Routledge Studies in Peace, Conflict and Security in Africa

HUMAN SECURITY AND SUSTAINABLE DEVELOPMENT IN EAST AFRICA

Edited by
Jeremiah O. Asaka and Alice A. Oluoko-Odingo

"Today's interconnected crises – from environmental and climate change to global pandemics, and migration – are changing the security landscape. What previously was a multifaceted security arena, is today a single security space of interlocking challenges far beyond traditional state-based security. This book offers a new, alternative perspective on human security, offering a way to make sense of this interconnected world. Centered on the dignity, empowerment, and context of people's everyday life in East Africa, Jeremiah O. Asaka and Alice A. Oluoko-Odingo bring together an interdisciplinary set of Eastern African scholars and practitioners to explore human security challenges in the region in new light."

Florian Krampe, *Program Director and Senior Researcher, Stockholm International Peace Research Institute, Sweden*

"Asaka and Oluoko-Odingo take us on a journey through East Africa in the company of a multidisciplinary team of seasoned and junior East African born scholars. Together they provide an insider perspective on regional security issues, which would be of interest to academics and practitioners alike. The editors present us a conceptual framework of conflict analysis which could be consensual both for Western and Non-Western academics."

Denis A. Degterev, *Professor, Doctor in Political Science, Chair, Department of Theory and History of International Relations, RUDN University, Moscow, Russia*

"*Human Security and Sustainable Development in East Africa* is a rich tapestry of enlightening and enriching perspectives on matters security in Eastern Africa. The volume clearly demonstrates how the conceptualization of national security in our contemporary world has deepened from the state as the referent point of national security to the individual as the referent point and how it has broadened from concerns with military-defense issues to issues of human/health security, food security, economic security, and environmental security, among others. The volume is a significant contribution to the burgeoning literature on human security, particularly in the post-Covid-19 world. Authored by Eastern Africans based in Africa and in the diaspora, the volume represents a compelling fresh and much needed new voice on the issue of human security. It should prove an invaluable resource for practitioners of security policy as well as development planners in Eastern Africa and beyond."

Wanjala S. Nasong'o, *Professor of International Studies, Rhodes College, Memphis, Tennessee*

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Human Security and Sustainable Development in East Africa

This book investigates contemporary human security issues in East Africa, setting forth policy recommendations and a research agenda for future studies.

Human security takes a people-centered rather than state-centered approach to security issues, focusing on whether people feel safe, free from fear, want, and indignity. This book investigates human security in East Africa, encompassing issues as diverse as migration, housing, climate change, displacement, food security, aflatoxins, land rights, and peace and conflict resolution. In particular, the book showcases innovative, original research from African scholars based on the continent and abroad, and together the contributors provide policy recommendations and set forth a human security research agenda for East Africa, which encompasses Kenya, Uganda, Tanzania, Somalia, Rwanda, Burundi, South Sudan, Sudan, Ethiopia, Eritrea, and Djibouti.

As well as being useful for policymakers and practitioners, this book will interest researchers across African Studies, Security Studies, Environmental Studies, Political Science, Global Governance, International Relations, and Human Geography.

Jeremiah O. Asaka is an assistant professor of Security Studies in the Department of Security Studies at Sam Houston State University.

Alice A. Oluoko-Odingo is an associate professor of Geography and Environmental Studies in the Department of Earth and Climate Sciences at the University of Nairobi.

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Human Security and Sustainable Development in East Africa

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Akua A. Ogonda,
You're a brilliant, beautiful, and amazing girl.
Stay curious, and always remember that daddy loves you and believes in you.
Jeremiah O. Asaka

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Acronyms

ACCESS	Africa, Climate Change, Environment and Security
ACHPR	African Charter on Human and Peoples' Rights
ADB	Asian Development Bank
AFCAP	African Community Access Program
AfDB	African Development Bank
AIDS	Acquired immunodeficiency syndrome
AUDA	African Union Development Agency
ANOVA	Analysis of variance
APSA	African Peace and Security Architecture
ARV	Antiretroviral
AU	African Union
BDFA	Beijing Declaration and Platform for Action
BRI	Belt and Road Initiative
CBD	Convention on Biological Diversity
CCK	Communication Commission of Kenya
CEWARN	Conflict Early Warning Mechanisms
CHS	Center for Human Security
CIA	Criminal Investigation Agency
CIDP	County Integrated Development Plans
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
COVAX	COVID-19 Global Vaccines Access
COVID-19	Corona virus disease of 2019
CO_2	Carbon dioxide
CSO	Civil Society Organization
CVE	Countering Violent extremism
DFID	Department for International Development
DRC	Democratic Republic of the Congo
EAC	East African Community
EALA	East African Legislative Assembly
ECD	Early Child Development
EDF	Ethiopian Defense Forces
FAO	Food and Agriculture Organization of the United Nations

FAR	Floor Area Ratio
FOCAC	Forum on China Africa Cooperation
FTAML	Funding of Terrorism and Anti-Money Laundering
GCR	Global Compact on Refugees
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHGs	Greenhouse gases
GMM	Generalized Moments Model
GOK	Government of Kenya
GOR	Government of Rwanda
GOU	Government of Uganda
HDR	Human Development Report
HBE	Home-based enterprise
HIV	Human immunodeficiency virus
ICCPR	International Covenant on Civil and Political Rights
ICSE	International Covenant on Social and Economic Rights
IDP	Internally Displaced People/Persons
IGAD	Inter-governmental Authority on Development
ILO	International Labor Organization
ILRI	International Livestock Research Institute
IMF	International Monetary Fund
InforMEA	United Nations Information Portal on Multilateral Environmental Agreements
IOM	International Organization for Migration
IPCC	International Panel on Climate Change
IR	International Relations
Kg	Kilogram
KFS	Kenya Forest Service
KNBS	Kenya National Bureau of Statistics
KWS	Kenya Wildlife Service
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer, and others in the LGBTQ community
LTR	Land Tenure Registration
LRTAP	Convention on Long-range Transboundary Air Pollution
MARPOL	International Convention for the Prevention of Pollution from Ships
MDC	Movement for Democratic Change
MEAs	Multilateral Environmental Agreements
MENA	Middle East and North Africa
MOT	Ministry of Transport
NASA	The National Aeronautics and Space Administration
NCTC	National Counter-Terrorism Centre
NEMA	National Environment Management Authority
NGO	Non-governmental organization
NISRI	National Institute of Statistics of Rwanda

NMT	Non-motorized transport
°C	Degree Celsius
ODI	Overseas Development Institute
OHCHR	Office of the United Nations High Commissioner for Human Rights
PACA	Partnership for Aflatoxin Control in Africa
PAs	Protected areas
PVE	Preventing Violent Extremism
RAI	Rural Access Index
R-ARCSS	Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan
ReCAP	Research for Community Access Partnership
RECs	Regional Economic Communities
REDD+	Reducing Emissions from Deforestation and Forest Degradation plus
ROK	Republic of Kenya
RSOs	Regional Security Organizations
SACCOs	Savings and Credit Cooperatives
SDG	Sustainable Development Goal
SID	Society for International Development
SMEs	Small and medium enterprises
SPLA	Sudan People's Liberation Army
SPLM/A	Sudan People's Liberation Movement/Army
SSA	Sub-Saharan Africa
SSR	Security Sector Reforms
TB	Tuberculosis
UKAid	United Kingdom Aid
μg	Microgram
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
UNCHS	United Nations Commission for Human Security
UNCLOS	UN Convention on the Law of the Sea
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Program
UN/ECE	United Nations Economic Commission for Europe
UNECA	United Nations Economic Commission for Africa
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNGPID	United Nations Guiding Principles on Internal Displacement
UN-Habitat	United Nations Human Settlement Program

UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UNMISS	United Nations Mission in South Sudan
UNSG	United Nations Secretary General
UPDF	Uganda People Defense Force
USAID	United States Agency for International Development
USSR	Union of Soviet Socialist Republics
VUP	Rwanda's Vision 2020 Umurenge Program
WB	World Bank
WCED	World Commission on Environment and Development
WFP	World Food Program
WHO	World Health Organization
WWII	Second World War
ZANU-PF	Zimbabwe African National Union-Patriotic Front

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Foreword

I am both pleased and proud to write this Foreword for one of the first PhDs in our innovative program at UMass Boston on Global Governance and Human Security (GG&HS), Jeremiah Asaka, and his External Examiner from the University of Nairobi, Alice Oluoko-Odingo. They are advancing notions and analyses of human security in East/Eastern Africa. And my post-graduate sojourn started at Makerere University in Kampala with Ali Mazrui in the late-1960s, as reflected in my penultimate paragraph (Njogu & Adem, 2017).

The coeditors animated their research network in a pre-COVID-19 world, but their contributors and cases are now into the delta variants: what implications for inequalities and insecurities? And old/new regionalisms (Shaw et al., 2011; www.routledge.com/New-Regionaisms-Series/book-series/ASHSER1146). At Makerere I paid taxes to the East African High Commission which died under the regime of Idi Amin; it is now back and aside from the original trio of ex-British territories has attracted another trio of smaller, more diverse members: Burundi, Rwanda, and South Sudan; but its anglophone headquarter is still in northern Tanzania (www.eac.int): Arusha (Reiss, 2022).

This original, interdisciplinary collection foregrounds analyses by a new generation of Eastern African analysts who advance innovative insights and policies. In particular, I would advance their original perspectives on varieties of human security, varieties of African capitalisms, especially along the formal/informal divide, digital technologies, new/small states, migrations and diasporas/remittances, varieties of religions, alternative definitions of East/ern Africa, etc.

In short, this collection advances analysis about/from the "global South" for a post-COVID-19 context as we all have to begin to confront a world in which zoonoses will continue to proliferate (Warner & Shaw, 2018). And I continue to learn from our ±100 ABDs/PhDs at UMass in GG&HS. (www.umb.edu/global)

And my perspectives are still impacted by the Mazrui focus on regionalisms and the transnational, contrast at the time to the powerful 'neo-Marxist' Dar es Salaam "school" animated by Walter Rodney & Co. Ali insisted that we include language and religion, "radical" at the time (Njogu & Adem, 2017; Adem & Njogu, 2018). But neither he nor anyone else in the 1960s mentioned climate change!

To situate/advance this promising volume, I will elucidate my half-dozen foci above, starting with human security. The 1994 UNDP HDR (www.hdr.undp.org) on "human security" could not have anticipated how farsighted it was ahead of dramatic global warming and COVID-19. This original collection begins to identify some of the dimensions of these in East/ern Africa, from which the world can learn/respond beyond 2021 and COP 26 in Glasgow in late-2021 (www.ukcop26.org)?

First, human security is more elusive post-COVID-19 especially in the global South, despite vaccine advances, in part as the delta variant is so transmittable. And the variety of zoonoses is expected to increase; viruses never stop mutating, alas. Hence the salience of "one health" juxtaposing animal, environmental & human diseases. (www.onehealthoutlook.biomedcentral.com; www.cdc.gov/onehealth/basics/zoonotic-diseases.html)

Second, the varieties of capitalisms (www.palgrave/com/gp/series/13996) continue to proliferate in Africa as elsewhere: from more formal to informal and from more legal to illegal, especially given the power of the internet. In Africa in particular, the salience of electronic sports (e.sports) and electronic gambling (e.gambling) is burgeoning, in part as its young men learn to be so active on their ubiquitous mobile phones…

Third, as an aspect of e.sports, the digital in East/ern Africa is growing, in both fragile states like Somalia as well as more established political economies like Kenya: from mobile phones to mobile money and onto e.gambling. So national brands have become global names, such as M-Pesa and Safaricom. Such companies did not exist at independence, only in the current century. And now there are over 50 million East Africans who are regular users of M-Pesa according to Safaricom! (www.itnewsafrica.com; 12 September 2021), using hundreds of cell towers powered by diesel, hydro-electric and/or photovoltaic means.

Fourth, in the era of formal 'decolonization' there was some focus on new, small, often landlocked states (Cooper & Shaw, 2009, 2013). This genre continues, encouraged by the proliferation of such states after the fall of Yugoslavia in Eastern Europe and then the USSR in Central Europe. But such analysis now has to include religions, informal sectors, money-laundering, gun-smuggling, diasporas, IOC, etc.

Fifth, the region, like the rest of Africa, is witnessing new religious movements, from islamic jihadists to charismatic pentecostals. These have their own definitions of regional human development and their own values re vaccines etc. (Kabandula & Shaw, 2020; Shaw & Kabandula, 2019).

And finally, sixth, the editors and contributors debate, whether directly or indirectly, the definition before mid-decade? Africa is part of the 4IR, "the digitalization of everything"; cars and trucks will increasingly consist of batteries and chips (see Shaw, 2021). This timely volume is a promising start.

Timothy M. Shaw, Ottawa, September 2021

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Some relevant websites:

www.cdc.gov/onehealth/basics/zoonotic-diseases.html
www.hdr.undp.org
www.itnewsafrica.org
www.palgrave.com/gp/series/13996
www.routledge.com/New-Regionalisms-Series/book-series/ASHSER1146
www.ukcop26.org

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Jeremiah O. Asaka and Alice A. Oluoko-Odingo

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1 Introduction

Human security and sustainable development in East Africa

Jeremiah O. Asaka and Alice A. Oluoko-Odingo

Introduction

In 1983, United Nations General Assembly (UNGA) established a special commission under resolution 38/161 and charged it with the responsibility of crafting a framework for integrating Environment and Development (UNGA, 1983). The commission was named the World Commission on Environment and Development (WCED) but later came to be popularly known as the Brundtland Commission after its chairperson – Gro Harlem Brundtland – who was appointed by then Secretary General of the United Nations, Javier Pérez de Cuéllar. The commission finalized its work in 1987 and published a final report entitled *Our Common Future* wherein sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987).

The work of the commission has since inspired several past (e.g., Rio Declaration, Agenda 21, Commission on Sustainable Development, Millennium Development Goals, etc.) and current sustainable development initiatives particularly the post-2015 development agenda, which was necessitated by "the elusiveness" and "limitations" of Millennium Development Goals (Shaw, 2015, p. 3). The post-2015 development agenda is specifically framed around 17 sustainable development goals (SDGs) with 169 associated targets all of which are meant to build on Millennium Development Goals (UNGA, 2015). Table 1.1 summarizes the 17 SDGs.

Looking at the 17 sustainable development goals detailed in Table 1.1, it is evident that they cover a lot of ground including but not limited to issues of peace, security, development, and environment all four of which fall within the scope of this book. Whereas some analysts do consider environment, development, peace, and security separately in their analysis, in this book we adopt a four-node nexus framework that takes all four concepts into consideration. A nexus analytical framework makes it possible to recognize and tease out linkages between environment, development, peace, and security to inform human security and sustainable development theory and praxis (Bassel et al., 2018; Bleischwitz et al,, 2018).

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Table 1.1 United Nations sustainable development goals

Goal	*Description*
Goal 1	End poverty in all its forms everywhere.
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
Goal 3	Ensure healthy lives and promote well-being for all at all ages.
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
Goal 5	Achieve gender equality and empower all women and girls.
Goal 6	Ensure availability and sustainable management of water and sanitation for all.
Goal 7	Ensure access to affordable, reliable, sustainable, and modern energy for all.
Goal 8	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
Goal 10	Reduce inequality within and among countries.
Goal 11	Make cities and human settlements inclusive, safe, resilient, and sustainable.
Goal 12	Ensure sustainable consumption and production patterns.
Goal 13	Take urgent action to combat climate change and its impacts.
Goal 14	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
Goal 15	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
Goal 17	Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Source: Compiled by author(s) based on information from United Nations, Department of Economic and Social Affairs webpage accessible here https://sdgs.un.org/goals.

But before we delve deep into our analysis and discussion, it is only proper that we provide the reader with a road map for this chapter. The chapter is organized into six main sections. Following this introduction is section two which explores the link(s) between environment, development, peace, and security. Section three situates the book within East Africa. Section four lays out the organization of the book. Section five summarizes key messages contained in the chapter and offers a conclusion. Finally, section six records all the works cited in the chapter. In the next section, we explore the nexus between the four key concepts discussed in the book – namely environment, development, peace, and security – and in the process highlight the significance of considering them together as opposed to separately.

Linking environment, development, peace, and security

The relationship between environment, development, peace, and security has been recognized for quite some time. But as the Brundtland Commission report referenced earlier points out, the relationship between these four key concepts is complex and often misunderstood (WCED, 1987). In most cases, the link is framed as a two-node nexus between, for example, environment/conservation and development (Büscher & Dressler, 2007), security and environment (Dalby, 2009), ecology and security (Obi, 1997), development and security (Stern & Öjendal, 2010), security and conservation (Duffy, 2014), "peace and security"[1], and/or "peace and development"[2] among other iterations. This rather incomprehensive framing is also reflected in the major disciplinary fields of study associated with the four key concepts namely environmental studies, development studies, peace studies, and security studies (Brauch, 2008).

However, in the recent past, there has been a growing recognition of the need to pay attention to all four key concepts at ones particularly considering climate change (Asaka, 2018, 2020; Brauch, 2008; Bassel et al., 2018; Krampe et al., 2021). For example, the Norwegian Nobel Committee brought global attention to the significance of an expanded understanding of the link between the four key concepts when it awarded the 2004 Nobel Peace Prize to Wangari Maathai "for her contribution to sustainable development, democracy and peace."[3] As Muhonja notes in her book entitled *Radical Utu: Critical Ideas and Ideals of Wangari Muta Maathai*, "for Maathai, environmental degradation and its effects on the continent of Africa were merely the symptoms of something more substantial, and so any real remedy required a consideration of the root causes" (Muhonja, 2020, p. 27). Maathai considered the contribution of poor/marginalized people to environmental degradation in Africa negligible compared to that of "governments and companies as well as individuals such as poachers, conservationists, and tourists, many of them foreigners controlling and profiting from African lands and resources" (Ibid).

The recognition of what Brauch (2008) refers to as the conceptual quartet is also reflected in the ongoing change in the thinking around security and how it relates to peace, environment, and development. The emergence of the concept of human security in the early 1990s is noteworthy in this regard. As captured in the 1994 human development report of the United Nations Development Program (UNDP) and resolution 66/290 of the United Nations General Assembly among other foundational documents on the concept, human security recognizes the interlinkages between environment, development, peace, security, and human rights (UNDP, 1994; UNGA, 2012). Furthermore, including climate change and human security on the United Nations Security Council's agenda points to "an ongoing change in the thinking on and use of the 'security' concept in its relationship to peace, development, and the environment" (Brauch, 2008, p. 23).

In his work on the conceptual quartet framework for understanding the interlinkages between environment, development, peace, and security, Brauch (2008) delineates six conceptual linkages between the four key concepts including peace and security, peace and environment, peace and development, development and environment, development and security, and security and development. He also identifies and discusses four linkage concepts including

> *security dilemma* for the classical peace and security interactions, *sustainable development* for the link between environment and development, *sustainable peace* has been used in the UN context and by action-oriented researchers who combined peace with sustainable development, and *survival dilemma* addresses security, environment, and development linkages caused by human and nature-induced factors of global environmental change.
>
> (Brauch, 2008, p. 16)

He frames these linkage concepts as the "four pillars of a widened security concept" (Brauch, 2008, p. 20). This book borrows from and improves on the conceptual quartet framework particularly the people-centered survival dilemma conceptual linkage in its analysis of human security and sustainable development in East Africa. Understanding the interlinkages between environment, development, peace, and security is crucial for achieving sustainable development goals and, therefore, human security.

In the context of this book, security is understood from a human security perspective. Human security is "people-centered, comprehensive, context-specific, and prevention-oriented responses that strengthen the protection and empowerment of all people and all communities" (UNGA, 2012, p. 1). As a security concept that recognizes the nexus between environment, development, peace, security, and human rights, human security provides a better conceptual framework for studying and/or understanding the interplay between the four key concepts that are currently under consideration. Please refer to Chapter 2 of the book for an in-depth discussion on the concept of human security including but not limited to how it has been conceptualized and operationalized in the book. In the next section, we situate the book within the East African context considering the context-specific nature of human security.

Context matters: Situating the book in the East African context

Since this book is about human security and sustainable development and acknowledging the context-specific nature of human security, at this juncture it is only proper that we provide some contextual background information on East Africa – the book's geographical area of focus. Often, East Africa is taken to mean the region of Africa occupied by Kenya, Uganda, and Tanzania – the three original East African Community member countries. However, in this book, we take on an expanded understanding of the region. We consider East Africa to

be a much larger region encompassing eleven African countries namely Kenya, Uganda, Tanzania, Burundi, Rwanda, Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, and Somalia. Looked at from this perspective, the region covers a total area of 6,211,443 square kilometers and is home to an estimated 364,591,078 people of diverse backgrounds. Figures 1.1 and 1.2 show the total area and estimated population by country respectively.

In terms of human development, a critical indicator of the state of human security in any given context, countries in the region rank on the lower end of the spectrum. According to the 2020 human development index, the best-performing country in the region in terms of human development was position 143 out of 189 countries ranked. Table 1.2 details the human development index per country in the region except for Somalia for which no data was available.

Several social, economic, political, and environmental factors may be attributed to the notable relatively poor state of human security in the region (see e.g., Abass, 2010; Abrahamsen, 2013; Adetula et al., 2021; Adivilah et al., 2018; Agade, 2018; Asaka, 2021a; Bassel et al,, 2018; Chitando & Tarusarira, 2019; Falola & Nasong'o, 2016; Hendriks & Sigsworth, 2016; Kumssa et al., 2011; Mengisteab, 2014; Nasong'o, 2015; Purkitt, 2009; Shaw, 2014; UNEP, 2004, 2009). These include historical injustices, poor governance, unemployment,

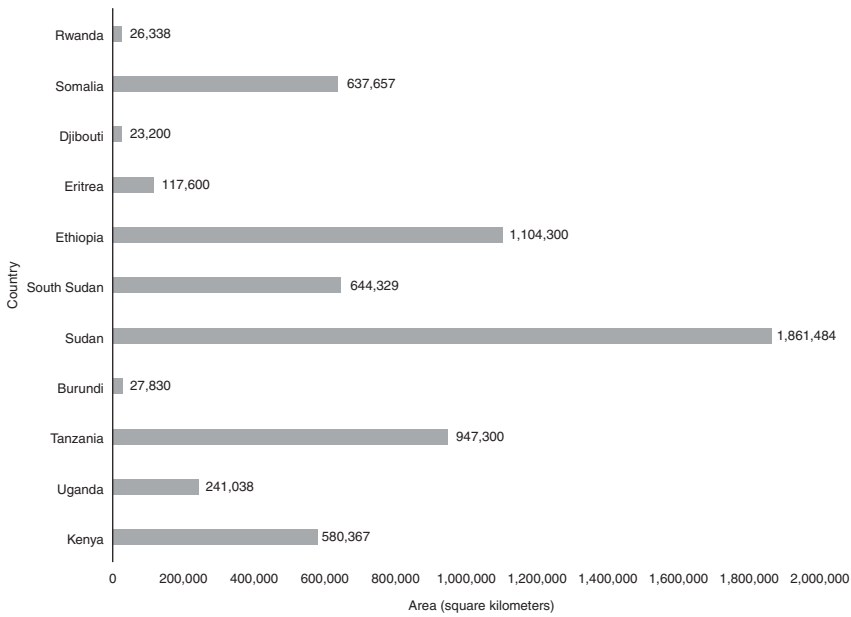

Figure 1.1 Total area by country.

Source: Compiled by author(s) based on the World Factbook (www.CIA.gov) total area data.

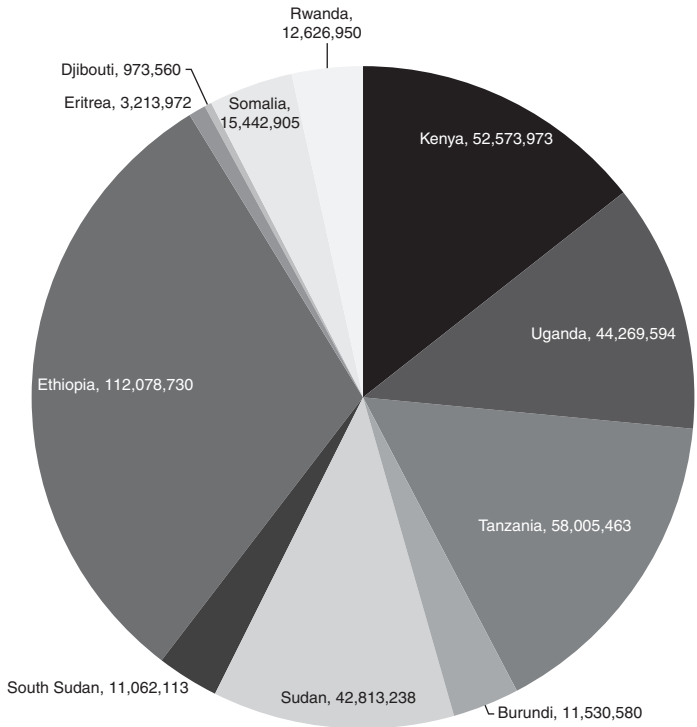

Figure 1.2 Estimated population by country.

Source: Compiled by author(s) based on World Bank (www.data.worldbank.org) 2019 population estimate data.

Table 1.2 Human development index per country in the region

Country	*HDI*	*Rank*
Kenya	0.601	143
Uganda	0.544	159
Tanzania	0.529	163
Burundi	0.433	185
Sudan	0.510	170
South Sudan	0.433	185
Ethiopia	0.485	173
Eritrea	0.590	180
Djibouti	0.524	166
Somalia	No data	No data
Rwanda	0.543	160

Source: Compiled by author(s) based on data from the UNDP 2020 human development report.

Figure 1.3 Corruption perception index ranking of East African countries.

Note: The figure shows that eight out of eleven countries in the region (i.e., about 73%) rank among the most corrupt countries in the world. The countries are ranked as follows: Kenya (124), Uganda (142), Tanzania (94), Burundi (165), Rwanda (49), Sudan (174), South Sudan (179), Ethiopia (94), Eritrea (160), Djibouti (142), and Somalia (179). At position 49, Rwanda is the least corrupt country in the region followed by Ethiopia and Tanzania both of which are tied at position 94. The most corrupt countries in the region are Somalia and South Sudan both tied at position 179 and are followed closely by Sudan at position 174. There's evidently a noticeable correlation between corruption and human insecurity in the region. For example, the region's two most corrupt countries are the same ones that are the most conflict prone.

Source: Compiled by author(s) based on data from Transparency International's 2020 corruption perception index report.

poverty, famine, malnutrition, conflict (including human-wildlife conflict and terrorism), environmental degradation (e.g., climate change, desertification, and loss of biodiversity), disease (e.g., HIV/AIDS, Malaria, and Tuberculosis), and natural hazards (including drought, storms, floods, and landslides). Moreover, recent events such as the conflict in Ethiopia (Gavin, 2021), locust invasion of 2019–2021 (Beaubien, 2021), and COVID-19 pandemic only serve to worsen the situation. The region also grapples with rampant theft of public funds, which further contributes to human insecurity in the region. Figure 1.3 shows the 2020 corruption perception index ranking for countries in the region.

In the next section, we discuss some of these issues in detail. Our discussion is specifically focused on geopolitics, climate change, food-water-energy-land nexus, natural resource use conflicts, disasters, internal displacement, refugeeism, and disease.

Social, economic, political, and environmental factors contributing to human (in)security in East Africa

Geopolitics

The fact that East Africa is strategically located along the Red Sea, Gulf of Eden, and Indian Ocean makes it central to global geopolitics and, therefore, attractive to great powers and their adversaries alike with implications for human security and sustainable development in the region. This very fact explains why China chose Djibouti as the location for its first-ever foreign military base (Cabestan, 2020; Vertin, 2020). It also explains why Al Qaeda targeted Kenya in its 1998 bomb attack, which remains one of the deadliest terrorist bomb attacks on the African continent. Kenya has long been an ally of the United States on many matters including global counterterrorism (Kamau, 2021; Prestholdt, 2011). East Africa is also home to the only United Nations' main office outside North America and Europe. The UN has four main offices located in New York, Geneva, Vienna, and Nairobi. It is no wonder, therefore, that the region is currently a playground/theater for the unfolding great power competition between China and the United States with the former already making significant inroads using, among others, its three signature foreign policy initiatives namely Forum on China Africa Cooperation (FOCAC), Belt and Road Initiative (BRI), and a non-interventionist approach toward internal affairs of African states, which has unsurprisingly proven to be quite popular with African heads of state. However, it remains to be seen what becomes of the region's engagement with China even though there are already some tell-tale signs on where the engagement may be headed including massive infrastructural development, heavy debt burden, and cultural shifts among others.

With the decline of U.S. super-power stature gradually giving way to the emergence of a multi-polar world, mid-sized powers are also increasingly flexing their muscles including in the East African region. For example, the ongoing civil war in Ethiopia has seen the country's Prime Minister Dr. Abiy Ahmed cozy up to mid-sized powers such as Iran, Turkey, and United Arab Emirates (UAE) among others while outrightly snubbing the United States (The Economist, 2021). As a recent *The Economist* piece entitled *Geopolitics: The menace of midsized meddlers* argues,

> other countries sense, not exactly a vacuum, but many areas of the world where American power is unlikely to be deployed vigorously. Mr. Biden says he had to ditch Afghanistan to concentrate on China. If all his attention

is on China, other regimes may calculate that they are free to flex their muscles elsewhere.

