

# 40 Perspectives on Urban Sustainability from around the Globe

## Compilation of Country Replies



*Editors:*

Thando Tilmann  
Tamar Sarkisġian

Thando Tilmann | Tamar Sarkissian (Eds.)

# **40 Perspectives on Urban Sustainability from around the Globe**

Compilation of Country Replies

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from around the Globe**  
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A SMUS Publication  
2023, Berlin, Germany

With contributions from the 40 scholars who took part in the  
“Developing a Ph.D. Proposal” GCSMUS program (SMUS Action 3  
Step 1) at the Technische Universität Berlin from September 2020  
through February 2021

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A DAAD Exceed Project at Technische Universität Berlin  
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Department of Sociology (IfS)  
Department of Urban and Regional Planning (ISR)  
Fraunhoferstraße 33–36 | Secr. FH 9-1 | D-10587 Berlin  
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(BMZ).



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individual contributors. GCSMUS assumes no liability or responsibility for  
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# Foreword

This book comprises 40 short texts by urban sustainability junior researchers from around the globe. The researchers were recipients of a six-month research stay grant from the Global Center of Spatial Methods for Urban Sustainability (SMUS), a DAAD Exceed centre funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

Further information on the SMUS global network and its partners can be found on our website: see [gcsmus.org](http://gcsmus.org).

Each SMUS partner was invited to nominate a researcher from their home country to participate in the centre's 'Developing a PhD Proposal' programme from September 2020 through February 2021. During this time, the researchers were given time to work on their PhD proposals. They also participated in an academic mentoring programme, and took classes in research ethics and skills, spatial methods, and topics and themes on urban sustainability that focussed on Sustainable Development Goal #11, 'making cities and human settlements inclusive, safe, resilient and sustainable'. The researchers were also given the opportunity to participate in and self-organise thematically relevant workshops and excursions.

As a part of their coursework, the students were tasked with writing short texts about how the urban sustainability topics covered manifest themselves in their respective cities. They were invited to submit their best country reply for an SMUS publication at the end of the program. This book is a compilation of those country replies. I hope that it will give you, the reader, a glimpse into urban sustainability perspectives from around the globe.

I want to thank all 40 junior researchers for their contributions to this publication. Moreover, I would also like to express my gratitude to the project co-editor Tamar Sarkissian and tutors Tilla Ruth Martina Reuscher, Paula Schmidt-Faber, and Naledi Tilmann.



**Thando Tilmann**  
Scientific Coordinator at SMUS

Technische Universität Berlin  
Global Center of Spatial Methods for  
Urban Sustainability (SMUS)

## About the Maps

The map on pages 12-13 provides an overview of the SDG 11 targets addressed in the classes and the geographic locations represented in the country replies. The subheadings under the targets, which have been divided into weeks, corresponding to the 6-month research stay of the 40 junior researchers, delve into the specific topics and themes covered under a particular target. The numbers below each week take you to specific country replies that are representative of a certain city. The geographic locations of the country replies are colour-coded according to the week numbers of the 6-months long research stay.

In line with the global nature of the network, in which South-South cooperation lies at the heart of our key objectives with more than 50 partners based in the Global South, we chose the Equal Area map projection, which accurately represents the relative size of the continents.

The maps on the subsequent pages zoom into specific geographic locations. The same scale is used for all six zoomed-in maps, meaning that the areas represented on the different maps are shown proportionally to their true size. The focus on specific geographic locations is intended to guide the reader based on their interests and to highlight the diversity of topics and themes researchers are working on in the SMUS network.

In the digital interactive version of this publication, the reader can use the maps and their legends to jump to the country replies and visit the authors' short biographies on the SMUS website.



# GERMANY EXPERIENCE



EXCURSION  
PHÖNIX-WEST,  
DORTMUND, GERMANY  
Photo - Sarkissian, Tamar



EXCURSION  
POTSDAM, GERMANY  
Photo - Million, Angela



KICK OFF EVENT  
TEMPELHOF AIRPORT,  
BERLIN, GERMANY  
Photo - Sander, Christian







































SMUS AT FUTURIUM  
BERLIN, GERMANY  
Photo - Tilmann, Thando



WORKSHOP  
TECHNISCHE UNIVERSITÄT BERLIN,  
BERLIN, GERMANY  
Photo - Klug, Hannah



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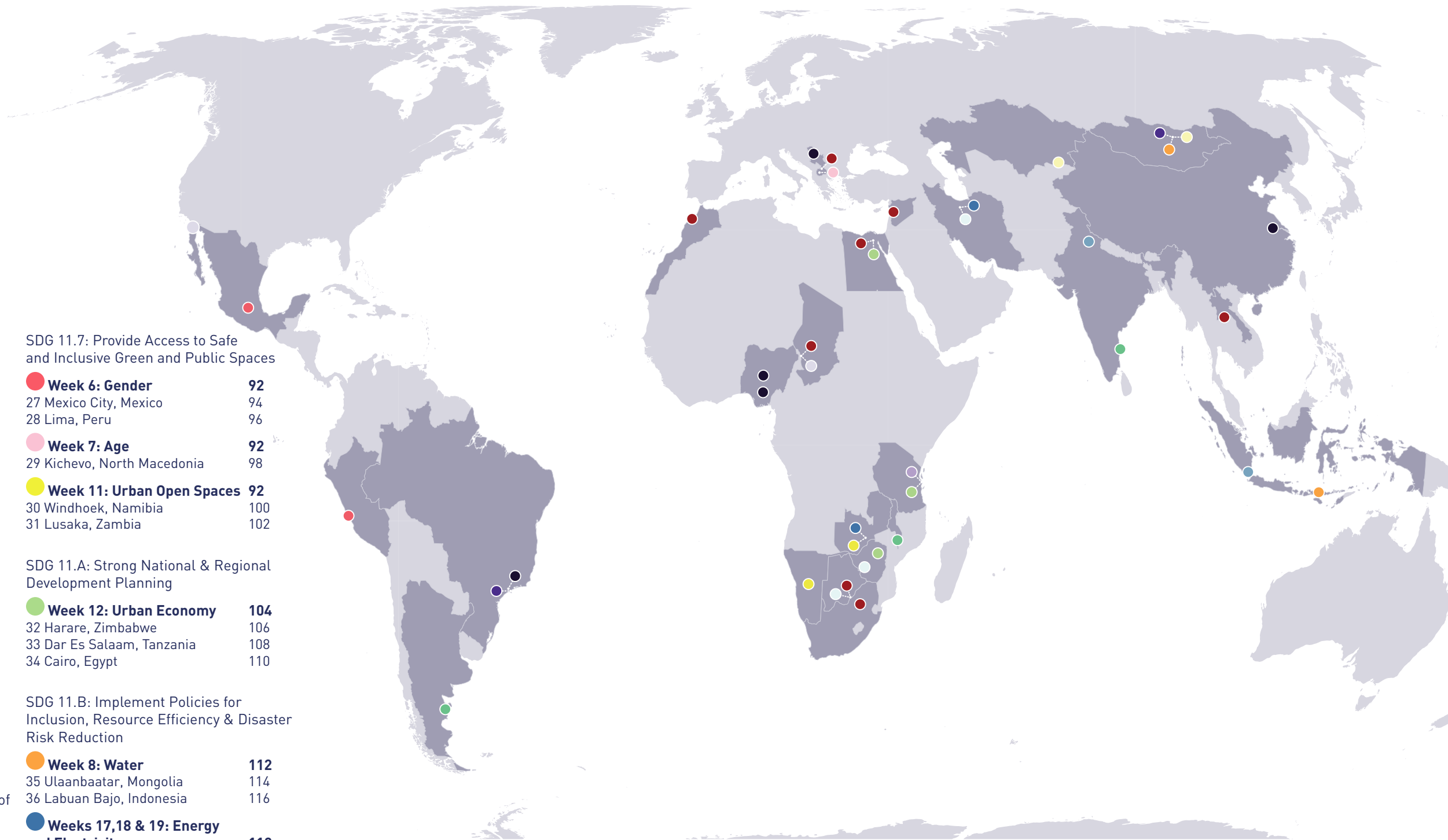
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## Weeks 20 & 21: Waste & Wastewater

25 Flores Lugo, Italia Pamela / Ensenada, Mexico



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## Week 6: Gender

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7 De Sousa, Mitchell / Trelew, Argentina

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## Week 24: Housing

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- 16 Nourredine, Hajar / Casablanca, Morocco
- 17 Odon, Masra / N'Djamena, Chad
- 20 Soliman, Samaher M. / Cairo, Egypt

## Week 7: Age

- 29 Avramoska, Sanja / Kichevo, North Macedonia

## Week 9: Education

- 40 Dyussenova, Dana / Almaty, Kazakhstan

## Week 12: Urban Economy

- 34 Riad, Ayman Hany / Cairo, Egypt

## Week 15: Internet & Digitalization

- 10 Nourani Sadoddin, Mohammad / Tehran, Iran

## Weeks 17,18 & 19: Energy & Electricity

- 38 Niazkhani, Samaneh / Tehran, Iran

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- 26 Rolland, Mainroal Ngargoto / N'Djamena, Chad

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- 3 Radić, Mina / Belgrade, Serbia
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- 31 Kafwamba, David / Lusaka, Zambia

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- 33 Moronda, Ernest Blendire / Dar Es Salaam, Tanzania

## Weeks 13 & 14: Urban Transport & Mobility

- 8 Kasowanjete, Bester Aubrey / Blantyre, Malawi

## Week 15: Internet & Digitalization

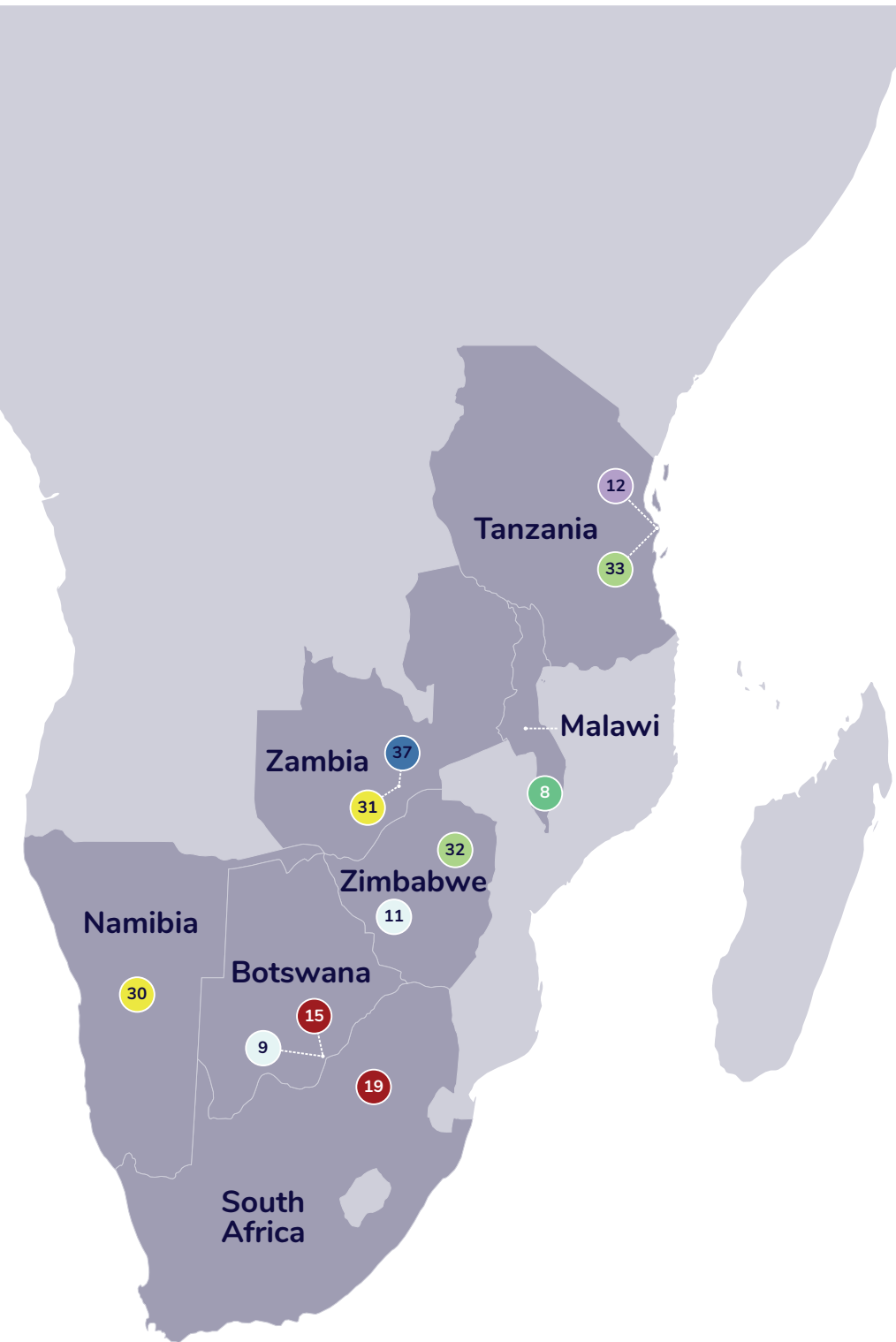
- 9 Motshwari, Khumo / Gaborone, Botswana
- 11 Sithole, Nicole Elsie Nonhlanhla / Bulawayo, Zimbabwe

## Weeks 17,18 & 19: Energy & Electricity

- 37 Kabaghe, Wiza / Lusaka, Zambia

## Week 22: Health

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# Focus: East Asia

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## Week 9: Education

39 Altankhuyag, Battsetseg / Ulaanbaatar, Mongolia

## Week 23: Disasters

23 Erdene, Nomundari / Ulaanbaatar, Mongolia

## Week 24: Housing

2 Cheng, Kexin / Nanjing, China



# Focus: South & South-East Asia

## Week 2: Race & Ethnicity

18 Phakhounthong, Khannaphaphone / Vientiane, Laos

## Week 8: Water

36 Talan, John Petrus / Labuan Bajo, Indonesia

## Weeks 13 & 14: Urban Transport & Mobility

6 Bhattacharjee, Upasana / Chennai, India

## Week 16: Religion & Culture

21 Fitra, Helmia Adita / Bandar Lampung, Indonesia

22 Iram / Roorkee, India

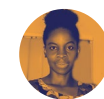




## SDG 11, TARGET 11.1: SAFE & AFFORDABLE HOUSING

### COUNTRY REPLY WEEK 24 HOUSING

*Discuss the transformation of housing over time in your local context, focusing on one aspect (policy, design, delivery, supply and demand, finance, etc.).*



**ANDY, NKEMJIKA NORA**

**Enugu City, Nigeria**



**CHENG, KEXIN**

**Nanjing, China**



**RADIĆ, MINA**

**Belgrade, Serbia**



**REIS, CAIO MORAES**

**São Paulo, Brazil**



**YAHAYA, ZEKERI**

**Abuja, Nigeria**

# 01 Andy, Nkemjika Nora Enugu City, Nigeria



## Housing Design and Delivery in Enugu, Nigeria: Moving Forward in History

Housing is one of the basic requirements for general livelihood. In every society, the interpretation of housing goes beyond a structure that serves as a place of shelter to a system that provides comfort, security, safety, improved well-being, productivity, and a sense of identity. This interpretation is usually reflected in the way houses have been designed and constructed over time. Enugu, like several other parts of Nigeria and the world at large, has experienced the transformation of housing typology as seen in the design, use of materials, and construction techniques.

One of the measures of optimal livelihood and even wealth at a cultural level to date has been home ownership; and historically in Enugu, when a person began earning money or was ready to settle down with a family, the next project would be to build a home. The typical traditional house was usually characterised by a single-level structure with a simple rectangular plan,

and the construction team usually consisted of the homeowner and relatives or community members, there-

by fostering kinship and a sense of identity. The building materials were locally sourced and consisted of tempered red earth/mud for the walls and floors and thatch from palm trees for the roof and doors. Timber (from oil palms, bamboo, and Iroko trees) was used for structural frames, doors, and windows. British colonialism and westernisation introduced the ‘modernisation’ of housing typologies: the gradual integration—and now monopoly—of concrete and metal in design and construction; first the roofs changed from thatch to asbestos, to the now popular aluminium and zinc; mud brick walls were replaced by the more ‘elite’ concrete; and typical residential buildings rose from single floors to multi-storeyed buildings.

Today, with modernisation, increased urbanisation, migration, and inflation, housing has become more industrialised and less personalised, and quite expensive. Commercial residences have taken over the housing market, and prices are determined by private developers. The most popular housing typology for commercial residences in Enugu city is the apartment building, usually consisting of two to four storeys of rentable flats, ranging from studio apartments (self-contained), to three-bedroom flats. The building usually does not exceed four storeys as the landlord wants to build as many floors as possible without having to include an elevator. This industrialisation and privatisation of housing design and delivery has resulted in a higher rate of exclusion

The Modern Traditional House (house of mud and zinc – the house was built with mud bricks, but the roof was replaced with zinc roofing). Picture taken in Amuife, a village in Enugu Ezike, Enugu, Nigeria.

Andy, Nkemjika Nora  
// 2020



at sociocultural and economic levels. Most residents live in rented flats until they have the financial means to buy or build their own homes, but according to statistics, only 26.95 % can afford the cheapest built house in Nigeria (EIU 2019). This in itself reduces housing satisfaction as rented flats generally do not promote a sense of identity.

Recently, research on affordable housing has begun to explore alternatives to concrete, leading to the reintroduction of historical building materials such as thatch, mud, bamboo, and timber. One such material is the compressed earth block (CEB), an improvement on the mud bricks previously used in traditional houses (Ugo-

chukwu and Chioma 2015). However, these historically significant materials, though potentially capable of reducing construction costs due to their local availability, are now regarded by society as primitive and therefore have no competing power in the market. There is a need for the government to provide incentives for the mass production of locally available building materials, and there is also a need for sociocultural reorientation in order for society to embrace these materials as the new normal in housing design and delivery in Nigeria.

## SDG 11.1 OVERVIEW

### References:

\* EIU (The Economist Intelligence Unit). 2019. “Nigeria: Annual Income Profile for Rural and Urban Households.” *Global Income Database*.

\* Ugochukwu, Iwuagwu Ben, and M. Iwuagwu Ben Chioma. 2015. “Local

*Building Materials: Affordable Strategy for Housing the Urban Poor in Nigeria.* *Procedia Engineering* 118 (2015): 42–49. doi: <https://doi.org/10.1016/j.proeng.2015.08.402>



## 02 Cheng, Kexin Nanjing, China



### From Public Housing to Renovating Old Residential Communities

After the market-oriented housing reform started in 1979, the real-estate boom has led to a lack of affordable housing in China. To control potential social instability, the Chinese government has established a series of programs—including the National Comfortable Housing Project from 1995 to 1998, the Economic and Comfortable Housing (ECH) program in 1998, and Public Rental Housing (PRH) in 2009—to provide housing for low-income to low-middle-income groups. In this process, local governments are required to collect large funds for public housing (Cai, Tsai, and Wu 2017, 1). After the tax reform in 1994, the sale of land became a major source of revenue for local governments. To avoid losing

high-priced land in the city centre, public housing was built in the outskirts (Ma, Li, and Zhang 2018, 41). Because of the delayed construction of public facilities and urban infrastructure, residents in these mass public housing districts often complain about the location.

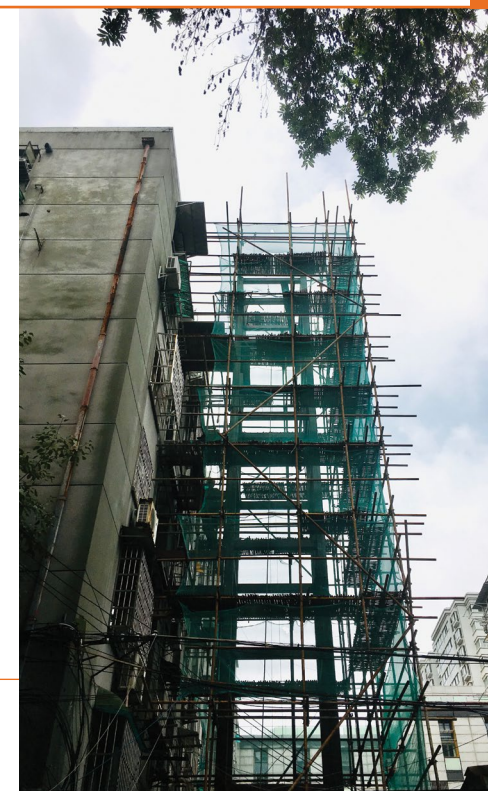
From 2010, several Chinese metropolises, including Beijing and Shanghai, started pilot projects to renovate old housing complexes. And from 2021 to 2025 (the 14th Five-Year Plan),

renovating old housing complexes will be an important project for economic development and urban renewal (Office of the State Council 2019). Nanjing started renovating old residential buildings in 2016, and 200,000 families have already benefited from this since 2019.

