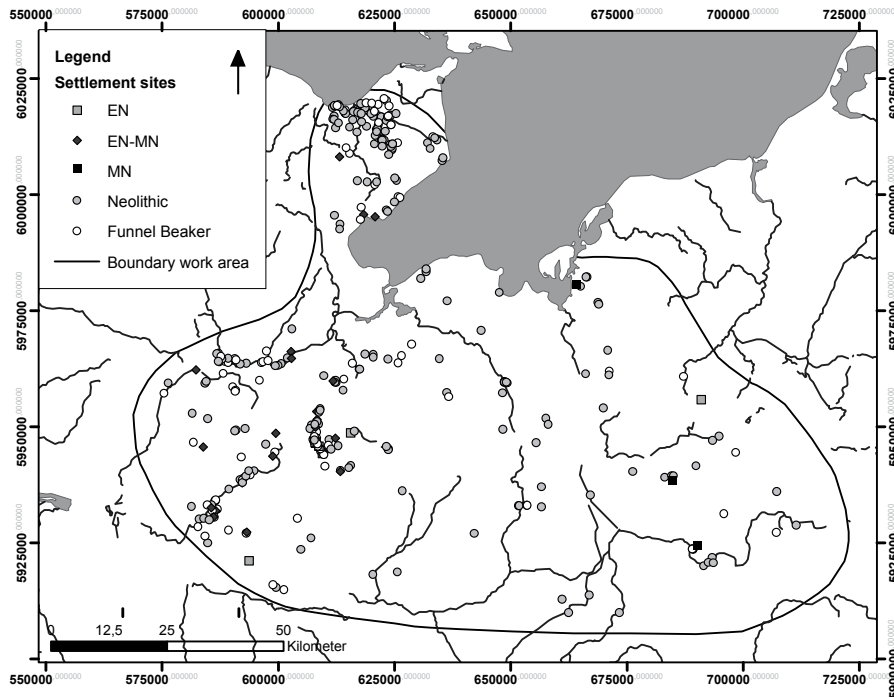


Fig. 204: The settlement sites within the study area which can be dated to either Neolithic or Funnel Beaker periods.

terminated as Neolithic (n=197). It should be noted that the sites classified as having a Funnel Beaker material generally cover a longer typological span and can therefore be assigned to several periods, of which the Funnel Beaker period settlement only makes up a part.

### 6.1.2.3 Settlement structures in the EN and MN

Due to the lack of data on Funnel Beaker settlements in the study area, only limited statements on the settlement structures and organisation of the different chronological levels are possible.

For the Western Mecklenburg area, only the site of Triwalk is available, in which a large number of settlement pits (n=124) could be investigated, from which a large number of fragments and small tools made of flint were recovered. In addition, the site includes a house floor plan that has been classified as uncertain by the editor. <sup>14</sup>C-dating and typo-chronological investigations indicate that Triwalk was inhabited from EN II to MN V (Staude 2011, 10-18). Secured settlement sites can be found in the eastern part of Mecklenburg-Vorpommern, which are defined by pits whose contents have settlement character (Skorna 2017). Only one Early Neolithic house structure is known in the south-eastern part of Mecklenburg-Vorpommern (Steffens 2009). Also in the area of the eastern and Southeastern Schleswig-Holstein there is a lack of house finds. Near the investigation area in the district of Plön lies the site Rastorf LA 6, on which a house structure could be examined, which can be assigned to EN II. The site probably represents a representative of a single farm (Steffens 2009, 29-31).

A larger database is available, especially for the Scandinavian region, which clearly indicates certain developments. Thus, a fundamental distinction can be made between the Early and Middle Neolithic settlement patterns. In Jutland some very small settlement sites are known, especially in the EN I, which certainly also included specialised sites used for specific activities (Madsen 1982). In the course of the EN II-MN I a development of larger settlement areas and a higher overall number of settlement sites takes place. The pottery from the house inventories in

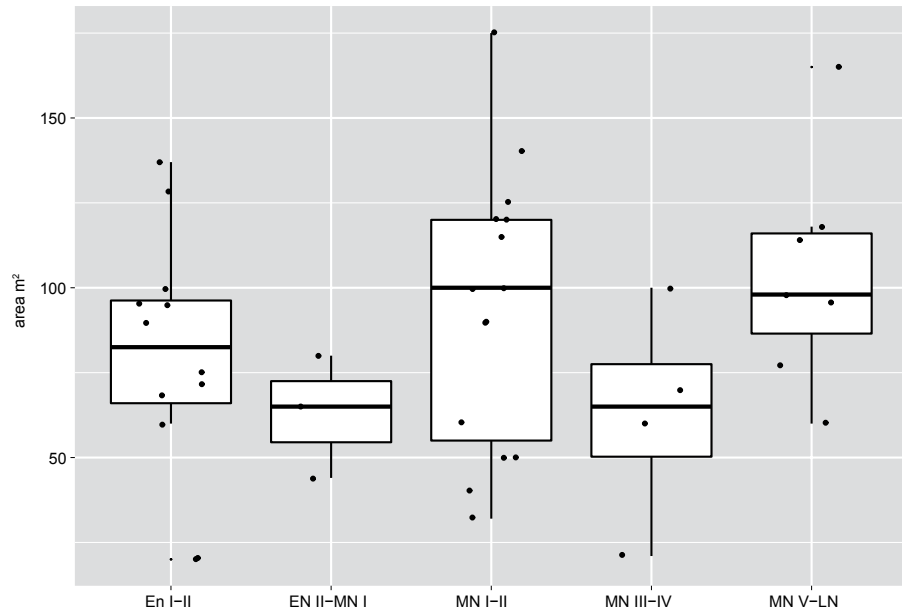


Fig. 205: The chronological development of the area (m<sup>2</sup>) of Funnel Beaker house structures from Northern Germany and Southern Scandinavia (database: Müller 2013).

Dagstorp, Scania, indicate a simultaneity of two houses within the settlement phases surrounding the EN II-MN II (Andersson 2004). A longer duration of the settlements is conceivable, in the course of which houses were built on the same site over several phases. The excavations at Oldenburg-Dannau, which are described in further detail below (Brozio 2016), also point to such structures.

The preserved house plans can be divided into different types and are supplemented by smaller features which could be interpreted as huts. A subdivision into five types with a chronological depth is possible (Artursson *et al.* 2003, 115-116). The earliest houses can be dated to the EN I-II, partly also to the MN I and are assigned to the type Mossby. This type of house is characterised by a two-aisled structure with apsidal finishes and convex long sides. The type Dagstorp I includes two-aisled houses with a straight end and a trapezoidal basic shape. This type is also present from the EN I onwards but has its main distribution in the MN I. Dagstorp I is partly simultaneous with the type Dagstorp II, albeit which has a longer chronological appearance up to the MN III. Dagstorp II is also defined as a type by two-aisled houses with a straight end, although with a parallel basic shape. One type of house with wall ditches is the Limensgård type. The long houses of this type also have straight narrow sides. This type is dated in the MN V (Mennenga 2017, 25-26).

The development of house types is also linked to a shift of the house size via the chronological stages of the EN I-MN V (Fig. 205). Since the data basis of the house structures from Schleswig-Holstein is very small, further examples from Scandinavia and Northern Germany were included.

The comparison of the house sizes to be assigned to the different chronological levels shows that already in the phases of EN I-II large houses were built, which could potentially be used for more than one family. Most houses have a floor area between 60 and 100m<sup>2</sup>, whereby two outliers (Rastorf LA 6 and Dagstorp 57) have a size of over 125m<sup>2</sup>. Especially small structures can be found in Saxtorp. These examples are structures that can also be characterised by seasonal use and therefore cannot be directly compared with the larger house features. Very few structures are clearly attributable to the transition from EN II to MN I. However, the few data available indicate a decrease in size. In the phases of the MN I-II a quite wide range of documented house sizes can be recognised. The sizes vary between 30 and 175m<sup>2</sup> (Büdelndorf, house 4). Half of the data is in the size range between 50 and 125m<sup>2</sup>, which shows an increase in the size of the houses from MN I, compared to the steps

of the EN. For the stages of the MN III-IV, the number of house structures decreases again and is associated with a drop in the known house floor plans. Finally, a renewed increase in size and an increased number of known structures can be observed from the MN V onwards.

#### 6.1.2.4 Investigated settlements in the study area

In the Southeast Holstein area, two settlement sites were closely investigated, albeit one of which (Wolkenwehe LA 154) dates primarily at the transition from MN V to JN I and thus holds no further interest. The second settlement examined in detail is Schöningstedt LA 115-117 (Schirren 1997, 36). Parts of an occupation layer could be uncovered on an area of 2300m<sup>2</sup>. However, only a very small part of the excavated pits are of anthropogenic origin. The material culture found on the site includes ceramics, various flint tool and thin-butted flint axes. The dating of the settlement amounts to EN II after a typological comparison of the ceramics.

Oldenburg-Dannau LA 77 is to be mentioned as one of two Funnel Beaker settlements in the Eastern Holstein area which was partly excavated and evaluated in detail in the course of the SPP 1400 (Brozio 2016). In the following, three aspects hold interest for the research questions of this work, on which the following explanations will concentrate. This includes the identifiable house inventories, which can provide information about possible division of labour between simultaneous households, as well as possible differences in household equipment. Any specific work areas outside the houses would also be of interest in the sense of an existing division of labour. Finally, the number of simultaneous households is important as a basis for estimating the available labour force in a Middle Neolithic settlement.

Another settlement investigated in parts by J. Hoika (1981) is Oldenburg LA 191, which is only 100m from Oldenburg-Dannau LA 77. The excavator sets a house feature to the MN III-IV, whereby later further settlement features were added in the form of post holes. Both settlements are located on small elevations close to each other (Brozio 2016, 27).

#### Oldenburg-Dannau LA 77: a brief description

Oldenburg-Dannau LA 77 lies in the area of the western Oldenburger Graben, which is characterised by a special density of Funnel Beaker finds and sites. These include settlement features, but also megalithic tombs, as well as individual finds. The settlement was excavated between 2009 and 2012 and was to answer open questions about the development of the settlement, specific architectural aspects, as well as the subsistence strategies. The chronological classification of the settlement was made on the one hand by <sup>14</sup>C-dating and on the other hand by typo-chronological analyses. A total area of 2433m<sup>2</sup> was excavated during the investigation years. 290 post-hole features of varying size and intensity, 80 settlement pits, two wells, seven stone packages, several rows of stakes on the shore of the settlement, and settlement burials were documented (Brozio 2016, 27-41). However, the five house structures hold particular interest, as well as the distribution of the find material between and within them. In addition to the houses, four huts could also be documented, which will not be considered in the following. Two of the houses could be completely excavated, while two others were examined for the most part (Fig. 206). Only one house was only partially documented, which is why statements on the house inventory have to be made here with caution.

In their basic form, the houses are very similar but have different dimensions and – as the overlapping features have already shown – are not all dating simultaneous. House 1 could be almost completely uncovered and has dimensions of 15x5m. The house is two-aisled and a sunken floor with a discolouration of the ground. Most of the finds from the house come from post holes and settlement pits. House 2, on

the other hand, is only documented to a relatively small extent and is characterised by very small dimensions of only 5-7m in length. Here again, post holes and discolouration of the ground from which the finds associated with the house originated were found. House 3 could be completely excavated and examined and has a length of 15m. House 4 is located directly behind and to a small part below house 3 and had a length of 13m. To the house belongs a settlement pit, from which also find material originates. Also house 5 could only partially be documented and is with at least 8.5m length the smallest of the excavated houses. Two soil discolourations and post holes could be defined as features belonging to the house. Furthermore, find material is also available here (Brozio 2016, 75-79).

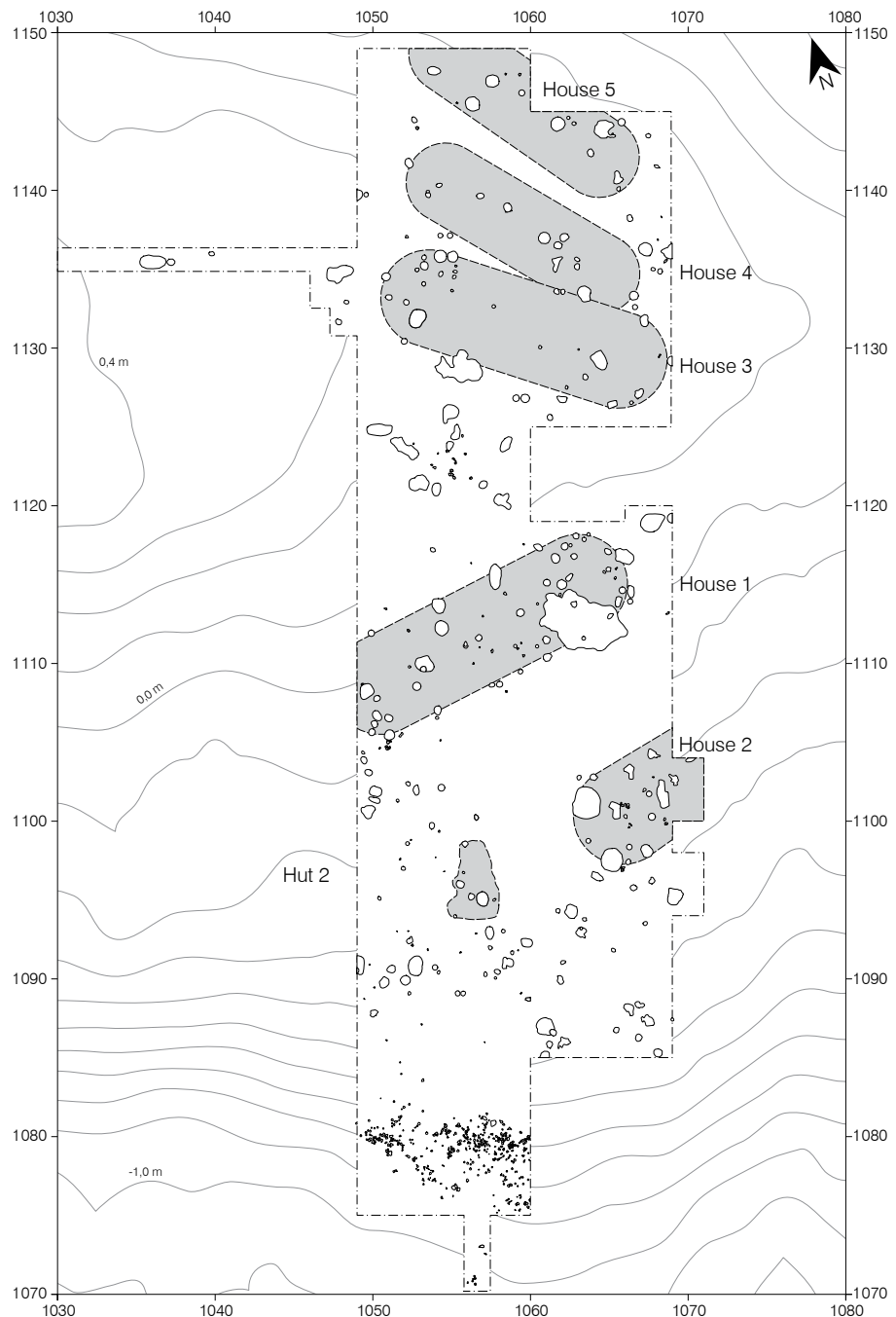


Fig. 206: The reconstructed house features of Oldenburg-Dannau LA 77 (Brozio 2016, 75).



Based on the ceramic material, with incorporation of absolute chronological data, a three-phased chronological model was developed, which describes the development of the settlement. The first phase dates between 3270-3110 cal BCE (MN Ib), the second between 3110-3020 cal BCE (MN II) and the third on 2990-2920 cal BCE (MN III-IV). The houses are classified into phases 1 (house 5), phase 2 (houses 1 and 4) and phase 3 (houses 2 and 3) (Brozio 2016, 104-109).

**Oldenburg-Dannau LA 77: house inventories and division of labour**

As already mentioned, in the course of the excavations artefacts could be assigned to the different houses in Oldenburg-Dannau, which are regarded as house inventories. However, due to taphonomic processes and the partial incompleteness of the houses, these are not complete inventories, but should be understood as approximations (Fig. 207).

The compilation shows that certain artefact groups can be assigned to each house of the settlement, even if the quantities differ in part. Among the finds found in every house are pottery sherds, reconstructed vessels, as well as flint flakes, flint knives and flint scrapers, which can be seen as everyday tools. Larger quantitative differences can only be seen in relation to pottery and the flint flakes, which are particularly numerous in house 3. House 3 also has a quite broad spectrum of represented finds, including pounders, which are indispensable for the production of flint tools. The only flint artefacts represented in only two houses are arrowheads and flint axe fragments. However, the overall very small number of this specific finds has to be taken into consideration. In particular, the presence of flint axe fragments does not correlate with the houses with the highest quantities of other flint tools or pounders. Also bone and antler tools are only sparsely represented in the find material. Moreover, only one single grinding stone was found.

Activity areas can be found mainly between the house structures on the free settlement area. Traces of flint tool production can be found mainly on these areas, in the buildings, as well as at the settlement boundary. All other artefact groups are also represented here, but to a much lesser extent. Ceramic fragments can also be found in all of these areas, but mainly in the open spaces between and in the houses. The ceramics in the open spaces can be interpreted as goods disposed of from the houses. The distribution therefore does not automatically indicate a clear differentiation of different fields of activity in the individual houses. Rather, a decentralised and diverse activity within the individual houses is to be assumed (Brozio 2016, 91-95). Thus, a clear functional division of labour regarding the house and area features in Oldenburg-Dannau cannot be determined. There are also no differences in house inventories, which could be interpreted as a vertical differentiation of households.

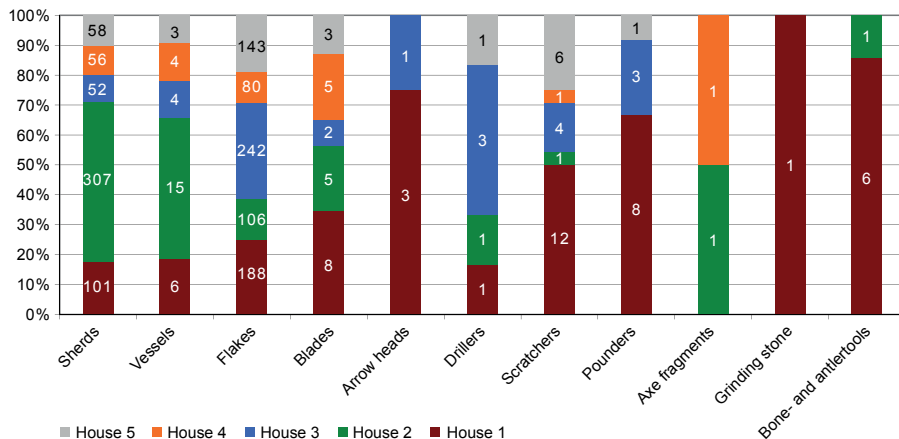


Fig. 207: The artefacts attributable to the different houses in Oldenburg-Dannau LA 77 (according to Brozio 2016, 78).

### **Oldenburg-Dannau LA 77: settlement structure, estimation of the available labour force**

As a second aspect of particular interest for this work, an estimation of the manpower available in Oldenburg-Dannau LA 77 has already been described. However, since the areas excavated during the investigations represent only part of the formerly existing settlement area, the original size of the settlement area must first be estimated. This was done in the course of the investigations by drilling and test trenches. Based on these prospections, the former extension of the settled area to 1.35ha was reconstructed. Based on the excavated area and the number of simultaneous houses on it, an estimate of the formerly existing, simultaneous houses was compiled. This estimate is approximately eighteen houses in phase 1, 36 in phase 2 and up to 27 houses in phase 3, but since this phase spans a total of 100 years, it is not necessarily assumed that this number of houses existed simultaneously. Rather, it can be assumed that a house had an approximate lifespan of 25 years if it was not maintained longer by repairs. Taking this guideline into account, the excavator assumes a simultaneity of 2-3 houses in phase 1, 11 houses in phase 2, and sixteen houses in phase 3 (Brozio 2016, 113-115). Due to the already-mentioned termination of megalithic construction activities from MN Ib, only phase 1 is of further interest. With an estimate of 2-5 simultaneous houses, the next step is to consider the number of residents per house. In ethnographic case studies, numbers between one to four core families per house were reported. However, some of these are longhouses with several separate hearths and fireplaces. However, such features are not discernible regarding Oldenburg-Dannau. Therefore, a number of one to two core families, each consisting of five to ten persons, is assumed within this framework (cf. Richter 1992; Starna 1980). This results in an estimated number of 10 to 100 people living simultaneously in a settlement the size of Oldenburg-Dannau during the phase of MN Ib. Of these, 60% or 6-60 persons, after deduction of children, the sick and the elderly, can be classified as fully fit for work.

However, the above explanations should be noted, which show that such a settlement size cannot be assumed for the EN in any case. It is also questionable for the MN I whether such a settlement size was the rule or whether the good location played a considerable role for the size of the presented settlement.

## **6.1.3 Economic markers**

### **6.1.3.1 Subsistence strategy and chronology**

In the course of the SPP 1400, extensive investigations could be carried out regarding the subsistence strategies in Funnel Beaker societies, which in particular provide clarity regarding the intensity and temporal development of land use.

Contemporaneously with the transition to the Neolithic stage of EN I, there are first indications of an increasing anthropogenic influence on the environment in pollen profiles in Eastern Holstein. This influence includes the introduction of agricultural cultivation, as well as the keeping of domesticated animals, which particularly affected forest areas and contributed to an opening of the landscape. Charcoal analyses indicate that the openings of forest areas and the creation of field areas took place in connection with the use of fire (Feaser *et al.* 2012, 186). It can be assumed that this cultivation method represents an extension of the formerly Mesolithic way of life. Nevertheless, the extent of this early tangible anthropogenic influence cannot be overestimated. Most likely, these were only very small-scale openings in the forest areas, which were probably located around the small settlements (Kirleis *et al.* 2012, 223).

A clear break is to be estimated in the course of the late EN I around 3750-3500 cal BCE. In the course of the later EN I and the transition to EN II, there have been strong changes regarding the subsistence strategies. Regional pollen diagrams from Eastern Holstein and Western Mecklenburg show an increase in *Plantago lanceolata*, indicating an increasing amount of fallow land. At the same time, a decrease in the pollen amount of mixed oak forests is to be recorded with an increase in the stock of hazel (*Corylus*), which also points to an expansion of arable land. It can now be assumed that the field areas are permanent and larger. Micro-charcoal analyses indicate that in this phase the importance of fire use seems to decrease (Kirleis and Fischer 2014, 91-92; Dörfler *et al.* 2012). The introduction of the plough can be mentioned as a fundamental technological innovation regarding the intensification of agricultural activities. Although no plough from Funnel Beaker contexts has survived, plough tracks can be found under various monumental tombs. The oldest of these traces were probably found under a long barrow in Denmark and date before 3770-3637 cal BCE (Sørensen and Karg 2012). In Schleswig-Holstein the oldest traces are found in connection with the tombs of Flintbek and date about 3500 BCE (Mischka 2011).

With the transition to the MN Ia, the pollen profiles again point to a decreasing openness of the landscape. For example, MN Ia indicates a decrease in agricultural activity, albeit which alternates with a short intensification phase in MN Ib. For the stages of the MN II-IV a reduced pressure on the landscape is then finally indicated, which will be replaced in the later phases and from the MN V onwards by an increase in activities (Feeser *et al.* 2012, 187). The developments described for the MN correlate temporally with a climatic change that led to cool summers and mild winters, and thus to reduced seasonality (Dreibrodt *et al.* 2012, 155).

In both EN II (from 3600 BCE on) and the MN, the archaeobotanical evaluation from settlement sites points to a high importance of naked barley (*Hordeum vulgare*), as well as emmer (*Triticum dicoccum*). However, einkorn (*Triticum monococcum*) and common wheat (*Triticum aestivum/durum*) seem to have played only a minor role due to the rare finds (Kirleis *et al.* 2012, 233).

### 6.1.3.2 Exchange goods

Due to the lack of necessary raw materials, early copper finds in the study area are clearly to be regarded as import finds. A compilation of the existing finds was made by Klassen (2000). There are very few copper finds within the study area (Fig. 208), the chronological classification of which is also extremely problematic. A total of six sites containing copper artefacts are known in the study area, seven of which are located in Mecklenburg-Vorpommern.

These are six individual finds of copper flat axes, a hoard and a grave find. Two factors hold fundamental concern regarding copper finds. At first the circumstances of the discovery are mostly unclear and cannot be reconstructed. Second, the dating of the material is only possible by means of comparative finds and the composition of the copper. However, both methods are subject to uncertainties and can be used above all for a rather rough chronological classification (cf. Skorna 2017).

Two of the finds, the copper flat axes of Raden (Güstrow) and Bülow (Teterow) are not necessarily to be classified as Funnel Beaker period finds but probably date to 4600-4300 BCE (Klassen 2000, 121). Two other finds are also not clearly datable: these are a flat axe with an indeterminate location, as well as another flat axe from Lindenbeck (Lübz). The last two flat axes were both found in the district of Hagenow (Hagenow and Kirch Jesar) and can at least be roughly classified based on the axe type and comparative finds from Europe. The axe of Hagenow probably dates to the late Funnel Beaker phases, while the example from Kirch Jesar probably dates around 4100-3900 BCE and is thus to be classified in the early phase of the EN I

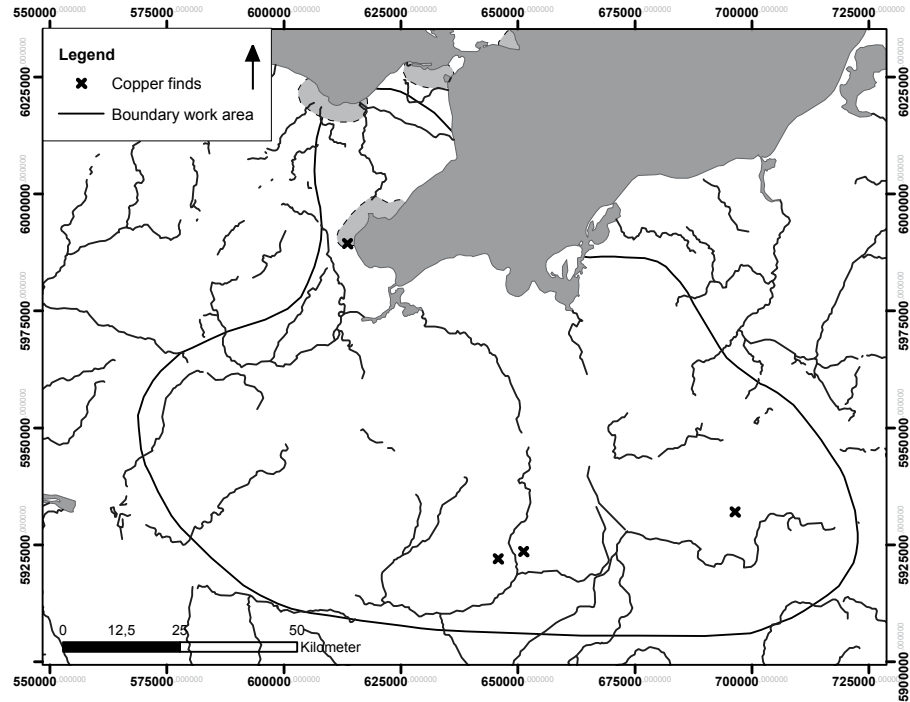


Fig. 208: The copper finds in the study area (mapping according to Klassen 2000).

(Klassen 2000, 98). However, the most important find is the hoard of Riesebusch near Ratekau, although the exact location is not known, as it is not a hoard excavated by archaeologists. The deposition comprises a copper flat axe, 13-16 spiral rolls and two copper rings. However, due to the unclear circumstances of the discovery, it is not possible to conclusively assess whether this is the entire inventory or whether parts of the hoard are missing. The hoard is dated to the EN II-MN Ia between 3500 and 3300 BCE (Klassen 2000, 90-91). The last and only copper artefact from a megalithic tomb is a copper roll from the Liepen dolmen near Rostock. The copper roll itself cannot be dated, but due to the copper composition and the burial context a temporal classification around 3400-2800 BCE was proposed, which is to be considered with uncertainty (Lutz *et al.* 1997, 48). Remarkable is the concentration of copper finds in the Mecklenburg area, as well as the early dating of such finds.

### 6.1.3.3 Thin-butted flint axes

Besides flint axes with pointed butt, thin-butted flint axes are the earliest Funnel Beaker axe types covering a timespan from the EN I to MN II. Thick-butted types are to be classified chronologically later, despite the assumed overlapping phases.

Due to their extensive availability in settlements as well as in tombs, the different axe types were the subject of typo-chronological investigations at an early stage of research. Important classifications were made by Becker (1957; 1973), Ebbesen (1975) and Nielsen (1977). While Becker (1957) divided the thin- and thick-butted axes into five types, all of which date into the MN I-V, later classifications already put the emergence of the thin-butted axes into the EN I-II. The criteria used for classification were characteristics of the polish, the cross-section, the length and width and the neck index. The most detailed classification of individual types was made by Nielsen (1977), who divided the thin-butted flint axes into six different types, which can be assigned to EN I, EN I-II, EN II-MN I, and MN II (Nielsen 1977, 108). For the thick-butted axes he took over the Becker classification, which provided for a separation between the types Bundsø (MN III), Lindø (MN IV) and Valby (MN V). Ebbesen (1975), on the other hand, contradicted the distinction between the types Lindø and

Valby, who only saw a smooth transition here. A fundamental problem of these type classifications results from the subjectivity of the characteristic recording, as well as the insufficient traceability with the help of statistical methods. Between all types, and especially between the thin-butted types defined by Nielsen, there are smooth transitions with sometimes small amounts of data. In addition, the classifications and their dating are not absolute-chronologically fixed using scientific data, so there is considerable doubt as to the significance of these typochronological models (cf. Mennenga 2016, 146).

The statistical analysis of finds of flint axes from Schleswig-Holstein carried out within the scope of a new study comes to the conclusion that a total of eight different types of Funnel Beaker period axe types can be distinguished. These include the early-dating flint axes with pointed butt, albeit which are rarely represented. Thin-butted axes can be divided into two different types. Flint axes of the old type are the most common and can be defined by a complete polish, the smaller thickness, as well as a higher average length. Flat axes dating to Funnel Beaker periods are very similar to this type of axe, whereby the types can be combined. The dating of both types can be placed on the EN I-MN I. The second type is defined by the Blandebjerg axes, which are not polished on the narrow sides and whose neck is already thicker. These axes can be seen as an intermediate type to the thick-butted axes and date into the MN II. In addition, there are thin-butted flint axes which cannot be assigned to any of these types and thus date indifferently between EN I and MN II. They are chronologically followed in the phases of the MN by the thick-butted axes (Breske 2017, 25-34).

Due to the described chronological position, the pointed and thin-butted axes in particular hold interest for further considerations. Based on the study by B. Breske (2017), a distinction is made between axes with pointed butt, thin-butted axe of the Old Type and Blandebjerg Type, and indifferent thin-butted exemplars.

### **Classification as depositions?**

Flint axes are the most common and certainly most important large tools in Funnel Beaker communities. Flint axes, fragments of those and production waste are very often found in settlement sites. Intensive reworking of flint axes is regularly present and can be explained by the comparatively complex manufacturing process, in particular also by the polishing of the axes. At the same time, flint axes are known as a common burial object in various Funnel Beaker graves (cf. Chapter 6.1.4.4). In addition to these categories, flint axe fragments and complete axes can also be found in connection with scattered finds, some of which can be interpreted as settlement sites or activity areas. However, the individual finds of flint axes hold most interest in connection with this work. Different interpretations are conceivable for these. On the one hand, simple losses or disposals of flint axes are conceivable if they became unusable outside the settlement sites. However, it should be noted that many of the individual finds are complete axes, whereby disposal due to unusability can be ruled out in many cases. Another reason for classification as an individual find may also be preferences on the part of collectors. Since flint axes are a popular artefact, it is possible that previously-existing contexts were either overlooked or simply ignored (Breske 2017, 19-22). On the other hand, such finds may be associated with activities such as timber extraction. Finally, however, depositional practices should also be seen as a conceivable interpretation in this context. Such depositions could – for example – be related to ritual contexts (cf. Sjögren 2011, 130-132). While losses of axes are of course conceivable, this is not considered the most probable interpretation compared to the rather high number of individual finds. A distortion of the data base by targeted collection activities is of course also possible and may influence the data stock. However, there is certainly a considerable number of finds without any further context, whereby possible interpretations include a classification as depositions or also and as remnants of specific activities, *e.g.* lumber work.

As already mentioned, many of the individual finds are complete axes, which were perhaps only used to a limited extent. Thus, possible individual depositions of flint axes represent a rather conclusive interpretation. In the case of depositions, these individual finds are a marker of the intensity of the expansion of economic activities beyond the immediate vicinity of the settlements. Depositions themselves should clearly be seen as an expression and investment by the communities concerned of a part of their (tool) production in non-economic purposes.

While the character of individual finds is debatable and accompanied by some source-critical factors, hoards of axes to be clearly defined as such are also known. These are defined by the joint laying down of several axes and can be found in connection with today's moor areas (Sjögren 2011, 131). In connection with the study area, hoards of thin-butted flint axes on Fehmarn are to be mentioned. Measuring up to 24-25cm, they are much longer than exemplars from settlement and grave contexts. Of particular interest here is the spatial proximity of the hoards to the good-quality secondary sources of flint along the Baltic Sea coast (cf. chapter 6.1.3.4). Some of the hoards comprise preparatory work, which per se have a greater length than further processed exemplars. Thus, in addition to ritual depositions, there is also a possible interpretation as storage site for preparatory work (Breske 2017, 97-99).

### Spatial distribution

A total of 313 complete individual finds of flint axes of the types pointed, thin-butted, flat axes and thick-butted could be included in the mapping (Fig. 209). These are distributed over 84 exemplars from Eastern Holstein, 100 exemplars from Mecklenburg-Vorpommern, and 129 from Herzogtum-Lauenburg and Stormarn.

There are smaller differences regarding type distribution in the individual regions. In Eastern Holstein the ratio between the types is unequally distributed. Here only relatively few single finds of thick-butted axes (n=18) with a high number of thin-butted axes (n=41) are to be registered. This results in a clear imbalance of the thin-butted types in favour of the axes of the Old Type (n=23) with a small number of the slightly later Blandebjerg axes (n=6). Six other axes can only be clas-

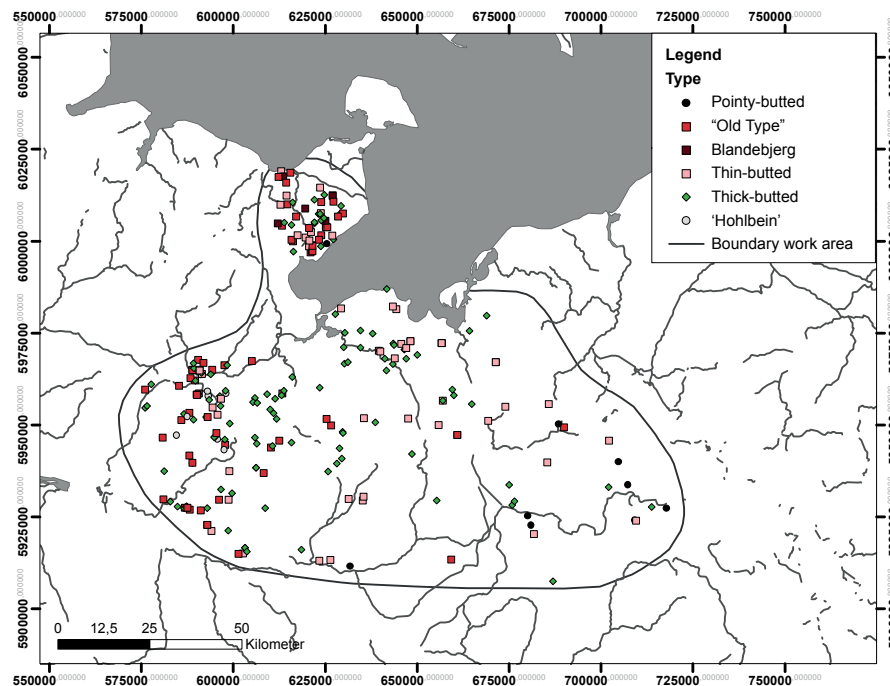


Fig. 209: The distribution of the single finds of different flint axe types in the study area.

sified as thin-necked. Thus, based on the individual finds, an early intensive deposition of early axe types can be assumed, whereas the intensity decreases significantly with the progress of the MN. In Southeast Holstein the ratio between thick and thin-butted axes is almost balanced. Altogether 57 finds of thick-butted and 50 thin-butted exemplars could be included here. Most of these axes can be assigned to the Old Type (n=39), whereas indifferent exemplars and late types are apparently only represented in small numbers. As in Southeast Holstein, the relationship between these two types is also quite balanced in Western Mecklenburg. Thus, 43 of the complete single finds of axes are to be classified here as thick-butted, as well as 35 as thin-butted, of which four are to be struck surely to the Old Type. There are also eight pointy-butted axes here, another of which is in Eastern Holstein.

There is a clear focus of the individual finds of thin-butted flint axes in the Eastern Holstein and Southeast Holstein region, while in Western Mecklenburg many of the axes can only be clearly attributed to the thin-butted type. Also striking is the balanced ratio between thin and thick-butted axes in large parts of the study area, with the exception of Eastern Holstein.

### Length of flint axes

In order to compare the length of the thin-butted flint axes deposited, a total of 135 exemplars could be included, the location of which can be determined in the district-based survey. Some of these axes are damaged, but the length of the axes has been preserved. However, as it was not possible to carry out a detailed examination of individual exemplars, a slight reduction due to post-processing cannot be completely ruled out for the finds included here either. Statistical investigations on thin-butted axes from Schleswig-Holstein have shown that approximately 1-1.5cm of the original length is lost in the course of this reworking with and without a further polishing. The calculated average length of non-reworked axes is 15.2cm, for reworked exemplars at 14.1cm. There are clearer differences in the length distributions when taking into account the still unpolished preparatory work, whose mean is 20.6cm (Lüth 2003). Accordingly, only polished artefacts were considered to

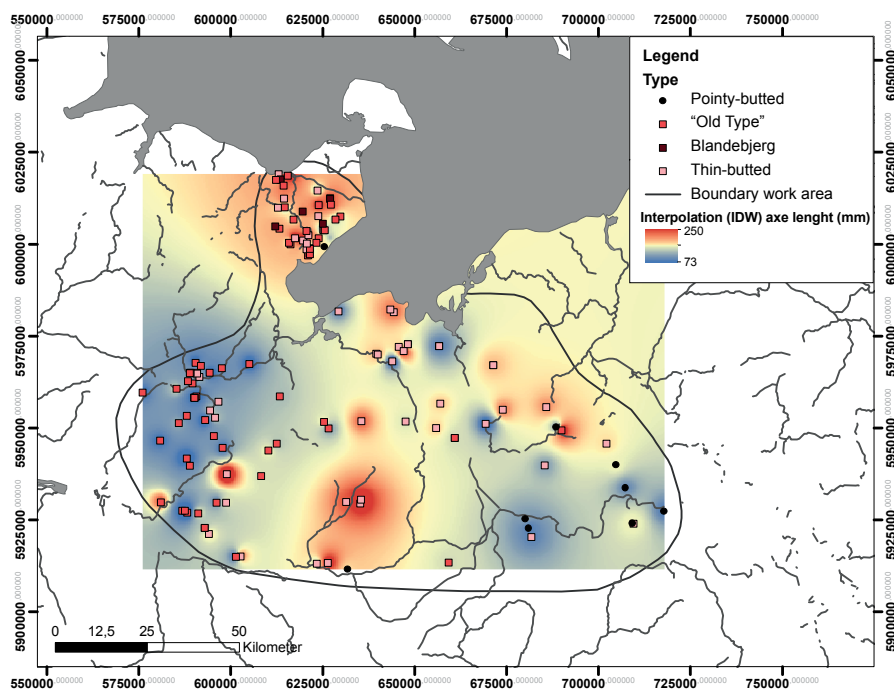


Fig. 210: Interpolation (IDW) of the length (mm) of thin-butted flint axes in the study area.

ensure comparability of the mapping. Within the study area, clearly distinguishable areas with particularly long axes are detectable (Fig. 210).

Due to the calculated mean of the length of thin-butted axes at 15.2cm, axes from 17cm were highlighted in the interpolation. The mapping shows a clear focus of the deposit of very long artefacts in Eastern Holstein, where the highest number of complete individual finds is also present. A total of 8.7% of the axes have a length of more than 18cm. The size distribution in the Southeast Holstein area is completely different. Here, mostly short axes between 11 and 13cm length are present. Only in the southern area, near the Sachsenwald, as well as at the border between Schleswig-Holstein and Mecklenburg-Vorpommern there are some axes of greater length. The percentage of axes over 18cm length is 4.1%. The picture in Western Mecklenburg is quite balanced. Both on the coast and inland, both short and long axes can be located. The proportion of axes over 18cm in length is 4.8%.

In particular, the deposition of particularly long thin-butted axes of the Old Type in Eastern Holstein, which can be classified as an early type, is striking in this picture. In Mecklenburg-Vorpommern, the pointy-butted axes are also only quite short: here, the thin-butted types of great length dating a little later are the most common type.

#### 6.1.3.4 Raw materials

Of course, the raw materials available for agricultural activities and tool production are part of the economic basis of Funnel Beaker communities in the study area. Due to the research questions of this work, sources of particular interest are flint sources and the soil quality of the different areas (Fig. 211). In the following, available information on both aspects is briefly explained.

#### Flint sources

Flint is essentially found in the entire area of the study area. As part of the glacial bedload, flint was distributed throughout the area and can be found below the topsoil. As large closed forest areas are to be assumed, flint was certainly also dug

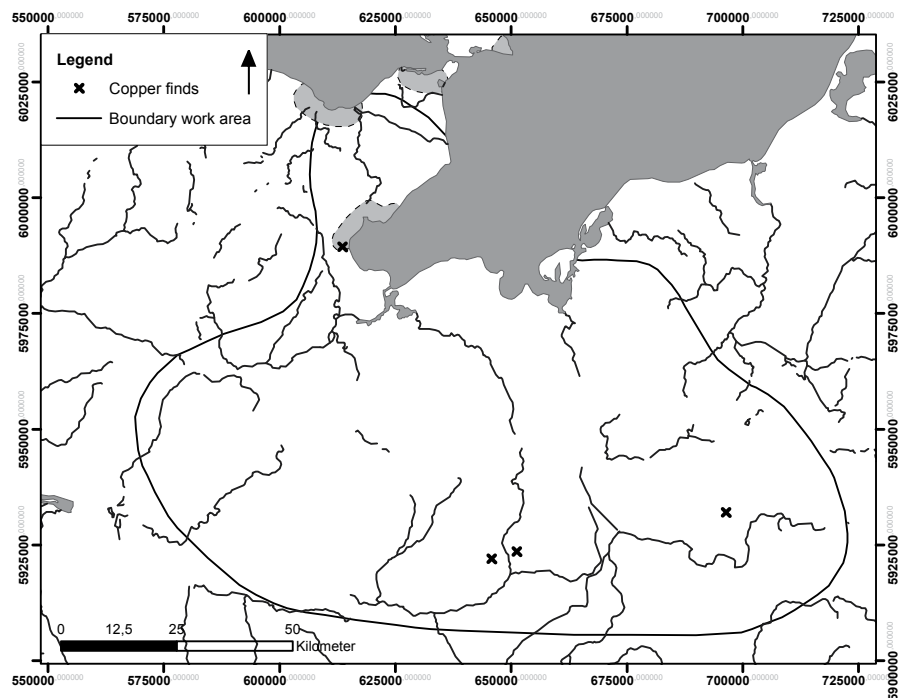


Fig. 211: The copper finds and secondary sources of Flint present in the study area (map based on Beuker 2005; Klassen 2000).



out. However, in contrast to other features from the Scandinavian region, no specific mining areas in the form of underground shafts are known (*e.g.* Södra Sallerup, Scania; Högberg *et al.* 2001, 200). A fundamental problem was certainly the partly quite poor quality of the near-surface flint, which was already heavily fragmented. For the production of small and simple tools, the use of locally-available material, which was easy to obtain, can also be assumed (Schirren 1997, 210). However, given that they were necessary for the production of large knives or axes, larger flint nodules are to be found above all at the coastal areas. Along the Baltic Sea coast some secondary sources are located, which show a particularly high quality of flint and are generally well suited for the production of all equipment, especially the axes.