(Ibid)

Climate change in East Africa

East Africa is home to a large population of poor or low-income people whose livelihoods are largely natural resource dependent. According to the Intergovernmental Panel on Climate Change (IPCC), low-income communities depend on climate-sensitive resources and yet have limited adaptive capacity (IPCC, 2014). The global body further adds that climate change will and is already impacting low-latitude areas (such as those in parts of East Africa) through droughts and floods, leading to low crop yields and subjecting the poor and vulnerable to the risk of hunger (Ibid). An analysis of Notre Dame Global Adaptation Initiative data on vulnerability to and readiness for climate change reveals that East Africa is one of the world's most vulnerable and least prepared to adapt to climate change as shown in Table 1.3.

Table 1.3 Vulnerability to climate change in East Africa by country* as of 2019

ND-GAIN Index Rank	*Country*	*ND-GAIN Index Score*
124	Djibouti	42.4
124	Rwanda	42.4
145	Tanzania	39
148	Kenya	38.9
157	Ethiopia	37.8
167	Uganda	35.9
169	Burundi	35.4
174	Somalia	34
176	Sudan	32.8
180	Eritrea	31.4

Source: Compiled by author(s) based on Notre Dame Global Adaptation Initiative's 2019 country rankings data available at https://gain.nd.edu/our-work/country-index/rankings/.

Note: The Notre Dame Global Adaptation Initiative Country Index (ND-GAIN Index) summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience. High ND-GAIN Index score correlates with low vulnerability and vice versa. ND-GAIN Index ranks countries on a declining/ascending scale where the country with the highest ND-GAIN Index score sits at the top of the list while the one with the lowest ND-GAIN Index score is placed at the bottom. Table 1.3 shows that East African countries have some of the poorest ND-GAIN Index scores globally making the region one of the most vulnerable to climate change and least ready to adapt. The region does not fare any better in comparison to other regions of Africa either, accounting for three out of ten worst ND-GAIN ranked African countries with none of the countries in the region appearing on the top ten best ND-GAIN ranked African countries.

* South Sudan is neither listed in the ND-GAIN rankings nor among the ND-GAIN list of countries with missing data. It is unclear whether Sudan's ND-GAIN index includes South Sudan.

Evidently, East Africa is a hotspot in so far as climate change is concerned. The implications of climate change for human security and sustainable development in the region are multiple and complex (Eklöw & Krampe, 2019; Thalheimer et al., 2021). In the subsequent discussions on food-water-energy-land nexus, natural resource use conflicts, hazards and disasters, internal displacement, refugeeism, and disease, we highlight some of the implications of climate change in East Africa.

Food-water-energy-land nexus in East Africa

The food system consists of activities within the food value chain, associated service organizations, and enabling environment. The socioeconomic drivers to the food system are supported by the biophysical drivers: minerals, climate, water, biodiversity, energy as well as land and soils (van Berkum et al., 2018). East Africa is well known for its biodiversity richness and yet faces challenges of natural degradation due to livelihood demands related to food, water energy, and land issues, in addition to prevailing climate change (East African Community (EAC), 2021). Increasing population results into escalating demand for food, thus affecting the provision of ecosystem services due to intense use of natural resources (land, water, and energy). Deforestation in search of food contributes to climate change, while the use of biofuels drives competition between land, water, and energy, thus contributing to diminishing ecosystem resources, leading to human displacement and conflict (Bassel et al., 2018; Richardson, 2010). As climate change is already negatively impacting the food production system in a number of countries in East Africa, the food-water-energy-land nexus needs to be addressed for sustainability (Bassel et al., 2018; Oluoko-Odingo, 2020). The effects of climate change will be more pronounced within the region's agro-pastoral and highland subsistence crop-producing areas thus contributing to natural resource degradation leading to regional insecurity (Department for International Development (DFID), 2008; IPCC, 2014; Ministry of Foreign Affairs, 2018).

Natural resource use conflicts in East Africa

East Africa is characterized by many natural resources such as forests, water resources (lakes, rivers, and the Indian Ocean), minerals, and more recently crude oil and natural gas in Kenya and Uganda, among others. Communities and states are interested in access, control, and management of these natural resources for their livelihoods and well-being. The ecological and demographic pressures, land-use conflicts, and inadequate land administration policies amidst shrinking natural resource endowments in the region contribute to conflicts, and when not addressed may degenerate into violence, environmental degradation, disruption of development projects, and undermining livelihoods (Asaka, 2020; Bereketeab, 2014). These conflicts are common within the pastoral and biodiversity conservation areas within the Arid and Semi-Arid Lands (ASALs)

such as the recurrent Pokomo-Orma conflicts arising from water scarcity due to prolonged droughts in the Tana River Delta (Asaka, 2012), and oil-related clashes/protests in Turkana (Asaka, 2020). Lake Victoria fisheries resources are also a known contributor to disputes in the region. For example, Migingo Island in the waters of Lake Victoria remains a source of simmering tension between Uganda and Kenya. There are also conflicts linked to forest use (timber, wood fuel, medicinal plants, biodiversity, wildlife habitats and other services-carbon dioxide sequestration) either between local communities and the central government or among community members themselves (Adivilah et al., 2018; Asaka, 2019). It is these types of conflicts, arising from disagreements or disputes with regard to the use, access and management of natural resources that are referred to as natural resource use conflicts and/or resource-based/related conflicts (Adivilah et al., 2018; Asaka, 2012, 2020; Asaka & Smucker, 2016; Bassel et al,, 2018; Muigua, 2014; Reda, 2015; UNEP, 2009).

A number of factors are responsible for various dimensions of natural resource use conflicts in the region including proliferations of small arms, political incitement, weakening/replacement of communal land tenure and conflict management systems that empowered the traditional elders with private legal structures, rural-urban migration where youth break ties with traditional structures of authority, and farm-land fragmentation which contribute to uneconomical pieces of land among others (Asaka, 2019, 2020; Mkutu, 2002, 2007, 2014; Odhiambo, 1996; UNEP, 2009).

Enhanced competition for natural resources (forests and water resources) exacerbated by climate change has also been known to contribute to conflict within the region (Asaka, 2012, 2020; Bassel et al., 2018; Kabubo-Mariara, 2015; Muigua, 2014). Even though there is no consensus among climate change scholars on a direct causal relationship between climate change and conflict, it is widely accepted that climate change can increase the risk of violent conflict through competition over scarce resources and alter the dynamics of the existing ones (Asaka, 2020; Bassel et al,, 2018). The social, economic, and political factors represent some of the intervening factors in the climate change-conflict association where pronounced impact occurs on the socio-politically and economically marginalized communities, occupying peripheral societal positions with minimal access to political power or economic opportunities (Meierding, 2013). Some studies establish that a 10–20% increase in the risk of armed conflict is linked to 0.5 °C increase in local temperatures (Hussona, 2021; IPCC, 2014; van Baalen & Mobjörk, 2018).

These factors and more often lead to migration and/or conflict between pastoralists and farmers, pastoralists and conservationists, herders and the government, or among pastoralists themselves (Asaka, 2018, 2019, 2020). Such conflicts are generally managed by existing legal and institutional frameworks. For instance, in Kenya, the courts of law, tribunal under various Acts, the National Environment Management Authority (NEMA), public complaints committee, Environmental Tribunal, and other informal-based community resource governance bodies are charged with the management of the environmental

conflicts. Adequate public participation, empowering the stakeholders with information on environmental rights, and easy access to environmental justice have proved to be more effective in the management of resource use conflicts (Odhiambo, 1996; Wasonga, 2021).

Hazards and disasters in East Africa

A hazard is a risk encountered in a given place arising from a given event such as volcanic eruption, lightning, floods, and droughts, among others. The hazards are concentrated in place and time and may lead to loss of lives of humans and other organisms, loss of infrastructure, land, and vegetation cover. Floods may destroy farms and carry away fertile topsoils, while also damaging infrastructure and other lands. Droughts may cause human displacement due to famine, livestock deaths, and loss of livelihoods. The population movements may lead to tensions within and between communities resulting into conflict. A hazard translates to a disaster when more than 10 lives are lost or 100 people or more are injured, homeless, displaced, or evacuated (Huho et al., 2016).

While disasters have long been considered anthropogenic (human-made) or natural (geophysical or biological) in nature, there is a growing recognition that disasters are largely a reflection of failure, on the part of human society, to prepare adequately thereby being unable to prevent disasters from occurring when faced with a hazardous situation or multiple hazardous situations as is increasingly becoming common in most parts of the world today (Chmutina & Meding, 2019; Kelman, 2020). As Kelman (2019) rightly points out, "disasters by definition are about society, so if humans or society are not unduly affected – which could also be society valuing the environment – then it is not a disaster. Consequently, disasters are not about the environment, but are about society" (pp. 1–2).

Natural hazards linked to weather extremes (hydrometeorological disasters such as droughts, floods, cyclones, tsunamis among others) are more frequent and account for over 70% of disasters globally. Humans contribute to the frequency and severity of these natural hazards due to their role in the emission of greenhouse gases into the atmosphere, which contributes to global warming and climate change. Geophysical disasters include earthquakes, volcanic eruptions, and landslides. Biological disasters are related to weeds, pests, and various types of diseases. Disasters are generally the result of technological and socio-political failures/shortcomings including structural collapse, chemical leaks, spillovers, nuclear leaks, fires, accidents, and politically instigated violence such as terrorism among others (Huho et al., 2016).

The East Africa region is vulnerable to a number of hazards including floods, droughts, earthquakes, landslides, strong winds, lighting, locust infestations, and diseases and pandemics. The region is currently in the middle of a multiple hazards situation. For example, South Sudan is currently grappling with floods and the COVID-19 pandemic. While Kenya, Somalia, and Ethiopia are in the midst of a severe drought made worse by COVID-19 and raging civil war

in the case of Ethiopia. These disasters added to high levels of poverty, disease prevalence, and knowledge and technology gaps lead to displacement of human populations from one region to another, further causing communal tensions and conflict (EAC, 2021a, 2021b; OCHA, 2021). For example, in parts of East Africa (e.g., Eritrea, Ethiopia, Somalia, and Kenya), drought affects over 13 million people, causing migration and ethnic tensions as well as terrorism whereby climate change exacerbates existing social vulnerabilities and makes certain segments of the affected population susceptible to recruitment by terrorist groups (see Asaka, 2021a, 2021b for additional discussion on the climate change and terrorism nexus). Drought is arguably the most prevalent hazard presenting the greatest challenge in the region followed by floods and epidemics. Hence, there is a need to deal with hydrometeorological hazards, particularly drought to improve resilience and prevent disasters from occurring (Oluoko-Odingo et al., 2016; UN Office for Disaster Risk Reduction, 2021).

Internal displacement in East Africa

According to the UN Guiding Principles on Internal Displacement (UNGPID) and African Union (AU) Convention for the Protection and Assistance of Internally Displaced Persons in Africa hereafter referred to as Kampala Convention,

> internally displaced persons are persons or groups of persons who have been forced or obliged to flee or leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border.
>
> (AU, 2009; UN, 2004)

Internal displacement is an ever-growing concern in East Africa. For instance, analysis of data from United Nations High Commissioner for Refugees (UNHCR) database on internally displaced persons (IDPs) and refugees reveals that the number of IDPs in the region grew from about 5 million in 2011 to 9 million in 2020 (see Figure 1.4).

The main drivers of the IDP phenomenon in East Africa include disasters, development projects, environmental conservation projects, inter-ethnic violence, and political violence including post-election violence, terrorism, and civil war among others (Adeola, 2020b; Cantor & Apollo, 2020, Kälin, 2014; Kamungi, 2009, 2011; Klopp, 2009; Krause & Segadlo, 2021; Njiru, 2017; Owain & Maslin, 2018; Yigzaw & Abitew, 2019). Climate change is already being blamed for frequent and intense hazards that create ever more devastating disasters with implications for the IDP phenomenon in the region (Adeola, 2020a, 2021a; Adeola & Viljoen, 2018; Ferris, 2017; Thalheimer et al,, 2021). As discussed in previous sections, climate change also contributes to the other

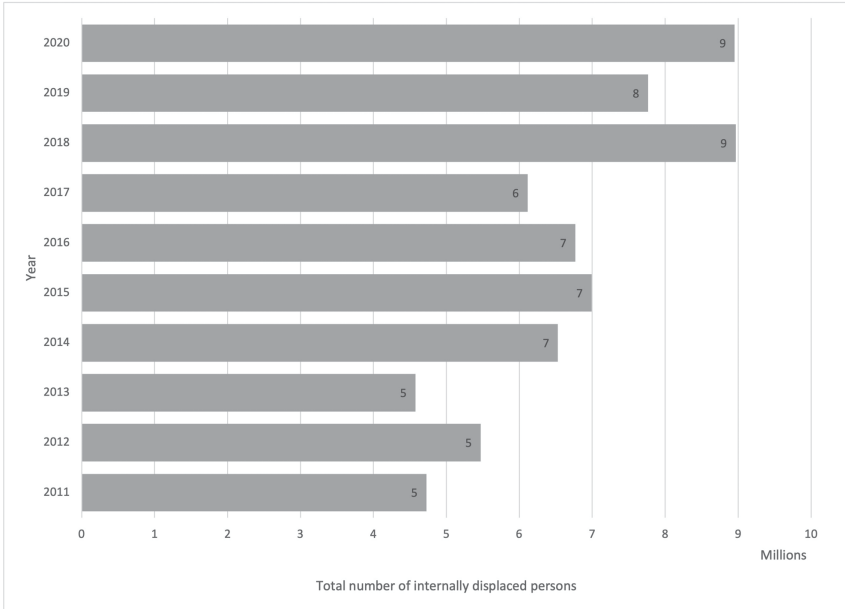

Figure 1.4 Trends in total number of IDPs in East Africa, 2011–2020.

Source: Compiled by author(s) based on UNHCR data available here www.unhcr.org/refugee-statistics/download/?url=0U40Rh.

drivers of internal displacement particularly resource use conflicts and terrorism (Asaka, 2021a).

But at the root of the internal displacement problem sits poor governance and, in most instances, a lack of political will to domesticate and/or implement provisions of the UNGPID and Kampala Convention both of which act as overarching frameworks for the development/formulation of national laws and policies aimed at protecting IDPs (Adeola, 2021b; Adeola & Orchard, 2020; Ferris, 2017; Kamungi, 2010, 2011; Kamungi & Klopp, 2007; Lwabukuna, 2021). In their investigation of the domestication of the two frameworks around the world, Adeola and Orchard (2020) identify the East African countries that have introduced laws and policies aimed at protecting IDPs and when such laws/policies were first introduced namely Burundi in 2000, Ethiopia in 2017, Kenya in 2012, Somalia in 2014, South Sudan in 2011, Sudan in 2009, and Uganda in 2004. With 7 out of 11 East African countries having laws and policies aimed at protecting IDPs, clearly, the problem is of adoption and implementation nature. Adoption in the sense that 4 out of 11 countries have no domestic laws and policies guiding the protection of IDPs within their borders. And implementation in the sense that even with over 60% of countries having introduced laws and policies for protecting IDPs in their respective domestic

jurisdictions, IDPs still face significant challenges across the region (Adeola, 2020b; Yasukawa, 2020).

Therefore, there is a need for all East African governments to come up with laws and policies that ensure protection and empowerment of internal displaced peoples in the region in line with the aspirations reflected in UNGPID and Kampala Convention. Even more important is the need to foster political good will for the effective implementation of existing laws and policies (Adeola, 2021b). In this regard, Adeola and Orchard (2020) suggest three factors that are crucial for moving beyond rhetoric and bringing about action namely timing, involvement of independent domestic institutions or civil society, and international support at the IDP protection law/policy drafting and implementation stages.

Refugeeism in East Africa

Internal displacement and refugeeism are two related but distinct concepts. While internal displacement concerns the involuntary dislocation of a person or groups of people within a country as a result of or in anticipation of conflict, human rights violations, and disaster, refugeeism concerns involuntary dislocation of a person or groups of people across internationally recognized state border(s) occasioned by armed conflict (Daley, 2001; Kälin, 2014). Climate change is already worsening situations that make armed conflict possible with implications for the refugee scourge in the region (Adger et al., 2014). Most East African countries have produced refugees in the recent past albeit with considerable variations in terms of the actual number of refugees produced by each country. Over the past four decades Somalia, Ethiopia, Eritrea, Sudan, South Sudan, Uganda, Rwanda, and Burundi have accounted for most of the refugees from the region. According to UNCHR data, there has been an upward trend in total number of refugees in East Africa since 2011 as Figure 1.5 shows. The trend correlates with rise in intra-state conflicts in countries such as South Sudan, Somalia, Sudan, and Ethiopia.

Disease burden in East Africa

The East African region, like the rest of the African continent, has long endured decades of heavy disease burden. Some of the diseases that populations in the region grapple with include Malaria, Tuberculosis (TB), and Human Immunodeficiency Virus, Acquired Immuno-Deficiency Syndrome (HIV/AIDS) among others. Climate change and COVID-19 pandemic add to this already heavy disease burden (Duclos & Palmer, 2020). However, on a bright note, an analysis of World Health Organization (WHO) mortality rate data reveals that the mortality rate of some diseases such as TB and AIDS has been on a gradual downward trend in much of the region over the past decade as Figures 1.6 and 1.7 show respectively.

The foregoing notwithstanding, East Africa remains central to global/regional governance and security architecture. The region plays host to several regional

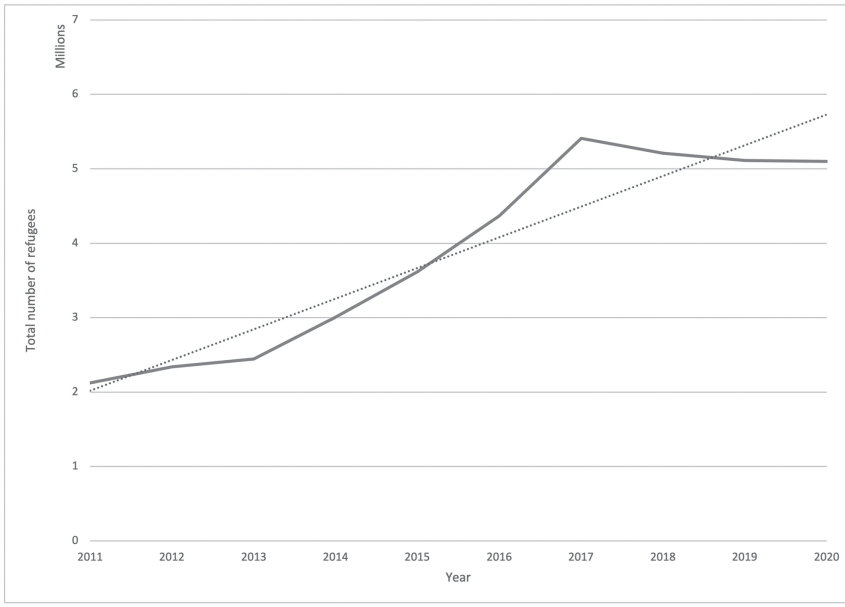

Figure 1.5 Trends in total number of East African refugees, 2011–2020.

Source: Compiled by author(s) based on UNHCR data available here www.unhcr.org/refugee-statistics/download/?url=0U40Rh.

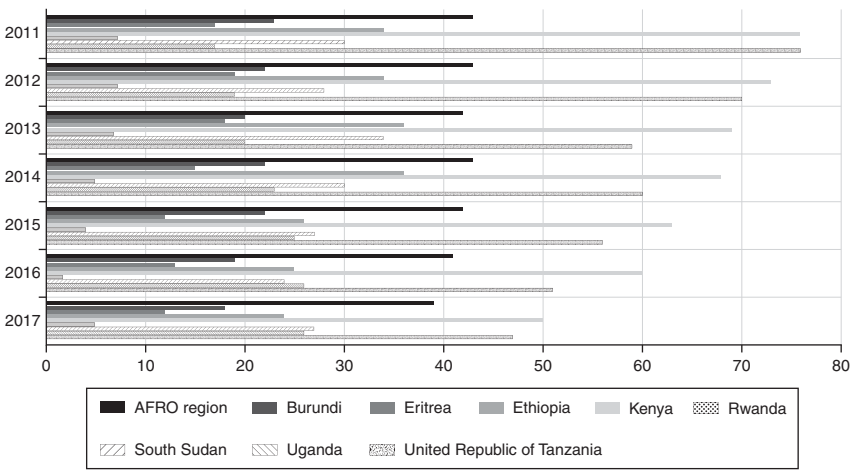

Figure 1.6 Trends in TB-related mortality rate per 100,000 people (both males and females), 2011–2017.

Note: Djibouti, Somalia, and Sudan are not included in the analysis because of missing data.

Source: Compiled by author(s) based on data from WHO/Global Health Observatory.

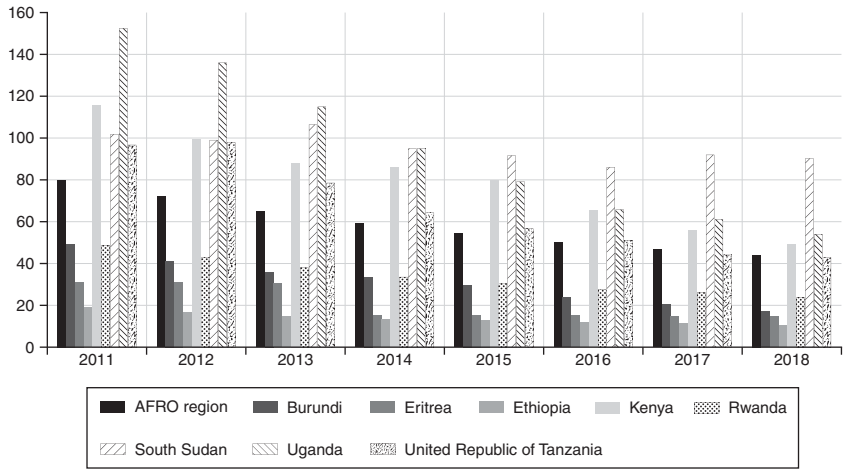

Figure 1.7 Trends in HIV/AIDS-related mortality rate per 100,000 people (both males and females), 2011–2018.

Note: Djibouti, Somalia, and Sudan are not included in the analysis because of missing data.

Source: Compiled by author(s) based on data from WHO/Global Health Observatory.

and international organizations including the United Nations Environment Programme (UNEP) based in Nairobi, Kenya, African Union (AU) based in Addis Ababa, Ethiopia, Intergovernmental Authority on Development (IGAD) based in Djibouti City, Djibouti, and East African Community (EAC) based in Arusha, Tanzania among others.

East Africa is also the birthplace of globally renowned M-Pesa – a mobile phone-based money transfer, payments, and micro-financing service that continues to revolutionize the banking industry in Africa and beyond. M-Pesa was launched in 2007 by Safaricom – one of Kenya's mobile phone service providers – and has since spread to other parts of Africa (e.g., Tanzania, Ethiopia, South Africa, Lesotho, Mozambique, Ghana, Democratic Republic of Congo, Egypt), Asia (e.g., Afghanistan and India), and Europe (e.g., Romania, and Albania). Another significant technology-related development out of the region is Ushahidi[4] – a crowd sourcing platform founded in Kenya in 2008 and currently used by millions of people around the world to digitally map events involving people including most recently to monitor the 2020 U.S. Presidential election.[5] Because of these and other factors, Kenya, a country in East Africa, has come to be known as the Silicon Savanah (Hruby & Bright, 2015). In the next section, we outline the structure of the book and provide a summary of key arguments contained in the rest of the chapters.

Organization of the book

This book is organized into 13 chapters including this introduction, which serves as Chapter 1. The rest of the chapters are as follows.

In Chapter 2, Jeremiah O. Asaka situates the book within current global context and debates. The chapter provides an in-depth discussion on the concept of human security, which lends itself well to the global sustainable development agenda unlike state-centric security. The chapter provides a working definition of human security, discusses human security as a conceptual framework, and highlights how the framework has been operationalized in the book.

In Chapter 3, Francis Onditi argues that Kenya's securitization of Somali refugees within its borders has had negative implications for both state and human security in the country. The chapter specifically points out that successive Kenyan governments' handling of Somali refugees has contributed to the formation of identities such as the intra-resistant refugee terrorists, which symbolize a deepening of criminal networks and civil disobedience, resulting from securitization of refugee crisis, at the expense of human security approaches. It notes that the country's approach to refugee management is currently military-oriented with little regard for human security. The chapter contends that the mistreatment of Somali refugees by Kenyan authorities endears some of the refugees to Al Shabab. The chapter argues that a human security approach to the management of Somali refugees in the country promises a better outcome because such an approach would pay attention to contextual issues, focus on prevention, respect human rights of Somali refugees, and involve both state and non-state actors.

In Chapter 4, Dennis Jjuuko frames protracted refugees as a human security concern and explores the relative plight of Somali refugees in Kenya and Uganda. The chapter argues that a human development approach to handling the human security concern of protracted refugees has considerable promise with regards to ensuring protracted refugees' livelihood security, self-reliance, and acceptance by host communities. The chapter relies on two case studies to establish this point: (1) a case study of Somali refugees in Kenya where they are often framed as a threat to security, and (2) case study of Somali refugees in Uganda who are considered productive members of the Uganda society even though they are not Ugandans.

In Chapter 5, Israel Nyaburi Nyadera and Billy Agwanda analyze prospects for a peaceful and prosperous South Sudan against a backdrop of the country's long history of violent conflicts and peace accords culminating in the most recent 2020 peace pact between the two hitherto warring parties in the country – President Salva Kiir and Vice President Riek Machar. The chapter argues that building resilient peace in South Sudan requires a peace agreement that reflects the local realities and needs of South Sudanese people, not just elites as has been the case in the past. It proposes a human security-centered approach as an alternative framework that can bridge the gaps created by the state-centric

model that emphasizes stability created by power-sharing over other key issues like justice, unity, reconciliation, and development.

In Chapter 6, Francis Semwaza examines the link between human rights and human security. Through two case studies focused on Ethiopia's Gambella region and Tanzania's Nyamuma village of Tanzania, the chapter shows that disregard for human rights of indigenous people including right to own land contributes to human insecurity. The chapter makes a case for an inclusive and decentralized approach to resource ownership. It argues that such an approach would empower indigenous communities to control their resources with positive implications for human security and sustainable development.

In Chapter 7, Alfred Bizoza adopts an institutional economic perspective and relies on a post-genocide Rwanda as a case study to explore three dimensions of human security namely: Economic security, food security, and health security. The chapter also discusses cross-cutting human security and sustainable development issues including land tenure security and gender equity/equality. In light of "new" challenge of COVID-19, the chapter argues that human security in the Rwandan context is a function of visionary leadership and political will.

In Chapter 8, Ruth Wangia-Dixon and Jeremiah O. Asaka frame aflatoxin as a human security issue and explore implications of the same for food security, health security, and economic security in East Africa. In framing aflatoxin as a human security issue, the chapter adopts a narrow human security perspective effectively applying the narrow human security framework in a novel way as it has only been predominantly used in the analysis of violent threats. The chapter argues that privileging violent threats over non-violent threats (e.g., aflatoxins) defeats logic because the essence of human security is to move the referent object of security from state to people thereby putting all threats to human life under the ambit of human security. The chapter establishes that aflatoxin presents a unique challenge to human security and sustainable development in East Africa, which makes its control and management paramount in ensuring a healthy and empowered population especially with COVID-19 pandemic in the mix because aflatoxins are known to interfere with vaccine effectiveness.

In Chapter 9, Mumo Nzau discusses governance as a critical element in the quest for human security and sustainable development in 21st-century East Africa. Taking a literature review approach, the chapter specifically explores the place of governance in environmental security – one of the seven dimensions of human security. The chapter shows how factors such as natural resources and climate change contribute to human (in)security in East Africa. The chapter argues that governance plays a critical role in enhancing human/environmental security by, for example, providing necessary legal, policy and institutional framework for gender inclusive processes of environmental resource management.

In Chapter 10, Evaristus Irandu employs a sustainable human security framework to analyze and discuss the role of climate-resilient rural roads in promoting human security and sustainable development in rural parts of Kenya. The chapter establishes that 23% of roads are in flood prone areas, and more

than 85% of these roads are in poor condition. The chapter further notes that the poor condition of rural roads negatively impacts access to markets, jobs, education, and health services by rural folks thereby contributing to human insecurity. It provides that climate change will make this situation worse through increased frequency and intensity of flooding. Therefore, the chapter makes a case for climate-resilient roads to ensure human security.

In Chapter 11, Alice A. Oluoko-Odingo explores the interplay between climate change and food security – one of the seven dimensions of human security – in East Africa and within the context of sustainable development. The chapter underscores the importance of food security as an important aspect of human security without which other dimensions of human security cannot be attained. The chapter also highlights the impact of climate change on food security and argues for a paradigm shift in the approach to human security for a more equitable, just, and sustainable world.

In Chapter 12, Assumpta Nnaggenda Musana and Doreen Kyosimire frame housing as a human security and sustainable development issue and contextualize their analysis within Kampala, Uganda. The chapter analyzes Kampala's low-income housing areas with the aim of developing house types that can be both adequate for low-income households and also prevent urban sprawl and the resultant vulnerabilities. The chapter makes the case for effective urban planning as a means for addressing urban poverty and household vulnerability.

In Chapter 13, Elias H. O. Ayiemba adopts a broad human security analytical framework in his exploration of the urbanization-migration nexus in Nairobi, Kenya. Rural to urban migration presents opportunities (e.g., employment, labor, etc.), but it also significantly contributes to existing human insecurity in urban areas including violence, poverty, poor housing, and disease among others. The chapter recommends the formulation of a migration policy to guide and engender effective management of migration from rural areas to urban centers. The chapter also makes the case for a multidisciplinary and multi-sectorial approach to research to engender stronger partnership on issues of advocacy against the proliferation of small arms in the countryside and urban centers.