The process of renovating old communities is now in a phase of shifting from top-down policies to bottom-up policies. In existing renovation projects for old districts, the pre-renovation resident participation mechanism is led by community party organisations, which carry out various forms of grassroots consultation, take the initiative to understand residents' demands, promote the formation of a consensus among residents and mobilise them to actively participate in the formulation of renovation plans, cooperate with construction companies, participate in supervision and follow-up management, and evaluate and give feedback on the effectiveness of the district renovation.

However, there is insufficient investment from the market and the residential sector. The reason for the lack of investment from the market is that the profitability model is unclear and the residents are more interested in achieving a short-term return on capital and a balance between income and expenditure (Tang 2020). The limited financial subsidies available for renovation dictate that the diverse needs of residents are difficult to meet in full, requiring a trade-off

**From 2010, several Chinese metropolises, including Beijing and Shanghai, started pilot projects to renovate old housing complexes.**



Lift being added to a residential apartment in Nanjing, China.  
Cheng, Kexin // 2018

between multiple renovation projects (Liang and Li 2016, 23). Another key challenge is the difficulty of reconciling the diverse interests of residents. Residents support or oppose specific renovation projects depending on how they affect their own lives, making it difficult to move forward with renovation work. For example, ground-floor residents are often reluctant to install lifts because, on the one hand, they do not need to use the lifts and, on the other hand, the installation of lifts has a negative impact on the quality of ground-floor housing in terms of light and ventilation. Another example is that the installation of additional parking garages affects the neighbouring residents, and residents

without cars want more green space rather than sacrificing greenery for parking facilities.

### SDG 11.1 OVERVIEW

#### References:

- \* Cai, Xiang, Chün-Chang Tsai, and Wei-Ning Wu. 2017. "Are They Neck and Neck in the Affordable Housing Policies? A Cross Case Comparison of Three Metropolitan Cities in China." *Sustainability* 9 (4): 542. doi: <https://doi.org/10.3390/su9040542>
- \* Liang, Chuanzhi, and Chao Li. 2016. "Key Practices and Reflections on Comprehensive Renovation of Old Residential Communities in Beijing (北京市老旧小区综合改造主要做法与思考)." *Construction Science and Technology (建设科技)*, no. 09: 20–23.
- \* Ma, Zuopeng, Chenggu Li, and Jing Zhang. 2018. "Affordable Housing Brings about Socio-Spatial Exclusion in Changchun, China: Explanation in Various Economic Motivations of Local Governments." *Habitat International* 76 (June): 40–47. doi: <https://doi.org/10.1016/j.habitatint.2018.05.003>
- \* Office of the State Council. 2019. "Guiding Opinions of the General Office of the State Council on Comprehensively Promoting the Renovation of Older Urban Areas (国务院办公厅关于全面推进城镇老旧小区改造工作的指导意见)." [http://www.gov.cn/zhengce/content/2020-07/20/content\\_5528320.htm](http://www.gov.cn/zhengce/content/2020-07/20/content_5528320.htm)
- \* Tang, Yan. 2020. "Funding Challenges of Old Residential Communities Renovation and the Creation of a Diverse Capital Participation Path (老旧小区改造的资金挑战与多元资本参与路径创建)." *北京规划建设*, no. 06: 79–82.

## 03 Radić, Mina Belgrade, Serbia



A well-known fact about buildings is that they consume 40 % of the total energy supply (ASE 2013). When it comes to buildings in Serbia, their annual energy consumption is 220 kWh/m<sup>2</sup>, while the European average energy consumption is 60 kWh/m<sup>2</sup> (Nikolić, Skerlić, and Radulović 2017). Unlike these countries, Serbia delayed implementing concrete measures towards improving energy efficiency in buildings.

The first step towards changes was the Law on Construction and Planning from 2009 ('RS Official Gazette' no. 72/09, 81/09 correction, 64/10-US and 24/11). After a new law was passed in 2011, a rulebook was developed on the energy efficiency of buildings in 2012 ('RS Official Gazette' no. 61/2011) in addition to a rulebook on the conditions, content, and manner of awarding certificates for the energy performance of buildings ('RS Official Gazette', no. 69/2012). The last step was taken in 2014 when the Central Registry of Energy Passports was established. This law has primarily imposed the development of a typology for residential buildings, their classification, and the analysis of their energy performances, with an aim to suggest measures of improvement.

**... improving the energy performance of existing buildings is much more urgent.**

Research results related to building typologies have proven that different

construction periods are a very important aspect in defining different housing types. Buildings from the second half of the 20th century 'show distinct features with respect to the regional, geographical, or climatic conditions; there are also typological and morphological distinctions between urban and rural areas, etc.' (Jovanovic Popovic et al. 2012, 22). After the destruction caused by the Second World War, there was a huge need for mass construction of new housing. '[T]he local distinction has weakened, the traditional construction systems, materials and techniques have been abandoned to the prevalence of the uniform, ready-made approach. Thus, it can be concluded that since the 1970s there has been almost identical manifestation of residential architecture in nearly all parts of Serbia' (Jovanovic Popovic et al. 2012, 22). Most of the identified buildings were constructed without permits and proper documentation. Therefore, when it comes to energy efficiency, buildings do not meet the standards (Jovanovic Popovic et al. 2012). According to Jovanovic Popovic et al. (2013), most of the identified buildings belong to a range of energy consumption classes from D to G, which are considered the worst on the scale from A+ (the lowest energy consumption) to G (the highest energy consumption). As a measure to improve the existing conditions of facilities, National Brochures were made based on a typology from the Atlas of Family Housing in Serbia. For all of the identified buildings, two levels of possibilities were suggested for

improving energy performance by defining strict construction measures, using energy passports as a tool of comparison. The first is the standard level, where the building can improve energy performance by at least one energy class. The second is the improved level, which sets out to achieve a minimum energy class of C.

While the law from 2011 requires minimum standard C energy class for new facilities, improving the energy performance of existing buildings is much more urgent. In the case of renovations, the facility category must improve by one class compared to the current condition. Despite the practical suggestions based on in-depth

Housing in the Zlatibor mountain region in western Serbia from the middle of the 19th century (facilities are part of the open-air museum 'Old Village Sirogojno').

Radić, Mina // 2020



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## 04 Reis, Caio Moraes São Paulo, Brazil



The city of São Paulo is nowadays deeply marked by what is called the ‘periphery’. Geographically, the term refers to the city’s urban outskirts, marked by irregular occupations of urban land, precarious self-constructions, and a lack of public equipment and urban infrastructure such as public lighting, garbage collection, health posts, hospitals, bus terminals, subway stations, schools, parks, etc. (Kowarick 2000, 22).

Sociologically, these characteristics reveal an ‘antiurban occupation of urban land’ (Martins 2008, 50), a way of inhabiting and living that is, at the same time, a denial and a product of the pathological urbanisation that has marked the city of São Paulo especially since the 1960s (Martins 2008, 50; Kowarick 2000, 22).

**It is in this context that social problems such as homelessness and the constitution of poor neighbourhoods emerged in the city’s geographic peripheries.**

To understand how this ‘periphery’ has been constituted, however, it is necessary to look at a broader context of accelerating economic, technological, and political transformations in Brazil. With the progressive replacement of slave labour by immigrant labour, especially European labour, the regime of labour known as ‘settlement’ [‘colonoato’] was established in the rural areas (Martins 1997, 60–69). This regime was characterised by the cultivation

of land by peasants who did not own it but could exploit it for their subsistence once they delivered part of their production to the landowner (Martins 1997, 69–70).

From the 1960s on, this regime began to change, largely due to the mechanisation of the field, which brought with it the proletarianization of the rural worker. This process of modernization created poor population surpluses that progressively moved to the large urban centres of the southeast, especially São Paulo (Martins 1997, 71–73). By that time, the city was experiencing great industrial progress. However, it was unable to absorb all the population surplus that arrived from the rural areas. It is in this context that social problems such as homelessness and the constitution of poor neighbourhoods emerged in the city’s geographic peripheries.

These regions are characterised to this day by irregular occupations of urban land, precarious self-constructions, and a lack of public facilities and urban infrastructure. Marked by the denial to the populations living there of the promises inherent to the urban world (Kowarick 2000, 22; Martins 2008, 50), the peripheries of São Paulo have an important sociological component: the way people live there is not restricted to the geographical regions normally referred to as such in urban studies. Even the geographic centre of the city, due to the land income that guides real-estate spec-



Two kids in Brasilândia, a peripheral neighborhood of São Paulo, Brazil.  
Queiroz, Tiago // 2007

ulation, is marked by the antiurban occupation of urban land. The promise of urbanisation—the possibility of a better, more comfortable life—does not come true. The ‘democratic management of the city’ seems more and more distant (Martins 2008, 62).

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## 05 Yahaya, Zekeri Abuja, Nigeria



### The Transformation of Housing Delivery in Abuja, Nigeria

Rapid urbanisation and poor housing delivery have become a dilemma in Nigeria. Recent data indicated that Nigerian towns and cities have grown phenomenally, with an urban growth rate consistently above 2 % per annum (UNDESA 2019). When properly structured, the rapid urbanisation in Nigeria can create a pathway out of poverty for millions of citizens and can serve as an avenue for socio-political and economic growth. However, rising social inequality and poverty within cities in the country have posed a challenge to development progress and remain a concern for housing delivery.

Housing is of central importance to the quality of life as it fulfils a basic human need for shelter. Hence, access to housing is viewed as a funda-

mental human right and introduced in new urban development programs as a strategy to tackle the exclusion of the urban poor from the city (Olotuah and Taiwo 2013). In Nigeria, there is a deficit of 17 million housing units in the country's urban centres (Geissler, Österreicher, and Macharm 2018). In most Nigerian cities, including Abu-

ja, the urban poor live in overcrowded housing, often in poor self-made structures in spatially excluded ghetto settings, in shelters that are degrading to human dignity (Olotuah and Taiwo 2013).

Poor housing delivery in Abuja has posed a challenge to the vision of and the commitment to building an inclusive capital city for all Nigerians, which was why the government moved its capital from Lagos to Abuja in 1991. This problem has resulted in the rise of slums. It suffices to say that Abuja was conceived as a slum-free city: a city in which the urban poor are seen as superfluous by the modern neoliberal governments, where neither government agencies nor the urban elites seek engagements with surplus humanity. A slum-free city is, as Roy (2014) would argue, a problematising activity in which the government of poverty seeks to act upon a population that is surplus to humanity. It is important to note that the Abuja Master Plan follows an exclusionary model that reserves land for housing for high- and middle-income groups and other uses, with no earmarking for economically weaker segments and low-income groups (Adama 2020). This deficiency in urban policy and planning make slums the inevitable outcome. Consequently, most of the residents who cannot access housing in the formal settlements have informally self-developed their houses in slum settlements. This 'illegal' settlement development trend has been met with demolition and forced evic-

tion by the government (Carl LeVan and Olubowale 2014). However, the government policy of demolition and forced eviction seems to be counter-productive as existing slum settings are expanding and new ones are springing up.

To promote affordable housing delivery, the government came up with a Mass Housing Scheme policy and encouraged real-estate developers to participate under the Public-Private-Partnership arrangement by allocating land to the developers, among other incentives. The real-estate developers are to invest in low-cost housing units affordable to all categories of residents. The Mass Housing Scheme's fundamental aim was to make housing prices affordable for the low-class groups and curb the growth of slum settlements. However, the Mass Housing Scheme has been bedevilled by many challenges, such as corruption, poor implemen-

tation, and unaffordability (Adama 2020). Therefore, the search for sustainable solutions for housing delivery continues in Abuja: a city that seems to be segregated, where affluence and abject poverty live in close proximity, and where the official policy is that of the government of poverty.

**Abuja was conceived as a slum-free city: a city in which the urban poor are seen as superfluous by the modern neoliberal governments, where neither government agencies nor the urban elites seek engagements with surplus humanity.**

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## SDG 11, TARGET 11.2 AFFORDABLE & SUSTAINABLE TRANSPORT SYSTEMS

### COUNTRY REPLY WEEKS 13 & 14 URBAN TRANSPORT & MOBILITY

*What do you think about the following SDG Target 11.2 and its Indicator 11.2.1: proportion of population that has convenient access to public transport, by sex, age, and persons with disabilities? Is it useful for measuring progress in your city, and how would one operationalise this measurement?*



**BHATTACHARJEE, UPASANA**

**Chennai, India**



**DE SOUSA, MITCHELL**

**Trelew, Argentina**



**KASOWANJETE, BESTER AUBREY**

**Blantyre, Malawi**

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Cropped and Recoloured

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## 06 Bhattacharjee, Upasana Chennai, India



SDG 11.2 is a noble goal to have in mind, but, at least in India, it is highly improbable by 2030. If we tackle the goal step by step, 'safe' is far-fetched. Public transport and decisions about commuting entail a constant process of negotiation for women, queer, and trans communities (Phadke, Khan, and Ranade 2011). Ensuring that transport is safe goes beyond legal reforms or introducing monitoring/surveillance measures: it is enormously dependent on cultural change. This does not refer just to the hope that potential perpetrators (most often men) will, at some point in the future, understand consent, but rather cultural change also refers to patriarchal and regressive customs and structures that restrain women's mobility, thus making the process of commuting a risk.

Public transport, while quite cheap across India, has more intricacies to it. For instance, Chennai is a city with a well-connected public transport system with buses and local trains, although the bus routes are better suited for connecting the working-class population often living in the outskirts/peri-urban areas. In 2018, the state decided to introduce metro rail services in the city, which are AC trains

that sometimes run underground. While the metro is a comfortable and quick mode of transportation, it is significantly more expensive for the working class. Thus, even within a public transport system that is widely considered to be affordable and eco-friendly, we need to assess who it is serving with its prices and its routes.

We are decades away from accessible public transport. Public transport does not have ramps and it is often designed in a way that is difficult to access for the elderly (for instance, bus footboards are too high). There is very little space for pedestrians and cycling is basically an extreme sport in any metro city in India. Sustainable cities require a multi-layered approach: reducing dependence on private vehicles such as cars and cabs (which are status symbols in India), ensuring better public transport connectivity, switching to battery-based transport, and encouraging walking and cycling.

Implicit within these goals is a more fundamental question: Who are (the possibilities of) mobilities designed for? Doreen Massey compels us to go beyond questions of class while understanding mobility and focus on the several dimensions of someone's social position in order to understand mobility. At the crux of her argument is the question of 'whether our relative mobility and power over mobility and communication entrenches the spatial imprisonment of other groups' (Massey 1993, 64). Transport

**With livelihoods rooted in the streets, mobility is not merely a means of or mode for connectivity and movement, but also has the potential to (re)produce relationships and even inequalities.**

Street vendors in  
Chennai, India.  
- CC BY 2.0 // 2011

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on page 130



systems are often conceived with a 'neutral' user in mind, who inevitably turns out to be an urban, able-bodied, middle class, cis-het man. In order to design for people from vulnerable or marginalised segments, arguably in the majority, consisting of intersecting sets of women, elderly, children, the differently abled, working class, rural, trans and queer communities, we need to be perceptive of needs and problems specific to them. As such, the indicator for measuring these goals is a fair way of understanding the progress made.

A fascinating instance of these negotiations is evident in the Pondy Bazaar located in T Nagar, Chennai; the pedestrian spaces in Pondy Bazaar (which is the central location in Chennai) were occupied by street vendors and traders, selling a range of things from food to trinkets and jewellery. Under the smart city project intended to beautify the locality and increase space, these streets and pedestrian spaces were cleared out and the vendors were moved to a 'pedestrian plaza', a building for their shops. Reactions to this have been mixed: while

people acknowledge that there's more space in the region, some complain that the building is not an adequate way of knowing about all the shops and prices, therefore reducing the choices available (Adlakha 2019; Ramakrishnan 2019). Interestingly, the newspaper articles covering this managed to give a lot of space to the customers in a predominantly upper caste and upper-class locality, while speaking relatively less about the vendors' reactions to it.

While discussing the state of street vending in Lusaka, Zambia, Karen Tranberg Hansen explains that street vending is not so much about economic logic but 'personal livelihood' (Tranberg Hansen 2004, 73). Street vending, as such, is not a process of the market but an economic practice that is embedded in the socio-cultural relations of households (Tranberg Hansen 2004, 74). With livelihoods rooted in the streets, mobility is not merely a means of or mode for connectivity and movement, but also has the potential to (re)produce relationships and even inequalities.

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## 07 De Sousa, Mitchell Trelew, Argentina



Roads shape cities; (Marshall 2000) therefore, part of the right to the city is the ability of all urban sectors of society to access anywhere that they want freely (Ascher 2001). The network of transportation infrastructures configures the city's growth and development (Trubka et al. 2010), spreading people's possibilities to live in less dense areas and create new mobility patterns. In this sense, mobility is understood here as all the social and human practices undertaken by the population to reproduce their movements using already existing means (Sheller 2018).

In this contradiction, the market-oriented use of transportation is evident. This can still be seen in the series of disciplines related to transport engineering that hardly understand the real dynamics of the people who rely on them (Schwanen 2017). The SDG target described above is essentially a policy by which the state and local municipalities should guarantee their citizens an equitable distribution of the right to

mobility. While the Global North and especially Europe seem to be knowledgeable about and involved in cities' urban plans, there are a wide range of complexities in the Global South (Uteng and Lucas 2018).

As for the city of Trelew, transportation planning de-

signed for the public is mostly based on the flows of the city's (supposedly) already existing productive movements. The destinations are the financial clusters or city centres, and residential areas are the origin. What makes certain areas of the city more expensive than others are the different levels of accessibility (Wegener and Furst 2004; Mansilla Quiñones 2017; Litman 2021). Public transportation infrastructure—mostly based on buses, both regionally and locally—is concentrated in the city centre, the city's most expensive area. While the wealthiest segment of the population lives in the outskirts, since they have the necessary means and road infrastructure to get to their workplace, the public infrastructure does not account for the city's assets.

In contrast, public transportation is very well covered around the city. It is used by most of the middle class and even the lower classes to reproduce their economic activities in the city centre. However, several other mobilities are situated simultaneously in other parts of the city that the planned infrastructure does not cover (De Sousa 2018). Consequently, these populations either creatively build their economic network on the margins of their exclusion or find alternative strategies that suit their dynamics. In addition, the informal economy is heterogeneous and stands out from the city's formal structure. Thus, the complexity of the movements around that economy makes it incompatible with the standard design of transportation planning flows (Gutiérrez and Pereyra 2019).

Elsa, a vendor from the informal market of INTA in Trelew, Argentina. She rides her bikes every day from her home to the marketplace to sell different cosmetic products. She attaches her cargo to the rear wheel. Despite having a lot of trouble riding her bike from her house to the marketplace, she does not have any other choice.

De Sousa, Mitchell // 2019



Speaking of the informal economy in Trelew, some of these populations' immobility and structural segregation have led them to create their own economic reproduction spaces. These spaces are the informal markets, located in proximity to the poorest neighbourhoods of the city. Even if public transportation is near them, it is still challenging for other lower-class citizens throughout the city to access them. Therefore, some of them have to rely on alternative strategies to access these places.

In Trelew, I have detected alternative mobility patterns: sharing mobility and

extensions of vehicles as stands for the marketplaces. Vendors and buyers from these marketplaces ask a neighbour who has a car to help take them to the marketplace in exchange for economic compensation. The other alternative is to use a different means of transportation, such as bicycles, which vendors use as a stand at the markets as an extension of their economic reproduction (De Sousa 2020).

Some actors even question public transportation since most vehicles lack the flexibility to reach the markets. Their design is not suited for moving the oversized loads they need to bring to the marketplaces to succeed with their economic activity. In summary, public transportation might shape the mobility patterns of the population. However, acknowledging why people move around cities complicates the discussion about all the alternative paths taken by the community to access cities. Therefore, the public should be aware of some of these practices in order to participate in the debate on formalising certain practices, such as recognising a more social use for private vehicles.

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# 08 Kasowanjete, Bester Aubrey Blantyre, Malawi



Transportation is loosely defined as the movement of people, goods, and services from one point to another (Iles 2005). There are several types of transportation such as passenger and freight transport (Rodrigue 2006). Passenger transport can also be subdivided into formal and informal, among other sub-categories. It is apparent that SDG 11 and the associated targets are mainly concerned with public passenger transport.

To appreciate the extent to which SDG 11 is relevant within the Malawian context, it would be worthwhile to understand and appreciate the context within which the passenger transport system operates. The provision of passenger transport services in Malawi can be conceptualised in two phases. These can be loosely coined the 'before 1995' and the 'after 1995' phases. In 1995, upon instructions from the World Bank and International Monetary Fund under the infamous Structural Adjustment Program, the government of Malawi privatised its passenger transport system (Government of Malawi 2016). The government's only remaining role in this new era was that of regulating the activities of the private operators of passenger transport, although the government's performance in this regard has not been impressive.

**The bus fare for the same route can vary significantly on the same day depending on demand and the time of day, like peak or off-peak hours.**

The urban and rural passenger transport system in this new era is dominated by relatively cheap, reconditioned, and Japanese-made mini-buses (Cervero 2000; Iles 2005). The carrying capacity of these vehicles ranges from 8 to 16 people including the driver and conductor (see picture). These vehicles are owned and operated by a multitude of private passenger transport operators. This has resulted in stiff competition among operators for passengers. This type of transportation is usually called informal passenger transport in most academic discourses (Cervero 2000; Iles 2005).