### Soil quality

The fundamental problem in determining the quality of soils as a basis for arable activities of Funnel Beaker communities is that data are only available for modern times. An important marker for the modern assessment of the quality of agricultural soils is the 'Ackerzahl' published by the federal states (Ratzke and Mohr 2005; Schlichting 1960). An estimation of the 'Ackerzahl' and 'Grünlandzahl' was already carried out before the industrialisation in the course of the 'Reichsbodenschätzung' and includes the soil types, the context of origin, the quality level, as well as local

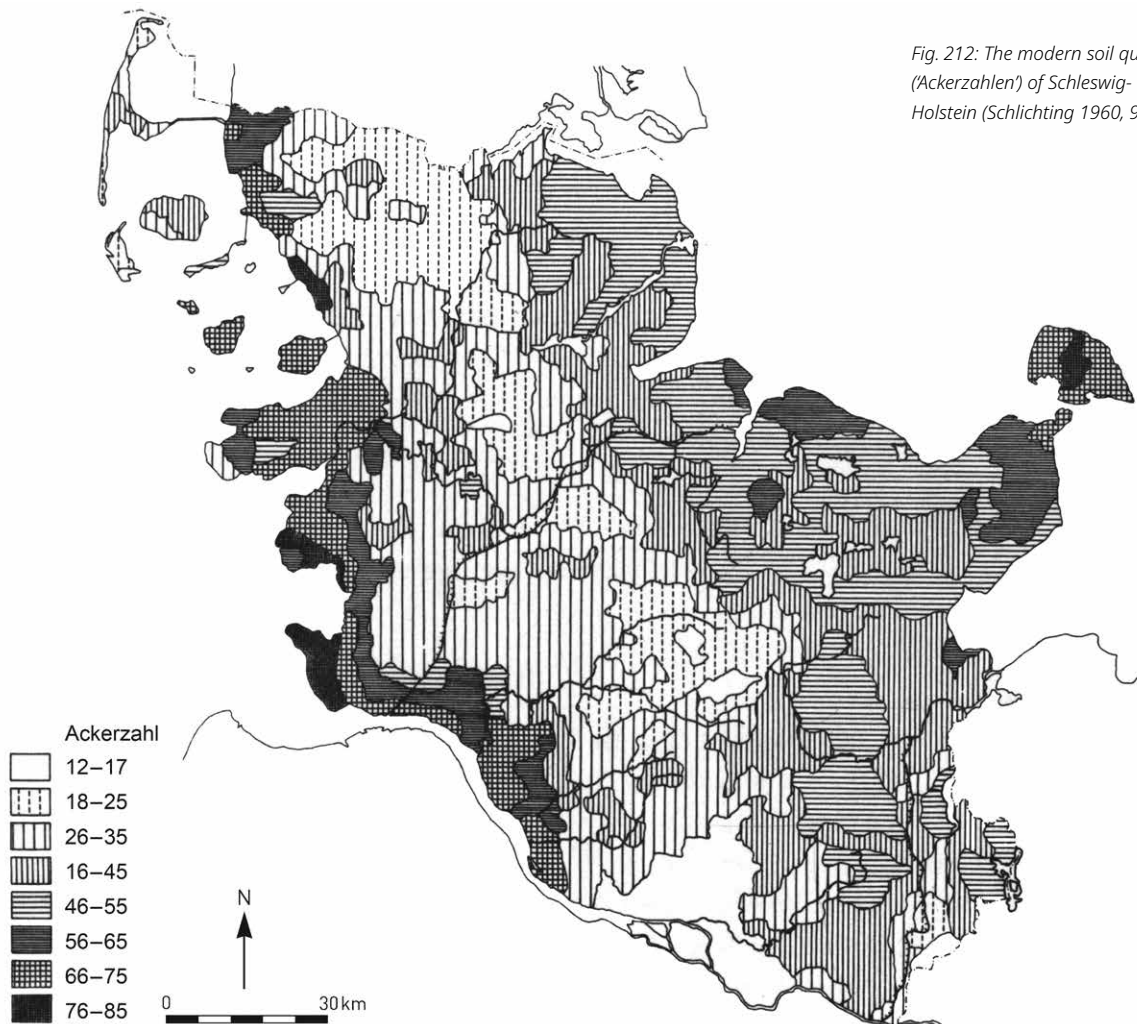


Fig. 212: The modern soil quality ('Ackerzahlen') of Schleswig-Holstein (Schlichting 1960, 99).

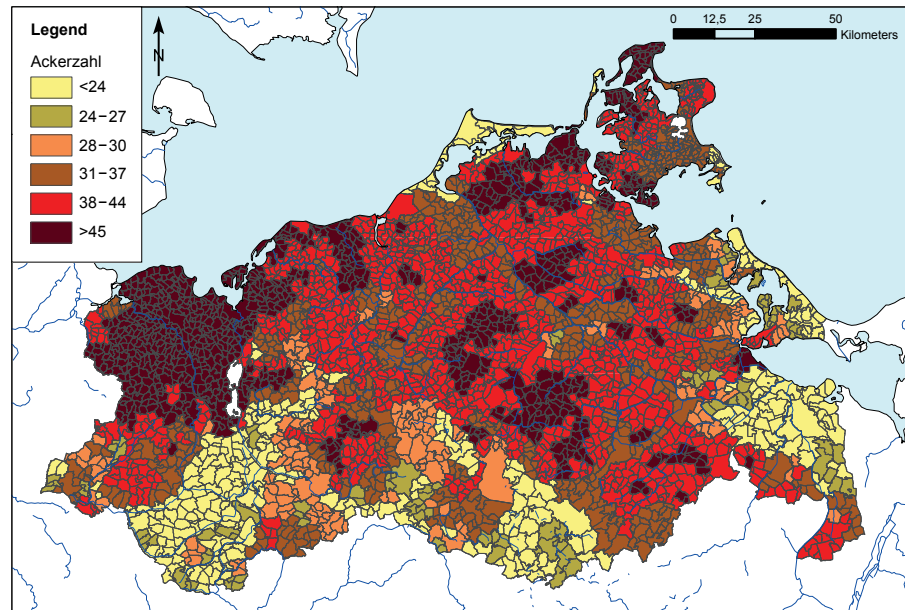


Fig. 213: The modern soil quality ('Ackerzahlen') of Mecklenburg-Vorpommern (after Ratzke and Mohr 2005, 33).

conditions. The problem is that the data were not collected spatially inclusive and comprehensive and do not include non-agricultural land (Hinz 2014, 181-182). Accordingly, the respective values can be used as a rough approximation of the profitability of different regions.

For Schleswig-Holstein, a fundamental distinction must be made between the west coast, the interior and the east coast (Fig. 212).

While high-quality values are achieved within a narrow area on the west coast, a relatively low value is recorded in the inland areas in particular. In the eastern area there are again soils of higher quality. This is also the area in which the highest concentrations of megalithic tombs and Funnel Beaker period settlement activities can be found (compare Fig. 204). Particularly noteworthy is the Wagrian Peninsula, which, compared to the other regions of Eastern and Southeast Holstein, has an increased quality of arable land (Ackerzahl: 56-65). In the remaining Schleswig-Holstein part of the study area, quality values between 36 and 45 and 46-55 are documented. In the southern area near the Elbe there are also some areas of inferior quality, albeit which alternate with higher-quality areas. Overall, with the exception of the Wagrian Peninsula, a fairly balanced picture can be spoken of (Schlichting 1960, 99).

In Mecklenburg-Vorpommern, the modern quality of arable land is mainly to be distinguished between the northern and southern regions (Fig. 213).

High-quality soils with values of more than 45 can be found in the western area of the Mecklenburg Bay, along the coast of North Pomerania and in parts of Rügen. In Southern Mecklenburg-Vorpommern, the value of arable land is mixed, but the majority is over 38, which sets Southern Mecklenburg-Vorpommern apart from this distribution. In the area of the Mecklenburg Lake District and near Ludwigslust the soils were classified poorer. Here, the value numbers between 20 and 30 are significantly lower. Within the study area, a relatively clear distinction can therefore be made between the currently higher-quality soils of Nordwestmecklenburg and the lower-quality areas of the modern Ludwigslust-Parchim district (Ratzke and Mohr 2005, 33).

Previous studies of the Southeast Holstein region have already shown that it was not the heavy soils, which were considered to be more productive, but rather the lighter types of soil that were more frequently used by Neolithic communities. This applies in particular to settlements in the immediate vicinity of which agricultural

activities may have taken place. Accordingly, it can be assumed that soils with a lower soil quality were also used to a large extent for Neolithic economic activities (cf. Hinz 2014, 182-184). A comparison with the location of the settlements (see Fig. 239) in the study area shows that many of the settlements can be found along the river courses. An exception to this is the Eastern Holstein area, where there is a very high concentration of settlements. Nevertheless, settlement concentrations in this area are also bound to areas close to watercourses (cf. Mennenga 2016, 191-196).

## 6.1.4 Megalithic graves

The focus of this work is on the megalithic tombs of the Funnel Beaker period in their functional and social contexts. A chronological differentiation of the different grave types, the effort involved in the construction of the different burial sites, their spatial distribution, the distribution of grave goods, and indications of the importance of collective and cooperative aspects are fundamental for further explanations of the data material available in the study area. Megalithic tombs represent complex features which in many respects represent a differentiated and complex object of investigation. On the one hand, this refers to the data stock itself. The already-mentioned source-critical factors are to be considered regarding megalithic graves. The original number of megalithic tombs was greatly decimated by various factors. The picture to be determined today in relation to the spatial distribution, but also in relation to the architectural features of individual tombs, is therefore only an approximate value. Although there are some well-examined monuments that give a picture of the different construction phases, most tombs are either poorly preserved or only superficially examined, whereby a differentiated analysis is only partly possible. Major problems also exist regarding the dating of individual tombs, as well as the individual grave types. The dating of individual tombs with the help of  $^{14}\text{C}$ -dating is now available, but it is sometimes difficult to record absolute chronological dates of the actual construction phases. Often only occupancy or burial phases can be dated because no material clearly associated with the construction phase is available. Taking these factors into account, the megalithic grave inventory within the study area is presented.

### 6.1.4.1 The megalithic grave types of the different phases

Although in the course of the SPP 1400 in recent years extensive investigations of the Funnel Beaker settlement structures and individual tombs have taken place in Northern Germany, an absolutely chronological dating of tombs is only available in one case. Therefore available dates from the Funnel Beaker North Group are included and these results are transferred to the individual grave types. The  $^{14}\text{C}$ -datings available for the different megalithic tomb types have already been summarised in various places (Fig. 214). These summaries include Southern Scandinavian and Northern German graves (Furholt and Mischka 2019; Mischka 2014; Persson and Sjögren 1995).

According to these investigations, the earliest grave types are the non-megalithic long barrows, which were already built from 3900/3800 cal BCE, *i.e.* from EN I (Persson and Sjögren 1995, 73). Dolmen types as the earliest form of megalithic burial chambers were most likely built from about 3600 cal BCE, the late EN I to early EN II. Their duration extends into the transition from EN II to MN Ia. Examples of dolmens to be dated early are a large dolmen from Búdelsdorf (3600 cal BCE; Hage 2016, 191) and dolmens from Flintbek (3600-3350 cal BCE; Mischka 2014, 131). Nonetheless, an exact temporal differentiation between small dolmens ('Urdolmen'), extended dolmens ('Erweiterte Dolmen') and other types such as the large dolmens ('Großdolmen') is difficult. However, the data indicate that extended dolmens were built

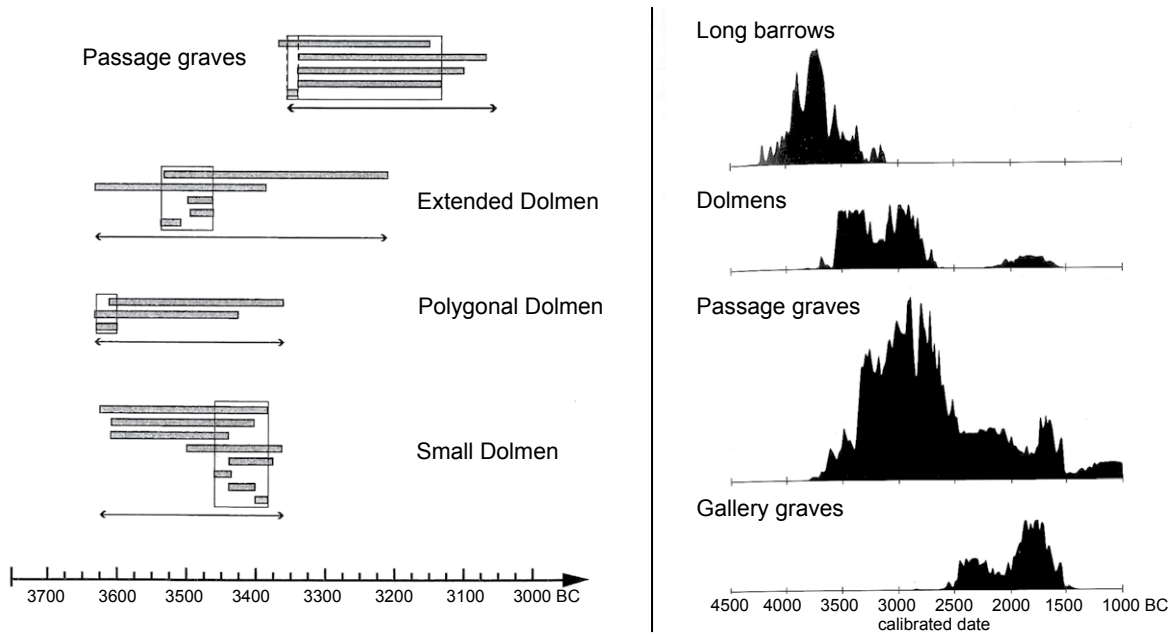


Fig. 214: Modelling of the  $^{14}\text{C}$ -dates available for Funnel Beaker graves in Northern Germany and Southern Scandinavia (Mischka 2014, 132; Persson and Sjögren 1995, 73).

longer than small dolmens. However, all dolmen types overlap in time, whereby no final distinction can be made between them. From the emergence of these first megalithic chamber types, extensions to megalithic long barrows were occurring. Some dolmens (both smaller and larger dolmen types) were incorporated into existing non-megalithic long barrows. Such an example can also be found in Borgstedt. Here the enclosure of the long barrow LA 22 could be dated to 3950-3804 cal BCE. The long barrow contained a megalithic burial chamber (large dolmen), which could be dated to 3700-3650 cal BCE. It can be assumed that this was subsequently erected within the enclosure (Hage 2016, 178-179). Clearly to differentiate are the passage graves, which represent the last stage of development of the megalithic grave types. These are to be dated absolutely chronologically to the MN Ia and Ib with a start of construction from approximately 3300 cal BCE (Mischka 2014, 132; Persson and Sjögren 1995, 73).

However, for this rough classification of megalithic construction phases, there are extensive overlaps between the individual types. It can be assumed that small dolmens were partly built at the same time as extended dolmens and these were partly built at the same time as passage graves. Nevertheless, the modelling offers rough clues to differentiate between overlapping construction phases. There are also indications of a regional differentiation of this basic chronology. For example, in Falbygden, Sweden, passage graves and only a few dolmen types were built right from the first construction phases. It should be noted that Falbygden is not one of the core areas of the distribution of megalithic tombs. In addition, the early-dating non-megalithic long barrows are missing here. There are therefore clear regional differences in the adaptation and preference of different grave types (Sjögren 2011, 126-127). Within the case study investigated here, the Holstein chambers, which can be found primarily in Eastern Holstein and the present districts of Stormarn and Herzogtum-Lauenburg, represent a regional type which is not to be found in Mecklenburg-Vorpommern. Fundamental architectural differences, which can be traced back to regionally differentiated building traditions, can be found above all in relation to the design of the chamber floors. In Mecklenburg-Vorpommern, red sandstone was used in addition to flint, clay and rubble fills. This element is missing in today's Schleswig-Holstein area (Schafferer 2014, 97-98).

Category	Grave type	Number	Chamber type	Number
Long barrows (n=142)	long barrow?	8		
	long barrow	57		
	non-megalithic long barrow?	15		
	non-megalithic long barrow	6		
	megalithic long barrow?	4		
	megalithic long barrow	52	small dolmen	3
			extended dolmen	3
			dolmen	1
			passage grave	8
Megalithic tombs (n=326)	megalithic tomb?	125		
	megalithic tomb	201	small dolmen	5
			extended dolmen	13
			bigger dolmen	7
			passage grave	9
			dolmen	2

Within the study area, a total of 469 tombs could be mapped (cf. Fig. 225). All of these monuments are assigned an LA number and an exact location. Monuments whose location and character were uncertain were not investigated further. The monuments can be divided into different types (Tab. 8).

The categorical distinction between long barrows and megalithic graves is fundamental. As mentioned above, it should be noted that some of the long barrows were not provided with a megalithic burial chamber until later and were formerly non-megalithic long barrows. It cannot be excluded that some of the megalithic tombs were originally provided with a long mound that is no longer preserved. The division into two categories should therefore be regarded as fluid.

Nevertheless, the imbalance between long barrows and megalithic graves, of which many more are represented in the study area, is striking. A total of 57 of the long barrows can be clearly identified as such, but it is unclear whether they are non-megalithic or megalithic long barrows. For a further eight monuments, even the classification as a long barrows is questionable due to the poor conservation conditions. The rest of the monuments can be assigned to the megalithic long barrows, *i.e.* those with a stone chamber. Also in relation to this type of grave there are four exemplars which are afflicted with considerable uncertainty. These include graves in which there are indications of a former chamber in the form of potential traces of orthostats, but no final statement can be made. In 52 cases it is clear that these are long barrows with megalithic burial chambers. However, the type of chamber could only be determined in fifteen cases, resulting in a clear accumulation of passage graves. Regarding the megalithic tombs in the study area, the determination of 125 exemplars is not to be made without doubt. A typical case for such a dubious determination is the relatively frequent flint scattering, which could indicate a former grave. In 201 cases the determination as megalithic tomb is certain, but also in this case the number of graves defined in relation to the type is very small at 35. A total

Tab. 8: The different grave types documented in the study area. Question marks mark an uncertain definition.

of 26 of the dolmen types are to be attributed, of which the extended dolmens make up the largest group. Passage graves have been documented in nine other cases.

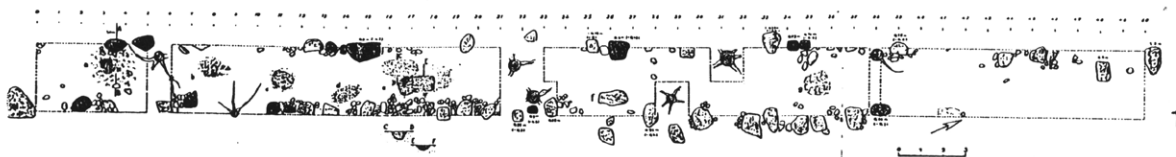
### The Early Neolithic grave types: EN I

The earliest type of grave represented in the study area are the non-megalithic long barrows, six of which have been confirmed and fifteen of which are uncertain. Among the confirmed monuments are four tombs from the Sachsenwald (LA 913, 914, 916 and 918) investigated in the 1950s. These have all remains of formerly existing stone frames, but due to the lack of megalithic burial chambers they are to be addressed as non-megalithic long barrows. The largest of these non-megalithic long barrows is LA 913 with a length of 54m, which also showed a comparatively high number of features (Fig. 215).

Directly next to a standing stone a smaller pit was uncovered, which was probably dug before the stone was erected and in which few fragments of pottery were found. Inside the long barrow another pit was documented, which also contained sherds. Two other pits within the barrow itself did not contain any finds. In addition to a discolouration that contained a fragment of a Funnel Beaker, it was also possible to uncover a feature that might have been a fireplace. This feature contained red-fired soil mixed with charcoal splinters and was otherwise empty. The features and some finds, such as flint artefacts (flakes and scrapers) and some sherds, were found near the old surface, at the bottom of the hillfill. Whether some of these were originally grave goods can no longer be clearly identified. Sherds of a corded beaker also indicate later burials. In contrast, in long barrow LA 914 only a pit in the central area of the former hill surface and directly adjacent a discolouration was documented. While the pit was empty, a perforated stone artefact was recovered in the discolouration. In addition, a quartzite disc originates from the hillfill itself, ceramics or flint artefacts were not recovered. The third of the long barrows examined, LA 916, also contained two features. One is an accumulation of boulders at the north-western end of the monument, and the other is a pit at the south-eastern end, albeit which was empty. Only a few sherds could be recovered from the long barrow, although they did not belong to any specific feature. Neither Neolithic finds nor features were discovered in the long bed LA 918. The tomb contained only one Iron Age burial (Sprockhoff 1954, 2-7). An early monument from Mecklenburg-Vorpommern is the Rothenmoor long barrow. The long barrow was excavated in 1966 has a megalithic stone frame of 15x6.5m. The hilly area filled up from loamy-sandy soil is interspersed with stone rubble. Near the south-western end of the long barrow a deepened grave could be examined during the excavation. The grave was covered with stones at the level of the old surface and supported on the sides by layers of stones. At the level of the old surface two deposited complete vessels were found, namely an undecorated funnel-necked beaker and an undecorated amphora. Most likely, both vessels are grave goods. Half of a decorated funnel-shaped cup was also found at the level of the stone cover. The character of this vessel is doubtful, but it could have been deposited during the burial. In addition, an arrowhead, a scraper and a flint tranchet axe were scattered in the area of the hillfill. Apart from Iron Age burials in the central area of the barrow, this is the only grave feature of the long barrow (Schuldt 1969a, 17-19).

Characteristic for the non-megalithic long barrow of the study area are certain similarities. Although some of the features are not well preserved, single or double

Fig. 215: The non-megalithic long barrow Sachsenwald LA 913 (Schirren 1997, 121).



burials are to be assumed. The problem here is that the pits in the long barrows uncovered in the Sachsenwald were empty and indifferent. Nevertheless, there is no evidence that a larger number of burials were carried out in the area under investigation. All long barrows also have a megalithic stone frame, which significantly increased the work involved in erecting the long barrows. Potential grave goods were found in both certain and questionable grave features only in very small numbers and comprised pottery, as well as simple flint artefacts or tools. Finally, the first construction phase is marked by a rather large variety of grave features, albeit which are primarily to be understood as single or double burials.

### The Early to Middle Neolithic grave types: EN II-MN Ia

The first monumental type of grave to be found from the end of EN I (ca. 3600 BCE), but above all in EN II, are the small dolmens. A basic distinction can be made between those that lay within a long barrow and those that lay within a round barrow. An example of a small dolmen lying in a long barrow is the grave of Mankmoos 1 (Fig. 216).

The tomb is located in close proximity to two other megalithic burial chambers, as well as burial mounds, which could not be determined further due to the degree of destruction. The 17.5m long and 5m wide, rectangular long barrow was provided with a stone frame, which was only partly preserved. Of the burial chamber positioned in the northern part of the hill, only the capstone and one of the orthostats were preserved. Sherds from the former chamber area suggest destruction in the 13<sup>th</sup>/14<sup>th</sup> century. In the hill there was a retouched flint knife, as well as some flint flakes. No secured grave goods have been preserved (Schuldt 1969b, 23-25). Besides Mankmoos 1, there is another dolmen within a long barrow in Naschendorf (grave 1; Schuldt 1970b), as well as a dolmen in question in the Sachsenwald (LA 772, Schirren

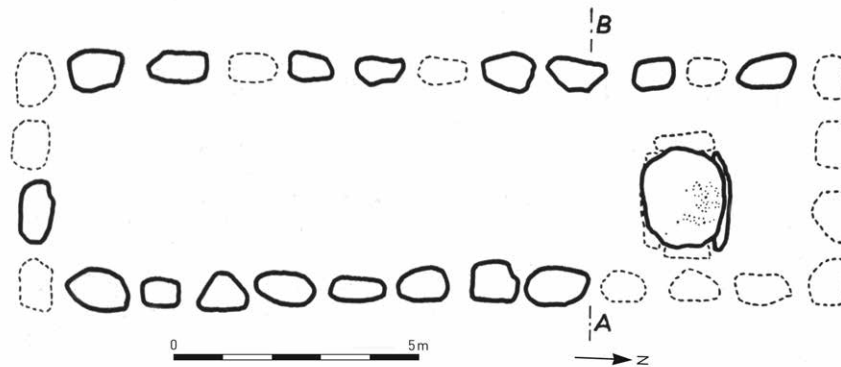


Abb.14 Mankmoos. Grab 1. Grabungsplan des Urdolmens.

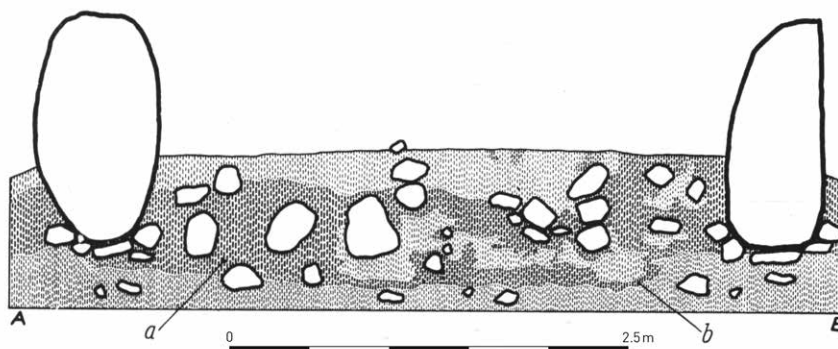


Fig. 216: The megalithic long barrow Mankmoos 1 with the burial chamber type small dolmen (Schuldt 1969b, 24).

1997, 117). The Urdolmen Naschendorf 1 was embedded centrally in a long barrow and has a chamber floor covered by stone slabs. Besides a few disarticulated bones, eight arrowheads were found (Schuldt 1970b, 41-43).

Five other small dolmens belong to the same type of chamber, but with a round hill or no preserved barrow. One of the best-studied dolmens in a round barrow belongs to the Barendorf grave cluster in Mecklenburg-Vorpommern. Altogether three small dolmens could be excavated and examined here (graves 4, 7 and 10). The three dolmens there are very differently in their architectural features. The chamber of tomb 4 is one of the few examples in the study area, which was dug into the ground. The chamber was dug 0.8m into the ground and was surrounded by a stone packing from the lowest point to just below the surface. Grave 7 lay within a round mound and has a recess that could have served as an entrance. The chamber was poorly preserved overall and had only a few remains of fired flint as floor covering. Tomb 10 was also built in a round mound, but is too severely destroyed to allow further statements (Schuldt 1970a, 18-35). Finally, two further monuments are to be addressed with uncertainty as small dolmens. Both tombs are located in Eastern Holstein, namely the tombs of Schashagen LA 108 and Grömitz LA 2. Small dolmens mostly show an orientation to either E-W or N-S. Of the three small dolmens located in long barrows, two are oriented against the orientation of the barrow, while the small dolmen in question (Sachsenwald LA 772; Schirren 1997, 117) is oriented exactly like the long barrow to NW-SE. The size of the chambers ranges from 2 to 3m in length and 1.5 to 2m in width. However, statements on the number of buried individuals within the chambers cannot be made due to the poor preservation. Also due to the poor preservation, no comparative statements can be made regarding specific architectural features. Remains of the former chamber floors are only preserved in two cases. In Naschendorf 1 red sandstone slabs were used, while in Barendorf 7 burnt flint was scattered on the chamber floor. In two cases, the burial chambers were also dug into the ground (Schuldt 1970a; 1970c). The few dolmens preserved in the study area are therefore characterised by a high overall variability, although the construction of the chamber is uniform according to the type. At two of the small dolmens in question (Schashagen LA 108 and Grömitz LA 2), as well as two certain exemplars, a construction can be found within a round mound. However, at another small dolmen, no hill is preserved (Barendorf 4).

Due to the dating indicated by <sup>14</sup>C-dates, the extended dolmens and large dolmens can partly be classified in the same construction phase as the small dolmens, but in this case the duration is longer, whereby at least some of these graves can be classified as younger than the small dolmens (see Fig. 214).

Extended dolmens are much rarer in long barrows within the study area than is the case with small dolmens. Only three of the monuments belong to the category of megalithic long barrows (Barendorf 2, Dahme 49 and Sachsenwald 773). Of interest is the monument of Dahme 49. Here, two dolmens are located within one long barrows, at least one of which is an extended dolmen (Sprockhoff 1965). Barendorf 2 exhibits a very rare architectural feature among extended and large dolmen within the study area. The chamber, which is located decentrally in the long barrow, has a very small corridor on the narrow side, which leads directly to the boundary of the hillfill, whereby it can be assumed that the chamber is accessible here. The discovery of a collared flask in this tomb could indicate an early construction in the EN II (Schuldt 1970a, 15-17). Regarding the extended dolmens, there are only a few well-preserved and documented examples in the study area. One such is the Dolmen 1 near Barendorf in the Everstorfer Forest (Schuldt 1970a). Although the two capstones and the originally round burial mound are no longer preserved in this case, the burial chamber is relatively well researched (Fig. 217).

One of the orthostats of the burial chamber is tilted into the chamber area, the rest of the stones are still in their original place. Flint was scattered in the



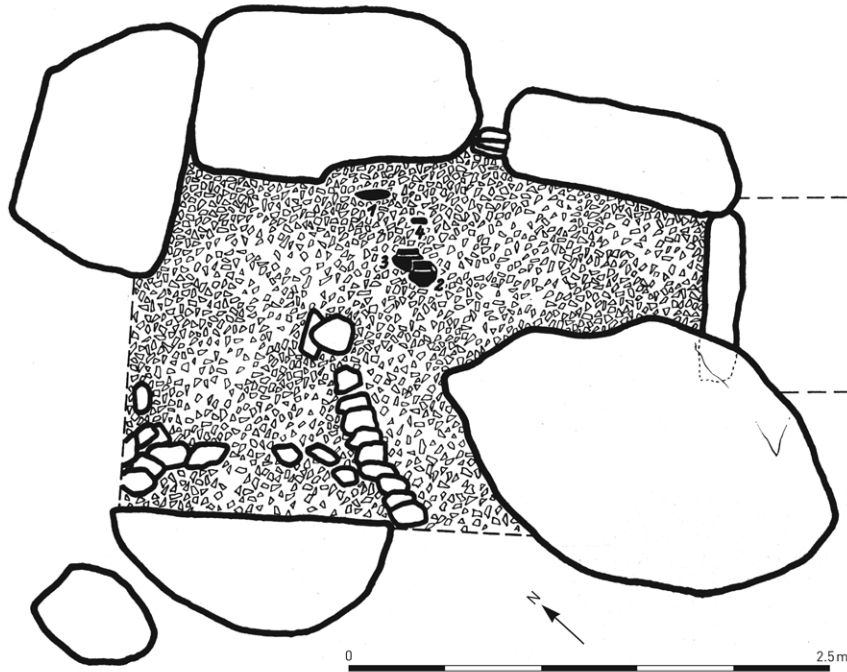


Fig. 217: The chamber of the extended dolmen 1 near Barendorf in the Everstorf Forest (Schuldt 1970a, 9).

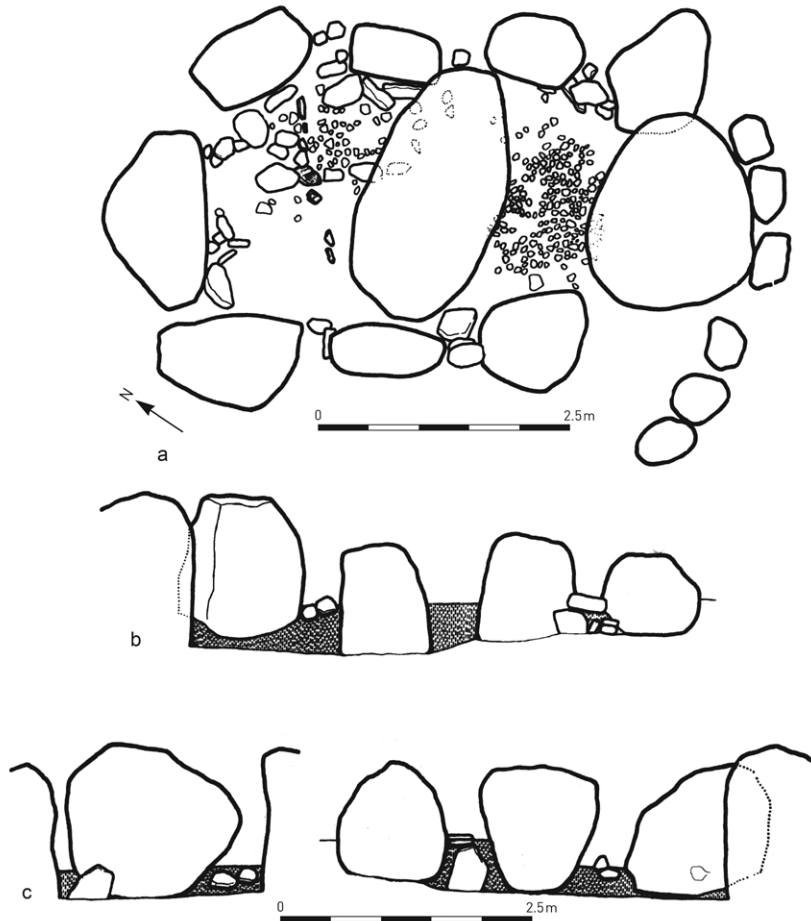


Fig. 218: The dolmen Mankmoos 2 (Schuldt 1969b, 27).

Grave	Shape mound	Orientation mound	Orientation chamber	Position chamber	Level chamber	Symmetry chamber	Shape chamber	Chamber floor	Specifics
Schnakenbek 123		NE-SW	NE-SW		at ground level	symmetric	rectangular	stone packings	
Ratekau 200	rectangular	NW-SE	NW-SE	central	below ground level	symmetric	rectangular	burnt flint	
Tralau 29	round				below ground level	symmetric	quadratic	stone packings	
Dabel			N-S		at ground level	asymmetric	quadratic	stone slabs	
Barendorf 1	round		NW-SE	central	at ground level	symmetric	rectangular	burnt flint	
Barendorf 2	rectangular	NE-SW	NW-SE		below ground level	asymmetric	oval	stone slabs	small passage
Naschendorf 5	round		E-W	central	at ground level	symmetric	rectangular	stone packings	
Barendorf 3	round								
Dahme 49	rectangular	NW-SE	NE-SW	central	at ground level	symmetric	rectangular		
Keillenhusen 22			NE-SW		at ground level	symmetric	rectangular		
Sachsenwald 773	rectangular	NNW-SSE	NNW-SSE		at ground level	symmetric	rectangular	burnt flint	
Wangels 326	rectangular	NE-SW	NE-SW	decentral	at ground level	symmetric	rectangular		
Wangels 437	round		E-W	central	at ground level	symmetric			
Naschendorf 2	rectangular	NW-SE	N-S		at ground level			stone slabs	
Mankmoos 2	rectangular	NE-SW	NE-SW		at ground level	asymmetric	rectangular	stone slabs	
Ganzlin Twietfort 2	round				at ground level	symmetric	rectangular		small passage
Domstühl 4			NW-SE		at ground level	symmetric	oval	loam	
Reinfeld 3			E-W		at ground level	symmetric	quadratic	stone slabs	

Tab. 9: Selected architectural features of the better preserved extended dolmens and large dolmens in the study area.

chamber, while in the relatively undisturbed western part there were some additional stones, which were originally probably also part of the floor construction. Below the flint layer a compact clay layer was excavated, on which a flint tool as well as sherds were found. This is probably the original layer used for funerals (Schuldt 1970a, 8-11).

The grave of Mankmoos 2 in Mecklenburg-Vorpommern (Schuldt 1969b) is an example of a rather well-preserved large dolmen. Although only the remains of what was originally a round burial mound remain, the chamber is relatively well documented (Fig. 218).

The grave is located near an small dolmen positioned in a long barrow and is therefore part of an originally certainly larger grave cluster. The N-S oriented burial chamber was covered with a stone packing. While the three capstones were already burst, the orthostats are probably still in their old position. The chamber was sprinkled with burnt flint, which was lying over a partially-preserved division into quarters. Probably the area of the quarters was covered with a layer of stones, but this structure is only preserved in the northern part of the chamber. The entrance to the chamber was on the southern narrow side through a slightly to the side moved standing stone. Starting from this entrance situation, the rest of the stones were arranged in a fan-like arrangement, which probably marked the entrance outwards. However, grave goods can no longer be assigned due to the severe disturbance caused by younger burials (Schuldt 1969b, 26-28).

Moreover, the extended dolmens and large dolmens in the study area are characterised by quite high variability in terms of their architectural characteristics regarding various factors (Tab. 9). As already mentioned, a small number of extended dolmens are positioned in long barrows. However, this does not apply to the large dolmens, which have all been documented in smaller rectangular or round mounds or without barrows.

As far as both dolmen types are set in rectangular or long-oval barrows, the majority of the chambers correspond to the orientation of the hill, but there are three deviations. The largest group of chambers are oriented to either NW-SE or NE-SW, although other orientations are also present several times. There is greater agreement on the position of the chamber in the hill, which is usually centrally located, and on the position of the chamber. Only three extended dolmens are dug into the ground, all examples being in the central or eastern area of the study area. Very different structures can be seen in relation to the shape of the chamber as well as in relation to the design of the chamber floors, insofar as these are preserved. Although many of the dolmens are rectangular, there are also square, oval and long-oval examples. Preserved chamber floors are often made up of stone slabs, but fired flint and layers of stone packings are also worth mentioning here. A special feature are the very small passages, which were documented in two cases in Mecklenburg-Vorpommern. In both cases, passages start at an angle from a narrow side of the chamber.

In summary, regionally shaped architectural peculiarities can be recognised in the data set. Overall, however, a high variability regarding the precise design of the dolmens can be assumed. The question of the existence of single and multiple burials cannot be conclusively clarified. Due to the small chamber size, single or double burials can certainly be assumed in relation to a part of the dolmen (especially small dolmens), but the bone preservation in the study area is so poor that this cannot be conclusively assessed.

### **The Middle Neolithic grave types: MN Ia-Ib**

The third construction phase of monumental tombs refers to the Middle Neolithic tombs. These clearly include the passage graves, whose construction phase begins from the MN Ia, approximately 3300 BCE. Almost half (n=8) of the passage graves are

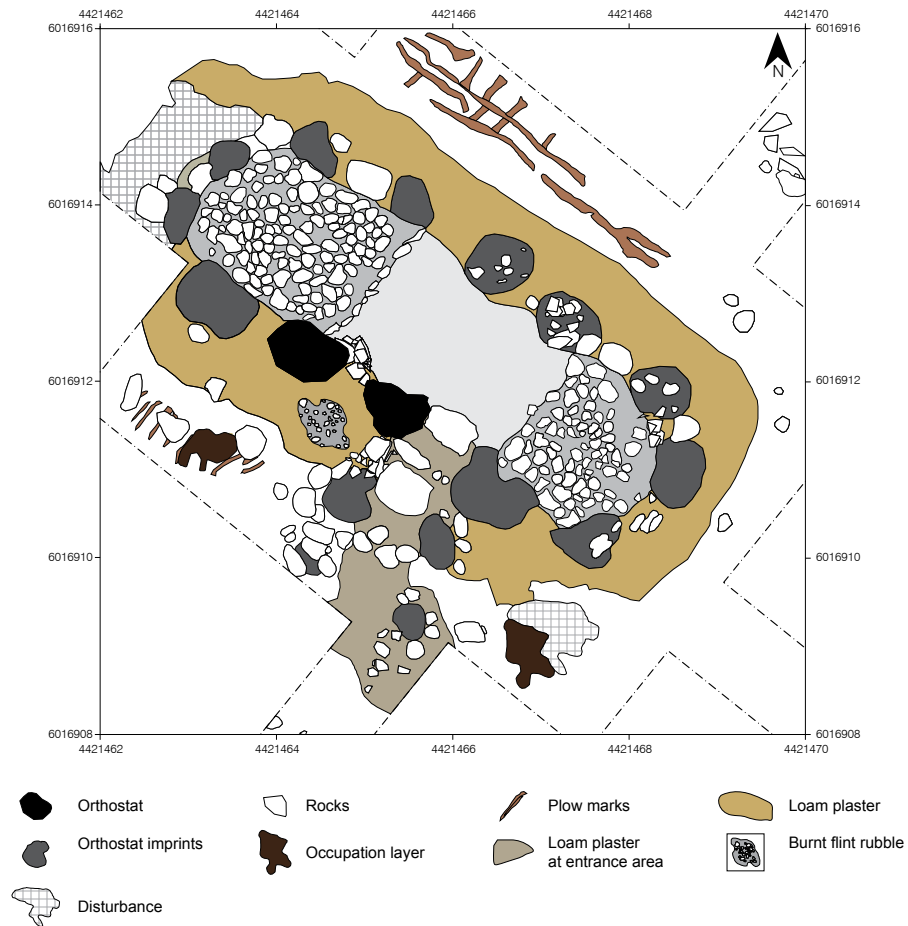


Fig. 219: Plan of the passage grave Wangels LA 69 (Brozio 2016, 131).

provided with a long barrow, while another nine have a smaller mound or no more burial mounds.

The best-studied and -dated passage grave in the study area is Wangels LA 69 (Brozio 2016). The burial mound of this monument was raised in two phases. In a first phase a round and in a second phase a long-oval barrow with a length of 32m and a width of 9-12m was built. Around the monument was a frame made of rocks, which was probably built together with the hill extension. Under an orthostat there was a pit with a completely preserved vessel, which indicates that it was deposited before the burial chamber was built. The chamber itself can be divided into three sections (Fig. 219).

At the north-eastern and south-western ends there are stone pavements separated by an unpaved central part. The northern pavement is separated from the central part by raised slabs of rock. Above these three areas there was a loose pile of burnt flint, which was mixed with the grave goods. Besides pottery the inventory comprised blades, flakes, cross cutters, thick-butted flint axes, a double axe and amber beads (Brozio 2016, 128-137). After evaluation of the  $^{14}\text{C}$ -dating, a total of 6-7 usage and construction phases were identified for Wangels. The construction of the orthostats, the filling of the first barrow, as well as the erection of the chamber took place within the second phase between 3360-3280 cal BCE. This was followed in the third phase by the erection of the second mound, which led to the creation of a long barrow, and the creation of the stone frame around 3280-32120 cal BCE. The burial phases in the chamber are finally in the fifth phase to date 3120-3000 cal BCE (Brozio 2016, 157-159). The features in Wangels clearly show that individual tombs were highly influenced by modifications and continuous use even after the

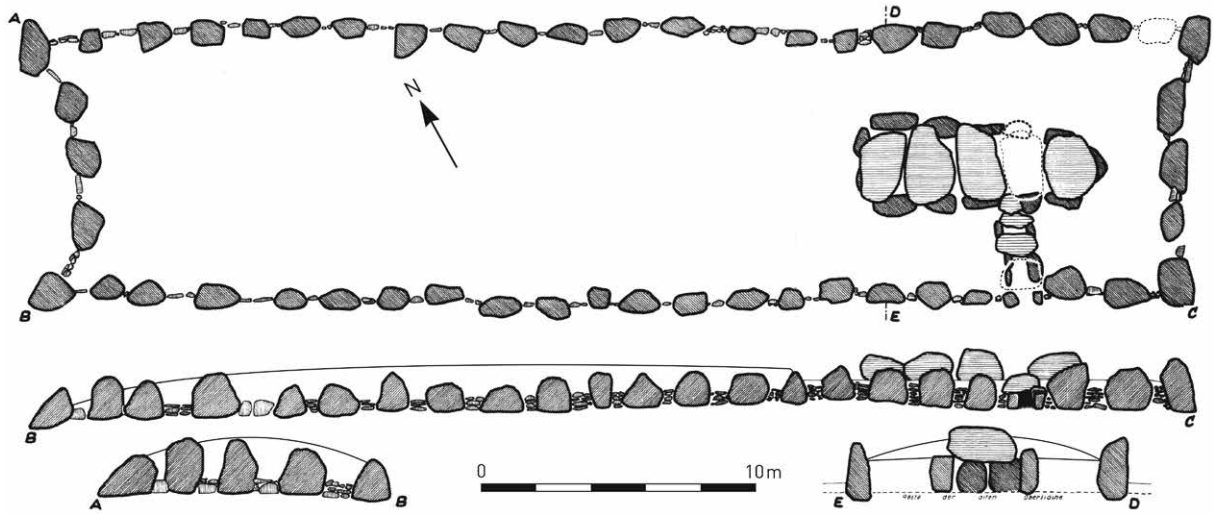


Fig. 220: The large passage grave of Naschendorf (reconstructed plan; Schuldt 1970d, 62).

construction of the burial chamber. The importance of possible ritual activities is also marked by the deposition of a vessel prior to the erection of the chamber.

Another well-preserved passage grave of the study area is the large grave of Naschendorf, which was excavated by E. Schuldt in the 1960s (Schuldt 1970d). The passage grave is located in a cluster of several monuments and, like Wangels LA 69, represents a passage grave within a long barrow (Fig. 220).