Summary and conclusion

This chapter has introduced the book and contextualize it within the broader policy and scholarly debates on the nexus between environment, development, peace, and security. The chapter has also provided pertinent background information on East Africa, which the book defines as comprising eleven countries namely Kenya, Uganda, Tanzania, Burundi, Rwanda, Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, and Somalia. Finally, the chapter has outlined the structure of the book and provided a concise summary of chapters.

While the book project began in the pre-COVID-19 pandemic period, Chapter 2 and a few other chapters discuss the current reality of the COVID-19 pandemic, which presents a significant challenge to achieving sustainable

development and, therefore, human security both in East Africa and globally. It is worth noting here that the book features a relatively decent mix of senior and junior East African born scholars based at various institutions on the African continent and abroad. Thus, the book provides a rare and much needed perspective on human security theory and practice within the context of post-2015 sustainable development agenda.

We hope you enjoy reading this book and find it beneficial/resourceful.

Notes

1 www.un.org/en/global-issues/peace-and-security.
2 See for example Stockholm Forum on Peace and Development www.sipri.org/events/stockholm-forum-peace-and-development.
3 Wangari Maathai – Facts. NobelPrize.org. Nobel Prize Outreach AB 2021. Thu. 2 Dec 2021. www.nobelprize.org/prizes/peace/2004/maathai/facts/.
4 www.ushahidi.com/about.
5 Election Incident Reporting project for US elections, November 2020 (and during voting prior to election date) https://eirusa.ushahidi.io/views/map.

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2 Human security

Jeremiah O. Asaka

Introduction

Today, we live in an increasingly interconnected and interdependent world where something that happens in a distant place almost always has implication(s) for other things/people in other places. Meaning things that once seemed remote and irrelevant are now increasingly closer and ever more relevant. As such, it is no longer feasible to simply ignore security problems/challenges in distant places because sooner or later distance gives way for proximity. For example, the European refugee/migrant crisis of the last decade was occasioned by an influx of refugees escaping armed conflict in parts of the Middle East and North Africa (MENA) – a region and culture that Europe has long considered distant and nemesis (Lee & Nerghes, 2018; Lendaro, 2016; Quinn, 2016).

Another salient example is the unfolding COVID-19 pandemic, which was first reported in Wuhan, China, but now literally affects every human-inhabited place on Earth (Morens et al., 2020; Plato et al., 2021). In a less-connected world such as the one that existed during the Cold War era and/or earlier, COVID-19 could have easily been contained in China (or East Asia) thereby effectively preventing it from developing into a global pandemic. But due to prevailing global interconnectedness and interdependence, COVID-19 has developed into a pandemic with a devastative global impact (Milani, 2020). Whereas the spread of the pandemic is attributable to globalization, the international community's inability to keep the pandemic under control is attributable to the observed decline in multilateralism and resurgence of nationalism, particularly buoyed by the election of Donald Trump in 2016, Jair Bolsonaro in 2018, and Boris Johnson in 2019 among others (Cavlak, 2020; Milani, 2020). In East Africa, the 2020 re-election of the late John Pombe Magufuli as Tanzania's President raised considerable concern especially because he downplayed the pandemic and spread misinformation about COVID-19 vaccines (Makoni, 2021; Nakkazi, 2020).

In today's highly interconnected and interdependent world, multilateral cooperation on global security issues is far more valuable than competition (Carayannis & Weiss 2021; Chikvaidze, 2020; Degterev, 2019; McLean et al., 2006; Sachs, 2020; Shaw et al., 2006; Vasiliev et al., 2021). That is why

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Washington (i.e., the Biden administration), now more than ever, needs to work with Beijing (i.e., Xi Jinping's administration), Moscow (i.e., Putin's administration), and a host of others (e.g., Japan, the World Bank, International Monetary Fund, United Nations, World Health Organization (WHO), European Union, African Union, pharmaceutical firms, and vaccine manufacturing countries including India and Germany among others) to nip the emerging trend of COVID-19 vaccine nationalism in the bud for a sustainable, safe, just, and inclusive future (Bollyky & Bown, 2020; Kozul-Wright, 2020).

The establishment of the COVID-19 Vaccines Global Access (COVAX) initiative by WHO, European Commission, and the Government of France in April 2020 was a good start, but the politics of the day at the time (e.g., Trump was still in the White House) stood in the way of substantive progress. Fortunately, with the election of Joe Biden, politics has since changed significantly, and multilateralism seems to be on the rebound. In fact, at the time of writing, the United States just hosted a global COVID-19 summit where world leaders reiterated their support for COVAX (see e.g., UNICEF, 2021), a sign that multilateralism is indeed on the rebound. Part of ensuring equitable global access to COVID-19 vaccines involves encouraging the production of a variety of effective vaccines in places where vaccine uptake is still relatively low such as the African continent. Based on current plans, Pfizer-BioNTech, Johnson & Johnson, China's Sinovac, and Russia's Sputnik V are some of the vaccines that are likely to be manufactured on the African continent in the coming year (Usman & Ovadia, 2021).

The foregoing discussion paints a picture of what Sabina Alkire once referred to as "the altered security environment" (Alkire, 2003, p. 10). She correctly points out that, "configuration of security threats in this post-Cold war world period of globalization and technological advance is clearly different than it was recently. Some threats are ancient and persistent; others are unprecedented" (Alkire, 2003, p. 11). The changing security landscape clearly calls for creative/innovative ways of thinking about and addressing security concerns (Albert et al., 2021). Indeed, security scholars and practitioners have long debated this issue and suggested possible alternatives including the concept of human security (see e.g., Alkire, 2003; Bajpai, 2004; Brauch, 2008; Caballero-Anthony, 2016; Dabelko et al., 2013; Dalby, 2009; King & Murray, 2001; Lövbrand & Mobjörk, 2021; Martin & Owen, 2014; Owen, 2004; Paris, 2001; United Nations Development Program [UNDP], 1994).

The purpose of this chapter is twofold. First, the chapter introduces the reader to security theory and practice with a particular focus on human security. Second, the chapter presents the book's human security conceptual framework and highlights how the same has been operationalized in the book. It is organized into six sections and proceeds as follows. This brief introduction paves way for a second section of the chapter, which presents a lay of the land with regard to security theory and practice. The chapter conceptualizes security as a contested term, which keeps evolving as long as the debate on the same continues. The chapter also delineates two broad categories of security

theory and practice, namely traditional and non-traditional security. Here, the chapter situates human security within the latter category. In the third section, the chapter discusses human security theory and practice in greater detail and provides a working definition of human security concept for the book. In the fourth section, the chapter describes the seven dimensions of human security borrowing from the 1994 UNDP conceptualization of human security. In the fifth section, the chapter details the human security conceptual framework and highlights how it has been operationalized in the book. And, finally, in the sixth section, the chapter concludes with a summary of key points. In the next section, I discuss the lay of the land with regard to security theory and practice.

Security: A debated and continuously evolving concept

Security is a contested concept. Meaning that, often, security means different things to different people (Williams & McDonald, 2018). However, a keen reading of security studies literature reveals that what security means in any given situation/context really boils down to four essential elements including referent object (i.e., whose security?), threat (i.e., security from what/who?), response (i.e., how should security be provided?), and responsibility (i.e., who provides security?). Security theory and practice can be grouped into two broad categories, which (hopefully) speak to one another.

On one hand, there is traditional security theory and practice, which considers state/nation-state as the referent object of security and violent conflict (involving state and non-state actors at the sub-national, national, and/or international level) as the primary threat to security (Huebert, 2021; Latif & Khan, 2011). According to the traditional security worldview, the provision of security is the responsibility of state actors, particularly the military (Shaw, 2014). Traditional security, also known as state-centric security, has long been criticized for being ill equipped to protect people from non-military threats, which constitute the majority of security threats today including pandemics, disasters, loss of biodiversity, and climate change among others. Another significant criticism of state-centric security concerns its trust in the ability of states/nation-states to provide security to their citizens. Critiques argue, correctly, that a state/nation-state can be a source of insecurity for its citizens either by commission or omission.

On the other hand, there is non-traditional security theory and practice, which emerged in response to the shortcomings of traditional security theory and practice (Caballero-Anthony, 2016; Peoples & Vaughan-Williams, 2020). It specifically emerged out of the need to make security more responsive to new realities in the threat landscape, including those that are specific and/or peculiar to certain demographics such as historically marginalized groups (e.g., racialized minority groups, poor people, indigenous people, women, and LGBTQ+ folks). As such, non-traditional security is anything but monolithic. However, what its sub-strands have in common is that they all rethink and redefine security in ways that do not privilege state and/or military security

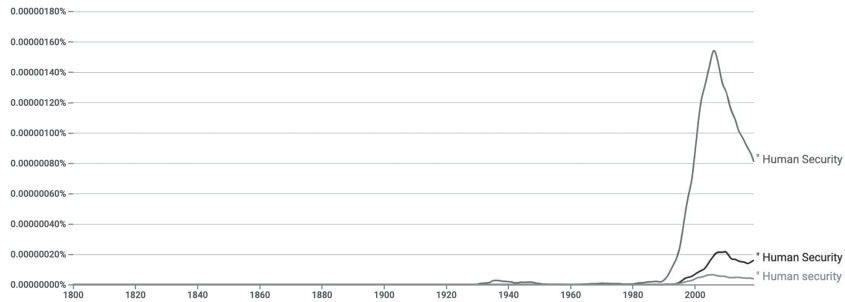

Figure 2.1 Trends in publication of books that reference human security.

Notes: This figure shows trends in the publication of books that contain the phrase "human security" and its two variants – "Human Security" and "Human security" – in the period 1800–2019. The figure shows that human security first appeared in English books around the 1930s. The figure also shows a sharp rise in the number of books referencing human security beginning around the late 1980s and early 1990s, which coincides with the end of the Cold War, publication of the 1994 human development report, and ensuing scholarly/policy debates around the concept of human security. The figure is based on a time-limited (i.e., 1800–2019), case-sensitive search of the phrase "human security" within the English (2019) corpus of Google Books Ngram Viewer tool.

Source: Compiled by the author using Google Books Ngram Viewer tool.

over the security of people at the individual, community, and/or societal levels. In essence, non-traditional security reimagines security in ways that change the referent object of security, expand the range of security threats, promote alternative intervention measures such as sustainable development, and extend responsibility for security to both state and non-state actors.

Of particular interest to this book is the idea of human security, which emerged in the early 1990s from a burgeoning non-traditional security theory and practice (Alkire, 2003; Asaka, 2018, 2020; UNDP, 1994; Shaw, 2014). Although the ideas that underpin human security such as "freedom from fear, freedom from want, and the freedom to live in dignity" can be traced back, at least, to the early days of the United Nations (Gasper et al., 2020, p. 5). Figure 2.1 shows trends in the publication of books that reference human security between 1800 and 2019.

In the next section, I discuss the concept of human security and provide a working definition of the same for the book.

Human security: Towards a working definition of human security

As is the case with the concept of security, "conceptions of human security varies widely" (Alkire, 2003, p. 5). Arguably, human security means different things to different people as there is no universally agreed-upon definition of human

security (Martin & Owen, 2014). But across the various conceptualizations of human security (Asaka, 2018; Owen, 2004) exists a common denominator, i.e., people as a referent object. This means that, unlike state-centric conceptualizations of security, human security is people-centered. By moving the referent object from the state to people, human security in effect expands the range of security threats beyond traditional threats associated with inter-state war and/or intra-state violent conflict to include non-traditional security concerns including disease, wildlife attacks, unemployment, disasters, illiteracy, extra-judicial killings, and food unavailability among others. The move also leads to variety in the actors responsible for security (Shaw, 2014).

In addition to the fact that different people experience security differently, people live in various geographical contexts that present unique security challenges. This means that whatever is considered a human security concern in one geographical context may not necessarily be a concern in another. This fact speaks to the context-specific nature of human security. However, as noted earlier on in this chapter and currently evidenced by the COVID-19 pandemic, increased global interconnectedness and interdependence brought about by globalization and technological advancement keeps blurring international boundaries, thereby enabling threats to spread across the globe with relative ease.

Considering the foregoing, human security can be understood as a state of being in which people – either as individuals or as members of a community/group – live a dignified life that is free of fear and want. Where freedom from fear concern protection against physical harm or loss of life; freedom from want involves both provision of basic needs and empowerment of individuals to ensure they have the capacity to provide for themselves, and freedom to live with dignity involves respect for human rights and dignity while actively safeguarding and nurturing the same. Therefore, human security isn't just "a concern regarding the protection of human life from threats to its core but also regarding the empowerment of people so that they can contribute to their own protection" (Asaka, 2020, p. 78). Table 2.1 provides a definitional summary of human security highlighting the referent object, threat(s), response, and responsibility for each of the three aspects of human security namely freedom from fear, freedom from want, and freedom to live a dignified life.

As noted in the previous section, human security should be understood within the context of the on-going debate about rethinking security in light of:

> empirically observable changes in the nature of security threats, and in our ability to address them; analytical advances in the ability to understand the interdependence between different security threats, and also between the security of fellow citizens and persons across the globe; and, institutional changes both within security structures and at the national and international levels.
>
> (Alkire, 2003, p. 5)

Table 2.1 A definitional summary of human security

	Freedom from fear	*Freedom from want*	*Freedom to live a dignified life*
Referent object	People (i.e., individual and/or community)	People (i.e., individual and/or community)	People (i.e., individual and/or community)
Threat	Natural hazards, disasters, violence including genocide, civil war, inter-ethnic tensions/clashes, domestic violence, and other threats that could bring about physical bodily harm or, worse, loss of life	Poverty and other threats that negatively affect a person's ability to achieve his/her basic material needs	Poverty, human trafficking, sex trafficking, racism, slavery, child labor, torture, and other threats that deprives a person of his/her human dignity
Response	Humanitarian intervention, conflict resolution, and peace building	Promotion of good governance, sustainable development, human development, and human rights	Promotion of good governance, sustainable development, human development, and human rights
Responsibility	State and non-state actors	State and non-state actors	State and non-state actors

Source: Compiled by author.

As an alternative to state-centric security theory and practice, human security has gained considerable traction in both academic and policy circles. A recent global survey on human security commissioned by the United Nations Trust Fund for Human Security[1] found that:

> (i) human security is broadly considered an essential framework to strengthen prevention and to respond to multi-dimensional challenges; (ii) the human security approach has been mainstreamed widely as an analytical and planning framework by those implementing activities on the ground; and (iii) there is considerable interest in further expanding the understanding and application of the concept and approach.
>
> (Human Security Unit, 2021, pp. 1–2)

In the next section, I discuss the dimensions of human security.

Dimensions of human security

A notable consequence of having people as the referent object of security is that the number of threats tends to grow considerably, which does present analytical and/or practical challenges (refer to the conceptual framework section for a discussion on some of these challenges). Therefore, in a bid to keep things organized and manageable, the 1994 UNDP report introduced seven categories under which human security threats could be considered. The seven categories, which I refer to here as dimensions of human security include food security, economic security, health security, environmental security, personal security, community security, and political security (UNDP, 1994). In Table 2.2, I provide a brief description of each of the seven dimensions.

Table 2.2 A brief description of human security dimensions

Dimension	*Brief description*
Food security	Food is essential for human well-being. Without access to adequate, affordable, safe, and nutritious food an individual's well-being could be compromised leading to ill-health and even death. This makes food security a critical component of guaranteeing human security. The United Nations Food and Agriculture Organization (FAO) defines food security as "a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and health life" (FAO, 2001, p. 49). Moreover, according to Oluoko-Odingo (2011, p. 2), "food insecurity and poverty are twin concerns, as lack of food security causes poverty, and any efforts directed towards eradicating poverty positively affects food security."
Economic security	Conventionally, economic security relates to access to stable and dignified employment and income. According to the UNDP (1994, p. 25), "economic security requires assured basic income – usually from productive and remunerative work, or in the last resort from some publicly financed safety net". It should however be noted that the traditional narrow focus of economic security means that a considerable proportion of the world's population engaged in productive but non-remunerative work is not accounted for in economic analyses. In view of this, economic security, particularly in economies that are not well-integrated into the international monetary economy (as, for example, some communities in northwestern Kenya), should be understood as livelihood security.
Health security	Good health is critical to human security. On the contrary, ill health is a manifestation of human insecurity. By the early 1990s when the human security concept was beginning to gain global prominence, the major causes of death in the so-called developing world were infectious and parasitic diseases while diseases of the circulatory system were the major killers in the so-called industrialized world (UNDP, 1994). But today, with globalization being more advanced than it was in the early 1990s, infectious diseases are increasingly becoming global as evidenced by the ongoing COVID-19 pandemic.

(*continued*)

Table 2.2 Cont.

Dimension	*Brief description*
Environmental security	The environment can be a source of both human security and human insecurity (Adger et al., 2014; Ali, 2007; Carius et al., 2004; Floyd & Mathew, 2013; Homer-Dixon, 1999; Obi, 2000; UNEP, 2004, 2009). On the one hand, the environment provides ecological services, which are critical for the survival of all forms of life including human life. On the other hand, competition for control over natural resources is a significant driver of violent conflicts in natural resource-rich/poor areas of the world. Moreover, climate change, loss of biodiversity, land degradation, air pollution, and weather-related disasters are known contributors to the notable decline in human security across the globe.
Personal security	Personal security concerns violence and/or threats that could cause physical bodily harm to an individual. Threats to personal security include "threats from the state (physical torture), threats from other states (war), threats from other groups of people (ethnic tension), threats from individuals or gangs against other individuals or gangs (crime, street violence), threats addressed against women (rape, domestic violence), threats addressed at children based on their vulnerability and dependence (child abuse), and threat to self (suicide, drug abuse)" (UNDP, 1994, p. 30). Moreover, Asaka (2018) identifies wildlife attacks as a threat to the personal security of the Samburu people of northern Kenya.
Community security	Community security is premised on the fact that community – a group of people who share a common cultural identity and/or ancestry – can be a source of both security and insecurity. For example, "the extended family system offers protection to its weaker members and many tribal societies work on the principle that heads of households are entitled to enough land to support their family" (UNDP, 1994, p. 31). Conversely, inter-ethnic mistrust, tension, and rivalry often lead to deadly violent conflict as is commonly the case in the Karamoja cluster, northwestern Kenya (Simonse, 2011). Moreover, communities have suffered insecurity – such as slavery and State-led violation of the rights of indigenous people – because of the mere fact of their common identity.
Political security	Human security is premised on respect for human rights: "one of the most important aspects of human security is that people should live in a society that honors their basic human rights" (UNDP, 1994, p. 32). Therefore, political security can be understood as freedom from political witch-hunt, political detention, political marginalization, torture, and extra-judicial killing among other forms of human rights violations. It also means freedom of speech, right to information, and freedom to participate unhindered in the political process of one's country.

Source: Adapted from Asaka (2020) with some modification.

It is important to note here that these dimensions of human security are not mutually exclusive. With human security defined and its dimensions identified, the discussion now shifts to the conceptual aspects of the book. In the next section, I outline the human security conceptual framework underpinning this book and highlight how it has been operationalized across all chapters of the book.

Human security conceptual framework

As an analytical framework, human security has elicited considerable debate and attracted significant criticism (Alkire, 2003; Christie & Amitav, 2008; Owen, 2004). In terms of criticism of the concept, I delineate two main concerns, both of which undercut the analytical utility of human security: (1) non-existence of a universally agreed-upon definition, and (2) an endless list of security threats.

The first concern (i.e., non-existence of a universally agreed-upon definition of human security) has two parts to it, namely a lack of definitional consensus and definitional clarity. Definitional consensus essentially pertains to a group of concerned parties settling for a particular meaning as the agreed-upon meaning to be used in reference to a specific concept/subject/word under their consideration. For example, climate scientists under the auspices of the Intergovernmental Panel on Climate Change (IPCC) may come to a consensus that any definition of climate change should – at the very least – consider it as an anthropogenic phenomenon. As alluded to earlier on, the concept of security itself has no universally agreed-upon definition. Meaning this first part of the concern is really a non-issue. That said, the critics have a point on definitional clarity, which concerns being clear about what one understands the concept to mean. Definitional clarity is paramount for any analysis, but it should not be confused with definitional consensus. It is only proper that anyone employing a human security analytical framework provides a clear and concise definition of the concept in the context of their analysis. Failure to do this only compounds the problem. That is why a whole section of this chapter has been dedicated to defining human security (refer to the chapter's section entitled *Human security: Towards a working definition of human security* for the book's working definition of human security).

The second concern (i.e., human security opens the door to an endless list of security threats) is perhaps the most significant of the two. The initial conceptualization of human security, detailed in the 1994 UNDP human development report, provided seven categories under which human security threats can be considered, namely personal security, community security, political security, food security, economic security, health security, and environmental security (refer to Table 2.2 for a summary of these categories). Critics charge – and rightfully so – that human security opens the door to a laundry list of threats, which leads to a sort of analytical nightmare involving a copious number of variables. This is of particular concern to quantitative scholars. The issue has been the subject of considerable debate among scholars of human security

Figure 2.2 Three conceptualizations of human security.
Source: Compiled by author.

specifically and security studies generally (see e.g., King & Murray, 2001; Owen, 2004; Paris, 2001).

Considering the foregoing, I identify three conceptualizations of human security from the literature as follows (see Figure 2.2 for a schematic representation of the three conceptualizations of human security). First, a broad conceptualization, which is essentially the original UNDP conceptualization of human security. This conceptualization has limited analytical utility due to its comprehensiveness, but continues to gain traction in the policy and practice realm, particularly within the UN and non-governmental organization (NGO) sector. Second, a narrow conceptualization, which retains people as a referent object, but limits threats to only those that are violent in nature. Relative to the broad conceptualization, this conceptualization significantly improves on analytical utility by limiting the number of variables. But in doing so, it leaves out a host of real human security threats, which makes it just as less comprehensive as, for example, national security that human security is supposed to be a better alternative to. Third, a threshold-based conceptualization, which considers, and includes/excludes threats based on their severity and pervasiveness. This conceptualization is sort of like a middle ground between the narrow and broad conceptualizations of human security. It improves on analytical utility without necessarily leaving out severe and pervasive threats to human security; of course, depending on how threat identification is conducted in any given context and by who.

From the foregoing discussion on conceptualizations of human security, and considering the Chapter 1 discussion on linking environment, development, peace, and security, a narrow conceptualization seems least suited for analyzing human security and sustainable development in East Africa. However, for a book that showcases and encourages creative/innovative ways of thinking about human security, the three conceptualizations of human security that have been delineated in the previous paragraph only serve as a starting point. In other words chapter authors have been accorded the liberty to: (1) employ any one of the three outlined competing conceptualizations in their analysis without modification, (2) employ any one of the three outlined competing conceptualizations in their analysis with some modification to enhance

analytical utility, or (3) propose novel/innovative ways of thinking about human security considering the ever-changing human security threat landscape and the need to achieve sustainable development. Thus, there is considerable variation in the conceptualization of human security across the various chapters of the book. For instance, Chapter 8 focuses narrowly on aflatoxin as a human security threat, thereby modifying the narrow conceptualization of human security, while Chapter 10 relies on an innovative sustainable human security framework to analyze climate-resilient rural roads and showcase their contribution to sustainable development. I consider such conceptual variations more of an asset than a liability.

Conclusion

This chapter has situated the book within a broader global context characterized by major global trends including technological advance, interconnectedness, interdependence, decline in multilateralism, changing security landscape, and the reality of COVID-19 pandemic among others. The chapter has also discussed the concept of human security in detail, identified its seven dimensions (i.e., food security, economic security, health security, environmental security, personal security, community security, and political security), and delineated three ways it has been conceptualized in the literature, namely narrow, broad, and threshold-based human security. Finally, the chapter has presented the book's human security conceptual framework and has highlighted how the same has been operationalized across the various chapters of the book. Relative to other conceptualizations of security, human security provides a better framework with which to understand, prevent, and respond to 21st century environmental, development, peace, and security concerns/challenges captured in the 17 sustainable development goals outlined in Chapter 1 of the book.

Note

1 United Nations Trust Fund for Human Security www.un.org/humansecurity/.

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3 Securitization versus human security

An ontological argument

Francis Onditi

Introduction

In a Eurocentric type of thinking, "security" was parochially constructed as the presence of the military and police, either providing physical protection or thwarting any dissenting voices. In the Cold War Era, security denoted military defense of state territory and interest (Baldwin, 1997). No wonder the notion of "security" was consigned to the domain of Security Studies. The lack of decisive results from military counter-insurgency operations across the globe is an indication that the approach to contemporary security threats operates within the old thinking (Katzman & Thomas, 2017). Indeed, as Smith (1999: 79) observes, the preoccupation of security studies with "military statecraft limits its ability to address the many foreign and domestic problems that are not amenable to military security". In this view, authorities have prioritized state security by investing more in military arsenals and less focus on individual, personal and human security frameworks, a condition referred to us, societal insecurity (Busumtwi-Sam, 2008). But, in 21st century, conflict and warfare have evolved to a level where states are not adequately prepared to respond adequately (Brzica, 2018). Certainly, issues that can be rightly deemed as security problems yet, falling outside the military domain, have aptly crept into the security discourse globally. Security should not be limited to militarism and policing, anyway. Rather, human security has the potential of offering a new approach to peace, security, and development. This chapter utilizes the case of the refugee crisis in Kenya to illustrate how the process of securitization can be used by states to undermine human security.

Securitization of the refugee phenomenon is a modern construct in the past decade. Kenya has been experiencing an unprecedented influx of refugees emanating from the political and socio-economic upheavals of its neighbors since the 1970s. Over the years, the phenomenon of the refugee has built a perception of insecurity to national security. As a result of this framing and socialization of refugees in the country, the Kenyan authorities have responded to the refugee phenomenon by labeling them as an "existential threat". But the threshold for an existential threat is higher than this characterization; for a security risk to pose such a threat, it must be classified as a strategic threat,

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i.e., framed at least militarily (Mabon, 2018). This chapter seeks to examine the extent to which the four "securitization" notions (audience, power relations, context and practice, and instruments) (Williams, 2007), have secured the country or aided in the construction of refugees as a security threat. Kenya's relationship with refugees has aroused mixed reaction. It is the first country in the region to have signed a tripartite agreement with the Somali government and the United Nations High Commission for Refugees (UNHCR) on the management of refugees. Despite this diplomatic gesture, the notion of the refugee as an "existential security threat", remains a malign social phenomenon, recreating what is commonly known as, "refugee terrorists". I doubt, this outcome is what the government of Kenya intended to achieve. Hence, the question remains, how the state should effectively manage the refugee phenomenon without exposing them to the dangers of victimization and radicalization? I argue that the aforementioned conceptual inclinations of security are not merely processes of safeguarding a state, but can have wider ramifications on societal relations, including the construction of the stature of resistance among refugees, hence perpetuating societal stratification or even human insecurity.

This chapter is organized into five sections. Following the introduction is a section that contextualizes security debate within post-Cold War peace and security environment. Section three examines four conceptual inclinations, with the aim of understanding how the various actors utilize such tools to construct security regimes. But simply studying the challenges and successes of securitization may not be adequate. Thus, section four analyses the instrumentality of human security as an alternative framework for managing the complex refugee crisis. The fifth section explores the possibilities of a comprehensive approach to the management of security challenges in the context of counter-insurgency operations. Finally, the conclusion provides some insights on the conceptual refinement of the securitization theory with the aim of reforming the management of refugee crisis based on a human security framework anchored on the deontic rights.

Contextualizing the debate

There are still concerns over whether African states are interested in shaping the institution of asylum. The historical account of the refugee phenomenon in Kenya, however, points to *ad hoc* approaches in managing the problem, leading to a spiral effect–violation of refugees' rights, radicalization and the changing identity of refugees. Before delving deeper into the issues of "securitization" verses the "refugee", this section reviews the contours of "refugee phenomenon", within the international security system. The refugee influx arose from diverse sources, including persecution for racial/political/religious reasons, war, famine, and starvation (Roe, 2008). Moreover, fear of these phenomena, or fear of the lack of these resources may cause mass exoduses of populations to other spaces that are considered or perceived as safe and secure (Nobel, 1998). As

refugees move to new destinations, they cause disequilibrium, and hence, create a unique human ecosystem. This disequilibrium tends to evolve into widespread social, political, economic, legal, and environmental disruptions. The conventional reaction to this problem has been to frame refugees as a threat to safety and security, particularly in refugee receiving countries (Baldwin, 1997). Subsequently, authorities always interrogate the situation to proffer an appropriate response to the problem. The response might take any form – military, legislation, or policy intervention.

In Kenya, unfortunately, the framing and response have taken the form of "securitizing", inevitably conforming to the character of an "existential threat". Indeed, scholars have observed that a threat of existential nature could affect nation-state or a local population (Kingsbury, 1996). This entrapment constructs what Darwich and Fakhoury (2017) call "*move*". The "*move*" in turn obligates the actor, in this case the state, to a particular subsequent behavior or action. Jutila (2016) conceptualizes "securitization" in relation to the course of the impact that takes at least three paths, demographic, political, and security. Taureck (2006), quoting Buzan (1991), however, argues that securitization cannot simply be made to be everything. He puts forward, three steps in constructing the concept of "securitization". They include identification, emergency action, and inter-sectorial relationship. These inter-related processes, however, might endanger a state or group of states in a defined territory, leading to an "existential threat" (Waever, 1995).