Other fundamental characteristics of this type of public or passenger transport are outlined below (Government of Malawi 2016). Firstly, the vehicles are rarely serviced or maintained, with the aim of reducing running costs while maximising profits. This tendency has repercussions on the safety of trips. Secondly, the issue of overloading passengers is common practice, and again this is influenced by the need to maximise profits. One of the consequences of this is that trip comfortability is heavily compromised. Furthermore, this system operates without any sort of timetable; therefore, connecting from one route to another in the same city is always chaotic and nightmarish. The bus fare system is not subsidised and very unstable. The bus fare for the same route can vary significantly on the same day depending on demand and the time of day, like peak or off-peak hours.

had a carrying capacity ranging from 30 to 60 passengers per vehicle. The factors stated above play a big role when it comes to issues regarding equal access to public passenger transport services and road safety (UN-Habitat 2013). Therefore, SDG target 11.2 and its indicator 11.2.1 are relevant and applicable in the cities of Malawi. This target could be operationalised if the government were to reverse its policy direction of abdicating its core duties to the private sector, which is profit oriented. A plausible route that could be taken by the state would be to venture into win-win partnerships with the private sector (UN-Habitat 2013).



Mini-bus operating on the streets of Blantyre, Malawi.

Kasowanjete, Chisomo David // 2020

In a nutshell, during the 'before 1995' period, the situation was somehow different in a number of ways (Government of Malawi 2016). The common passenger transport infrastructures were well managed and maintained by the government. The bus fare system used to be heavily subsidised by the government to the extent that making profits was not the sole motivation for running the service. The most commonly used mode of public transport were the conventional buses, which

had a carrying capacity ranging from 30 to 60 passengers per vehicle. The factors stated above play a big role when it comes to issues regarding equal access to public passenger transport services and road safety (UN-Habitat 2013). Therefore, SDG target 11.2 and its indicator 11.2.1 are relevant and applicable in the cities of Malawi. This target could be operationalised if the government were to reverse its policy direction of abdicating its core duties to the private sector, which is profit oriented. A plausible route that could be taken by the state would be to venture into win-win partnerships with the private sector (UN-Habitat 2013).

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## SDG 11, TARGET 11.3 INCLUSIVE & SUSTAINABLE URBANIZATION

### COUNTRY REPLY WEEK 15 INTERNET & DIGITALISATION

*How could internet and digitalisation shape urban frames? Address from one angle, e.g. work, infrastructure, participation, etc.*



**MOTSHWARI, KHUMO**

**Gaborone, Botswana**



**NOURANI SADODDIN, MOHAMMAD**

**Tehran, Iran**



**SITHOLE, NICOLE ELSIE NONHLANHLA**

**Bulawayo, Zimbabwe**

### COUNTRY REPLY WEEK 22 HEALTH

*In your view, what are the most salient health-related issues in physical urban space in your city or neighbourhood?*



**SHEMAGHEMBE, EMMANUEL EMMANUEL**

**Dar Es Salaam, Tanzania**

## 09 Motshwari, Khumo Gaborone, Botswana



In recent years, Botswana has experienced increased Internet access and participation (Batane 2013). The government of Botswana has always committed itself to improving the lives of the people by providing a technology infrastructure in the country so as to increase access to and participation in the Internet and digitalisation among different sectors of the population (Batane 2013). For example, ICT curriculum was introduced in schools, and the procurement of Internet and computers for all the schools was ensured. All these efforts to some extent have increased knowledge about the Internet and digitalisation, as reflected in the Internet usage statistics below.

The number of Internet users has risen sharply in recent years largely due to lower prices and because the prices for connectivity have fallen dramatically (Lancaster 2020). For example, in 2017, there were 48,901 fixed-rate Internet subscriptions, while there were 1,532,954 mobile Internet subscriptions (Statistics Botswana 2018). These statistics reflect that people are using the Internet in high numbers, even more so since the last Botswana housing population census of 2011 calculated Botswana's population at 2,024,787 (Esselaar and Sebusang 2013). However, these statistics on mobile Internet usage are misleading because generally people in the city have a tendency to own more than one SIM card in order to benefit from all the Internet specials offered by various networks. Therefore, these numbers include individuals with multiple SIM cards. Also, these statistics do not provide an in-depth account of which age bracket uses the Internet the most and which regions use these services the most. These statistics do not necessarily reflect the truth because there are a lot of problems in terms of Internet and digitalisation participation.

Just recently, Internet access and participation problems in Botswana were illustrated during the COVID-19 pandemic, particularly between March and June 2020 when the country was put on lockdown. Some schools, especially in the capital city Gaborone, came up with initiatives to introduce online learning platforms during this period so that teaching could continue. However, the plan to conduct online learning during the lockdown failed as some students did not have digital devices, such as laptops or desktop computers, or Internet access. Some students used their parents' cell phones to connect to the zoom sessions, while others did not turn up for classes at all, and still others experienced unstable Internet connections. Makwati (2020) lamented that during this time, students struggled to keep up with the demands of modern education brought about by the COVID-19 pandemic.

power to work, the lack of electricity is a hindrance to the diffusion of ICTs (Sebusang and Masupe 2003). There are still some households in the capital city without a power connection, or, in some instances, there are regular power outages due to maintenance.

Internet access and participation in Botswana pose a problem as shown in the examples above. However, efforts by the government of Botswana are recognisable, and we hope that the situation will continue to get better as the country is spending many billions of pula on information technologies every year, and now the country is preparing for the transition to 5G.

**... the plan to conduct online learning during the lockdown failed as some students did not have digital devices, such as laptops or desktop computers, or Internet access.**

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An example of a cheap phone that does not connect to the Internet; some people use this kind of phone.  
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on page 130

Private institutions, such as banks and mobile phone companies, have introduced applications that enable their customers to perform transactions either on their phones or online; however, citizens still opt to stand in long queues to perform basic transactions (CIPESA 2019). Usually, these companies offer training on their online services, but people still do not turn up to learn except for young people. So it can be concluded that people are not confident with their level of digital literacy. Other arguments are that Internet is expensive for some people in the city, and in some cases where people are able to connect, the Internet is slow or unstable. Also, since the Internet and digitalisation need

power to work, the lack of electricity is a hindrance to the diffusion of ICTs (Sebusang and Masupe 2003). There are still some households in the capital city without a power connection, or, in some instances, there are regular power outages due to maintenance.

Internet access and participation in Botswana pose a problem as shown in the examples above. However, efforts by the government of Botswana are recognisable, and we hope that the situation will continue to get better as the country is spending many billions of pula on information technologies every year, and now the country is preparing for the transition to 5G.

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# 10 Nourani Sadoddin, Mohammad Tehran, Iran



Digitalisation in Iran has evolved in a very complex and multifaceted way over the last 15 years. Iranian Internet users have been excluded or banned from many online options. However, most of the population has access to new digital technologies and is very active in the virtual world. Persian is reported to be the 5th most used content language on the web (before German and French), mostly written by Iranians (W3Techs 2021). In 2019, 11 % of all available jobs in Iran were electronic and digital ones (Abolmasoum et al. 2019). Since the spread of the coronavirus, more than 12 million students have been using a new digital platform called 'Shad' (Ismaeili 2020). Now, their education depends on having access to a smartphone and a fast connection. There are more than 120 million active SIM cards in Iran, which is 144 % of the total population (CRA 2020a). A report in 2016 estimated that 69 % of Iranians have smartphones, and 6 out of every 10 Iranians use a social network (ISPA 2017).

**With the rise of new digital tools and online social networks, Iranians have found countless opportunities to raise their voices and share decisions.**

Even though many famous online networks and platforms (e.g., Twitter, Facebook, YouTube, etc.) are banned or restricted in Iran (MacLellan 2018), Iranian users are becoming tech-savvy to access these platforms. This situation has shaped a particular Internet culture

and digital behaviour among Iranian users. They are very eager to interact and communicate using new digital solutions. In a country with 83 million people, 24 million use Instagram (Davis 2019), and about 50 million have an account in an interactive messaging application called Telegram (Iqbal 2021).

In recent years, Iranians have tested many online solutions to shape communities, take part in decision-making processes, and start creative initiatives. Some communities are shaped much faster in crisis conditions. For example, after the 2017 Iran–Iraq earthquake, some celebrities could raise a significant amount of aid money using online platforms. Many people could connect and gather in small groups to build temporary shelters. Similar activities happened after the 2018 flood.

In the capital city, Tehran, the Internet has become an inseparable part of everyday life. In the first three months of 2020, more than 2.5 million fixed DSL lines (CRA 2020b, 62) and 14 million mobile data services were in use (CRA 2020b, 68). Compared to Tehran's total population, about 9 million people were concentrated in 3 million households in 2018 (FAVA 2019); it is clear that most of the citizens use the Internet and mobile data. Online interactions and transactions have been increasing tremendously in this virtual megacity. Online platforms provide many services, including food services, transportation, and

Dalan magazine team collecting memories and soft knowledge about streets of Tehran. The activities of many online initiatives increased after the coronavirus pandemic in Iran.

@dalanmag (Instagram channel of Dalan Magazine) - Dt. Urheberrecht // October 28 2020

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shopping. In the last ten years, Tehran has become a hotspot for ICT-related initiatives and start-ups. Most of them are conducted by young post-graduate students (Imani and Khalighi 2019, 15). Many ICT ideas related to urban spaces have been developed in recent years. Bdood, a program for sharing bicycles, has even created new safe bicycle routes with the municipality's help. Notably, Dalan and Paagard, some newly born online businesses, collect soft knowledge about the city or design interactive reality games in urban spaces (see image). The municipality has also started to provide digital maps and online services on its website.

With the rise of new digital tools and online social networks, Iranians have found countless opportunities to raise their voices and share decisions. Since the spread of the coronavirus, being an Internet user is inevitable for participating in social life all across the country. Nowadays, there is an interest in using interactive online tools, both from above and from below. So, it might be possible for a new generation of Iranian citizens to gradually shift the current top-down and centralised political and social culture to a more participatory one.

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## II Sithole, Nicole Elsie Nonhlanhla Bulawayo, Zimbabwe



The world we live in today is a digital one. Different parts of the globe are connected relatively seamlessly by the Internet and the rate at which people can share information, ideas, conduct business online, and engage with social media has increased exponentially over the last decade. According to Johnson (2021), in January 2021, 59.5 % of the world's population, roughly 4.66 billion people, made active use of the Internet, ultimately making different parts of the globe more proximate to the others. In Zimbabwe, only 33 % of the total population, about 4.81 million people, has been found to be active users of the Internet (Kemp 2020). A significant portion of these Internet users is from the urbanised population. Even though this is the

and tertiary institutions has increasingly incorporated information and communication technologies (ICTs) into several of their processes. Research posits that the shift to online learning has various benefits, some examples being that it creates opportunities for more interaction between lecturers and students, 'speedier delivery and response times to queries and feedback on assignments, greater access to communities of learners and quicker lead-in times for updating course materials' (Richard and Dzimano 2011). This in turn fosters more efficiency and development of urban spaces as schools and universities can function more effectively and act as hubs of innovation.

case, there is still a substantial number of urbanised Zimbabweans who are unable to access the Internet, many of whom are primary, secondary, and tertiary school students from the urban poor who now more than ever, in the era of COVID-19, need to connect to the Internet to learn.

Despite these issues related to accessibility, teaching and learning within primary, secondary,

The shift toward digital teaching and learning has recently been exacerbated by the advent of the COVID-19 pandemic, which makes it unsafe for learners to engage with their studies in traditional ways. Web-based schooling has allowed those students who have access to ICTs to continue with their studies in safe environments and even to broaden their learning far beyond the traditional learning environment. However, as already mentioned, many people are being left out of these modern technological processes. Whilst some learners have been able to easily access and adapt to virtual learning environments, many, predominantly the urban poor who were already on the digital margins in the first place, have found it difficult to adapt to the new reality of online learning. The se-

**Whilst some learners have been able to easily access and adapt to virtual learning environments, many, predominantly the urban poor who were already on the digital margins in the first place, have found it difficult to adapt to the new reality of online learning.**



A university student from Zimbabwe who is privileged enough to have ICTs at his disposal in his home, allowing him to engage with his studies at home despite COVID-19.

Sithole, Nicole Elsie  
Nonhlanhla // 2020

vere economic climate in the country, characterised by high inflation and poor service delivery—most notably, unreliable electricity supplies (POTRAZ 2019)—has hampered students' ability to access the Internet as they should. This is made even worse especially during a time when utilising ICTs usually provided by schools and universities is impossible because of COVID-19 restrictions.

training and into widening access to ICTs, the urban city spaces will reap the fruits of having safe and efficient educational environments that are equipped to withstand disruptions in face-to-face academic activities.

Zimbabwe is also lagging behind in training its teachers, lecturers, and other academic staff in how to use modern technologies, how to navigate online learning platforms, and how to make the most of these virtual environments in teaching processes (Richard and Dzimano 2011). Ultimately, however, if the appropriate resources are channelled into this

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# 12 Shemaghembe, Emmanuel Emmanuel Dar Es Salaam, Tanzania



## Introduction and Background

Urban environments, as well as the process of urbanisation, are believed to have both positive and negative effects on health. While overall there is an urban advantage to health, in most low-income countries, averages mask true differences in health that may be seen by disaggregating certain factors. Residents of urban environments often have greater access to health care and social services, although access may differ according to city size and may not be distributed equally among all residents. Urban environments tend to offer greater access to education and increased job opportunities, both of which can improve health. However, ‘urbanicity’—the characteristics of a locality being urban—also often leads to a more sedentary lifestyle, less access to fresh food (‘food deserts’), more access to processed food and especially in poorly developed countries, more crowded living situations with a greater

**... that while urbanisation continues to offer opportunities, today’s urban environments can constitute a source of health risks and new health hazards ...**

chance for unsanitary conditions. Additionally, while urban life offers many benefits, some argue that urban spaces may create negative health factors due to experiences of social fragmentation, overcrowding, and crime prevalent in some cities (Duthé et al. 2016). The city of Dar es Salaam is

no exception to this process.

Urbanisation in Dar es Salaam has had immense impacts on the health sector itself and the health of the city dwellers. It has posed both threats and strengths as the city grows into a mega city. This is due to the fact that the health of urban populations has

changed as cities have evolved owing to factors such as the social environment, the physical environment, and the provision of and access to health and social services. Reliable urban health statistics are largely unavailable globally. However, available data indicate a range of urban health hazards and associated health risks that cut across different sectors, including health, environment, energy, transportation, and urban planning (Andrulis 1997).

## Challenges and Prospects

Urbanisation refers to the process of shifting from rural to urban areas. The health of humans and the environment in which they live are intricately linked. Also, the number of people, where they live, and how they live—for instance, their use of natural resources and production of wastes—affect the conditions of the environment. Changes in environmental conditions, in turn, can affect human health with impacts such as poor housing, poor hygiene, etc. (Shayo and Mugusi 2011).

Dar es Salaam offers the lure of better education, employment, health care, and culture, and it also contributes disproportionately to the national economy. As a result, people might even prefer to move from rural and small communities to squatter settlements or overcrowded housing units in the oldest and most densely populated inner parts of urban areas. It has been reported that rapid, ill-planned, and unplanned urban growth is often associated with urban poverty, environmental degradation, and population demands that far outstrip service capacity (NBS and ICF Macro 2011).

Ill-planned urbanisation results from adherence to pre-conceived ideas or the transposition of planning methods from other countries and regions without regard to political, economic, de-

mographic, social, and cultural factors. This places human health at risk and can intensify an existing humanitarian crisis. Therefore, this implies that while urbanisation continues to offer opportunities, today’s urban environments can constitute a source of health risks and new health hazards (WHO 2010). These can include sub-standard housing, crowding, air pollution, insufficient or contaminated drinking water, inadequate sanitation and solid waste disposal services, vector-borne diseases, industrial waste, increased motor vehicle traffic, stress associated with poverty and unemployment, etc. Urban health risks and concerns, therefore, involve many different sectors, including health, environment, housing, energy, transportation, urban planning, and others.

Along the same lines, the World Bank estimates that by 2035, cities will become the predominant sites of poverty. More than one billion people—about one third of the urban population—live in urban slums. More than half of the world’s population lives in urban areas, crowded into 3 % of the earth’s land area. It is estimated that in 2030, the worldwide urban population will be 4.9 billion out of 8.1 billion people, compared 2.8 billion out of 6.0 billion in 2000. These projections highlight the importance of viewing urban health as an international issue (Vlahov and Galea 2002, 4).

## Conclusion and Recommendations

This paper suggests that most of the key factors that affect health in the city

of Dar es Salaam can be considered within three broad themes: features of the social environment, the physical environment, and the provision of and access to health and social services. The first theme refers to properties of the urban community (e.g., cultural milieu, social norms and networks, stressors) that affect individual behaviour. Principal features of the urban social environment include socioeconomic status; crime and violence; and a higher prevalence of psychological stressors that accompany increased density and diversity in cities.

The second theme includes air temperature, natural light, humidity, and wind. The growing demand for goods and population services has increasingly forced society to artificialize the processes of transformation in the physical environment and to increase the yield of natural resources. Moreover, the city is conceived as the most artificial ecosystem, and the subsistence of its inhabitants depends on the supply of resources coming from the natural system. Therefore, characteristics of urbanisation, including the intensity, rate, and duration of these changes may affect health.

The last theme on how urbanisation influences health is related to services such as housing, water, sewage, roads, communication, and educational and health facilities. In comparison with city peripheries, it is evident that the core of the city has a better social or physical environment despite the fact that the infrastructure continues to face some challenges.

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## SDG 11, TARGET 11.4 PROTECT THE WORLD'S CULTURAL AND NATURAL HERITAGE

### COUNTRY REPLY WEEK 2 RACE & ETHNICITY

*How do race and ethnicity manifest themselves in physical urban space in your city? Critically discuss one aspect of your interest in the context of your whole city or of a particular neighbourhood.*



**ASKAR, YOUSSEF**

Homs, Syria



**ODON, MASRA**

N'Djamena, Chad



**ILJAZI, ESRA**

Kumanovo, North Macedonia



**PHAKHOUNTHONG,**

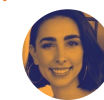
**KHANNAPHAPHONE**

Vientiane, Laos



**MOLEBATSI, MOMPATI ROBERT**

Gaborone, Botswana



**PIETERSE, AMY**

Pretoria, South Africa



**NOURREDINE, HAJAR**

Casablanca, Morocco



**SOLIMAN, SAMAHER M.**

Cairo, Egypt

### COUNTRY REPLY WEEK 16 RELIGION & CULTURE

*How are religion and culture represented by public space in your city?*



**FITRA, HELMIA ADITA**

Bandar Lampung, Indonesia



**IRAM**

Roorkee, India

# 13 Askar, Youssef Homs, Syria



Race and ethnic identification play a minor role for individual Syrians. Members of the various Syrian ethnic and religious groups lived together peacefully before the start of the conflict in 2011. Multiple identities exist for Syrians, including religion, ethnicity, family and social class, language, and country. Primary identities in Syria start with blood ties, such as the family, clan, and tribe; followed by place, such as village, neighbourhood, or country; and finally, religion. Gender also has a role in the male-dominated local culture.

A notable change in relationships between Syrian ethnic groups occurred after the 2011 revolution. The conflict has increased inter-group polarisation and segregation, both reducing and increasing intergroup contact and integration. Not only were there generally homogenous communities prior to the conflict, but displacement during the last five years may have maintained or increased this homogeneity. Thus, ethnicity has been a significant part of the Syrian context in the past couple of years. Communities have been more segregated or homogenous, with social interactions usually limited to other people within the neighbourhood from the same group.