The long barrow has a rectangular shape and a length of approximately 40m and a width of 10m. Thus, the tomb represents the largest passage grave from the study area in relation to the burial mound. The hill is also surrounded by a stone frame, at the eastern end of which is the burial chamber. Unfortunately, there is no information on the construction phases of the site, so it is not possible to clarify whether the mound was built before the passage grave, or whether it was filled up in one or more phases with or after the chamber. Partly dry-stone walling is still preserved between the stones of the frame. The chamber itself was relatively well preserved but disturbed by a number of later Neolithic burials. However, the previous division into several quarters can still be seen, which divided the chamber into at least six sections by raised rows of stones. The middle area of the chamber is kept free. Especially this middle part is covered with a very dense layer of small rolling stones, which extends into the quarters. It is unclear whether this fill was subsequently destroyed or whether it was not placed over the entire chamber from the beginning. Burnt flint was also scattered over the stone layer. However, on these layers only a few of the formerly existing grave goods were found. Most of the finds were found in front of the entrance, outside the burial mound, in an area of 8m<sup>2</sup>. In some cases, parts of the vessel from the passage and this outer area could be assembled with fragments from the chamber, whereby at least some subsequent removal from the chamber can be assumed. The finds comprise fragments of at least 50 vessels and a gouge mixed with burnt flint and bone (Schuldt 1970d, 62-68). It is no longer possible to separate removed grave goods from any depositions in front of the chamber. However, the tomb clearly shows how much effort could have been invested in a grave.

A comparison of selected architectural features shows that the passage graves in the study area show both factors that are characterised by a high uniformity but also variability (Tab. 10). The classification of the tomb Altenkrempe 121 (Sprockhoff 1965, ID 283) is uncertain. Although the dimensions of the chamber indicate a characterisation as a passage grave, the passage of the tomb is no longer preserved. Hence, it could also be a very large dolmen. The same applies to the tomb Schön-

Grave	Shape mound	Orientation mound	Orientation chamber	Position chamber	Position passage	Shape passage
Blanksensee	rectangular	E-W	E-W	central	lengthwise central	everted
Pöppendorf	round		NW-SE	central	lengthwise decentral	straight
Domsühl 3			N-S		lengthwise central	straight
Klein Görnow	round		E-W		lengthwise central	straight
Naschendorf 3	trapezoid	NW-SE	NW-SE	central	lengthwise central	straight
Naschendorf 4	rectangular	NW-SE	NW-SE	decentral	lengthwise decentral	straight
Groß Labenz 1	rectangular	NW-SE	NE-SW	decentral	lengthwise central	straight
Altenkrempe 100	rectangular	E-W	E-W	central	lengthwise central	straight
Altenkrempe 121		N-S	N-S			
Kellenhusen 2						
Schönningstedt 61	round		N-S			
Wangels 69	long-oval	NW-SE	NW-SE		lengthwise decentral	straight
Wangels 324	oval	NW-SE	NW-SE	central	lengthwise central	
Wangels 325	oval	NE-SW	NE-SW	central	lengthwise central	straight
Wangels 334	rectangular	NE-SW	NE-SW	central	lengthwise central	straight
Wangels 353			NE-SW		lengthwise central	straight

Tab. 10: Selected architectural features of the better preserved passage graves in the study area.

ningstedt 61 (Schirren 1997), which is also characterised by large dimensions and a passage no longer preserved. Finally, the Kellenhusen 2 monument (Sprockhoff 1965, ID 280) has also been severely destroyed, whereby a definition as a passage grave is fraught with uncertainty.

A strong variability can be seen in the design of the burial mounds. The already-mentioned long barrows occur in both rectangular and in long-oval form, whereby stone frames are only partially preserved. A relatively large group is made up of passage graves with round or oval mounds, which are usually relatively small. This also applies to the rectangular burial mounds, which cannot be defined as long mounds. Even in these cases, stone frames are preserved for all types of hills, but not in all cases. In almost all cases, the orientation of the hill also corresponds to the longitudinal axis of the chamber. Only in one case this is not the case (Groß Labenz 1). The orientations of the chambers are also relatively variable, although the focus is on an orientation according to NW-SE or NE-SW. A higher uniformity exists regarding the positioning of the chamber. This is mostly centrally located in the burial mounds. This applies to all round and oval hills, as well as most long barrows and rectangular hills. In contrast to the dolmen types, there are no passage graves dug into the ground in the study area, whereby the passage constructions are certainly responsible. Also very uniform are the symmetry of the burial chambers, as well as the shape, which are rectangular to long rectangular except for one case. Regarding the chamber floors, there is a fundamental problem in the mostly very poor preservation, which means that no generalising statements are possible. However, all types of floors are present, which can also be found in the dolmens. These include layers of fired flint, detritus, constructions made of stone slabs, as well as stone pavements. Regarding the passages, two exceptions to the regular design are discernible. These include a decentralised position of the passage on one of the long sides of the chamber (Wangls LA 69 and Naschendorf 4), as well as a funnel-shaped passage at Blankensee near Lübeck. This form of construction can often be found further north and is a typical architectural feature on the North Frisian Islands (see Wunderlich 2014).

In conclusion, a high variety of different types, architectural features and specific designs can be seen throughout the entire phase of the construction of megalithic tomb monuments. There are some regional differences; for example, regarding the use of specific floor coverings within the chambers, or regarding the types. In any case, the burial chambers have been enlarged over the centuries. The passage graves represent the most complex types of graves and can therefore be seen in several respects as the final point of the construction of megalithic tombs in the Funnel Beaker period. However, the general diversity of construction activities must be emphasised throughout all construction phases. This concerns the placement of the chambers (above ground, below ground), the aforementioned design of the chamber surfaces (different floor coverings), the installation in existing barrows and the construction of new mounds and overlapping phases of the individual grave types. Thus, the megalithic-building activities in Funnel Beaker contexts can be described as an extremely changeable phenomenon which merges into one another in its specific forms.

#### 6.1.4.2 Work expenditure calculations

Overall, the work expenditure of 66 graves could be calculated within the study area. The gradation presented in chapter 4.1.2 regarding the conservation-related quality of the calculation is broken down as follows:

**1. Fully-preserved burial monuments:** n=1; or almost completely preserved; only the non-megalithic long barrow LA 913 excavated by Sprockhoff (1954) in Sachsenwald can be counted.

**2. Well-preserved burial monuments:** n=29; these include two small dolmens, three large dolmens, four extended dolmens, ten passage graves, five non-megalithic long barrows and three megalithic long barrows.

**3. Moderately well-preserved burial monuments:** n=28; this includes one small dolmen, three large dolmens, nine extended dolmens, eight passage graves, eight megalithic long barrows and one non-megalithic long barrows.

**4. Poorly-preserved burial monuments:** n=8; this includes two small dolmens, four passage graves and two megalithic long barrows.

This shows that dolmens in particular are affected by a poor conservation rate. Overall, the balanced occurrence of good and moderately well-preserved graves is to be emphasised. While in the case of the well-preserved complexes at least the chambers are almost completely preserved (but not necessarily internal structures), this does not apply to all burial mounds. Some of them are also completely missing. In all cases, orthostats had to be reconstructed or estimated in relation to the moderately well-preserved monuments according to the partially still preserved pits, and capstones according to the dimensions specified by the orthostats. Moreover, the hills are at best partly preserved in this category, whereby interior constructions are no longer available here. Especially when there are no more indications of the extent of a former hill, no reconstruction of it was carried out. Due to the overall lack of specific architectural features, the values of all monuments are to be regarded as minimum values and at the same time as a calculation of the final result. Detailed investigations have shown that the construction of megalithic long barrows in particular was carried out in various work steps over a period of 140 years (Mischka 2014). Since such information is not available regarding the existing monuments (except in the case of Wangels LA 69; Brozio 2016), such a differentiation had to be dispensed with to ensure the comparability of all data.

Taking all existing data into account, it is clear that the calculated values do not follow a normal distribution (Fig. 221). Most of the graves are in the smallest groups of values and the higher the amount of work, the fewer are to be found. The factors that influence this data distribution are described below.

The calculated values show that there are significant differences in the type distribution and the expenditure associated with the construction. The smallest group is the small dolmen, whereby only for five graves the amount of work could be calculated. The time required to construct these monuments is between 3,500 and 6,500 person-hours. All small dolmens do not have a preserved stone frame, so here a

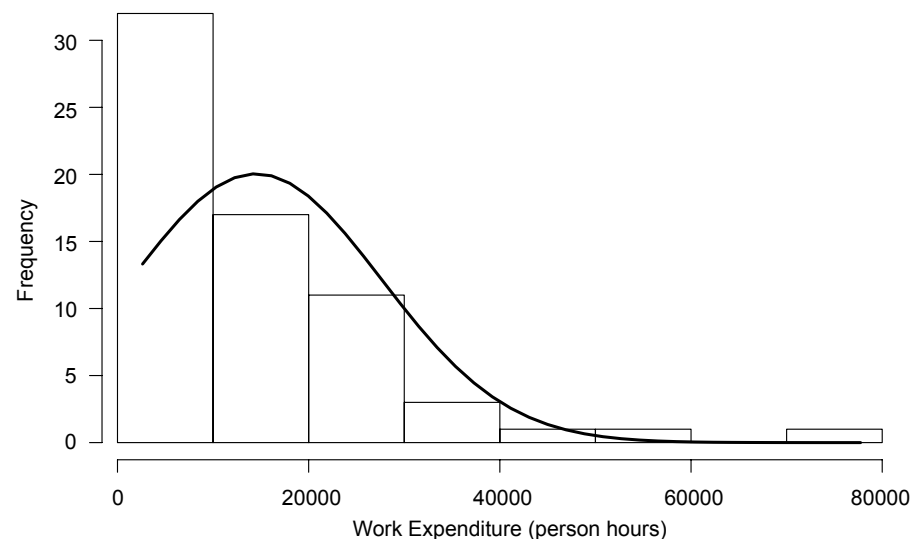
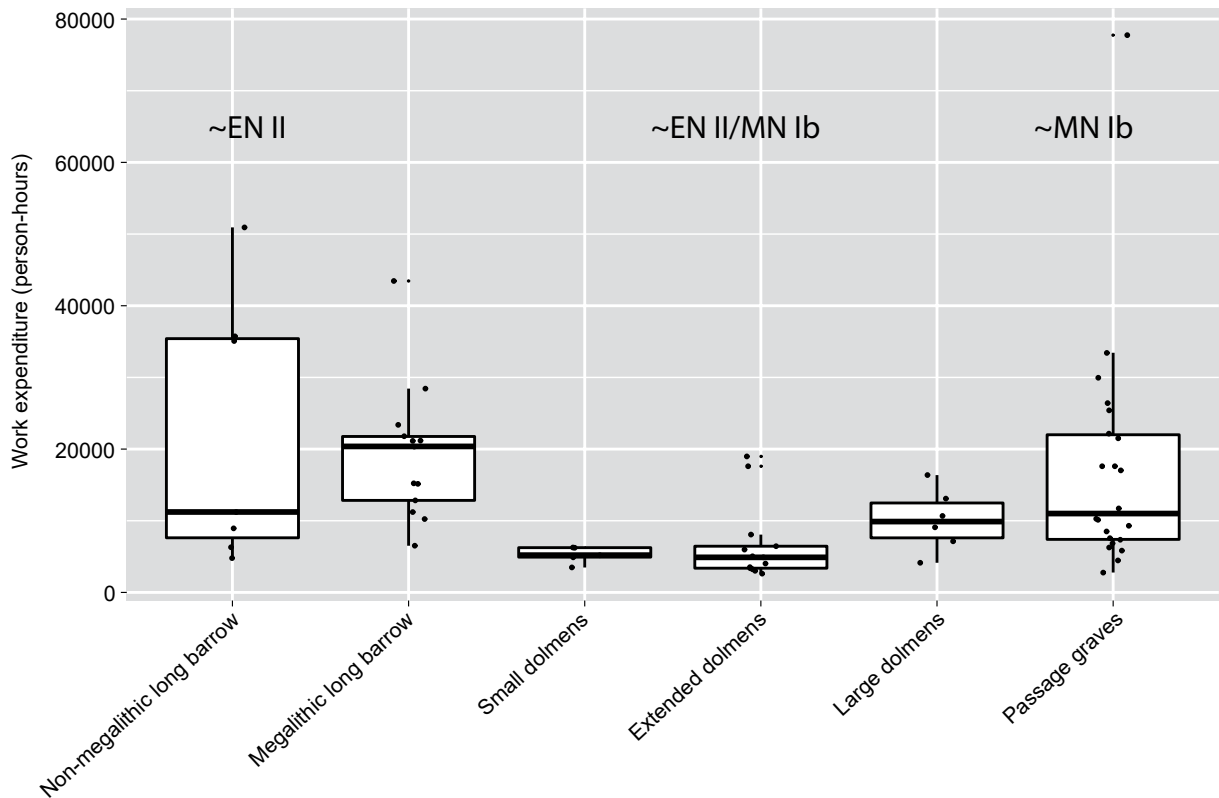


Fig. 221: Histogram of the calculated work expenditure (in person-hours) for all 66 grave monuments in the study area.



reason for the low values is to be seen. A similar picture emerges regarding large dolmen, which can be found above all in Mecklenburg-Vorpommern as a regional type of grave. Here it was possible to calculate the expenditure for six monuments, which ranged between 4,000 and 16,000 person-hours. Only two of these tombs still have remains of a former stone frame around the burial mound. Chamberless, *i.e.* non-megalithic long barrows are represented in the data set with seven tombs. These have a wide range of 5,000 to 50,000 person-hours, whereby all tombs have at least partially-preserved stone frames. Larger groups of graves, which were suitable for calculating the person-hours required for construction, can be found in relation to extended dolmens and long barrows with megalithic burial chambers. Here, thirteen graves are contained in each data set. The person-hours required for the construction of the extended dolmens range between 4,000 and 18,000, a distribution very similar to that of the large dolmens. Only two of the extended dolmens still had remains of a stone frame. Megalithic long barrows have remains of these in eleven cases. Here the expenditure is estimated between 6,000 and 25,000 person-hours. Only in the event of an outlier does the total expenditure amount to 45,000 person-hours. The largest group by far, with 22 monuments available for calculations, is that of the passage graves that occur in the entire investigation area. Regarding this type of grave, the highest span can also be found in terms of the hours required for construction. Nine of the graves lie in an area between 3,000 and 10,000 person-hours, which partly does not exceed the expenditure of the establishment of a small dolmen. However, a larger part of the data set, a total of twelve graves, already require between 10,000 and 30,000 hours, which can otherwise only be found with long barrows (non-megalithic and megalithic). This data set also contains an outlier which, at 77,000 person-hours, also defines the highest of all graves considered. Only eight of the tombs contain stone frames, whereby the values for the majority of the monuments originally had to be set higher.

Fig. 222: Boxplot of the work expenditure (in person-hours) for the different grave types in the study area considering a rough chronological classification.



Overall, subject to the source-critical factors and different quality of the calculations, there is a clear differentiation between the work involved in the different grave types (Fig. 222).

It is clear that already in the first phase of Funnel Beaker period monumental building activities large, sometimes very complex tombs were erected. This is connected with the existing stone frames in most cases and the partly massive hill fills of the graves. Also the enormous range of dimensions and effort of this type of grave is remarkable in comparison to the later megalithic graves. However, it remains unclear for how many burials the non-megalithic long barrows were used. The excavated long barrow LA 913 in Sachsenwald also does not provide much information due to unclear features and poor bone preservation. Recent <sup>14</sup>C dates outside the working area indicates that the construction of the first small dolmens already began in EN I around 3600 cal BCE. However, compared to the earliest tombs, these are characterised by a significantly lower workload, which in no case exceeds 10,000 person-hours. This is only the case if small dolmens were part of a megalithic long barrow. This is the case in relation to the grave of Mankmoss 1, district of Nordwestmecklenburg, with 15,218 person-hours. However, in most cases it is unclear which chamber type was originally used in the long barrows, whereby no more precise chronological differentiation can be made here. Probably later than the first small dolmens, with or without long barrow, are the extended dolmens, as well as large dolmens. No further chronological differentiation can be made between the two types, given that they mainly represent regional grave variants (cf. Schafferer 2014, 97). However, the amount of work invested in both types of graves is very similar and much higher than for simple dolmen. Certainly later, the passage graves date, which at the same time are marked by a massive range of the calculated effort. This type of grave reaches similar values as the megalithic long barrows, so a second peak of massive investments in the construction of megalithic graves must be mentioned here. This peak is connected with the transition to the MN Ib, with which the construction of new megalithic graves ends and only the existing tombs are reused.

In addition to the differences based on different grave types and their chronological occurrence, any regional variations are also of interest. Figure 223 shows an interpolation of the workload calculated per grave in its regional distribution.

In all regions of the work area, graves of low as well as high effort can be found. The southern area of the study area is characterised by a rather small number of graves with high expenditures (from 20,000 person-hours). This concerns the southern areas of the districts of Nordwestmecklenburg and Ludwigslust-Parchim, as well as the Herzogtum-Lauenburg and Stormarn. However, especially in the district of Stormarn, only a small number of graves exist anyway, whereby the distribution here can also be caused by source-critical conditions. In the southern part of Herzogtum-Lauenburg a multitude of graves is known, whereby the distribution here is interesting. There are some tombs in this area, which stand out due to a high effort. These are the very early-dating non-megalithic long barrows, whereby a very early and intensive construction of graves in this area can be assumed. At the same time there are also many smaller, not particularly complex tombs here, whereby high investments are to be understood above all punctual. The Mecklenburg area is a contrast to this. Only a few early grave types are to be found here, but above all dolmens in different forms, as well as passage graves. Especially the passage graves as a younger type were built in this region, albeit with very high expenditure. Eastern Holstein and the northern, coastal part of the study area represent a kind of means between these extremes. Here, early, chamberless long barrows as well as a large number of passage graves and dolmen types can be found. Both types show high variations in the amount of work invested, whereby in this area we can speak of a constantly high investment in the construction of large tombs. Overall,

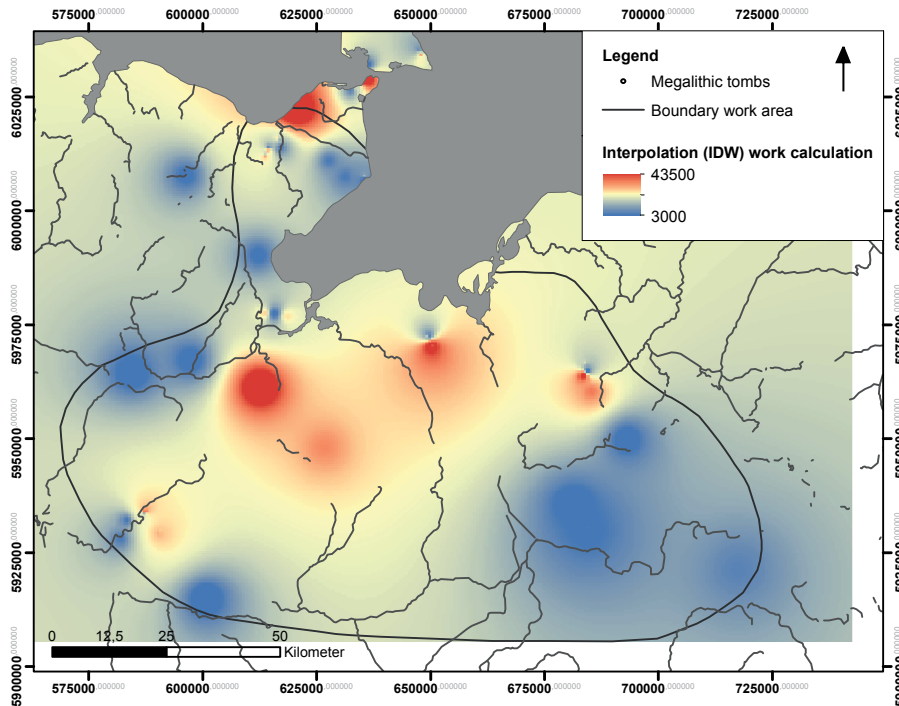


Fig. 223: Interpolation (IDW) of the work expenditure (person hours) within the study area.

the spatial proximity to the coast and the chronological priorities seem to play a role in the distribution of the workload. Regarding the more southern, offshore areas, a shift in intensive construction activity from EN II to MN Ib is likely. This change is shown by the spatial location of large grave types, which can be found first further to the west, later further to the east. This aspect will be discussed in further detail in the next chapter.

### 6.1.4.3 Spatial analysis

In the following, some spatial factors are included in the analyses. One is an assessment of local differences in the occurrence of megalithic burial sites and non-megalithic sites within the study area. Furthermore, two local inventories of tombs are described in further detail, which are particularly well preserved and could therefore represent an original distribution.

In the Mecklenburg area of the study area, a general differentiation between burial and settlement areas could be worked out. The analyses show that although the two spheres partly overlap, they can to a large extent be differentiated from each other. Burial and settlement areas are always in close proximity to each other and form islands that were neither used for the settlements nor for the construction of the graves (Schaffner 2014, 96). This division is very interesting because it points to a formal classification and construction of the landscape by the Funnel Beaker communities living there. In fact, a quite similar picture can be observed in the other areas of the study area (Fig. 224).

Especially in Eastern Holstein there is a strong overlapping area, where both the density of settlement sites and megalithic graves is very high, but apart from this the distributions are spatially offset. Thus, megalithic graves are increasingly found south of the intersection area, while the density of settlement sites north of it is higher. In addition, there are the aforementioned island situations throughout the investigation area in which neither megalithic tombs were built nor settlements were established.

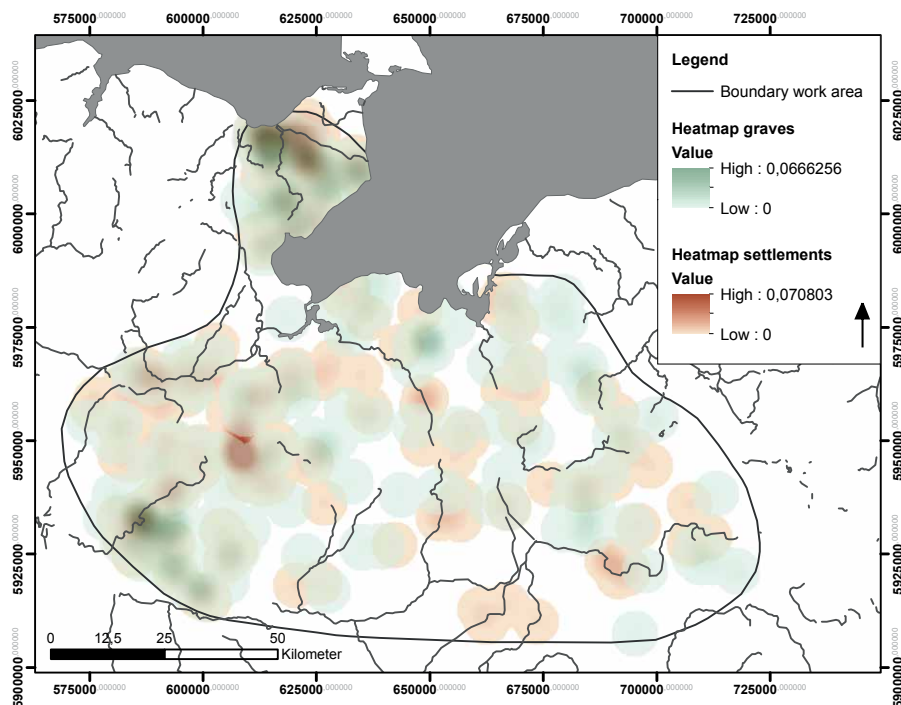


Fig. 224: Heatmaps for settlement sites and megalithic graves in the study area.

### Distribution and regional priorities

An assessment of regional distribution priorities must take into account the sometimes very poor conservation conditions and the unclear assignment of many graves to specific types. Especially in intensively used agricultural areas, a very poor degree of conservation can be assumed (cf. Chapter 6.1.1.2).

At the first level, a distinction can be made between the categories of long barrows and megalithic graves already described. The long barrows contain on this level both the non-megalithic and the megalithic tombs. Regarding the megalithic tombs, both the very unsafe examples (primarily flint scattering) and those with preserved round mounds, or entire chambers or remains of burial chambers without preserved mounds are included. The mapping of these categories reveals obvious focuses of megalithic construction activities (Fig. 225).

On the one hand, there is the area around the Oldenburger Graben in Eastern Holstein. In the southern area there are a large number of questionable megalithic tombs, as well as some secured monuments. Especially in the north-western part near the coast a high number of secured megalithic long barrows and other megalithic graves can be found. This area has by far the highest density of graves within the study area. Especially early-dating non-megalithic long barrows are rarely represented here. Another focus is the south-western region of the study area. This area is much more marked by an imbalance between long barrows and megalithic graves. Especially confirmed examples of long barrows are found here in large numbers. The whole eastern and central area has a very low density of graves of both categories, but clearly safe and unsafe megalithic graves make up the majority. In addition to individual, better preserved clusters, a small number of monuments in this area should be emphasised, but this is certainly also source-related.

On a second level, a distinction can be made between non-megalithic and megalithic long barrows (Fig. 226).

As already mentioned, this difference is mainly due to chronological factors, whereby early and later hotspots of construction activities could be recognisable here. In the area around the Oldenburger Graben there are only megalithic long

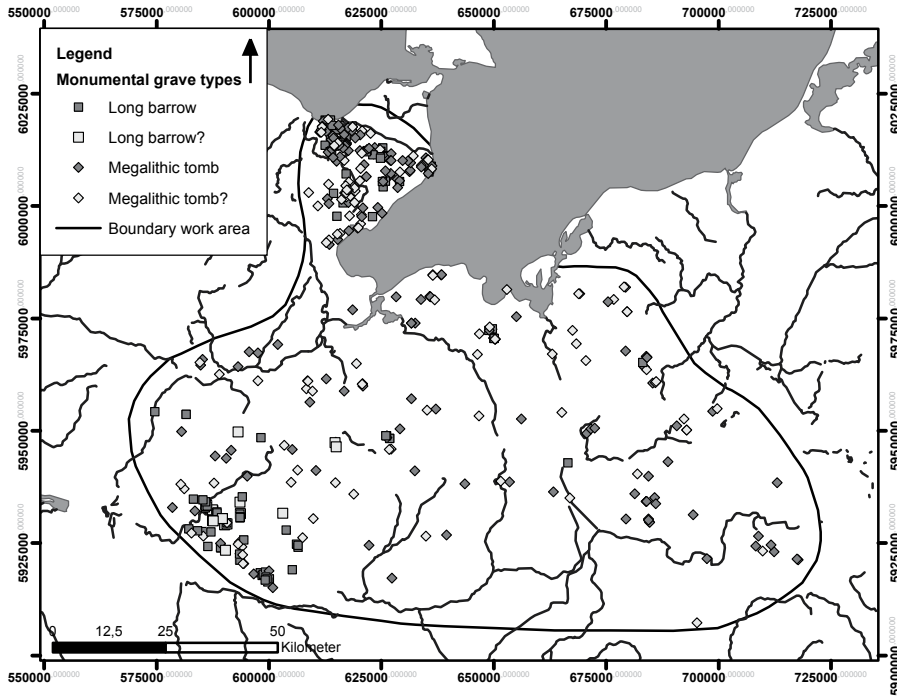


Fig. 225: Distribution of the long barrows and megalithic tombs preserved in the study area as a superior category.

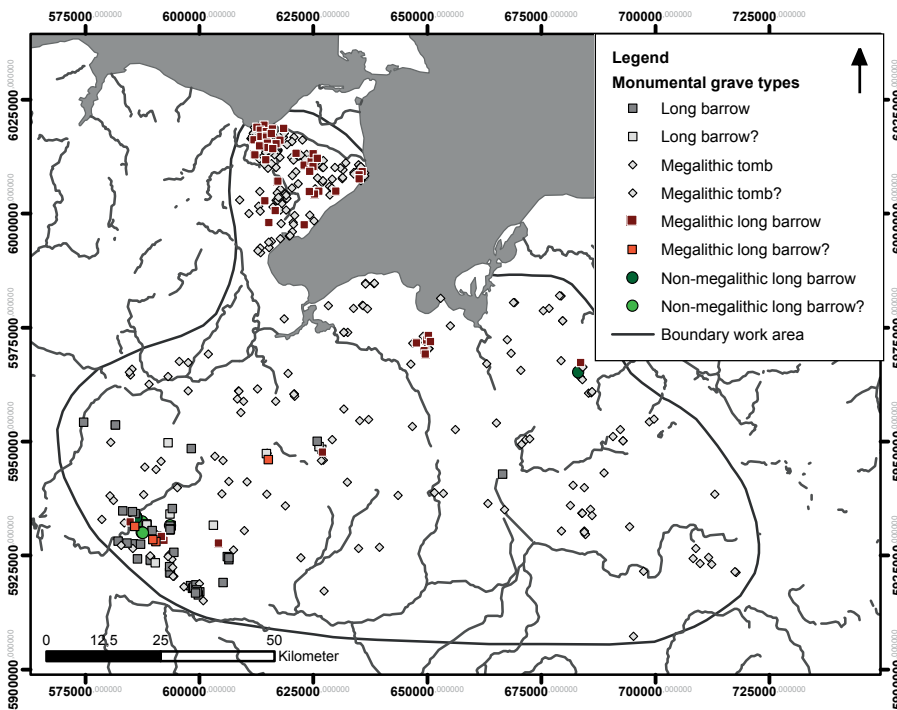


Fig. 226: Distribution of the long barrows of different types and megalithic tombs preserved in the study area.

barrows, which can therefore be assigned to a later construction phase than the non-megalithic monuments. However, it must be borne in mind that it was not unusual to convert formerly non-megalithic long barrows into megalithic long barrows by subsequently inserting megalithic burial chambers into the burial mound (cf. Müller *et al.* 2014, 175-177). Thus, in relation to the region around the Oldenburger Graben, it is possible that the megalithic long barrows were built earlier than the burial chambers indicate. Non-megalithic long barrows can also be

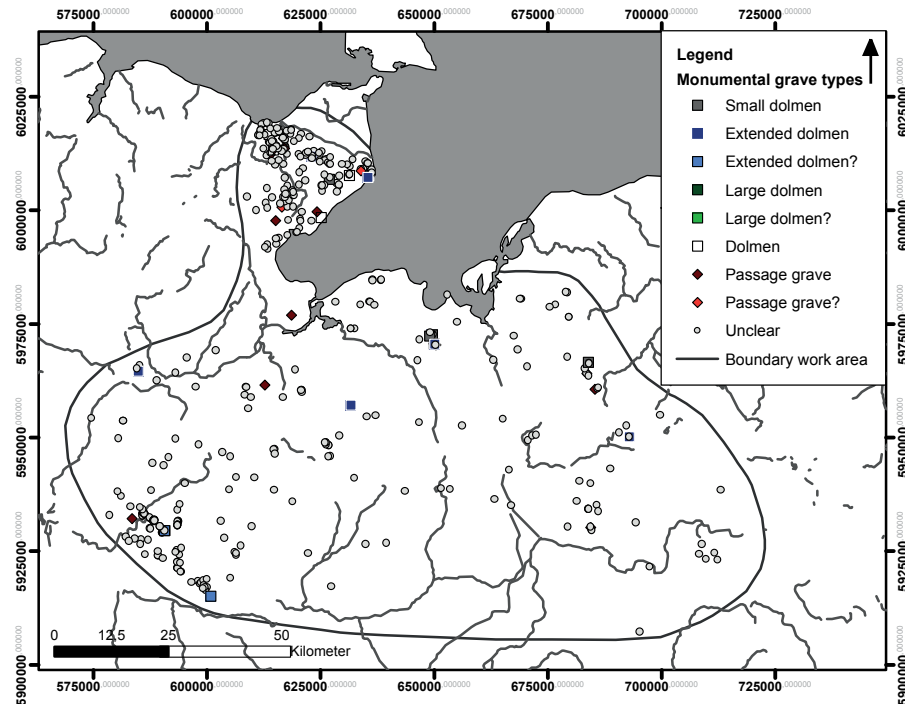


Fig. 227: Distribution of the determinable chamber types in the study area, including the megalithic long barrows.

found in Mecklenburg-Vorpommern, as well as some secured and many unsecured examples in the Sachsenwald. Certainly, the density of the monuments in this area can be regarded as source-related, since fewer monuments were destroyed within the forest. However, the concentration of safe and questionable non-megalithic long barrows, which is unique in the study area, can also be interpreted as an early hotspot of monumental building activities.

A third level of differentiation – which can also be partially interpreted chronologically – are the different chamber types in their spatial distribution (Fig. 227).

Small dolmen are only very rarely represented, although they are distributed over a wide area and cannot be found within a concentration. The same applies to the extended dolmens and large dolmens, which also do not occur in specific concentrations. The only exceptions are the clusters of Barendorf and Naschendorf, which represent a concentration of the different types of dolmens but can be explained by their good conservation. Large dolmen are a rather regional chamber type found mainly in the eastern part of the study area. This second construction phase can therefore be found over a clear area within the entire study area, although there are no clear indications of a selective concentration of construction activities. Finally, the last type to be mentioned are the passage graves, which also occur in the entire investigation area, but have a clear focus in Eastern Holstein. Since the different dolmen types are not concentrated here and taking into account the conservation-related deficits, this could be a late focus of megalithic construction activities.

### Original grave clusters?

Within the study area there are a small number of areas with an exceptionally good preservation of megalithic graves. These areas are forest areas where the activities leading to the destruction of the original grave inventories had a lesser impact. These include above all agricultural work that resulted in the removal of the disturbing boulders and graves. Also for the construction of churches, a considerable number of boulders were removed from megalithic tombs (Schirren 1997, 147-149).

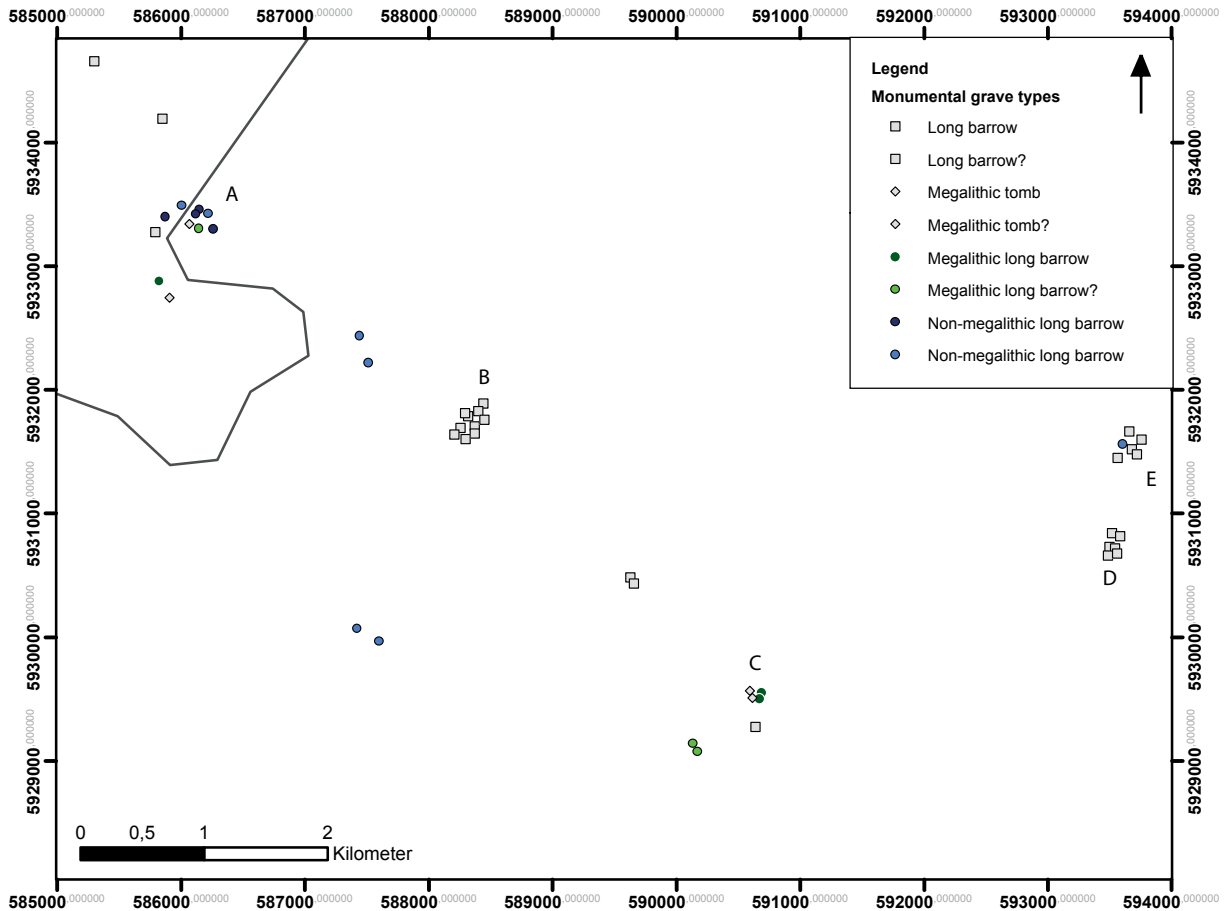


Fig. 228: The Funnel Beaker graves in the Sachsenwald, district of Herzogtum-Lauenburg.

The data sets in Langeland, which were interpreted as almost complete, show that megalithic graves were built in both clusters and individually (Tilley 1996, 131). As a result, the presence of isolated megalithic graves *per se* is no indication of a strong degree of destruction. Rather, a parallelism of individual graves and grave clusters can be expected. Such a situation is partly the case in the Sachsenwald, district Herzogtum-Lauenburg, as well as in the Everstorfer Forst, district Nordwestmecklenburg. Both examples are described below.

Grave clusters hold particular interest for this work for various reasons. Thus, they show a possible frame of reference of cooperating funeral communities. They also show how a shared burial area was used either for a limited period or for a very long time. The significance of individual grave clusters in connection with available data on settlement is further explained in chapter 6.1.4.5.

### The grave clusters in the Sachsenwald

In the Sachsenwald there are five clusters of Funnel Beaker grave monuments (Fig. 228) in addition to individual graves or graves in pairs. A total of 35 burial sites are located in the five clusters, at least 20 further sites could be located between the clusters and in the immediate vicinity. Clusters A-C are located in an NW-SE aligned axis at a distance of 2.7 and 3.2km respectively. Clusters D and E are located north-east of Cluster C: the distance between Clusters C and D is 3.2km, and between Clusters D and E only 1km.

Excavations of a total of four tombs were carried out by E. Sprockhoff (1954) in 1951/1951. All of these monuments belong to Cluster A (LA 911-918) and all of them are non-megalithic long barrows. The rest of the complex comprises two long

barrows with remains of a stone frame (LA 911 and 912), an indefinite megalithic burial chamber without burial mound (LA 915), and a megalithic long barrow (LA 917), but the burial chamber is destroyed. The distance between the graves is between 50 and 150m (Schirren 1997, 120-123).

Cluster B (LA 21-24/195-190) is the largest of the five tomb clusters with a total of ten tombs. However, none of the graves were examined. In all cases, these are indefinite long barrows, some of the stone frames of which have been preserved. The distance between the graves is 60-160m (Schirren 1997, 119).

Cluster C (LA 772-775) is the smallest of the clusters and contains only four tombs, all very close together (between 50 and 90m distance). Two of these graves (LA 772 and 773) are megalithic long barrows, but the type of chamber could not be determined, as only individual stones were preserved. In this group, one of the few round hills within the clusters can be found. The type of burial chamber could not be defined due to the degree of destruction. However, the type of tomb 774 could not be determined separately (Schirren 1997, 118).

Cluster D (LA 605/683-684/689/691-692) and Cluster E (LA 494/497/499/499-500/513-514) each comprise six graves. All twelve graves are long barrows, some of which still have stone frames. Further information regarding the original presence of megalithic or non-megalithic burial chambers is not available. The graves of the two clusters are located at a similar distance to each other as is the case in clusters A and B (50-150m) (Schirren 1997, 119).

The grave clusters show clear differences not only in the number of graves, but also in the preserved base of the mounds. Since the height is no longer preserved in many cases, only the length and width of the hills of the long barrows (both megalithic and non-megalithic) were included (Fig. 229).

The distribution of the hill floor area per cluster shows clear differences between the grave groups. For example, Cluster A has a very wide range of burial sites. Even if the visible outlier is removed from the data set, the largest monument in this cluster can still be found in relation to the burial mound. It is also striking that Group A does not include any monuments whose hills are less than 200m<sup>2</sup> in size. This distinguishes this grave group from Cluster B, which has a very high number of graves and a large span of existing mounds. However, half of these graves, with approximately 80-160m<sup>2</sup>, are located in a size range that is also characteristic of the remaining clusters. The other five graves from Cluster B have large to very large hill

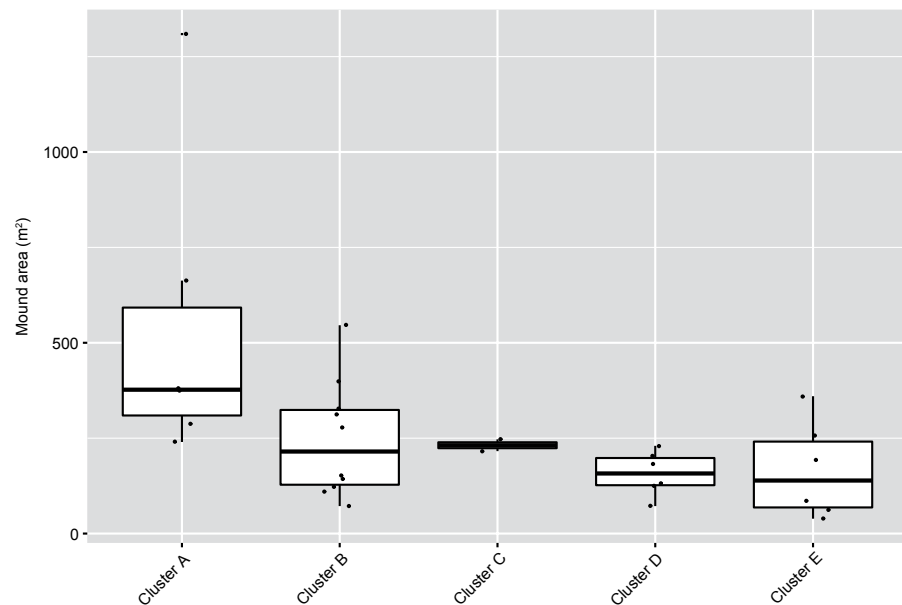


Fig. 229: The preserved mound areas (m<sup>2</sup>) of the long barrows of the individual grave clusters in the Sachsenwald.



dimensions. On the other hand, Cluster C has only two graves, both of which are in the medium size range. Finally, the last two clusters – D and E – show mounds of the smallest, up to medium dimensions. Therefore, overall clear differences in construction activities can be observed between the grave clusters in the Sachsenwald. This refers to the number of tombs built as well as the size distribution of the hills. However, it remains to be seen whether these differences could be due to a temporal development. A chronological differentiation within and between the grave clusters is not possible due to the lack of information on grave type dating.

Regarding the orientations, a varying degree of uniformity and heterogeneity can be recognised within the grave clusters. Cluster D and E belong to the more uniform groups. Here the majority of the monuments are aligned according to N-S ( $n=5$  or  $4$ ). In Cluster D, the last grave is directed to NW-SE, while in Cluster E there is a grave to E-W and one to NE-SW. The two graves preserved in Cluster C are also characterised by a NW-SE orientation. This is also the most common orientation in both Cluster B and A. Here 50% (four in Cluster A; five in Cluster B) of the tombs are aligned accordingly. Each Cluster A contains one grave orientation according to N-S, E-W, WNW-ESE, as well as one indefinite monument. In Cluster B, two of the graves are directed towards N-S and WNW-ESE respectively. Finally there is a long barrow, which is oriented to NE-SW.

### **The grave clusters in the Everstorfer forest**

Two more clusters of megalithic graves, probably largely intact, can be found in a small forest area in Mecklenburg-Vorpommern. Both clusters were extensively investigated in the 1960s and a large number of graves were excavated so that precise information is available on the grave types and other architectural features (Schuldt 1970a-d; Hollnagel 1970). The clusters are located near the villages of Barendorf and Naschendorf at a distance of 2km from each other. Both clusters comprise different grave types, whereby based on the presented evaluation of  $^{14}\text{C}$ -dating of megalithic graves (Furholt and Mischka 2019; Mischka 2014, 132-135; Persson and Sjögren 1995, 82), a chronological depth and a continuous use of both grave groups can be assumed.