In view of this ever-changing context, "securitization" as a component of International Relations (IR) studies (Huysmans, 2006), has garnered attention from varied scholastic perspective. Some scholars have endeavored to redefine the terminological meaning of "security" by questioning associated ontologically materialistic and theoretical approaches to security (Waever, 1995). In practice, though, to protect their existence from such threats, states proclaim that pertinent action must be taken (Balzacq et al., 2016). To recuperate the security discourses from this Eurocentric approach, which in essence perpetrates racial violence against black refugees, Howell and Richter-Montpetit (2020) suggest stripping the securitization theory some of its methodological apparatus, including the concept of "normal politics". However, the political and intellectual environment in which refugees operate in Africa is mainly shaped by ethnic animosity and border politics as opposed to the politics of racism or intellectual biasness. Therefore, efforts to de-securitize the refugee phenomenon in the global south should be framed within the comprehensive approach framework that intractably addresses development, defense, and diplomacy (3Ds). This model is particularly important for Kenya as it experiences an influx of refugees driven by systemic challenges, including pressure on limited resources, the structural insurgency situation in Somalia and political instability in Ethiopia, Eritrea, South Sudan, Democratic Republic of Congo, and Burundi. This chapter thus focuses on implications of "securitization" on the management of the refugee phenomenon in Kenya. The cyclic process of securitization in a state involves a perceived existential threat against a referent

object, a securitizing move, acceptance of a threat construction and the issue is moved on to the security agenda/policy as illustrated in the following section.

How securitization is sustained in the modern state

This section considers variations in policy and theory, by examining the four conceptual inclinations of securitization: (1) audience, (2) power relations, (3) context, and (4) practices and instruments. Whether the various measures adopted by the Kenyan government in responding to the problem of refugees increased security tensions or mitigated against the threat, will vary between these four conceptual inclinations (Waever, 1995; Walt, 1991; Watson, 2012). The first conceptual inclination of securitization is the "audience". In the classical Copenhagen School, securitization processes must involve the public through debates, political utterances, or policy formulation (Cote, 2016). Therefore, the concept of "audience" defines the intersubjectivity of securitization. The nature of securitization raises questions, for example, what would be the consequences of engaging the audience and what would be the criterion for determining acceptance by members of the public on an issue such as whether refugees should or should not be repatriated? Buzan and Hansen (2009) definition take care of the several factors, including the perception of actors. However, this condition seems a tall order considering the functioning of a state; it would be almost impossible to believe that every time a government introduces a policy, the public endorses it. Hence, scholars have argued the need to develop the concept of "audience" (Williams, 2007). The reasoning behind audience acceptance is to legitimize emergency measures. However, the vagueness of the concept implies that it remains difficult for intellectuals and political activists to challenge actions taken by authoritarian regimes against refugees. Within the period specified in this chapter, the Kenyan government has formulated policies leading to the securitization of refugees. In the past, we have seen the media engage the public on what they term as the management of the refugee crisis, albeit with limited success.

In this era of technology advance, things such as social media and the internet have been instrumental in the activities of belligerent groups. Considering the foregoing, it is crucial that the role of the media and internet defines the concept of "audience", as initial measures in countering terrorism. The Kenyan government, through the Communication Commission of Kenya (CCK), has intensified social media monitoring. However, this approach seems to compound the complexity of engaging the audience in securitization, since, among the audience, elements are perceived as perpetrators of cyber insecurity. It is for this lack of clarity of who the "audience" is that scholars continue to question the composition of the "audience". Should it be confined to those perceived actors in particular security issues or elites, technocratic or scientific settings? (Baele & Thomson, 2017; Cote, 2016; Ghincea, 2017; Vultee, 2010). Still, it is widely acknowledged that the "setting" is largely shaped by expectations of a specified type of audience (Roe, 2008). Suggestions such as the classification

of the audience are necessary as a first step in securitization move as suggested by Vaughn (2009). Securitization is not necessarily a negative thing for a state to do (Roe, 2012). However, in a democratic context such as Kenya where every "move" by the state is questioned, this categorization produces two complications: (1) it might lead to the profiling of individuals, which subverts efforts to uphold human rights; and (2) in order for the players to trace policy development, the "move" must subtly connect with various settings. This raises a fundamental question, is a securitization intended for the benefit of the larger society or is it part of state craftsmanship to sustain the incumbent political regime?

The second concept is "power relations". The securitization process is not only about discourses, but also about "whose" discourse matters. This is a question of power relations among the various actors–members of the public, legislatures, the judiciary, the executive, civil society, and the international community (Stritzel, 2007; Malmvig, 2014; Balzacq, 2005). Hence, the outcome of a securitizing "move" is conditioned by various factors, among them; the capacity of actors to make socially effective claims about threats, the society of individuals making such claims, and the prevailing economic and political circumstances in the country (Wilkinson, 2007; Williams, 2003). In Kenya, political personalities and their ethnic affiliations are key in determining public policy. This understanding, therefore, helps us to appreciate that securitization goes beyond the question of *is* to what it *does*, and perhaps *who does*/or *gets* what, to an extent that the most fundamental question of securitization in political complexes such as Kenya's refugee crisis, shifts to whose discourse counts? The question of refugees and their link to terrorism has attracted several actors in Kenya. The involvement of state and non-state actors is anchored in both the protection of external borders as well as observing human rights. In authoritarian settings, the ideal scenario is that the elites dominate the discourse, and as such, they successfully carry out securitizing "moves". However, in moderate democracies such as Kenya, securitization theory can capture and, at times there exist, gray areas as to who really makes the final decision, even on matters of security. For instance, when the Kenyan government introduced a Security Bill in 2014, the opposition ganged up with civil society organizations (CSOs) to challenge its core, arguing that it would erase the gains made in the country after the promulgation of the 2010 Constitution. As early as 2015, the effects of the proposed bill were already being felt – human rights violations and profiling individuals, particularly those considered to be refugees or asylum seekers from Somalia. In this case, it is plausible to argue, as Buzan and Waever (2009) put it that, "by definition, something is a security problem when the elites declare it to be so, and power holders can always try to use the instrument of securitization of an issue to gain control over it." Even though, in this situation, the opposition used the securitizing issue to project their political relevance, it can also be argued that power asymmetries often determine what would be or not be a security threat. As a result, the labeling of refugees as terrorists by security agents is the norm in Kenya. One vital

thing about the CSO contribution to addressing the question of refugee radicalization is the human security approach that has initiated socio-economic activities in geographical areas experiencing extremism. As part of the securitization of refugee infrastructure, intelligent monitoring units are set up in all refugee camps and this information is relayed to the National Counter-Terrorism Centre (NCTC) for analysis and action.

The third conception is context. In the parlance of international security studies, "context" is defined as ecological boundaries, administrative systems such as political, legislative, and policy frameworks, military or socio-cultural environmental factors that influence interventions as well as the outcomes of such interventions. Buzan and Hansen's (2009) conception of context revolves around security threats. In the same vein, context is therefore proximal and distal (or external). The proximate context includes the immediate features of the interaction, whereas the distal context comprises things like social class, the ethnic composition of the participants, the institutions, or sites where discourse occurs and the ecological, regional, and cultural settings. In the Kenyan case, securitization of the refugee question and subsequent evolution of refugee identities into terrorist groups have largely been shaped by three contextual factors: (1) the institutional arrangement, (2) political activities, and (3) legislative environment (Abdullahi, 1994). In 2003, Kenya set up a task force that was inter-ministerial in nature, which concentrated on fighting against the Funding of Terrorism and Anti-Money Laundering (FTAML). Other measures included the flinging out appeals to reverse the verdict of the High Court of Kenya, on the deportation of Al-Haramain's Sudanese director, Sheikh Muawiya Hussein, in January 2004. From a sociological perspective, it will be unwise to ignore elements that shape a country's context, including socio-cultural, politics, and the economy. Rather, it would be more productive to recognize the fact that African states are not homogenous in their socio-cultural and political setup; hence, case by case analysis of the securitization move would be ideal in understanding the subtle pattern and consequences of framing refugees as an existential security threat. Bourdieu and Foucault define "securitization" as a field of practice, "*habitus*" and "*dispositif*" (Bigo, 2002). In other words, it is not sufficient to examine the notion of securitization only based on context, practices, and instruments through which policies aimed at empowering institutions are key in understanding how "governmentality" shapes the security landscape.

Finally, the "practices and instruments" dimension of securitization refers to the various technical or physical modalities put in place to handle a phenomenon that is declared a threat to national security. In the Kenyan case, the National Counter-Terrorism Unit has identified the "refugee" phenomenon as a focal threat to national security. What followed is coalescing around the need to protect the Kenyan border against any form of existential threat. Some actions that followed included registering refugees and massive repatriation. This system of practice or partitioned decision-making included a set of knowledge about threats generated through state machinery. Practice and instruments

as an inclination of the securitization process seem to be characterized with a "colonization" impetus. In other words, the logic used in the field of securitization can easily diffuse to other sectors. For instance, an idea about a threat is generated through instruments of state and communicated through channels such as the media over time among the members of a social and political system. The state's security ecosystem is composed of intelligence, police, the military, and state bureaucrats, among others. Borrowing from Rogers (1962) the theory of diffusion of innovation/ideas, practices, and instruments of state/social systems enhances the process of securitization following five steps. First, it involves generating knowledge around the issue – members of the public who become aware of the threat and have some idea of how the threat is structured. Second, it involves persuasion – the public forms a favorable or unfavorable attitude toward the idea. Third, the public engages in activities that lead to a choice to adopt or reject the existence of a threat. Fourthly, the state machinery puts the idea into force. Lastly, the state evaluates the results of the diffusion of ideas around the threat to establish the depth and breadth of the intervention (Dibra, 2015).

The Kenyan framework of response to the refugee crisis, then, resonated with the global conception of a "refugee" as an international entity. Although there is no consensus on what constitutes the "international community", legal scholars contend that this entity is a demarcated legal zone occupied with human activities (Ben-Nun, 2015). In another article, Ben-Nun (2016) goes further to argue that a global refugee regime is universal in its scope and legal conception. The issue, however, took a political dimension. Political leaders mainly drawn from the Northeastern part of the country emphasized that the most durable solution is to set up composites in Jubaland with Kenyan and Ethiopian administrations playing the shielding role. This more hardline reaction to this crisis is thought by most to be part of an organized prolonged approach to drive terrorist groups from Central and South Somalia, consequently establishing a self-sufficient bolster region in the country. This "*move*" by the Kenyan government was informed by the belief that camps had become hosting grounds for terrorist groups and avenues for the "radicalization" of youth. The decision was, however, received with varying reactions worldwide, especially with Kenya being party to international instruments that obligate it to protect refugees under international law. However, in countries with "gray security systems", may prove problematic; the protected might be the perpetrators of terror attacks, as articulated by Lupovic (2014) in his normative model of security. Hence, the instrumentality of the human security approach in the management of the refugee crisis.

The instrumentality of human security in Africa

Over the years, the notion of (in)security has evolved remarkably, especially in the past three decades (Baldwin, 1997; Jore, 2019). Indeed, as with many other key terms in the social sciences, security, a subjective, complex, and

multidimensional concept remains difficult to strictly define. This is more so in a complex conflict environment in sub-Saharan Africa, where the challenge of defining (in)security, arguably revolves around three inter-related philosophies of the mind: (1) What one considers acts of insecurity might be someone else's source of inspiration, (2) Who counts depends on who defines the order of importance, (3) For one to be accounted for, it depends on who accounts, how and why (Onditi et al., 2021). In other words, who benefits? Whereas conventional intra-conflict situations the struggle between the state and non-state actors dominates the scene, "complex mixed war" is saturated with ambiguities, networks of security forces who pay allegiance to various leaders, paramilitary groups, warlords, criminal gangs, and mercenaries.

Much of the intra-conflict situations in Africa, the basic point of departure is either geopolitics or ideological inclination, however, for the complex mixed wars, exclusion, ethnic identities, and bigotries are key drivers sustaining civil wars and conflicts. In this type of civil war, humanitarian catastrophes are central tactics of warfare leading to internal displacement and denied access to basic human needs. It is therefore difficult to end complex mixed wars because warring parties are sustained by continuing violence and humanitarian catastrophes. All these culminate into the dilemma that surrounds the concept of security. No matter how one would want to wish away the relativist perspective on different concepts, various complex factors matter in understanding the link between the notion of "complex mixed war" and the concept of "security". This distinction is a necessary step in stipulating its meaning and linkages to the notion of human security.

Intra-state, rather than inter-state, the conflict has been predominant in the (in)security discourse ever since the conclusion of the Cold War in 1989. This is arguably due to the growing recognition of the "Janus-faced nature of the state," (Smith, 1999: 74). That is state as source of both security and insecurity for the citizens. Indeed, security, as a concept, has increasingly assumed a more encompassing connotation (Buzan & Waever, 2009). Beyond its initial centeredness on the state's military might, security has been deepened and widened to include economic, political, social, and environmental considerations (Buzan, 1991). Akin to this, Choucri (2002: 99) summarized the widening scope of security under three broad domains namely: (1) military capacity and defense, dubbed military security; (2) governance of the regime, dubbed as regime security; and (3) structural conditions and environmental viability, dubbed as structural security. As far as Choucri (2002: 100) is concerned, "a state is secure to the extent that all three dimensions or conditions for security are in place; and it is insecure to the extent that one or more conditions (or dimensions) of security are threatened or eroded". Herein lies the association between the refugee phenomenon and human security principles: (1) primacy of human rights; (2) legitimate political authority; (3) multilateralism; (4) bottom-up approach; and (5) regional focus.

Based on the foregoing discourse, the notion of national security is increasingly being subsumed under the idea of human security, with emphasis on the

first principle, the primacy of human rights, i.e., security of individual rather than merely that of the state (Thomas, 2001; McDonald, 2008; Menkhaus, 2004). As Shamieh (2016: 1856) observed, central to human security is the valuation of an individual's interest in terms of the "vulnerabilities faced and capacities gained"; thereby, addressing the policy question of security "for whom", "by whom" and "how should it be realized". However, it is important to specify that the management of the refugee crisis in Kenya has been executed with the Cold War era strategies – securitization as opposed to the human security framework. This chapter adopts Paris (2001) definition of human security hinged on social institutions as the key drivers of insecurity as opposed to territorial disputes. Foreign threats have been intricated with concerns about domestic terrorism, organized crime, or forced migration. All these continue to pose major risks to the stability of states. Therefore, the refugee phenomenon should be addressed through what I coin, 'new domestic conflicts'. Unsurprisingly, refugees are in constant confrontation within the existing power structures at various levels, and especially with the state; an effective management strategy would therefore be configured with the view to address the various levels and forms – a comprehensive approach.

Exploring possibilities of a comprehensive approach

Indeed, to avoid the predominant quick-fix approaches, and achieve the durable results, there is a need for improved cooperation between security agencies and developmental agencies, especially those that are embedded within the principles of human security. The Military-Civic dimension of counter-insurgency seems at once both antagonistic and complimentary, depending on what is emphasized i.e., enemy-centric, or population-centric (Plakoudas, 2014: 132–133). The adherent of the enemy-centric approach prioritizes the crush of the enemy in military terms as the pathway to victory. On the other hand, the supporters of the population-centric approach consider victory over the insurgents/terrorists as attainable through secured belongingness of the local population from whom the refugees draw supports.

In this chapter, the local population of locations/areas where refugees are hosted have been divided into three categories: (1) active minority for the cause; (2) neutral or passive majority; and (3) active minority against the cause. The winning over of most the population is paramount to the destruction, disruption, and dislodgment of the negative attributes that emerge from securitization of refugees. However, the attainment thereof is largely pivoted on the extent to which military strategies are effectively synergized with development and diplomacy with an eye on (re)building the perception of government's legitimacy. Indeed, "while the security line of operation is essential, the governance and developmental lines are even more important to build a lasting peace" (Verret & Army, 2013: 99). Hence, it is imperative to understand the linkages between human security in its broadest sense, including human rights, environmental sustainability, good governance, participatory democracy, removal of

inequalities and discrimination and gender equality, with peace and security, if policies, strategies, programs, and initiatives are to be successful in conflict prevention, resolution, and sustained recovery (Jervis, 2002).

Admittedly, achieving the above is both complex and difficult otherwise there would be less conflict around the world. However, it is worth striving for, with all essential tools and competence. Meanwhile, the efficacy of either depends largely on contextual factors driving or sustaining the securitization of refugees. The various variables beneath modern terrorism/insurgency tend more to delimit the efficacy of previously effective militaristic sole tactic of counterinsurgency. As noted earlier, the parochial view of the traditional militaristic counterinsurgency tends to de-emphasize the centrality of human security to sustainable peace and development. This is due to, among other reasons, the focus on national/territorial integrity or the "law and order" approach. Yet, "management of refugees, especially in insurgency environment requires population-centric intelligence and not exclusively enemy-centric intelligence (although the latter is certainly needed in support of security operations)" (Kitzen, 2012: 717). Indeed, the idea of human security suggests that military sole tactic to security hardly encapsulate the full, if not ever-widening, dimension of security besides the fact that it is hardly sustainable. In lieu, the bullets often escalate violence, transforming a seemingly peaceful populations (in this case refugees) into violent ones as reminiscent of the victims of this securitization along the Kenyan coast and Northeastern part of the country. It is on the basis of this relationship between the state and refugees that some studies identify fear, want and indignity as the three major obstacles to the management of refugees in the Horn of Africa (Kumssa et al., 2014).

Hence, the human security approach underscores that the traditional national/military security is not an end in itself; rather, it is a means to the attainment of the "freedom from fear, freedom from want and freedom to live in dignity" (Okpara, 2012), which this study considered as vital in dealing with insurgencies. In this study, I have highlighted five principles of human security drawn from the experiences of refugees under the noose of securitization: (1) people-centered, (2) comprehensive, (3) multi-sectorial, (4) context-specific, and (5) prevention-oriented. By its people-centeredness, human security prioritizes the empowerment of the people and gets them directly involved in the peace-building process. In terms of comprehensiveness, human security is not just about granting psychological freedom from fear and want, but also the freedom to live in dignity. By its multi-sectorial focus, it recognizes the interdependent dimension of global and local threats, insecurities and vulnerabilities, human rights, and development. Hence, it underscores the importance of contributions from all sectors within and beyond the country in managing refugees. The context-specific nature of human security means that it is important to acknowledge and appropriately address, the uniqueness of local among global threats in assessment and planning. As a prevention-oriented approach, human security is pre-emptive rather than reactive since it addresses both immediate and structural factors causing fear, wants, and humiliation.

The context-specific nature of human security helps to underscore the local dimension of the insurgencies, which government tends to cover up by merely attributing these insurgencies to the global phenomenon of terrorism. Yet, this is not to dismiss the external factors as have been acknowledged in the study, covering the gamut of politics, culture, economics, diplomacy, and defense.

It is against this backdrop that this chapter proposes the development, defense, and diplomacy (3Ds) approach to handling the refugee issue in Kenya. The approach is useful because it emphasizes security-diplomacy-development triple nexus. The 3Ds approach underscores a population-centric dynamic of counterinsurgency by emphasizing the mix of defense, diplomacy, and development in countering the insurgencies and building durable peace. In tandem with Thompson's (1966), the idea of counterinsurgency, prevention of violent conflict is always better relative to responding to violent conflict, especially considering the "cost-effectiveness of prevention when compared with the exorbitant bill for subsequent relief, protection and reconstruction if prevention fails" (cited in Ramsbotham et al., 2011: 117). However, prevention sometimes appears more difficult than "cure" particularly in relation to timing. For instance, while it is always best to quell the movement of refugees in its early stage, geopolitics might be too heavy for a particular state to anticipate and respond to the refugee crisis. This is hardly surprising, given the high politicization of the crises.

In the context of the 3Ds approach, development is considered as central to counter insurgency in the manner it is with human security. Certainly, the refugee crisis has a reversal effect on development in several ways due to its socio-economic and environmental overburdening effect. But lack of development itself constitutes a powerful source of grievance fueled by a combustible mix of poverty, inequality, marginalization, and exclusion that often precipitates into violent conflagrations (United Nations, 2004). In this regard, the 3Ds approach is an indispensable foundation for a collective security system that accent prevention over the containment of conflicts. It serves multiple functions including combating poverty, infectious disease, and environmental degradation that kills millions and threaten human security, without necessarily removing military intervention; preventing or reversing the erosion of state capacity, which is crucial for meeting every class of threat; preventing civil war and addressing the environments in which both terrorism and organized crime flourish (Gupta, 2005). In this respect, the security budget within the human security paradigm is fundamentally tilted toward investment efforts involving economic development, good governance, and robust multi-tract diplomacy in the long term (Thomas, 2001; McCormack, 2011).

In terms of criticisms, the compelling view that the refugee phenomenon evolves rapidly in response to countermeasures, so that what works today may not work tomorrow, and insights valid for one region or one period may not apply elsewhere, there are calls for a development of flexible and context-relevant countermeasures toward the management of refugees. Mindful of these challenges, the operationalization of the 3Ds herein is geared toward adapting

lessons from its application elsewhere rather than a blind adoption of everything 3Ds.

Conclusion: Theoretical refinement

What do all these mean? It is highly likely that despite the weaknesses of securitization as a method for managing the refugee phenomenon, this approach will remain important for the Kenyan government and other countries with similar challenges. The consequence will be a continued resentment of refugees in response to framing them as key drivers of an existential security threat. Partly because, rather than promoting human security values, securitization measures represent little more than the violation of deontic rights of refugees, and those considered sympathizers. Formal methods and approaches in securitization are state-centric, developed based on a subverted national interest model. At the same time, these arrangements are at the mercy of the self-interest and survival tactics of the incumbent political regime in the country, with minimum regard for the international standards on refugee repatriation. The intersection of these forces produces refugee terrorist(s) that reflects intra-state resistance to the implementation of involuntary repatriation scheme. To address this issue, the government of Kenya has promoted refugee management and repatriation practices that are fundamentally lacking in deontic rights and have few, if any human security-centered processes. One can, therefore, think of securitization as the process through which non-politicized or politicized issues are elevated to security issues that need to be dealt with urgently by the state. Hence, an issue can be framed as a security threat from various perspectives, military, political, societal, economic, and environmental. Therefore, the question for further research is: In securitizing an issue, how should authorities frame it to preclude any form of victimization of certain groups of people who are perceived as drivers of the national or international security threat?

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4 Interrogating the role of human security and human development in transforming refugees livelihoods in Kenya and Uganda

Dennis Jjuuko

Introduction

The Office of the United Nations High Commissioner for Refugees (UNHCR) reports an unprecedented rise in the number of displacements, where the agency reports a displacement of one person every two seconds due to conflict or persecution. By 2019, the agency indicated that there were 70.8 million forcibly displaced people worldwide, where 25.9 million were refugees (UNHCR, 2019). Amnesty International also indicated that 1.4 million refugees needed resettlements as of 2019 (Amnesty International, 2019).

Kenya and Uganda are among the leading host countries for refugees in sub-Saharan Africa. Kenya is currently hosting an estimated one million refugees (UNDESA, 2019). Uganda is home to an estimated 1.4 million refugees (UNHCR, 2020). While these refugees are considered temporary residents in policy, their stay is protracted by factors that prevent their voluntary repatriation. However, integrating them into host communities is rarely given adequate attention as a human security and development issue, affecting their chances and freedoms to a sustainable livelihood. Refugees' challenges are seen as temporary encounters that can be dealt with using one-off solutions, such as humanitarianism, but the reality of their prolonged stay is out of sync with quick remedies that are always provided (Ilcan et al., 2015).

Refugees are a distinct category of people who are not factored into the legal and policy frameworks of host countries since they are not counted as part of the citizenry to be catered for in terms of access to services. How do protracted refugees access services in host communities where existing legal and policy frameworks do not treat them as referents? What would be the refugees' next line of defense when humanitarianism fails? These questions pose a wicked problem that this chapter grapples with. The chapter contends that when global refugee policy engages the human development approach, its potential to transform protracted refugees' livelihoods increases because human development treats destitution, insecurity, and political inequality as one (Murphy, 2013).

This argument is premised on three propositions: (1) separately supporting protracted refugees within the same challenged setting as their hosts increases

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antipathy, thereby interrupting possibilities for integration, (2) investing in long-term livelihood strategies, such as programs for self-reliance, fosters protracted refugees' peaceful co-existence with their hosts, hence creating possibilities for resilience, and (3) viewing protracted refugees by what they contribute as opposed to what they take endorses the success of integration programs in building sustainable livelihoods for both protracted refugees and their hosts. Refugees should not be passive recipients of aid. Instead, they should be facilitated to be responsible and resilient residents who survive through the crisis (Ilcan & Rygiel, 2015). The literature handles the question of resilience from human rights, humanitarian, and security perspectives based on international law. However, it ignores the important aspect of building sustainable livelihoods for protracted refugees.

Therefore, this chapter makes a case for human development in transforming livelihoods by enlarging freedoms and opportunities and improving the well-being of protracted refugees and their hosts. The chapter frames and discusses the protracted Somali refugee crisis as a human security issue. It explores the relationship between human development and human security and provides suggestions on how the two can build resilient livelihoods for protracted refugees and their hosts.

Human security and human development concepts

Human security

A focus on humans as a referent in the pursuit of the security agenda is a relatively new phenomenon in international security discourse. It is this idea of a people-centered understanding of security that underpins human security (UNDP, 1994). Since its conceptualization in the 1994 human development report, human security has become a core component of the development and security nexus. Human security follows three conceptions: Natural rights or rule of law which focuses on individual basic rights for life, liberty, and the pursuit of happiness that should be protected by the international community; humanitarian conception where human security refers to international actions to abolish weapons that harm civilian life and non-combatant, to genocide and to punish international crimes by strengthening international responses; and the broad conception that includes economic, political, environmental, and other threats to human and individual well-being. The main goal of human security is to safeguard the vital core of all human lives from critical pervasive threats (Alkire, 2003). This is by using processes that build on people's strengths and aspirations, and creating political, social, environmental, economic, military, and cultural systems that together give people the building blocks of survival. Human security assumes freedom from fear of conflicts, violence, and crime to sustain peace; freedom from want while recognizing poverty, infectious diseases, and environmental degradation as threats that must be confronted by inclusive development; and freedom from indignity through human rights as a

safeguard against discrimination and exclusion. Thus, it emphasizes protection and empowerment of the most vulnerable as strategies for achieving inclusive development, while emphasizing human centeredness, multi-sectoral/actor approaches, comprehensiveness, context-specific strategies, and prevention-oriented. It is this description of the human security concept that this chapter employs to understand the situation of Somali refugees in Uganda and Kenya with emphasis on livelihoods and perception of the refugees by authorities in both countries (i.e., whether they are perceived as passive recipients of aid or potential responsible and resilient people who contribute to the livelihoods and economy of their hosts).

Human development

The need for conditions that influence possibilities of satisfying needs and desires is what human development seeks to address as it explores and realizes the physical and psychic, biological and cultural, individual, and social potentials of each person. Thus, it is "a process of enlarging people's choices" allowing them to "lead long and healthy lives, to be educated, to enjoy a decent standard of living", as well as "political freedom, other guaranteed human rights and various ingredients of self-respect" (UNDP, 1997). Fundamental to enlarging these choices is building human capacities in terms of the range of things that people can do or be in life. By investing in people, including protracted refugees, we enable growth and empower them to pursue many different life paths, thus developing human capabilities (Sen, 2000). The most basic capabilities for human development are to lead long and healthy lives, be knowledgeable (i.e., educated), have access to resources and social services needed for a decent standard of living, and be able to participate in the life of the community. Without these, many choices are not available, and many opportunities in life remain inaccessible (UNDP, 2009). Human development espouses values of equity, sustainability, productivity, empowerment, cooperation, and security (UNDP, 2015).

Equity emphasizes fairness for everyone. Sustainability suggests a view that everyone has a right to earn a living that can sustain their lives and have access to more even distribution of goods. Productivity promotes the full participation of people in the process of income generation in an environment of more efficient social programs for people. Empowerment gives people the freedom to influence development and decisions that affect their lives. Cooperation stipulates participation and belonging to communities and groups as a means of mutual enrichment and a source of social meaning. While security offers people development opportunities freely and safely with the confidence that they will not disappear suddenly in the future (UNDP, 2015).

Barret acknowledges distinct ontologies that produce contestation over meanings of security and development (Barrett, 2018). This chapter understands security in terms of human security – the safeguarding/protection of "the vital core of all human lives in ways that enhance human freedoms and fulfillment"

(Risse and Meyer, 2018), with major threats being war, mass atrocities, environmental degradation, and public health crises. Seven categories of human security challenges can be delineated as follows: economic security, food security, health security, environmental security, personal security, community security, and political security (UNDP, 1994). Protracted refugees are increasingly becoming victims of these security challenges.

Human development on the other hand is about creating and expanding opportunities and choices for people to transform their lives. It sees income growth as a means to development, rather than an end in itself, together with developing people's abilities and giving them a chance to use them (UNDP, 2009). Nonetheless, host communities often have the same livelihood needs as the groups they host and solving this puzzle through program designs is a determinant factor in how refugees are perceived, received, and supported by their hosts.

It is thus important to emphasize that promoting human security and human development in protracted refugees' situations demands enhancing refugees and hosts capabilities and their aspirations to live free from fear of each other, want, and in dignity. Human security details the category of threats protracted refugees face while suggesting that they should be treated as referents for security since they flee persecution from their countries of origin to host countries in anticipation of protection from these threats. Human development thus improves their protection by guaranteeing them sustainable livelihoods in the host communities, together with promoting their peaceful co-existence with hosts to ensure safety and empowerment through access to services like education and health necessary for their decent living.