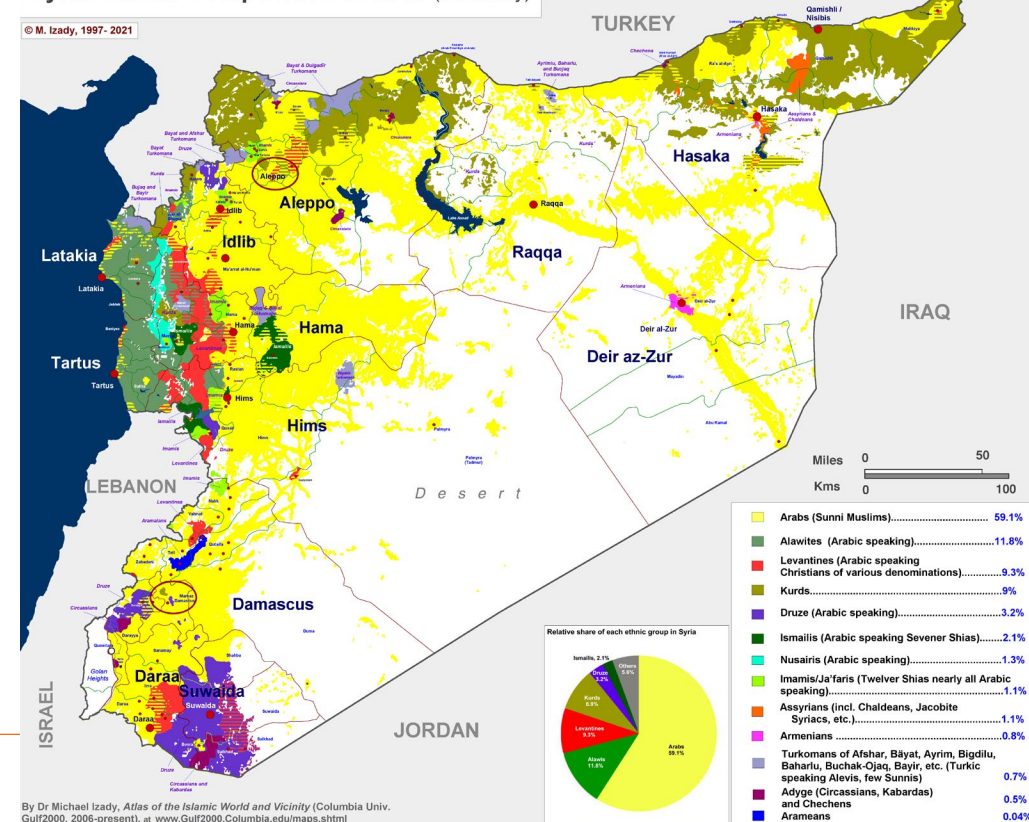
A map by Izady (2014) shows the lack of geographical

mixing between ethnic and religious groups in Syria. There is considerable homogeneity geographically, with most people in a certain area from one ethnic group and living relatively isolated from other groups, with some mixing in urban areas and certain rural areas. This segregation creates differences between groups such as unbalanced income, poverty, and social class.

There are no clear poverty differences between the different ethnic groups in Syria, but some researchers suggest that such patterns do exist. Minority groups are generally poorer than the Sunni Arab population. This assumption does not use direct poverty rates for each ethnic group, but rather assumes that the majority of people in specific governorates are from specific ethnic groups, as per Izady's ethnic map. Also, urban poverty rates are much lower than rural rates. Cities with the lowest rates, such as Damascus, Rural Damascus, Homs, Idleb, and Deir Elzor, have the largest Sunni Arab populations. The Kurds live mainly in rural Hasakeh, which has a moderate poverty rate, while the Sunni Arabs in the urban Hasakeh area have a much lower rate. They also live predominantly in the rural Aleppo governorate, where the urban poverty rate is moderate to start with, yet the rural rate is the highest in the country, which highlights the difference between the Sunni Arabs in Aleppo and Kurds in rural areas. This is especially apparent in rural areas, where villages are often composed of just one ethnic or religious

**The conflict has increased inter-group polarisation and segregation, both reducing and increasing intergroup contact and integration.**

Syria: Ethnic Composition in 2010 (summary)



Syria Ethnic Composition in 2010  
- Dt. Urheberrecht // 2021

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group, and even in urban areas, like Damascus and Aleppo, where certain neighbourhoods are predominately Sunni, Christian, Kurd, Alawite, or Druze, and most social interactions occur with people from the same ethnic group.

In summary, social and ethnic identity in Syria are strongly affected by religion, tribe, socio-economic status, and rural/urban differences. There were limited studies on ethnicity or ethnic identity in Syria prior to 2010, and few since then after the conflict drew academic attention. However, it still is not easy to carry out comprehensive studies as the Syrian government has a policy of ignoring ethnic variables for data analysis and discouraging any research or discussion related to minority groups and identities.

SDG 11.4 OVERVIEW

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## 14 Iljazi, Esra Kumanovo, North Macedonia

In North Macedonia, racial diversity is not noticeable in comparison with ethnic diversity. Kumanovo, a city in the northeast of the country, is a representative case of a multi-cultural community with an impulse towards integration in a single consistent society. The physical structure of the city of approximately 100,000 inhabitants

is conventionally organised into boulevards, streets and blocks, a strong city centre, a historical core (kept in debris), and an industrial district (although modest and devastated) that still provides some income.

One of its more important points of gravity is the city's green market, an explosion of colours, smells, languages, and people. This is a place where everybody is welcome. Inclusivity has been cultivated here over decades. Macedonians, Albanians, Roma, Serbs, Turks, and many others, citizens and peasants, men and women, young and old, architects and farm-

ers all come together in a single space. It is clear that there is a common interest: food. They all depend on it. It is organised in stalls, then in blocks of stalls with narrow passages between them, impossible to cross without touching someone or recognising a familiar face. Those who sell speak all the languages, those who buy are only interested in getting a good price and quality. The way in is easy to find due to the many entrances, and consequently you can get out almost as quickly as you want. It is indeed the spirit of the city concentrated in this 'sprawl' of life, or at least that is how everyone likes to imagine it.

Can we describe the city in the same manner? A violent history of ethnic armed conflicts, a lack of communication, poor infrastructure, and a segregated community tell a completely different story. It seems that common interests are challenged by unusual and unconventional ignorance derived from absurd politics. Ethnically mixed schools are separated, and mixed neighbourhoods tend to 'purify' their residents. On the one hand, 'security' has increased, while on the other hand, migration has accelerated like never before. The obvious reason for this is the scepticism of interethnic bonds, poor economic prospects, flourishing informality in built structure, and unreliable authorities. A shrinking population leaves behind abandoned city fragments that are very difficult to integrate, thus influencing physical urban space negatively. However, when these ethnicities are brought together

**One of its more important points of gravity is the city's green market, an explosion of colours, smells, languages, and people. This is a place where everybody is welcome. Inclusivity has been cultivated here over decades. Macedonians, Albanians, Roma, Serbs, Turks, and many others, citizens and peasants, men and women, young and old, architects and farmers all come together in a single space.**



The green market of  
Kumanovo, North  
Macedonia.

Zeqiri, Betim // 2020

casually, they always find a way to interact, finding comfort in each other through being in the same situation and unnoticeably intensifying the identity of diversity.

The future development of the city tends not to include ethnic diversity as one of the key ingredients. It is more directed towards readymade recipes for sterilised urban environments. The analogical model could be a dehumanised, exclusive supermarket, where you have everything in its place, wrapped in beautiful packages, and the bill is paid at a machine on the way out (Alexander et al. 1977, 246–251). In order to secure a more sustainable urban development strategy, we can refer to the green market of the city as an analogical model. There we can smell the peaches provided by the proud farmer before he puts them in the recycled paper bag for the same and fair price.

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# 15 Molebatsi, Mompoti Robert

## Gaborone, Botswana



Botswana is multicultural, even though extant literature portrays the country as more homogenous (Solway 2002). There are various ethnic groups that subsist in relative harmony compared to what may be the case in other African countries. The majority of influential ethnic groups traces their origin from a common Sotho-Tswana ancestry and hence has Setswana as their language, with some differences in dialects. Setswana was designated a national language in 1966 when Botswana became a nation state (Selolwane 2004). The language is reported to be spoken by about 90 percent of citizens and stands out as a cause of the reported homogeneity (Werbner 2002). Despite Setswana being spoken across the breadth of the country, there are other languages and cultures based in regions whose inhabitants may not always speak Setswana, let alone belong to the dominant Tswana culture. Such cultural groups raise concerns from time to time that the diversity of the country is being undermined as their identities are neglected and that of the dominant Tswana cultural groups are promoted. The issues raised often revolve around a failure to promote other languages by not

teaching them in schools and not using them on radio and television. The two mediums of communication are mainly government run and there is no community radio or television broadcasting in Botswana.

Although ethnicity in Botswana has not overtly played to the point where people are openly disadvantaged on the basis of their ethnic origin, minorities have suffered some prejudices. Whilst there are generally equal opportunities for all citizens, some ethnic groups do not freely enjoy their group rights inasmuch as their identity is subsumed under dominant Tswana groups. Or at times, diverse people are given a collective label that confers collective subordination (Wilmsen 2002). The San people stand out as an example. They are largely subordinated by the powerful majority groups and mainly relate with the majority as sources of cheap labour.

Although there are some people of Indian origin and a small white population, race has not been as much of a topical issue. Few cases of racial flare-up occur in the tourism sector, which is mainly operated by whites. The skirmishes have mainly been between local Botswana and tourism operators and do not involve tourists so much.

Language policy is influenced by power relations that arose at the birth of the nation state and remains the same to this day. The practice is seen by the disadvantaged groups as

**Whilst there are generally equal opportunities for all citizens, some ethnic groups do not freely enjoy their group rights inasmuch as their identity is subsumed under dominant Tswana groups.**



Residential lots in a market area in Gaborone, Botswana.  
Molebatsi, Mompoti Robert // 2020

a way of deculturing them for the benefit of the Tswana-speaking groups. The hype about Botswana's aggregate profile hides the rich diversity of the country and gives only a partial picture of the country. For the remaining cultures, the common characterisation of Botswana serves to give them an imposed identity. Although race and ethnicity may appear as non-issues in Botswana, they manifest themselves prominently.

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## 16 Nourredine, Hajar Casablanca, Morocco



The Kingdom of Morocco covers the extreme west of North Africa, separated from Spain by the Strait of Gibraltar. A strategic location and a rich history have made Morocco quite heterogeneous and culturally diverse.

The oldest inhabitants of this region are the Berbers, later joined by the Jews more than 2,000 years ago. The region was invaded by Phoenicians, Romans, Byzantines, and finally Arabs, but the Ottomans never occupied Morocco. So, today's Morocco is very different from its neighbours, who were exposed to Ottoman domination.

Initially, there was little interaction between these ethnic groups, each with its own settlements. However, to escape legal discrimination based on religion, many Berber tribes converted to Islam, but many Jews and Jewish Berbers resisted conversion and retained their cultural values and behavioural predispositions. Autonomous Jewish Berber tribes existed in Morocco until the 12th century (Dana and Dana 2008).

A Muslim kingdom was established, composed of invading Arabs as well as indigenous Berbers and a massive Jewish community that was closely involved in trade. Each ethnic group remained within its cultural boundaries, allowing

themselves to maintain their respective traditions. Over time, various commercial activities were associated with particular cultural groups (Dana and Dana 2008). Morocco reached its heyday between the 12th and 15th centuries when its empire extended across the Strait of Gibraltar to Europe. European influence arrived in Morocco during the 16th century, when the Portuguese built a colony in Mogador (Segalla 2020).

Then Europe began to industrialise Morocco by creating new types of commerce and economic bazaars. The situation changed in 1912 when France and Spain claimed protectorates in Morocco. The former kingdom was then divided. France's political strategy was to divide and rule. When Morocco became independent in 1956, 70 % of the population, including 80 to 85 % of the Berbers, lived in rural areas. A single currency (the dirham) and a uniform system of administration were put in place to erode economic barriers between areas; the new strategy adopted by the Moroccan king was aimed at uniting the different components of the country and encouraging Arab Berber marriage (Dana and Dana 2008).

Morocco's ethnic diversity contributed to a contrasting and exciting mix of Arab, Berber, African, Islamic, and European influences. In Tangier, people still speak Spanish and, in many cases, Ladino (Judeo-Spanish). In Casablanca, French is common. In the Atlas Mountains, Berber dialects predominate. In September 2003, the



The Hassan-II Mosque of Casablanca built partly on the sea, Morocco.

Nourredine, Hajar // 2020

government authorised for the first time the teaching of the Berber language in more than 10 % of schools in Morocco (Morocco Country Review 2020).

The majority of Morocco's inhabitants are indigenous Berbers; they are Muslims but not Arabs. Morocco is also home to Christians and Jews. Arabic is spoken along with French, Spanish, and Berber dialects. Today, Moroccan architecture is very diverse, including ancient designs, Berber style, Arab-Andalusian style, neoclassical, neo-Moroccan, and neo-Moorish. This means that in parts that were less impacted by colonisation, we can still find Raids and Kasbahs, symbolising the Berber and Jewish presence

especially towards the south of Morocco. In the northern region, the architecture and even the names of the streets and neighbourhoods and the language used are still Spanish, unlike the centre of the country and the city of Casablanca, which were impacted by French colonisation. Today, this imposes a model of centralised urban planning impacted by the Islamic model, which also gives an impression of grandeur, strength, and balance.

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**Morocco's ethnic diversity contributed to a contrasting and exciting mix of Arab, Berber, African, Islamic, and European influences.**

## 17 Odon, Masra N'Djamena, Chad



Increasingly, the phenomenon of ethnicity is becoming a real issue in N'Djamena, and it can be physically noticed through many factors, of which the most important are the occupations and industries in which the groups work. Indeed, certain business activities are strongly dominated by certain ethnic groups, as shown in the table below.

Ethnic Group	Trade	Representativeness
Kim	Fresh fish	72 %
Sara	Bars	70.5 %
Ouaddaien	Groceries	95 %
Gorane	Hardware stores	93 %
Kanembou	Thrift stores	95 %
Toupouri	Vegetables	42 %

Considered to be the greatest breeders in the country, certain ethnic groups originally from the north hold a monopoly on the cattle market, and this can be easily seen when walking around the city.



Markets of N'Djamena,  
Chad.  
Odon, Masra // 2020



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# 18 Phakhounthong, Khannaphphone Vientiane, Laos



Laos is a landlocked country located in South-East Asia. The country is abundant in natural resources and rich in cultural heritage. Laos is well known for its ethnic diversity with around 49 groups co-existing in different parts of the country (Schlemmer 2017). Therefore, it is important to understand the history and settlements of these ethnic groups.

Laos is considered a sub marginal country, which has been influenced by ethnic immigrants who travelled to Laos from two 'core' countries, China and Cambodia (Khmer in the past). Therefore, Laos could articulate different customs and traditions from the immigrants, making the country rich in its cultural diversity (Nakagawa 2018).

The ethnicity of Laos people is defined firstly by ethno-linguistic families, namely the Lao Tai, the Mon Khmer, the Hmong people, and the Chinese Tibetan population, and secondly by the characteristic settlements, namely lowlanders, uplanders, and highlanders. Although, today, we state that the official language in Laos is Lao, it is important to point out that many of the ethnic minorities

**How can ethnic minorities live in the modern world without diluting their traditional lifestyle?**

speak their own language and may not be accustomed to the official Lao language. The ethnic minorities in Laos are either fully integrated into the dominant Lao pop-

ulation—a process called 'acculturation', which is predominant among the lowlanders—or have preserved their cultural values, as seen in the highlanders (Schlemmer 2017). These people live in the mountains and have minimal exposure to the modern cities, education, healthcare systems, and job opportunities and make a living by practicing shifting cultivation, growing rice, maize, and opium (Ovesen 2002).

In contrast to the highlanders, the lowlanders, who have integrated into the dominant society, try to learn and share their culture with the dominant local people. Although they assimilate the local cultures, they have been seen to preserve and reflect some of their own traditions that were passed on by their ancestors. It is important to note that, in the past, there existed a hierarchical classification based on skin colour, giving rise to groups separated into dark- and light-skinned people.

### Current State of Race and Ethnicity in Modern-Day Luang Prabang (LPB)

LPB was recognised by UNESCO as a world heritage site in 1995. Since then, it has become a tourist hotspot. The city is not only famous for its historic architecture, but also for the different ethnic minorities that reside within its walls. At present, different ethnic minority groups co-exist within the city, which include the Khmu, the Hmong, Tai Dam, Yao, Tai Daeng, and Tai Lue, amongst other subgroups (We are Lao n.d.). Since Luang Prabang is an

Traditional house of  
Tai Lue in Poongjong  
village, Luang Prabang,  
Laos.  
Phakhounthong,  
Khannaphphone // 2013



economically and culturally important town, the government has proposed development plans to preserve the city's tangible and intangible heritage. Even though the Lao government has taken measures to curb social discrimination and provide equal opportunities to reduce inequalities, many ethnic groups are still living in the highlands, which are difficult to access, and this shows the existence of a social divide. In this regard, I would like to put forth the following questions. How can ethnic minorities live in the modern world without diluting their traditional lifestyle? How do we address the existing social divides, and what steps could be taken to ensure sustainable co-existence overall? If we do not protect our ethnic diversity, will we lose our ethnic identity?

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## 19 Pieterse, Amy Pretoria, South Africa



South Africa's urban landscape has been historically shaped by racial segregation and discriminatory policies. The infamous apartheid planning system was implemented between 1948 and 1994 under the rule of the Nationalist Party. The apartheid system was set in motion by a series of acts and bills, including pass laws, the Natives (Urban Areas) Act of 1923, and the Native Land Bill, even before official apartheid legislation was introduced (Davenport 1991). The apartheid system set out to reorganise society through the segregation of white and non-white groups. The movement and urbanisation of Black, Indian, and Coloured groups into White urban areas were significantly restricted. The Group Areas Act of 1950 was arguably the most significant apartheid policy instrument that led to large-scale, forced removals and the establishment of settlements on the outskirts of cities that were designed to ensure maximum control over the inhabitants (Harrison et al. 2007). Additionally, ethnically defined homelands were established to confine the independent political rights of black South Africans to small geographical spaces across the country. Apartheid planning tried to balance contradictory policies, which were to 'remove blacks from white-occupied space at the same time as needing blacks in close proximity to provide

labour for the white-owned economy' (Harrison et al. 2007, 33). The apartheid system started to crumble in the mid-1970s, and its demise was sealed in February 1990 when the African National Congress (ANC) was unbanned and the Group Areas Act was abolished in 1991. The period between 1990 and 1994 was marked by political and social instability as the transition to democracy was negotiated (Harrison et al. 2007). In 1994, the first democratic election took place, with the ANC taking the majority and Nelson Mandela being elected president of South Africa. Since 1994, a range of planning and housing policies have been developed and implemented to redress the Apartheid spatial form and address informality, achieving various degrees of success (Charman et al. 2017; Mears 2011).

Informal settlements, often found on the outskirts of cities, are one of the spatial outcomes of decades of apartheid planning, which has been exacerbated by continuously increasing urbanisation, growing unemployment, and inequality (SERI 2018). A conservative estimate is that one in five people live in informal dwellings in South Africa's metropolitan areas (SERI 2018). Informal settlement dwellers deal with many challenges, such as a lack of access to basic services and a lack of security of land tenure (Mears 2011). A number of informal townships exist in the City of Tshwane. Some of the largest of these settlements are Mamelodi to the east of the city and Garankuwa-Mabopane-Winterveld to the northwest. Both of these settle-

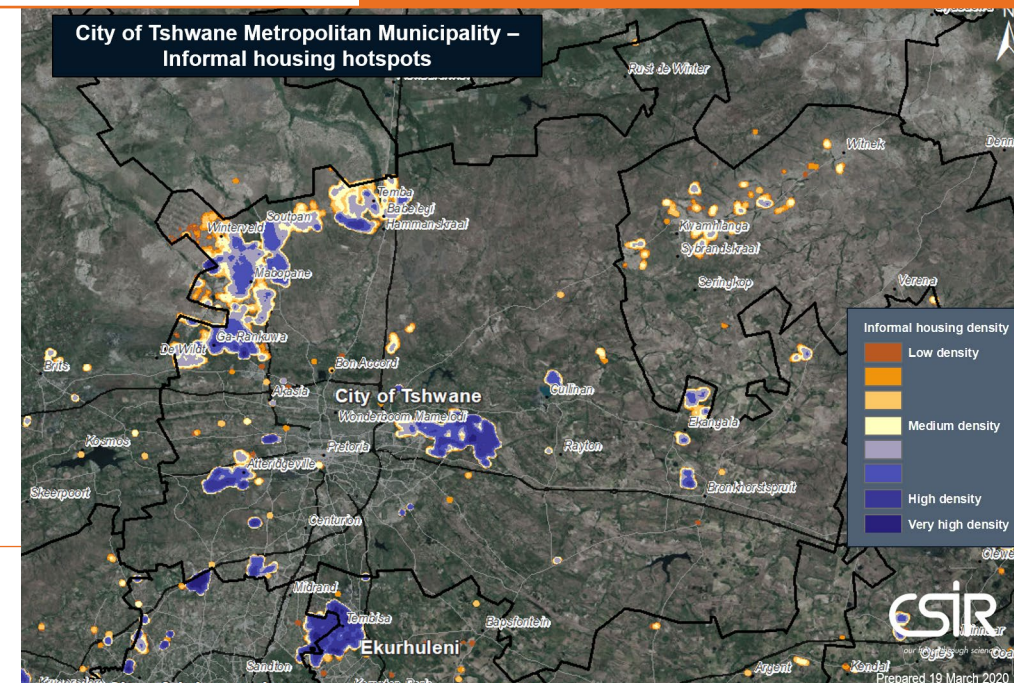
**A conservative estimate is that one in five people live in informal dwellings in South Africa's metropolitan areas (SERI 2018).**

'remove blacks from white-occupied space at the same time as needing blacks in close proximity to provide

Informal settlement areas in and around the City of Tshwane, Pretoria, South Africa.