The first of these two clusters (near Barendorf, subsequently Cluster A), comprises a total of ten tombs, eight of which are close to each other (200-300m). The two other graves are located at a distance of about 600m, their association with Cluster A is therefore questionable. However, not all of the eight graves of the cluster were examined or, due to the degree of destruction, it was not possible to address the type of all graves. However, five of the graves could be identified, namely two small dolmens and three extended dolmens. (Schuldt 1970a, 7-8). The Cluster A shows a high diversity regarding individual construction elements. Of the three small dolmen located in or near the cluster, only one has remains of a rectangular stone frame. However, the hill of another small dolmen was completely destroyed, whereby no statements are possible here. In one case the chambers were at ground level, in one case underground and in one case in a slightly elevated position. The chamber floor was only in one case still well preserved and showed a scatter of burnt flint. The two extended dolmens are also quite different. A long rectangular hill with a stone frame is preserved in one case, while the second grave only contains remains of a round hill. The round hill was only filled up with earth, while the long rectangular hill contained earth and stone packings. The tomb with stone frame contained a dug-in chamber with a partially-preserved slab floor. The other extended dolmen, on the other hand, had a ground-level chamber with remains of a layer of fired flint (Schuldt 1970a).

In the case of the second cluster near Naschendorf (subsequently Cluster B), all grave types could be reliably determined. These are one small dolmen, two extended dolmens, and two passage graves (Schuldt 1970b-d; Hollnagel 1970). The

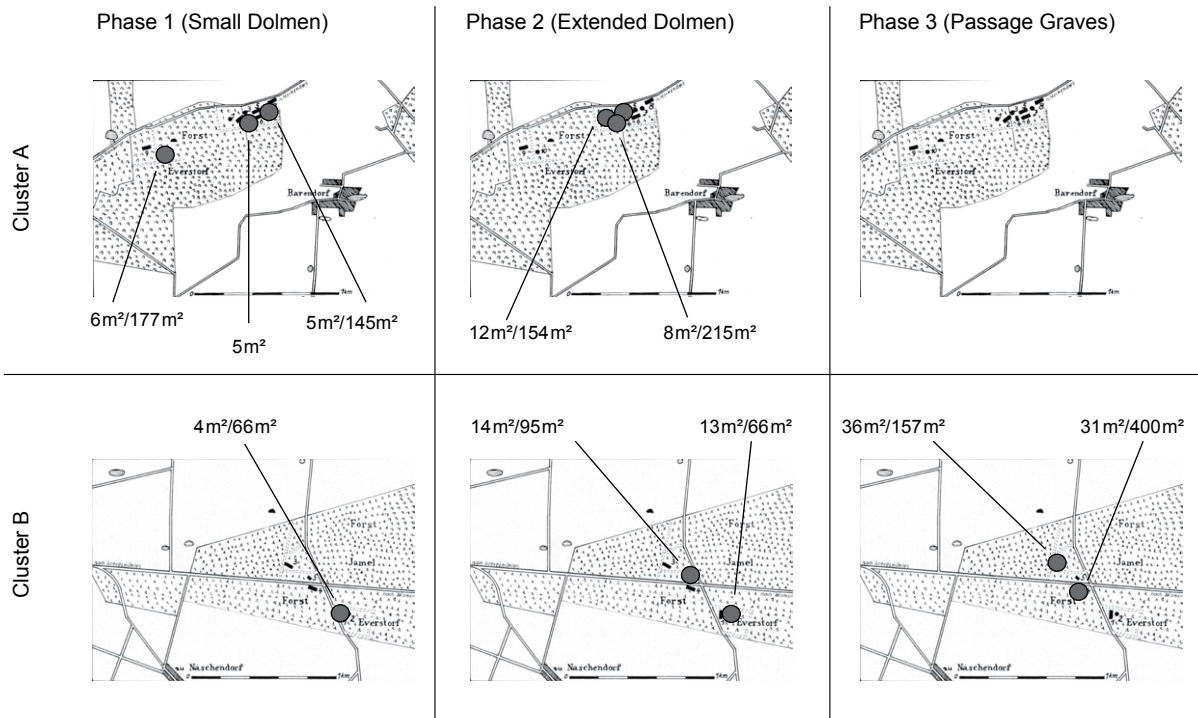


Fig. 230: The grave clusters at Barendorf (Cluster A) and Naschendorf (Cluster B) (changed after Schuldt 1970d, 61).

graves of Cluster B seem to be a little more uniform overall, although differences are also visible here. The small dolmen is provided with a long rectangular mound and a stone frame. The hill filling comprises earth and stone layers. Stones also form the floor of the burial chamber at ground level. Both extended dolmens have a stone frame, but one of the hills is round and one is long rectangular. Both mounds are covered with earth and stone packings. The ground-level chambers are covered with stones packings in one case and with slabs in one case. Finally, both passage graves were also provided with a stone frame. One of the hills has a trapezoidal shape, in the second case the more usual long rectangular shape was used. However, both hills consist only of earth, whereby of course isolated stones are contained. The chambers are at ground level and in both cases in the lower layers of the burial chamber, a fill of stone chipping could be documented, which probably marks the original chamber floor.

Taking into account the available <sup>14</sup>C-dates of megalithic tombs in Northern Europe, specific phases of construction activities can be assumed for both clusters (Fig. 230). There is no evidence of the earliest construction phase in the form of non-megalithic long barrows known in contexts of the Funnel Beaker period. The first construction phase is defined in both clusters by the construction of small dolmens. Two of these tombs were built in Cluster A, as well as another dolmen in the small grave group near it. In Cluster B, only one small dolmen was built. The second construction phase in both clusters is characterised by the construction of several extended dolmens. This includes three graves in Cluster A and two graves in Cluster B. Finally, the last construction phase is characterised by the passage graves, which were built exclusively in Cluster B. However, due to the indefinite burial sites in Cluster A, it cannot be ruled out that passage graves were originally also found here.

This makes it possible to distinguish some fundamental differences in the erection of monuments within both clusters. Due to the close location of the monuments to each other within the two clusters, as well as the clear distance of the clusters from each other, it can be assumed that two social groups were directly related to each other but deliberately differentiated the burial areas. Obvious differences exist

regarding the quantity of graves and the size of graves within the clusters. In Cluster A, the first two construction phases focused on the construction of a large number of burial sites, especially if the somewhat distant burial sites are also included. In the first two phases, the group associated with Cluster B invested only in the construction of a smaller number of burial sites, albeit which assumed increasingly larger dimensions than in Cluster A from phase 2 onwards. While in Cluster B the small dolmen is small in terms of both the chamber dimensions and the size of the burial mounds, the documented extended dolmen of phase 2 have a larger chamber size with smaller burial mounds at the same time. This development towards larger burial chambers culminated in the erection of the two passage graves, which contain the largest chambers of the two clusters. One of these two passage graves was provided with a very large burial mound, while the second grave interestingly possesses a rather small burial mound in comparison to the former mounds in Cluster A. The groups or communities, which over a long period made a continuous reference to the two burial sites by erecting different types of graves, seem to have pursued differentiated approaches or strategies of megalith-building activities. While one group (Cluster A) concentrated on the construction of a large number of smaller monuments with large burial mounds, in the other group (Cluster B) a smaller number of monuments were built, albeit most of which have large to very large chambers, mostly with moderate burial mounds. These construction strategies characterise different representative approaches developed by the two associated groups within a small local environment.

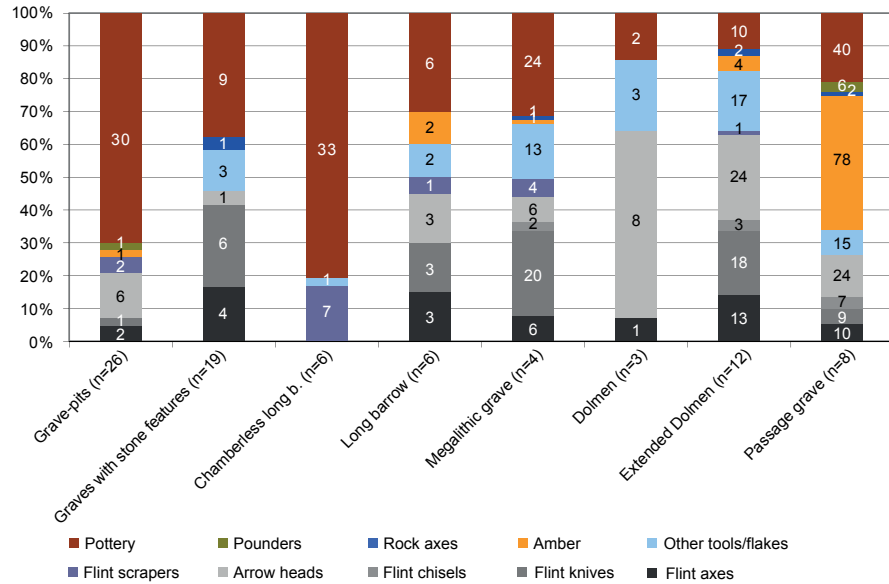
In summary, the spatial distribution of the megalithic tombs of the Funnel Beaker period shows some interesting focuses and characteristics. On the one hand, early emphasis of megalithic construction activities in both the south-western and north-western areas of the case study can be seen, which are expressed in the construction of non-megalithic long barrows. Especially in today's Sachsenwald such early grave clusters can be found, albeit which contain only very few later grave types. It can therefore be assumed that the focus of megalithic construction activities has shifted over the centuries. In particular, the fact that there are good conservation conditions in the Sachsenwald permits this assumption. Later, a clear focus of construction activities can be found in today's Eastern Holstein, whereas the density of megalithic graves in the rest of the study area remains relatively constant. Of particular interest for the characterisation of megalithic tombs are the grave clusters, which may indicate an almost complete burial site. These clusters can presumably be seen as central burial grounds for several communities in which action-oriented dynamics, such as specific representation mechanisms and an urge to build many and large monuments, which may be marked by competition, become visible.

#### **6.1.4.4 Grave goods**

A comparison of the equipment of different grave types from Funnel Beaker contexts is particularly difficult for several reasons. A fundamental distinction must be made between megalithic and non-megalithic burial sites, as well as between burial sites with collective burials and individual burials.

Non-megalithic graves are much rarer in the test area than megalithic graves. Only 45 non-megalithic tombs are known from the test area, with the exception of the Ostorf-Tannenwerder burial ground (all from Kossian 2005). These can be divided into simple grave pits without further architectural attributes, as well as flat graves with stone elements. Burials from non-megalithic long barrows are in some way an intermediate stage between the two grave types relevant here. These burials are probably to be seen as individual burials and did not take place in a megalithic burial chamber. However, due to their association with a monumental tomb, they differed formally strongly from simple grave pits and flat graves.

Fig. 231: The preserved grave inventories of simple flat graves, non-megalithic long barrows and megalithic grave types in the study area.



A clear classification of megalithic graves as individual burials is only possible in very few cases. This is partly due to the often very poor bone preservation. In addition, the graves are often disturbed by later destruction and subsequent burials. As a rule, the grave goods preserved in megalithic burial chambers cannot be assigned to single individuals, whereby here it is not possible to compare the burial objects with persons and only the entire inventory can be evaluated. Due to the disturbances mentioned above, megalithic burial chambers are not closed features, whereby incomplete inventories can be assumed.

Nevertheless, at least the known stock of grave inventories of different grave types is to be compared here (Fig. 231).

Ceramics, as well as simple flint artefacts and tools, regardless of the type of grave, clearly belong to the basic equipment of Funnel Beaker period graves. Especially in simple grave pits and non-megalithic long barrows, pottery make up the largest part of the preserved burial objects and can therefore, taking into account the source-critical factors, be seen as the most important grave good of these graves. Overall, the non-megalithic long barrows have the least variation of different artefacts. Apart from ceramics, antler and bone tools and flint scrapers should be mentioned here. Regarding the earth pits and flat graves with stone elements, the occurrence of different flint tools in particular is more frequent. In addition to flint blades and arrowheads ('Querschneider'), these also include flint axes. Stone axes, pliers and other tools are rare, but also represented. The rarity of amber in earth graves and non-megalithic long barrows is striking. Regarding the megalithic grave types (long barrows with burial chambers, indefinable megalithic graves, small dolmens, extended dolmens and passage graves), the smaller percentage of pottery, measured against the entire inventory, stands out. The proportion of flint as well as antler and bone tools is significantly increased here. However, apart from the proportion of ceramics the ratios of the different grave goods are quite similar to those of the non-megalithic graves. Thus, flint axes are only a small group of grave types, especially in comparison to the other flint artefacts. The low variance of the small dolmens is remarkable, which also contained arrowheads quite often. A clear imbalance exists only in relation to amber beads. These occur significantly more frequently in passage graves than in all other types of graves.

The low variance of different grave goods in non-megalithic long barrows and small dolmens, as early types of graves, could indicate a chronological change towards a higher variance of grave goods. This variance is quite visible in relation to

passage graves. At the same time, it must be borne in mind that passage graves could contain many more burials than all other types of graves listed here, whereby a high variance can also be attributed to individual burials. Other authors also found that regarding Funnel Beaker burials fixed combinations are not necessarily common, which indicate certain standard inventories for different persons or grave types (cf. Bakker 2011; Kossian 2005, 110).

The preserved grave goods from both non-megalithic and megalithic tombs cannot be interpreted as an expression of existing institutionalised social inequality and fixed social hierarchies. Thus, there is no clear differentiation according to the different types of graves that would indicate them. However, it should be noted here that the assignment of individual burial objects to specific individuals within megalithic graves and the incompleteness of the grave inventories have to be kept in mind. It cannot be ruled out that social inequality and hierarchies were not expressed through the death ritual, but through other factors.

#### **6.1.4.5 Collective and cooperative elements of megalith-building traditions**

For the assessment of the extent to which megalithic tombs of the Funnel Beaker period represent collective construction activities in the study area, a consideration and combination of several factors is indispensable. This includes, on the one hand, an approximate calculation of the available manpower in a defined area, the work required for the construction of the megalithic tombs, as well as the spatial reference to existing burial areas.

The megalithic tombs of Funnel Beaker contexts are partly characterised by complex extension processes, which can include the construction of several dolmens within one tomb (cf. Mischka 2012). In addition, the tombs occur frequently and especially in better preserved or investigated contexts in grave clusters containing different grave types (cf. Gebauer 2014, 103). This indicates a continuous use of specific burial areas. At the latest with the – regarding the chamber area – larger and more accessible grave types, a burial is to be assumed not only of single individuals, but also smaller to larger groups.

Based on this data, the fundamental question is how these groups were composed. Archaeologically, settlement features and, in particular, house features can be used to provide information on the number of inhabitants. However, the social composition of funeral communities can only be reconstructed from these structures to a limited extent. In view of possible family relations between the individuals buried in the graves and burial grounds, scientific analyses can be consulted in a supportive manner. However, there is little information available from megalithic graves. Due to the lack of aDNA analyses from megalithic graves, analyses from collective graves of the Bernburg and Wartberg groups are used for comparison, which have a close relationship with the Funnel Beaker core area, especially regarding burial rites. The similarity between these groups includes the use of collective graves and their internal segmentation (see Wangels LA 69; Brozio 2016). The tombs of Benzingerode, Calden, Odagsen and Panker were examined more closely regarding possible family relationships. The tomb of Benzingerode has eight quarters in which 46 individuals were buried. The <sup>14</sup>C dates indicate a burial period of 200 years, around 3100-2900 cal BCE. A total of seventeen individuals were examined for aDNA. The result was that a total of four pairs were maternal related as they share their mtDNA haplotypes. Three of these four pairs also lay together with other individuals in one quarter. Nine other individuals have different haplotypes, whereby at least a maternal relationship can be excluded (Berthold 2008, 39-51; Meyer *et al.* 2008, 123-125). Three other graves from the Wartberg group were examined: Calden and Odagsen. On the other hand, Panker is a megalithic tomb from Funnel Beaker

contexts. The graves date between 3400-2800 BCE. A total of at least 201 individuals were buried in these four graves, of which only eight mtDNA sequences could be reproduced (three from Calden, three from Odagsen and one from Panker). In Calden and Odagsen two individuals each have the same haployp and thus share a female ancestor (Lee *et al.* 2014, 17-178). In each of the case studies both individuals who were related to each other and those who were not were buried. However, it must be borne in mind that only the biological relationship within the female line could be examined, whereby further relationships cannot be ruled out. The small number of suitable sample material is also critical of the source.

A comparative approach, including ethnographic data sets, is an additional interpretation aid. The data available from Sumba, Nagaland and Madagascar show a clear commonality. In all cases, extended networks – some of which go beyond the small groups buried in individual graves – hold strong importance regarding the construction work of megalithic (tomb) monuments. Thus, the graves erected in Sumba are regarded as the property of the entire clan of the builder, although only parts of the nuclear family are buried in the grave. This is related to the collective efforts described in chapter 5.1 regarding the provision of resources and manpower required to build the grave (Adams 2010, 281). Very similar processes have also been described in Nagaland, *e.g.* concerning Angami and Lhota-Naga. Here the efforts to erect the megalithic monuments include relatives, clan members and some other villagers (Jamir 2004, 110-112). In the case of Merina in Madagascar, funeral communities usually include local family clusters that are jointly responsible for the construction and preservation of the graves (Bloch 1994, 111-115). It becomes apparent that the groups involved in the construction activities are very large and can even surpass the actual funeral communities. In these contexts, feasting activities also hold strong importance to achieve social prestige (cf. also Jeunesse 2016).

In a next step, the effort required for construction, the time potentially available for construction activities and the availability of people must be brought together. For Oldenburg-Dannau LA 77, a probably number of 10-100 inhabitants could be determined in MN Ib, of which 6-60 persons can be classified as fully able to work. However, as already mentioned, this is not to be set as the sole benchmark, since the settlement was located in a favourable settlement area and could reflect a large community being not necessarily typical for that time. This settlement is set in a temporal context characterised by an intensification of economic activities, an increase of landscape open spaces, as well as a merger of houses formerly to be defined as hamlets to small settlement communities (cf. Andersson 2004). For the EN, which is characterised by individual hamlets, only a very small group of available individuals for megalithic construction is to be expected. This may not have exceeded 4-10 persons.

Within the framework of the SPP 1400, various studies have attempted to estimate the population density during the Funnel Beaker settlement phases. Based on the fragmentary information on settlement, the known megalithic graves were used as data basis (Rassmann and Schafferer 2012; Schiesberg 2012). Both studies come to similar results with 0.7-1.6 persons/km<sup>2</sup> (Schiesberg 2012) and 1.7-2.3 persons/km<sup>2</sup> (Rassmann and Schafferer 2012). However, it should be noted that the density of megalithic graves in the eastern part of Mecklenburg-Vorpommern is considerably higher than in the western part, which is the subject of this work (Rassmann and Schafferer 2012, 117). It is therefore more likely to be based on the lowest estimates. With an area of 5710km<sup>2</sup> (district Nordwestmecklenburg and Ludwigslust-Parchim) a span of 3,998-9,707 persons could be expected. In this area there are 116 megalithic tombs (and non-megalithic tombs). A rough comparison between the factors of the total population, as well as the number of tombs would mean that with an available number of persons between 34 and 82, which would be available for the construction of a grave would have to be calculated. However, these calculations

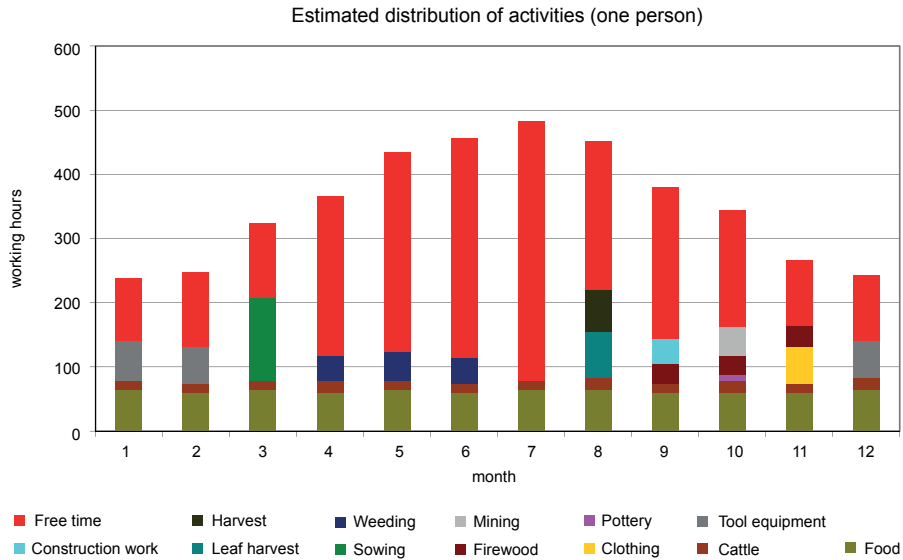


Fig. 232: Calculation of the working time required for different activities per month (according to Kerig 2010, 242).

include the total population, whereby only about 60% of people who are fully able to work can be assumed. These figures correspond relatively well to the settlement findings of Oldenburg-Dannau LA 77 and indicate that only small groups were actually available for the construction of megalithic plants.

T. Kerig (2010, 42) calculated the second factor to be determined, the time available per month (Fig. 232). In this breakdown, July is the month with the highest value of free time available that could be used for the construction of megalithic tombs.

Based on this month, 2,242 (6 people) to 22,420 (60 people) hours of available time can be expected. According to this calculation, a small dolmen could have been built for a small group (6 people) in one to two months. Large monuments, such as those with non-megalithic and megalithic long barrows, and the later passage graves could only be built in several months even by a large settlement community (60 people). Especially the non-megalithic long barrows, as well as the small dolmen within long barrows are to be seen in a context in which rather single farms are to be assumed. This suggests that such construction activities were either stretched over an extremely long period, or that several groups cooperated with each other. Considering the location of many graves in clusters, as well as segmentation within the grave chambers and frequent deposition practices, the latter situation can be assumed.

Finally, the design of the tombs itself provides information on the significance of collective levels of action. Especially the Middle Neolithic passage graves are in many cases characterised by an internal structure, which again subdivides the burial area (cf. Brozio 2016, 153). These so-called quarters could indicate a differentiated positioning of single individuals or groups within the tomb. With reference to the importance of feasting activities in the ethnographic case studies, depositional practices at Funnel Beaker graves are also of interest. These are mainly found in the immediate vicinity of the burial chambers of passage graves. Here ceramics and flint artefacts were repeatedly deposited in front of the chambers and in pits near the entrance. In some cases, complete vessels could also be reconstructed at the entrance areas. The amount of pottery deposited there is in some cases far greater than that found in the chamber. In some cases, the chamber may also be cleared, especially if the chamber has been used for subsequent burials. However, the types of pottery that occur in both contexts are also important for distinguishing between deposited pottery and cleared grave goods. Thus, specific forms such as ceramic spoons, pedestaled bowls

	Area	Settlements	Settlements /km <sup>2</sup>	Megalithic tombs	Megalithic tombs /km <sup>2</sup>	Thin-butted flint axes	Thin-butted flint axes/ km <sup>2</sup>	Flint axes >180mm
NW-Mecklenburg	5710km <sup>2</sup>	80	0.01	116	0.02	646	0.1	31 (4.8%)
Stormarn/Lauenburg	2055km <sup>2</sup>	191	0.09	126	0.06	1062	0.5	46 (4.1%)
Eastern Holstein	581km <sup>2</sup>	103	0.2	210	0.4	540	0.9	47 (8,7%)

Tab. 11: The distribution of settlements (EN-MN), megalithic tombs (all types; incl. long barrows) and thin-butted flint axes in absolute numbers, as well as average number/km<sup>2</sup>.

and ‘display vessels’ can be found in front of the chambers of passage graves, but these do not occur in the chambers. Typochronological classifications of the material indicate ongoing activities, which can cover a period of several hundred years (see Wunderlich 2014; Andersen 2000, 50-55; Kjærsum 1969).

## 6.1.5 Regional comparison

In the following, some of the factors presented here will be compared at a regional level. Decisive factors are the already-described natural and economic factors, as well as the occurrence of settlements and megalithic tombs (Tab. 11).

### 6.1.5.1 Natural differences within the study area

Regarding the natural differentiation within the study area, a differentiation between Eastern Holstein and the rest of the area is to be highlighted. On the one hand, this concerns the qualitative classification of soil quality described in chapter 6.1.3.4, as indicated by the modernly defined quality of arable land. Although these results cannot be directly transferred to the conditions of the Funnel Beaker period, they can nevertheless be interpreted as an indication of the natural advantages of the Eastern Holstein area. These advantages can be seen in the distribution and density of Funnel Beaker settlements in the study area (cf. Tab. 11). The fundamental problem of the few known settlement and house features within the study area has already been outlined. These factors must be considered, but it is conceivable that Oldenburg-Dannau is a special case due to the location of the settlement in an economically favourable area. Especially in the Western Mecklenburg area of the study area, only a low density can be observed, although an influence of source-critical factors cannot be excluded here. Ultimately, it can be stated that, based on the data available, unequal and advantageous differences in natural areas can be assumed which had an effect on the density of settlements and activities within the investigated area.

An advantageous location in Eastern Holstein is also worth mentioning regarding the occurrence of secondary flint sources. This correlates with a significantly increased density of individual finds of thin-butted flint axes in this area. At the same time, the percentage of very long (>180mm) classified axes here is much higher than in Southeast Holstein and Western Mecklenburg. In these areas the percentage of long axe finds is in a similar range, while the density of individual finds in Southeast Holstein is higher than in Mecklenburg. A decrease in the number and length of flint axes from the coastal areas to the interior of Schleswig-Holstein has already been confirmed by further investigations (see Breske 2017, 74-81).

Ultimately, it can be stated that the discernible differences in the natural environment can certainly be correlated with the archaeological data based on the factors described. This allows conclusions to be drawn about a significantly increased population density in the Eastern Holstein area. To what extent these factors can be reconciled with megalithic construction activities is described in further detail below.



### 6.1.5.2 Economic productivity and megalithic construction

A comparison of the different regions within the study area regarding the density of monumental tombs, the work involved in their construction, as well as the size of mounds and chambers shows some interesting focal points and differences. By far the highest density of megalithic graves can be found in the Eastern Holstein part of the study area. Here, a particular focus of later construction activities can be seen in the form of passage graves. This stands in contrast to the described concentration of non-megalithic tombs in the Southeast Holstein area. It can therefore be assumed that intensive construction activities will be relocated as the EN progresses. This development is also reflected in the regional comparison of mound and chamber sizes (Fig. 233 and 234). The early focus of the construction of non-megalithic long barrows, especially around the Sachsenwald, is reflected in the large span and outliers within the data distribution. While in Eastern Holstein also quite large mounds were built, which stand in connection with megalithic long barrows, the lack of these early and concerning their dimensions often monumental tombs in the distribution is well recognisable.

The somewhat later construction of large burial chambers is also reflected in the distributions (Fig. 235 and 236). There are burial chambers measuring up to 25m<sup>2</sup> in the Southeast Holstein area, but the number of megalithic burial chambers here is considerably lower than in the other two regions. In Mecklenburg-Vorpommern in particular, there are quite a large number of graves whose chamber size can be attributed to the upper whisker. The regional comparison of the estimated workload of individual burial sites (see Fig. 223) can be reconciled with the distribution of large burial chambers, as these are usually the main factor in the work invested.

The distribution of these two factors can be reconciled quite well with the distribution of individual finds of long flint axes in the study area (compare Fig. 210). With the exception of one occurrence of particularly long, thin-butted flint axes near the Mecklenburg Elbe Valley, the distribution of the extra-long axes largely corresponds to that of the particularly large burial mounds and burial chambers. There is a significant ( $p$ -value: 0.04), positive correlation (0.52) between the density of deposited thin-butted flint axes and the density of megalithic graves. Overall, differences can be observed at a regional reference level regarding natural factors, economic markers and the occurrence of megalithic burial sites. Since these dif-

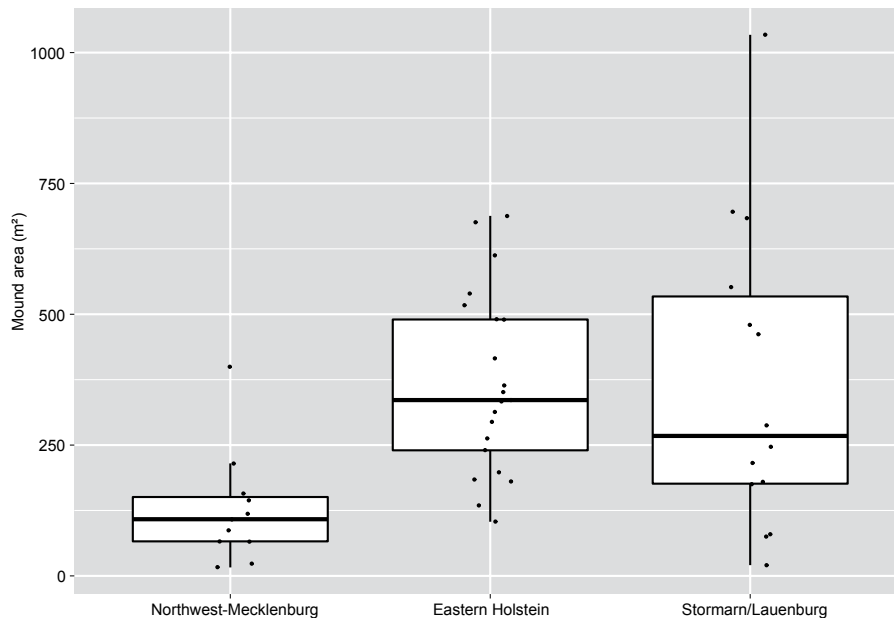


Fig. 233: Boxplot of the mound areas (m<sup>2</sup>) by regions within the study area.

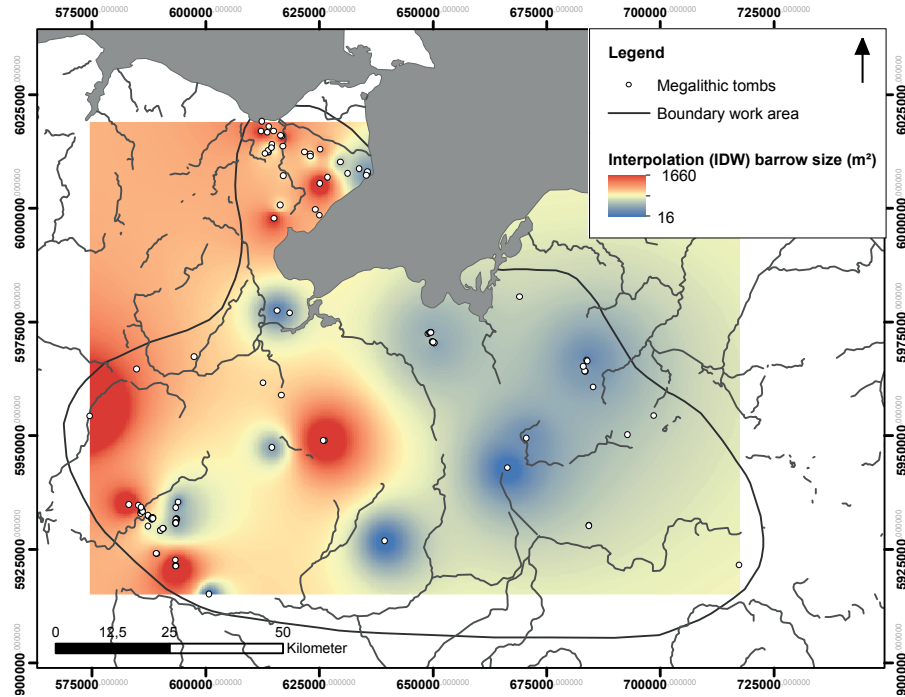


Fig. 234: Interpolation (IDW) of the mound area (m<sup>2</sup>) of the megalithic tombs within the study area.

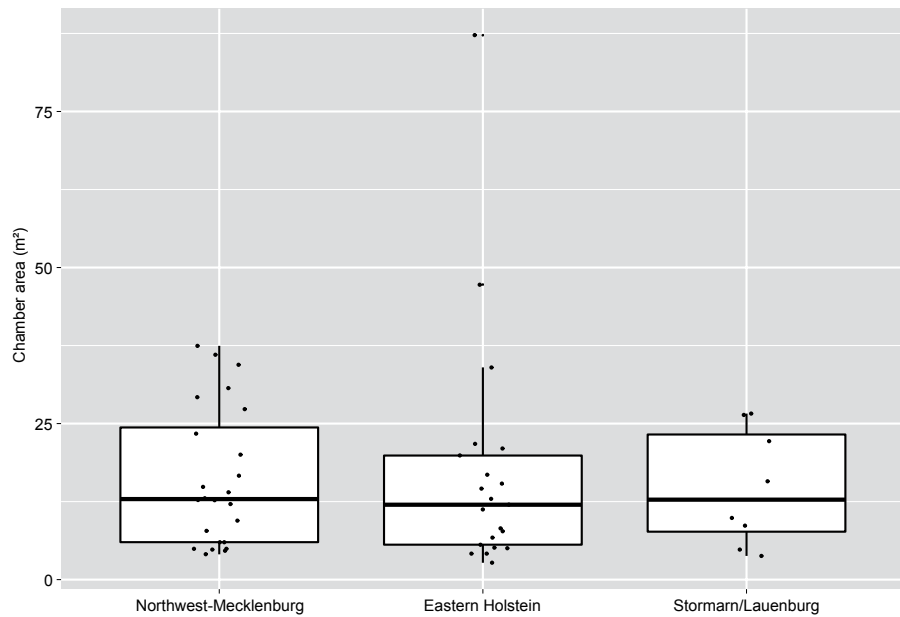


Fig. 235: Boxplot of the chamber areas (m<sup>2</sup>) by regions within the study area.

ferences correlate with each other, a connection between the economic potential (which depends on natural factors) and the construction of megalithic tombs can be assumed. However, it must be borne in mind that local differences in particular cannot be recorded and evaluated due to restrictions in the availability of the necessary archaeological data.

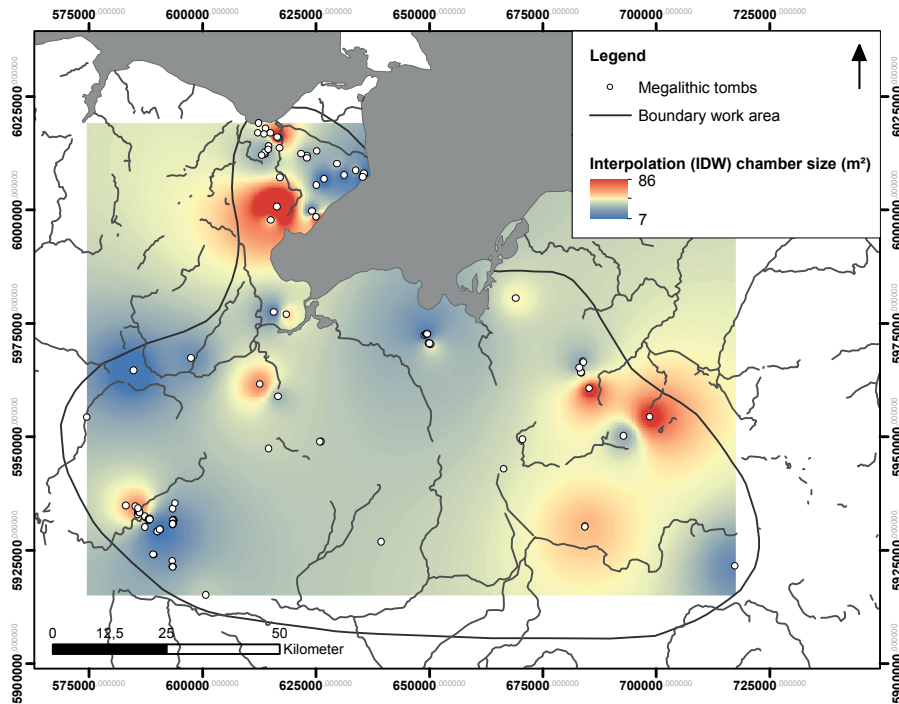


Fig. 236: Interpolation (IDW) of the chamber area (m<sup>2</sup>) of the megalithic tombs within the study area.

### 6.1.6 Megalith-building traditions in Funnel Beaker communities of modern-day Northern Germany: modelling

Megalith-building traditions among Funnel Beaker communities was repeatedly regarded, among other things, as an indicator of an emerging social differentiation or stratification and as necessarily connected with a centralised organisation of the required resources and manpower (cf. Artursson *et al.* 2016). Thus, Funnel Beaker communities would represent a kind of intermediate stage to the more egalitarian Mesolithic and the Bronze Age societies, repeatedly characterised as more socially stratified.

Although this interpretation should not be excluded, an alternative explanation model will be presented in this context (Fig. 237). Taking into account the source-critical factors, the study area presented here shows no clear evidence that points to institutionalised social inequality. Possible indications are the house inventories, the size of the houses, as well as grave inventories. Especially regarding the grave goods, no far-reaching differentiations are discernible. The existing differences are rather to be connected with chronological factors, as well as the fundamental diversity of individual and collective burials. However, if a central organisation of megalithic construction activities could be assumed by local elites or other authorities, a special position in archaeological data would be expected. Accordingly, economic inequality cannot be ruled out, but institutionalised social hierarchisation based on the available data is not discernible.

However, regarding megalithic construction activities, a close connection between economic factors and megalithic construction can be assumed. The construction of megalithic tombs has most probably represented a not insignificant additional expenditure in terms of resources and manpower to be provided and can therefore *per se* be seen as an indicator for an increasing surplus production. The fact that different factors, such as the increase in the number of settlements, the partial increase in their size, the intensification of agriculture indicated by archaeobotanical analyses and the opening of forest areas, as well as the increasing

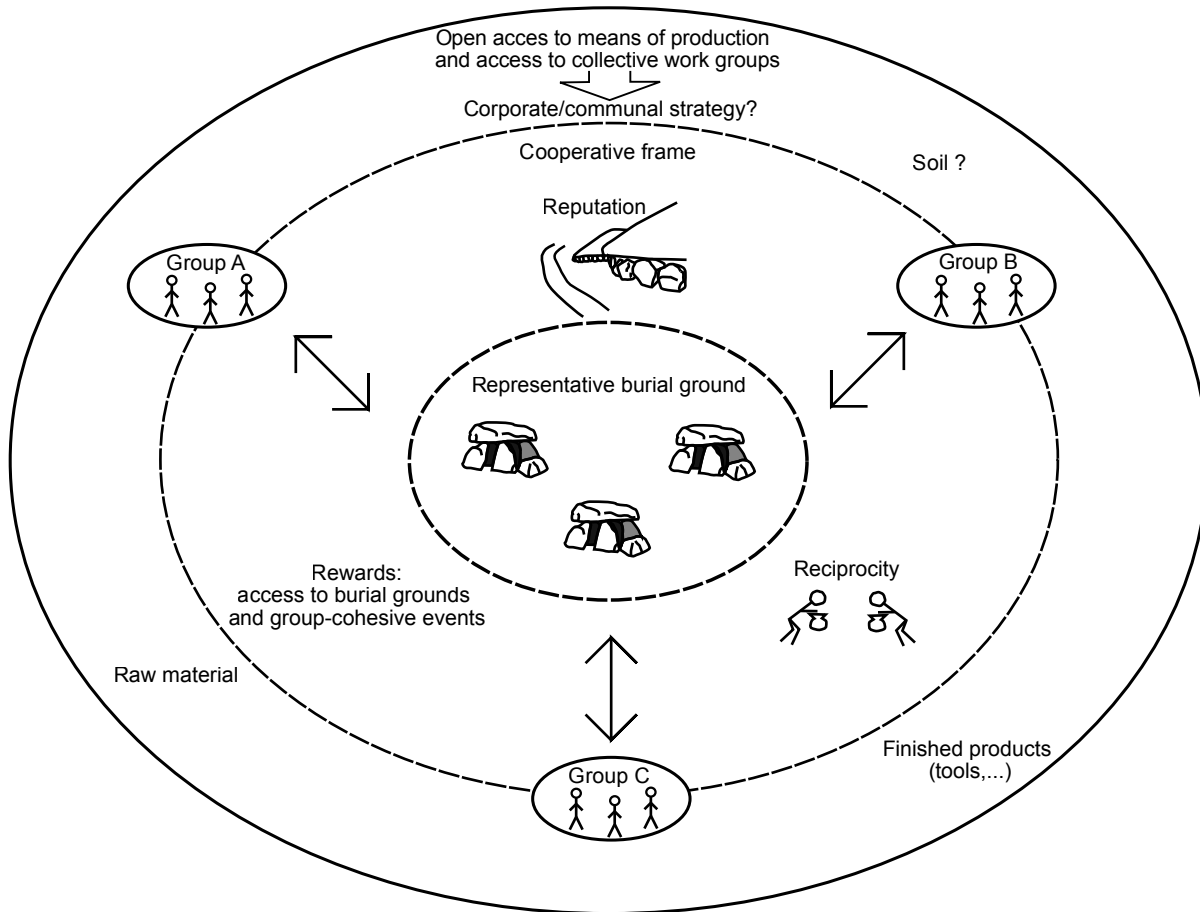


Fig. 237: Model of the megalithic building traditions in Funnel Beaker societies.

construction of large chamber graves in the course of EN I-II up to MN I correlating in time can certainly not be seen as a coincidence. The recognisable special position of Eastern Holstein regarding the modern documented quality of farmland and the near presence of high-quality raw materials goes hand in hand with an increased density of settlement activities, as well as the construction of a large number of particularly large tombs. The distribution of the flint axes and their length must also be seen in this context, because this factor also correlates with the size of the megalith tombs. Therefore, megalithic construction within the study area can be seen as an important part of the ideological sphere in harmony with and dependent on economic factors. Whether the production of the required surplus was kept communal cannot be answered based on the archaeological data. However, due to spatial conditions, access to flint's secondary sources may not necessarily be restrictive. A bottleneck situation such as is often associated with pronounced social inequality (e.g. Earle *et al.* 2015) cannot be assumed here.

The megalithic graves themselves show some interesting aspects, as long as the conservation conditions show an appropriate quality. These include the nearby grave clusters, which have a chronological depth and a hierarchy regarding mound and chamber size and are self-contained. These structures can be associated with a competitive situation in which the funeral communities worked strongly towards the representativeness of their place of burial. On the one hand, such a situation could have naturally led to conflicts between groups; however, the desire to present specific building skills represented in this way can also be seen as an important factor that strengthened social cohesion within communities and groups. Furthermore, there are activity areas around the graves, which were re-

peatedly used for depositions. In particular, these depositions can be seen as part of reciprocal activities, which is one of the key elements of cooperative structures. In view of the work required for the construction of megalithic tombs and the collective efforts to be associated with them, megalithic tombs can be regarded as an important momentum for the negotiation and reproduction of social relations. Part of these structures was certainly also the integration of specific knowledge about building traditions and the correct use of ritual objects. This aspect can be seen in the laying down of special ceramics in the context of megalithic tombs, which is shared over a wide geographical area.

However, the question of the exact outline of the assumed collective organisational structures cannot be answered based on the archaeological data stock. However, the ethnoarchaeological case studies show that collective structures have been possible even without central organisation and social differentiation. The socio-political relationship of individuals and families is decisive for the possibility of erecting a megalithic monument.

These characteristics can be summed up in the following way:

1. Megalithic tombs are in many cases a clear collective frame of reference. This is especially true for grave clusters. The grave groups then represent a group-related, specifically-connoted space that can be reconstructed over centuries by expanding the clusters. The graves are linked to ritual aspects. In particular, specific ceramics can then be seen as a memory figure that enables ritual communication. Therefore, a close connection between megalithic tombs and the specific culture of memory of a community is to be assumed.
2. A clear link between the agricultural economy and a clear social inequality is not proven by the available data. However, the lack of relevant data and source-critical factors must be taken into account.
3. A decentralised organisation in the sense of anarchistic embossed behaviour can neither be substantiated nor rejected based on the material. However, the importance of collective working methods and cooperations should be emphasised regarding the small settlement sizes and the amount of work involved in the construction of the tombs. Although there are indications of a constant expansion of the burial grounds, the construction of the massive burial chambers of the passage graves in particular cannot be associated with a single farm or very small groups. The construction of megalithic graves as collective burial sites and the connection with other activities (depositing ceramics and flint in front of the graves) leads to the conclusion that these served the collective representation of the respective burial community.
4. Megalithic tomb monuments in the study area are clearly to be understood as an important factor in the construction of the landscape. Grave clusters in particular can be interpreted as an expression of specific social domains that served as recursive elements in the materialisation of a common identity. Since individuals of different ages, sexes and degrees of kinship were apparently buried within the megalithic tombs, an open access within the burial community is primarily to be assumed.
5. The dependence of larger groups on each other – indicated by the low population density and small size of the settlements – indicates the importance of collective action and open, non-restrictive provision of the necessary resources and labour.
6. Cooperation in megalith-building activities can be seen as a central factor in the consolidation of group structures. The competitive situations indicated in the material may also have been an important aspect. The graves then primarily served the group-related reputation and access to the burial grounds can be

seen as a central mechanism in the sense of a reward system for participation in cooperative megalithic construction. Reciprocity can also be regarded as a central mechanism within the cooperative construction of megalithic tombs due to the suggested repeated activities at the megalithic tombs, which might have been associated with feasting in this context. The open structures necessary for cooperation with the continued participation of large parts of the affected communities, taking into account source-critical factors, can be regarded as given due to the described anthropological structures, especially within collective burial chambers.