Protracted refugees as a human security issue

Despite the rising number of refugees reported by UNHCR and other related agencies, trends indicate that not all of them get resettled, with a dwindling number of those that get accepted by potential countries of second settlement since 2016 – 189,000 in 2016, 103,000 in 2017, and 92,000 in 2018 respectively (Connor and Passel , 2019; UNHCR, 2019). This is due to factors ranging from: (1) states retention of ultimate control over the quantity and quality of asylum they grant to refugees on their territory (Betts et al., 2012), (2) outcomes for refugees and displaced populations are increasingly shaped by politics in policy fields that fall outside the scope of the refugee regime (Betts & Milner, 2019), and (3) the refugee regime contains no binding obligation on states to cooperate to ensure its functioning (Milner, 2014). This means the highest number of refugees choose to stay longer than expected, either voluntarily or involuntarily, in the country of their first settlement. This number of refugees is often denied nationality and access to basic rights such as education, healthcare, employment, and freedom of movement in the host countries (UN, 2019). Thus, presenting a challenge to their human security in terms of safety and human development in form of descent livelihoods and access to services like health and education.

Refugee issues are similarly treated as political questions with the ability to disrupt national security by labeling them as dangerous, menacing, threatening, and alarming by a securitizing actor who has the social and institutional power to push the issue beyond politics. For instance, Eroukhmanoff discusses that calling immigration, including forced migration, a threat to national security shifts immigration from a low priority political concern to a high priority issue that requires action, such as securing borders (Eroukhmanoff, 2018). In securitization, political issues are constituted as extreme security issues to be dealt with urgently when they have been labeled as "dangerous", "menacing", "threatening', or "alarming", by a "securitizing actor" who has the social and institutional power to move the issue "beyond politics" (Eroukhmanoff, 2018). Therefore, the refugee influx seen as a threat to national security shifts refugee challenges from low priority political concerns to high priority security issues that require urgent action such as limiting free movement by refugees. When national security views refugees as a threat, other than referents who need protection from a threat, it disorients programming from the protection of their rights to dealing with protracted refugees as a crisis thereby denying or downplaying their contribution to the development process. Central to securitization is showing the rhetorical structure of decision-makers when framing an issue and attempting to convince an audience to lift the issue above politics (Eroukhmanoff, 2018). In other words, "by saying the words, something is done, like betting, giving a promise, naming a ship" (Buzan, Wæver, and de Wilde, 1998, p. 26 in Eroukhmanoff, 2018, p. 2). Words, therefore, constitute reality which in turn triggers certain responses. Threats are thus not just threats by nature but are constructed as threats through language. To convince an audience to take extraordinary measures, the securitizing actor must draw attention and often exaggerate the urgency and level of the threat, communicate a point of no return, that is "if we do not tackle this problem, everything else will be irrelevant", and offer a possible way out (lifting the issue above politics) – which is often framed in military terms (ibid). In so doing, the securitizing actor makes some actions more intelligible than others and enables a regime of truth about the nature of the threat and the referent object's nature, thereby conditioning the way referents to view a defined threat (protracted refugees). An issue thus becomes securitized when an audience collectively agrees on the nature of the threat and supports taking extraordinary measures.

For refugees, migration across borders makes them subject to this categorization due to a lack of citizenship in their new areas of settlement. Cohn adds that there are power differentials between and within categories such as class, caste, race, ethnicity, age, and sexuality which renders refugees a vulnerable group in their new areas of settlement (Cohn, 2012; UN, 2019). Agathangelou and Ling accentuate that "we inter-subjectively create our worlds that are a source of fear and vulnerability" (Agathangelou & Ling, 2004, p. 523). Marie Breen-Smyth similarly points to a review of the application of the term "suspect community" and research that shows the problems associated with constructing an entire population and to problems of misidentification (Breen-Smyth, 2014, p. 4).

She acknowledges that the "suspect community" is not merely the product of legal and security apparatuses, but the product of a larger cultural apparatus or "imaginary" (ibid). It is redefined as "a community created in and by the securitized imagination and enacted in a process of othering" (ibid). Refugees are subjected to this in the process of trying to integrate with their hosts because they cannot identify with communities in their new areas of settlement, thus excluded due to differences in culture, some-times color, language, and origin, tagged with being viewed as groups that encroach on the limited available resources.

In different environments and areas, there is a tendency to categorize newcomers or people with characteristics that deviate from the norm as "others" that deserve distinct categorization from the "rest" of society. This categorization rests upon a central set of distinctions between different categories of people, valorizes some over others, and organizes access to resources, rights, responsibilities, authority, and life options along the attributes differentiating those groups (Cohn, 2012). Securitization of refugees may thus make it difficult for them to live fulfilled lives with dignity in the host communities and/or countries. Profiling in this case becomes a security apparatus of control and a source of insecurity. Opponents of securitization thus challenge refugee policy in host countries to also think about protracted refugees as referents because they are threatened and need to be protected.This is because protracted refugees are vulnerable, but not a threat.

Refugees are equally framed as a threat through speech that influences hosts reactions and responses toward them thereby making them more vulnerable. The February 2017 Chatham House Roundtable on Public Perceptions of Refugees and Migrants categorized people into three segments: pro-migration liberal cosmopolitans, anti-migration hostile nationalists, and an anxious middle (Chatham House, 2017). The divisions in opinions were around issues like culture with feelings that refugees pose a threat to belonging and identity; security which was especially high in countries that suffered terrorist attacks; and economy where people were worried about jobs due to high unemployment rates, and the inadequate public services like health. However, it was clear in this roundtable that politicians and the media influence public opinion. They craft messages that either give hope for immigration policies or instill fear for refugees among the populace, which consequently influences categorization and relations with refugees. Some perceived threats from protracted refugees are thus not threats by nature but are constructed as threats through language to convince an audience to take extraordinary measures that further violate the rights and freedoms of a defined threat – protracted refugees (Eroukhmanoff, 2018).

Despite efforts to garner collective intergovernmental efforts to deal with issues of protracted refugees through the negotiated Global Compact on Refugees (GCR) at the United Nations General Assembly (UNGA) in 2018, Hathaway (2018) identifies that one of the risks of such a nonbinding and thin agreement is that the GCR will give rise to a bureaucratic process that "does

not come even close to dependably addressing the operational deficits of the refugee regime" (Hathaway, 2018, 594).

The case of Somali refugees in Kenya and Uganda

Something is a security problem when the elites declare it to be so (Waever, 1998). The securitizing actor can be any entity with the authority to handle the issue (Balzacq et al., 2016). Another important characteristic of a securitizing actor is that it has enough social and political capital that can be used to convince an audience of the security threat (Peoples & Vaughan-Williams, 2014). This calls for credibility in the eyes of the audience.

In the Kenya context, the Government of Kenya (GOK) can thus be identified as a securitizing actor since the political process through which different administrations emerge is a source of their authority and credibility before the Kenyan citizenry. The government has the legitimacy to speak security, and this gives it the political and social capital to securitize refugee issues. Speeches and official statements are most frequently used to convey the message. Phrases that have been used to describe Dadaab refugee camp for instance are "a centre for radicalization" (Ruto, 2016) and a hosting ground for al-Shabaab (Zadock, 2016). Similarly, in the years 2013–2015, GOK regularly made the link between a deteriorating security situation and refugee-hosting following a plethora of terrorist attacks or security incidents in the country (Voppen, 2017). Thus, GOK has always maintained the position of Somali refugees returning to their country more than the need for them to live in Kenya and is purposefully securitizing Somali refugees by associating them with al-Shabaab terrorists. It cannot be denied that there are members of al-Shabaab residing in the camps and that there is a real security threat, this is a contextual reality (The Guardian, 2016; Ruto, 2016). However, GOK is portraying the whole community of Somali refugees as a security threat (Mwangi, 2018). By opening a new refugee camp[1] close to the South Sudanese border and threatening to close Dadaab refugee camp, GOK decided who is a good refugee and who is not (Mwangi, 2019). Refer to Chapter 3 of the book for additional discussion on securitization, particularly of Somali refugees in Kenya and its implications.

In the Ugandan context, a growing number of Somali refugees – the majority of whom were previously in Kenya – have moved to the country in recent years, settling in some areas of the capital (Kampala) or in the Nakivale refugee camp, located in the south of the country (Iazzolino, 2014). The dynamics informing this pattern of movement relate to both security needs together with aspirations and desires in a multifaceted Somali refugee population of entrepreneurs and prospective students. The novelty of this steady influx to Uganda is thus motivated by: a growing pressure on Somali refugees in Kenya where state security concerns have increasingly permeated public discourse on refugee issues; Uganda's "progressive and human rights oriented" refugee legal framework, based on the 2006 Refugee Act and implemented in 2010; and ease of access to neighboring areas, particularly the border of Uganda and

the Democratic Republic of the Congo (DRC), Rwanda and, until recent upheavals, South Sudan (refer to Chapter 5 of the book for a discussion on the situation in South Sudan), where fresh business opportunities have drawn the interest of resourceful refugees (ibid).

Embracing refugee definitions in conformity with the 1951 Convention, of which Uganda is a signatory, the 2006 Refugee Act allowed refugees the right to an identity card or travel document, remain, non-discrimination, administrative assistance, freedom of religion, freedom of association, access the courts, and freedom of movement (Sharpe & Namusobya, 2012). Moreover, it recognized "rights in respect of which refugees must receive treatment in accordance with 'aliens generally in similar circumstances': rights regarding moveable and immovable property, the transfer of assets, public education above the elementary level, self-employment, liberal professions, and wage-earning employment" (ibid). The seemingly liberal approach to the Somali diaspora in Uganda has its rewards, such as intelligence both in Uganda and in Somalia on potential threats to Ugandan civilian and military targets. Somalis in the diaspora have been regularly employed as consultants in "cultural awareness" training for Uganda People Defense Force (UPDF) troops being deployed in Somalia, with US State Department funds. Additionally, Uganda has been able to utilize its leading role in the mission at an international level. For instance, in November 2012, Uganda threatened to pull its troops out of Somalia in retaliation for a UN report which claimed that its government was supporting the M23 rebels in the DRC (Al Jazeera, 2012).

As traditional Somali refugee havens grow hostile and Somalia remains volatile, Uganda has emerged as a safe haven where Somali refugees can accrue assets – be they financial, legal, or academic – which facilitate physical and social mobility. The case of the Somali diaspora in Uganda also offers insights into the relationship between the state security apparatus and refugee populations and throws light on the stark difference between Uganda and Kenya, not only in relation to refugee policies but also to their geopolitical strategies in the region (Iazzolino, 2014). Equally important to note is an observation about the country's proximity to the refugees' places of origin as a determining factor for the nature of refugee policy. As of 2020, there were 218,873 Somali refugees in the Dadaab refugee complex alone compared to 44,479 Somali refugees in the whole of Uganda (UNHCR, 2020). The geographical location of Uganda attracts less Somali refugees that may be easy to monitor. Kenya shares the border with Somalia which makes it easy for Somali refugees to cross. This explains why Kenya has more Somali refugees than Uganda. Migration trends indicate an increasing threat of migrants in host countries especially regarding sharing the available resources. Kenya and Uganda's different refugee policies toward Somali refugees can therefore equally be attributed to the number of Somali refugees each country hosts where the former sees a big number as a threat compared to the latter.

Therefore, refugees' treatment in arrangements like the recently negotiated GCR has important implications for prospects of local integration, the durable

solution least often discussed but most likely to become the de facto reality for most of the world's refugees (Arnold-Fernández, 2019). National governance frameworks are the primary determinants of refugee's ability to live safely, move freely, work, and access state and private services including education, healthcare, banking, and justice among others (ibid).

When refugee policy treats refugees as victims fleeing persecution and in need of protection, refugee programming focuses on offering needed protection together with designing strategies for promoting their safety and building their capacities to mend resilient livelihoods through different human development projects. On the contrary, protection cannot be effective when refugees are perceived as a threat to national security. Refugees need to be seen as contributors to the growth of the economies of their hosts since they flee with different professions and expertise that hosts can utilize. For the safety of protracted refugees, the focus must be more on what they contribute rather than what they take from their hosts to harness their unique strengths, and their capacities must be built to realize sustainable livelihoods.

The potential for human development as a human security remedy in refugee situations

The issue of how to understand and support the livelihoods of refugees has emerged as a pressing agenda due to the large number of protracted refugee situations globally (Omata, 2012). One of the major difficulties UNHCR faces in prolonged displacement is diminished donor interest in supporting these long-term refugees (Jacobsen, 2005). As a result, assistance programs for protracted refugee situations have been constantly deprived of adequate funding. This could be the reason why hosts see refugees as a liability rather than assets since they are less accompanied by economic capital when they flee their countries.

In the face of these daunting challenges, the international refugee regime has realized that refugees should be "assisted to assist themselves" (Horst, 2006, p. 6) and placed a new emphasis on the economic capacity of refugees (Crisp, 2003a). Given this context, the theme of livelihoods has become an important agenda in the domain of refugee assistance. With this growing interest in the economic aspect of refugees' lives, there is now a burgeoning body of research focusing on the livelihoods of forced migrants (e.g., Al-Sharmani, 2004; Andrews, 2006; De Vriese, 2006; Horst, 2006; Jacobsen, 2002, 2005; Young, 2006). Research into refugees' economic security introduces important factors in understanding the nexus between human security and human development as central to administering correct prescriptions for protracted refugee situations. There are many points of ideological departure around conflict, security, and development. Stern and Ojendal (2010) indicate that the nexus is differently experienced, instilled with meaning, and carried out. Comparably, Chandler notes the "panoply of theory, policy and practice" surrounding the security and development

nexus, particularly given the proliferation of development paradigms (Chandler, 2007, p. 367). Further, O'Gorman notes the failure of nexus operations to specify a "referent object".[2] Securitization creates a narrative that increasingly dominates the refugee debate, in which the priority of countries is to protect their populations from refugees rather than provide protection for them (International Refugee Rights Initiative, 2017).

Whereas refugees may impose economic, environmental, and security burdens on their hosts (Jacobsen, 2002), they also face challenging environments especially when they are treated as people without the requisite education and skills to contribute to the development of society. They are habitually seen as those that only drain the economies of hosts, yet what they need is an environment that guarantees their right to thrive e.g., through entrepreneurship and/or service provision. Jacobsen argues that viewing refugees as passive victims, who wait for relief handouts and bring only trouble to host countries fails to see the multiple ways they pursue livelihoods for themselves, and in so doing can contribute to the economic vitality of host areas (Jacobsen, 2002). Protracted refugees can be a resource if the necessary factors are in place to enable them to offer their knowledge and skills. Human development thus fills in this gap. The ability of refugees to use their skills and generate a livelihood for themselves is what guarantees their human security. Jacobsen adds that livelihood activities help recreate and maintain social and economic interdependence within and between communities and can restore functioning social networks based on the mutually beneficial exchange of labor, assets, and food (Jacobsen, 2002).

Omata (2012) uses the case of Somali refugees in Uganda to demonstrate the resourcefulness of protracted refugees, especially where their entrepreneurial skills are harnessed for the development of the economies of countries where they settle. Drawing from 86 interviews with refugees in Kampala, Omata presents findings on refugee livelihoods in relation to the private sector. The study indicates that while there is little access to farmland by the Somali refugees in Uganda, the respondents made a living in the private sector (Omata, 2012, p. 12). Somali refugees, especially in Kampala, are involved in selling daily necessities, selling specific items such as crafts and plastic items, petty trading in local markets, running restaurants, bars, operating internet cafes, forex bureaus, gas stations, and vehicle maintenance (ibid). While they mainly employ their fellow refugees, they equally provide jobs to a significant number of Ugandans.

Integration of protracted refugees can be more effective when complemented by human development targeting sustainable livelihoods that promote cordial relationships and peaceful co-existence with their hosts. Protracted refugees' fundamental security needs, as needs felt during humanitarian emergencies, periods of social crisis, and war, should not be placed to the side, as if they were something to be addressed separately (Milner, 2014). So "human security" means secure "human development" putting resilience as a long-term strategy for refugees' livelihoods at the center of interventions in the host communities (Milner, 2014, p. 558).

When human development programs are squarely designed for protracted refugees as the only referents, they are bound to further compromise their human security since host communities, especially in the global south, also have needs as the people they host. In addition, human development programs from governments and non-state actors targeting only host communities further empower hosts and make protracted refugees more vulnerable. Therefore, human development programs must foster peaceful co-existence between protracted refugees and the host communities. Enhancing protracted refugees' self-reliance and building resilience are goals that can determine the success of the GCR in countries like Kenya and Uganda, which host large numbers of displaced persons (Carciotto & Ferraro, 2020). Investing resources in human development that promotes knowledge and skills for generating wealth guarantees resilient livelihoods not only for protracted refugees but also the host communities. When protracted refugees are allowed to gain access to resources, have freedom of movement, and can work beside their hosts to pursue productive lives, they will be less dependent on humanitarianism and better able to overcome the sources of tension and conflict with their hosts (Jacobsen, 2002). These programs then mend the fraying economic fabric that binds communities and strengthen what Anderson calls peace economies in contrast to war economies (Anderson, 1999).

It is thus important to create more opportunities and choices for both protracted refugees and their hosts. Developing their abilities and giving them chance to use them need to be the aspiration of refugee policy toward building sustainable livelihoods for protracted refugees and their hosts (UNDP, 2013). However, this can only be facilitated by progressive refugee policy frameworks which empower protracted refugees to participate in sustaining economies as opposed to draining them (Betts et al., 2019). Protracted refugees and hosts' agency in the human development process is equally important, especially where they are empowered to engage in creative problem-solving, adapting products and processes to address challenges and create opportunities (Betts et al., 2015). Protracted refugees, especially in Uganda, have creatively negotiated for land that is availed for cultivation, while Somalis refugees in Kenya are engaged in creative income-generating activities within the informal sector in ways that benefit them and their communities. Somali refugees in Uganda devised a self-settlement strategy allowing the right to work with limited government assistance and this has transformed their opportunities across a range of areas including education.

Notably, protracted refugees face opportunities and constraints at each stage of the innovation process which emerges at individual, community, and institutional levels (Betts et al., 2015). The humanitarian system so far lacks a good model of facilitating and nurturing innovation by refugees. Human development can thus survive in a permissive environment with the right to work and freedom of movement, access to education and skills training, good infrastructure and transportation links, and transnational networks to facilitate cooperation

through quick information flow (Omata, 2012). Refugees often maintain their ties with the country of origin and often utilize them for their economic activities. Because Somali refugees in Uganda are allowed free movement and access to work, education, and skills, they can import and export merchandise to their countries through their networks which facilitates markets, capital inflows, and jobs, not only for themselves but also for their hosts. For instance, several refugees work as brokers for business people in the country of origin thereby contributing to the private sector both in the country of origin and of asylum by linking business demands with a supply between the two countries (Omata, 2012).

Conclusion and recommendations

The intersection of human security and human development is a fundamental response to outstanding challenges to protracted refugees and host communities' relations. Given the current policy direction of short-term humanitarianism that is void of protracted refugee situations, the securitization of protracted refugees by their hosts should now be obvious.

There are several programs by both states and non-state actors toward refugees, but all look at temporary solutions, yet refugee challenges are increasingly becoming permanent. As such, programs need to look at creating lasting solutions through providing sustainable livelihoods for both protracted refugees and their hosts as a way of fostering peaceful co-existence as a precursor for resilience.

Viewing refugees as contributors to development other than perpetual consumers of the hosts' wealth and development in terms of services risks the integration project as a durable solution for protracted refugee situations in Kenya and Uganda. Therefore, emphasis should be on investing in their capacities to contribute to the growth of the host country's economy through a process of realizing sustainable livelihoods.

To achieve this, any investment should be targeted at both refugees and their hosts to guarantee peaceful co-existence as a precursor for a successful integration project. This is because refugees in global south countries (e.g., Kenya and Uganda) and their hosts face the same livelihood challenges and policy that favors either group will likely contribute to discontent between the hosts and refugees. The recently negotiated GCR by intergovernmental parties is a novel framework that must emphasize sharing of responsibility with host countries to encourage and facilitate meaningful investment in sustainable livelihoods for protracted refugees and their hosts by emphasizing building their capacities to contribute to national development. This is because refugee-hosting countries do not want an extension to the burden they already bear, while the richer states will not accept any specific obligations to ensure a more predictable and fairer burden – and sharing of responsibility. Yet the GCR is based on a "commitment" to implement cooperation (Geoff, 2019, pp. 27–28).

Notes

1 The Kenyan Government, in 2015, agreed to open a new refugee settlement in the Turkana region, near the South-Sudanese border in which local integration plays a more important role.
2 Barry Buzan identified a referent object as that which is threatened and in need of protection. He claimed that if a referent object is not identified, then security concepts make little sense and questioned "security for whom?" – specification should include the individual, the state, the international system, and more. Buzan (2007, p. 8).

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5 Elusive peace and conflict resolution in South Sudan

A human security alternative approach

Israel Nyaburi Nyadera and Billy Agwanda

Introduction

When South Sudan gained independence in 2011, there were high expectations that 10 years down the line, the country will have settled into its new status as the newest member of the community of states. After an intense period of civil war with the North (Sudan), South Sudan was expected to have transformed and transitioned into a new era of concerted efforts toward reconstruction, reconciliation, and realization of the dreams that sustained the war of independence and its subsequent anticipation to initiate social, economic, and political liberation. Yet, exactly a decade later in 2021, the country still finds itself in a precarious and unforeseen position struggling to overcome one of the most severe humanitarian crises to grace the decade as well as grappling with continued challenges of establishing security (Agwanda & Asal, 2020). An internal conflict that broke out in 2013 and which has largely been fought between government forces and opposition groups has led to the death of over 400,000 people, displaced approximately 4 million individuals to neighboring countries, and an additional 1.8 million others internally (Nyadera et al., 2020). The nature, extent, impact, and responses to the conflict provide an emerging yet important discourse on the relevance and applicability of human-centric and state-centric approaches to security. The failure of the several attempts to restore peace through negotiated and mediated peace agreements offers insightful lessons and new opportunities to scholars to investigate, scrutinize, and critically evaluate how effective is the state-centric model which has been an overarching feature of peace efforts in South Sudan, in addressing contemporary conflicts.

Indeed, the drastic reduction in the frequency of inter-state conflicts, on one hand, has been obscured with the emergence of new intra-state conflicts between states and non-state actors who have developed hybrid strategies of attacks, recruitment, financing, communication, and organization. Consequently, to address these emerging threats, it has become imperative that governments, regional and international non-governmental organizations, peace advocates, and scholars come up with new approaches or rethink the existing mechanisms to effectively deal with contemporary conflicts. A study by Kerr (2003) encapsulates this need as a security dialectic constituted of two

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schools either promoting the state or the person as the fundamental reference for promoting security. In other words, this security dialectic raises critical questions pertaining to the reference object of security, the nature of such threats, and the possible ways, means, or methods for the referents to protect themselves from the threats.

Several scholars have endeavored to investigate the merits of upraising human security above the mainstream emphasis on the state. Barry Buzan (2000) criticizes human-centric proponents of security by arguing that the synonymity of human security with individual rights is already provided for in the numerous existing human rights laws. However, Buzan is criticized for adopting a very narrow perspective by associating national security with international security where the states remain as the main actor. Other critics of human security such as Khong (2001), argue that securitizing the individual and thereby making humans the main referents of security, then it becomes less beneficial. But, despite these arguments, examining the experience of conflicts in countries such as Syria, Somalia, Afghanistan, Nigeria, and Yemen, it becomes grossly impractical to not recognize the space and essence of human security. In all the cases mentioned herein, achieving sustainable peace this far, even after years of peace efforts, continue to remain largely a pipe dream. According to Nyadera and Bincof (2019), the security measures adopted to restore security have remained largely unproductive with reverse outcomes that have seen human security becomes threatened even further as reflected in the number of conflict incidences in the country.

As deduced from Table 5.1, violent events have continued post the 2020 peace deal that established a coalition government with concerning figures of attacks targeting civilians. Reports from the United Nations Mission in South Sudan (UNMISS) have highlighted that intercommunal violence accounted for over 86% of civilian violence. Between the months of January and March, more than 36,000 civilians in regions such as Warrap, Jonglei, Unity, Central Equatoria, Western Bahr-el-Ghazal, and the greater Pibor were displaced (UNSG, 2020).

Table 5.1 Data showing attacks on civilians during the South Sudan Conflict (2014–2020)

Year	*Violent events*	*Violence targeting civilians*
2020	848	297
2019	796	334
2018	875	428
2017	1074	443
2016	785	345
2015	506	315
2014	581	285

Source: Authors' compilation.

Other studies are largely drawn from the critical school of IR (Thomas, 1989; Krause, 1998; Mathews, 1989) emphasize the need to have an encyclopedic appreciation of the security. That is, by adopting an extensive understanding of security in a manner that incorporates both normative understanding and attaches empirical and interpretational features to which human destiny can be achieved. This perspective has trusted discourses on the intersection between human security and peacebuilding into the fore to the extent of becoming increasingly institutionalized. Advocates call for the integration of peace initiatives in inculcating a comprehensive approach that unifies development and reconstruction in creating pathways to sustainable and resilient peace. In this manner, peace and stability can become the natural outcome of the processes of elevating human security above that of the state, that is, deconstructing the traditional emphasis on security over developmental needs, or protection over empowerment. Cognizant of this debate, this chapter rethinks the South Sudan case by focusing on the latest attempt by the government to activate the peace treaty by establishing a coalition government in February 2020. The authors are pessimistic about the efficacy of the latest agreement to adequately address the conflict in the country based on the experience of the previous deals signed between 2013 and 2019. In fact, since the formation of the coalition government tensions continue to remain high while in some places, community violence has been reported . The state security machinery has re-embarked on an offensive to suppress civil societies and journalists. According to the World Press Freedom Index reports of 2021, South Sudan is ranked among the worst countries (139 out of 160) on press freedoms (Reporters Without Borders, 2021). The session of hostilities when the peace deal was signed also left a huge vacuum at the local level, and the additional absence of governors or county commissioners to deal with the leadership vacuum has opened another opportunity for local communities to rearm themselves, thereby, fueling communal violence. This study identifies the existence of a gap in the existing literature on why previous peace deals have largely not been significantly successful in ending the conflict. While studies such as Kalpakian (2017), Onditi et al. (2018), and Nyadera (2018) have examined the multifaceted factors that have directly or indirectly led to violence such as state fragility, political rivalry, historical injustices, and identity politics, this chapter will focus on whether the 2020 peace agreement adequately addresses human security and how it can be applied to South Sudan.

Challenges of state-centric security model

The understanding of security and how it is implemented has often been fundamentally associated with the state-centric approach. Even though this approach has widely continued as reflected in several peacebuilding initiatives and strategies, it is increasingly coming under sustained criticisms from scholars and peace practitioners (Moe & Stepputat, 2018; Sriram, & Zahar, 2009; McCulloch, 2017). Specifically, the critical school of thought in IR emphasizes

on the approach's weakness in creating sustainable solutions to emerging security threats and contemporary conflicts. By largely alienating the normative elements of security, the outcome of a state-centric model of security in peace initiatives have been agreements that have an elitist focus on the state rather than local actors who significantly contribute to conflict and conflict processes. Put differently, it is very common that major peace agreements emphasize how power can be shared between adversaries in a given conflict which proponents of this approach highlight its ability to restore stability in the country. Critics on the other hand draw attention to the inability of such arrangements to guarantee other critical post-conflict factors such as access to justice by victims as well as the failure to address deep-rooted causes of conflicts. A study by Spears (2000) highlights that the focus on the stat-centric model contributed to the collapse of peace agreements in Afghanistan and Somalia.

In South Sudan, the previous and current peace initiatives have been tailored through a state-centric approach despite the ethnic nature of the conflict. Additionally, these agreements have also been reached not because of the genuine desire by the conflict adversaries to create peace in the country, but mainly because of the intense external pressure from regional organizations such as the Inter-governmental Authority on Development (IGAD), independent efforts by neighboring states, and other international actors. In this context, therefore, the cessation of hostilities has been because of mutual compromise to share government positions and state power among a few but powerful political elites are drawn from both sides of the conflict divide. Even though some studies (Zartman, 1995; Ottaway, 1995) argue that power-sharing agreements are the most effective mechanism through which peace in both the short-term and long-term can be realized, their arguments are fundamentally anchored on the assumption that most conflicts particularly in Africa are an outcome of a winner-takes-it-all political culture, and that addressing it, could potentially reduce conflicts.

In March 2020, Mr. Sherere, a Special Envoy of the UN to South Sudan hailed the 2020 power-sharing peace deal as an important step that has "moved the country further along the road to sustainable peace" (Lynch & Gramer, 2020, March 5). Other external partners in the peace process such as Norway and the United Kingdom issued a joint statement that partly states that "We welcome the fact that the government and opposition parties have made the necessary compromises to allow this important step" (Lynch & Gramer, 2020, March 5). Nonetheless, the optimism reflected at the time concerning the promise of power-sharing has not been reflected in a stable government. In fact, the level of confidence of both regional and international actors continues to remain wavy with regard to the ability of the peace deal to be effectively implemented. Apart from the establishment of the coalition government, other critical components of the peace deal such as institutions of transitional justice are yet to be established (Agwanda, 2020). The National Assembly as of February 2021 is yet to convene, contested ministerial positions remain unfilled, and the unification of the army into a single national institution – a critical

safeguard against another outbreak of fighting – is yet to take place. Indeed, evidence from cases such as Kenya during and after the 2007 post-election violence, Zimbabwe power-sharing agreement in 2008, and South Sudan previous power-sharing agreements show that peacebuilding approaches that focus on rebuilding state institutions have only paused conflict for some time but have failed to fully address the deep-rooted reasons why these societies experienced conflicts in the first place. On the one hand, we can attribute this challenge to the dynamics that emerge within the coalition governments which tend to be characterized by internal mistrust and rivalry. We can also argue that the short period these governments come to power (maximum five years) is often insufficient to address some of the historical and structural grievances that tend to cause conflicts. In addition, this chapter attributes the weakness of the state-centric approach in South Sudan to challenges such as weak implementation mechanisms, and the overarching disregard of human security aspects which underwhelmingly feature in the fresh agreement.