- Dt. Urheberrecht // 2020

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ments were formally established under apartheid and have continued to expand formally through largely government-subsidised housing and as a result of informal expansion and the erection of backyard shacks. A number of smaller informal settlements has also emerged throughout the city on account of the demand for low-income housing in close proximity to economic nodes (Huchzermeyer et al. 2014).

Over 26 years have passed since our first democratic election and the abolition of apartheid. However, our cities are still faced with a segregationist spatial form where large portions of the population live in informal dwellings and settlements far from the urban core. Informal settlement

dwellers are predominantly black and poor as 'poverty rates are highest for black Africans, followed by Coloureds, Indians/Asians, and then whites, representing exactly the racial hierarchy imposed by the Apartheid state' (SERI 2018, 15). Spatial transformation remains a focus area throughout all spheres of the South African government, and supporting organisations are continuously working to shape our cities to reflect the principles of spatial justice, spatial sustainability, efficiency, spatial resilience, and good administration, as set out in the Spatial Planning and Land Use Management Act of 2013.

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## 20 Soliman, Samaher M. Cairo, Egypt



Jews have been living in Egypt for hundreds of years, until they reached their maximum population of approximately 80,000 in the late 1940s (WDMI 2017). The total Egyptian population at the time was nearly 20 million (Kenner 2013). They were living in settlements mostly in Cairo and Alexandria, the biggest cities. In Cairo, they chose to live in the older part of the city (within the Islamic city boundaries), and the district they lived in was even named after them: the Jewish Quarter (today the Jewish Alley). They worked as merchants, jewellers, and entrepreneurs and spoke Arabic like any other Egyptian. This Jewish quarter was very well

known for its jewelery shops and hand-made products. It is still there today.

The Egyptian Jews were greatly affected by the Arab-Israeli conflicts and war. By the end of the 1940s, during the establishment of Israel as a

country, even though they always lived with Muslims and Christians in the quarter side by side, the late Egyptian president Gamal Abdel Nasser forced Jews to leave the country (1956–1967).

It was common back then to have spies among the Egyptians who were recruited by the Israeli government, which was followed by several attacks on institutes and public buildings (Montasser 2015). After these incidents, Jews were forced to sign papers

agreeing to leave everything behind, from their businesses to their homes. This agreement included never coming back to Egypt again, until today. The relationship between other Egyptians and Jews was badly affected; some did not differentiate between an Egyptian Jew and an Israeli. This resulted in the separation of friends and families, the loss of jobs and workplaces, and even the revocation of Egyptian citizenship. Most Egyptian Jews migrated to Israel and the United States of America after these brutal presidential decisions.

Several series and films have documented the life of Jews in Egypt: how they were treated and how they came to leave their country. In addition, some films were made about individuals who were falsely accused of being spies. *Jews of Egypt*, a film by Amir Ramses from 2013, documents cosmopolitan Egypt in the 1940s and how society gradually shifted from being totally open-minded and flexible enough to accept each other to a society in which social exclusion based on religion took place. This documentary actually participated in Filmfest Hamburg (a film festival) in 2013. Another series named *Jewish Alley* from 2015 presents cases of the Jewish community in Egypt and the events that occurred back then. Several famous people and actors in Egypt were Jewish or had Jewish origins, like renowned singer Leila Mourad and actress Rakia Ibrahim.

If it were not for some serious political reasons, I believe that the typical relationship between Egyptian Jews

**This resulted in the separation of friends and families, the loss of jobs and workplaces, and even the revocation of Egyptian citizenship.**



Moussa Bin Maimoun  
Synagogue in the  
Jewish alley of Cairo,  
Egypt.

Soliman, Samaher M. //  
2021

and other Egyptians would have been the same and they would be sharing their lives together as they used to. Whatever happened did not erase them from the history or social identity of Egypt. In spite of having no official count of Jews who still live in Egypt today, the Jewish quarter in Old Cairo still carries its original name and synagogues are still present, representing a very important ethnic group that has been and always will be a part of Egyptian identity and history (Egypt Independent 2016).

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## 21 Fitra, Helmia Adita Bandar Lampung, Indonesia



To date, people from all over the world mostly know about Jakarta and Bali, or at least they have heard of them when talking about Indonesia. These two regions are internationally well known as Jakarta is the capital of Indonesia, filled with urbanistic and modern buildings, while Bali is a popular tourist destination that offers a spiritual and traditional atmosphere. However, I will not elaborate more on these places, but rather I would invite my readers to learn more about Lampung Province, which also has its own beauty as a tourist destination with its rich culture. Lampung Province is located at the tip of Sumatera Island. Since Lampung Province is adjacent to Java Island, it has become the main gateway to Sumatera Island. Like Bali,

Lampung society (Dongoran, Musadad, and Indrawati 2018; Ciciria 2015; Ardee and IndonesiaKaya 2021; Lisianti, Hagijanto, and Makisedek 2020). For the locals, Siger is a legacy of the predecessors of Lampung society. It is an important traditional object which is used in every ritual or ceremony in Lampung Province. They are shaped like a crown with gold color and a detailed design representing a symbol of pride, dignity, and social status for the Lampung people. In Lampung culture, Siger is usually worn by the bride as an honorary crown in traditional wedding rituals. The value of Siger is strongly associated with feminism. Lampung people, or so-called Lampungnese, believe that women play a crucial and significant role in daily activities. The locals believe that behind their beauty, women are hardworking, independent, persistent, and inspiring. They believe that women are also very supportive whoever they are with. This view of feminism was driven by the spirit of Islam, which places women in a dignified position (Setiawan 2017). This happened in the 15th century when Islam was widely spread in Lampung (Dongoran, Musadad, and Indrawati 2018).

Lampung Province also has many beautiful beaches and other natural tourist attractions. In addition to its beautiful landscape, Lampung Province has a beautiful culture.

To begin with, I would like to invite my readers to take a look at the picture. If you look at it carefully, you can see a symbol shaped like a crown in every building. In Lampung, this crown symbol is called Siger. Siger can be found in every public space in Lampung Province as they are a symbol of

Given the fact that the siger is a valuable symbol in Lampung society, the government of Bandar Lampung formulated and legalised a local regulation—City Regulation of Bandar Lampung No. 65—in 2010 that aims to preserve its value. This regulation states that every single big commercial building, such as malls, hotels, and so on, should put a siger on its façade.

The Siger tower in Lampung, Indonesia is a symbol of Lampung culture, manifested in many forms such as physical buildings and other socio-cultural activities.

Fitra, Helmia Adita // 2019



This regulation also defines the punishment for those who disobey the rule, ranging from a written warning to revoking the business license (Primayudha and Fitriany 2019). Since this regulation was implemented, many complaints—mostly from architects—have been submitted to the city government. They argue that placing the siger on public buildings diminishes the significance of the siger itself. This is because the siger is seen only as a sign or a location marker for people in Lampung. From an architectural point of view, if the siger's symbolism on a building is intended to be deeper and more meaningful, the values embodied in the siger must be translated into the building's design and function as a whole, and it must not only be placed on the façade as a logo (Primayudha and Fitriany 2019).

In the case of Lampung, we are able to understand that although culture and religion are intangible and abstract components, they are usually associated with one another and often manifest in physical spaces as we live in a symbolic world. The manifestation of culture and religion in physical development will forever persist because people tend to show their identity. However, the government should take culture into account so that culture can be an asset for development in the future rather than a burden that might intensify social conflict among ethnic groups.

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## 22 Iram Roorkee, India



The history and culture of my city, Roorkee, Uttarakhand, India, is an intriguing one, indeed. Roorkee is a small city but rich in culture and religion. There are many places to visit in and around Roorkee to witness the history and cultural diversity. Some of the most interesting places to see in Roorkee include forts, monuments, museums, and archaeological sites, and the city is also a sacred place for Hindu and Muslim cultures in India. It is famous for its educational, scientific, and military institutes like IIT Roorkee, CBRI, NIH, army cantonment, etc. Roorkee people and cultural spaces are better organised and maintained in comparison to their neighbours. It has become one of the major cities of Uttarakhand, which connects the people from the Uttarakhand Hill region to the people living in the Indo-Gangetic plain region. It is a destination to explore the richness of Indian culture, traditions, religion, history, and natural beauty. According to the 2011 census, although most people in Roorkee are Hindu (72.72%), the state maintains a secular ambience with people belonging to different faiths like Islam (23.62%), Christianity (0.94%), Sikhism (1.54%), Buddhism (0.06%), and Jainism (1.02%) (Population Census 2011). Mostly, harmony and cultural inclusivity are experienced between people belonging to different religions.

**Public spaces are interactive and dynamic structures that adapt to an environment with an ever-growing population and its endless needs.**

Public spaces are an essential element of a city. The unique identity of any space is depicted by its sense of place and by providing psychological and functional meaning to people's lives. Various activities like sitting, eating, sleeping, communicating, hanging out, working, celebrating, or worshipping are performed in the vibrant public spaces of Uttarakhand (Appadurai 1987, 14). They bring people together socially and provide a physical setting for socio-economic activities.

The culture and tradition of Roorkee keep the public spaces beautifully alive and pulsing with vitality. Public spaces are interactive and dynamic structures that adapt to an environment with an ever-growing population and its endless needs. And with this, space begins to reflect one of India's forms of living and conduct: the idea of adaptability. People belonging to different backgrounds interact here, laying the foundations for a lively and rich city culture. Due to this, these spaces never lose their popularity among the people. These spaces become accessible to all, marking their inclusivity. They are further classified based on their function, like city squares, maidans, bazaars, ghats, parks, tourist spots, and religious spaces, mostly along the banks of the canal. These public spaces reflect the history and cultural diversity, allowing for a greater level of social diversity. These spaces are now an integral part of the daily lives of the people.

The market established in the vicinity of IIT Roorkee has grown rapidly

This picture was taken during the Chhath Pooja celebration in Roorkee along the Ganga Canal in Uttarakhand, India.  
Iram // November 2020



and caters to students and other people. The main bazaar for selling and trading mostly satisfies the needs of the city's inhabitants. Marketplaces are a networking hub that contribute to the economy and identity of the city. The bustling markets' combination of traditional shops and temporary stalls in and around the city region provides a glimpse into the Garhwali, Kumaoni, and Indo-Gangetic Plain cultures.

About 30 km north of Roorkee, Haridwar is a famous Hindu religious and cultural site. One of the oldest and the largest Hindu religious gatherings is a three-month-long Kumbh Mela festival celebrated in Haridwar. This festival is not only celebrated by devotees, but also by onlookers and tourists who flock to participate. This festival is the largest religious gathering in the world, which sees the largest congregation of pilgrims and involves taking holy dips in the River Ganges. According to Hindu belief, taking a holy dip in the River Ganges during this period washes away your sins.

I can conclude by saying that the rich and diverse Roorkee culture is a mixture of the Hilly and Plain regions.

### SDG 11.4 OVERVIEW

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# GLOBAL PERSPECTIVES 1



ENUGU, NIGERIA

Photo - Andy, Nkemjika Nora



ROORKEE, INDIA

Photo - Iram



VIENTIANE, LAOS  
Photo - Phakhounthong,  
Khannaphaphone



HARARE, ZIMBABWE

Photo - Bwanyire, Boniface Nevanji



NANJING, CHINA

Photo - Cheng, Kexin





# SDG 11, TARGET 11.5 REDUCE THE ADVERSE EFFECTS OF NATURAL DISASTERS

## COUNTRY REPLY WEEK 23 DISASTERS

*What disasters are impacting your city/country, and how is your city/country responding?*



**ERDENE, NOMUNDARI**

**Ulaanbaatar, Mongolia**



**HELEODORO, TALITA INES**

**Ilhabela, Brazil**

## 23 Erdene, Nomundari Ulaanbaatar, Mongolia



Water-related disasters can result in huge economic losses by destroying homes, infrastructure, health, and food production. Compounded by climate change, the frequency and the intensity of disaster events are projected to increase, exacerbating the added negative effects on vulnerable and marginalised communities. Effective and equitable strategic actions for resilience to water-related disaster events are essential for the community's livelihood, social stability, and sustainable development. This report briefly describes the most damaging water-related disaster events (flood and dzud) recorded in Mongolia and their impact on the local community.

The occurrence of flooding caused by heavy rainfall has increased in intensity and frequency as a result of climate change and is the most damaging type of natural disaster in Mongolia.

**Effective and equitable governance is important in order to be prepared for national disasters.**

In the urban context, flooding events result in large economic losses every year. The heavy rain can be attributed to oversaturated soil; however, the flood events are a clear sign of the mismanagement of rapid urban expansion. The Ulaanbaatar flood events are man-made disasters. The lack of effective drainage systems, unregulated constructions, and land-use changes without consideration of the natural topography all contribute to the flooding events. Due to their locations and disconnection from central utility

systems, the marginalised groups of the city are the most vulnerable and prone to disaster events, affecting their health and economic well-being. The most damaging rainfall event recorded was in 1966, July 11–12, during which the water level of the Tuul river rose by 3.12 m compared to its usual level and a flood overflowed the capital city's industrial region, costing over USD 7.5 million and 130 lives (MNE 2018).

Apart from floods, disasters related to the dzud events lead to substantial economic loss. A dzud is an extreme winter weather disaster following the dry summer season that leads to a loss of forage harvest and livestock feed, resulting in high livestock mortality. Because of the grazing husbandry tradition of Mongolians, dzud events have a substantial effect on the livestock population and overall internal migration in Mongolia (Gemenez et al. 2012). Overpopulation in primary and secondary cities is one of the main drivers behind urban environmental issues (ADB 2021). Official reports and studies describe many cases in which herder communities have no choice but to leave their homes due to natural disasters driven by climate change—such as drought and dzud, which cause substantial loss of livestock, the main source of income for the herder community. Due to the lack of job opportunities needed in order to improve living conditions in rural areas, the community is forced to migrate to the capital city, to seek educational and employment opportunities (Aljazeera 2021). The expectation of better living



Mongolian landscape.  
Naranzul, Molomjamts // 2020

conditions is far more elusive than the reality, which suggests a lack of knowledge among rural communities regarding the urban labour market and bureaucracy. There is an urgent need to develop a balanced policy that reduces urban-rural development disparities.

Effective and equitable governance is important in order to be prepared for national disasters. The core reason for Mongolia's inefficient national disaster management is linked to political instability, institutional capacity, and economic challenges. The state budget allocated to disaster mitigation has always been insufficient and is mostly used to manage and recover from accidents that have already occurred, not for risk mitigation and preventative measures (JICA 2013). To date, the responsibilities within the agencies are

clearly allocated; however, the data and the reports are fragmented due to the lack of strategic cooperation. Moreover, the available data does not cover all the consequences of the natural disaster, such as death damages, income loss, etc. (UNDRR 2019).

The upward trend of water-related disasters is rooted in socioeconomic factors, such as population growth and land use. For this reason, it is important to support the participation of the community, private sectors, and NGOs to publicly share information related to disasters. The current government aims to support citizen participation by means of capacity building and by providing training on survival skills (UNDRR 2019).

### SDG 11.5 OVERVIEW

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- \* JICA (Government of Ulaanbaatar City, Emergency Management Department of the Capital City, Japan International Cooperation Agency). 2013. *Mongolia: The Project for Strengthening the Capacity of Seismic Disaster Risk Management in Ulaanbaatar City: Final Report*. <https://openjicareport.jica.go.jp/pdf/12129102.pdf>
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## 24 Heleodoro, Talita Ines Ilhabela, Brazil



The island of São Sebastião, where the municipality of Ilhabela is located, presents a relief structure that is considered geologically fragile. As part of the Serra do Mar mountain range, whose escarpments advance dynamically over the northern coast of the state, the site has steep slopes. The soil structure and density, together with the occurrence of rainfalls, present a high degree of fracture (OCA 2015). The topography of Serra do Mar, characterised by the proximity of the cliffs to the ocean slope, causes the formation of orographic rains, which are responsible for the high rainfall in the region. Due to the characteristics of the soil and the volume of rainfall, the steep faces of the mountain range suffer from erosion, especially where they were deforested. Together, these characteristics result in a region that is highly vulnerable to extreme events such as gravitational mass movements and slides.

**The city has been suffering the consequences of an urbanisation model that has not taken into account the challenges imposed by human occupation and urban expansion on a region with high environmental fragility.**

This particular landscape and the intense presence of the Atlantic Forest make this territory a natural patrimony as valuable as it is fragile, which presents countless restrictions to its occupation. It is in this context that the entire north coast region has gone through an intense process of urbanisa-

tion and population growth. In the case of Ilhabela, the limit of the urban area imposed by the presence of a Conservation Unit results in land scarcity and resulting pressure on the areas bordering the urban sprawl. Thus, the construction of new houses at the base of the hills, near the steep slopes of Serra do Mar and advancing over the forest, has increased the population's exposure to environmental risks. As Marandola et al. (2013, 40) point out, 'The conflict between urbanisation, development and the environment manifests itself in the increase of risks, either by the occupation of biophysically fragile areas, which produces risk areas in the urban fabric, or in the production of vulnerabilities to increasingly significant layers of the population.' According to the Atlantic Forest Management Plan, there are 23 sectors at risk of slipping on hillsides in the city, where 451 houses are located. The Plano Municipal de Conservação e Recuperação Da Mata Atlântica de Ilhabela (Municipal Plan for the Conservation and Recovery of the Atlantic Forest of Ilhabela) points out that according to the 2015 report by the Instituto de Pesquisa Tecnológica (Technological Research Institute) regarding susceptibility to gravitational mass movements, 5 % of the urbanised area of the city is classified as high-risk area, 20 % as medium-risk area, and 74 % as low-risk area (OCA 2015).

We can add climate change to this scenario: Coastal zones are among the regions that will suffer the most from its consequences in the coming years, mainly due to the increase in

Advance of urbanization from the coast and central areas onto the rugged foothills of Ilhabela, Brazil.  
Heleodoro, Talita Ines // 2020



the average level of the oceans and the frequency and intensity of climate events according to the report by the Intergovernmental Panel on Climate Change (Iwama 2014). In Ilhabela, the intensification of rainfall—more frequent and of greater volume—is aggravating the already existing risk of landslides, mass movements, and floods. Marandola et al. (2013) point out the unpreparedness of the region to deal with the climate issue: there is a lack of diagnostics for the problems already present and a lack of response capacity to propose adaptation and mitigation measures that deal with the growing risks and vulnerabilities.

The city has been suffering the consequences of an urbanisation model that has not taken into account the challenges imposed by human occupation and urban expansion on a region with high environmental fragility. The region is undergoing a process of metropolisation, which, as Marandola et al. (2013, 36) point out, brings 'in its own consti-

tutive process, risks and dangers that are expressed by the lack of adjustment and adherence of the production of urban space to natural systems, from the site to regional rhythms of rain, wind and biodiversity.' However, it is not a question of making already socially and economically vulnerable populations responsible for the compulsory occupation of risk areas, or of accepting that population growth is irrevocably linked to urban expansion over areas of environmental preservation. It is necessary to question the urban growth model that has been employed until now and to discuss urban planning policies that work within the limits imposed by physical reality, seeking to work together with the natural systems of the region and with the challenges imposed by global changes.

### SDG 11.5 OVERVIEW

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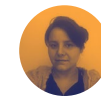
- \* Iwama, Allan Yu. 2014. "Riscos e vulnerabilidades às mudanças climáticas e ambientais: análise multiescalar na zona costeira de São Paulo – Brasil." Tese (doutorado), Universidade Estadual de Campinas. [https://www.researchgate.net/publication/276264966\\_Riscos\\_e\\_vulnerabilidades\\_as\\_mudancas\\_climaticas\\_e\\_ambientais\\_analise\\_multiescalar\\_na\\_zona\\_costeira\\_de\\_Sao\\_Paulo\\_-\\_Brasil](https://www.researchgate.net/publication/276264966_Riscos_e_vulnerabilidades_as_mudancas_climaticas_e_ambientais_analise_multiescalar_na_zona_costeira_de_Sao_Paulo_-_Brasil)
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## SDG 11, TARGET 11.6 REDUCE THE ENVIRONMENTAL IMPACT OF CITIES

### COUNTRY REPLY WEEKS 20 & 21 WASTE & WASTEWATER

*What are innovative case studies/projects/examples from your country on dealing with water and wastewater from a policy, management, technology, or design perspective?*



FLORES LUGO, ITALIA PAMELA

Ensenada, Mexico



ROLLAND, MAINROAL NGARGOTO

N'Djamena, Chad

## 25 Flores Lugo, Italia Pamela Ensenada, Mexico



For the last two decades, Mexico has been categorised as the number one producer of berries in Latin America. These crops are harvested mainly in the northern region of Mexico near the United States border in the coastal state of Baja California. This region is characterised by semiarid weather, which means that it has very little rainfall each year.

With rising temperatures and climate change patterns, the decrease in rainfall has become a big issue because the water resources available from these regions are only in groundwater. However, with the lack of rainfall, this natural storage has been depleted, and seawater has disturbed the natural process with saltwater entering the groundwater located near the coast, resulting in the contamination and salination of the groundwater. This is the case for the most productive agricultural lands located in the north of Mexico.