## 6.2 Comparison of two archaeological regions: Northern Germany and Scania

In order to ensure that the case study from Northern Germany does not serve as a single archaeological example, a brief comparison of the relevant aspects and factors for Scania – as another region of the Funnel Beaker North Group – is presented below and examined for possible parallels. Following the first case study, a brief outline of known settlement sites and a brief presentation of the individual finds of thin-butted flint axes will be given.<sup>13</sup> The focus is on the megalithic tombs, especially the dolmens and passage graves, as well as the unique structures of the menhirs existing in Scania hold interest. These are also important in view of the variety of megalithic architecture and the regular construction of such stones in Nagaland.

### 6.2.1 The reference area: Scania

The region of Scania in Southern Sweden was chosen as the reference region. Scania is a region which, especially in the last decades, has benefited from extensive projects and studies that have considerably expanded knowledge of the first Neolithic communities in Southern Scandinavia (see, for example, Anderson and Wallebom 2013; Rudebeck 2011; Hadevik and Steineke 2009). Thus, Scania is an extraordinarily well investigated region, in which comprehensive knowledge exists regarding different monumental structures, the settlement system, as well as the tombs and thus proves to be a well suited comparison region. Scania has a quite high density of the different find categories, which indicate intensive activities of the Neolithic communities living there. These include a very high number of finds of thin-butted flint axes, as well as settlement and burial sites, which can be found mainly along the coast (Fig. 238).

The dense settlement and use of the area during the Neolithic is largely due to the high quality of the soil and the natural advantages of this region. With the highest elevation of 200m above sea level, Scania is lying very low and is characterised by sandy soils that can be used for agriculture. These circumstances still embosses the character of Scania, which is characterised by intensive agricultural use, especially in comparison to the more northern zones of Sweden. The proximity to the coastal areas, as well as the natural productivity of Scania due to the quality of the soil, caused not only the good agricultural conditions important for Neolithic communities, but also a good usability for hunting and gathering activities (Regnell and Sjögren 2006a, 15-17).

As in Northern Germany, Funnel Beaker societies were the first Neolithic communities in Scania. The EN is only accompanied by a very minor land

---

13 The mapping of the flint axes, the settlement sites and the megalithic tombs was based on the public database of the Swedish National Heritage Board (<http://www.fmis.raa.se/coccon/fornsok/search.html>; last viewed on 08.01.2018).

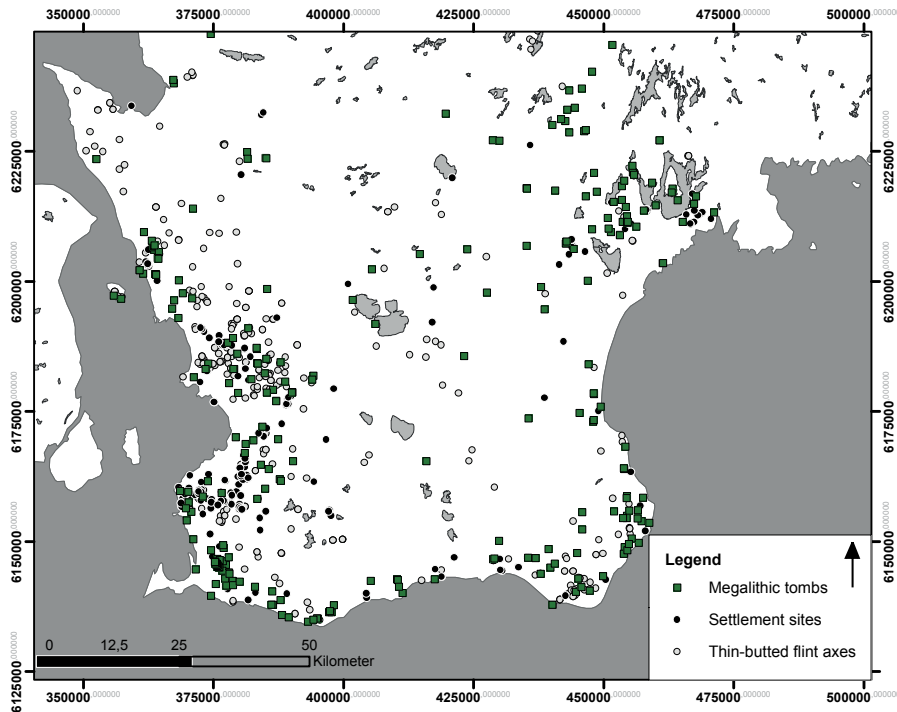


Fig. 238: The single finds of thin-butted flint axes, the megalithic tombs, as well as the settlement sites in Scania of the Funnel Beaker period.

opening, while this increases in the course of the transition to the MN. This transition is accompanied by a decrease in the proportions of elm, lime and ash in the pollen diagrams (Regnell and Sjögren 2006b, 114). Archaeobotanical studies in Southern and Central Sweden indicate that the introduction of the represented plant species took place in a relatively short period, between 4000 and 3700 BCE. Plant species documented in settlements and graves include emmer (*Triticum dicocum*), einkorn (*Triticum monococum*), naked barley (*Hordeum vulgare*), and wheat (*Triticum aestivum/durum*). Furthermore, the radiocarbon data indicate that the introduction of these was largely synchronous over a wide area including Southern and Central Sweden. Findings in Almhov, Scania, indicate that emmer and wheat were the dominant cereals. This is in contrast to recent studies in Northern Germany, where naked barley is the dominant plant species (cf. Kirleis *et al.* 2012; cf. chapter 6.1.3.1). The earliest occurrence of domesticated species, such as cattle, goats and sheep, can also be identified during the period mentioned for the introduction of arable crops. Again in Almhov bones of probably domesticated pigs were found, which can be dated around 3900 cal BCE. However, it should be noted that the Southern Swedish sites of the EN I generally contain only a few bone finds that would be suitable for further analysis. First bone finds originating from domesticated pigs date only around 3700 cal BCE. However, especially in the coastal sites of EN I the proportion of animal bones concerned is so low that a parallelism of the importance of hunted animals and domesticated domestic animals can be assumed (Sørensen and Karg 2012, 102-106).

## 6.2.2 Settlement sites

Scattered finds and excavated settlement sites in Scania indicate a focus especially on the south-west coast (Fig. 239). This concerns both the early and the Middle Neolithic settlement sites. Along the south and east coast, the density of such sites and thus probably also of Neolithic settlement activities is significantly lower.

However, the better-researched settlement sites hold importance regarding the megalithic tombs, some of which are presented as examples. Artursson *et al.* (2003) compiled a comprehensive list of the settlement sites of Scania known to date. Among the earlier best-researched sites were Dagstorp and Saxtorp, whose features gave names to the respective house types common in the Early and Middle Neolithic. In particular, Dagstorp proves to be a multi-phase settlement site, each with several, probably simultaneous house sites. The dating of this site ranges from EN I to MN II-III. Overall, the number of houses in Dagstorp comprises fifteen buildings, of which two houses and one hut can be assigned to the EN. Three of the houses can be assigned to EN I and five others to MN I. Whether all of these houses can actually be classified as simultaneous cannot be estimated (Artursson *et al.* 2003, 61).

Extensive investigations at the settlement sites of Almhov and Östra Odarslöv were also carried out in connection with rescue excavations on the south-west coast of Scania between 2001-2002 and 2013 (Artursson *et al.* 2016, 5). The first of these sites, Östra Odarslöv, covers an excavated area of 104,000m<sup>2</sup>, the area with the main stock of Neolithic finds and features being 37,000m<sup>2</sup>. The settlement site was originally located on a wet ground area and contains the remains of fourteen huts, two longhouses, occupation layers and pits (Fig. 240). In addition, remains of wooden post tracks, a flat grave, a row of stones and three dolmens with long barrows were excavated near the settlement site. The entire site is dated to the EN.

The dating of the finds and features indicate three distinct phases of settlement. In a first phase between 3800 and 3700 cal BCE nine of the huts were probably built, as well as one of the pits. In addition, one of the façade structures within the ritually used area to the south can be dated to this first phase. On the second phase, 3700-3600 cal BCE, four huts, as well as the two longhouses could be dated. Presumably these features represent an extension of the occupation of the first settlement phase, some of which remain in use. The presumably ritually used area was also further expanded in this phase. Therefore, now the earth burial took place, as well as three further facades were erected. The settlement activities seem to have ended around 3600 BCE, although a re-use of the ritual area took place. During this phase, the three dolmens as well as the standing stones were built. Two of the dolmens

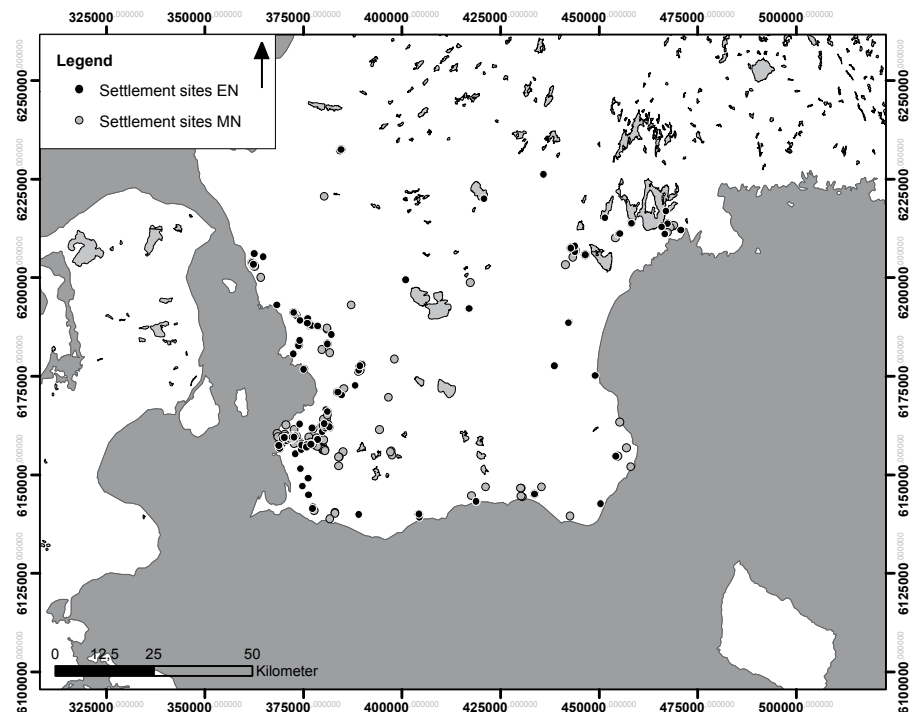


Fig. 239: The Early and Middle Neolithic settlement sites in Scania.



were built over the wooden facades. The continuous use of this place is indicated by ceramics, which dates back to the MN I around 3400 BCE. The scientific studies characterise the site as a settlement presumably based on long-term agricultural activities and livestock farming (Andersson *et al.* 2016, 28-36).

Almhov is located a short distance south of Östra Odarslöv, on the southernmost part of the west coast of Scania. The excavations carried out as part of rescue work uncovered an accumulation of huts, a large number of pits, as well as long barrows and graves. Thus, Almhov also comprises a combination of a possibly seasonally-used activity area, as well as a ritual place, which were in close proximity to

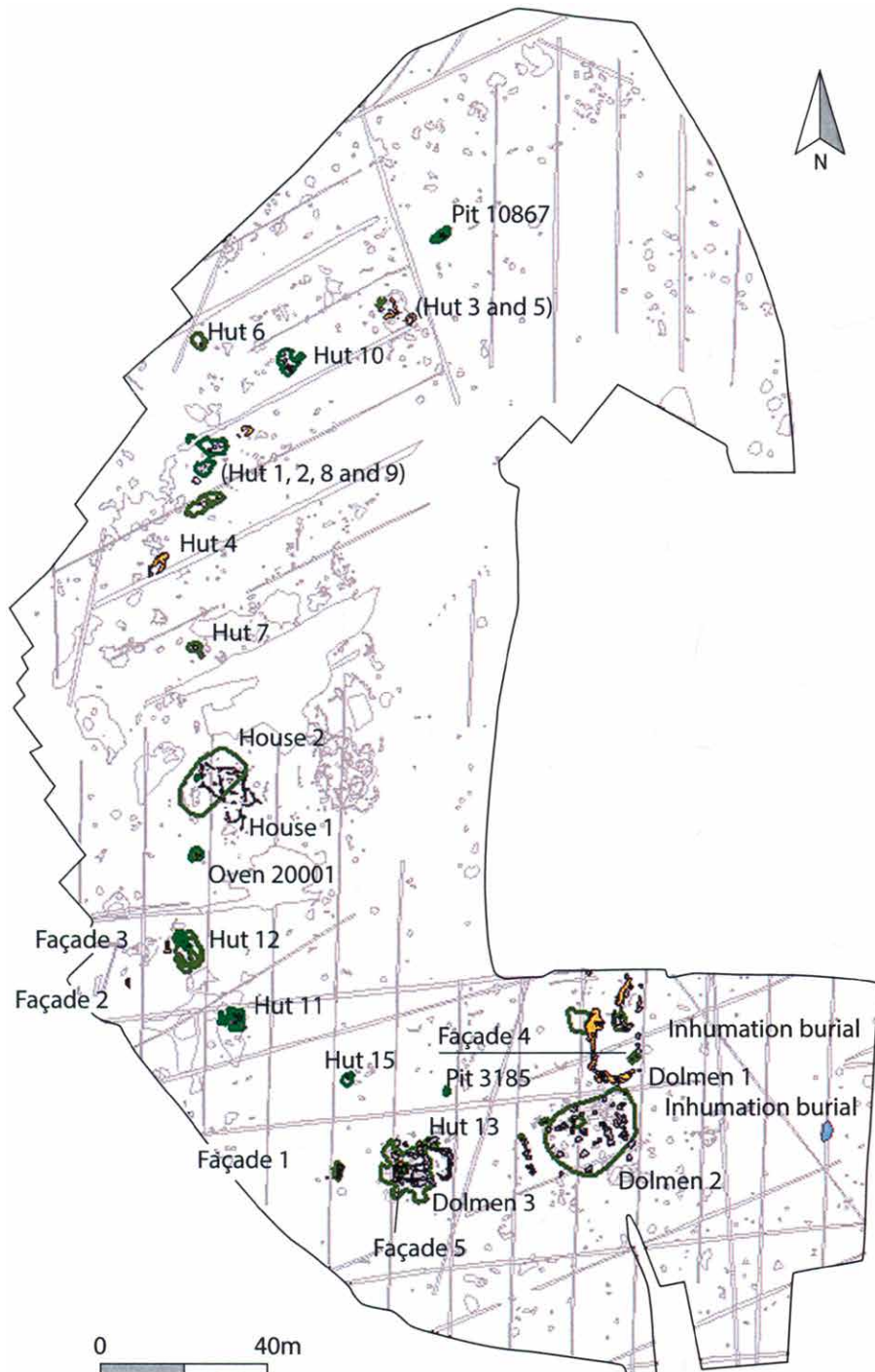


Fig. 240: The plan of the excavation of Östra Odarslöv with the different features (according to Andersson *et al.* 2016, 28).

each other and possibly had a direct relation to each other. The settlement features date between 4000 and 3700 cal BCE, while two of the dolmens were built around 3500-3300 cal BCE (Artursson *et al.* 2016, 5).

### 6.2.3 Economic markers

A brief outline of economic factors is provided in the following to compare them with aspects of megalithic tombs, as has already been done in the archaeological case study above. Since the individual finds of thin-butted flint axes showed interesting parallels to the distribution and size of megalithic tombs in Northern Germany, this aspect will be the focus of the comparison of the two archaeological case studies.

#### 6.2.3.1 Flint: mining areas

A special feature in the Scandinavian region is the Södra Sallerup site near Malmö, which has been under investigation since the 1970s. Here a systematic mining of flint can be observed from the EN around 4000 BCE. Of course, there are other flint sources along the coast of Scania (see Fig. 241), but Södra Sallerup is a speciality due to the well-preserved, partly Neolithic-dating shafts. The complex comprises at least 400 flint mines and surface mining areas, some of which could be dated to 4000-3800 cal BCE by means of <sup>14</sup>C investigations. Whether there was a specialisation in specific artefact types in this extraction area cannot be conclusively assessed due to the lack of material studies. Nonetheless, it is clear that point-butted flint axes, which are characteristic of the earliest axe types of the Funnel Beaker period societies in Scania, were produced there. In the area of the extraction area, areas were also investigated which can be interpreted as primary workplaces as well as secondary depositions of manufacturing waste. Workplaces include concentrations of scrapers that were important for the processing of antler axes. Overall, a large number of works took place at the mining area, which can be interpreted as an indication of local specialisation in the mining and production of flint tools. In the course of this characterisation, questions arise as to the supply of the people working there and the necessary agricultural surplus production (Andersson *et al.* 2016, 62-63).

#### 6.2.3.2 Thin-butted flint axes: distribution and length of complete exemplars

After the pointy-butted flint axes, the thin-butted axes in Scania, as in the rest of the Funnel Beaker North Group, represent the earliest axe types that date into the EN and can thus be classified as being contemporaneous to the main construction phase of the megalithic tombs (cf. Karsten 1994).

The spatial distribution of the individual finds of thin-butted flint axes (Fig. 241) largely corresponds to the focal points of the distribution of settlements and graves (cf. Fig. 239 and 244). Clear clusters can be found on the west coast, in the south-west, as well as in the south-east of Scania. Differences can be observed in comparison to the distribution of settlement sites. The density of the axe finds in the south-east of Scania is clearly higher than that of the settlements and corresponds there rather to the spread of the megalithic graves. There are also minor differences in the western part of Scania. The density of settlements in the south-west is highest, while clusters of axe finds and megalithic tombs are also present here, but their overall density is lower. Both thin-butted axes and megalithic graves can be found in higher numbers, above all a little more to the north on the west coast.

In addition to the distribution of finds, the length of the flint axes is also of interest (cf. chapter 6.1.3.3). The interpolation of the length of the axes shows centres of gravity which, of course, roughly correspond to the density of the distribution of

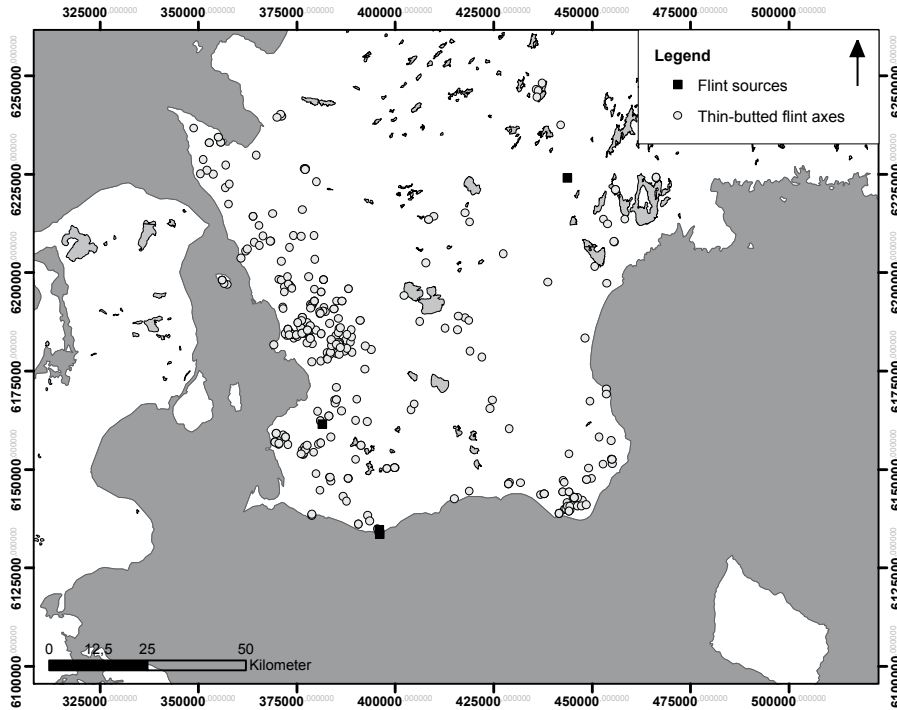


Fig. 241: Flint sources (according to Hughes et al. 2010) and individual finds of thin-butted flint axes in Scania.

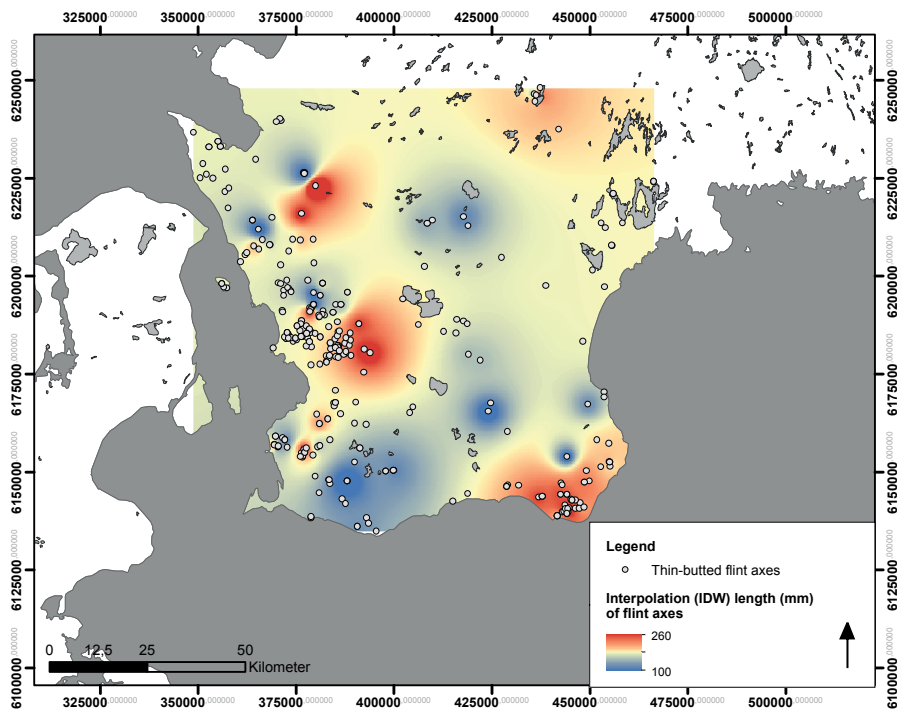


Fig. 242: Interpolation (IDW) of the length (mm) of the single finds of thin-butted flint axes in Scania.

finds. Within the clusters in the south-east, south-west and west, long exemplars of over 180mm in length can be found (Fig. 242). The main distribution centre of very long exemplars of flint axes in the south-east of Scania reflects the centre of the construction of particularly large burial chambers there, which are mainly passage graves (cf. Figs. 247 and 248). Another focus regarding the length of the axe finds can be found on the west coast as well as in the south-western area of Scania. Both areas are characterised by the presence of both particularly large burial chambers and

large burial mounds, whose spatial distribution is close to the overlong flint axes. Finally, in the northern area of Scania there are long flint axes, albeit which have no equivalent regarding the graves.

It is worth mentioning here the Early Neolithic hoards of flint axes in Scania, which contain some of the longest thin-butted flint axes in the region. Thus, the total length of almost 75% of the depot finds of thin-butted flint axes listed by Karsten (1994) is a length between 150 and 300mm, although unpolished exemplars are still included. Thus, the average length is greater than that of the individual finds of the same axe type. These hoards contain up to eight axes which seem to have been in use very rarely, if not at all. Deposits often took place in wetlands such as bogs and certainly represent a high economic value due to the effort required to produce flint axes, which was deposited in connection with ritual factors (Karsten 1994, 55-57).

According to the distribution of the single finds of thin-butted flint axes, a possible interpretation of a connection of their deposition near frequented ritual areas in which megalithic graves were built is given. Although these are located in the immediate vicinity of settlement sites, they seem to be physically separated from them (cf. Sjögren 2011, 131-132). Due to the similar distribution patterns of megalithic graves and individual finds of thin-butted flint axes, a combination of both factors can be assumed. This interpretation is supported by the similarities in the spatial position of the large chambers, burial mounds and flint axes.

These patterns are similar to those in the first archaeological case study, whereby here again – to a certain extent – a certain reflection of the economic potential of individual regions is assumed, as well as the ability to erect large megalithic monuments.

## 6.2.4 Megalithic monuments

The beginning of research into Sweden's megalithic tombs can be dated back to the 19<sup>th</sup> century and still represents an important regional focus within the Funnel Beaker societies. To date, the database of Swedish long barrows, dolmens and passage graves contains approximately 550 graves of varying quality, which are distributed over two very different natural areas (Fig. 243). The number of tombs destroyed today from the EN and MN cannot be precisely estimated. However, the investigation of already destroyed monuments has recently come to the fore, which, in conjunction with clues from land names and old maps, indicate the formerly much higher number of megalithic tombs (Andersson 2017, 29-30).

The first centre of distribution are the coastal areas along the southern and western coasts of Sweden, which have a high density of burial grounds, especially in Scania and Bohuslän. Regarding Scania, the favourable natural conditions should be taken into account, which made this region a settlement centre during the phases of the EN and MN. A second, inland, distribution focus is around the Falbygden area, which has the highest density in Sweden with 255 graves (Sjögren 2011, 125).

A research-historically intensive phase, which was accompanied by excavations of a large number of burial chambers, was the time until 1900 by researchers such as O. Montelius or Hildebrand (Sjögren 2011, 125). Systematic publications on the megalithic tombs of Scania and their inventories were published by Bagge and Kaelas in 1950 and 1952. In the 1970s, M. Strömberg (1971) also contributed important analyses of megalithic tombs in Hagestad. C. Tilley (1999; 1996) also attempted a more comprehensive documentation of Funnel Beaker burial customs in Sweden. While these first research studies were mainly concerned with the well-preserved graves in Scania, Falbygden increasingly came into focus as an important research area (e.g. Sjögren *et al.* 2009; Persson and Sjögren 1995; Bägerfeldt 1992). Most recently, large-scale rescue excavations have made it possible to study complex and diverse ritual areas containing megalithic tombs and other monuments (cf. Chapter 6.2.4.3).

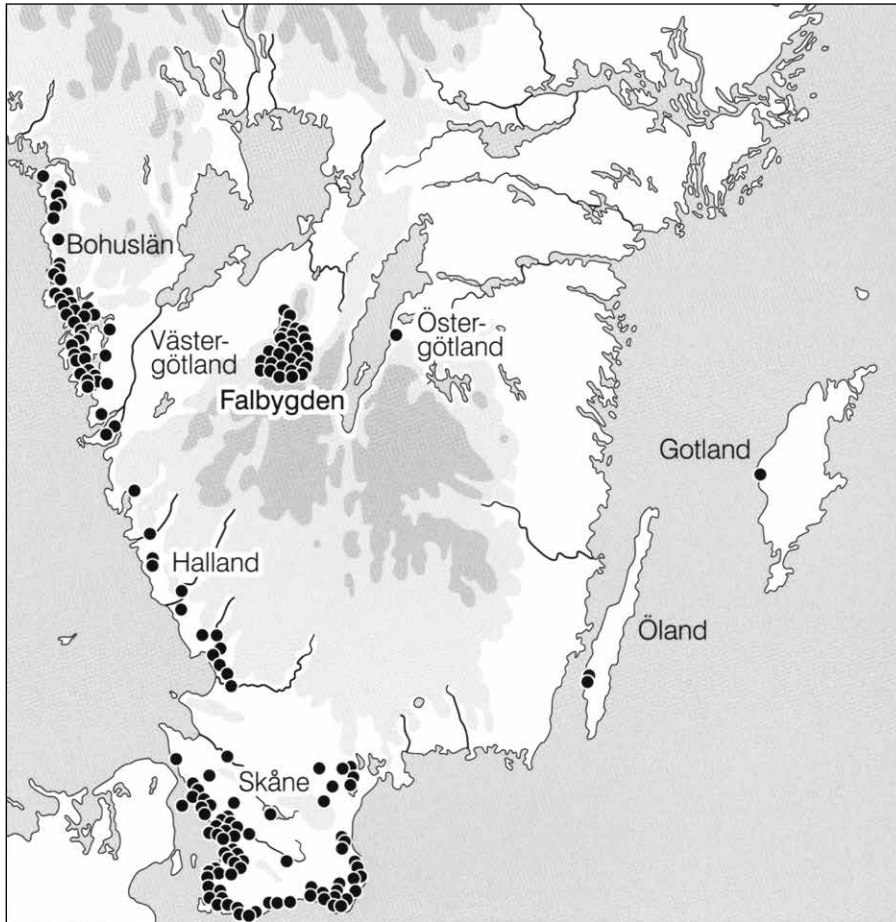


Fig. 243: The spatial distribution of megalithic monuments dating in Funnel Beaker periods in Sweden (Sjögren 2011, 125).

There are regional differences in the distribution and architectural features of the individual grave types. While in Bohuslän and Scania the majority of megalithic tombs can be attributed to the dolmens and are known in comparison less passage tombs (Bohuslän: 60% dolmens, 40% passage tombs), the ratio in Falbygden is reversed. In Bohuslän especially the burial chambers of both types show a high variability regarding their size and form, whereby generally especially the dolmen chambers are quite small. However, in Falbygden, the megalithic graves are characterised by a higher regularity (Sjögren 2011, 125-127).

As with the megalithic tombs from Northern Germany and Denmark, a chronological depth of the different grave types represented in Sweden can be assumed (cf. Fig. 214). The earliest  $^{14}\text{C}$ -data exist for long barrows, which were probably built around 3800 cal BCE from EN I onwards. The dolmens date a little later, from approximately 3600-3500 cal BCE on and were partly built into existing long barrows.  $^{14}\text{C}$ -data from passage graves date later and indicate the start of construction of these graves from approximately 3300 cal BCE and thus in the transition phase to the MN Ia (Artursson *et al.* 2016, 4; Schulz Paulsson 2010, 1003-1010).

#### 6.2.4.1 The different grave types and their occurrence in Scania

Scania's monumental tombs can be divided into three main types, two of which are megalithic tombs in the narrower sense. Regarding the tombs with megalithic burial chambers, a fundamental distinction can be made between dolmens and passage graves (Fig. 244). The construction of passage graves in the south-eastern and

north-western areas of Scania is a clear focus. In the south-western area dolmens can be found.

In general, dolmen chambers are of a smaller size and have only a very small passage, if at all. Usually only a large stone was used for the ceiling construction of the dolmens. The burial mounds are either round or long rectangular. In Scania 130 dolmens were included in the mapping and analysis, 27 of which could be recorded more precisely. Of these, most of the monuments can be found in Southwest Scania (n=18), where a large number of dolmens have been investigated, particularly in the course of the new rescue excavations. Again, the majority of the dolmens have a rectangular chamber (n=13), whereas square chamber floor plans are rare (n=4). However, due to the degree of destruction, the chamber shape can no longer be defined precisely in ten cases. The chamber sizes, independent of the chamber shape, are characterised by a quite wide span and have areas between 0.50m<sup>2</sup> up to 4.20m<sup>2</sup>. Most of the dolmens have a rectangular mound (n=17), whereas round hills are very rare (n=4). Neither the shape of the chamber nor that of the mound have regional characteristics. Two tombs from Southwest Scania represent a special case. Thus, in Bunkeflo/Vintrie Park and in Maglarp, two dolmens each were embedded in rectangular hill formations. Dolmen are often relatively simple in their construction, whereby rock fills were quite common for both the burial chambers and the barrows (Fig. 245).

Overall, the number of passage graves in Scania is less than that of the dolmens. A total of 48 such monuments were included in the mapping, as well as 30 tombs in the analysis of the architectural features of the chambers and barrows. The burial chambers of Sweden's passage graves are generally rectangular or oval in shape and have a passage leading to the end of the burial mound. A round shape of the burial mounds is most common, but there are exceptions. The passage graves have very different dimensions and, depending on the size of the burial chamber, are provided with 3-5 capstones (Sjögren *et al.* 2009, 85-86). These characteristics can also be found in Scania. Here oval (n=11) and rectangular (n=12) chambers are represented in relation to the burial chamber. Square (n=2) and round (n=1) shapes are rare. Four of the chambers were too severely destroyed to determine the shape

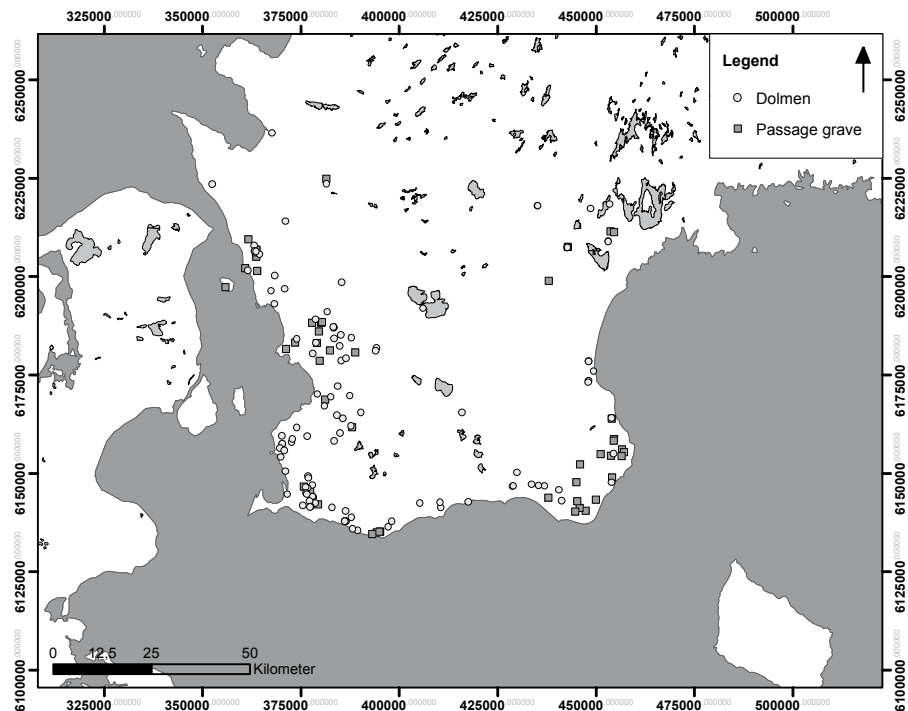


Fig. 244: Distribution of the megalithic tombs in Scania.

of the burial chambers. Some of the burial chambers are no larger than in the case of the dolmens. Thus, the smallest passage grave in relation to the chamber area is only 3.9m<sup>2</sup>, the largest 16.3m<sup>2</sup> in size. Concerning the mounds, a round shape is most common (n=24). Rarely are oval (n=1) or rectangular (n=2) burial mounds, whereby in three cases the shape of the mound could no longer be determined. As in the case of the dolmens, there are two passage graves (Stora Kungsdösen and Snarringe) in Scania, each of which contained two independent graves within a hill. For passage graves, internal divisions in the form of individual sections and paving of the chamber floor, some of which has been preserved over a large area, are particularly common (Fig. 246).

Around the chamber are partly stone packings to be found, which separate the chamber from the hillfill. In addition, the passage of the passage graves often show internal divisions into several sections created by upright stones. Relatively common are also small roundish cup marks on the capstones, which partly cover the surface of the capstones.

The spatial foci in the distribution of the dolmens and passage graves mentioned above are also reflected in the interpolation of the chamber sizes (Fig. 247, Tab. 12).

Thus, the distribution centre of the passage graves in Southeast Scania is directly reflected in the accumulation of burial chambers with an area of over 10m<sup>2</sup> in this area. Some focal points can also be seen on the west coast, but here, in the south-west, there are many tombs with a chamber area of only 1-3m<sup>2</sup>. This clearly shows how much the chamber size depends on the type of grave. There are a few passage graves with a relatively small chamber area, but no dolmens with an area of more than 6m<sup>2</sup>.



Fig. 245: Plan of one of the dolmens examined in Döserygg (Andersson/Walleborn 2013, 123).

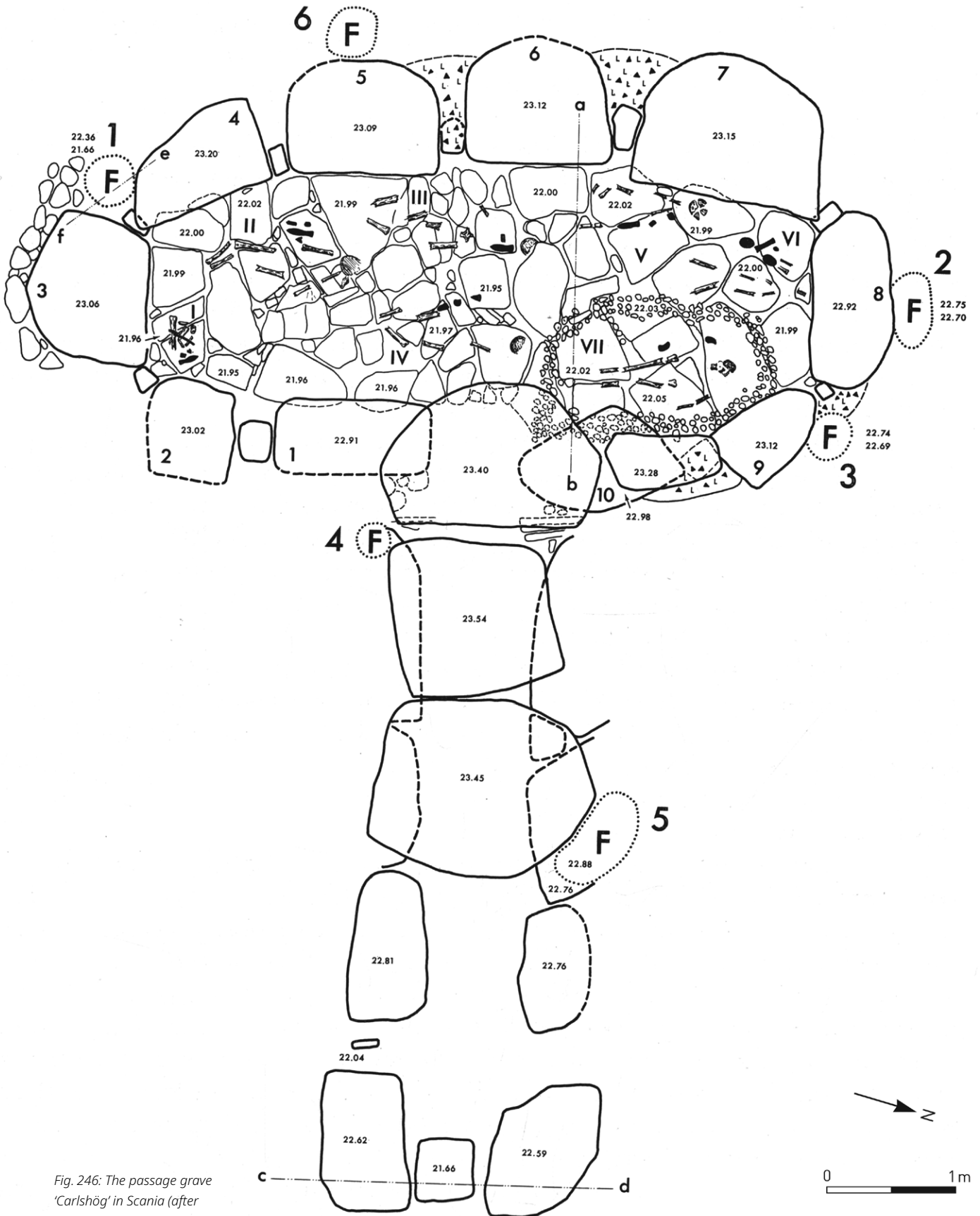


Fig. 246: The passage grave 'Carlshög' in Scania (after Strömberg 1971, 31).



Grave type	0-2m <sup>2</sup>	2-4m <sup>2</sup>	4-6m <sup>2</sup>	6-10m <sup>2</sup>	>10m <sup>2</sup>
Dolmen	14	9	4		
Passage grave		2	1	12	16
n/a	3	8	4		

Tab. 12: The categorized chamber sizes according to the grave types.

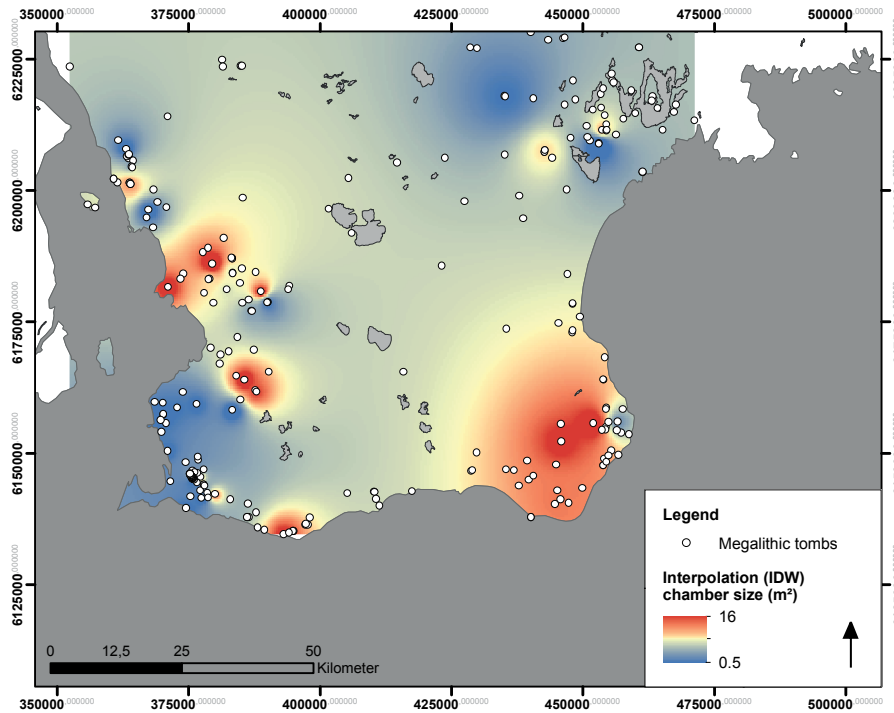


Fig. 247: Interpolation (IDW) of the chamber areas (m<sup>2</sup>) of the megalithic tombs in Scania.

Interestingly, the distribution patterns are largely reversed with respect to the interpolated size of the burial mounds (Fig. 248, Tab. 13).

Especially the passage graves in Southeast Scania have only comparatively small burial mounds with a size of 80-120m<sup>2</sup>. In contrast to this are the burial mounds of the dolmens, which are often rectangular and whose mounds have a size up to over 100m<sup>2</sup> in size in at least half of the cases. Apart from that, the proportion of different types of graves in all categories of mound sizes is quite balanced. Regarding the smallest size category, the passage graves are in the majority, while the ratios are balanced regarding the higher size classes. The high number of preserved mounds and the wide range of their size distribution in Western and Southwest Scania can also be seen in the boxplot (Fig. 249). In contrast, the chamber sizes are more evenly distributed over the different regions (Fig. 250). Also in this distribution, Southwest Scania shows the strongest clustering, as well as Western Scania the highest range of represented sizes. However, it is clear that in relation to the chambers, South and Southeast Scania exhibit a significantly increased distribution curve, which includes some of the largest burial chambers.

### 6.2.4.2 Work expenditure calculations

For the reference region of Scania, the work involved in the construction of a total of 36 megalithic tombs with a total of 41 burial chambers could be calculated. The quality of the calculations (see section 4.1.2) must be broken down as follows due to the conservation conditions:

Grave type	20-100m <sup>2</sup>	100-200m <sup>2</sup>	200-400m <sup>2</sup>	>400m <sup>2</sup>
Dolmen	7	7	4	3
Passage grave	11	6	5	3
n/a	17	10	10	3

Tab. 13: The categorized mound sizes according to the grave types.

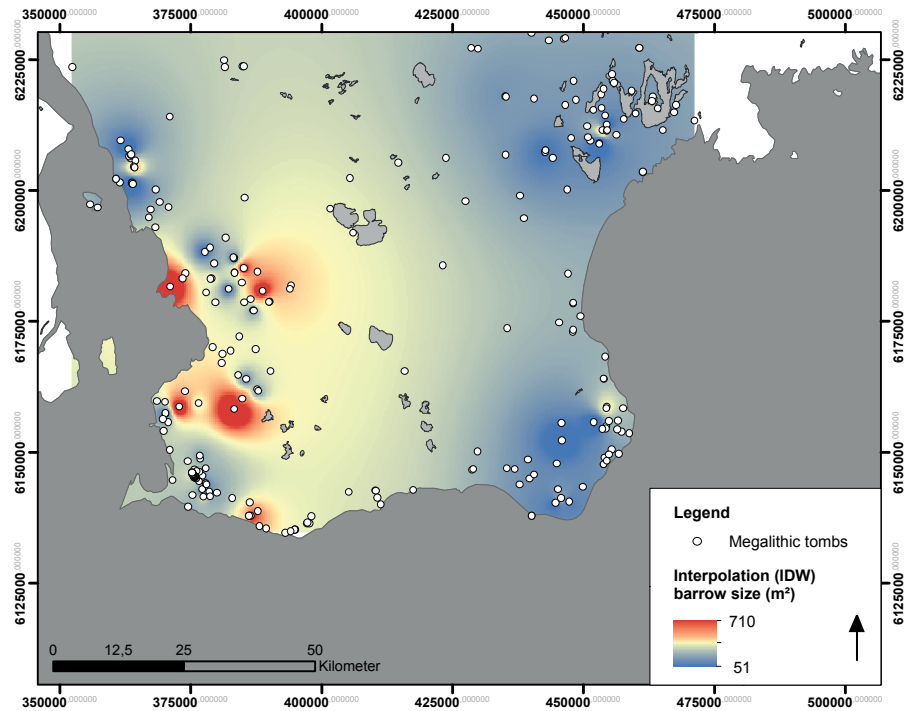


Fig. 248: Interpolation (IDW) of the mound areas (m<sup>2</sup>) of the megalithic tombs in Scania.