State-centric model as a challenge in South Sudan peacebuilding

A flagship recommendation of state-centric approaches in peacebuilding is to establish government from a grand coalition of the leading actors in a given conflict. According to Lijphart (1981), consociationalism offers the assumption that involving elite politicians from dominant groups in a given state in the formation of a coalition government is an important step toward restoring stability. Whereas this approach may have yielded positive results in other cases, particularly in Europe, the complex dynamics of conflicts in Africa offer a very limited chance for achieving sustainable peace. In a study on inclusive peace agreements in Africa, Spears (2000) emphasizes that bringing political elites into cooperation can be an effective approach if the nature of the problem facing a state is external rather than when the threat is internal. Rothchild and Foley (1988) also criticize Lijphart's argument by arguing that indeed, the political culture in Africa is dominantly characterized by the existence of ethnic-based coalitions, thus, relying on such an approach is unlikely to yield and guarantee sustainable peace. Mehler (2009) opines that the failure of power-sharing governments often falls short of achieving long-term peace since power is handed over to parties that were not only involved in the conflict but also may lack the commitment to serve the whole population rather their own political and economic ends. In Zimbabwe, for example, the 2008 power -sharing agreement between the Movement for Democratic Change (MDC) and Zimbabwe African National Union-Patriotic Front (ZANU-PF) was undermined from within. Reports of that high-ranking ZANU-PF officials using violent and non-violent means including the arrest and torture of their coalition partner MDC's ministerial nominees are seen as undermining the peace process (Sriram & Zahar, 2009). In Kenya, constant rivalry, and competition between the signatories of the 2007 power-sharing agreement was reflected publicly on issues of the protocol as

well as failure to implement important proposals such as the Kriegler and Waki reports.

This chapter argues that the political bargain reached by political elites in South Sudan is grossly ill-suited to yield an outcome of resilient peace and reposition the country on a path to achieve the vision it had for its citizens before and at independence. It should be noted that the conflict is a consequence of the struggle for state power hence, a complex problem considering that political actors are influenced not by the primary desire for peace, but that of gaining state power (Brosche & Höglund, 2016; Prendergast & Duffield, 1998). As a consequence, in cases where peace agreements remain very fragile such as in South Sudan, any element of betrayal by either of the actors in the conflict can lead to renewed violence just as it has been witnessed in the multiple previous agreements signed since 2013. But even more importantly, coalition governments established through power-sharing during conflicts do not enjoy similar stability comparatively to those that assume the position of leadership through elections. This is because unlike in the experience of political parties in which like-minded groups come together, power-sharing brings together different actors not because they collectively ascribe to similar ideologies, but because they possess some capacity for violence. Therefore, this only serves to solidify existing fragilities such as mistrust and competing interests in government. It is plausible to argue that expecting resilient peace to be an outcome of peace efforts in complex multi-ethnic political environments with additional competing social and economic interests, is highly improbable.

Proponents of state-centric approaches reiterate the role of military formation in post-conflict peacebuilding not only as an entity that quantifies the relative power of a state but also as a key defining feature of what constitutes a state. In other words, state-centrists consider the existence of a functional military as a core component of peacebuilding. However, the nature of contemporary conflicts in which non-state actors and the state become the main antagonists has often influenced the inclusion of these non-state actors into the military as part of the package of peace agreements. Several studies (Hoddie & Hartzell, 2003; Glassmyer & Sambanis, 2008; highlight that such integration does not constitute disarmament, and this is common in state-centric approaches that emphasize on power-sharing.

Given the violent nature of conflicts such as that in South Sudan, the decision to integrate combatant non-state actors into the national military also unintentionally legitimizes the illegalities and crimes committed during conflicts. Some of the non-state combatants are often alleged to have committed serious violations such as crimes against humanity, yet their integration into the national army, therefore, raises fundamental concerns on prospects of achieving justice for the victims. In South Sudan, different combatants are known to have perpetrated acts of sexual violence against women and random attacks on civilian populations (Jaff, 2020; Murphy et al., 2019; Kindersley & Rolandsen, 2019). Victims of these crimes are naturally entitled to receive justice which at minimum, involves holding into account the perpetrators of such violent acts.

But peace negotiations influenced largely by state-centric approaches tend to offer perpetrators of crime and violence very soft-landing spots after the secession of hostilities by absorbing them into the military (Hoddie & Hartzell, 2003; Martin, 2013). In a similar manner, combatants affiliated with the state and who operate under the guise of the state monopoly over the use of force, are also not often held accountable despite their gross violations of fundamental rights and freedoms of individuals through acts of war crimes.

The integration of armed groups to form the Sudan People's Liberation Movement/Army (SPLM/A) can be traced back to 1983 following the contestation of the Anyanya II that was signed between the Government of Sudan and its Southern dissidents (Young & Lebrun, 2006: 13). This highlights the period between the Sudan war of liberation and the signing of the Comprehensive Peace Agreement that created the path toward independence and in which tens of rebel militia groups amalgamated with Sudan People's Liberation Army (SPLA). As such, the idea of merging armed non-state actors in the military of South Sudan, reflects continuation of past initiatives.

Even so, this practice, as argued by Warner (2016), can yield negative implications on the processes of peace and security. In South Sudan, this may be due to several reasons. First, the country has a very complex political environment given that its independence was achieved under a system of single-party politics embedded in militarism. In other words, political competition under the single-party rule also meant that there was a competition within the military. These dynamics that remain alive in South Sudan's political culture, therefore, pose as a great challenge to any efforts of establishing peace because both sides of the divide in the power-sharing formula continue to seek dominant control or influence in the military. Second, there was a very minimal success from the efforts to disarm, decommission, and integrate fighters after the civil war with Sudan. While studies such as Warner (2006) attribute this to weak support from external actors, the bottom line remains that the country is rendered vulnerable to a resurgence of conflict, especially at a time when external support is limited due to the outbreak of the coronavirus 2019 (COVID-19) pandemic.

By rewarding the leading combatants of the conflict with state power and legitimacy, the state-centric approach also raises serious challenges to peacebuilding processes by creating a scenario whereby peacebuilding is prioritized as an issue of stability versus justice. In conflicts that have been characterized by problems of identity such as in Angola, Kenya, Cameroon, and Somalia, the attempt to hold perpetrators of violence to account often spirals into complex dilemmas that can lead to the outbreak of more conflict. However, although justice in post-conflict scenarios is commonly associated with punishment, some scholars (Heyns & Stefiszn, 2006 argue that it ought to go beyond by effectively addressing other social and economic issues of post-conflict societies. In South Sudan, the overarching pre-occupation with the distribution of power at the highest levels has relegated other important issues such as the implementations of transitional justice mechanisms thereby reflecting the primacy put on stability over justice (Agwanda, 2020). Whereas

both stability and justice are core components of peacebuilding, each demand adequate attention in order to establish sustainable peace. For South Sudan, perhaps the experience of Rwanda can offer a valuable lesson on post-conflict peacebuilding (Okoro, 2014).

The question of boundaries has also emerged as a major challenge to the peace process. This is not only unique to South Sudan as several intra-state and inter-state conflicts have been fought over boundaries. Boundaries do not only symbolize administrative spheres or structures but also assign an identity to individuals and groups. This essence of boundaries, therefore, assigns it a significant role in post-conflict societies as actors get an opportunity to address issues such as historical injustices that pertain to land or the general system of governance and representation. In South Sudan, disputes over boundaries have emerged as one of the major issues of the peace process. In 2015, sharp divisions emerged over a presidential decree by Salva Kiir that increased the number of regional states from 10 to 28 (Addam, 2019). This decision was criticized for being unconstitutional and in direct violation of a 2015 peace agreement. Critics of this presidential decree argued that the decision by Kiir was not an effort to decentralize leadership, rather, an opportunist attempt by the president to use the new administrative regions as rewards for political loyalty and minimize the influence of Riek Machar since the new administrative regions were economically unviable and unsustainable. Even though this decision was ultimately rescinded with the 2020 peace deal, dissatisfaction with two special administrative regions continues to draw criticism from sections of the government-allied to Machar. But more importantly, decreasing the number of administrative boundaries falls short of what studies by Hutchinson and Pendle (2015) and Young (2016) describe as deep rivalry between the Nuers and Dinkas.

Cognizant of these challenges, a study by Nyadera (2018) suggests the need to develop a multidimensional approach to peacebuilding that promotes political stability for the state and access to justice to victims of conflict. But perhaps more important, peacebuilding mechanisms in South Sudan should strive to target the deep historical grievance emerging from issues such as inequality and political marginalization which have significantly contributed to the conflict. This chapter argues that in power-sharing models, emphasis should not only be on stabilization (debate on which entity is stabilized- state or government?) because that serves to quarantine peace to a political game in which actors independently dictate when there can or cannot be peace depending on their interests.

Applying a human security model in South Sudan

Over the last three decades, human security has emerged as one of the core components of security studies and is increasingly applied in peace and conflict studies despite attracting equal measure of criticism from traditional security theorists (Paris, 2001). While its application is expanding, the concept has equally received criticism for its definitional problems. The lack of a unified

definition owing to its numerous variables has been recognized even by its proponents as contributing to its analytical weakness (Tadjbakhsh & Chenoy, 2007). However strong proponents of the concept including the authors of this chapter, emphasize its usefulness in interrogating not only the underlying causes of inter-state and intra-state conflicts but also its ability to offer viable and sustainable policy frameworks upon which conflicts can be resolved.

Several studies (Khong, 2001; Richmond, 2001; Suhrke, 1999) highlight the strength of human security as having the ability to provide a viable policy framework that brings about a transition from the traditional emphasis on territorial border security to that of the individuals living within a given state's territory. In other words, human security focuses on how to eliminate the underlying causes of threats to security and guarantee them a dignified life. The human security approach provides that people are free from want (food, health, and gainful employment) and fear (physical or psychological abuse, death, violence, and persecution). In South Sudan, the key indicators of human security that include personal, economic, political, food, health, and environmental security (see Human Development Report, 1994) can be critical in establishing sustainable peace especially given the complex nature of the conflict.

Proponents of human security argue for the need to incorporate measures that can guarantee personal security during the designing and implementation of peace processes. In this context, personal security is understood from a broader sense beyond life and death to include other important facets such as safety from war, violence, sexual abuse, domestic violence, or criminal attacks. In South Sudan, the personal security of individuals has been significantly threatened not only during the period of violent clashes but also when the secession of hostilities was declared. A report by the U.N. Human Rights Commission released in 2019 documents serious crimes such as torture, rape, violence, and kidnappings committed on individuals and groups by both government and opposition forces. However, despite the Report's recommendation for further investigations into high-ranking government officers, military commanders, and militia groups, the 2018 peace deal does not address personal security (Miles, 2019).

Guaranteeing political security is another important pillar of human security that can enhance the effectiveness of peace deals in fragile environments. Fundamental political and civil rights are invaluable components of peace processes that enable individuals to better express themselves during political processes such as elections or engagement in public participation on issues of governance and development. But more importantly, it establishes a fair and balance ground upon which any member of the society can attempt to compete for the various positions of governance. In South Sudan, issues concerning political security such as the absence of trust in the political structures and judicial institutions are strongly linked to the emergence of the conflict. A human security model can therefore offer great opportunities to engage in discourses on how these institutions can be improved to become more independently efficient, effective, and transparent. It is therefore imperative that South Sudan

peace processes of the new deal should have inculcated this approach as it can offer a path for addressing pressing political uncertainties regarding electoral processes and conduct.

Whereas common causation of conflicts in Africa is economic grievances (Ikejiaku, 2012; Draman, 2003; Goodhand, 2003), very limited attention is often given to detail the measures for addressing economic issues in post-conflict societies. A human security approach offers a dimension for economic security in peacebuilding processes by emphasizing the need for a deeper understanding of economic factors that could have played a role in triggering conflicts. Although the 2018 Revitalized Agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS) has failed to offer a pathway for a speedy economic revamping of the economy, economic indicators in the country have raised serious concerns. A report published by the UN Development Program (UNDP, 2019) highlight that approximately over 80% of the population live under a dollar per day while over 30% cannot access secure water and food supply. The high rate of economic insecurity therefore amplifies the collapsing risks of peace processes because of the potential increase of intercommunal violence. In other words, economic security as a component pillar of the human security pillar can address economic issues such as poverty, rural development, and economic equity in South Sudan.

Closely linked to the pillar of economic security is food security which is equally neglected in the peace agreements. Indeed, ensuring a safe, affordable, and plentiful supply of food is a question of security. Conflicts do not only derange food production and supply chains, but the absence of food itself can cause conflicts directly through starvation or indirectly through sparking violent competition for food resources. Given the period of civil war in South Sudan, food security ought to have taken a front position in the peacebuilding agenda specifically on identifying the role to be played by the antagonistic parties in ensuring that food security is not compromised further through actions such as destruction of farmlands and displacement of civilians. A report published by United States Agency for International Development (USAID) (February 20, 2020) identifies that the impact of war, climate change, and invasion of locust, exposed 47% of the population in South Sudan to food insecurity. As such, by focusing on the power-sharing formula at the top, without considering the real threats such as food insecurity that faces communities at the local level, peacebuilding processes cannot yield a sustainable outcome for the country.

According to a study by Trombetta (2008), health security is an important distinguisher of human security from the state-centric approach. Societies that are in or emerging from conflict, are faced with various health threats partly because of their development status even prior to the outbreak of conflicts. Increasingly, health is categorized as a basic human right and as such, should be one of the cornerstones of the peacebuilding processes. The South Sudan health sector has been dipped in disarray especially considering that conflict broke out barely two years after independence. According to Doctors without Borders, there are approximately 1500 hospitals and clinics in the country out of which

1000 are in dire need of repairs. In addition to the problems of lack of personnel, medical equipment, medicine, and health facilities, the peace agreement ought to have considered health security, that is, access to affordable health services by individuals, as one of the priority areas that needed concerted attention during peacebuilding processes.

Trombetta (2008) also identifies environmental security as a key component of human security in light of expanding degradation of global and local ecosystems. Other scholars (Upreti, 2012; Kok, 1996) connect environmental security with sustainable development and argue that it should be one of the core goals for post-conflict societies. In countries such as Nigeria and Lebanon, protracted conflicts have been linked to environmental pollution (Evelyn & Tyav, 2012; Takshe et al., 2010; Obi, 2014). As a component of human security, proponents of environmental security argue that addressing serious problems of ecological degradation can also resolve conflict emerging or sustained by such environmental problems (Johnson et al., 2021; Ide et al., 2021; Eklöw & Krampe, 2019). According to Krampe and VanDeveer (2021), natural resources and environmental factors can constitute, in a significant way, a sustainable peacebuilding process. In South Sudan, exploration of natural resources such as oil and minerals for several years has begun to affect the quality of the environment through pollution, and this has translated into environmental conflicts in different parts of the country (Roelf, 2020). This chapter recognizes that the continued degradation of the environment in South Sudan, is a ticking time-bomb that if not addressed, will exacerbate an already fragile situation. This necessitates the inclusion of environmental issues in peace deals in a manner that can enhance both short-term and long-term policy responses.

As a final pillar of human security, this chapter identifies the role of community security in peacebuilding as a significant level of social interactions. In many societies across Africa, the community provides an important reference of identity and base for both political and economic mobilization. But in many societies likewise, communities have become the baseline for which members of a particular religious or ethnic group become targeted with violence. Given these important dynamics of communities, it is imperative that community security be included as an important facet of peacebuilding processes (Austesserre, 2010; Kalyvas, 2006). In South Sudan, Krause (2019) denotes the civil war as "communal wars". In other words, the conflict is largely organized around the unit of communities and as a consequence, should be an important consideration for peace advocates to reflect on the position of communal security in peacebuilding processes. Notably, the domination of ongoing peace processes by the dominant Dinka and Nuer groups should not negate the position, views, contributions, and needs of other minority groups in the country if sustainable peace is to be achieved.

In light of the analysis provided herein on the basic principles of human security and how the peace agreement based on the state-centric peace model has overlooked vital aspects of security necessary for building sustainable peace in South Sudan, this chapter synthesizes human security into four

comprehensive fabrics. First, the idea of human survival (individual, community) in the context of freedom from fear is a critical dimension for a cohesive existence and interaction between individuals and the state. Secondly, human development (freedom from want) is vital to guarantee the sustainability and development of both the state and individuals by encouraging efficient and effective management of economic resources and guaranteeing opportunities for individuals to have access to knowledge and health facilities. Third, human dignity (freedom from shame) can play an anchoring role in facilitating and sustaining processes of national unity, cohesion, and peace by enabling the protection of collective rights and freedoms such that diversity is embraced, and equity is encouraged. Fourth, the idea of human sustainability (freedom from vulnerability) which guarantees that the affairs of the society are managed effectively through important actions such as good governance, effective economic policies, environmental protection, and empowerment of local communities. Whereas the peace agreement has largely neglected these issues, when harnessed, they have the potential to redirect the country back to a path of achieving sustainable peace.

Conclusion

Conflicts that emerge between state and non-state actors have convoluted peacebuilding processes. In light of this, peace advocates, scholars, international organizations, and other stakeholders involved in peacebuilding processes need to reinterrogate the widely applied traditional approaches to peacebuilding and develop new strategies and frameworks that can address the complex nature of contemporary conflicts. The collapse of several peace agreements not only in South Sudan, but also in other conflict-ridden countries such as Somalia, Central African Republic, Congo, Yemen, Afghanistan, Libya, and Syria re-emphasizes the need for a broader framework for peacebuilding that reflects the local needs and dynamic facing the respective societies. Indeed, a commonality between the collapsed peace agreements in these countries is that they are a product of external initiatives, are externally led, and influenced. In addition, most of them if not all, have been established through state-centric approaches, which perhaps accounts for their failure to initiate sustainable processes that can guarantee resilient peace.

Cognizant of the challenges facing the state-centric model in peacebuilding, this chapter proposes a human security approach as an alternative independent of collaborative framework to peacebuilding, particularly in multi-ethnic conflicts characterized by deep economic and political inequalities. This is because while power-sharing may contribute to the secession of hostilities, it does not guarantee the sustainability of peace. Galtung (1964) explores the question of positive and negative peace which indeed have significant relevance to our proposed approach. The focus on ending direct violence (negative peace) in South Sudan has overlooked the impact of structural and indirect violence (positive peace). Positive peace calls for the inclusion of issues such as

ending discrimination, poverty, hunger, promoting social justice, among others. These are issues that have not often gained the attention they need in the peacebuilding process in South Sudan.

The chapter recommends that beyond the power-sharing approach, peacebuilding should be a continuous process in two important ways. Foremost, actors who are signatories to a peace agreement and the various external stakeholders involved in peace processes such as regional and international organizations, civil societies, and action-independent states should consistently maintain their commitment not only during negotiations but also in the implementation processes of peace agreements. The collapse of several previous agreements in South Sudan can partly be attributed to the lack of commitment toward the implementation of other provisions of the peace agreement outside the establishment of a care-taker government. Secondly, peace agreements ought to incorporate key components of human security in a robust manner that puts the collective interests of both the state and individuals at the center of negotiations and implementation rather than laying emphasis on the interests of leaders whose actions are responsible for the emergence of conflict in the first instance.

Prioritization of human security in peace processes is advantageous in dealing with some of the potential challenges that threaten the viability of peace agreements. In South Sudan, this approach is critical given the cost of the conflict in terms of economic damages, loss of lives, and collapse of the social aspirations of the country. To a great extent, the experience of statehood has robbed South Sudanese of their dignity in life. Thousands have died from starvation, many reduced to refugees, and families have been denied an opportunity to practice important African cultural practices such as providing dignified burial rights to family members and relatives who lost their lives during the conflict. The main aim of any given peace process in South Sudan should therefore seek to restore the collective aspirations of the state by facilitating measures that can yield economic development, national unity, national reconciliation, individual rights and freedoms, peace, and appreciation of collective adversity.

The 2020 peace deal is anticipated to return the country to a path of peace after a long period of violence and disruption of socio-economic activities. While the new deal can be used as a starting point of a renewed peace agenda, it is imperative that the various stakeholders involved in the peace process take note of the lessons learned from the previously collapsed agreements. More importantly, there should be a concise recognition that the power-sharing formula can at best sustain the secession of hostilities in the country and that to attain resilient peace, a human security-centered model should be emphasized. In the absence of such a broad and inclusive approach, aspirations for attaining sustainable peace will remain to be very fragile. In addition to this, individual initiatives from leading South Sudanese leaders such as Salva Kiir and Riek Machar can perhaps learn from other local initiatives of leaders to resolve personal differences and consider elevating peace and national interest.

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6 Conflicting identities and insecurities?

Uncertainties about land rights in Tanzania and Ethiopia

Francis Semwaza

Introduction

The realization of one central human right, the right to life, depends largely on the availability of and one's access to material resources, especially land, across time and civilizations (Blanco & Razzaque, 2011). It is for this reason that even the three basic human needs without which life is impossible – food, clothing, and shelter – are all material in nature. This fact alone makes the two major human rights covenants, the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Social and Economic Rights (ICSE), converge, making it difficult to alienate material being from political and social beings (Davis et al., 1994). This principle applies largely to the world's agrarian societies – that are mostly indigenous in nature and orientation – who immensely rely on land from subsistence food production, income generation, to cultural provision.

Despite the two covenants virtually merging into meeting the same end, the idealism inherent in the United Nations system and its ideals makes international law and the discourse on human rights in particular to overlook the question of material wellbeing, and thus individual as well as collective security, of the people it is committed to protecting. Moreover, given the reliance of international treaties and conventions on the goodwill of states to implement recommendations, the international human rights instruments lack of specificity, especially as regards resource rights, can be argued as giving states too much leeway that could attract them to disrespect their people's rights to resource access, use, and control, thus jeopardizing their survival.

This chapter, therefore, argues that power politics influence international human rights conducts at the state level and that international law's limited scope in recognizing land (and other resources) as essential components of human rights, contributes to human insecurity, especially of individual persons and indigenous communities as a collective. The chapter highlights policy loopholes whose impacts trickle down to the local level and undermine the security of individuals and/or communities (Owen, 2004). Based on a case study of land-related human rights abuses in Tanzania and Ethiopia, the chapter

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first discusses the legitimacy concerns in the ongoing investment land allocation practices in Africa; and relates historical events to the present global politics of the Global North's political and economic domination of the Global South. It revisits the world's political trajectory after the Cold War and theorizes the influence of power politics on international law. It finally discusses the fate of the world's disadvantaged populations amid the contemporary land alienation practices in relation to the guaranties (or the lack thereof) provided for by international law.

Literature review

African land reforms – the legitimacy question

The recent plight of poor people losing their traditionally owned land began with the changes in policies and laws governing land resources in the Global South, particularly Sub-Saharan Africa. For example, Obeng-Odoom (2012) informs that by 2000, Tanzania, South Africa, and Ghana, among others, had all introduced new national land policies and laws responding to the urge to move from centralized to liberalized economies. This process is generally referred to as land formalization. Land formalization in the African context largely aims at simplifying the land acquisition and ownership process to create a better climate for the promotion of private capital which is so far believed as the solution to the long-term economic problems in the underdeveloped world (Soto, 2007; Brown, 2005). Adversely, the land which is used for subsistence food production; which houses crucial resources like water and vegetation; and which bears cultural significance for ancestral activities, becomes contentious and subjects the majority of local communities to food and general insecurity. Despite the majority of the communities largely practicing subsistence agriculture, they remain even uncertain of whether to work on the land for the fear that it would be taken at any time and given to 'investors.' This also affects women who provide much of the labor in agricultural activities. The notion of land grabbing as used here, and as commonly used in the discourse of development elsewhere, refers to large-scale land acquisitions mostly by foreign investors in the world's poor countries (Pearce, 2012). While Western companies/corporations are acquiring the majority of the land from Africa and other countries in the developing world, some local investors and conservation efforts within the respective countries also get involved in the process. From the start of economic liberalization in the 1990s to the present the repercussions are increasing, and the world should be convinced that the impacts are inevitable due to what some scholars call land marketization/commodification – a process that turns land from a necessity into a commodity to be afforded only by those with the financial and other means to do so. As Sassen (2013) puts it, land commodification falls within the larger category of financialization, commodification, and corporationalization of traditional economies.

Even though recipient governments have been formalizing property rights in their respective countries and foreign capital has been increasing in the once capital-starved world peripheries, the changes in land tenure regimes vary considerably. Only one element can be said to be shared among many African countries in their land acquisition and ownership models – that is, the maintenance of radical title (i.e., a situation whereby all land belongs to the state). In a radical title scenario, citizens only retain the right to use land. However, the malleability of radical title means that it can be misused by the state to revoke people's user-rights. While recipient states continue to show commitment to protecting land rights of their majority citizens by elevating and attempting to codify the diverse communal customary land ownership systems, their insistence on commercialization may compromise their desire to guarantee a better protection of their people's livelihoods (German et al., 2013). Insisting on how commercializing land tends to disadvantage a country's majorities, as shown above, more recently Chowdhury (2013) reminded that "since the advent of agrarian revolution in England, it remains an experiential fact that commercial interests in land have always disrupted the lives of people who largely depend on land for daily production and consumption" (p. 64). Given this history, therefore, mass-suffering embedded within the commercialization of land cannot be unexpected, especially in African settings where the economy is largely agrarian and is dominated by subsistence agriculture. Indeed, the African land formalization process negatively affects the poor indigenous populations who depend on land for subsistence food production, engaging in other income-generating activities, and practicing their cultural and religious beliefs (Kusiluka et al., 2011). Because of the foregoing, today, most food producers in the developing world are grappling with hunger (Sachs, 2009).

While indigenous populations are pushed out of their lands for numerous reasons, at issue is the recent surge in the acquisition of large tracts of land for commercial and conservation purposes (Asaka, 2019; Benjaminsen & Bryceson, 2012; Benjaminsen et al., 2013; Cultural Survival, 2012). This situation complicates the conflict by bringing in parties whose interests and roles might not come out clear enough: while governments should defend their people, the trend suggests that they often turn against the interests of their citizens. Moreover, the same civil society organizations (CSOs) who champion the rights and interests of indigenous and other minority communities happen to advocate for massive alienations in the name of forest preservation. Yet, commercial land interests stand atop, and they are the ones mostly responsible for the increased commodification of the rarest commodity for the majority of Africa's rural dwellers to afford. Consequently, it has also become the case that much of the land grabs have resulted in land speculations and hoarding in the investors' quest to trade it for a greater value in later years (Starr, 2014). For instance, Starr informs that, only between 21 and 27% of the large-scale land acquisitions worldwide are developed into the intended investments. Under these circumstances, not only a nation's poor majority are in jeopardy; states are

also experiencing problems with enforcing land and other land-related regulatory frameworks.

Since land grabbing occurs as a product of and amidst changing legal and political environment for promoting private capital or in the pretext of conservation, the question remains if these reforms are inclusive enough to empower the people whose lives are bound to their ability to access land. And if the acclaimed reforms do not prioritize the poor to whom the potential investment lands belong, then, the question extends to whose law is it, and who does it benefit? So far, pressing concerns have been identified as the lack of meaningful consultations regarding land transfers in the victim populations. For several reasons, such lack of information, empowerment, and other power imbalances, government decisions in the African settings may often override peoples' participation in the land transfer deals. Moreover, although the people may legally participate in the deliberations in accordance with the procedures, their consent, or the absence thereof, may not affect the governments' resolve to grant land to an[y] investor (German et al., 2013). Since land is indeed the voice of the poor in the underdeveloped world (Schoneveld et al., 2011), Sassen (2013) rightly concludes that in the midst of the ongoing massive land alienations, the democratic promise that political and economic liberalization sought to spread to the non-Western world is nearing extinction. Accordingly, it is obviously the case that over 70% of the population in the Sub-Saharan Africa region has its voice shunned away for the lack of guarantees on their daily livelihoods due to the uncertainty and disruption characterizing their smallholder agricultural production activities.

In exploring the different paths to answer the above question(s), the chapter implicitly focuses on the formal and informal sources and application of international law and the protection of indigenous populations. The term *indigenous* as used here refers to people whose lives depend on the land, who have lived on the land for generations, and who have devised their own ways of governing their land-based on their cultural prescriptions over time. In other words, *indigenous communities* are communities that practice customary land tenure. This label is intended to include as many subpopulations as possible because of the fact that it is the traditionally owned land that appears to be the major target and victim of the ongoing massive land alienations occurring in the southern Africa region (Barume, 2010). Moreover, it should be noted that as a resource, the land is not a subject of keen interest in international law and human rights law scholarship despite a few manifestations framed within the discourse of property rights. In fact, the said land rights discourse at present lacks enough contextualization and does not offer adequate protection to the world's poor majorities, some of whom are indigenous peoples. In explaining this scholarly and practical gap, some scholars such as Wickeri and Kalhan (n.d.) have gone an extra mile to claim that "… there is no right to land codified in international human rights law" (p. 1). With that being the case, studying the phenomenon of contemporary land alienations or *land grabbing* as is known today, calls on researchers to revisit the interaction between local politics within recipient states and politics at the international level.