The result of the saltwater intrusion into the groundwater has forced farmers to be innovative when it comes to increasing the quantity of water suitable for their crops. They have introduced desalination plants to increase the water available for agricultural lands.

According to an online Argentinean

newspaper, this innovation is the first example of converting salty groundwater into water for crops in Latin America. This report mentions how this innovative technology works, beginning with the extraction of seawater using coastal wells, which deliver very good quality water as the sand acts as a natural filter.

Filters eliminate any suspended solids and a microfiltration system eliminates the smallest particles. At this point, a high-pressure pump forces the water to pass through membranes that separate the water from the salt, producing clean water on one side and a concentrated brine on the other. This process, called reverse osmosis, was designed to extract salt from seawater to obtain fresh water for agricultural operations. However, this process cannot be used to obtain drinking water (infobae 2019).

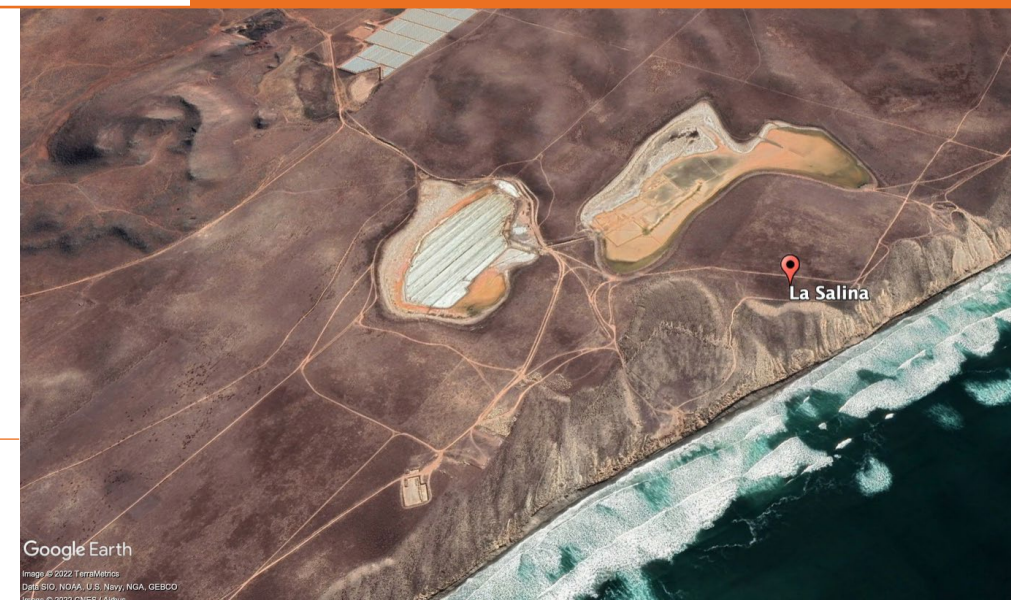
In this innovative example of farmers dealing with water scarcity by introducing desalination technology, one of the most influential companies using this technology fulfils the corresponding international regulations for the Valley of San Quintin, in the state of Baja California. The report mentioned above states that this technology is environmentally sustainable and that the waste resulting from the process—in this case the salt or brine—is discharged into the ground, and therefore the saltwater does not reach the ocean and will not affect any marine species.

However, there is a dilemma because several small companies or family business that use this innovative technology

First desalination plant operating in Latin America. Image data: Google, TerraMetrics, CNES / Airbus.

- Dt. Urheberrecht // 2022

Image Sources & Licenses on page 130



do not follow the international regulations, and they may discharge the brine directly into the ocean. This wastewater that is deliberately discharged into various bodies of water mainly represents an environmental risk for organisms living in aquatic ecosystems. Modifying the natural habitat is considered contamination, and, in this case, the hypersaline effluent (brine) can be toxic to the species in that body of water (González et al. 2009).

### SDG 11.5 OVERVIEW

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\* González-Enriquez, Rodrigo, Karla Natalie León V., Germán Eduardo Dévora-Islordia, and Ana Gabriela Mendoza Lopez. 2009. "Funcionamiento y contaminación generada por plantas desalinizadoras ubicadas en las zonas del mar de Cortés y mar Caribe: un estudio para el desarrollo de normatividad ambiental acuática." *Revista*

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## 26 Rolland, Mainroal Ngargoto N’Djamena, Chad



With the growing demographics of our cities in recent years, our cities constantly generate large amounts of waste every day. This includes solid waste and wastewater. This municipal waste pollutes our environment and will make our cities non-liveable at some point in time. The municipal services concerned with the management of this waste are facing difficulties. These difficulties are material, organisational (human), and financial. In terms of the material challenges, some of our municipal services do not have rolling stock or other material equipment for the removal of municipal solid waste and the recovery of waste from rainwater drainage channels. These drainage channels, open or closed, are generally blocked by waste and can no longer ensure proper drainage, hence the need to clean them regularly.

them there are about a hundred densely populated neighbourhoods. In addition, our cities do not have a good drainage system for removing wastewater, leaving people with no choice but to manage this wastewater themselves. Thus, those who have limited financial means build pits to retain wastewater, which is then removed a little later by the municipal services for a fee. However, those who cannot afford it throw out their wastewater in public, either in pits or in the street, thus creating concentrations of dirty water. These points produce foul odours and the stagnation creates favourable sites for the proliferation of mosquitoes, flies, and other disease vectors.

Aware of the inability of the municipality to remove municipal waste, the population formed an organisation called the Sanitation Committee in the different neighbourhoods of each municipality to remove household waste and clean the drainage channels in order to clean up their neighbourhoods, thus contributing to the sanitation of the city. Each of the households in the districts concerned must subscribe to a plan for the removal of household waste from their home.

The fight against the faecal-oral route remains a major problem for the Ministry of Public Health and the municipalities because when the excreta are not deposited in nature, they are discharged in 'traditional latrines', which are simple pits or sumps. The duration of use depends on the depth of the pit and the number of users. These traditional pits

With the limited rolling stock and other material equipment that these services have, they try as best they can to remove waste in certain districts of the city's municipalities. The management of this municipal waste is problematic because our cities have several municipalities and in each of

**Aware of the inability of the municipality to remove municipal waste, the population formed an organisation called the Sanitation Committee in the different neighbourhoods of each municipality to remove household waste and clean the drainage channels in order to clean up their neighbourhoods ...**



Disposal of waste near a residential area in Chad.

Rolland, Mainroal Ngargoto // 2021

or sumps are not immune to collapse, especially during the rainy season. In addition, floods invade these pits and wash away faeces, causing general contamination. The pits are also accessible to insects, rats, and other disease vectors. To overcome this problem, initiatives started as part of a family latrine construction project funded by the French Development Agency and implemented by Toilets of the World have enabled the populations of the 7th and 8th districts to equip themselves with modern family latrines. These latrines are 90 % subsidised by the project (900,000 CFA francs), and the interested household bears the remaining 10 % (100,000 CFA francs) after the verification of eligibility requirements. It should be noted that there are modern

septic pits only in residential areas and among some high-income officials and traders.

### SDG 11.5 OVERVIEW

#### Reference:

\* HCNE (Haut Comité National de l'Environnement), MEE (Ministère de l'Environnement et de l'Eau), PNUD (Programme des Nations Unies pour le Développement), and ONU-DAES (Organisation des

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## SDG 11, TARGET 11.7 PROVIDE ACCESS TO SAFE & INCLUSIVE GREEN & PUBLIC SPACES

### COUNTRY REPLY WEEK 6 GENDER

*What specific challenges do women and girls face in your home country in navigating urban public spaces?*



**ESPINOSA, GONZALO GARCÍA**

Mexico City, Mexico



**KLUG, HANNAH**

Lima, Peru

### COUNTRY REPLY WEEK 7 AGE

*In your country (in an urban setting), what is your image of 'the child' and when does 'childhood' end? What is considered a good and what is considered a bad childhood, and which norms are the implicit reference point?*



**AVRAMOSKA, SANJA**

Kichevo, North Macedonia

### COUNTRY REPLY WEEK 11 URBAN OPEN SPACES

*Choose one urban open space in your city/neighbourhood and describe what kind of activities take place/what kind of actors use this space in a 24-hour cycle.*



**HANSEN, GABY**

Windhoek, Namibia



**KAFWAMBA, DAVID**

Lusaka, Zambia



## 27 Espinosa, Gonzalo García Mexico City, Mexico



From a sociological point of view, space can be analysed in two different ways. On the one hand, space is treated as a container where social interactions take place. On the other hand, space is a 'social construct and a practice' (Baur et al. 2014, 14). In this sense, researchers can observe how people imagine, think, construct, change, experience, and appropriate space.

Towns are a particular kind of space that is appropriated in many different ways by its inhabitants. As Olga Sabido Ramos (2019) pointed out, the city is a space where a lot of sensory stimuli irritate the human body, but these stimuli are not the same for women and men. In their daily lives, women are exposed to sexual violence, like unwanted sexual

glances, inappropriate touches, and sexual harassment. Men are exposed to violence as well, but of a different kind. This means that the experience of the city is shaped by gender.

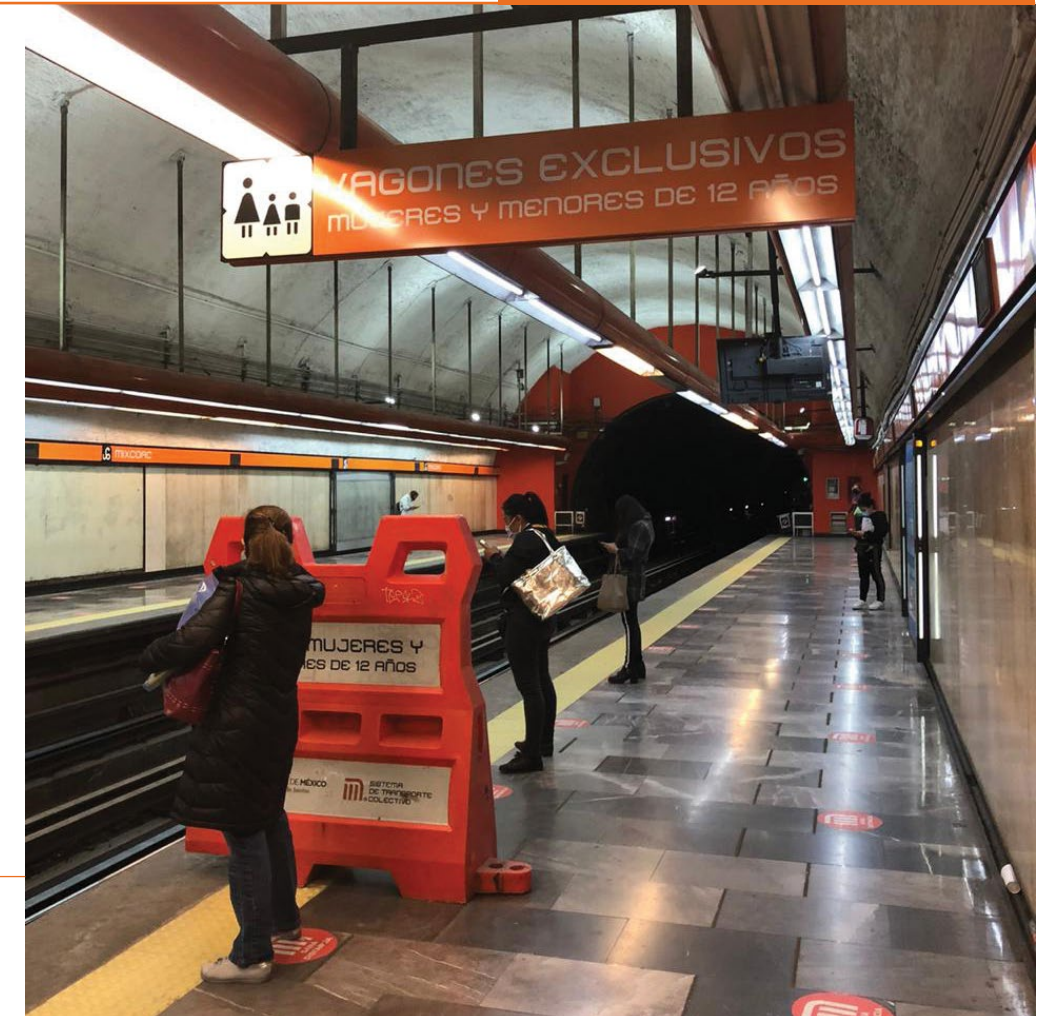
The case of public transport is no different. A recent study showed that fear of aggression and sexual violence are the main factors that have the greatest influence on women's urban mobility. They restrict

mobility, limit travel options, increase travel costs, and influence decisions such as where to work, live, and/or study, while reducing the use of certain services, notably affecting women's travel patterns' (Mejía-Dorantes and Soto Villagrán 2020, 2–3). Due to sexual violence, most women change their daily life and travel patterns to avoid it. According to the authors, another key aspect is that the public transport system was planned on an abstract being (male gender) who is not involved in care activities. For example, rolling suitcases are not allowed in Mexico City's subway.

To face sexual violence issues, the subway's administration implemented a public policy in 2002 stipulating that the first three subway cars would be female only. The absence of men in these spaces causes a sensation of safer trips among women. Also, women have said that the facilities' maintenance and upkeep are important to provide a sense of safety; well-illuminated spaces are also important.

As one can see, the different experiences that women live in daily life shape their mobility patterns. These experiences are associated with fear mostly. The fear of suffering sexual harassment or of being raped. This emotion has pushed some women to stay home, promoting a pattern of restricted mobility (Soto Villagrán 2017). This restricted mobility pattern means that some women renounce participating in some activities because trips in public transport imply too many risks

**This restricted mobility pattern means that some women renounce participating in some activities because trips in public transport imply too many risks for them, which also means that these women see their right to the city diminish.**



Women-only space in the subway of Mexico City, Mexico.  
Espinosa, Gonzalo García // 2020

for them, which also means that these women see their right to the city diminish.

All this violence that women experience constitutes a barrier in the way they appropriate the city and its public spaces. At least in Mexico City, one of the most significant barriers is the fear to suffer some kind of gender-based violence. In addition to economic, social, and other kinds of barriers, women face a specific type of barrier that only they experience. As Soto Villagrán (2017)

stated, similar to accessibility barriers (related to moving between different places within the city), gender-based violence constitutes a barrier to women's mobility and to their appropriation of the city.

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## 28 Klug, Hannah Lima, Peru



### Challenges Faced by Women in Lima's Urban Public Space

Women represent an important pillar in the Peruvian family constellation. But women's social situation and everyday life is overshadowed by cultural gender prejudices and strong stereotypes, which lead to social inequality and violence not only at home but also in public space. Gender inequality and discrimination in Lima's urban public space is mainly caused by the inappropriate behaviour of men, such as verbal or non-verbal street harassment (Flores 2019, 183) and by the spatial conditions of urban public space, which pose a series of daily challenges.

**Gender inequality in Lima is not only represented by the inappropriate behaviour of men but also by the spatial conditions of urban public space.**

To discuss both aspects, it is first necessary to study women's daily activities. In Peruvian society, the woman's role is historically linked to domestic work, which includes taking care of the children, organising the household, and providing food

for the family. Due to this predefined role combined with the inaccessibility to educational opportunities and the labour market, Peruvian society pushes women from a very young age into a position of constant economic and social dependency on men (Aguilar et al. 2017, 34).

Projecting women's activities into urban public space, one can notice that

women's daily movements, such as walking the children to school or going to the market, are numerous but of short distances within their neighbourhood. In contrast, men move throughout the city by car (Cabrera and Villaseca 2007, 41–44). Walking through public space in Lima can pose some challenges, including potential accidents, which are caused by poor urban development planning. Lima's urban development is often influenced by politicians and their interest in economic growth, which brings about the construction of large-scale infrastructure projects, such as highways and road expansions. Owing to the mega development projects, Lima's urban development is mostly oriented towards a 'male', motorised city than towards a 'female', walkable one.

Gender-based development can also be seen in the neglect of maintenance and design of public space such as pedestrian ways, which produces many challenges for women during their everyday activities. The challenges include, for example, road blocking, broken or narrow pavements, and missing ramps or pedestrian crossings, thus forcing women to walk on the street and increasing enormously the risk of road accidents. All aforementioned challenges are even more complicated when children are involved. Furthermore, the abandoned spaces, inaccessible green areas, lack of public lighting, and confusing space situations generate a constant sensation of insecurity for women in Lima's public urban space (Cabrera and Vil-

Peruvian mother walking with her children in the district of Luringancho-Chosica, Lima.  
Klug, Hannah // 2019



laseca 2007, 42–43]. According to the Institute of public opinion of PUCP University, 68.4 % of Peruvian women feel insecure while walking in urban public space during the day and about 93.6 % of them feel unsafe using urban public space at night (IOP 2013).

Gender inequality in Lima is not only represented by the inappropriate behaviour of men but also by the spatial conditions of urban public space. From an urban planning point of view, gender discrimination must be tackled by addressing the gender-specific needs in the urban design. Design is the tool for shaping our environment and generating social changes through space.

Its parameters should include a gender perspective to generate a direct and long-term impact. Indeed, it would take several adjustments and changes, at not only social and political but also structural levels, to re-centre gender equality in public discourse, politics, and urban design.

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## 29 Avramoska, Sanja Kichevo, North Macedonia



Childhood can informally be separated into 3 phases. Early childhood ends at 6 years of age when children start elementary school. Middle childhood starts at age 6 and ends between the ages of 11 and 13, which is the age at which children start to become more independent from their parents and become adolescents. Childhood in North Macedonia officially ends at the age of 18.

Several variables can make childhood happy: living in a harmonious family; socialising and playing with their peers; being safe, fed, and healthy and having access to clean water; having access to education, etc. These prerequisites can be fulfilled under the following circumstances: if the parents have finances for the family to function well, if there is a good health and educational system in the country, if there is peace without any

conflicts or wars, if there is a good water infrastructure, and if the children have the opportunity to develop their talents.

**The modernisation of cities across the world affects the way children interact and use the city.**

One of the measures of a good childhood is how free and safe children are in public space. Studies show that children need other children for good mental health. During the summer and when the weather is good, children spend most of their free time outside of their homes: on the street, where they spend a lot of time unsupervised by their parents. Wheth-

er they live in an apartment building or a house, in most cases children form a playgroup outside their residence, a microcosm, where they can socialise with their peers. Although public urban spaces in North Macedonia are rarely designed to serve the younger population, children tend to find that genius loci in their neighbourhoods. Car drivers are well aware that children are playing on the street and that the car does not have priority in that space anymore; the residential street becomes an informal playground.

A distinction can be made between different settlements in the country. Children living in medium-sized cities in North Macedonia have the greatest freedom of movement and use of public space. This is because primary schools are relatively close to their place of residence, so in most cases, children move independently on the way to and from school. Furthermore, the traffic is not as dense as in the big city. However, the rural settlements and the city of Skopje itself have different characteristics and conditions for children.

Skopje, as the only big city in North Macedonia, offers many options for children. But in some neighbourhoods, especially in the city centre, there is an obvious lack of areas that are safe for children to spend time on their own and socialise within the neighbourhood. In a city where priority is given to cars, children rely on an adult not only to drop them off and pick them up from school, but also to take them



Child-friendly  
neighbourhood,  
Kichevo, North  
Macedonia.

Avramoska, Sanja // 2020

to a certain playground area. In rural areas, people face inadequate schools and infrastructure for children. Also, they have less opportunities to socialise with their peers due to more young families migrating to the cities. 'If children are not able to explore the whole of the adult world round about them, they cannot become adults. But modern cities are so dangerous that children cannot be allowed to explore them freely' (Alexander et al. 1977, 294).

The modernisation of cities across the world affects the way children interact and use the city. This process is

also playing out in North Macedonia where more young people are moving to Skopje, which has become the country's metropolis. This also leads to more children living in a big city and not having enough opportunities to explore their environment freely.

### SDG 11.7 OVERVIEW

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## 30 Hansen, Gaby Windhoek, Namibia



Public space is first about life, then space, and then buildings; the other way around never works (Gehl 2011). Spaces will always remain empty; a sense of life, of being in and with space, is required in order to create a sense of place (Gehl 2011). 'Public space is for living, doing, business, kissing and playing. Its value can't be measured with economics or mathematics; it must be felt with the soul' (Enrique Penalosa n.d.).

Zoo Park, as a social focal point, is the only 'green' public space situated in the CBD (Central Business District) of Windhoek exemplifying such a sense of place. It is constructed on a gentle rolling slope. Various activities take place along the gradient at different points and periods of the day (see image). It has many traces of cultural layers and adaptive compositions of used and re-used functions. The historic name, Zoo Park, implies that you will find animals in the park (Stern and Lau 1989), however this is not the reality today as the park had undergone several functional changes over time. No longer a 'zoo' but rather a passive park, it retained its name in memory of all the animals that once occupied the space.

As a child, I have the fondest memories of Zoo Park. As part of our weekly

routine, we visited this space every weekend. For many, weekends are a time for relaxation and recreational activities. Zoo Park, as a social recreational space, sets the scene for observing and framing the public landscape.