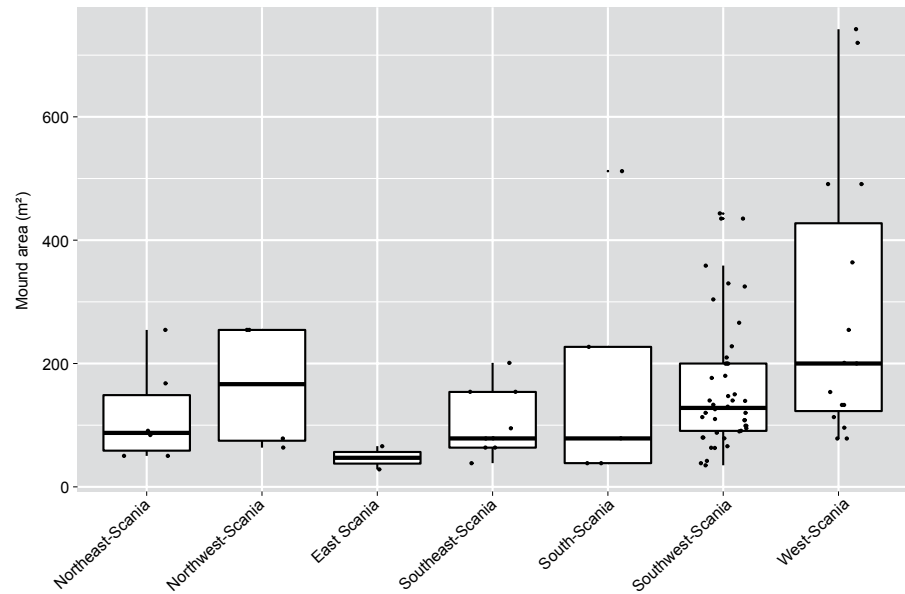


Fig. 249: Boxplot of the mound areas (m<sup>2</sup>) in Scania.

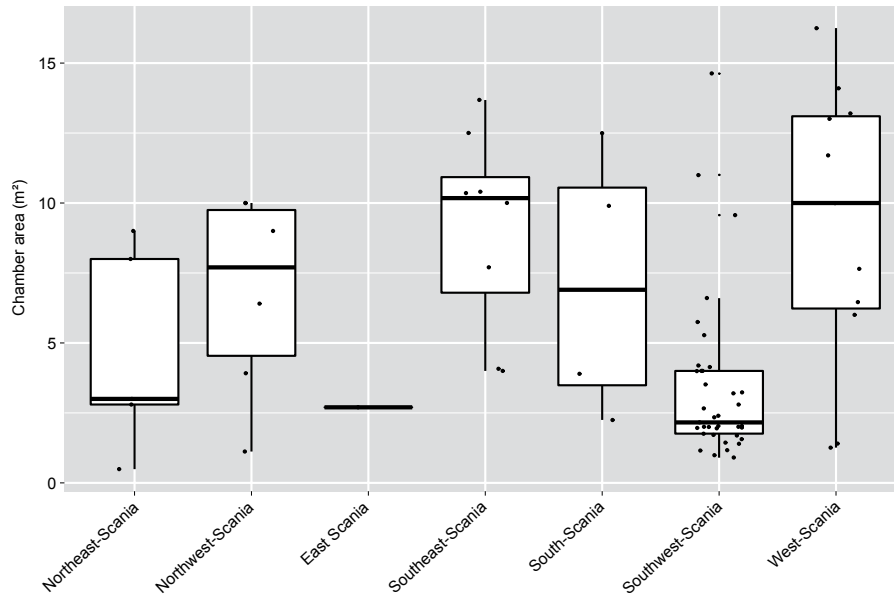


Fig. 250: Boxplot of the chamber areas (m<sup>2</sup>) in Scania.

1. **Fully-preserved burial monuments:** n=0; none.
2. **Well-preserved burial monuments:** n=7; this includes three passage graves, a dolmen which probably lay in a round mound, two dolmens in rectangular long mound, and a dolmen which is integrated into a long barrow.
3. **Moderately well-preserved burial monuments:** n=26; these include eleven passage graves, eleven dolmens and four double graves. In two cases these are two dolmens, one case two passage graves and in one case a dolmen and a passage grave. Regarding the dolmens, in two cases there is no barrow preserved, in three cases there are dolmens in round mounds, and in six cases there are dolmens in rectangular mounds.
4. **Poorly-preserved burial monuments:** n=3; this includes a passage grave, a dolmen with a round mound, as well as a double grave with two passage graves.

Considering the conservation-related quality of the work expenditure calculations, the lack of complete or well-preserved tombs is noticeable. In this respect, the vast majority of the data stock can only be classified as moderate. The distribution of the grave types is balanced in all levels of the different quality gradations. In particular, information on interior constructions, such as divisions into quarters within the burial chambers, as well as formerly existing floor coverings are often missing. This is due to the damage often caused to the graves by previous investigations, disturbances, as well as by agricultural work. The burial mounds are also a factor that often cannot be included in the calculations, as they have often been eroded or ploughed over. In addition, many burial chambers are already completely destroyed today and all formerly existing orthostats and capstones are no longer present. The fact that these tombs could nevertheless be classified as moderately well preserved regarding the work expenditure calculations is due to the extensive rescue excavations from whose context these tombs largely originate in the reference area. In the course of the excavations, it was often possible to document very precisely the former extent of the mound, rock fills, as well as the standing traces of the orthostats. Thus, at least the length and width of the orthostats can be determined reliably, even if the height of the same, as well as the approximate size of the capstones had to be estimated.

The histogram of all tombs included in the analyses shows that the total expenditure invested in the monuments is very variable (Fig. 251).

Nevertheless, there are significantly fewer outliers here than is the case in the first archaeological case study. Overall, the distribution in Scania corresponds approximately to a normal distribution and is within a comparable range regarding many tombs, although there are differences in the individual grave types.

As expected, a relatively clear separation can be seen regarding the types of graves and the work involved in constructing the tombs (Fig. 252).

The least amount of work is associated with the simple dolmens (n=2), especially if these no longer have a preserved burial mound. The construction of a simple dolmen chamber can be estimated at 2000-3000 person-hours. If a burial mound is preserved, then the expenditure can be calculated with at least 4,000 person-hours, although up to scarcely 15,000 person-hours. Regarding the dolmens in round barrows (n=5) a quite wide range of 5,000-10,000 hours is recognisable in view of the small number of tombs. However, in the case of the dolmen with the highest workload (Trollasten; Strömberg 1968) it must be borne in mind that a stone

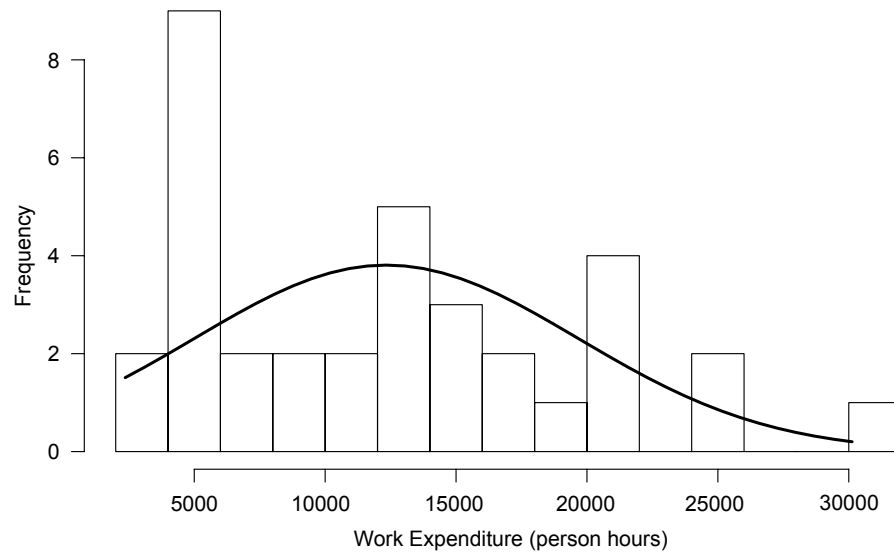


Fig. 251: Histogram of the work expenditure (person-hours) of all graves considered in Scania.

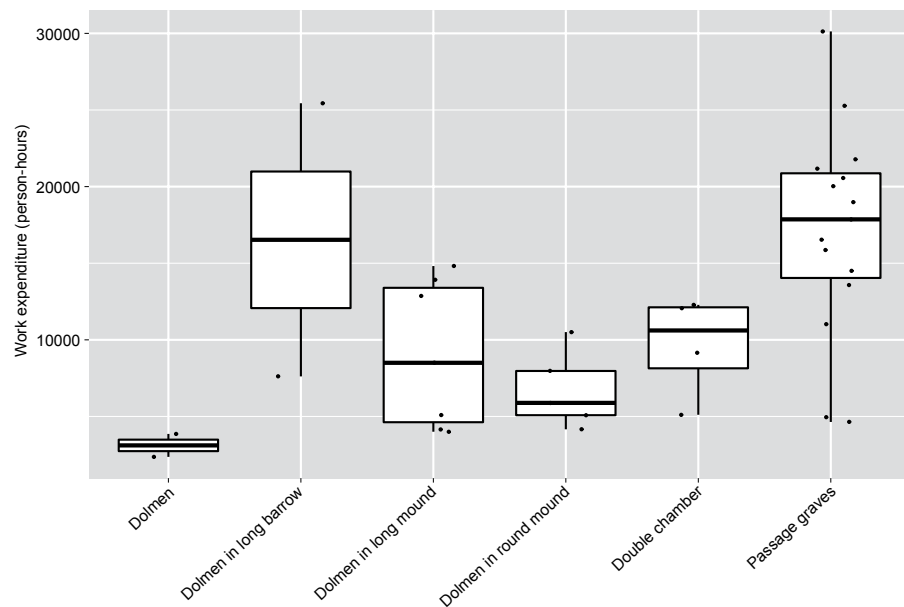


Fig. 252: Boxplot of work expenditure (person-hours) broken down by grave types.

pavement could be documented here, which – in combination with the relatively large orthostats – influences the high construction costs. Significantly influenced by the size of the mound as well as the presence of further construction features such as stone fills or the like, the effort of constructing dolmens in rectangular barrows (n=13) is also very different. The small monuments required approximately 4,000 person-hours, while large exemplars can be estimated at up to 14,000 hours. Finally, two dolmens are integrated into long barrows, whereby the values of the effort calculations differ considerably. The Skabersjö long barrow can be estimated at approximately 7,000 person-hours, while the value calculated for the Västra Hoby long barrow is 25,000 hours.

It seems astonishing that the construction of tombs with two burial chambers within one mound (n=5) does not exceed the spans described above. The two long mounds, each with two dolmen chambers documented in the comparison area, both require approximately 12,000 person-hours of work. A very small complex is the monument of Stora Kungsdösen (Tilley 1999), which contained two passage graves built directly next to each other. Since the chambers are very small and the degree of preservation is relatively poor, only 5,000 hours were calculated here. Here, however, the missing mound as well as a possible previously-existing stone frame must be considered. However, since the burial chambers are usually the decisive factor for the total expenditure, a relatively small grave is to be expected here.

The passage graves (n=20; two of them double graves with two chambers each) are to be distinguished relatively clearly from the different dolmen types regarding the calculated values. Nevertheless, there are also here particularly small and relatively simple tombs, the construction of which took about 4,000-5,000 person-hours. Again, the conservation situation in this case is relatively poor, whereby the calculated value must be considered low. However, all other passage graves require at least 11,000 person-hours to be erected. This value increases to up to 30,000 hours of invested work in the reference area. The tomb with the highest calculated workload is the passage grave Gillhög (Tilley 1999; Forssander 1936). This monument is overall well preserved, but has no interior or exterior constructions and no stone frame, so a minimum value can be assumed.

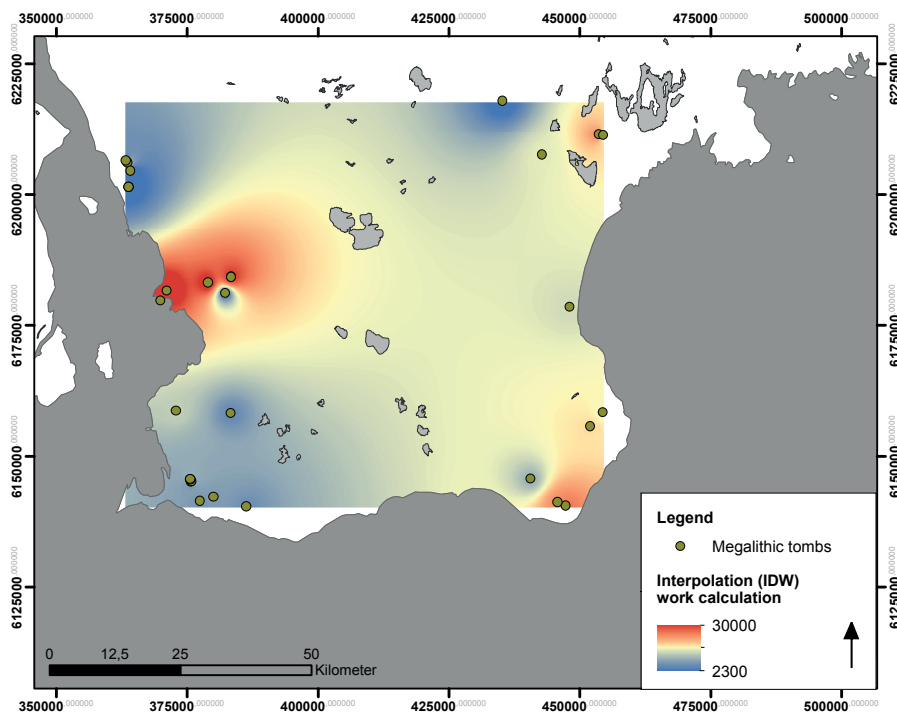


Fig. 253: Interpolation (IDW) of the work expenditure (person hours) of all graves considered in Scania.

Since transport and the erection of the orthostats and capstones are the decisive factors in terms of the workload, it is unsurprising that the interpolation of the workload shows similar spatial focuses as is the case regarding the chamber surfaces (Fig. 253).

There are three regional priorities. On the one hand, the west coast of Scania is to be mentioned here, which emerges most clearly. Here, with some large passage graves, they are the most complex graves within the reference region of Skania regarding their construction. Furthermore, a smaller hotspot in Southeast Scania as well as in Northeast Scania is to be mentioned. Here, however, only individual tombs are responsible for the outliers. A comparison with the mounds shows that even large-scale burial mounds do not necessarily significantly increase the amount of work.

#### 6.2.4.3 Standing stones

Extensive investigations within the scope of rescue excavations have uncovered significant features in recent years, which considerably expanded the presentation of the megalithic construction activities of the Funnel Beaker communities located in today's Scania. Two important sites are Östra Odarslöv and Döserygg. In both cases, the erection of standing stones is directly related to megalithic grave clusters.

As already mentioned, in Östra Odarslöv in connection with a ritual area near a settlement site some megalithic graves were examined, which stand in connection with monuments and/or palisades from wood and stone. The structure, which is of interest here, is a monument consisting of five standing stones, which were located in a north-south direction near the dolmens, probably built at the same time (Fig. 254). Although the stones themselves were no longer present during the excavation, the stance marks reinforced with stone packings indicate standing stones of different shapes and sizes. Probably the centrally placed stone was the largest within this small cluster (Andersson *et al.* 2016, 33-36). The entire construction probably

Fig. 254: Reconstruction of the standing stones erected near the dolmens in Östra Odarslöv (Andersson *et al.* 2016, 34).



marked the path that led to dolmens and thus represented a strongly structuring and space-defining element within the ritual area.

The site of Döserygg was also investigated during rescue excavations between 2006 and 2008 and is also located in the south-western area of Scania. However, in contrast to Östra Odarslöv there are no remains of settlement traces here; rather, it is a purely ritualistic place. The knowledge about formerly certainly existing surrounding settlement sites is only small; however, rather small settlement sites are to be assumed. The site is extremely complex and includes various features such as dolmens, a stone circle, standing stones, an enclosure with wooden palisades, as well as various pits and stone packings (Fig. 255). It can be assumed that the partially strongly-disturbed features do not reflect the original stock of megalithic monuments, but merely show a section of the Neolithic layout.

The site probably covers a period of 1,400 years and dates between 4000 and 2600 cal BCE, although the chronological relationship of the individual features to each other is unclear in parts. In the course of the excavations, presumed ritual depositions in the wetlands surrounding the site could also be documented. Both the wooden palisade and the pits of the standing stones run along a length of at least 730m along an axis from north to south and separate the wetlands from the area used for the construction of the dolmens. In the middle area of this construction there were two entrances, which were marked with standing stones. Again, in this case, the megaliths themselves were no longer preserved, but the pits of the orthostats of the dolmens and those stones near the palisade are similar in terms of the nature of the fillings, as well as the dimensions of the pits (approximately 0.4-1.5m

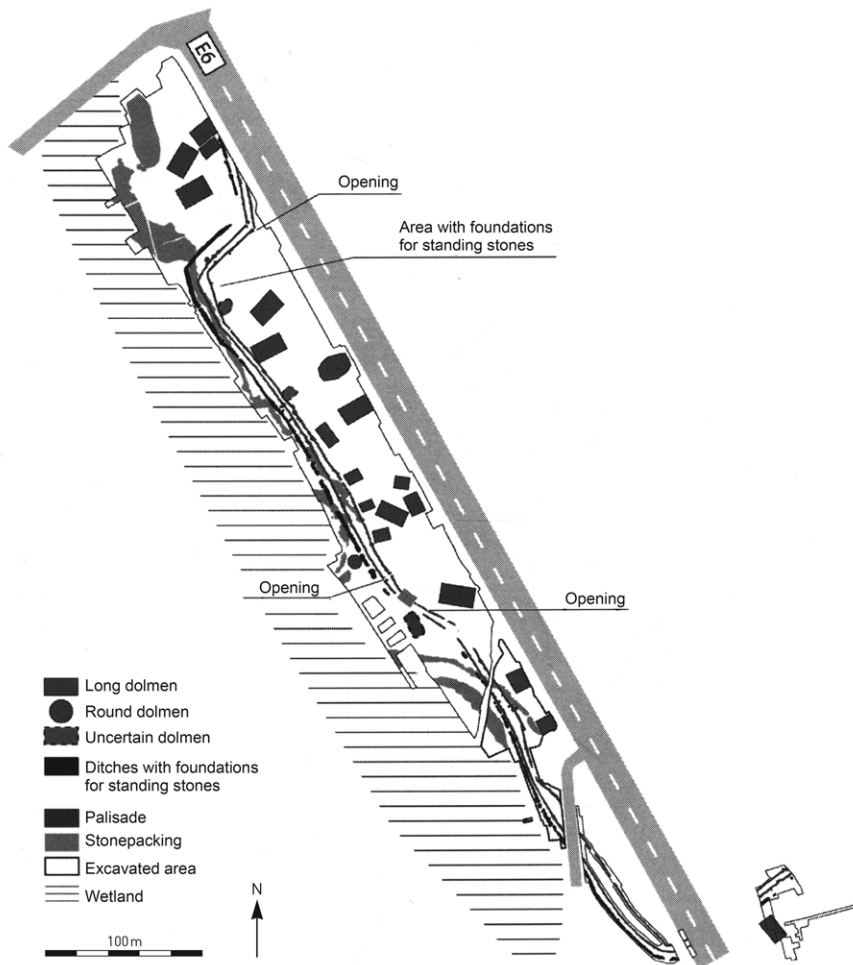


Fig. 255: Excavation plan of the Döserygg site (after Andersson and Wallebom 2013, 127).

in diameter). The number of standing stones that used to run along the palisade is estimated to be at least 300, while that of the posts themselves is estimated at 5,000. The finds found in Döserygg and available <sup>14</sup>C-data indicate that the megalithic tombs were built during the EN up to 3300 cal BCE. The wooden palisade was probably only built in the transition to the MN, whereby continued use of the place until 2600 BCE is indicated by ceramic finds. However, it should be noted that some of the dates as well as part of the find material point to an earlier construction of the palisade and the standing stones, whereby the chronological relationship cannot be conclusively clarified at the present time (Andersson *et al.* 2016, 57-61; Andersson and Wallebom 2013, 125-129).

In summary, it can be stated that the construction of standing stones in connection with ritually connoted areas and megalithic tombs in Scania are not to be found by the majority, but also do not represent an isolated case. Rather, due to the often-poor conservation conditions of these sites, as well as the high number of monuments that have already been destroyed, it is to be expected that a higher number of such structures existed in the past. The two sites presented here show an extraordinary complexity, which includes a continuous extension of the ritual areas over many centuries. Thus, the features resemble the clusters of megalithic graves present in Northern Germany, but only in the case of Scania standing stones are present as an additional architectural element.

#### **6.2.4.4 Collective and cooperative elements of megalith-building traditions**

The features and house layouts documented in Östra Odarslöv and Dagstorp indicate a small number of simultaneous houses in the settlement phases relevant for megalithic construction. For example, in Östra Odarslöv, the two houses are probably to be classified as simultaneous and chronologically in the phase prior to the construction of the megalithic tombs. However, since the ritual place near the settlement was already in use at this time and facades were erected, a similar size of the settlements is assumed in the following phase. In Dagstorp three of the houses excavated there could be attributed to EN I and five to MN Ia. If these houses are classified as simultaneous, a maximum number of two to five houses per settlement results for the relevant time horizons of the EN-MN Ia. If the ethnographic data on the number of persons per house (cf. chapter 6.1.2.4) are compiled, 5-20 persons per house can be assumed. This would mean that the settlements in question would have a population of 10-100 people, of whom 6 to 60 would be fully able to work. This is similar to the figures assumed in the first archaeological case study. In connection with the calculations of available free time (Kerig 2010), 2,242 (6 persons) to 22,420 (60 persons) hours per month are thus free for the construction of megalithic tombs, among other things.

Again, the construction of small dolmens was possible for a small community in a short period, but the construction of the large tombs must have taken a relatively long time. The sites of Östra Odarslöv and Döserygg also show that, at least in part, much more complex ritual structures can be assumed, which must have tied up much more manpower and time through the construction of further standing stones, rows of wooden piles and stone platforms. In this context, it is reasonable to assume that the sites were used by several settlement communities and had a central and communal function. In this context, the erection of standing stones can be seen as an additional architectural element, which may have been built as a sign of the communities involved and may have had a similar memorial function as is the case in Nagaland.



### 6.2.5 The archaeological case studies: summary

Looking at the factors categorised as essential for the initial research questions of this work, some similarities emerged between the previously-explained archaeological case study – the Funnel Beaker societies in Northern Germany – and the reference area of Scania. Three aspects are particularly important here. The settlement system and the size of the settlement communities are essential for estimating the collective efforts to build monumental tombs. The settlement features investigated in Scania are similar to those known from today's Northern Germany. While the EN is mainly based on individual hamlets, in the course of the early MN there are first indications of smaller village communities, albeit whose size has not necessarily exceeded the size of five simultaneous houses. Therefore, a low population density and small village communities can be assumed. At the same time, archaeobotanical studies in Scania point to a slowly increasing landscape opening as well as to the intensification of agricultural activities in the course of the EN and the transition to the MN. At the same time, in Scania, as in Northern Germany, an increase of the chamber size can be observed with the construction of the passage graves from the MN Ia, which of course are accompanied by an increased amount of work. The work calculated for the graves located in Scania, in relation to the different grave types, follows the span widths, which could also be calculated for the monuments located in Northern Germany. However, it should be noted that the existing data set is smaller overall and only very few megalithic long barrows could be included in the calculations.

In relation to the first archaeological case study, the similar distribution of the individual finds of thin-butted flint axes, their length distribution and the distribution of the large chambers and mounds leads to the hypothesis that megalithic construction can certainly be associated with natural spatial factors and the economic productivity of individual areas. Regarding Scania, this hypothesis can be confirmed, at least regarding the interpolation of the length of thin-butted axes. Moreover, in Scania, single finds of thin-butted flint axes can be found primarily in those regions that can be characterised by grave and/or settlement landscapes. The axe finds, which are classified as overlong with a length of over 180mm, are also located in Scania in relative spatial proximity to the large burial chambers, which results in a similarity to the first archaeological case study. There is an offset between the position of the large chambers and the locations where the axes were found. This could indicate the existence of differently connoted spaces for ritual depositions and burials, as already discussed by Sjögren (2011, 131-132) for Falbygden. This is similar to the distribution of axes and chambers in Northern Germany and indicates the existence of specific spaces for the construction of the graves and the deposition of axes, which in this context is characterised as ritual.

However, one aspect that clearly distinguishes the two comparison areas is the features of extremely complex burial areas documented in Scania, which obviously included the construction of standing stones and other features such as rows of piles or platforms. Especially the standing stones hold interest in this context. On the one hand, these can be seen as the ritually used space structuring element of the landscape construction, which could have been an important feature in a possible joint use by several settlement communities. In addition, mechanisms similar to those in Nagaland could play a role here. The erection of individual stones could represent the participation of individuals or groups in activities important for the ritually used burial area and serve as a reminder of important events. However, such an interpretation must be considered uncertain, as direct archaeological evidence cannot be provided.

Regarding the influential interpretations of megalithic graves presented at the beginning, some interpretations can be excluded for the research areas presented here. Neither the grave goods, nor the house sizes and house inventories show a

clear vertical social stratification in the case study of Northern Germany. Certainly, the existence of institutionalised inequality in connection with Funnel Beaker communities cannot be ruled out, but the data situation by no means clearly indicates such an inequality (compare also Bakker 2011). Therefore, an interpretation in the sense of using the megalithic graves as burial places for special social groups or social leaders (cf. Kristiansen 1984; Madsen 1982; Fleming 1973) is rejected. A function of the graves as territorial markers (cf. Renfrew 1976; 1973) is possible but seen as not very probable due to the often cluster-like arrangement and generally quite unequal distribution. An imprinting of the graves as a symbolic expression for the domestication process progressing in the course of the Neolithic (cf. Hodder 1990) is quite conceivable; however, this is very difficult to comprehend in the archaeological material. It is quite clear, that although burial grounds were located in the vicinity of settlement sites, they were often separated and likely representing different social spheres. Here, a symbolic expansion of the domestic sphere into the wild sphere of the unstructured landscape may have been influential but remains impossible to prove based on the available data. Also, megalithic tombs have repeatedly been erected on former domestic sites, as – for example – in the case in Rastorf (cf. Steffens 2009).

Here, above all, the previously established characterisations of megalithic graves as active markers are followed, which see the graves as an important expression of social group affiliation and processes of negotiating them (e.g. Tilley 1999; 1996). Several of the structures within the analysed data point towards this kind of interpretation. This implies the formal grave clusters consisting of different, chronologically different grave types as well as an increase in size of the tombs within the clusters. These burial grounds could well have been attached to a larger community or several villages cooperating in their construction and maintenance. This collaborative character of monument construction is strongly implied by the available settlement data and the calculation of the work expenditure of different graves. Also, representative elements in front of the graves, such as depositional areas, as well as the later on present structuring of the grave chambers themselves point towards this. In addition to this interpretation, which is focusing strongly on the communal and cooperative character of the monuments, the importance of economic factors must be stressed. As already suggested by Chapman (1981) and Madsen (1982) there might have been a quite close connection between the erection of many large megalithic graves and the occurrence of favourable natural conditions and important resources (also Larsson 1985). Therefore, megalith-building activities in Funnel Beaker societies can also be connected to the expression of group-related economic inequalities.

The strong interlink between these economic factors and the tombs, which certainly held strong ritual importance (as suggested by their connection to depositions) places the megalithic tombs in the sphere of a ritual economy. Although megalithic tombs can be seen as a factor used of an active landscape construction and structuring by the respective communities, there are no clear hints at a restricted access to the burial grounds, nor to specific resources. Bottleneck situations and unequal distributions of specific goods and resources are not visible in the case studies. Therefore, communal and corporate strategies are seen as more probable than exclusive strategies within Funnel Beaker communities. The collective character of megalithic tombs is not only visible in their size and the work attached to their construction. Rather, the existing analyses on the individuals buried in the tombs indicate burials both of biologically related on non-related individuals. In addition to the presence of both female and male, as well as adult and juvenile individuals, a rather open access to the burial grounds can be assumed. The specifically-connotated burial grounds and the use of specific objects (such as special ceramic types) can – in addition to depositional

practices possibly linked to feasting activities – be seen as hint at the function of the burial sites as specific places of a collective memory. In turn, this could have served as an important aspect serving to generate and maintain a group-related representation and identity.



## 7 Synthesis

In order to allow a summarising synthesis of the case studies presented above, a comparison of the individual models will be made. Here it will be evaluated which of the theoretical aspects and different courses of action are visible and applicable to the different case studies. In a second step, a short consideration will then be made concerning whether and to what extent overlapping patterns can be identified.

### 7.1 The different models

Regarding the different models of megalithic construction in different societies, there are both similarities and differences in the significance of different ways of acting, as well as the expression of fundamental social aspects, such as different forms of inequality.

#### 7.1.1 Megalith-building traditions on Sumba

Regarding Sumba, the first recent case study for megalithic construction, it is fundamentally linked to grave construction. Overall, there is a strong collective frame of reference within the Sumbanese communities, including the *Umas* and clans, covering such diverse aspects as house building, fieldwork, marriages, but also the organisation of feasts and megalith building. The dependencies that arise from this collective frame of reference and are repeatedly consolidated have a favourable effect on communal and collective structures. The existence and the development of economic and social inequality is very different for the west and east of the island. While in the west even anarchistic structures of society and action<sup>14</sup> are effective to some extent, strong and institutionalised inequalities can be observed, especially in the east of the island. Economic inequality, which is ultimately also materialised by the construction of different types of megalithic tombs, is present throughout the island. Also to be differentiated is the importance of corporate or exclusionary strategies, which differ greatly from region to region in Sumba. In the eastern part of the island in particular, objective sources of power can be identified, which are mainly based on formerly hereditary social leadership positions and an unequally distributed possession of resources, namely livestock and buffalo populations. Although there are also differences in the distribution of resources in the west of the island, there are no strong social hierarchies based on hereditary positions to which the majority of the population has no access. Social differentiation in the sense of

---

14 For example, these include decentralised forms of organisation, effective control mechanisms of social positions and open access to resources.

different social roles and positions (e.g. priesthood) is also present in Western Sumba, but the social consequences are much less pronounced here and there are control mechanisms that monitor those who hold specific social positions. In addition, social influence is strongly linked to personal suitability and social standing, whereby there is social permeability here. The construction of megalithic tombs, especially in the west of the island, is the result of cooperative structures and significant actions linked to them. First, reciprocal structures involving a comprehensive system of rights and obligations, as well as guilt relations between community members. The aforementioned social participation in terms of political and social participation can be seen as part of a reward system that requires participation in cooperative structures (such as participation in house building, *etc.*). Regarding the clearly recognisable differences between Eastern and Western Sumba, the fact that these are partly recognisable by the megalithic graves themselves holds strong interest. Both the distribution curves of the grave volumes and the decorations of the tombs differ considerably from each other and reflect the restrictive or more open social structures. In particular, the hierarchical social inequality existing in Eastern Sumba can be clearly seen in a type hierarchy, the use of specific ornamental patterns and the unequal house sizes. Megalith construction throughout Sumba is associated with economic inequalities and a certain degree of competition that lead to the construction of larger tombs. Accordingly, the construction of specific grave types is closely linked to the material resources provided by the builder. However, the construction of the graves as a whole, especially in the west of the island, is inextricably linked to the extensive communal and collective structures that characterise Sumba's traditional communities. Accordingly, the importance of the different courses of action, which are important for the maintenance and consolidation of cooperative structures, is to be assessed.

### 7.1.2 Megalith-building traditions in Nagaland

In Nagaland, there are some quite similar patterns. Collective and communal structures also hold the utmost importance in this area. However, due to the natural conditions and the historical development of Nagaland the village communities located there are to be understood even more strongly than in Sumba as self-sufficient communities, which are self-contained and fully functional. In contrast to Sumba, where ancestral villages have a central local function in terms of ritual aspects while at the same time being dependent on the surrounding villages and households, each village in Nagaland is an independent unit. An increased decentralisation can be observed, in which all functions and social authorities in the village itself have always existed. Although social differentiation was also traditionally present here and included the positions of priests, some of which are hereditary, control mechanisms were described here that prevented individuals from exerting too much influence or could exclude unsuitable individuals from these positions. It seems that courses of action are important, which can be characterised as being typical for anarchistic forms of socio-political organisation within literature of social anthropology. This also includes the social units of the *Khels* and clans, which were effective at different levels, were important for different activities and areas of life and brought about a strong degree of interdependence between the individual members. However, megalith construction in Nagaland was almost exclusively limited to the construction of standing stones in various forms. The intrinsic link between megalithic architecture and the *Feasts of Merit* meant that standing stones in Nagaland served as a materialisation of the completion of a specific feasting series, which at the same time indicated the high social status of the feast giver. Other factors, such as specific house elements or the permission to wear special garments, were also significant, but the megalithic building always stood for the completion and the last stage of

these feasting series. Regarding the feasting series, there was a high expenditure of resources, whereby cooperative structures were important. Thus, the provision of the necessary resources was often shared, with reciprocal relationships between members of social groups taking effect. Besides being embedded in fundamental socialisation processes, the megalithic monuments of Nagaland have other characteristics. The megalithic monuments of the Angami-Naga served as a place of remembrance, in which each stone was assigned to a deceased relative. In contrast, the monuments of the Chakhesang-Naga are primarily to be seen as a reminder of the builder, as well as of his achievements and feasting activities. Nevertheless, in both examples no further activities took place on the monuments themselves, which would have an increased ritual component. However, the location of the monuments along the paths to the rice fields favoured the creation of a specifically-connoted memory space, which also had a very high frequency. At the same time, this placement represents an element of landscape construction, albeit which was only linked to certain social groups to a very minor degree. Thus, it was only described in one village that areas could be used by a *Khel* or clan and then only served to represent this group. In all other cases, the monuments were erected in a mixed form, whereby no restrictive structures were created in terms of landscape structure. As in Sumba, there is economic inequality in Nagaland. The possibility for individuals to participate in megalithic construction and end the corresponding feasting series is strongly linked to their economic situation. However, no strict resource control by individual community members or groups can be observed. Rather, in addition to individually allocated land areas, there are also communally owned economic areas that are open to the use of all community members. Ultimately, the possibilities of providing the surplus production necessary for the feasts varied from family to family.

A striking difference to Sumba is the influence of the conversion to Christianity within the last centuries. Although Sumba was also Christianised, the megalithic building was adapted to the new religion and mixed with elements of the traditional religion. Here a materialisation of syncretic religious structures is recognisable. In Nagaland, on the other hand, the feasting activities and the megalithic building ended with the turn towards Christianity.

### 7.1.3 Megalith-building traditions in Funnel Beaker communities

For the archaeological case studies, there are some limitations regarding the traceability of certain theoretical approaches and specific courses of action due to the nature of the data material. Thus, especially anarchistic social structures are difficult to understand based on archaeological sources. The significance and form of cooperation and collective action can only be reconstructed in parts of the material. Nevertheless, basic structures are discernible.

An outstanding characteristic is the landscape construction through the construction of megalithic tombs that can be traced in both case studies. Many of the Funnel Beaker period tombs can be found in specific clusters, which are often located in the vicinity but clearly separated from the settlement sites. This spatial differentiation results in a very specific modification of the landscape, which suggests a separation into a domestic and a ritual sphere (cf. Sjögren 2011). Especially in Scania it was possible to document elaborately constructed places, which include not only tombs, but also standing stones and wooden palisades. These places can be seen as a central point of contact for communities who, through their use, have a claim to these spaces. Such a claim for use may have resulted in two factors. First, such a claim made it possible to differentiate between other communities that did not use the same burial site. Second – and partly due to the first factor – increased social

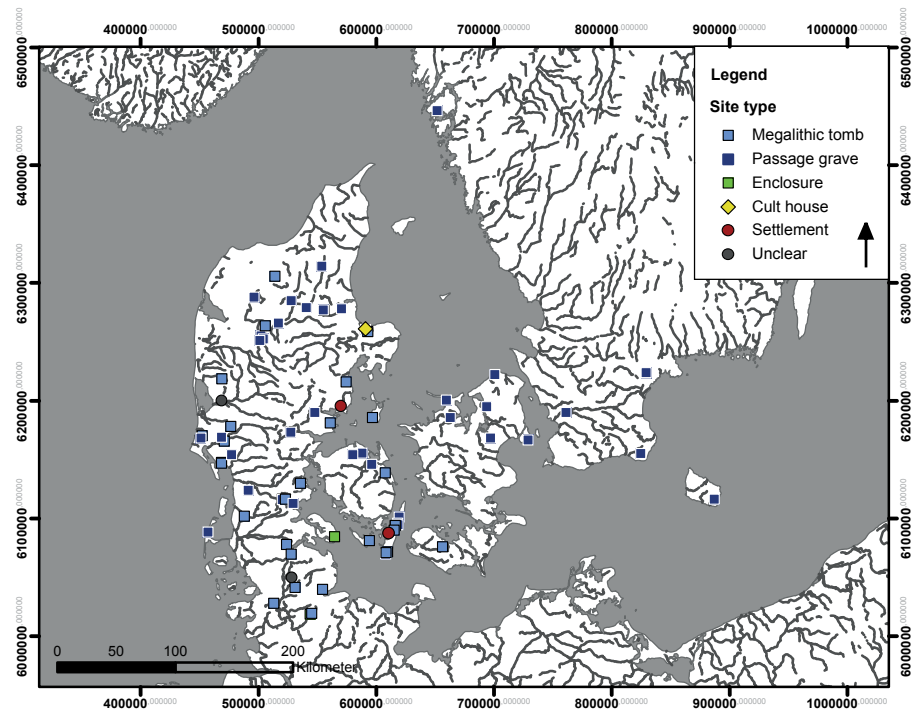


Fig. 256: The finds of ceramic spoons dating to the MN Ib in their contexts of the Funnel Beaker North Group.

cohesion has developed within the group using the burial grounds. Whether and to what extent access restrictions existed for individual group members, or members of other groups, can no longer be deduced from the archaeological data. Nevertheless, anthropological studies of collective graves indicate that a cross-section of the population was buried in the graves (cf. Chapter 6.1.4.5). In addition, the later erected passage graves in particular offered a lot of space for burials, whereby at least not a form of access can be assumed that was designed only for a certain part of the communities using the places (e.g. restrictions based on age or gender). Subject to the previously inadequate data situation, it can therefore be assumed that access to the social domains thus created was quite open. These can be seen as an expression of a specific culture of memory that took place in these specifically-connoted spaces. Linked to the tombs were depositions of ceramics and flint artefacts in front of the megalithic tombs. Among the objects laid down are very special pottery, such as clay spoons and fruit bowls, which can only be found on megalithic graves and in enclosures (Fig. 256). Since these objects are not only to be found exclusively in ritually related complexes of features, but also stand out in form and decoration from the ceramic material of the Funnel Beaker communities, it can be assumed that they were significant for ritual communication.

Based on the archaeological data, there are no clear indications of an institutionalised social differentiation within Funnel Beaker communities. There are no clear differences in the distribution of grave goods, which would indicate an unequal distribution of goods. The same can be observed for the house sizes and house inventories. Copper objects, as imported raw materials from exotic materials, are not necessarily found in connection with individual persons (e.g. as burial objects) but above all as presumed depositions. The rarity and circumstances of these finds could also be interpreted as meaning that the possession of such goods in the context of the Funnel Beaker period was not used to achieve the social prestige of individuals and was rather devalued collectively in hoards. Therefore, an expression of social hierarchisation is at least not discernible in the distribution of material goods. Resource control, along with access restrictions and restricted distribution of the corresponding goods, is not to be assumed in the case of flint.



Course of action	Sumba	Nagaland	Funnel Beaker
1. Cultural memory	<b>not likely</b>	<b>yes</b>	<b>yes</b>
2. Economic/social inequality	<b>yes</b> (mainly Eastern Sumba)	<b>yes</b>	likely <b>no</b>
3. Anarchistic aspects	<b>partly</b> (mainly Wanokaka)	<b>yes</b>	<b>unclear</b>
4. Communal strategies	<b>yes</b> (Western Sumba) <b>no</b> (Eastern Sumba)	<b>yes</b>	likely <b>yes</b>
6. Landscape construction and resource control	<b>no</b> and <b>low degree</b> (Western Sumba) <b>yes</b> (Eastern Sumba)	<b>partly</b> and <b>low degree</b>	<b>yes</b> and (likely) <b>no</b>
7. Collective action	<b>yes</b>	<b>yes</b>	likely <b>yes</b>
8. Cooperative action	<b>yes</b>	<b>yes</b>	likely <b>yes</b>

Tab. 14: The aspects and actions to be classified as existing or non-existing or important or less important for megalithic construction in the different case studies.

Whether there were restrictions on access to land cannot be determined archaeologically. Accordingly, it is more likely that resources will be freely distributed if there is no or very little control over the distribution channels. This points to the strong importance of local strategies that place a strong focus on community action. The collective character of the representative collective monuments of this period, such as megalithic tombs and enclosures, is appropriate to this. Especially the construction of the graves is a recursive element, which served in this context for the consolidation of cooperative structures with mutual dependence. These dependencies can be derived from the sometimes very high amount of work involved in building the tombs, while at the same time the individual settlements are very small in size. Reciprocal structures could become clear from depositions and feasting activities that may have taken place.

However, the absence or minor role of access restrictions and the emphasis on collective identity does not mean that there have been no economic inequalities in Funnel Beaker contexts. The indications of economic inequalities in the data set refer to differences between individual areas within the study area, which could be based on the variable productivity of individual groups. The sizes of the chambers and burial mounds as well as the distribution of the flint axes must be taken into account. One way of illustrating economic inequality and the productivity of a group was the construction of large tombs and grave clusters by the same means. In such a framework, competitive characteristics of group-related representative building projects are conceivable, which ultimately influenced the size differences of the megalithic graves visible today.

In summary, the following factors and actions can be described as powerful or less significant. The courses of action correspond to the theoretical background of this work presented at the beginning (cf. Chapter 3). There are some overlaps between the individual theories. Thus, communal and cooperative strategies are certainly also part of anarchistic social structures (Tab. 14).

## 7.2 Comparison and synthesis

As explained at the beginning of this paper, the purpose of the present studies is to evaluate possible social mechanisms and effective practices of megalithic-building traditions based on a comparative approach. It was explained that an ethnoarchaeological approach offers the opportunity to expand traditional narratives and

integrate alternative interpretations into archaeological research approaches. Previous analyses of megalithic construction in contexts of the Funnel Beaker period partly followed theoretical assumptions that are strongly based on the premises and ideas of historical materialism influenced by Marxism. This includes the idea that cooperative projects need a central organisation that can be implemented by a leader who either originates from an institutionalised social hierarchy ('chiefdoms', cf. Kristiansen 1984) or can also be located in looser structures (cf. Artursson *et al.* 2016). This is followed in part by an idea of social differentiation that may locate Funnel Beaker societies in the direction of a social-evolutionary step between egalitarian, Mesolithic societies and increasingly hierarchical Bronze Age societies. Such interpretations could be based on modern ideas shaped by a very specific socio-political environment about the importance of economic productivity, the influence of self-interest and basic forms of work organisation.

As a central factor which developed in the course of this work, the way in which collective structures of action are organised and their social significance has emerged has to be named. Regarding the ethnoarchaeological case studies, different approaches are indeed discernible. For example, the construction of megalithic tombs in Sumba – which always takes place in a collective form from a technical perspective – takes place under two completely different premises. In the east of the island, restrictive structures can be seen that are actually based on institutionalised social hierarchies and are influenced strongly by objective sources of power, resource control and exclusionary strategies. In the west of the island, however, megalithic-building traditions take place in a context characterised by generally open structures, mutual dependencies and cooperative actions. This is also the case in the communities investigated in Nagaland. In particular, cooperative structures show an interdependency of the most diverse aspects of life that favour the formation of social cohesion and networks within society. Here, the traditional working groups and cooperations regarding field construction, house building and feasting activities can be mentioned. Regardless of the framework conditions, the importance of cooperative structures in all case studies is a consistent factor that determines megalithic construction. It becomes clear that collectively organised megalithic construction can be found in connection with both solidified structures of economic and social inequality, as well as in decentralised and open structures (which exhibit partially anarchistic structures). A certain degree of economic inequality, which favours and recursively materialises a representation of individuals and groups based in part on competitive structures (*e.g.* by large tombs), can be observed in all case studies. However, this form of representation and differentiation can in no way be equated with institutionalised (hierarchical) social inequality. Such a connection becomes obvious in Eastern Sumba, but was in no case a prerequisite for the development of megalithic-building traditions. Thus, megalithic monuments turn out to be an effective carrier of the materialisation of institutional social inequalities, but can also be used as an expression of opposing social structures.