End of polarity and de-facto global economy

Global dealings since the late 1980s are mostly unipolar following the disappearance of the former Union of Soviet Socialist Republics (USSR) as a competing power and the ascendancy of the United States as the model economy in the postwar period. Although guidance in international economic activities is definitely a necessity, the global ignorance on the need for a world hegemon often leads states to exaggerate its significance. The hegemon operates in collaboration with both strong and weak states in a world where interdependence is inevitable given the complexity of the interstate system. But weak states specifically have to be wary of potential bullying along the way as humans who constitute families, states, and other entities, are all egoistic and self-centered. In support of the foregoing assertion, Waltz (1954) reminds that man is a combination of evil and good, and that humans are neither perfectly rational nor truly loving; they rather focus on themselves. On that note, be it unipolar, bipolar, or multipolar relations, exploitation would prevail and the extent to which countries compromise in trading relations vary between states and across time. It can, therefore, be said that the trade abuses that the Global South has been experiencing, and which have resulted in the ongoing large-scale land alienations, derive their roots from both internal developments within states as well as from the interstate system where power politics prevails.

With those developments, what could otherwise be democracy seems to have taken a new shift now that it disadvantages the very people it sought to empower. It also overwhelms even the seemingly very competent statesmen who avowed to protect the interests of their citizens. Most country statesmen in the developing world know exactly the direction economic liberalization should take, but they would exploit the loopholes within transitional politics to accumulate personal wealth through graft and other forms of rent-seeking during the land granting processes. No matter how ridiculous invoking mercantilism might sound today since the countries are not the same as they were in the 16th century, and there seems to be some degree of consent on the part of sovereign states that are victims of land grabbing (Sassen, 2013), it remains evident that the impact and abuses on the rights of the world's needy populations are rampant and resemble the old practice of primitive accumulation of capital. The poor countries' virtual submission to modern forms of land alienations, however, emanates from a combination of factors including the latter's undisciplined leadership, economic desperation as well as deception by the economically strong states whose influence in global politics is almost irresistible. In summary, if consent exists at all, it is ill-obtained consent. The economic paradigm shift has drawn nearly all countries into one trading practice of prioritizing private capital amidst the minimal role of the state in providing social goods (Browning, 2000). In the recipient countries, the situation is worse, although the prevailing ignorance and lack of choices make the world to still subscribe to the *one-size-fits-all* liberal economic model without contextualizing it to fit local peculiarities.

Historically, the ongoing exploitation of poor countries and the resulting abuses of human rights began since time immemorial, and there seems to be little-to-no escape-way. There existed no options for the hardly 30-year-old independent countries to carve their political independence than siding with the Eastern or the Western bloc. Most underdeveloped countries' previous subscription to the east in the 1960s throughout the late 1980s was nothing much than a demonstration of hatred toward Western colonization. All they found was some temporary pseudo relief since the USSR itself remained imperialist in its orientation promoting proxy wars outside its borders and sometimes invading countries that would hesitate to join their alliance as it was the case with the Soviet invasion of Hungary in 1956/7. The post-1990s changing political allegiance from east to west has produced policy changes under which land commoditization occurs. This, in turn, leads to the denial of the majority's rights to own land, as it now requires a large fortune to cope with the fast-paced land commodification process. The impact of land grabbing is gradual, but it magnifies as days go by. A decade ago, little was expected as to how worse the situation could become. It can be said that land grabbing today equals fighting a more complex form of colonial imposition that continuously changes its face.

International law and power politics

International law, as it stands in relation to power and wealth among nations, is not value neutral as the latter appears to be its major determinant and weakness. The influence brought by financial and military power proves difficult to ignore, because the same may result in coercion and have shaped the global political and economic direction (Kingsbury, 1998). Emphasizing the market orientation of international law, Kingsbury writes, "There is however a growing incongruence between the increasing market orientation of international law and the inability of international governance institutions or of many sovereign states to cope with problems of inequality that markets alone do not resolve" (p. 601). On the economic front, therefore, international law suffers from the very problem it aimed to resolve and avoid – imperialism and forced centripetal tendencies of and by the powerful states and the subjugation of the weaker states. So far, historical developments appear to suggest that the stronger economically a country is the [more] sovereign it becomes.

A few instances may help to elaborate the points raised above: initially, Europeans claimed to spread Christianity and Western civilization as the reasons for colonizing other parts of the world centuries after Westphalia (Molina, 2012). An alternative discourse on the alleged civilizing mission views it as "a complex mix of imperialism and eurocentrism intended to advance the Western economic agenda to foster its own industrialization" (Molina, 2012, p. 20). Owing to the physical and subtle coercion experienced so far, the discourse of liberalism today could suggest the same pattern whereby some powerful actors

participate in spreading the message urging other nations to subscribe to the unrivaled Western liberal economic and political model(s).

The hegemonic guidance the west has been providing since the end of the Second World War (WWII) comes with some benefits and detriments like any other economic model. It also manifests some imperial tendencies characteristic of all hegemons across world history. Again, this tendency renders imposition almost possible subtly through ideological infusion and rarely by physical coercion (Snidal, 1985). While the Roman Empire as a hegemon during its time made Roman Catholicism the world religion which maintained a tight grip markedly until the advent of the 1789 French Revolution, the Pax Britannica mastered the art of colonizing foreign territories. In its own right, Pax Americana has ushered in the era of regimes and institutions with far-reaching hands and in what Ruggie describes as "internationalization of political authority" (Ruggie, 1982, p. 380).

Experience shows that liberal economic institutions have so far proved to be flexible enough to regulate from afar and with complex and rapidly changing technologies than ever before. As Césaire (2001) has predicted, so far it has proved painstakingly difficult for the underdeveloped world to embrace economic and political liberalism and come out unscathed. Currently, two opposing yet complementary interest-driven processes seem to go hand by hand. While most small states would obviously seem to enjoy the *free-riding* from the trade regimes and economic institutions which the hegemon and its allies provide, the powerful liberal states have to find ways – including physical and ideological coercion – to recover the cost they incur in regulating the economy and be able to continue providing such guarantees. In line with the aforementioned supposition, Strange (1987) notes that "At their peak, hegemons use their power to build frameworks of acceptable rules, institutions, and customary usages that will maintain economic order…" (p. 558). Along these lines, it is not surprising that liberalism today is in all respects the global order.

In view of the foregoing, African land grabs today emanate from this relationship between and among states and are not isolated from the world's political developments, especially starting the 1990s. The hardships during the successive economic shocks of the 1970s and 1980s culminated into a further weakening of most immature states. The drastic fall in the price of agricultural products upon which most African and other developing countries depended, the high prices of oil, and severe drought across the 1980s that caused hunger and robbed the countries of their little fortunes, all led to the triumphing of Western ideas that even the most defiant countries finally came to embrace. This situation forces most underdeveloped countries today to follow the unlocalized liberal trajectory without enough knowledge and willingness to mitigate the dangers involved in the choices they make. On another scale, leaders of the Global South also have been taking advantage of the system for increasing their own fortunes through rent-seeking while further subjecting their people to poverty.

Conceptual framework

Conceptually, the chapter builds on the idea that better land tenure security for Africa's majority smallholder farmers results in improved food security and relative peaceful coexistence between a country's various communities. With the understanding that people's satisfaction reduces the number of conflicts, in Africa where most societies practice subsistence farming, land tenure security remains of utmost importance for people to sustainably produce food for their households and their nations at large. This becomes of particular importance among people in indigenous societies, such as those in the predominantly agrarian Tanzania and Ethiopia, that largely depend on land for their survival – especially in growing food and sustaining their cultures (Barume, 2010).

Improved land tenure security for smallholder farmers will lead not only to guaranteed food security, but it will also spill over to improved livelihoods by encouraging people to engage in better income-generating activities which would result in increased environmental protection, better health outcomes, and ultimately the enjoyment of the guarantees of basic human rights due to the prevailing tranquility (Deininger & World Bank, 2003). After all, human security is about protecting the people (Liotta & Owen, 2006). These societal improvements will make people feel more secure at where they live and conduct their farming activities: more importantly, they will have the ability to negotiate their security since they can speak for themselves regarding their own well-being (United Nations Development Program [UNDP], 1994). With the reduced number and magnitude of threats, there is the likelihood of sustainable peace to prevail in countries whose populations rely heavily on land-based activities, including agriculture.

Methods

Study area, data, and analysis

The Nyamuma village in northwestern Tanzania and the Gambella region in Ethiopia resemble in many ways, including the land-related conflicts between governments and the people. Both areas are endowed with large natural forest reserves that attract both conservation efforts and state-led development endeavors from both national and local government authorities. Spaced almost 13 years apart, the Nyamuma and Gambella incidents represent the two grossest abuses of peoples' rights to resource control in eastern Africa. While the Nyamuma incident dates back to the year 1999, the Gambella evictions occurred in 2012. However, the approaches that authorities have employed for years create new tensions or magnify the existing ones over who owns the land and how to manage it. Moreover, in most cases, the challenges experienced remain unaddressed for years, which brings more uncertainty in food production and human security more generally.

Information about the two cases was obtained through an investigation of various media, research, and action reports, as well as proceedings, related to the incidents of interest in this analysis. The collected information was analyzed through content analysis according to the overarching theme(s) of the research: land tenure security, abuses of human rights by the state, and general insecurity. The presentation of the analysis is accompanied by related literature to help further explain the similarities and differences between the cases for study and those happening elsewhere in Africa and globally.

Case analysis and discussion

Case 1: The Gambella incident

News surfaced on April 28, 2012, that the Ethiopian Defense Forces (EDF) had killed at least five people and injured eight protesting villagers in the Gambella region after the victims allegedly trespassed into an undeveloped large tract of land acquired by a multinational company, the Saudi Star (Cultural Survival, 2012). The Human Rights Watch (2012) further reported that the Ethiopian government had been perpetually frightening villagers with its military and law enforcement officials, sometimes resorting to raping female community members and subjecting youth protesters to arbitrary detentions. Gambella is a far distant place in rural Ethiopia that borders South Sudan. In fact, before 1956, the Gambella region belonged to Sudan. Due to fear, most villagers have sought refuge in South Sudan – a recently established state that has been battling ethnic-charged civil strife since its birth (Refer to Chapter 5 of the book for additional discussion on South Sudan). Moreover, the Ethiopian government reportedly evicted nearly 300,000 members of pastoral-nomad societies who have managed their land and affairs for over ten generations (Pearce, 2012). The evictions did not even consider the time that the people's ancestors had moved and stayed there. The supposedly reclaimed land would be given to investors, including Saudi Star, and 104 kilometers of gravel roads would be built as part of the development plan (Ethiopian News Agency, 2012).

Case 2: The Nyamuma ordeal

It was in the early months of 1999 when villagers in northwestern Tanzania's national reserve of Serengeti National Park suffered unannounced police raids and beatings, and witnessed their entire villages being set ablaze after being accused of encroaching into the reserve. This was ordered, sanctioned, and witnessed by the Serengeti District Commissioner, as he was then, and high-ranking police officials, among others, in which incident over one hundred households were evicted (Kideghesho, 2008). Most African governments embark on massive conservation efforts both responding to the ongoing global pressure to conserve the environment as well as in their efforts to boost income

generation through tourism. Tanzania is no exception to the above rule; it has been on the forefront of conservation since its independence in the 1960s. Recently, the country is a model of the Norway-funded United Nations (UN) effort known as Reduced Emissions from Deforestation and Forest Degradation (REDD). While conservation and tourism may not be a problem, the enforcement of the policies as well as the absence of clearly enforceable land-use plans usually allow for powerful institutions such as conservationists and private investments to have an upper hand in land negotiation processes (Neville & Dauvergne, 2012). The Nyamuma scandal remains unsolved to date despite Tanzania's Commission for Human Rights and Good Governance instructing the state to compensate the villagers and take responsible officials to task, a decision which was later approved by the country's High Court of Tanzania and upheld by the country's supreme judicial organ, the Court of Appeal of Tanzania.

Case remarks

The two cases above represent many similar concerns over forceful expropriating of indigenous peoples' lands, hence human rights violations of the world's fragile groups whose lives are attached to the land. Denying them the right to access to land equals denying them their right to life and to self-determination. The drivers so far as the cases represent, have been large-scale agricultural investments, mining activities, or conservation efforts. The body of actors in the said violations remains complex, but they include both powerful and weak states, multinational trading firms, international financial institutions, and sometimes non-governmental institutions.

The fate of the indigenous

As earlier noted, international law barely recognizes resource rights, and land is no exception. Hence, the law has little to offer in protecting land from being alienated. Had land been included in the discourse of human rights, perhaps a better protection would be guaranteed. Considering this vacuum in guaranteeing the welfare and survival of the most unprotected people, national efforts seem to be the most potent weapon (Barume, 2010). Barume, for instance, exemplifies the case of Aborigines in Canada and Native Americans in the United States as the example of these national efforts at protecting indigenous lands and other rights from being abused. In those countries, matters relating to the rights of indigenous populations have been centralized at the federal level granting the people almost autonomous governance over land and other affairs. The conventional and other State and Federal laws do not apply to those areas. The indigenous populations there govern their own affairs under preferential treatment arrangements afforded by national laws. Theoretically, this mode of native affairs centralization seems to be diffused enough to empower the vulnerable populations that most social circles happen to overlook.

In the developing world, however, the centralization of land matters of the indigenous populations has not yielded the desired outcome. Most states in the Global South have attempted to codify the various customary land ownership systems to allow for uniformity and create the environment for recognition at the higher levels. Tanzania's Village Land Act [Cap. 115] of 1999 exemplifies such centralization attempts. But as Cotula (2013) recently noted, this centralization appears to subject the vulnerable populations to higher laws and authorities, which so far, have exposed the said communally owned lands to the danger of being expropriated as they do not give the respective communities the power to determine and decide upon their own matters (Cotula, 2013; Schoneveld et al., 2011). The same country, Tanzania, has enacted another piece of legislation – the Land Act [Cap. 114] of 1999 – which overrides the powers given to communities to manage their lands as provided for under the previous act. In this regard, participation of the indigenous people, or any other rural communities, in controlling their land and in deciding whether or not land can be granted to an investor, is hampered by the very laws which are said to follow the modern economic systems, and which can be seen as promoting majority participation.

Despite international law not recognizing land resources as a requirement for human survival, there have been attempts to at least recognize the existence of indigenous people and their rights. There exist the UN Declaration on the Rights of the Indigenous People adopted in 2007, and the International Labor Organization's (ILO) Resolution No. 169 which also recognizes and avows to protect the rights of the indigenous people, including land. At Africa's regional level, there exist numerous resolutions with the most notable one being the African Charter on Human and Peoples' Rights (ACHPR). However, the existence of these instruments has not stopped massive land alienations from occurring. So far, the major weakness of these international instruments which seek to recognize, promote, and protect the rights of indigenous people has been the lack of enforceability at the domestic level (Barume, 2010). The instruments are not legally binding, and although states may ratify them, certain provisions need to be adopted and included in municipal laws of the respective states for them to take effect.

Amidst these weaknesses in international law and the poor countries' failure to protect community lands, there come two suggestions all pointing to the state: (1) states should increase their commitment to protecting their people from abuses related to resource rights; and (2) states be held responsible at the international level for violating the resource rights of their people. The recommended solutions to address the vulnerability of lands belonging to indigenous people, includes legal plurality and states' increased role and commitment to protect their peoples' rights. Barume (2010) suggests that regimes violating the land rights of their people be held accountable for criminal acts, while Cotula (2013) emphasizes the need to pluralize the legal regimes governing land tenure in respective countries. Both suggestions may help guarantee better protection for the needy populations. The problem,

however, will be making these recommendations a reality, given the complex legal processes, the countries have already established. Carefully studying the politics of land grabbing may lead to the view that reversing the land grants already made to several companies may not only be highly impossible but also will put the host countries in endless legal disputes that would further weaken their already ailing economies. However, remaining silent may not be an option either; empowering a nation's majority to speak for themselves remains the key to fighting injustices.

Conclusion and recommendations

The gaps manifest in the human rights discourse and practice on the one hand amid the desire by most developing nations to generate more revenues, on the other hand, seem to have lowered the nations' commitment to respect and guarantee their people's rights. The rights to resources, in this respect, are the most vulnerable ones. Whereas implementing international law largely depends on the goodwill of the state in an environment where private gains outweigh community welfare (Starr, 2014), it becomes harder for the international human rights instruments to have a significant impact, not least to be enforceable especially in protecting the resource rights of vulnerable groups. This situation exposes the majority of smallholder farmers – who can barely afford to buy food supplies from outside – to a high level of uncertainty, and thereby subjects them to actual and potential famine, loss of freedoms, and a host of other insecurities.

As discussed in the cases above, most international protocols advocating for human rights do barely touch on resource rights. This omission results in land tenure uncertainties and consequently leads to food insecurity for the majority of rural residents in most African countries. With that in mind, further investigation could be made to explore the best ways for the said instruments to address these concerns legally and politically, as a way of guaranteeing the cover for the most vulnerable sections of the populations in areas where subsistence farming still dominates. Guaranteed access to land will not only help in curtailing the dangers of food insecurity among the people but also, it will give them the voice to hold their governments responsible and accountable in weighting the balance between public and commercial interests in matters pertaining to land ownership in most African countries.

In light of all that is happening, the international community, then, is tasked with creating incentives to have the states adopting the necessary provisions of the ICCPR, ICSE, and other international human rights instruments into their domestic legislation in order to foster accountability at the state level. Moreover, suggestions could be made that, those human rights violations embedded within business practices be considered in the same weight as corporate corruption, thus intolerable, and whoever is responsible be taken to task according to applicable laws. On another level, states could be advised to tighten their standards of practice by paying

more attention on individual than state liability so that government and other institutional officials accused of violating people's rights can bear the responsibility for their actions. This approach could help reduce the incidence of individual human rights violators hiding under the umbrella of the state (Bassiouni, 2008). This combination might help mainstream the rights discourse as it relates to resource control to sustain the lives of the world's indigenous populations.

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7 Economic perspectives to human security in Rwanda

Alfred R. Bizoza

Introduction

The concept of human security is associated with global security which in turn is reflected by civil wars, genocides, climate change, and international crises (Mack, 2005). East Africa has experienced worse cases of civil wars and political crises including but not limited to the 1994 Rwandan Genocide against Tutsi and ongoing conflicts in Somalia, Ethiopia, South Sudan, and the Democratic Republic of Congo (DRC). Subsequently, the discourse about human security has been confounded with peace restoration and rebuilding of nations. Consequently, greater efforts are on the protection of territories or countries against any external invasion since the end of World War II than actual human security (Leaning, 2009). Later, the concept of human security has evolved and expanded to include other aspects of human development following the publication of the 1994 report by the United Nations Development Programme (UNDP), which for the first time clearly spelled out the concept of human security.

Since then, several scholars have linked human security with other human development dimensions such as economic security, food security, health security, environmental security, personal security, community security, and political security (see e.g., Amir & Mat, 2021; Adger et al., 2021; Murshed, 2008; Purkitt, 2009; King & Murray, 2001). The understanding of the concept of human security has improved to accommodate other notions beyond the national security in a sense of strong and capable armies to protect the state borders from external aggression and give also adequate consideration to protecting human rights and threats to livelihood, human dignity, and well-being (Leaning, 2009).

Rwanda's recent history makes it a good case study for human security in East Africa. In 1994, a genocide against Tutsi resulted in extermination of a million people in 100 days. The efforts of rehabilitation and recovery of the economy are in essence preservation and sustenance of human security. The post-conflict government inherited two sets of problems: (1) the consequences of the 1994 Genocide against Tutsi, and (2) the structural problems of Rwanda's economy. Consequently, important efforts were made after this period to build peace, security, and unity and reconciliation. Subsequently, the period since

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2000 has seen the start of development through the design and implementation of different policies, programs, and institutional reforms addressing poverty, ending hunger, unemployment, death caused by diseases, gender inequalities, and inequities; all these contribute undoubtedly to the core values of human security while at the same time ensuring the twin freedoms among citizens – freedom from want and freedom from fear (Murshed, 2008).

Furthermore, Rwanda has instilled the culture of policy planning and performance contracts to ensure appropriate institutional and strategic frameworks are in place to promote and protect the rights to economic, food, and health security among other rights. This best practice strengthens the linkage between social protection and the long-term development of Rwandans. For instance, the provisions by the Vision 2020 already upgraded to Vision 2050 and the 7-Years government's plan or the National Strategy of Transformation (NST-1) entail programmatic interventions meant to enable people to escape from poverty and hunger, create more jobs to increase employment among job seekers, keep child deaths at minimum (i.e., reduce infant/child mortality), and restrain the spread of diseases, ensure gender equality and equity between women and men, promote citizen's participation in decision making, among others. Thus, all these sustain the notion of human security being a necessary but not sufficient prerequisite for development without human fulfillment (Alikire, 2003). A similar reasoning is that the role of leadership with strong political will and clear vision is central to the good and social performances observed in Rwanda in the period after the 1994 genocide against Tutsis until now. Thus, the presence of strong institutions established by the leadership coupled with the trust in leadership by citizens in Rwanda is major determinant of the country's ability to withstand potential shocks on human security and development.

This chapter focuses on Rwanda and adds insights to the discourse of human security from an economic perspective. It demonstrates how addressing poverty, food insecurity, unemployment, gender inequality and inequity, and limited access to healthcare services is an effective approach to human security. In the same reasoning, the author contends that commendable efforts made in Rwanda to establish human security from the perspective of territorial stability and security within its boundaries are consistent with the search for human fulfillment by tackling other issues facing people's improved livelihoods. Also, this chapter is written at a time when the world is severely being affected by the COVID-19 pandemic since its onset worldwide in December 2019. Further, the chapter explores how the Rwandan government is acting to prevent aggravated poverty and food insecurity by promoting employment in the process of economic recovery post-COVID-19. Thus, the implementation of human security is understood to be localized and contextualized with local realities (Amir & Mat, 2020).

The remainder of this chapter is structured as follows. Section two presents the conceptual framework of the chapter. Section three presents the current status of human security in an institutional economic perspective. Progress made on key performance areas using standard on human development

indicators and the actions taken from the policy are documented to inform on new frontiers toward human security in Rwanda form the main content of this section. Finally, the chapter ends with a discussion of major observations from the analysis of the chapter to draw some conclusions.

Conceptual framework

Since the adoption and formalization of the term human security by the United Nations Commission for Human Security (UNCHS), most of the definitions highlight necessary conditions determinant of human security including protection of individuals and their basic human rights and freedoms, access to material well-being, equality, and environmental sustainability (Adger et al., 2021; Barnett & Adger,2007; Dodd et al., 2020). An important distinction of human security from other conceptualizations of security is that it moves the referent object of security from the state to the people (King & Murray, 2001). At the heart of human security is acknowledgment that non-military threats such as epidemics, floods, earthquakes, and droughts are just as important as military threats (King & Murray, 2001). In a recent study, Adger and colleagues show how environmental hazards represent an increasing source of perceived insecurity to the migrant population over time (Adger et al., 2021). Their measurement of the human security index involved a greater consideration of economic, social, and environmental dimensions: employment (stability of income) and housing (housing stock quality, tenure security, and legal protection); frequency and severity of crime rates, the extent of free elections and opportunities for civic engagement and participation; and consumption levels of calorie sources and intra-household distribution of food.

Much of the literature on human security in Rwanda is mainly focused on the 1994 genocide against Tutsi and state-building process after this period (e.g., Ndahiriwe, 2021), respect of human rights (e.g., Bisoka & Geens, 2021), and building of social cohesion and inclusion (e.g., Abbott & Sapsford, 2021). Case studies assessing human security in Rwanda from an institutional economics perspective are scarce. The chapter considers people's inability to sustainably escape poverty, secure stable income from employment, have sustainable food and nutrition security, insufficient access to health services, and gender inequity and inequality as core values of human security. Thus, socioeconomic policies and their operationalization are fundamental toward the institutional and economic reforms needed to secure humans or protect them against the fear of poverty, lack of jobs, insufficient food, and lack of means to secure health services (Dodd et al., 2020). This would imply or translate into expected long-term social economic transformation and sustainability.

The chapter contributes to the existing literature on human security by demonstrating how the fronts against the above types of fears is equal to the fronts to secure the territorial boundaries or the country's sovereignty with a focus on social protection, labor, and gender policy responses in Rwanda. Since the country is also facing the challenges caused by the COVID-19, the author also

Table 7.1 Conceptual framework for economic perspective of human security in Rwanda

Human Security Dimensions	Elements selected for analysis	Description	Policy response
Economic security	Poverty reduction	Stability of poverty escapes	Social protection
	Employment	Nature and stability of employments	Employment policies
Food security	Sustainable access to food and quality nutrition	Balanced diet and stunting rates.	Social protection Agriculture policies
Health Security	Access to health	Access to health services including health insurance	Health policies
Cross-cutting issues	Security of land tenure	Security of land tenure and protection against eviction or land grabbing.	Land policies
	Gender equality and equity	Gender-based violence Decision-making	Gender related policies

reflects on the status before and after COVID-19 where possible on selected economic and social dimensions in the context of this chapter. These elements address two important dimensions of human security that can be addressed from this institutional and economic standpoints: freedom from "want" and freedom from "fear". The first one refers to anticipated quality of life and is well approached from the economic perspective while the second one implies addressing issues pertaining to equity which in turn is approached from the institutional or political perspective (Murshed, 2008). For the sake of analysis, the chapter's analytical scope is limited to three dimensions of human security namely economic security, food security, and health security. In this case study, addressing both the economic security and food insecurity leads to freedom from want while freedom from fear is addressed through the security of land tenure, and health security dimensions of human security. On the other hand, achieving gender equality, equity, and empowerment of women contributes to the above two dimensions of human security also known as the twin freedoms from want and fear (Murshed, 2008) (Table 7.1).

Economic perspective on human security in Rwanda

This section discusses three main dimensions of human security, namely economic security, food security, and health security. It also provides insights into cross-cutting issues such as gender and land tenure security both of which have implications at least for economic security and food security.

Economic security

Economic security in terms of poverty reduction has been at the forefront of the country's national planning and interventions starting from Vision 2020, the various strategic development plans like the Poverty Reduction Strategic Paper (1&2) in the period 2003–2006, the Economic Development and Poverty Reduction Strategy (1&2) during 2008 and 2018, and a recent National Strategy for Transformation (NST1/2017–2024) already implementing the Country's Vision 2050. All these strategies have reiterated the need to continue improving people's economic security by their lives from poverty and extreme poverty. Despite commendable efforts made in the past on this front, poverty remains a major concern.

The overall trend of poverty show improvement up to 38.2% from 58.9% and up to 16% from 40% for poverty and extreme poverty levels respectively for the period 2000–2017 (National Institute of Statistics of Rwanda [NISR], 2018a). However, looking at the poverty transition matrix (Table 7.2), overall, 19.16% remained poor while 38.05% remained non-poor over the three waves of analysis (2010/11–2017/18). About 43% oscillate between being poor or being non-poor for one or two waves of the three waves considered. During the same period, the Gini Coefficient has slightly improved from 0.507 and 0.425; this reflects reduction in inequality in income distribution at country level. Although the Gini Coefficient has improved, there is still an apparent skewed distribution of income and wealth among different segments of the Rwandan population.

In a perspective of human security as linked to poverty, human security is measured by the number of years of future spent outside a state of "generalized poverty." Generalized poverty occurs when an individual falls below the threshold of any key domain of well-being (King & Murray, 2001). In the case of Rwanda, cognisant of the efforts and positive effects made to reduce poverty, the risks of impoverishment are still high due to environmental hazards and the inability of the industries to create more jobs that would employ young graduates. Therefore, environmental protection, climate change adaptation, and job creation are critical to ensuring human security (Kirezi & Simon, 2019).

Social protection policy through its programs has been one of the main policy options used by the government of Rwanda to address extreme poverty, as it is the case for other African countries. The Rwandan approach incorporates programs such as Vision 2020 Umurenge Programme (VUP), community-based health insurance (commonly known as Mutuelle de Santé), food and nutrition security programs, especially to people affected by acute shock (e.g., drought, flood, and landslide), Early Child Development (ECD), and nutrition-sensitive direct support, among others. As linked to employment responses, through VUP, government and development partners provide public works employment for members of extremely poor households (e.g., through the construction of anti-erosion measures and feeder roads), direct support through cash transfers for extremely poor households without members who can work, and subsidized

Table 7.2 Poverty transition matrix (2010/11–2017/18)

Transition	*Transitions (%)*								
	PPP	*PPN*	*PNP*	*NPP*	*PNN*	*NPN*	*NNP*	*NNN*	*Total*
Rwanda	19.16	7.76	5.34	5.13	12.52	5.47	6.57	38.05	100
Urban vis-à-vis-Rural									
Urban	8.98	5.14	2.28	3.48	9.92	5.99	3.35	60.86	100
Rural	21.85	8.45	6.14	5.56	13.21	5.33	7.43	32.02	100
Provincial levels									
City of Kigali	10.79	7.94	1.54	4.11	7.26	5.07	0.54	62.76	100
Southern Province	20.37	6.14	7.85	4.94	14.95	3.35	6.76	35.65	100
Western Province	20.97	6.55	5.31	6.43	8.83	5.8	10.61	35.49	100
Northern Province	24.46	9.18	4.68	4.13	20.34	6.11	3.66	27.45	100
Eastern Province	15.73	9.5	4.72	5.07	10.45	6.94	6.57	41.02	100

Source: NISR (2018c), EICV5; Notes: P: poverty and N: Non-Poverty.

credits and financial products for small business start-ups for those able to run a business. The government of Rwanda already has an established social protection response mechanism to base on the targeting of beneficiaries, the package per category of social protection scheme, the choice of activities with greater poverty reduction impacts, the transfer payment of finance and insurance services, and other poverty graduation measures.