Come along with me on my adventure to explore Zoo Park (see image). It is now morning (9:00–11:00 a.m.) as I start my journey. I get some coffee at the Zoo Café (1: see image). I take a stroll on the meandering path that connects the park. Along one stretch of the path, water flows in an artificial stream from the top pond to a huge Koi pond situated at the bottom (2: see image). At the bottom (2: see image), I see children playing on the rocks, fish swimming, and birds chirping juxtaposed to the hustle and bustle of the CBD. Can you see and hear it too? My journey takes me to the top of the slope where you have to cross the foot bridge over the pond (3: see image). Crossing the foot bridge, I pass by the Chinese gazebo (4: see image) where many people pause to rest. Passing the landmark, the vista broadens and draws your eye once again down to the Koi pond against the backdrop of CBD (5: see image). I am back at midday (12:00 a.m. to 2:00 p.m.). The park is lifeless as this is the hottest time of the day and doing any type of activity is mostly unpleasant. I see a few people seeking shelter under the shade of various trees found in the park (6: see image). Come, let us take a seat on the bench or on the roots and enjoy the shade under the huge Ficus tree (7: see image). Can you feel the cooling effect? It is now late afternoon

**The park is full of life, especially the animated playground (8: see image), filled with children's laughter and excitement. Can you see the children playing?**



Zoo park as a landscape frame: a journey through Zoo Park in Windhoek, Namibia.  
Hansen, Gaby // 2020

(5:00–7:00 p.m.), usually the busiest time of the day. The park is full of life, especially the animated playground (8: see image), filled with children's laughter and excitement. Can you see the children playing? The sun has set (8:00 p.m.), greeting the night. The park lights turn on and it is now devoid of life. However, in the far distance you can hear the reverberation of singing, vibrating down the slope. Come along as we end the park visit with some singing and dancing at a concert held in the amphitheatre (9: see image) to the far left of the park.

As Enrique Penalosa mentioned, public space must be felt with the soul. I hope this experience of Zoo Park has evoked a sense of delight in your soul.

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## 31 Kafwamba, David Lusaka, Zambia



### Shopping Malls as Metamorphosed Urban Open Spaces: Choreographies of Actors and Activities in Segregated Spaces

A diverse range of urban open spaces is dispersed across Lusaka's physical landscape. Ranging from urban playgrounds and street markets to shopping malls, these spaces ostensibly share a common element: the presence of people choreographing their situated interactions and activities. Over time, challenges of managing these spaces have given rise to the development of new approaches to using urban open spaces across the world (Jansson et al. 2019). For Lusaka, improving the access to and use of these spaces is seemingly being weaved around breaking the inadvertent social segregation ensuing from shopping malls. Literature is replete with studies that reveal such segregation in shopping malls or business parks (Mandeli 2019; Heer 2019; Wang, Kwan, and Hu 2020). Nevertheless, managers at these shopping malls endeavour to break such segregation by incorporating non-commercial uses into these spaces. For this country reply, Twin Palm shopping mall in Lusaka, Zambia, was chosen to reveal the kinds of actors and activities that are present in such urban open spaces.

**Though primarily designed for parking cars, this space has been refigured to include other social activities that are relevant to all actors regardless of age and social status as described in the following section.**

### Delimiting Urban Open Space

Twin Palm Mall is located in proximity to high-, middle-, and low-income neighbourhoods. This segregated assortment of neighbourhoods presents both opportunities and challenges at the shopping mall. As already stated, social segregation is one of the notable challenges that has emerged. However, opening up its space to all these actors presents one of the many opportunities offered by this shopping mall. The vast area it spans provides a space seemingly open to endless possibilities. Of interest is the shopping mall's immense carpark as an urban open space. Though primarily designed for parking cars, this space has been refigured to include other social activities that are relevant to all actors regardless of age and social status as described in the following section.

### Activities, Actors, and Power in Using Open Space

As noted in the preceding section, this space is primarily used for parking cars. However, Twin Palm Mall's managers have created room for other activities that are not directly linked to shopping. Quite often, and regularly, large sections of this carpark are cordoned off for aerobics. Women, the elderly, and those wanting to lose weight are normally the main participants in this activity. On weekends, many hours are tenaciously spent engaging in aerobics: an activity shunned by most young and slender-bodied people. These actors relentlessly wage war on body fat impelled by what Kim Chernin termed 'the tyranny of slenderness' (Chernin 1981,

Aerobics and the conviviality of the event mark the use of Twin Palm Mall's carpark section as an urban open space in Lusaka, Zambia. This picture shows women as key actors in the fight against body fat impelled by the tyranny of slenderness.

- Dt. Urheberrecht // 11  
March 2019

Image Sources & Licenses  
on page 130



cited in Lloyd 1996). Body insecurity, especially among women, is primarily induced by societal cultures that prefer slenderness to other body types and has made this activity prominent in this open space. This creates skewed power relations between these groups and the motorists. The latter concede to only using this space when the aerobics and other similar activities have been completed. The other activities carried out at different times in this section of the carpark include turning it into a play area for children. Thus, age, gender, and body size are the key defining attributes of user groups for this urban open space.

area for aerobics and children's play appear to create a psychological barrier to motorists entering this space even when it is free. At the same time, the nature of the activities conducted in this space could have determined its selectivity and isolated-ness.

The exclusivity of this space to these intermittent activities seems to cause its isolation. On a typical day, subject to traffic density, this section of the carpark remains unoccupied by cars. Safety measures of cordoning off the

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## SDG 11, TARGET 11.A STRONG NATIONAL & REGIONAL DEVELOPMENT PLANNING

### COUNTRY REPLY WEEK 12 URBAN ECONOMY

*Would you say the formal or the informal urban food sector in your city is more fit for the future? Please elaborate.*



**BWANYIRE, BONIFACE NEVANJI**

Harare, Zimbabwe



**MORONDA, ERNEST BLENDIRE**

Dar Es Salaam, Tanzania



**RIAD, AYMAN HANY**

Cairo, Egypt

## 32 Bwanyire, Boniface Nevanji Harare, Zimbabwe



### Informality as 'Economic Heroism' in Zimbabwe

The question of whether the formal or informal urban food sector is appropriate for Zimbabwe's future raises several salient issues that must be taken into account when dealing with this highly complex subject. I must state at the onset that while I do not offer an explanation for these salient issues here, it is my hope that within this small reflection I will be able to bring to the reader's attention the conspicuous contextual issues in Zimbabwe regarding this matter. Medina and Schneider (2018) noted that the informal sector constitutes approximately 60.6 % of Zimbabwe's economy and that Zimbabwe's informal sector is the largest in Africa, second only to Bolivia on a global scale. Loosely translated, that suggests that a significant proportion of Zimbabwe's population draws its livelihood from the informal sector, including the urban food sector amongst many others (Medina, Jonelis, and Cangul 2017).

While conventional neo-liberal ideology would view this in a negative sense and argue that this must be redressed in order to promote the formal economy and improve the country's development trajectory, I argue

here that such an attempt to 'blindly' formalise the informal urban food

sector in Zimbabwe would be myopic and ill-advised given the centrality of the informal economy in the lives of ordinary Zimbabweans. I contend here that it is important to look at the informal sector from different lenses and to go beyond conventional and pejorative understandings of the sector.

The informal urban food sector in its current configuration serves a veritable purpose in Zimbabwe by offering livelihoods to various vulnerable groups, including women. The International Labour Organization (2017) noted that a significant proportion of the players in Zimbabwe's informal food sector are women, and, therefore, any future attempts to formalise this sector must focus on protecting the rights and livelihoods of women whose very survival depends on this sector. It would be imperative that these issues be heavily guarded so as to not risk bringing in 'big business' in the form of big retail chains, who in essence would simply repatriate the profits to their Euro-North American headquarters at the expense of our own people and their livelihoods. Therefore, a policy direction that I believe would be appropriate in the future for this sector would be one that is geared towards offering further support to these small businesses in terms of formal infrastructure, training, and tax incentives, amongst other things.

Beyond the livelihood and gender dimension, it is also important to understand that the informal urban food sector in its current configuration spells the difference between life and death



Informal food market in a lower-class neighbourhood in Mufakose, Harare, Zimbabwe.

Bwanyire, Susan // 2020

for some residents within the confines of poor, marginalised, and lower-class neighbourhoods. This is because, unlike the formal food sector, the informal food sector in Zimbabwe is flexible and offers residents the chance to purchase that which they can afford to buy at that moment through a rationing system popularly known as 'tisaona', which loosely translated means 'emergency food portion'. This means that a poor person unable to afford an entire 2-kg package of sugar or a 2-litre bottle of cooking oil is still essentially accommodated and through this 'rationing' is able to purchase instead a small cup of sugar and a few millilitres of cooking oil. For the average poor person in a lower-class neighbourhood in Zimbabwe, the availability of these informal urban food services goes beyond convenience and is in essence a matter of survival, and these are services that would otherwise be inconceivable un-

der a highly formalised urban food sector dominated by big food retail stores.

One may argue that this policy prescription is an unconventional way to look at things and possibly not beneficial to the overall economy of the country. And to such a person, my humble 'decolonial' response would be: 'It does not have to be good enough for the rest of the world, it simply has to be good enough for ordinary Zimbabweans, and that is enough.'

Asante!

### SDG 11.A OVERVIEW

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# 33 Moronda, Ernest Blendire Dar Es Salaam, Tanzania



**In other words, the disciplinary regime (power) is used to enable the 'formal' urban food economy, which is run by global food chains and established food traders and disables the informal urban food sector.**

## Here to Stay? Unsustainable Sustainable Street Food Trading in Dar es Salaam

An informal economy, be it legal or illegal, plays a crucial role in economic development in African countries, and Tanzania is by no means any different. Since the early 1990s, Neoliberal market principles have been causing a 'shift of emphasis' (Foucault 2007) from the informal sector to the formal sector as a logical and sustainable form of an urban economy. This implies that the people and built spaces are managed, controlled, and organised under urban governance that is geared towards vilifying 'informality'. By using the concept of a 'disciplinary regime', I will discuss how urban governance undermines the sustainable informal food sector in Tanzania.

Tanzania has a population of more than 55 million people; however, less than 2.5 million mainland Tanzanians are employed in the formal sector (NBS 2016). At this juncture, one may notice how colossal and critical the informal sector is for economic and social sustainability in Tanzania. To put it into perspective, the city of Dar es Salaam alone has approximately 5 million residents, but the economic data from 2005 indicate that 98 % of all businesses in

the city were informal (Doyle 2017). The reality on the ground has not changed much since then.

FAO (2003) considers the informal urban food sector to include, inter alia, a lack of specialisation, low capital, interdependence between consumption and production, avoidance of all or some taxes, and social innovations. The city of Dar es Salaam contributes 6 % of its total food supply, and the remaining 94 % is imported (Boustedt and Mair 2013). Informal urban food traders who have connections with relatives in rural areas from where food goods are imported are essential in feeding the populace. I argue that the informal urban food sector is (and will be) crucial for the foreseeable future; however, the conceptualisation of 'informality' is problematic in the urban food economy, which renders it unsustainable.

Street food trading in urban public spaces is a common feature in most Global South cities, but it is largely banned by the municipal authorities (Roever and Skinner 2016). The ban is rooted in the Western conceptualisation of the city as a symbol of modernity and progress (Bromley 2000). Street trading, including food vending, is therefore regarded as an anomaly and 'informal'. City authorities are constantly trying to correct this backward, deviant economic behaviour of 'informality' (Kamete 2018). Accordingly, trade discursive narratives paint the informal sector as chaotic, unorganised, and non-formalised, which in turn affects trade policymaking and planning (Doyle 2017).

Street food vending Mamantile in Dar es Salaam, Tanzania.  
Musiba, Edwin // 2019



In Dar es Salaam, for example, street trading is protected by neither commercial nor labour laws (Steiler 2018). On several occasions, food vendors such as Mamantile (female street food vendors) (FAO 2003) have had tenuous hostile relations with law enforcement, facing both criminalisation and eviction (Steiler 2018). In other words, the disciplinary regime (power) is used to enable the 'formal' urban food economy, which is run by global food chains and established food traders and disables the informal urban food sector. Despite some improvements in tolerating the street food traders afforded by the current political regime (Steiler 2018), there is no legal assurance for what I call a 'short-lived honeymoon' for informal traders.

Saitta (2017) argues that the informality of the urban food economy is at best 'a form of resistance and evasion from power...should also be seen as a sign of the state's inability—or perhaps lack of will—to bring some classes of citizens into its sphere of influence and protection.' I would recommend that the informal urban food economy will stay in Tanzania until the government reconsiders its policies concerning socio-economic inequality because informality is part of the modernisation process and traders are the product of economic disparity.

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## 34 Riad, Ayman Hany Cairo, Egypt



In Egypt, food accounts for over 40 % of an average household's total expenditure, and this share can reach over 50 % in poorer families. In 2011, about 25 % of Greater Cairo inhabitants had poor access to food and suffered from food insecurity (CAPMAS 2011). Cairo, the capital of Egypt, is considered the largest market in the Arab countries. The city has roughly 13 million inhabitants and accounted for around USD 128 billion of GDP in 2012, not including the outer regions of the agglomeration made up of new cities and informal regions (Ramzy et al. 2011). Egypt, as a whole, is growing unchecked, and Cairo is no exception. Having such a large number of inhabitants with such a high expenditure on food reflects the magnitude of the economic activities related to urban food.

There is no credible, comprehensive overview of consumer revenue or expenditure per channel; however, in terms of the number of outlets and total surface area per type, Cairo's retail sector is still dominated by small traditional grocery stores and street booths (Waldhauer et al. 2015). Traditionally, the main market outlet for food products in Cairo has been small grocery stores. These stores are independent and are usually family-owned and family-run. They offer a

limited assortment of fresh local products: mainly fruit, vegetables, and meat (Waldhauer et al. 2015). Consumers may remain loyal to these traditional shops due to Egyptian culture, especially among low-income consumers who appreciate the informal transactions and credit systems (Dihel and El Shinnawy 2006). Formal food channels in Cairo include supermarkets and hypermarkets. These two combined, account for a market share of only about 9 % of the total food retail market (Waldhauer et al. 2015). Both almost exclusively target middle- and high-income consumers. They offer a wide variety of products ranging from local to Western products and have recently turned into a commodity among high-income Egyptians (Waldhauer et al. 2015).

The increased complexity of the urban food market in Cairo is represented by several characteristics of its urban food market channels: 1) the higher share of micro-enterprises in the total retail sector, 2) the prevalence of fragmented food supply chains, 3) the high share of informal outlets as compared to the total retail sector, 4) Egypt's government-subsidised system for bread, vegetable oil, rice, and sugar (Rohac 2013).

Ter'et El Zomor local market in the informal Boulaq settlement (picture) reflects many challenges facing urban food in numerous areas in Cairo that are still dependent on local markets. The market is located in the densest neighbourhood of Cairo, where ground-floor shops are taking over the main street, which was intended for 2-way



Fresh food stand in Ter'et El Zomor local market in Boulaq informal settlement, Cairo, Egypt.

Riad, Ayman Hany // 2010

traffic. Not only shops but also street vendors with fresh fruit, vegetables, and fish bring their products to the middle of the action to avoid missing the heavy pedestrian traffic. The large steel structures were an attempt by Egyptian authorities using GIZ funding to turn all activities into formal ones, but this clearly failed.

Cairo may not be prepared for future challenges in its urban food sector, but there is room for improvement. The city has many strengths, especially concerning social sustainability and being dependent on well-distributed local outlets in each street and neighbourhood. While the transition from traditional supply chains to modern ones is occurring on a fragmented basis, this

will be a must in the future. Traditional chains face significant challenges in terms of food losses and food safety issues.

... however, in terms of the number of outlets and total surface area per type, Cairo's retail sector is still dominated by small traditional grocery stores and street booths.

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## SDG 11, TARGET 11.B IMPLEMENT POLICIES FOR INCLUSION, RESOURCE EFFICIENCY & DISASTER RISK REDUCTION

### COUNTRY REPLY WEEK 8 WATER

*Discuss one particular aspect of urban water in your city or neighbourhood that intersects with urban inequality. (e.g. prepaid water meters, access to water, pricing, flood-prone areas, etc.)*



**BADRAKH, KHALIUN**

Ulaanbaatar, Mongolia



**TALAN, JOHN PETRUS**

Labuan Bajo, Indonesia

### COUNTRY REPLY WEEKS 17,18 & 19 ENERGY & ELECTRICITY

*Discuss the generation and distribution of electricity/energy as it relates to one aspect of your city.*



**KABAGHE, WIZA**

Lusaka, Zambia



**NIAZKHANI, SAMANEH**

Tehran, Iran

## 35 Badrakh, Khaliun Ulaanbaatar, Mongolia



Drinking water in the city of Ulaanbaatar is considered one of the scarcest resources in Mongolia as 70 % of the country is covered by the arid and semi-arid Gobi Desert. Surface water resources add up to roughly 21035.4 million m<sup>3</sup>, and underground water resources are about 3062.1 million m<sup>3</sup> (Zandaryaa and Davaa 2013). Water makes up about 0.44 % (or 686.7 thousand hectares) of the total area of Mongolia. In Mongolia, 80 % of the total water resources are surface water, while 20 percent are underground water. Additionally, 0.4 % percent of the ground water is used for drinking purposes and 99.6 % is used for the industry and services. In contrast, 0.8 % of the surface water is used for drinking purposes and 99.2 % is used for the industry and services (MNET 2019). The largest fresh water lake in Mongolia is Khuvsgul, which is the second-most voluminous freshwater lake in Asia and constitutes about 1 % of the world's fresh water resources (Amicus 2021).

about 69.9 % of them (200,000 households) live in the Ger area. About the 37 % of the households living in apartments have running water and heating (Dolgorsuren and Chagnaa 2012).

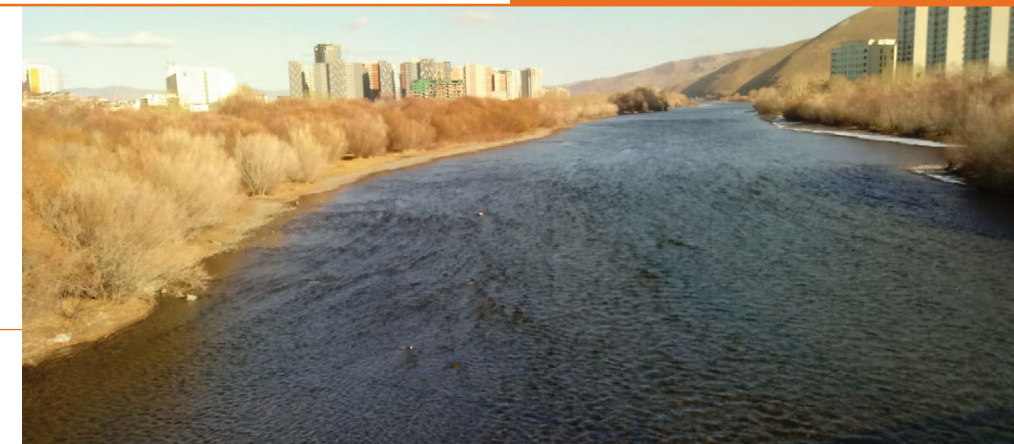
Today in Mongolia, the price for water is very low: about 4 Mongolian tugrug (MNT) or 0.001 US dollars. This is the reason people think that we do not have water problems and do not need to care about water consumption. However, the inhabitants in Ger districts use water from deep wells and, according to the Water Supply and Sewerage Authority of Ulaanbaatar, it is not sufficient in terms of volume and hygiene because most people do not keep the water in appropriate containers. Here, mostly the children go for water; the wells are open according to a defined schedule, and they are closed one day per week. Some inhabitants use river water directly for domestic use, which is no longer acceptable today.

About 171 deep wells are located along the Tuul river and separated in seven underground water resources—Deed, Gachuurt, Tuv, Uildver, Yarmag, Makh combinat, and Nisekh—for the water supply of Ulaanbaatar. On average, 193,300 m<sup>3</sup> of water per day are used by the city inhabitants. The Tuv underground water resource provides 40 % of the total water supply. These water resources are renewable (Dechinkhundev 2015). In Ulaanbaatar, we use fresh water for domestic purposes, including in toilets. The average water consumption in apartments is 140 litres per capita, and 7.8 litres in Ger districts

**According to the Millennium Challenge Corporation, the underground and surface water supply will last for less than 20 more years if we continue to use it at the same rate as today.**

The most populated city of Mongolia, Ulaanbaatar, is 470,444 hectares and has about 1.6 million inhabitants. Ulaanbaatar is a highly crowded city. It is located between four mountains and has 2 rivers, the Selbe and Tuul. A total of 391,000 households (1.6 million people) live in this city, and

Tuul river in Ulaanbaatar, Mongolia, late autumn 2020.  
Badrakh, Khaliun // 2020



(Bulgan 2018). In Ulaanbaatar, there are 11 factories and 3 power plants, which use large amounts of water: One power plant uses 15 million m<sup>3</sup> water annually.