On the other hand, other courses of action and factors are only partially significant. This is the case regarding the importance of linking the culture of remembrance and megalithic architecture, as well as regarding the importance of the element of landscape construction. For the societies of the Funnel Beaker period, the importance of the graves as places of remembrance seems to be particularly pronounced. This is indicated by the use of objects that can be seen as materialisation of ritual communication, as well as the repeated exploration of the places themselves, whereas in Sumba this factor seems less significant. Although the graves in Sumba are also a reminder of the dead, there is no active use of the graves as a ritual place for the culture of remembrance. In Nagaland the monuments serve as a reminder of the builders or deceased relatives, but even in this case no further rituals or activities at the monuments have been described. The use of the Funnel Beaker monuments

as memorial sites, on the other hand, was much more active and probably involved complex actions involving larger groups. In this sense, the significance of megalithic tombs as a factor of landscape construction seems meaningful. If Funnel Beaker tombs served very strongly as an actively designed and representatively erected meeting place for the integration of different groups and their social connection to each other, such an arranged use seems meaningful. The settlement sites are also of interest here. As has been described, the villages in Nagaland are quite large and can be seen as economically and socially self-sufficient units. This independence from each other, which is partly due to their secluded location, causes a strong degree of interdependence among the villagers, which is expressed by the presence of different levels of collectives, which are influential in all areas of life. However, according to today's known data, the situation in Funnel Beaker contexts seems to be presented differently. In the EN, only individual farmsteads can be assumed which develop into small settlements in the course of the MN (cf. Chapter 6.1.2.1). While in Nagaland a collective frame of reference was constantly given and recursively reassured, this was more difficult in Funnel Beaker temporal contexts due to the spatial distance. In this context, megalithic burial grounds and the cooperation required to establish them could have played a significant role in creating a collective frame of reference, albeit which required permanent reinsurance in the form of a place of remembrance. This would provide an explanation why the chosen forms of representation (collective burials in ever larger graves, *etc.*) in Funnel Beaker contexts were much more strongly oriented towards the entire collective. In Nagaland and Sumba, the standing stones and graves are the result of cooperative efforts and can only be made possible by the collective frame of reference, but a monument can always be attributed to a single person or family. As a result of the already consolidated collective structures, an individual representation could be placed in the foreground more strongly than was perhaps the case in contexts of the Funnel Beaker period in which these structures were first created.

In other words, the megalithic-building traditions dealt with here can be seen as an important factor in the negotiation and reproduction of social relations within a collectively shaped framework of action. In this sense, feasting activities and the maintenance of social cohesion are fundamental. The diversity of megalithic-building traditions in the ethnoarchaeological case studies shows that an extended view of possible alternative approaches and motivations is worthwhile. Against the background that there are no clear indications of an institutionalised social hierarchy in Funnel Beaker societies, an interpretation of a connection between megalithic construction and institutionalised social inequality is rejected. Rather, the elements of cooperation and decentralisation, such as being emphasised by anarchist theory, seem to be worthwhile ways of interpretation.



## 8 Summary

This study deals with the social implications of megalithic construction in different societies. Megalithic-building traditions can be found all over the world in various forms and in different time positions. Regarding Neolithic societies in Europe, megalithic-building traditions have been studied and interpreted in many ways as an object of research. Some of these interpretations linked megalithic construction with increasing social inequality and hierarchisation, as well as a central organisation of building projects. In the course of the SPP 1400 'Early Monumentality and Social Differentiation', the investigation of Funnel Beaker social structures in connection with the project 'Equality and Inequality' was one of the research questions.

Theoretical approaches have been chosen regarding possible effective and meaningful courses of action, which show a strong degree of openness regarding the underlying social structures and power relations. These are placed in front of the empirical part of this work, whereby the interpretation possibilities can be adapted to the respective societies. Furthermore, this work pursues a comparative, ethnoarchaeological approach to enable an extension of the approaches and premises present in archaeological research.

The investigations were carried out based on three case studies and a reference region. Regarding the two ethnoarchaeological case studies, Sumba (Indonesia) and Nagaland (India), extensive data sets on megalithic monuments, which could be linked with interviews, could be collected based on own field studies. It became apparent that megalithic construction is strongly influenced by communal social structures and collective efforts. Regarding Western Sumba, as well as Nagaland, it was demonstrated that there are extensive communal and cooperative structures within the communities there that link different spheres of daily life. These very structures are also effective in feasting activities and the construction of megalithic monuments by individual members of social groups and thus place them in a primarily collective framework. In Nagaland in particular, structures are discernible that have been grouped together within the European research tradition as anarchistic modes of action. These include effective control mechanisms regarding specific social positions (such as priests), collective jurisdiction, decentralised organisation and a commitment to mutual assistance; for example, in the provision of resources for feasting activities. Nevertheless, megalithic monuments in these flat hierarchical societies serve a way of expressing and materialising economic inequality and social prestige. The megalithic tomb is not the only factor effective in this context, but it is the most obvious and impressive. Furthermore, the monuments hold strong importance as a memory space, as well as a landscape-forming element. On the other hand, in the east of Sumba, the structures are completely different. Here institutionalised social hierarchies exist in which megalithic graves serve as

a restrictively-treated element for the consolidation and materialisation of these very structures. Linked to the social structures is a control of the most important economic resources, which is reflected as ornamentation on the large tombs of the prominent social stratum.

Parts of Eastern Schleswig-Holstein and Western Mecklenburg (Germany) and the region of Scania (Sweden) were chosen as the study area for the case study on the Funnel Beaker period. A model for megalithic construction within these societies could be developed with the help of data from the state archaeologies and new excavation results from subprojects of the SPP. In parts, a similar significance of certain courses of action can be assumed as can be seen in the ethnoarchaeological case studies. The Funnel Beaker period graves in general, but especially in relation to the Middle Neolithic passage graves, are characterised by a very high workload. In view of the very small settlement sizes, especially in EN II, this could probably not be achieved by a single settlement community. Correspondingly, in this case, cooperative groups are to be assumed, which jointly used and constantly expanded a burial ground. References to the ritual significance of these places can be found from the usual MN depositions of ceramics and flint in front of the graves. In addition, the house sizes, the house inventories and the grave goods preserved do not allow us to assume any institutionalised social differentiation. The recognisable regional differences in the chamber and mound sizes of the megalithic monuments hold interest, as well as the length of the flint axes. These could indicate economic inequalities between individual communities, which could well have encouraged competitive behaviour regarding the construction of monuments.

Finally, the various implications of megalithic-building traditions could be demonstrated based on the individual case studies. The social structures underlying the affected communities in Sumba and Nagaland are relatively clear in the manner of megalith building and the concrete design of the monuments. By taking into account the recent examples of megalithic construction, the horizon of significant and effective ways of acting could be broadened, whereby above all decentralised and communally designed mechanisms are important. These also represent interpretations regarding Funnel Baker societies, which can supplement the existing idea of megalithic construction.

## 9 References

- Adam, L. 1922. Potlatch: eine ethnologisch-rechtswissenschaftliche Betrachtung, in: Lehmann, W. (ed.). *Festschrift Eduard Seler: dargebracht zum 70. Geburtstag von Freunden, Schülern und Verehrern*. Stuttgart: Strecker und Schröder, 27-45.
- Adams, R.L. 2007. *The Megalithic Tradition of West Sumba, Indonesia: An Ethnoarchaeological Investigation of Megalithic Construction*. PhD. Simon Fraser University.
- Adams, R. L. 2010. Megalithic Tombs, Power, and Social Relations in West Sumba, Indonesia, in: Calado, D./Baldia, M./Boulanger, M. (eds.). *Monumental Questions: Prehistoric Megaliths, Mounds, and Enclosures*. Proceedings of the XV World Congress (Lisbon, 4-9 September 2006). BAR International Series 2123. Oxford: Archaeopress, 279-84.
- Alemchiba, M. 1970. *A Brief Historical Account of Nagaland*. Kohima: Naga Inst. of Culture.
- Amborn, H. 2016. *Das Recht als Hort der Anarchie. Gesellschaften ohne Herrschaft und Staat*. Berlin: Matthes & Seitz.
- Anand, V.K. 1967. *Nagaland in transition*. New Delhi: Assoc. Publ. House.
- Andersen, N.H. 2000. Kult og ritualer i den ældre bondestenalder. *Kuml* 2000, 13-57.
- Andersson, M. 2004. *Making Place in the Landscape. Early and Middle Neolithic societies in two west Scanian valleys*. Skånska spar. Lund: Archaeological Excavations Department.
- Andersson, M. 2017. Truls Hoj – A Passage Grave and Related Monuments. *Journal of Neolithic Archaeology* 2017, 29-60.
- Andersson, M./Artursson, M./Brink, K. 2016. Early Neolithic Landscape and Society in South-West Scania . New Results and Perspectives. *Journal of Neolithic Archaeology* 2016, 23-114.
- Andersson, M. and Wallebom, B. 2013. Döserygg and the Skegrie Dolmens. New Light on the Megalithic Graves in South-West Scania, Southern Sweden, in: Bakker, A./Bloo, S.B.C./Dütting, M.K. (eds.). *From Funeral Monuments to Household Pottery. Current advances in Funnel Beaker Culture (TRB/TBK) research*. Proceedings of the Borger Meetings 2009, The Netherlands. BAR International Series 2474. Oxford: Archaeopress, 121-34.
- Angelbeck, B. and Grier, C. 2012. Anarchism and the Archaeology of Anarchic Societies. Resistance to Centralization in the Coast Salish Region of the Pacific Northwest Coast. *Current Anthropology* 53/5, 547-87.
- Ao, T. 1957. *Ao Naga customary laws*. Mokochung: Aowati Imchen.
- Arponen, V./Müller, J./Ohlrau, R. 2016. Artefacts, houses, and inequality, in: Meller, H./Hahn, H.P./Jung, R./Risch, R. (eds.). *Arm und Reich – zur Ressourcenverteilung in prähistorischen Gesellschaften*: 8. Mitteldeutscher Archäologentag vom 22. bis 24. Oktober 2015 in Halle (Saale). Tagungen des Landesmuseums für Vorgeschichte

- Halle 14. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, Landesmuseum für Vorgeschichte, 49-60.
- Artursson, M./Earle, T.K./Brown, J. 2016. The construction of monumental landscapes in low-density societies: New evidence from the Early Neolithic of Southern Scandinavia (4000-3300 BC) in comparative perspective. *Journal of Anthropological Archaeology* 41, 1-18.
- Artursson, M./Lindenroth, T./Nilsson, M.-L./Svensson, M. 2003. Byggnadskultur i södra & mellersta Skandinavien, in: Svensson, M. (ed.). *I det Neolitiska rummet*. Skånska spår – arkeologi längs Väst kustbanan 3. Lund: Riksantikvarieämbetet, 40-171.
- Assmann, J. 2013. *Das kulturelle Gedächtnis. Schrift, Erinnerung und politische Identität in frühen Hochkulturen*. 7th ed. München: H.C. Beck.
- Athickal, J. 1922. *Maram Nagas, a socio-cultural study*. New Delhi: Mittal Publications.
- Atkinson, R.J.C. 1956. *Stonehenge*. London: Hamilton.
- Bägerfeldt, L. 1992. *Megalitgravarna i Sverige. Typ, tid, rum och social miljö*. 2nd ed. Gamleby: Arkeo-Förl.
- Bagge, A. and Kaelas, L. 1950. *Die Funde aus Dolmen und Ganggräbern in Schonen, Schweden 1. Das Härad Villand*. Stockholm: Wahlström & Widstrand.
- Bagge, A. and Kaelas, L. 1952. *Die Funde aus Dolmen und Ganggräbern in Schonen, Schweden 2. Die Härade Gärds, Albo, Järrestad, Ingelstad, Herrestad, Ljunits*. Stockholm: Wahlström & Widstrand.
- Bakker, J.A. 2011. Is a social differentiation detectable in the TRB culture?, in: Furholt, M./Lüth, F./Müller, J. (eds.). *Megaliths and Identities. Early Monuments and Neolithic Societies from the Atlantic to the Baltic*. 3rd European Megalithic Studies Group Meeting 13th – 15th of May 2010 at Kiel University. Frühe Monumentalität und soziale Differenzierung 1. Bonn: Habelt, 261-72.
- Balfour, H. 1922a. *Diaries 1922/1923*, Nagaland. Oxford University: Pitt Rivers Museum: Manuscript Collections.
- Balfour, H. 1922b. *Sketchbook 1922/1923*, Nagaland. Oxford University: Pitt Rivers Museum: Manuscript Collections.
- Basa, K.K./Mohanty, R.K./Ota, S.B. (eds.). *Megalithic traditions in India: archaeology and ethnography*. New Delhi: Aryan Books International.
- Bauer, A.M. and Trivedi, M. 2013. Contextualizing Megalithic Places: Survey, Mapping, and Surface Documentation in the Environs of Hire Benakal (Koppal District, Karnataka). *Man and Environment XXXVIII/2*, 46-61.
- Bayliss, A./McAvoy, F./Whittle, A. 2007. The world recreated: redating Silbury Hill in its monumental landscape. *Antiquity* 81/311, 26-53.
- Becker, C.J. 1957. Den tyknakkede flintøkse. Studier over tragtbægerkulturens svære retøksker i mellem-neolitisk tid. *Aarbøger* 1957, 1-37.
- Becker, C.J. 1973. Studien zu neolithischen Flintbeilen. *Acta Archaeologica* 44, 125-86.
- Bekkema, M. 2013. *From Roaming Rocks to Giant s' Graves. On the relation between the availability of building materials and the distribution pattern of megalithic monuments of the Funnel Beaker Culture in North West Europe*. BA. University of Amsterdam.
- Bernard, H.R. 2006. *Research Methods in Anthropology. Qualitative and Quantitative Approaches*. 4th ed. Lanham: AltaMira Press.
- Bernbeck, R. 1994. *Die Auflösung der häuslichen Produktionsweise. Das Beispiel Mesopotamiens*. Berliner Beiträge zum Vorderen Orient 14. Berlin: Reimer.
- Bernbeck, R. 1997. *Theorien in der Archäologie*. Tübingen et al.: Francke.
- Bernbeck, R. 2014. Prestigegüter, in: Mölders, D. and Wolfram, S. (eds.). *Schlüsselbegriffe der Prähistorischen Archäologie*. Tübinger Archäologische Taschenbücher 11. Münster t al.: Waxmann, 221-5.
- Bernbeck, R. and Müller, J. 1996 (eds.). *Prestige – Prestigegüter – Sozialstrukturen. Beispiele aus dem europäischen und vorderasiatischen Neolithikum*. Archäologische Berichte 6. Bonn: Holos.



- Berthold, B. 2008. Die Totenhütte der Bernburger Kultur von Benzingerode, Ldkr. Harz, in: Berthold, B./Alt, K.W./Bramanti, B./Drings, S./Kranzbühler, J./Meyer, C./Nehlich, O./Richards, M.P. *Die Totenhütte von Benzingerode. Archäologie und Anthropologie*. Archäologie in Sachsen-Anhalt Sonderband 7. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, 17-106.
- Beuker, J. 2005. Import from all quarters. Stone axes in the northern Netherlands, in: L. Kooijmans, L./van den Broeke, P.W./Fokkens, H./van Gijn, A.L. (eds.). *The Prehistory of the Netherlands*. Amsterdam: Amsterdam Univ. Press, 277-80.
- Biehl, P.F. and Gleser, R. 2003. Theorien und Methoden der Stilanalyse, in: Heinz, M./Eggert, M.K.H./Veit, U. (eds.). *Zwischen Erklären und Verstehen? Beiträge zu den erkenntnistheoretischen Grundlagen archäologischer Interpretation*. Tübinger Archäologische Taschenbücher 2. Münster et al.: Waxmann, 149-74.
- Binford, R.L. 1971. Mortuary practices: their study and their potential. *Memoirs of the Society for American Archaeology* 25, 6-29.
- Binford, L.R. 1978. *Nunamiut Ethnoarchaeology*. New York et al.: Academic Press.
- Binford, L.R. 1983. *In pursuit of the past: decoding the archaeological record*. London: Thames and Hudson.
- Binford, L.R. 1989. *Debating Archaeology*. Studies in Archaeology. San Diego: Academic Press.
- Blanton, R. and Fargher, L.F. 2008. *Collective Action in the formation of pre-modern states*. New York: Springer.
- Blanton, R. and Fargher, L.F. 2009. Collective Action in the Evolution of Pre-Modern States. *Social Evolution and History* 8/2, 133-66.
- Blanton, R./Feinman, G.M./Kowalewski, S.A./Peregrine, P.N. 1996. A Dual-Processual Theory for the Evolution of Mesoamerican Civilization. *Current Anthropology* 37/1, 1-14.
- Bloch, M. 1994. *Placing the dead: tombs, ancestral villages, and kinship organization in Madagascar*. 2nd ed. Waveland: Waveland Press.
- Borgerhoff Mulder, M./Fazio, I./Irons, W./McElreath, R.L./Bowles, S./Bell, A./Hertz, T./Hazzah, L. 2010. Pastoralism and Wealth Inequality: Revisiting an Old Question. *Current Anthropology* 51/1, 35-48.
- Bourdieu, P. 1997. *Die verborgenen Mechanismen der Macht*. Schriften zu Politik und Kultur. Hamburg: VSA-Verlag.
- Bowles, S./Smith, E.A./Borgerhoff Mulder, M. 2010. The Emergence and Persistence of Inequality in Premodern Societies. *Current Anthropology* 51/1, 7-17.
- Bradley, R. 1998. *The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe*. London et al.: Routledge.
- Brather, S. 2004. *Ethnische Interpretationen in der frühgeschichtlichen Archäologie*. Reallexikon der Germanischen Altertumskunde. Ergänzungsbände 42. Berlin et al.: de Gruyter.
- Breske, B. 2017. *Untersuchungen zu neolithischen Beilen in Schleswig-Holstein*. MSc. Kiel University.
- Brozio, J.P. 2016. *Megalithanlagen und Siedlungsmuster im trichterbecherzeitlichen Ostholstein*. Frühe Monumentalität und soziale Differenzierung 9. Bonn: Habelt.
- Carballo, D.M. 2013. Cultural and Evolutionary Dynamics of Cooperation in Archaeological Perspective, in: Carballo, D.M. (ed.). *Cooperation and Collective Action. Archaeological perspectives*. Boulder, Colorado: University Press of Colorado, 3-33.
- Carballo, D.M./Roscoe, P./Feinman, G.M. 2014. Cooperation and Collective Action in the Cultural Evolution of Complex Societies. *Journal of Archaeological Method and Theory* 21/1, 98-133.
- Cazzella, A. 2013. Ethnoarchaeology today: actions and actors, in: Lugli, F./Stoppiello, A./Biagetti, S. (eds.). *Ethnoarchaeology: Current Research and Field Methods*. Conference proceedings, Rome, Italy, 13th – 14th May 2010. BAR International Series 2472. Oxford: Archaeopress, 5-8.

- Channa, S.M. 1992a (ed.). *Nagaland. A Contemporary Ethnography*. New Delhi: Cosmo Publication.
- Channa, S.M. 1992b. Introduction, in: Channa, S.M. (ed.). *Nagaland. A Contemporary Ethnography*. New Delhi: Cosmo Publication.
- Chapman, R. 1981. The emergence of formal disposal areas and the “problem” of megalithic tombs in prehistoric Europe, in: Chapman, R./Kinnes, I./Randsborg, K. (eds.). *The archaeology of death*. New Directions in Archaeology. Cambridge et al.: Cambridge University Press, 71-81.
- Chapman, R. 1995. Ten years after – megaliths, mortuary practices, and the territorial model, in: Anderson Beck, L. (ed.). *Regional Approaches to Mortuary Analysis*. New York et al.: Plenum Press, 29-51.
- Chapman, R. 2013. Death, Burial, and Social Representation, in: Tarlow, S. and Nilsson Stutz, L. (eds.). *The Oxford Handbook of the Archaeology of Death and Burial*. Oxford: Oxford University Press, 47-57.
- Clark, J.G.D. 1951. Folk-culture and the study of European prehistory, in: Grimes, W.F. (ed.). *Aspects of Archaeology in Great Britain and Beyond*. London: H.W. Edwards, 49-65.
- Cunningham, J.J. 2014. The Independence of Ethnoarchaeology, in: Chrisomalis, S. and Costopoulos, A. (eds.). *Human Expeditions: Inspired by Bruce Trigger*. Toronto: University of Toronto Press, 51-72.
- Cunningham, J.J. and Maceachern, S. 2016. Ethnoarchaeology as slow science. *World Archaeology* 48/5, 628-41.
- D’Altroy, T.N. and Earle, T.K. 1985. Staple Finance, Wealth Finance, and Storage in the Inka Political Economy. *Current Anthropology* 26/2, 187-206.
- David, N. and Kramer, C. 2001. *Ethnoarchaeology in action*. Cambridge World Archaeology. Cambridge: Cambridge University Press.
- Dibbern, H. 2016. *Das trichterbecherzeitliche Westholstein: eine Studie zur neolithischen Entwicklung von Landschaft und Gesellschaft*. Frühe Monumentalität und soziale Differenzierung 8. Bonn: Habelt.
- Dieball, W. 1971. *Megalith, Pfahlendenkmal und damit verbundene Sitten auf Madagaskar*. PhD. University Cologne.
- Dobres, M.-A. and Robb, J.E. 2014 (eds.). *Agency in archaeology*. London: Routledge.
- Dörfler, W./Feeser, I./van den Boogard, C./Dreibrodt, S./Erlenkeuser, S./Kleinmann, A./Merk, J./Wiethold, J. 2012. A high-quality annually laminated sequence from Lake Belau, northern Germany: revised chronology and its implications for palynological and tephrochronological studies. *Holocene* 22/1, 413-26.
- Dreibrodt, S./Zahrer, J./Bork, H.-R./Brauer, A. 2012. Witterungs- und Umweltgeschichte während der norddeutschen Trichterbecherkultur – rekonstruiert auf Basis mikrofazieller Untersuchungen an jahresgeschichtlichen Seesedimenten, in: Hinz, M./Müller, J. (eds.). *Siedlung, Grabenwerk, Großsteingrab. Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 145-58.
- Duphorn, K. 1995. *Die deutsche Ostseeküste*. Sammlung geologischer Führer 88, 115-44.
- Durkheim, E. 1988. *Über soziale Arbeitsteilung: Studie über die Organisation höherer Gesellschaften*. 2nd ed. Frankfurt/Main: Suhrkamp.
- Earle, T.K./Ling, J./Uhnér, C./Stos-Gale, Z./Melheim, L. 2015. The Political Economy and Metal Trade in Bronze Age Europe: Understanding Regional Variability in Terms of Comparative Advantages and Articulations. *European Journal of Archaeology* 18/4, 633-57.
- Earle, T.K. and Spriggs, M. 2015. Political economy in prehistory: A Marxist approach to Pacific sequences. *Current Anthropology* 56/4, 515-44.
- Ebbesen, K. 1975. *Die jüngere Trichterbecherkultur auf den dänischen Inseln*. Arkaeologiske studier 2. Kopenhagen: Akademisk Forl.

- Ebbesen, K. 1995. Die nordischen Bernsteinhorte der Trichterbecherkultur. *Praehistorische Zeitschrift* 70/1, 32-89.
- Ebersbach, R. and Doppler, T. 2016. Hausinventare prähistorischer Siedlungen: Methodische und quantitative Aspekte, in: Kerig, T./Nowak, K./Roth, G. (eds.). *Alles was zählt... Festschrift für Andreas Zimmermann*. Universitätsforschungen zur Prähistorischen Archäologie 285. Bonn: Habelt, 379-92.
- Eerkens, J.W. 2013. Free-Riding, Cooperation, and Population Growth. The Evolution of Privatization and Leaders in Owens Valley, California, in: Carballo, D.M. (ed.). *Cooperation and Collective Action. Archaeological perspectives*. Colorado: University press of Colorado, 151-74.
- Ekengren, F. 2016. Contextualizing Grave Goods: Theoretical Perspectives and Methodological Implications, in: Tarlow, S. and Nilsson Stutz, L. (eds.). *The Oxford Handbook of the Archaeology of Death and Burial*. Oxford: Oxford University Press, 173-92.
- Endrigkeit, A. 2014. *Älter- und mittelbronzezeitliche Bestattungen zwischen Nordischem Kreis und süddeutscher Hügelgräberkultur: Gesellschaftsstrukturen und kulturhistorische Beziehungen*. Frühe Monumentalität und soziale Differenzierung 6. Bonn: Habelt.
- Erasmus, C.J. 1977. Monument building: some field experiments, in: Ingoll, D./Yellin, J.E./Macdonald, W. (eds.). *Experimental Archaeology*. New York: Columbia University Press, 52-78.
- Evans-Pritchard, E.E. 1955. The Nuer of the Southern Sudan, in: Fortes, M. and Evans-Pritchard, E.E. (eds.). *African Political Systems*. 5th ed. London: Oxford University Press, 272-96.
- Feeser, I./Dörfler, W./Averdieck, F.-R./J. Wiethold, J. 2012. New insights into regional and local land-use and vegetation patterns in eastern Schleswig-Holstein during the Neolithic, in: Müller, J./Hinz, M. (eds.). *Siedlung, Grabenwerk, Großsteingrab: Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 159-90.
- Feinman, G.M. 2000a. Corporate/Network. New Perspectives on Models of Political Action and the Puebloan Southwest, in: M. B. Schiffer, M.B. (ed.). *Social Theory in Archaeology*. Foundations of Archaeological Inquiry. Salt Lake City: University of Utah Press, 31-51.
- Feinman, G.M. 2000b. Dual-Processual Theory and Social Formations in the Southwest, in: Mills, B.J. (ed.). *Alternative leadership strategies in the prehispanic Southwest*. Tucson: University of Arizona Press, 207-29.
- Feinman, G.M. and Nicholas, L.M. 2016. Framing the Rise and Variability of Past Complex Societies, in: Fargher, L.F. and Heredia Espinoza, V.Y. (eds.). *Alternative Pathways to Complexity. A Collection of Essays on Architecture, Economics, Power, and Cross-Cultural Analysis in Honor of Richard E. Blanton*. Boulder: University Press of Colorado, 271-93.
- Fleming, A. 1973. Tombs for the living. *Man* 8/22, 177-93.
- Forssander, J. 1936. Skånsk megalitkeramik och kontinentaleuropeisk stenålder. *Meddelanden från Lunds Universitets Historiska Museum* 1936, 1-77.
- Fortes, M. 1949. *The Web of Kinship among the Tallensi. The Second Part of an Analysis of the Social Structure of a Trans-Volta Tribe*. London: Oxford University Press.
- Forth, G. 1981. *Rindi: an ethnographic study of a traditional domain in Eastern Sumba*. Verhandelingen van het Koninklijk Instituut voor Taal-, Land- en Volkenkunde 93. The Hague: Nijhoff.
- Fox, J.J. 1980. Models and Metaphors, in: Fox, J.J. (ed.). *The Flow of Life. Essays on Eastern Indonesia*. Harvard Studies in Cultural Anthropology 2. Cambridge and London: Harvard University Press, 327-33.
- Fraser, D. 1983. *Land and society in Neolithic Orkney*. Oxford: B.A.R.

- Fried, M.H. 1967. *The evolution of political society: an essay in political anthropology*. Random House studies in anthropology 7. New York: Random House.
- Fritsch, B./Furholt, M./Hinz, M./Lorenz, L./Nelson, H./Schaffner, G./Schiesberg, S./Sjögren, K.-G. 2010. Dichtezentren und lokale Gruppierungen – Eine Karte zu den Großsteingräbern Mittel- und Nordeuropas. *Journal of Neolithic Archaeology* 2010, 1-4.
- von Führer-Haimendorf, C. 1939. The Megalithic Culture of Assam. Appendix 1, in: Schnitger, F.M. (ed.). *Forgotten Kingdoms in Sumatra*. Leiden: Brill, 215-22.
- von Führer-Haimendorf, C. 1946. *The Naked Nagas. Head-hunters of Assam in Peace and War*. Calcutta: Thacker, Spink & Co.
- Furholt, M. 2016. Settlement layout and social organisation in the earliest European Neolithic. *Antiquity* 90/353, 1196-212.
- Furholt, M. and Mischka, M. 2019. The phasing of megalithic construction activities and its implications for the development of social formations in Northern Central Germany, in: Hinz, M./Müller, J./Wunderlich, M. (eds.). *Megaliths - Societies - Landscapes: Early Monumentality and Social Differentiation in Neolithic Europe*. Frühe Monumentalität und soziale Differenzierung 18. Bonn: Habelt, 921-38.
- Gebauer, A.B. 2014. Meanings of monumentalism at Lønt, Denmark, in: Furholt, M./Hinz, M./Mischka, D./Noble, G./Olausson, D. (eds.). *Landscapes, Histories and Societies in the Northern European Neolithic*. Frühe Monumentalität und soziale Differenzierung 4. Bonn: Habelt, 101-12.
- Glørstad, Z.T. and Melheim, L. 2016. Past Mirrors: Thucydides, Sahlins and the Bronze and Viking Ages, in: Melheim, L./Glørstad, H./ Glørstad, Z.T. (eds.). *Comparative perspectives on past colonisation, maritime interaction and cultural integration*. New directions in anthropological archaeology. Sheffield: Equinox Publishing Ltd., 87-108.
- Gosselain, O.P. 2016. To hell with ethnoarchaeology! *Archaeological Dialogues* 23/2, 215-28.
- Gramsch, A. 2000. Braucht Prähistorie Vergleiche?, in: Gramsch, A. (ed.). *Vergleichen als archäologische Methode. Analogien in den Archäologien*. Mit Beiträgen einer Tagung der Arbeitsgemeinschaft Theorie (T-AG) und einer Kommentierten Bibliographie. BAR International Series 825. Oxford: Archaeopress, 151-63.
- Gramsch, A. 2014. Analogie, in: Mölders, D. and Wolfram, S. (eds.). *Schlüsselbegriffe der Prähistorischen Archäologie*. Tübinger Archäologische Taschenbücher 11. Münster and New York: Waxmann, 19-23.
- Grier, C. 2014. Landscape Construction, Ownership and Social Change in the Southern Gulf Islands of British Columbia. *Canadian Journal of Archaeology* 38, 211-49.
- Gunawan, I. 2000. *Hierarchy and Balance. A Study of Wanokaka Social Organization. Monographies in Anthropology*. Canberra: The Australian National University.
- Gurven, M./Borgerhoff Mulder, M./Hooper, P.L./Kaplan, H./Quinlan, R./Sear, R./Schniter, E./von Rueden, C./Bowles, S./Hertz, T./Bell, A. 2010. Domestication Alone Does Not Lead to Inequality: Intergenerational Wealth Transmission among Horticulturalists. *Current Anthropology* 51/11, 49-64.
- Hadevik, C. and Steineke, M. 2009 (eds.). *Tematisk rapportering av Citytunnelprosjektet*. Malmö Museer Arkeologienheten Rapport nr. 48.
- Hage, F. 2016. *Büdeltsdorf/Borgstedt: eine trichterbecherzeitliche Kleinregion*. Frühe Monumentalität und soziale Differenzierung 11. Bonn: Habelt.
- Hahn, H.P. 2010. Gibt es eine "soziale Logik des Raumes"? Zur kritischen Revision eines Strukturparadigmas, in: Trebsche, P./Müller-Scheeßel, N./Reinhold, S. (eds.). *Der gebaute Raum. Bausteine einer Architektursoziologie vormoderner Gesellschaften*. Tübinger Archäologische Taschenbücher 7. Münster/New York/München/Berlin: Waxmann, 107-22.
- Hahn, H.P. 2012. Segmentary Societies as Alternatives to Hierarchical Order: Sustainable Social Structures or Organization of Predatory Violence?, in: Kienlin, T.L./Zim-

- mermann, A. (eds.). *Beyond Elites. Alternatives to Hierarchical Systems in Modelling Social Formations*. Universitätsforschungen zur Prähistorischen Archäologie 215. Bonn: Habelt, 33-40.
- Halbwachs, M. 1941. *La topographie légendaire des Évangiles en Terre Sainte: étude de mémoire collective*. Paris: Presses universitaires de France.
- Halbwachs, M. 1950. *La mémoire collective*. Paris: Presses universitaires de France.
- Hartz, S. and Lübke, H. 2005. Zur chronostratigraphischen Gliederung der Ertebøll und der südlichen Mecklenburger Bucht. *Bodendenkmalpflege in Mecklenburg-Vorpommern* 52, 119-43.
- Hayden, B. 2001. Feasts: A Prolegomenon to the Importance of Feasting, in: Dietler, M. and Hayden, B. (eds.). *Feasts. Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Washington and London: Smithsonian Institute Press, 23-64.
- von Heine-Geldern, R. 1945. Prehistoric research in the Netherland Indies, in: Honig, P. and Verdoon, F. (eds.). *Science and scientists in the Netherland Indies*. New York: Board for the Netherlands Indies, 129-67.
- Heyerdahl, T. 1957. *Aku-Aku: das Geheimnis der Osterinsel*. Berlin: Ullstein.
- Hingst, H. 1959. *Vorgeschichte des Kreises Stormarn*. Die vor- und frühgeschichtlichen Denkmäler und Funde in Schleswig-Holstein 5. Neumünster: Wachholtz.
- Hinz, M. 2007. Territoriale und soziale Strukturen. Modelle zur Kollektivgrabsitte der Wartberg-Gruppe. *Journal of Neolithic Archaeology* 9, 1-18.
- Hinz, M. 2011. Who for whom? Ritual architecture and the related population, in: Furholt, M./Lüth, F./Müller, J. (eds.). *Megaliths and Identities. Early Monuments and Neolithic Societies from the Atlantic to the Baltic*. 3rd European Megalithic Studies Group Meeting [13-15 Mai 2010 Kiel]. Frühe Monumentalität und soziale Differenzierung 1. Bonn: Habelt, 129-42.
- Hinz, M. 2014. *Neolithische Siedlungsstrukturen im südöstlichen Schleswig-Holstein*. Frühe Monumentalität und soziale Differenzierung 3. Bonn: Habelt.
- Hodder, I. 1990. *The Domestication of Europe: Structure and Contingency in Neolithic Societies*. Oxford: Blackwell.
- Hodder, I. 1991. *Reading the Past. Current Approaches to Interpretation in Archaeology*. 2nd ed. Cambridge: Cambridge University Press.
- Hodson, T.C. 1911. *The Naga tribes of Manipur*. London: Macmillan.
- Hofmann, K.P. 2013. Gräber und Totenrituale: Zu aktuellen Theorien und Forschungsansätzen, in: Eggert, M.K.H. and Veit, U. (eds.). *Theorie in der Archäologie: Zur jüngeren Diskussion in Deutschland*. Tübinger Archäologische Taschenbücher. Münster/New York/München/Berlin: Waxmann, 269-98.
- Hofmann, K.P. 2014. Gräberanalyse, in: D. Mölders, D. and Wolfram, S. (eds.). *Schlüsselbegriffe der Prähistorischen Archäologie*. Tübinger Archäologische Taschenbücher 11. Münster/New York: Waxmann, 115-8.
- Högberg, A./Apel, J./Knutsson, K./Olausson, D./Rudebeck, E. 2001. The Spread of Flint Axes and Daggers in Neolithic Scandinavia. *Památky archeologické* XCII/2, 193-221.
- Hoika, J. 1981. Jungsteinzeitliche Siedlungsreste aus Oldenburg-Dannau, Kreis Ostholstein. *Offa* 38, 53-83.
- Hoika, J. 1987. *Das Mittelneolithikum zur Zeit der Trichterbecherkultur in Nordostholstein*. Untersuchungen zur Archäologie und Landschaftsgeschichte. Offa-Bücher 61. Neumünster: Wachholtz.
- Hoika, J. 1994 (ed.). *Beiträge zur frühneolithischen Trichterbecherkultur im westlichen Ostseegebiet / 1*. Internationales Trichterbechersymposium in Schleswig vom 4. bis 7. März 1985. Verein zur Förderung des Archäologischen Landesmuseums e.V. Schleswig. Untersuchungen und Materialien zur Steinzeit in Schleswig-Holstein und im Ostseeraum 1. Neumünster: Wachholtz.
- Hollnagel, A. 1965. Die Großsteingräber von Domsühl, Kreis Parchim. *Bodendenkmalpflege in Mecklenburg* 1965, 55-69.

- Hollnagel, A. 1970. Der "Teufelsbackofen" genannte Dolmen im Forst Everstorf, Kreis Grevesmühlen. *Bodendenkmalpflege in Mecklenburg* 1968, 89-99.
- van der Hoop, A.N.J. 1932. *Megalithic remains in South Sumatra*. Zutphen: Thieme.
- Horam, M. 1977. *Social and Cultural Life of Nagas: The Thangkul Nagas*. New Delhi: B.R. Pub. Corp.
- Hoskins, J. 1986. Hoskins, So my name shall live: Stone-dragging and grave-building in Kodi, West Sumba. *Bijdragen tot de Taal, Land en Volkenkunde* 142/1, 31-51.
- Hoskins, J. 1993. *The Play of Time. Kodi Perspectives on Calendars, History, and Exchange*. Berkely/Los Angeles/London: University of California Press.
- Hoskins, J. 1998. *Biographical Objects. How Things Tell the Stories of People's Lives*. New York and London: Routledge.
- Hughes, R.E./Högberg, A./Olausson, D. 2010. Sourcing flint from Sweden and Denmark. A pilot study employing non-destructive energy dispersive X-ray fluorescence spectrometry. *Journal of Nordic Archaeological Science* 17, 15-25.
- Hurtig, T./Fukarek, F./Stübs, J. 1957. *Physische Geographie von Mecklenburg*. Berlin: VEB Deutscher Verlag der Wissenschaften.
- Hutton, J.H. 1921a. *The Sema Nagas*. London: Macmillan.
- Hutton, J.H. 1921b. *The Angami Nagas: with some notes on neighbouring tribes*. London: Macmillan.
- Hutton, J.H. 1922. The Meaning and Method of the Erection of Monoliths by the Naga Tribes. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 52, 242-9.
- Hutton, J.H. 1965. The Mixed Culture of the Naga Tribes. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland* 95/1, 16-43.
- Hutton, J.H. 1969. *The Angami Nagas. With Some Notes on Neighbouring Tribes*. 2nd ed. Oxford: Oxford University Press.
- Ingold, T. 1993. The temporality of the landscape. *World Archaeology* 25/2, 152-74.
- Jamir, T. 2004. Megaliths of Nagaland: Reflections of Material Milieu and Social Values, in: Momin, M. and Mawlong, C.A. (eds.). *Society and Economy in North-East India*. Volume 1. New Delhi: Regency Publications, 105-17.
- Jamir, T. 2015. Death, Memory and Society: An Ethnoarchaeological Study of Angami Mortuary Practices, in: Basa, K.K./Mohanty, R.K./Ota, S.B. (eds.). *Megalithic Traditions in India*. Archaeology and Ethnography. New Delhi: Aryan Books International, 609-40.
- Jeunesse, C. 2016. A propos des conditions de formation des assemblages osseux archéologiques dans les sociétés pré-littéraires disparues européennes (Néolithique et Protohistoire). Une analyse ethnoarchéologique dans deux sociétés vivantes de l'Asie du Sud-Est. *Journal of Neolithic Archaeology* 18, 115-56.
- Johansen, P.G. 2004. Landscape, Monumental Architecture, and Ritual: A Reconsideration of the South Indian Ashmounds. *Journal of Anthropological Archaeology* 23, 309-30.
- Joshi, V. 2008. Die Naga: eine Einführung, in: Kunz, R. and Joshi, V. (eds.). *Naga. Eine vergessene Bergregion neu entdeckt*. Basel: Merian, 36-49.
- Joussaume, R. 1985. *Des Dolmens pour les Morts. Les mégalithismes à travers le monde*. Paris: Hachette littérature.
- Jung, M. 2010. Keltische Paläste? Eine Diskussionsbemerkung, in: Trebsche, P./Müller-Scheeßel, N./Reinhold, S. (eds.). *Der gebaute Raum. Bausteine einer Architektursoziologie vormoderner Gesellschaften*. Tübinger Archäologische Taschenbücher 7. Münster/New York/München/Berlin: Waxmann, 253-74.
- Karnatz, J. 1987. *Die Vorgeschichte des Kreises Ostholstein, der südliche Teil des Altkreises Oldenburg, die Stein- und Bronzezeit*. PhD. Kiel University.
- Karsten, P. 1994. *Att kasta yxan i sjön: en studie över rituell tradition och förändring utifrån skånska neolitiska offerfynd*. Acta archaeologica Lundensia 23. Stockholm: Almqvist & Wiksell International.

- Keane, W. 1995. Religious Change and Historical Reflection in Anakalang, West Sumba, Indonesia. *Journal of Southeast Asian Studies* 26/2, 289-306.
- Keane, W. 1997. *Signs of Recognition. Powers and Hazards of Representation in an Indonesian Society*. Berkely/Los Angeles/London: University of California Press.
- Keers, W.G. 1938. Indrukken van het megalithische tijdperk van West-Soemba. *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap* 55, 926-31.
- Kerig, T. 2010. Der Faktor Arbeit im Neolithikum: Steinbearbeitung, Feldbestellung, Schwertransport, in: B. L. Karlsruhe (ed.). *Jungsteinzeit im Umbruch: die "Michelsberger Kultur" und Mitteleuropa vor 6000 Jahren*. Katalog zur Ausstellung im Badischen Landesmuseum Schloss Karlsruhe 20.11.2010-15.5.201. Darmstadt: Primus-Verlag, 236-42.
- Kerig, T. 2013. Wirtschaft: Struktur und Leistung in frühen Gesellschaften, in: Eggert, M.K.H. and Veit, U. (eds.). *Theorie in der Archäologie: Zur jüngeren Diskussion in Deutschland*. Tübinger Archäologische Taschenbücher 10. Münster/New York/München/Berlin: Waxmann, 139-90.
- Kersten, K. 1951. *Vorgeschichte des Kreises Herzogtum Lauenburg*. Die vor- und frühgeschichtlichen Denkmäler und Funde in Schleswig-Holstein 2. Neumünster: Wachholtz.
- Kirleis, W. and Fischer, E. 2014. Neolithic cultivation of tetraploid free threshing wheat in Denmark and Northern Germany: implications for crop diversity and societal dynamics of the Funnel Beaker Culture. *Vegetation History and Archaeobotany* 23/1, 81-96.
- Kirleis, W./Müller, J./Kortemeier, C./Behling, H./Soeghondo, S. 2012. The Megalithic Landscape of Central Sulawesi, Indonesia: Combining Archaeological and Palynological Investigations, in: Tjoa-Bonatz, M.L./Reinecke, A./Bonatz, D. (eds.). *Crossing Borders. Selected Papers from the 13th International Conference of the European Association of Southeast Asian Archaeologists*, Volume I. Singapore: NUS Press, 199-217.
- Kjærøum, P. 1969. Jættestuen Jordhøj (The passagegrave Jordhøj). *Kuml* 1969, 9-66.
- Klassen, L. 2000. *Frühes Kupfer im Norden: Untersuchungen zu Chronologie, Herkunft und Bedeutung der Kupferfunde der Nordgruppe der Trichterbecherkultur*. Jysk Arkæologisk Selskabs skrifter 36. Aarhus: Aarhus University Press.
- Klassen, L. 2004. *Untersuchungen zum Neolithisierungsprozess im westlichen Ostseeraum unter besonderer Berücksichtigung der Kulturentwicklung Europas 5500-3500 BC*. Jutland Archaeological Society publications 47. Aarhus: Aarhus University Press.
- Kneisel, J. and Müller, J. 2011. Produktion, Distribution, Konsumption und die Formation sozialer Unterschiede in frühbronzezeitlichen Gesellschaften Mitteleuropas, in: Hansen, S. and Müller, J. (eds.). *Sozialarchäologische Perspektiven: Gesellschaftlicher Wandel 5000-1500 v. Chr. zwischen Atlantik und Kaukasus*. Internationale Tagung 15.-18. Oktober 2007 in Kiel. Archäologie in Eurasien 24. Mainz: von Zabern, 295-324.
- Koch, E. 1998. *Neolithic bog pots from Zealand, Møn, Lolland and Falster*. Nordiske Fortidsminder 16. København: Kongelige Nordiske Oldskriftselskab.
- Kossian, R. 2005. *Nichtmegalithische Grabanlagen der Trichterbecherkultur in Deutschland und den Niederlanden*. Veröffentlichungen des Landesamtes für Denkmalpflege und Archäologie Sachsen-Anhalt – Landesmuseum für Vorgeschichte 58. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, Landesmuseum für Vorgeschichte.
- Kossinna, G. 1910. Der Ursprung der Urfinnen und der Urindogermanen und ihre Ausbreitung nach Osten. *Mannus* 2, 59-108.
- Krause, R./Böhr, E./Guggisberg, M. 2005. Neue Forschungen zum frühkeltischen Fürstentum auf dem Ipf bei Bopfingen, Ostalbkreis (Baden-Württemberg). *Prähistorische Zeitschrift* 80, 190-235.