Approximately 85 % of the water consumed is from the underground water, which is more sensitive and takes longer to recover. Although surface water is more regenerative, there is also a risk of contamination, depletion, and drought. According to the Millennium Challenge Corporation, the underground and surface water supply will last for less than 20 more years if we continue to use it at the same rate as today. The seven water resources along the Tuul river are located in fluffy sediment and are renewable, being replenished during the rainy season (Batjargal 2017).

sustainable development without the water issues (Buynkhisig 2017). Ulaanbaatar has been faced with a water shortage over the last few years, and we need to address this first and foremost. Four years ago, the flow of the Tuul river was interrupted for several days to one month as a result of the late rainfall in Ulaanbaatar. This was caused not only by climate change but also by anthropogenic factors. As the population grows, fresh water resources need to be preserved using appropriate and sustainable methods, such as: using water from underground water resources without wasting it, providing equal access to fresh water, decreasing consumption in apartments, changing people's mindset, using water treatment technologies, and using grey water for certain purposes.

The 17 goals of the SDG are all connected to water: we cannot talk about

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## 36 Talan, John Petrus Labuan Bajo, Indonesia



One of the urban problems in Indonesia is access to clean water. The following statistical data show the proportion of the population that has access to adequate and sustainable water and sanitation services in Indonesia. The data displayed come from the national level: the provinces that are located on Java Island and the East Nusa Tenggara province.

Even though the situation is improving every year, access to clean water in Indonesia is facing another problem. World Bank publications (2020, 267–281)

state that the increasing access hides a large gap between different income groups regarding access to clean drinking water. Income correlates to the type of clean water provided for urban residents. The use of bottled water is one of the factors that affects the percentage of access to clean water. More than half of the middle-upper group depends on bottled water, while only 8 percent of the lower group uses bottled water (WB 2020, 267). Financial capacity is the main determinant of access to this type of water supply.

Piped water services provided by regionally owned

companies in Indonesia only cover 19–20 % of the basic needs. The rest has been covered by self-supply or community-based supply. For example, in Kupang, which is the capital of East Nusa Tenggara, the population's access to clean water through piped water in 2010 only reached 43.61 %. Another 51.39 % was contributed by

	2015	2016	2017	2018	2019
Indonesia: National Level	61.57 %	67.20 %	67.54 %	69.27 %	77.39 %
Central Java Province	66.68 %	70.19 %	71.56 %	74.04 %	80.29 %
East Nusa Tenggara Province	23.37 %	38.74 %	43.77 %	50.72 %	64.55 %

The comparison of data on the proportion of the population with access to clean water at the national level and in two provinces of Indonesia (BPS 2019).

the private sector through water tanker services (Talan 2015). To access clean water through private services, each household must pay a large amount of money. For poor families, they have to sacrifice other needs such as proper education for their children. Data from the Central Statistics Agency (BPS 2018) of East Nusa Tenggara Province shows that on average children drop out of school at the beginning of junior high school or when they are 13 years old.

In Labuan Bajo, city development has resulted in water grabbing. Rapid urban growth, a lack of planning, poor governance, and corruption have been emerging as the main direct causes of water scarcity in Labuan Bajo. Tourism as the new prima donna of the economy has shifted water utilisation away from agriculture to service businesses such

Children in the province of East Nusa Tenggara, Indonesia, collecting water for sanitation.

Talan, John Petrus // 2016



as hotels and restaurants for higher marginal economic benefits. The use of water for tourism exacerbates the scarcity of urban water and increases its costs. Tourism businesses are able to pay the most and are supplied the most on a regular basis, thus neglecting the needs of local people.

Residents in Labuan Bajo usually access water through piped water and wells. Piped water is only able to cover 24 % of the city's needs. But it is prioritised for hotels due to business water rates. Wells are the main source of clean water for city residents, but they are exposed to saltwater intrusion because they are close to the coast.

The provision of piped water also creates problems for local residents because the supplied water comes from rivers, which reduces the water supply for agriculture. Ironically, the pipeline runs through residential areas that do not have access to that water.

Another irony is that the difficulty experienced by urban residents in accessing clean water has an impact on the deepening inequality of women and children in their social relations. A study conducted by Stroma Cole (2017) found that the growth of tourism in Labuan Bajo has resulted in a lack of access and control of local residents over water supplies and was the root cause of women's inequality. At the family level, women and children are the ones who have to bear the biggest burden of water scarcity. In the local social system, women are responsible for domestic affairs, including providing water for households. A wife is responsible for all household matters, such as washing, boiling water for drinking, washing dishes, etc., to be considered a good wife. As the weakest members of the household structure, children are often forced to help their mothers provide water.

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**Rapid urban growth, a lack of planning, poor governance, and corruption have been emerging as the main direct causes of water scarcity in Labuan Bajo.**

## 37 Kabaghe, Wiza Lusaka, Zambia



### Energy and electricity in Zambia

According to UN-Habitat (2012), cities consume about 70 % of the world's primary energy. Most of this energy is used in buildings (45 %) and transport (30 %). In the Republic of Zambia, 78 % of households are champions in using 'green' substitutes to nuclear, coal, or diesel-generated power such as solar panels, wood, and charcoal (Central Statistical Office Zambia 2013, 25). Unlike many of our neighbouring countries and countries in the Global North, Zambia relies on hydropower for 94 % of its electrical energy. Energy is the most vital sector for all infrastructure such as water, transport, information and telecommunication systems (ICT), housing, and others. In Zambia most of the energy is consumed in the form

of electricity and is produced from one primary source using hydropower from the Kariba Dam, a double-curvature concrete arch dam in the Kariba Gorge of the Zambezi river basin between Zambia and Zimbabwe.

Other secondary sources of energy are produced from fossil fuels (coal) by Maamba Collieries Limited (MCL), the largest coal mining concession and the

only coal-fired thermal power plant in Zambia. Electricity is an energy vector and not an energy source, which means that it is produced and transmitted to the end consumer (user), where it is transformed into another form of energy such as lighting, heating, or power. The Kariba Dam power station, like other typical power plants, is on the outskirts of the capital city of Zambia (Lusaka) about 190 km away, and electricity is produced and transported by way of high- to medium-voltage transmission using above-ground cables. It is then converted into lower voltage levels and subsequently distributed to consumers (users) via low-voltage electricity. The voltage levels of the lines are then adjusted to the end consumers' needs through various transformers distributed within the city of Lusaka from which the electricity is fed into above-ground distribution cables at low voltage.

The final transformation and distribution are managed by the state-owned enterprise (SOE) utility company Zambia Electricity Supply Cooperation Limited (ZESCO), acting as the grid operator on behalf of local authorities. Connected to the low-voltage end of the grid are the residential consumers (households) and industrial or commercial consumers (shopping malls, hospitals, markets, factories, etc.) who usually demand much higher power. To maintain a continuous flow of electricity services to sensitive facilities like hospitals or military centres, there are backup

**Most residential and large consumers in the city of Lusaka nowadays have resorted to installing their own self-running electricity generators using rooftop solar photovoltaic systems because of erratic service interruptions caused by load shedding.**

Electricity Transformer and Grid distributed above ground cables at low voltage within the City of Lusaka, Zambia.

Kabaghe, Anganile // 2021



generators ready to intervene in case of service interruptions or blackouts.

As a result of poor rainfall in the 2014/2015 rainy season, electricity shortages or 'load shedding' has been happening across the country and has affected all sectors, especially the prices for staple foods such as maize and for copper and has made public services even less reliable (Kesselring 2017). Most residential and large consumers in the city of Lusaka nowadays have resorted to installing their own self-running electricity generators using rooftop solar photovoltaic systems because of erratic service interruptions caused by load shedding. In 1990, after the liberalisation of the electricity markets and under the Zambia Electricity Supply Act, ZESCO had a monopolistic position for selling power, but that changed allowing commercial consumers and households to gain the opportunity to compete and become resellers: like

Copperbelt Energy Cooperation (CEC), which operates and maintains a robust network of transmission, distribution, and power generation assets, accounting for at least 45 % of national electricity consumption. Local traders like MTN and Airtel also offer services (unbundling) by selling electricity units to households and large consumers, making profits from the incurred higher consumption. ZESCO customer public relations mainly takes the form of metering and billing their electricity consumption, which is the source of the company's revenues, and non-paying customers are disconnected from the grid automatically through newly installed smart meters. Smart meters recently installed in most households in Lusaka are modern meters with a two-way communication channel, meaning that the meters can be controlled and managed remotely from the control room.

The biggest challenge in Zambia and Lusaka today in terms of electricity generation is due to climate change resulting in lower water levels to drive the turbines at Kariba Dam hydropower station. The government has therefore started investing in other renewable smart alternative sources like photovoltaic systems, which are still in progress. Another challenge is the operation and maintenance of the grids, which requires striking a balance between supply and demand due to a rapidly growing population, thus posing economic challenges in terms of financing and causing social disruptions in everyday life.

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## 38 Niazkhani, Samaneh Tehran, Iran



The Greater Tehran Regional Electricity Company is responsible for managing the transmission and production of electricity in Tehran province, along with two other provinces located in the region (Qom and Alborz). This company is responsible for providing the required power to the four power distribution companies of Greater Tehran, Tehran's marginal districts, and the Alborz and Qom provinces with a total area of 30,051 square kilometres and a population of 17,272,320 (equivalent to 21.6 % of the country's population). In terms of the number of subscribers and production capacity, it is the largest regional electricity company in the country.

The gross production of the company's power plants in 2016 was equal to 50,114,864 MWh and the growth rate of this index in the period from 2003 to 2016 was 5.5 % on average. The total length of the transmission lines in Tehran province and the immediate region

(the area covered by the Tehran Regional Electricity Company) in 2016 was 2315 km and 3404 km, respectively, and the share of 400-kV and 230-kV lines in both regions and the country was almost equal. During this period, the annual growth rate of 400-kV lines in the province and the region was 4.67 % and

2.48 %, respectively, while the rate for 230-kV lines was 2.77 % and 2.07 %, respectively (PBO 2018).

The total annual electricity consumption of Tehran province in 2016 was equal to 33,480.5 GWh and equivalent to 78.85 % of the total electricity consumption in the immediate region (the area covered by the Tehran Regional Electricity Company). The consumption of the province in all economic sectors was more than 50 % of the total consumption of the region. And in Tehran province, each sector's share of the total consumption of the region in 2016 was as follows: Household 78.3 %, Public 86.2 %, Agricultural 66.1 %, Industrial 73.9 %, Other (including Commercial) 87.1 %, and Street Lighting 72.5 %. The Household sector accounted for 34.4 % of total consumption in Tehran province, followed by the Industrial (22.1 %), Public (17.8 %), and Other (17.5 %) sectors (PBO 2018). The growth rate of electricity consumption in all economic sectors of the province has been positive, with this rate in both the Agriculture and Street Lighting sectors coming in higher than the regional average and lower in other sectors. The highest growth rate, both in the province and in the region, is in the Street Lighting sector, followed by Other sectors (including Commercial) and Public.

The study and analysis of consumption changes by sector in the cities of the province show that the city of Tehran is in first place by far in terms of electricity consumption across all eco-

**The total annual electricity consumption of Tehran province in 2016 was equal to 33480.5 GWh and equivalent to 78.85% of the total electricity consumption in the immediate region.**



Electricity pylons in Iran.  
CC BY-SA 2.0 // 2014

Image Sources & Licenses  
on page 130

conomic sectors compared to the other cities in the province. Tehran's share of the province's household electricity consumption is 70.2 %, followed by Rey city in second place with 4.65 %. Tehran's share of the province's Public electricity consumption is 83.9 %, with Rey city coming in second with 3.69 %. Even in the Agricultural sector, Tehran is in first place with a share of 23.3 %, followed by Shahriar with 11 % and Varamin with 9.4 %. Tehran's share of the province's Industrial electricity consumption is 37.3 % and is higher than Rey city with 20.7 %. Tehran, Rey, and Shahriar's share of electricity consumption in Other sectors, which also includes Commercial subscribers, was 77.2 %, 4.8 %, and 3.9 %, respectively, and these three cities hold the top three places in the province. Finally, Tehran's share of Street Lighting consumption is 54 %, which is higher than Islamshahr (with a share of 5.6 %) and the other cities in the province (PBO 2018).

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\* PBO (Plan and Budget Organization of Iran). 2018. "Tehran Province Spatial Plan Report (Infrastructure Situation Analysis)." Vice Chancellor

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## SDG 11, TARGET 11.C SUPPORT LEAST DEVELOPED COUNTRIES IN SUSTAINABLE & RESILIENT BUILDING

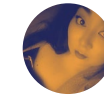
### COUNTRY REPLY WEEK 9 EDUCATION

*What would be a concrete measure for your city/neighbourhood to encourage children and young people to learn about their built environment and thus influence its configuration?*



**ALTANKHUYAG, BATTSETSEG**

**Ulaanbaatar, Mongolia**



**DYUSSENOVA, DANA**

**Almaty, Kazakhstan**

Photo - "People Standing in Front of Brown Concrete Building" by The Happiest Face =) - Pexels license

Cropped and Recoloured

Image Sources & Licenses on page 130



# 39 Altankhuyag, Battsetseg Ulaanbaatar, Mongolia



Uttke stated that ‘sustainable city development is about large-scale and small-scale interventions that are responsive to community needs and tastes, and that are rooted in local climate, topography, history, and culture’ (2012, 8). Thus, it is essential for not only the public but also children and youth to have an awareness and understanding for the built environment and to participate in its development. A city should be a place of learning for the children, underscoring the pride, history, and culture of the country. Unfortunately, in Mongolia, it is very rare for the opinions or critical views of the public to be taken into account in the development of the built environment. People who have power and money also have control over the built environment in which we live.

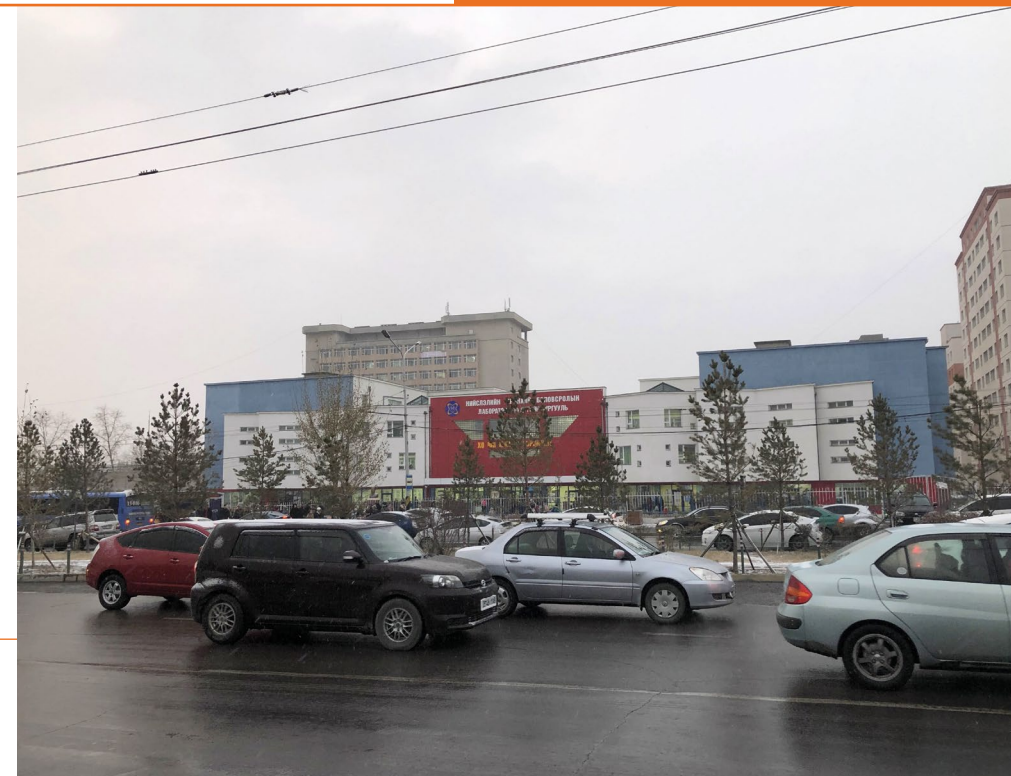
There is no such thing as proper city planning and land-use, and constructors do not generally follow the rules and regulations since the administrative authorities are highly corrupt. As a result, today Ulaanbaatar is becoming a very disorganised and chaotic city, where almost no consideration is given to children and elderly people when developing the living environment. Just as

Therefore, raising awareness among youth for their surroundings from a young age is crucial in order to inform them of their rights and turn them into responsible citizens (Polinova Rajeva 2017) because they will become the responsible people in the future. One of the feasible measures that could be introduced in Mongolia is to include built environment education in the curriculum of basic education. Million & Heinrich explained that ‘built environment education is a multifaceted and interdisciplinary way for young people to learn about their own environment and gain necessary skills in designing it’ (2014, 336). Built environment education can be included as part of some subjects or in extracurricular activities at schools such as visiting museums, exploring the city, organising small projects, etc.

In addition, built environment education offers various advantages for improving the traditional curriculum, in which active student participation has been neglected. As Polinova Rajeva (2017) emphasised, built environment education can support children in developing various skills, including problem solving, teamwork, critical thinking, and social engagement. Thus, what is lacking in the education system can be compensated for with built environment education. However, to implement this system, in-depth planning and collaboration are needed between experts from various fields and decision makers. A proper and well-developed educational program will help children to start paying attention to their sur-

an example, the parks and playgrounds are the first things to be removed if there is a chance to make a profit in exchange.

**A city should be a place of learning for the children, underscoring the pride, history, and culture of the country.**



A public school located next to the main road, Ulaanbaatar, Mongolia.

Altankhuyag, Battsetseg // 2020

roundings, which I think will definitely have an influence on the quality of the built environment since big changes start with small steps.

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## 40 Dyussenova, Dana Almaty, Kazakhstan



Quality education remains a priority for Kazakhstan. During the years of Kazakhstan's sovereign voyage, the domestic education system has proven its viability and demand.

Economic and political achievements from previous decades have made it possible for the state to focus on the top priority: its citizens and their quality of life. In a message to the people of Kazakhstan dated 5 October 2018, the president emphasised that the main priority should be to ensure the welfare of the people of Kazakhstan, which depends primarily on the stable growth of income and quality of life. Education plays a key role in human resource development.

However, economic growth can only occur if young people acquire the skills and receive the opportunities necessary to reach their potential. Also, in 2018, the development of draft laws 'on the status of teachers' and 'on introducing amendments and additions to some legislative acts of the Republic of Kazakhstan on the status of teachers and reducing the burden on students and teachers' is strategically important in improving the quality of education. As international practice shows, countries with highly effective education systems (Finland, Singapore, etc.) focus on im-

proving the quality of their teachers. It is no coincidence that a common proverb goes "Ұстазы мықтының – ұстанымы мықты" (whoever has a strong teacher will have a strong core).

Kazakhstan's position in the world ratings shows positive dynamics, but the state should make certain efforts to improve the quality of life of its citizens. And these measures are actively being taken in the country. In solving this important task, Kazakhstan puts great hopes in its youth. In all 17 Sustainable Development Goals adopted in the Incheon Declaration, young people have been identified as the main driver of development.

The question is how to solve this problem when there is an inter-regional imbalance in the provision of quality educational services because it is necessary to identify the schools at risk, to study the reasons for their low educational outcomes, and to organise targeted work with them, including the use of pedagogical leadership technology. The issue of employment after graduation requires careful study of the situation to determine specific measures. There is a low coverage of students with additional education in Almaty. It is necessary to attract private investors to build additional education facilities and volunteers from among parents, representatives of public associations, and youth organisations. To address the issues of three-shift systems, emergency schools, and the shortage of student places, it is necessary to define a set of measures.

**It is no coincidence that a common proverb goes "Ұстазы мықтының – ұстанымы мықты" (whoever has a strong teacher will have a strong core).**

with highly effective education systems (Finland, Singapore, etc.) focus on im-



University graduation ceremony in Kazakhstan.

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Many people perceive the path that the national education system has taken differently. However, over the last 20 years, a whole generation has grown up in our country receiving education under modern market conditions. Of course, the fact remains that today tens of thousands of young people in Kazakhstan who received post-Soviet education and actually proved the viability of the domestic education system work and make a career in the country with dignity. In particular, mechanisms are currently being developed to provide all citizens of the Republic with quality education and to create optimal conditions for professional growth and self-realisation.

### SDG 11.C OVERVIEW

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# GLOBAL PERSPECTIVES 2



ZANZIBAR CITY, TANZANIA  
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- \* **Page 71**      **Informal settlement areas in and around the City of Tshwane, Pretoria, South Africa.**  
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([https://earth.google.com/web/@30.21400809,-115.70312864,-35552.20583099a,61698.13164817d,35y,136.78795653h,52.61322975t,0.0092r?utm\\_source=earth7&utm\\_campaign=vine&hl=en](https://earth.google.com/web/@30.21400809,-115.70312864,-35552.20583099a,61698.13164817d,35y,136.78795653h,52.61322975t,0.0092r?utm_source=earth7&utm_campaign=vine&hl=en)) - Dt. Urheberrecht // 2022
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