- Kristiansen, K. 1984. Ideology and material culture: an archaeological perspective, in: Spriggs, M. (ed.). *Marxist perspectives in archaeology*. Cambridge: Cambridge University Press, 72-100.
- Kristiansen, K. and Larsson, T. 2005. *The rise of Bronze Age society: travels, transmissions and transformations*. Cambridge: Cambridge University Press.
- Kruyt, A.C. 1922. De Soembaneezen. *Bijdragen tot de Taal, Land en Volkenkunde van Nederlandsch-Indie* 78, 466-608.
- Kühl, J. 1980. Ein eingetiefter erweiterter Dolmen mit einzelgrabzeitlichen Nachbestattungen bei Ratekau, Kreis Ostholstein. *Die Heimat* 87/10, 310-8.
- Kuipers, J.C. 1990. *Power in Performance. The Creation of Textual Authority in Weyewa Ritual Speech*. Conduct and Communication Series. Philadelphia: University of Pennsylvania Press.
- Kuipers, J.C. 1998. *Language, Identity, and Marginality in Indonesia. The Changing Nature of Ritual Speech on the Island of Sumba*. Studies in the Social and Cultural Foundations of Language 18. Cambridge: Cambridge University Press.
- Kümmel, C. 1998. Marxistische Perspektiven in der gegenwärtigen englischsprachigen Archäologie, in: Eggert, M.K.H. and Veit, U. (eds.). *Theorie in der Archäologie. Zur englischsprachigen Diskussion*. Tübinger Archäologische Taschenbücher 1. Münster/New York/München/Berlin: Waxmann, 115-82.
- Langenheim, K. 1935. *Die Tonware der Riesensteingräber in Schleswig-Holstein*. Veröffentlichungen der Schleswig-Holsteinischen Universitäts-gesellschaft 2. Neumünster: Wachholtz.
- Laporte, L./Bocoum, H./Cros, J.-P./Delvoye, A./Bernard, R./Diallo, M./Diop, M./Kane, A./Dartois, V./Lejay, M./Bertin, F./Quesnel, L. 2012. Megalithic monumentality in Africa: from graves to stone circles at Wanar, Senegal. *Antiquity* 86, 409-27.
- Larsson, M. 1985. *The Early Neolithic Funnel-Beaker Culture in South-west Scania, Sweden. Social and Economic Change 3000 – 2500 B. C.* BAR International Series 264. Oxford: BAR.
- Lee, E.J./Renneberg, R./Harder, M./Krause-Kyora, B./Rinne, C./Müller, J./Nebel, A./Wurmb-Schwark, N.V. 2014. Collective burials among agro-pastoral societies in later Neolithic Germany: perspectives from ancient DNA. *Journal of Archaeological Science* 51, 174-80.
- Lohe, K. 2011. *Naga Village. A Sociological Study*. Guwahati: EBH Publishers.
- Lorenz, L. 2015. *Kommunikationsstrukturen mittelneolithischer Gesellschaften im nordmitteleuropäischen Tiefland*. Frühe Monumentalität und soziale Differenzierung 14. Bonn: Habelt.
- Lüth, P. 2003. Sekundäre Überarbeitung dünnackiger Flintbeile der Trichterbecherkultur im nördlichen Schleswig-Holstein. *Journal of Neolithic Archaeology* 5, 1-11.
- Lutz, J./Pernicka, E./Matuschik, I./Rassmann, K. 1997. Die frühesten Metallfunde in Mecklenburg-Vorpommern im Lichte neuer Metallanalysen. Vom Endmesolithikum bis zur frühen Bronzezeit. *Bodendenkmalpflege in Mecklenburg-Vorpommern* 45, 41-67.
- Lyman, R.L. and O'Brian, M.J. 2001. The Direct Historical Approach, Analogical Reasoning, and Theory in Americanist Archaeology. *Journal of Archaeological Method and Theory* 8, 303-42.
- MacFarlane, A. 2008. Christoph von Fürer-Haimendorfs Naga-Fotografien – eine Einführung, in: Kunz, R. and Joshi, V. (eds.). *Naga: eine vergessene Bergregion neu entdeckt*. Katalog zur Ausstellung im Museum der Kulturen vom 22. August 2008 bis zum 17. Mai 2009, Museum der Kulturen, Basel. Basel: Merian, 24-8.
- MacKie, E. 1977. *The Megalith Builders*. Oxford: Book Club Associates.
- Madsen, A.P. 1896. *Gravhøje og Gravfund fra Stenalderen i Danmark: Det Østlige Danmark*. Kjøbenhavn.



- Madsen, T. 1982. Settlement Systems of Early Agricultural Societies in East Jutland, Denmark: A Regional Study of Change. *Journal of Anthropological Archaeology* 1, 197-236.
- Majumdar, K. 1992. An Angami Village, in: Channa, S.M. (ed.). *Nagaland. A Contemporary Ethnography*. New Delhi: Cosmo Publication, 49-74.
- Malinowski, B. 1922. *Argonauts of the Western Pacific. An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea*. London: Routledge.
- Mao, A.D. 1993. *Nagas, Problem and Politics*. New Delhi: Ashish.
- Marx, K. 1867. *Das Kapital: Kritik der politischen Ökonomie*. Hamburg: Meissner.
- Mathiassen, T. 1944. The Stone Age Settlement at Trelleborg. *Acta Archaeologica* 15, 77-98.
- Mauss, M. 1954. *The gift: forms and functions of exchange in archaic societies*. London: Cohen & West.
- Mawlong, C.A. 2004. Megaliths and Social Formation in Khasi-Jaintia Hills, in: Momin, M. and Mawlong, C.A. (eds.). *Society and Economy in North-east India*. Volume 1. New Delhi: Regency Publications, 35-56.
- McAnany, P.A. and Wells, E.C. 2008 Toward a Theory of Ritual Economy, in: McAnany, P.A. and Wells, E.C. (eds.). *Dimensions of Ritual Economy*. Research in economic anthropology: an annual compilation of research 27. Bingley: Emerald, 1-16.
- Menne, J. 2018. *Keramik aus Megalithgräbern in Nordwestdeutschland. Interaktion und Netzwerke der TRB-Westgruppe*. Frühe Monumentalität und soziale Differenzierung 16. Bonn: Habelt.
- Mennenga, M. 2016. Archäoprognose in Schleswig-Holstein, in: Bock, A. and Mennenga, M. (eds.). *Wasser, Landschaft und Gesellschaft. Studien zum Ressourcenmanagement der Trichterbechergesellschaften*. Frühe Monumentalität und soziale Differenzierung 10. Bonn: Habelt, 117-245.
- Mennenga, M. 2017. *Zwischen Elbe und Ems. Die Siedlungen der Trichterbecherkultur in Nordwestdeutschland*. Frühe Monumentalität und soziale Differenzierung 13. Bonn: Habelt.
- Meurers-Balke, J. 1983. *Siggeneben-Süd: ein Fundplatz der frühen Trichterbecherkultur an der holsteinischen Ostseeküste*. Offa-Bücher 50. Neumünster: Wachholtz.
- Meyer, C./Kranzbühler, J./Drings, S./Bramanti, B./Nehlich, O./Richards, M.P./Alt, K.W. 2008. Die menschlichen Skelettfunde aus der neolithischen Totenhütte Benzingerode, in: Berthold, B./Alt, K.W./Bramanti, B./Drings, S./Kranzbühler, J./Meyer, C./Nehlich, O./Richards, M.P. *Die Totenhütte von Benzingerode. Archäologie und Anthropologie*. Archäologie in Sachsen-Anhalt Sonderband 7. Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, 107-43.
- Meynen, E. and Schmithüsen, S. 1953-1962 (eds.). *Handbuch der naturräumlichen Gliederung Deutschlands*. Bad Godesberg: Bundesanstalt für Landeskunde und Raumforschung.
- Mills, J.P. 1922. *The Lhota Nagas*. London: Macmillan.
- Mills, J.P. 1926. *The Ao Nagas*. London: Macmillan.
- Mills, J.P. 1937. *The Rengma Nagas*. London: Macmillan.
- Mischka, D. 2011. Flintbek LA3, biography of monument, in: Furholt, M./Lüth, F./Müller, J. (eds.). *Megaliths and identities. Early monuments and Neolithic societies from the Atlantic to the Baltic*. Frühe Monumentalität und soziale Differenzierung 1. Bonn: Habelt, 67-94.
- Mischka, D. 2012. Temporality in the monumental landscape of Flintbek, in: Furholt, M./Hinz, M./Mischka, D. (eds.). „As time goes by?“ *Monumentality, Landscapes and the Temporal Perspective*. Proceedings of the international workshop „Socio-Environmental Dynamics over the last 12,000 years: The creation of landscapes II (14th-18th March 2011)“ in Kiel. Universitätsforschungen zur Prähistorischen Archäologie 206. Bonn: Habelt, 133-43.

- Mischka, D. 2014. Flintbek and the absolute chronology of megalithic graves in the Funnel Beaker North Group., in: Furholt, M./Hinz, M./Mischka, D./Noble, G./Olausson, D. (eds.). *Landscapes, Histories and Societies in the Northern European Neolithic*. Frühe Monumentalität und soziale Differenzierung 4. Bonn: Habelt, 125-43.
- Mohen, J.-P. 1989. *Megalithkultur in Europa. Geheimnis der frühen Zivilisationen*. Stuttgart/Zürich: Belser.
- Mölders, D. 2014. Wirtschaftsarchäologie, in: Mölders, D. and Wolfram, S. (eds.). *Schlüsselbegriffe der Prähistorischen Archäologie*. Tübinger Archäologische Taschenbücher 11. Münster/New York: Waxmann, 315-9.
- Müller, J. 1990. Arbeitsleistung und gesellschaftliche Leistung bei Megalithgräbern. Das Fallbeispiel Orkney. *Acta Praehistorica et Archaeologica* 22, 9-35.
- Müller, J. 2001. *Soziochronologische Studien zum Jung- und Spätneolithikum im Mittelb-Saale-Gebiet (4100-2700 V.Chr.)*. Eine sozialhistorische Interpretation prähistorischer Quellen. Vorgeschichtliche Forschungen 21. Rahden/Westfalen: Leidorf.
- Müller, J. 2011a. *Megaliths and funnel beakers: societies in change 4100 – 2700 BC*. Kron-voordracht: gehouden voor de Stichting Nederlands Museum voor Anthropologie en Praehistorie 33. Amsterdam: Stichting Nederlands Museum voor Anthropologie en Praehistorie.
- Müller, J. 2011b. Ritual Cooperation and Ritual Collectivity. The social structure of the middle and younger Funnel Beaker North Group (3500-2800 BC), in: Furholt, M./Lüth, F./Müller, J. (eds.). *Megaliths and Identities. Early Monuments and Neolithic Societies from the Atlantic to the Baltic*. 3rd European Megalithic Studies Group Meeting [13-15 Mai 2010 Kiel]. Frühe Monumentalität und soziale Differenzierung 1. Bonn: Habelt, 273-84.
- Müller, J. 2012. Vom Konzept zum Ergebnis...., in: Hinz, M. and Müller, J. (eds.). *Siedlung, Grabenwerk, Großsteingrab. Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 15-25.
- Müller, J. 2013. Mesolithisch – Neolithisch: Zur Entwicklung von Hütten und Häusern im südlichen Skandinavien und nördlichen Mitteleuropa. *Offa* 69/70, 2012/2013, 249-64.
- Müller, J. 2017. *Großsteingräber – Grabenwerke – Langhügel: frühe Monumentalbauten Mitteleuropas*. Archäologie in Deutschland Sonderheft 11. Darmstadt: Theiss.
- Müller, J./Dibbern, H./Hage, F. 2014. Non-megalithic mounds beneath megaliths: A new perspective on monumentality in North Central Europe, in: Furholt, M./Hinz, M./Mischka, D./Noble, G./Olausson, D. (eds.). *Landscapes, Histories and Societies in the Northern European Neolithic*. Frühe Monumentalität und soziale Differenzierung 4. Bonn: Habelt, 171-82.
- Müller, J. and Staude, K. 2012. Typologien, Vertikalstratigraphien und absolutchronologische Daten: Zur Chronologie des nordwestmecklenburgischen Trichterbecherfundplatzes Triwalk, in: Hinz, M. and Müller, J. (eds.). *Siedlung, Grabenwerk, Großsteingrab: Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 35-59.
- Müller-Scheeßel, N./Hofmann, R./Müller, J./Rassmann, K. 2010. Entwicklung und Struktur des spätneolithischen Tells von Okolište (Bosnien-Herzegowina) unter architektursoziologischen Gesichtspunkten, in: Trebsche, P./Müller-Scheeßel, N./Reinhold, S. (eds.). *Der gebaute Raum: Bausteine einer Architektursoziologie vor-moderner Gesellschaften*. Tübinger Archäologische Taschenbücher 7. Münster/New York/München/Berlin: Waxmann, 171-92.
- Nagel, E. 1991. Zur Chronologie der mecklenburgischen Trichterbecherkultur, in: Jankowska, D. (ed.). *Die Trichterbecherkultur: neue Forschungen und Hypothesen*.

- Material des internationalen Symposiums Dymaczewo, 20-24 September 1982. Poznań, 7-10.
- Nagel, E. and Wechler, K.P. 1992. Eine Siedlung der Trichterbecherkultur bei Gritsow, Kreis Greifswald. *Bodendenkmalpflege in Mecklenburg-Vorpommern* 39, 7-72.
- Nakoinz, O. 2013. *Archäologische Kulturgeographie der ältereisenzeitlichen Zentralorte Südwestdeutschlands*. Universitätsforschungen zur prähistorischen Archäologie 224. Bonn: Habelt.
- Näser, C. 2005. Ethnoarchäologie, Analogiebildung und Nomadismusforschung. Eine Einführung mit einer Fallstudie aus Nordafrika, in: Gertel, J. (ed.). *Methoden als Aspekte der Wissenskonstruktion. Fallstudien zur Nomadismusforschung*. Orientwissenschaftliche Hefte 17. Halle: Orientwiss. Zentrum der Martin-Luther-Univ. Halle-Wittenberg, 17-42.
- Needham, R. 1987. *Mamboru: history and structure in a domain of Northwestern Sumba*. Oxford: Clarendon Press.
- Neugebauer, W. 1968a. Das Megalithgrab von Blankensee, Hansestadt Lübeck, in: R.-G. Z. Mainz (ed.). *Hansestadt Lübeck – Ostholstein – Kiel*. Führer zu vor- und frühgeschichtlichen Denkmälern 10. Darmstadt: Wissenschaftliche Buchgesellschaft, 101-3.
- Neugebauer, W. 1968b. Das Megalithgrab Waldhusen, Gem. Pöppendorf, Hansestadt Lübeck, in: R.-G. Z. Mainz (ed.). *Hansestadt Lübeck – Ostholstein – Kiel*. Führer zu vor- und frühgeschichtlichen Denkmälern 10. Darmstadt: Wissenschaftliche Buchgesellschaft, 128-32.
- Nielsen, P.O. 1977. De tyknakkede flintøkseres kronologi. *Aarbørger* 1977, 5-71.
- Nienu, V. 2015. *Naga Cultural Milieu. An Adaptation to Mountain Ecosystem*. San Francisco: Dorylus Publishing Group.
- Nilius, I. 1971. *Das Neolithikum in Mecklenburg zur Zeit und unter besonderer Berücksichtigung der Trichterbecherkultur*. Beiträge zur Ur- und Frühgeschichte der Bezirke Rostock, Schwerin und Neubrandenburg 5. Schwerin: Museum für Ur- und Frühgeschichte.
- Nilsson Stutz, L. 2015. A Proper Burial. Some Thoughts on Changes in Mortuary Ritual and how Archaeology can begin to understand them, in: Brandt, J.R./Prusac, M./Roland, H. (eds.). *Death and Changing Rituals. Function and Meaning in Ancient Funerary Practices*. Studies in Funerary Archaeology 7. Oxford: Oxbow Books, 1-16.
- Nockemann, G. 2016. Erkelenz-Kückhoven – Eine Siedlung, zwei Gruppen, in: Kerig, T./Nowak, K./Roth, G. (eds.). *Alles was zählt... Festschrift für Andreas Zimmermann*. Universitätsforschungen zur Prähistorischen Archäologie 285. Bonn: Habelt, 93-9.
- Nooteboom, W.O.J. 1940. *Oost-Soemba, een Volkenkundige Studie*. Gravenhage: Nijhoff.
- Onvlee, L. 1938. Over de weergave van 'heilig' in het Soembaasch. *Tijdschrift voor het Indische Taal-, Land en Volkenkunde* 78, 124-36.
- Osborne, J.F. 2014. Monuments and Monumentality, in: Osborne, J.F. (ed.). *Approaching Monumentality in Archaeology*. Albany: State University of New York Press, 1-19.
- Osborne, J.F. 2017. Counter-monumentality and the vulnerability of memory. *Journal of Social Archaeology* 17/2, 163-87.
- Ovung, A. 2012. *Social Stratification in Naga Society – A Study of Lotha Society*. New Delhi: Springer.
- Parker Pearson, M. 2001. *The Archaeology of Death and Burial*. Stroud: Sutton.
- Parker Pearson, M./Godden, K./Ramilisonina/Retsihisatse/Schwenninger, J.-L./Heuretbeze, G./Radimilahy, C./Smith, H. 2010. *Pastoralists, warriors and colonists: the archaeology of southern Madagascar*. BAR International Series 2139. Oxford: Archaeopress.
- Parker Pearson, M. and Ramilisonina 1998. Stonehenge for the ancestors: the stones pass the message. *Antiquity* 72, 308-26.

- Peregrine, P.N. 2004. Cross-Cultural Approaches in Archaeology: Comparative Ethnology, Comparative Archaeology, and Archaeoethnology. *Journal of Archaeological Research* 12/3, 281-309.
- Persson, P. and Sjögren, K.G. 1995. Radiocarbon and the chronology of Scandinavian megalithic graves. *Journal of European Archaeology* 3/2, 59-88.
- Raetzl-Fabian, D. 2000. Calden: *Erdwerk und Bestattungsplätze des Jungneolithikums. Architektur – Ritual – Chronologie*. Universitätsforschungen zur Prähistorischen Archäologie 70. Bonn: Habelt.
- Rao, S.N. 1991. Megalithic Practices among Khasis and Nagas of North-Eastern India, in: Sirgh, J.P. and Sengupta, G. (eds.). *Archaeology of North-Eastern India*. New Delhi: Har-Anand Publ., 106-25.
- Rassmann, K. and Schafferer, G. 2012. Demography, Social Identities, and the Architecture of Megalithic Graves in the South-Western Baltic Area, in: Hinz, M. and Müller, J. (eds.). *Siedlung, Grabenwerk, Großsteingrab: Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 107-20.
- Ratzke, U. and Mohr, H.-J. 2005. *Böden in Mecklenburg-Vorpommern; Abriss ihrer Entstehung, Verbreitung und Nutzung*. Beiträge zum Bodenschutz in Mecklenburg-Vorpommern. 2nd ed. Güstrow: Landesamt für Umwelt, Naturschutz und Geologie Mecklenburg-Vorpommern.
- Regnell, M. and Sjögren, K.-G. 2006a. The investigation area, in: Sjögren, K.-G. (ed.). *Ecology and Economy in Stone Age and Bronze Age Scania*. Skånska spår – arkeologi längs Västkustbanan. Lund: National Heritage Board, 12-9.
- Regnell, M. and Sjögren, K.-G. 2006b. Introduction and development of agriculture, in: Sjögren, K.-G. (ed.). *Ecology and Economy in Stone Age and Bronze Age Scania*. Skånska spår – arkeologi längs Västkustbanan. Lund: National Heritage Board, 106-69.
- Reinhold, S. 2014. Raumkonstruktionen, in: Mölders, D. and Wolfram, S. (eds.). *Schlüsselbegriffe der Prähistorischen Archäologie*. Tübinger Archäologische Taschenbücher 11. Münster/New York: Waxmann, 245-9.
- Renfrew, C. 1973. Monuments, Mobilization and Social Organization in Neolithic Wessex, in: C. Renfrew, C. (ed.). *The Explanation of Culture Change: Models in Prehistory*. Gloucester: Duckworth, 539-58.
- Renfrew, C. 1976. Megaliths, territories and populations, in: de Laet, S.J. (ed.). *Acculturation and continuity in Atlantic Europe mainly during the Neolithic period and the Bronze Age: papers presented at the IV Atlantic Colloquium*. Dissertationes Archaeologicae Gandensis 16. Brugge: De Tempel, 198-220.
- Renfrew, C. 1979. *Investigations in Orkney*. Reports of the Research Committee of the Society of Antiquaries of London 38. London: Thames and Hudson.
- Rennebach, G. 1973. Untersuchungen an Großsteingräbern und Hügelgräbern im Ganzliner Holz, Forstrevier Twietfort, Kreis Lübz. *Bodendenkmalpflege in Mecklenburg* 1973, 121-56.
- van Reybrouck, D. 2000. Beyond ethnoarchaeology? – A critical history on the role of ethnographic analogy in contextual and postprocessual archaeology, in: Gramsch, A. (ed.). *Vergleichen als archäologische Methode. Analogien in den Archäologien*. Mit Beiträgen einer Tagung der Arbeitsgemeinschaft Theorie (T-AG) und einer Kommentierten Bibliographie. BAR International Series 825. Oxford: Archaeopress, 39-52.
- Richter, D.K. 1992. *The Ordeal of the Longhouse: The Peoples of the Iroquois League in the Era of European Colonization*. Virginia: University of North Carolina Press.
- Röder, B. 2012. Beyond elites: Neoevolutionistische Gesellschaftstypologien und Verwandtschaftsforschung als Alternative zur archäologischen Elitenforschung?, in: Kienlin, T.L. and Zimmermann, A. (eds.). *Beyond Elites. Alternatives to Hierarchical*

- Systems in Modelling Social Formations*. Universitätsforschungen zur Prähistorischen Archäologie 215. Bonn: Habelt, 105-24.
- Roscoe, P. 2009. Social Signaling and the Organization of Small-Scale Society: The Case of Contact-Era New Guinea. *Journal of Archaeological Method and Theory* 16, 69-116.
- Roscoe, P. 2013. War, Collective Action, and the “Evolution” of Human Politics., in: Carballo, D.M. (ed.). *Cooperation and Collective Action. Archaeological perspectives*. Colorado: University Press of Colorado, 57-82.
- Rosenstock, E./Masson, A./Zich, B. 2019. Moraines, megaliths and moo: putting the prehistoric tractor to work, in: Hinz, M./Müller, J./Wunderlich, M. (eds.). *Megaliths - Societies - Landscapes: Early Monumentality and Social Differentiation in Neolithic Europe*. Frühe Monumentalität und soziale Differenzierung 18. Bonn: Habelt, 1099-112.
- Rosenswig, R.M. and Burger, R.L. 2012. Considering Early New World Monumentality, in: Burger, R.L. and Rosenswig, R.M (eds.). *Early New World Monumentality*. Gainesville: University Press of Florida, 4-22.
- Rouffaer, G.P. 1937. *Ethnographie van de kleine Soenda Eilanden in Beeld*. 's-Gravenhage: Nijhoff.
- Roux, V. 2007. Ethnoarchaeology: A Non Historical Science of Reference Necessary for Interpreting the Past. *Journal of Archaeological Method and Theory* 14, 153-78.
- Rudebeck, E. 2011. Plats för fester, frön och förfäder. Det tidiga jordbrukets globala kulturhistoria på sydsandinavisk mark, in: Andrén, A. (ed.). *Förmodern globalitet. Essäer om rörelse, möten och fjärran ting under 10 000 år*. Lund: Nordic Academic Press, 45-69.
- Sahlins, M.D. 1961. The Segmentary Lineage: An Organization of Predatory Expansion. *American Anthropologist* 63/2, 322-45.
- Sahlins, M.D. and Service, E.R. 1960 (eds.). *Evolution and culture*. Ann Arbor: University of Michigan Press.
- Saitta, D.J. 1997. Power, Labor, and the Dynamics of Change in Chacoan Political Economy. *American Antiquity* 62/1, 7-26.
- Sarkar, H. 1982. Megalithic Culture of India, in: Kim, B.-M. (ed.). *Megalithic Cultures in Asia*. Hanyang University Monographs 2. Seoul: Hanyang Univ., 127-63.
- Schafferer, G. 2014. Megaliths and landscapes – Grave architecture as spatial manifestations of tradition and social identities in northern Germany, in: Furholt, M./Hinz, M./Mischka, D./Noble, G./Olausson, D. (eds.). *Landscapes, Histories and Societies in the Northern European Neolithic*. Frühe Monumentalität und soziale Differenzierung 4. Bonn: Habelt, 91-100.
- Schäffler, H. 2006. *Begehrte Köpfe. Christoph Fürer-Haimendorfs Feldforschung im Nagaland (Nordostindien) der 30er Jahre*. Wien: Böhlau.
- Schierhold, K. 2011. The Gallery Graves of Hesse and Westphalia: Expressions of different identity(ies)?, in: Furholt, M./Lüth, F./Müller, J. (eds.). *Megaliths and Identities. Early Monuments and Neolithic Societies from the Atlantic to the Baltic*. 3rd European Megalithic Studies Group Meeting 13th – 15th of May 2010 at Kiel University. Frühe Monumentalität und soziale Differenzierung 1. Bonn: Habelt, 177-84.
- Schiesberg, S. 2012. Bevölkerungsdichten und Populationsgrößen in der Trichterbecherzeit, in: Hinz, M. and Müller, J. (eds.). *Siedlung , Grabenwerk, Großsteingrab. Studien zu Gesellschaft, Wirtschaft und Umwelt der Trichterbechergruppen im nördlichen Mitteleuropa*. Frühe Monumentalität und soziale Differenzierung 2. Bonn: Habelt, 121-41.
- Schirren, C.M. 1997. *Studien zur Trichterbecherkultur in Südostholstein*. Universitätsforschungen zur prähistorischen Archäologie 42. Bonn: Habelt.
- Schlichting, E. 1960. *Typische Böden Schleswig-Holsteins*. Schriftenreihe der landwirtschaftlichen Fakultät der Universität Kiel 26. Kiel: Parey.

- Schmütz, K. 2017. *Die Entwicklung zweier Konzepte? Großsteingräber und Grabenwerke bei Haldensleben-Hundisburg*. Frühe Monumentalität und soziale Differenzierung 12. Bonn: Habelt.
- Schnegg, M./Pauli, J./Beer, B./Alber, E. 2010. Verwandtschaft heute: Positionen, Ergebnisse und Forschungsperspektiven, in: Alber, E. (ed.). *Verwandtschaft heute: Positionen, Ergebnisse und Forschungsperspektiven*. Berlin: Reimer, 7-44.
- Schoknecht, U. 1991. *Zislow: Ergebnisse archäologischer Untersuchungen*. Beiträge zur Ur- und Frühgeschichte Mecklenburg-Vorpommerns 25. Schwerin: Archäologisches Landesmuseum Mecklenburg-Vorpommern.
- Schott, R. 1990. Die Macht des Überlieferungswissens in schriftlosen Gesellschaften. *Saeculum* 41, 273-316.
- Schuldt, E. 1967a. Zwei Megalithgräber von Groß Labenz, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 35-52.
- Schuldt, E. 1967b. Die große Kammer von Klein Görnow, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 53-65.
- Schuldt, E. 1969a. Die Untersuchungen von Megalithgräbern an der mittleren Warnow. *Bodendenkmalpflege in Mecklenburg* 1967, 7-16.
- Schuldt, E. 1969b. Ein Hünenbett ohne Kammer von Rothenmoor, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 17-22.
- Schuldt, E. 1969c. Drei Megalithgräber von Mankmoos, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 23-33.
- Schuldt, E. 1970a. Die Dolmengruppe im Nordteil des Everstorfer Forstes bei Barendorf, Kreis Grevesmühlen. *Bodendenkmalpflege in Mecklenburg* 1968, 7-38.
- Schuldt, E. 1970b. Der Urdolmen im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. *Bodendenkmalpflege in Mecklenburg* 1968, 39-44.
- Schuldt, E. 1970c. Ein Ganggrab mit trapezförmiger Einfassung im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. *Bodendenkmalpflege in Mecklenburg* 1968, 49-59.
- Schuldt, E. 1970d. Das große Ganggrab im Everstorfer Forst bei Naschendorf, Kreis Grevesmühlen. *Bodendenkmalpflege in Mecklenburg* 1968, 61-87.
- Schuldt, E. 1972. Die Großsteingräber von Friedrichsruhe, Kreis Parchim. *Bodendenkmalpflege in Mecklenburg* 1972, 7-16.
- Schuldt, E. 1974. Die steinzeitliche Besiedlung im Malchiner See bei Basedow, Kreis Malchin. *Bodendenkmalpflege in Mecklenburg* 1973, 7-65.
- Schulz Paulsson, B. 2010. Scandinavian Models: Radiocarbon dates and the Origin and Spreading of Passage graves in Sweden and Denmark. *Radiocarbon* 52, 1001-17.
- Schwabedissen, H. 1979. Zum Alter der Großsteingräber in Norddeutschland, in: Schirinig, H. (ed.). *Großsteingräber in Niedersachsen*. Veröffentlichungen der urgeschichtlichen Sammlungen des Landesmuseums Hannover. Hildesheim: Lax, 143-60.
- Scott, J.C. 2009. *The Art of Not Being Governed. An Anarchist History of Upland Southeast Asia*. Yale Agrarian Studies Series. New Haven/London: Yale University Press.
- Sema, L. 1986. *Emergence of Nagaland. Socio-economic and political transformation and the future*. New Delhi: Vikas.
- Sengupta, G./Roychoudhury, S./Som, S. 2006 (eds.). *Past and present : ethnoarchaeology in India*. New Delhi: Pragati Publications.
- Shenk, M.K./Borgerhoff Mulder, M./Beise, J./Clark, G./Irons, W./Leonetti, D./Low, B.S./Bowles, S./Hertz, T./Bell, A./Piraino, P. 2010. Intergenerational Wealth Transmission among Agriculturalists: Foundations of Agrarian Inequality. *Current Anthropology* 51/1, 65-83.
- Shimray, R.R. 1986. *Origin and culture of Nagas*. New Delhi: Somsok Publication.
- Sjögren, K.-G. 1986. Kinship, Labor, and Land in Neolithic Southwest Sweden: Social Aspects of Megalithic Graves. *Journal of Anthropological Archaeology* 5, 229-65.

- Sjögren, K.-G. 2011. Megalithic Landscapes in Sweden, in: Hansen, S. and Müller, J. (eds.). *Sozialarchäologische Perspektiven: Gesellschaftlicher Wandel 5000-1500 v. Chr. Zwischen Atlantik und Kaukasus*. Internationale Tagung 15.-18. Oktober 2007 in Kiel. *Archäologie in Eurasien* 24. Mainz: von Zabern, 125-38.
- Sjögren, K.-G./Price, T.D./Ahlström, T. 2009. Megaliths and mobility in south-western Sweden. Investigating relations between a local society and its neighbours using strontium isotopes. *Journal of Anthropological Archaeology* 28, 85-101.
- Skorna, H. 2017. *Der Hortfund von Neuenkirchen, Landkreis Mecklenburgische Seenplatte – Studien zu einer neolithischen Deponierung von Kupferobjekten*. MA. Kiel University.
- Smith, A. 1778. *An Inquiry Into The Nature and Causes Of The Wealth Of Nations*. London: Strahan.
- Smith, E.A./Hill, K./Marlowe, F.W./Nolin, D./Wiessner, P./Gurven, M./Bowles, S./Borgerhoff Mulder, M./Hertz, T./Bell, A. 2010. Wealth Transmission and Inequality among Hunter-Gatherers. *Current Anthropology* 51/1, 19-34.
- Smith, E.A. and Peregrine, P.N. 2012. Approaches To Comparative Analysis in Archaeology, in: Smith, E.A. (ed.). *The comparative archaeology of complex societies*. Cambridge: Cambridge University Press, 4-20.
- Soejono, R.P. 1982. On the Megaliths in Indonesia, in: Kim, B.-M. (ed.). *Megalithic Cultures in Asia*. Hanyang University Monographs 2. Seoul: Hanyang Univ., 73-98.
- Sommer, G. 1967. Der Dolmen von Dabel, Kreis Sternberg. *Bodendenkmalpflege in Mecklenburg* 1967, 105-11.
- Sørensen, L. and Karg, S. 2012. The expansion of agrarian societies towards the North – new evidence for agriculture during the Mesolithic/Neolithic transition in Southern Scandinavia. *Journal of Archaeological Science* 51, 98-114.
- Spielmann, K.A. 2008. Crafting the Sacred: Ritual Places and Paraphernalia in Small-Scale Societies, in: Wells, E.C. and McAnany, P.A. (eds.). *Dimensions of Ritual Economy*. Research in economic anthropology: an annual compilation of research 27. Bingley: Emerald, 37-72.
- Spriggs, M. 2008. Ethnographic parallels and the denial of history. *World Archaeology* 40/4, 538-52.
- Sprockhoff, E. 1938. *Die nordische Megalithkultur. Handbuch der Urgeschichte Deutschlands*. Berlin and Leipzig: de Gruyter.
- Sprockhoff, E. 1954. Kammerlose Hünenbetten im Sachsenwald. *Offa* 13, 1-16.
- Sprockhoff, E. 1965. *Atlas der Megalithgräber Deutschlands. Teil 1: Schleswig-Holstein*. Bonn: Habelt.
- Staecker, J. 2009. Geschlecht, Alter und materielle Kultur. Das Beispiel Birka, in: Brather, S./Geuenich, D./Huth, C. (eds.). *Historia archaeologica. Festschrift für Heiko Steuer zum 70. Geburtstag*. Reallexikon der Germanischen Altertumskunde – Ergänzungsbände 70. Berlin and New York: de Gruyter, 475-500.
- Starna, W.A. 1980. Mohawk Iroquois Populations: a Revision. *Ethnohistory* XXVII, 371-82.
- Staupe, K. 2011. *Lineares Grubenwerk und Siedlungsplatz Triwalk, Landkreis Nordwestmecklenburg: Zur Chronologie der Trichterbecherkultur in Mecklenburg-Vorpommern*. PhD. Kiel University.
- Steffens, J. 2009. *Die neolithischen Fundplätze von Rastorf, Kreis Plön: eine Fallstudie zur Trichterbecherkultur im nördlichen Mitteleuropa am Beispiel eines Siedlungsraumes*. Universitätsforschungen zur prähistorischen Archäologie 170. Bonn: Habelt.
- Stonor, C.R. 1950. The Feasts of Merit among the Northern Sangtam Tribe of Assam. *Anthropos* 45, 1-12.
- Strömberg, M. 1968. *Der Dolmen Trollasten in St. Köpinge, Schonen*. Acta archaeologica Lundensia 7. Bonn: Habelt.

- Strömberg, M. 1971. *Die Megalithgräber von Hagestad: zur Problematik von Grabbauten und Grabriten*. Acta archaeologica Lundensia 9. Bonn: Habelt.
- Sukendar, H. 1985. The Living Megalithic Tradition in Eastern Indonesia. *Bulletin of the Indo-Pacific Prehistory Association* 6, 55-63.
- Thong, J.S. 2012. *Head-Hunters Culture. Historic Culture of Nagas*. New Delhi: Mittal Publications.
- Tilley, C. 1996. *An ethnography of the Neolithic. Early prehistoric societies in southern Scandinavia*. New Studies in Archaeology. Cambridge: Cambridge University Press.
- Tilley, C. 1999. *The Dolmens and Passage Graves of Sweden. An Introduction and Guide*. London: University College London.
- Trebsche, P. 2010. Architektursoziologie und Prähistorische Archäologie: Methodische Überlegungen und Aussagepotenzial, in: Trebsche, P./Müller-Scheeßel, N./Reinhold, S. (eds.). *Der gebaute Raum. Bausteine einer Architektursoziologie vor-moderner Gesellschaften*. Tübinger Archäologische Taschenbücher 7. Münster/New York/München/Berlin: Waxmann, 143-70.
- Trigger, B.G. 1990. Monumental Architecture: A Thermodynamic Explanation of Symbolic Behaviour. *World Archaeology* 22/2, 119-32.
- Veit, U. 2005. Kulturelles Gedächtnis und materielle Kultur in schriftlosen Gesellschaften: Anthropologische Grundlagen und Perspektiven für die Urgeschichtsforschung, in: Kienlin, T.L. (ed.). *Die Dinge als Zeichen: Kulturelles Wissen und materielle Kultur*. Universitätsforschungen zur Prähistorischen Archäologie 127. Bonn: Habelt, 23-40.
- Vel, J.A.C. 1994. *The Uma-economy: indigenous economics and development in Lawonda, Sumba (Eastern Indonesia)*. PhD. University Wageningen.
- Vel, J.A.C. 2008. *Uma Politics. An ethnography of democratization in West Sumba, Indonesia, 1986-2006*. Verhandelingen van het Koninklijk Instituut voor Taal-, Land- en Volkenkunde 260. Leiden: KITLV Press.
- Venuh, N. 2014. *People, Heritage and Oral History of the Nagas*. Guwahati: Papyrus.
- White, L.A. 1959. *The evolution of culture: the development of civilization to the fall of Rome*. New York: McGraw-Hill.
- Wiessner, P. 1984. Reconsidering the Behavioral Basis for Style: A Case Study among the Kalahari San. *Journal of Anthropological Archaeology* 3, 190-234.
- Wiethold, J. 1998. *Studien zur jüngeren postglazialen Vegetations- und Siedlungsgeschichte im östlichen Schleswig-Holstein*. Universitätsforschungen zur Prähistorischen Archäologie 45. Bonn: Habelt.
- Winther, J. 1935. *Troldebjerg. En bymæssig bebyggelse fra Danmarks yngre stenalder*. Rudkøbing: Eget.
- Winther, J. 1943. *Blandebjerg: fyldekalk imellem Troldebjerg og Lindø; landscænkning paa Sydlangeland i og efter jættestuetid*. Rudkøbing: Eget.
- Wunderlich, M. 2014. Der Denghoog LA 85 Wenningstedt auf Sylt im Kontext der trichterbecherzeitlichen Gesellschaft auf den Nordfriesischen Inseln, in: Wunderlich, M./Koch, J.K./Dieck, P.. *Denghoog, Großseibstadt, Rastorf: Studien zu neolithischen Gräbern und Häusern*. Frühe Monumentalität und soziale Differenzierung 5. Bonn: Habelt, 9-158.
- Wylie, A. 1985. The reaction against analogy. *Advances in Archaeological Method and Theory* 8, 63-111.
- Yalman, N. 2005. Ethnoarchaeology, analogy, and problems, in: Takaoglu, T. (ed.). *Ethnoarchaeological investigations in rural Anatolia*. Volume 2. Istanbul: Ege Yayınları, 15-26.



**Appendix:  
photos of the ethnoarchaeological  
field work**



1



2



3

Photographs taken in the village Tarung, Waikabubak (Sumba)  
1. The northern part of the twin-village of Tarung (photo: J. Müller)  
2. The *Marapu*-hut at the central ritual area in Tarung (photo: J. Müller)  
3. The border area between Tarung and its twin-village (photo: M. Wunderlich)



1



2



3

- Photographs taken in the village Pasunga, Anakalang (Sumba)
1. An almost unfinished lower part of a dolmen (photo: J. Müller)
  2. An almost finished capstone in a quarry area near Pasunga (photo: J. Müller)
  3. View on a part of the quarry area near Pasunga (photo: J. Müller)



1



2



3

Photographs taken in the village Wainyapu, Kodi (Sumba)

1. Megalithic tombs in front of houses in Wainyapu (photo: K. Rassmann)
2. A deteriorating house in Wainyapu (photo: K. Rassmann)
3. Mandibles of pigs displayed at a house in Wainyapu (photo: K. Rassmann)



1



2



3

Photographs taken in the village Toda, Kodi (Sumba)

1. The *Marapu*-hut and the ritual area in Toda (photo: K. Rassmann)
2. The tombs and houses surrounding the ritual area in Toda (photo: K. Rassmann)
3. Some of the houses in the eastern part of Toda (photo: K. Rassmann)



1



2

Photographs taken in the village Uma Bara, Eastern Sumba (Sumba)  
1.-2. Impressions of the typical landscape nearby Uma Bara (photos: J. Müller)



1



2



3

Photographs taken in the Angami-village Khonoma, Nagaland

1. Careful burning of one of the smaller garden fields (photo: M. Wunderlich)
2. The landscape surrounding Khonoma (photo: M. Wunderlich)
3. Overview of the terraced fields used for wet-rice cultivation (photo: M. Wunderlich)



1



2



3

Photographs taken in the Chakhesang-village Khezhakeno, Nagaland  
1. A traditional house in Khezhakeno (photo: M. Wunderlich)  
2. A monument nearby the village area of Khezhakeno (photo: K. Rassmann)  
3. Standing stone along the foot paths leading towards the terrace fields (photo: K. Rassmann)





1



2



3

Photographs taken in the Chakhesang-village Mesülumi, Nagaland

1. Standing stones at the foots paths north of Mesülumi (photo: M. Wunderlich)
2. The terrace fields north of Mesülumi (photo: M. Wunderlich)
3. Fires in connection with shifting cultivation at Mesülumi (photo: M. Wunderlich)



1



2



3

Photographs taken in the Chakhesang-village Rüzazho, Nagaland

1. Rüzazho and its surrounding seen from the south (photo: M. Wunderlich)

2. The central part of Rüzazho (photo: M. Wunderlich)

3. Standing stones within the village area of Rüzazho (photo: M. Wunderlich)



1



2



3

Photographs taken in the Chakhesang-village Rüzazho, Nagaland

1. A sitting platform in the northern terrace fields of Rüzazho (photo: M. Wunderlich)
2. Standing stones at the foots paths leading to the terrace fields (photo: M. Wunderlich)
3. Some terrace fields and the surrounding mountains of Rüzazho (photo: M. Wunderlich)



1



2



3

Photographs taken in the Chakhesang-village Zhavame, Nagaland

1. Overview of Zhavame (photo: M. Wunderlich)

2. The village area of Zhavame seen from the north (photo: M. Wunderlich)

3. A sitting platform in Zhavame (photo: K. Rassmann)



1



2

- Photographs taken in the Chakhesang-village Zhavame, Nagaland
1. Standing stones at the foots paths east of Zhavame (photo: M. Wunderlich)
  2. Fires in connection with shifting cultivation and terrace fields at Zhavame (photo: M. Wunderlich)



1



2



3

Photographs taken in the Chakhesang-village Zhavame, Nagaland  
1. A traditional house in Zhavame (photo: M. Wunderlich)  
2. The decoration of a house front in Zhavame (photo: M. Wunderlich)  
3. Detail of carvings at a house front in Zhavame (photo: K. Rassmann)



# MEGALITHIC MONUMENTS AND SOCIAL STRUCTURES

## Comparative studies on recent and Funnel Beaker societies

Megalith building constitutes not only a past, but also a recent phenomenon, which is still practised today. The documentation and interpretation of recent megalith building traditions is offering potential aid in the interpretation of prehistoric monuments. Fieldwork in Sumba and Nagaland set up a frame to answer questions such as: Who is buried in the megalithic tombs and what kind of commemoration is connected to megalithic monuments? How are socioeconomic characteristics of the associated households and societies reflected in the megaliths?

*Megalithic monuments and social structures* includes various archaeological and ethnoarchaeological case studies on social implications of megalith building activities from a comparative perspective. The case studies presented include recent megalith building traditions in Sumba, Indonesia, Nagaland, North-East India, as well as Neolithic Funnel Beaker communities in today's Northern Germany and Southern Sweden.

This book presents a rich body of new data. By taking into account recent examples of megalithic construction, knowledge on important and influential ways of acting within societal contexts was expanded, whereby above all decentralised and communally-designed mechanisms are important. The case studies presented here clearly demonstrate the importance of cooperative and competitive structures and their effect on feasting activities and megalith building. Additionally, megalithic monuments represent a way of expressing and materialising economic inequality and social prestige. These mechanism and aspects also represent interpretations regarding Funnel Baker societies, which can supplement the existing ideas of megalithic construction in Neolithic Northern Europe.



**sidestone**press

ISBN: 978-90-8890-786-9