However, the same NISR report shows how poverty and extreme poverty did not reduce much in the last poverty survey (2016/17) due, mainly, to environmental shocks, namely drought leading to high food prices, and other negative effects. The computation of the poverty index in Rwanda accounts for 70% of the measurement of food availability (i.e., production component) and affordability (i.e., price and inflation) while 30% represents other necessities and their price. In this context of unpredictable environmental shocks intertwined with high rainfed agriculture – agriculture being the main source of employment, economic security dimension of human security will require innovative social protection packages coupled with efficient graduation measures and effective investment in climate change mitigation and adaptation measures to reduce heavy reliance on rainfed agriculture in order to feed the ever-increasing population. Furthermore, there is also a possibility to consider a multidimensional poverty index as already being explored by NISR.

Employment for economic security

Rwanda has a target to create 214,000 annual jobs and more than 77.6% of all employed people are in the informal sector. The analysis of the labor force (LF) through its main constituents, namely employment (EMP) and unemployment (UNE) shows their respective average annual changes of 4.9% and 3.8%,

respectively. The change in employment for male headed households (Chg-M) is double (6.4%) compared to 3.7% of female headed households (Chg-F). The average change for employment in urban area (CHG-UR) is 5.6% against 2.8% in the rural area (Chg-RU) while the change in unemployment is −1.9% for female headed households against 5.6% for male headed households (see Table 7.3).

Looking at the main sectors of economic activities, female headed households (FHH) are more employed in the agriculture, trade (wholesale and retail) and food related services, human health, and social work activities, and equally represented in the financial and insurance activities (Table 7.4). Despite continued functioning of some labor-intensive programs especially in rural areas, people who are in sectors other than agriculture especially the informal sectors will be severely affected by the lockdown policies related to the COVID-19 pandemic. On-going estimates released in the national media by NISR, show that 40 days after the outbreak of COVID-19, unemployment increased by up to 65% in the service sector, 90% in industry, and 15% in the agriculture sector. These negative effects were expected. Apart from the living effects caused by this COVID-19 pandemic, majority of young people especially those from rural areas migrate for the search of jobs as a sign of lack of stable income from employment among the youth now estimated at 22.2%. The city of Kigali has the highest percentage (50.9%) (NISR, 2018a).

In addition to ill health and loss of life, COVID-19 pandemic has also led to a rise in unemployment and continues to contribute to increased demand for social protection, which places pressure on the national budget. As a result, actions by the government will need to include those that promote public works to generate jobs, capital injections and fund baskets to ensure quick and easy access to liquidity for small and medium enterprises (SMEs) (to be delivered by microfinance institutions and savings and credit cooperatives [SACCOs]) to retain employment and stimulate job creation for new market entrants. This constitutes further another area where low skilled or unskilled (poor) workers may benefit considering targeting lessons in the on-going *Ubudehe* and poverty classification system.

Food security

Food security on its own is a multi-disciplinary field that is influenced by many other factors, including climate change and environmental degradation (Amir & Mat, 2021). Drawing from the Food and Agriculture Organization's four pillars, namely food availability, accessibility, utilization, and stability (Food and Agriculture Organization [FAO], 2008), deficiencies in any of these components indicate presence of hunger and malnutrition. It is categorically understood that everybody (man, woman, and child) has the absolute right to be free from hunger and malnutrition in order to develop fully. Therefore, the concern of hunger eradication is a common objective for all countries, including Rwanda.

Table 7.3 Annual changes of labor force (2017–2020) (percent)

Year		*Total*	*Female*	*Male*	*Urban*	*Rural*	*Chg-T*	*Chg-F*	*Chg-M*	*Chg-UR*	*Chg-RU*
2017	LF	3600916	55.4	44.6	27.8	72.2	–	–	–	–	–
	EMP	2959965	57.1	42.9	27.5	72.5	–	–	–	–	–
	UNE	640951	47.3	52.7	28.9	71.1	–	–	–	–	–
2018	LF	3877558	55.5	44.5	27.2	72.8	7.7	7.9	7.4	5.4	8.6
	EMP	3321598	56.9	43.1	26.8	73.2	12.2	11.7	12.8	9.5	13.3
	UNE	555960	47.2	52.8	29.1	70.9	−13.3	−13.4	−13.1	−12.6	−13.5
2019	LF	4025992	54.8	45.2	25.9	74.1	3.8	2.7	5.3	−0.9	5.6
	EMP	3405877	55.7	44.3	26.2	73.8	2.5	0.5	5.2	0.0	3.5
	UNE	620115	49.9	50.1	24.6	75.4	11.5	17.9	5.8	−6.0	18.7
2020	LF	4105648	54.0	46.0	25.9	74.1	2.0	0.5	3.8	1.7	2.1
	EMP	3568934	54.5	45.5	25.4	74.6	4.8	2.5	7.7	1.8	5.8
	UNE	536714	50.8	49.2	28.7	71.3	−13.4	−11.9	−15.0	1.1	−18.2
Averages	LF	3902528.5	54.9	45.1	26.7	73.3	3.4	2.8	4.1	1.5	4.1
	EMP	3314093.5	56.1	43.9	26.5	73.5	4.9	3.7	6.4	2.8	5.6
	UNE	588435.0	48.8	51.2	27.8	72.2	−3.8	−1.9	−5.6	−4.4	−3.2

Source: Author's computation based NISR data (2017, 2020).

Table 7.4 Trends of employment in various sectors (2020–2018) (percent)

Economic activities	*2020*		*2019*		*2018*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Agriculture, forestry and fishing	46	54	46	54	45	55
Mining and quarrying	92	8	91	9	94	6
Manufacturing	54	46	52	48	56	44
Electricity, gas, steam and air conditioning supply	90	10	93	7	82	18
Water supply, sewerage and waste management	40	60	68	32	62	38
Construction	77	23	83	17	85	15
Wholesale, retail trade, repair of motor vehicles, motorcycles	48	52	47	53	49	51
Transportation and storage	98	2	97	3	97	3
Accommodation and food service activities	48	52	51	49	53	47
Information and communication	79	21	69	31	74	26
Financial and insurance activities	55	45	54	46	50	50
Real estate activities	80	20	85	15	83	17
Professional, scientific and technical activities	63	37	68	32	69	31
Administrative and support service activities	72	28	69	31	65	35
Public administration and defense	71	29	73	27	74	26
Education	54	46	51	49	54	46
Human health and social work activities	44	56	49	51	46	54
Arts, entertainment and recreation	84	16	64	36	65	35
Other service activities	68	32	63	37	70	30
Activities of households as employers	37	63	45	55	45	55
Activities of extraterritorial organizations and bodies	54	46	56	44	63	37

Source: 2020 Labor Force Survey.

The state of food insecurity among households in Rwanda stood at 20% (NISR, 2018a). The Western Province is the most affected, with 29.9%. At district level, Rutsiro and Ngororero have higher proportions of the food insecure households with 49.0% and 40.8%, respectively. They are followed by Nyabihu and Rusizi Districts which have food 25.7% and 25.3% of insecure households respectively (NISR, 2018a). In addition, 20% of households had margin food consumption and 4% of poor food consumption, implies an extreme unbalanced diet due to lack of protein and comprised mainly of starch

together with some vegetables and pulses (NISR, 2018a). The global chronic malnutrition (stunting) prevalence among under-five children stands at 34.9% with 10.4% severe stunting (NISR, 2018a). The level of malnutrition remains serious challenge based on the World Health Organization threshold (30–39%). The prevalence of stunting is at 34.9% while the level of westing and underweight for under-five children stands at 2% and 13%, respectively.

The study by Amir and Mat (2021) in Malaysia-Thailand border assessed the coping mechanisms in case of food insecurity and found three main categories of coping strategies. These comprise consumption, income, and external intervention as a coping mechanism. Accordingly, the income strategies are more preventive while consumption and external aid are considered as ex-post coping strategies as they are applied "after" food insecurity occurs. As already mentioned, Rwanda in its social protection schemes, there is also food and nutrition security programs especially to people affected by acute shock (e.g., drought, flood, and land slide). Because of COVID-19, the burden of government to support vulnerable people access food has been amplified. For instance, the number of households beneficiaries under the social protection programs (mostly food distribution and cash transfers) has increased by 42.3% for the period March to December 2020.

Rwandan citizens at the junction of both poverty and food insecurity

Overall, there is evidence of policy efficiency in allocation of social protection programmes across the country because this is found to be more pro-poor in the last six years (NISR, 2018a). But it is also worthy to note some geographical differences in the effectiveness or efficiency of development programmes in addressing poverty dynamics. For instance, the Northern province has the highest percentage of the population that stayed in poverty (24.46%) from 2010/11 to 2016/17. This is followed by the Western Province with 20.97% of population staying in poverty. However, looking at the poverty and extreme poverty levels, Western Province has the highest poverty and extreme poverty incidence rates (47.1% and 21.6%), it has the second highest levels of chronic poverty (see Table 7.5), its employment to population ratio is estimated at 42.3%, the lowest after the southern province and the highest unemployment rate after the city of Kigali and has the highest coverage of public works under VUP-public works (33%). This is followed by the Southern province as one looks at the same variables.

Part of the explanation for this continued poverty status especially for the Western and Southern Provinces can be found in identified structural determinants such as the size of the household, availability of off-farm employment, access to health insurance, and other facilities such as water, electricity, improved sanitation. These also constitute indicators of poverty, not just determinants of poverty. Moreover, since majority of people depend on agriculture, the current deficiencies in bio-physical characteristics such as soil erosion, soil acidity, smaller land sizes, low crop productivity, and hilly

Table 7.5 Western and Southern Provinces at the junction of poverty and food insecurity (percent)

Province	*Poverty levels (percent)*		*Food security index (percent)*		*Growers of industrial crops*		*EMP 2 P ratio (percent)*	*Unemployment (percent)*	*percent share SP-PW (2018/19)*
	Poverty	*Extreme*	*M-FI*	*S-FI*	*Coffee*	*Tea*			
City of Kigali	13.9	4.2	1.9	0.3	2.3	0.0	54.9	18.7	5.8
Southern	41.4	16.9	18.4	2.1	16.4	1.4	41	14.7	29.6
Western	47.1	21.6	27.7	2.2	14.4	1.8	42.3	15.3	33.1
Northern	42.3	17.4	16.0	1.9	3.6	0.5	46.4	11.2	12.5
Eastern	37.4	15.3	14.7	1.5	9.3	0.0	47.8	14.7	19.1

Source: NISR (2018a), LODA (2018/19) and CFSVA 2018.

topography constrain the agriculture development that is expected to be the main source of majority's livelihoods, all threatening human and food security. Consequently, allocation of agriculture related projects in these areas end with less impacts on people's living standards than expected. In addition, these two provinces have more farmers engaged in growing of traditional commercial and industrial crops namely coffee and tea and with poorer and food insecure people (see Figures 7.1 and 7.2). This status reflects efforts needed for geographical inclusion in wealth creation and poverty reduction. Therefore, more analysis is needed to establish the extent to which tea and coffee farming reduce or accentuate poverty and food insecurity (Pemunta et al., 2020).

Health security

Health security is said to be at the vital core of human security. Similarly, the Sustainable Development Goal (SDG) 3 focuses on well-being for everyone irrespective of age and aims to ensure that every person lives a healthy life. Further, the concept of human security expands the link(s) between health and human development, particularly as regards violence and conflict, global infectious diseases, and poverty and inequality (Chen & Narasimhan, 2003). For example, COVID-19 pandemic has caused unprecedented public health crisis worldwide with significant repercussions in different sectors, especially the health systems have been threated (Chiwona-Karltun et al., 2021). The global shock caused by COVID-19 is a concrete example that links health and human security. Apart from the lockdown conditions and other related restrictions, the fear of death by the corona virus is a vivid example of human insecurity, calling for global cooperation between state actors (e.g., governments) and non-state actors (e.g., private sector and civil society) to curb the spread of the virus

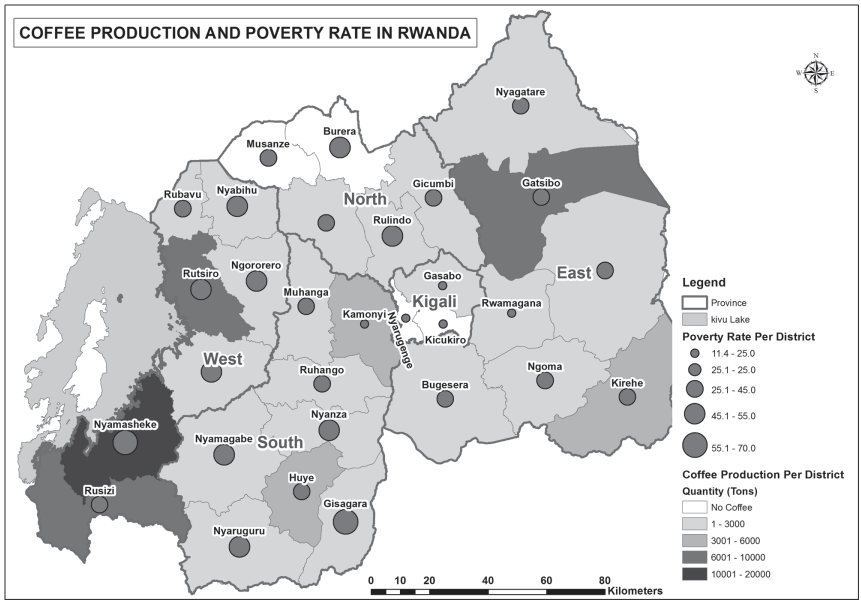

Figure 7.1 Coffee production zones and poverty rates.
Source: Author.

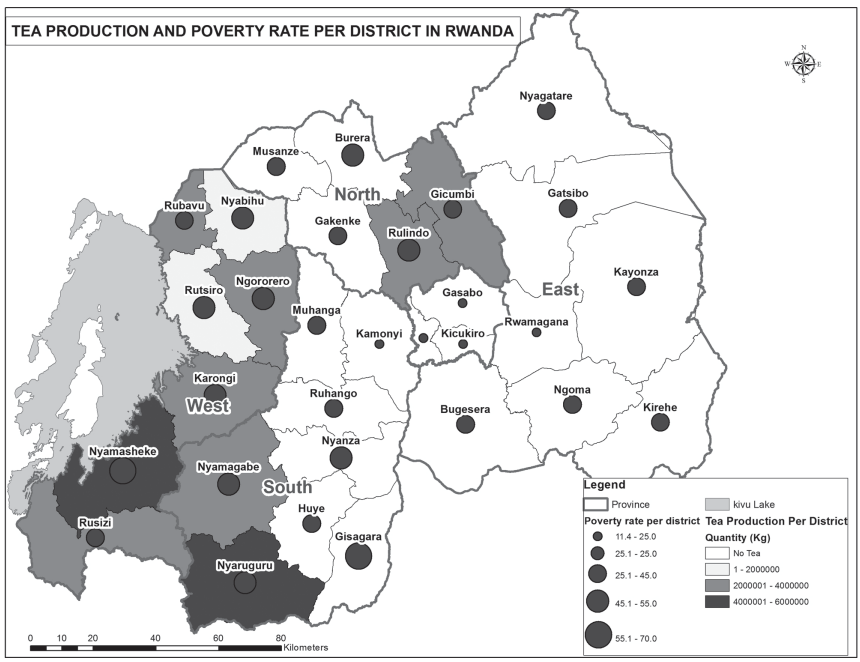

Figure 7.2 Tea production zones and poverty rates.
Source: Author.

Table 7.6 Trends of health relevant indicators

Development indicators	*2000/1*	*2005/6*	*2010/11*	*2013/14*	*2019/20*
Access to Safe Drinking Water (%)	70,1	70,3	74,2	84,8	87.4
Access to Improved Sanitation (%)	50,4	58,5	74,5	83,4	86.2
Maternal Mortality Rate per 100,000 births	1071	750	476	210	203
Infant Mortality Rate per 1000 Live Births	107	86	50	32	33
Under-5-Years Mortality Rate per 1000 Live Births	196	152	76	50	45
Trend in Prevalence of Underweight Children (%)	24,5	18	11	9,3	8
Trend in Prevalence of Stunted Children (%)	48	51	44	38	33
Trend in Prevalence of Wasted Children	8	5	3	2	1
Population Covered by Mutual Health Insurance (%)	–	43.3	68,8	70.0	73.9

Source: NISR-HDS, 2019/20; EICV5.

and reduce fatalities through various actions and policy interventions including guaranteeing access to vaccination and treatment.

Looking at the health standards, Rwanda has made a lot of improvements in the last two decades as reflected in Table 7.6. For instance, the health insurance coverage has increased from 43.3% in 2005 to about 74%. The access to save drinking water and sanitation also changed from 70% and 50% to 87% and 86%, respectively. Nevertheless, the trend in reducing the prevalence in stunting has slightly reduced but this remains a major policy concern.

Cross-cutting issues

The analysis of human security in Rwanda has also considered some cross-cutting issues such as security of land tenure and gender equality and equity, both have greater prospects for economic and food security.

Land tenure registration and security of tenure

Pressure on land, including the land grabbing phenomenon observed in many places in Africa, place the land issue at the heart of human security (Clover & Ericksen; 2009; Barrière, 2017). Accordingly, this issue is even considered to be the main driver of many potential conflicts. Therefore, human security in this context of human relationship to the land and its resources, depend on how it is supported by the policy and relevant laws (Barrière, 2017). On-going efforts in Land Tenure Registration (LTR) are aimed to reform aspects of land property

rights, to instill modern land registration systems and secure land tenure; a lot remains to ensure that tenure security translates into development impacts (Ali et al., 2014; Melesse et al., 2018; Holden & Otsuka, 2014; Higgins et al., 2018; Bizoza & Opio-Omoding, 2021).

For the case of Rwanda, LTR was initiated since 2008/9 to increase land tenure security and to have a variety of social, economic, and environmental benefits such as increased investment in agriculture, use of land as collateral, increase allocative efficiency of land, and reducing economic and social inequalities (Bizoza & Opio-Omoding, 2021; Ali et al., 2016). Thus, the current land tenure system in Rwanda provides a framework to ensure private land rights and contributes to human security as people's security of land tenure has improved in addition to other social and economic impacts (Ali et al., 2014). However, despite the advantages associated with the introduction of land tenure registration, more clarity is needed in terms of contractual arrangement when it comes to cultivation in the marshlands with agriculture investment such as irrigation belonging to government and yet are well exploited by citizen farmers. Elements of human insecurity prevail especially when these irrigation schemes are not efficiently used by small scale farmers to improve their farming practices. It is increasingly becoming a real concern for efficient use and management of these types of lands in order to reap the expected investment returns. There is not yet any legal guidance (such as law, regulation, Presidential or Prime Minister's Order) on sub-leasing of irrigated lands to private investors (Refer to Chapter 6 of the book for a related discussion on land rights in Ethiopia and Tanzania).

Gender equality, equity, and human security

With the current understanding of gender equality and equity being central to poverty reduction and national development, gender inequality and inequity are still seen in many countries both developed and developing when it comes to access to resources, wage employment, and decision-making positions. Some scholars argue that there is no human security in a context where inequality and inequities are predominant (e.g., Zeitlin & Mpoumou, 2004).

Since Rwanda's commitment to the 1995 Beijing Declaration and Platform for Action (BDFA), one year after the genocide against the Tutsi, the country has overcome this critical period and has successfully delivered on its commitments to promoting gender equality, equity, and empowerment of women and girls. Progressive legal and institutional reforms have emerged to bring gender perspective into all structures, institutions, policies, and programmatic interventions at sector levels. These are supposed to address gender dimensions of human security. For instance, it is hard to believe and confirm that women and girls enjoy human security when there is yet gender-based violence, domestic conflicts resulting from gender power dynamics, inequality in access and control of resources, and when women human rights are negatively affected. In response to these gender-based human security dimensions, Rwanda has made commendable progress in gender equality and equity as well as empowerment

of women and girls. More importantly, women's political participation has significantly increased over the last two decades and gender commitments have been mainstreamed in various policies and strategic plans, legal instruments and institutions that support promotion of gender equality and elimination of discrimination against women and girls have been established (GoR, 2019).

Furthermore, there is substantial evidence of gendered related effects resulting from the interventions in different sectors in the context of Rwanda. These include land tenure security effects (e.g., Ali et al.,, 2014; Djurfeldt, 2020); financial inclusion effects on gender (e.g., Irankunda & Van Bergeijk, 2019; Businge, 2018); increased participation of women in entrepreneurship, business development, and employment (Buss et al., 2019; Klege & Visser, 2020; Barron et al., 2020); information and communication technologies (Mumporeze & Prieler, 2017; Valberg, 2020); improved access to education and health (Russell, 2016; Gacinya, 2020; Kabwete et al., 2020), access to social protection programs (Pavannello, 2017; Jones et al., 2017); and increased women's representation in leadership both in the public entities and the private sector (Mukabera, 2019; Burnet, 2019).

Despite the efforts made and the progress so far achieved regarding gender equity and equality across various sectors, some gender inequalities persist leading to more poverty among women and girls, limited access to productive resources, gender-based violence, unpaid care work, and limited access to alternative sources of energy for poor women among others (GMO, 2018; GoR, 2019, Barron et al., 2020). This status still finds some explanation in gaps and levels of integration of gender dimensions in the policy planning, sector-based gender mainstreaming strategies, and effective gender budgeting and evaluation processes across sectors, the inability to bridge the gender gaps in some productive sectors, and structural challenges including social norms and gender stereotypes (Watkins & Jessee,2020). Therefore, achieving dimensions of human security from the gender perspective calls for well-adapted interventions to address the above remaining issues. Also, the study by Nzayisenga and colleagues in the context of Rwanda illustrates how human security with a sensitivity to gender relations and positions is important for gaining a fuller picture of the security of individuals (Nzayisenga et al., 2016).

Discussion and conclusion

The results of this study expand the on-going discourse about the multi-facets of the human security concept in low-income countries and especially in Sub-Saharan Africa including East Africa (Adger et al., 2021). The initial treatment of human security being a state of peace and without civil wars, genocides, and international crises though critical to people's lives, but it embodies some limitations when other aspects of people's livelihoods are not given proper attention by the policy.

Rwanda is a good case study to portray this transition toward a broader understanding and consideration of human security in its comprehensive treatment. The country experienced a worst case of human insecurity that

culminated in the genocide against Tutsi in the 1994. Since the genocide, the country has gone through a phase of nation building in all aspects of human security also connected to human development. Prominent developmental debate is currently on how to reduce poverty, ensure food security, create more jobs especially for women and the youth, promote gender equality and equity, promote land tenure security, ensure access to health services and insurance, among others. Any deficiency in the above areas constitutes a human security dimension that need to be given efforts as it is in the case of wars and political crises. Policy responses on these areas of development help to secure the twin freedoms i.e., freedom from want and fear. Policy interventions and programs aimed at reducing poverty, food security, stability of income from employment contribute to freedom from want. The freedom from fear in this case is achieved through programmatic interventions addressing issues linked to various forms of gender inequality, inequity, and gender-based violence; land tenure insecurity, and sufficient access to health services and reduce mortality rates especially maternal ones.

The analysis of equality and equity in resources distribution as measured by the Gini Coefficient indicates the need for more efforts by the policy in ensuring equality in wealth distribution among all citizens to ensure inclusive national transformation. Similarly, results in this chapter have also revealed differences in poverty reduction and food security. Some districts in Western and Southern Provinces are still at the junction of extreme poverty and food insecurity. Surprisingly, these two provinces are known to be the main producer of the traditional commercial crops' coffee and tea with relatively low share of employment but with high percentage share of social protection interventions especially through the public works as already revealed in the discussion in section three. In a context of high political will to address poverty and food insecurity through different social protection schemes and other development interventions, the chapter argues that some structural challenges of these particular areas may cause this inequality and hence people's insecurity beyond the normal understanding of the human security.

This study is the first of its kind in understanding human security in an institutional economic perspective in Rwanda. It contributes toward broadening the understanding of on-going development and national transformation initiatives in Rwanda as an alternative and a comprehensive approach to ensure sustainable human security. Further research is needed to document from a micro-level perspective how individuals perceive their security in connection with sustainable economic development and political and stability in Rwanda and elsewhere in Africa.

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8 Human security implications of aflatoxins in East Africa

Ruth Wangia Dixon and Jeremiah O. Asaka

Introduction

In East Africa, as with much of the African continent, a growing population coupled with contamination of food supplies and changing weather patterns driven in part by climate change is increasingly exacerbating food insecurity and driving resource competition, which in turn contributes to other human security challenges such as resource-based conflict among others (Bassel et al., 2018; East African Community [EAC], 2020; Nabwire et al., 2020; Waithaka et al., 2013). According to the United Nations Food and Agriculture Organization (FAO), food security refers to "a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2001 p. 49). The greatest threat to the availability of sufficient, safe, and nutritious food in East Africa is aflatoxin contamination of a variety of food staples (EAC, 2020; Nabwire et al., 2020; Nishimwe et al., 2019). Aflatoxins are naturally occurring food contaminants produced by *Aspergillus fungi* (Lewis et al., 2005; Omara et al., 2020).

Staple food crops including but not limited to maize, millet, rice, sorghum, teff, wheat, peanuts, and soybeans are highly susceptible to aflatoxin contamination in East Africa (Kitya et al., 2010; Kuhumba et al., 2018). Surveillance and testing of additional food products for aflatoxin contamination reported detectable levels in root-tuber crops (e.g., potatoes), oilseeds and nuts (e.g., sunflower and cotton seeds), spices, coffee, and tea (Kitya et al., 2010; Kuhumba et al., 2018; Mutegi et al., 2018). Widespread aflatoxin contamination is attributed to favorable weather in East Africa (Nabwire et al., 2020; Nishimwe et al., 2019; O'Connor, 1992). Aflatoxin producing fungi thrive under high humidity and high temperature; relative humidity ranging from 62% to 95% and temperatures ranging from 80°F to 110°F in East Africa enables the production of copious amounts of aflatoxins (Nabwire et al., 2020; Nishimwe et al., 2019). Even though aflatoxin contamination is unavoidable, strategic mitigation practices can maintain low contamination levels (EAC, 2020; Lewis et al., 2005).

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Human exposure to high levels of aflatoxins through dietary sources results in immune suppression, aflatoxin poisoning characterized by jaundice, acute liver failure, liver cancer, and in severe cases death (Kemboi et al., 2020; Lewis et al., 2005). Furthermore, aflatoxin-contaminated foods fetch lower prices in both local and global markets contributing to lower earnings and reduced gross domestic product. The threat of aflatoxin contamination to human security from population health to trade and economy has bolstered research efforts for effective management and control strategies for aflatoxins in the food supply chain.

Traditionally, a state-based security paradigm prioritizes the protection of the public against physical violent threats. However, the debate over human security is expansive and warrants multidisciplinary approaches to ensure the social, psychological, political, and economic wellbeing of the public (Alkire, 2003; Owen, 2004). When at any time, a subsection of the population does not have adequate access to food for nutritional needs and sustenance, physical wellbeing, social, economic, and political stability are collectively threatened. Aflatoxin contamination of staple food supplies presents significant challenges to attaining human security within the East African region. In this chapter, we frame aflatoxin as a human security concern and explore its implications for the same in the region. In this regard, we specifically focus on three purposively selected dimensions of human security: food security, health security, and economic security. Our study is guided by the following three questions: What is/are the impact(s) of aflatoxins on food security, health security, and economic security in East Africa? How has the region responded to the aflatoxin problem in the past? What are the possible suggestions/recommendations for future policy and research?

A strategic search on the National Library of Medicine, commonly referred to as pubmed.gov (https://pubmed.ncbi.nlm.nih.gov) on aflatoxin related literature was done using the following keywords/phrases: Food security, Kenya, Uganda, Tanzania, Somalia, Rwanda, Burundi, Sudan, South Sudan, Ethiopia, Eritrea, Djibouti, and Aflatoxins. The online search was done multiple times (i.e., on November 20, 2019, January 2, 2020, October 11, 2020, and June 7, 2021). The entire search process yielded 106 results for the period 1964–2021. Critical review of published papers allowed us to eliminate articles that fall outside the scope of this chapter. Other studies excluded were biomarker studies, animal studies, and laboratory studies because they are beyond the scope of the current topic.

The chapter is organized into four main sections. Immediately following this introduction is a conceptual framework section, which lays out the chapter's analytical framework. The conceptual framework section is followed by a case analysis section, which provides a detailed analysis of pressure points presented by aflatoxin contamination as it relates to human security. Finally, the chapter ends with conclusion and outlines recommendations for future policy and research.

Conceptual framework

This chapter employs a human security analytical framework to explore the security implications of aflatoxins in East Africa. As already established in

Chapter 2 of this book, human security can be conceptualized in at least three ways. First, a broad conceptualization wherein all the seven dimensions of human security (i.e., economic security, food security, health security, environmental security, personal security, community security, and political security) are considered together in a single analysis/study. Second, a narrow conceptualization focusing primarily on human security threats associated with violent conflict. Third, a threshold-based conceptualization that considers human security threats based on severity and pervasiveness.

The chapter specifically adopts a narrow conceptualization of human security with some modifications. A noteworthy analytical strength of a narrowly conceptualized human security is that it limits threats under analysis to a manageable number (Owen, 2004). As noted in Chapter 2, broadly conceptualized human security has been criticized for its laundry list of threats that presents analytical nightmare, while threshold-based human security is desirable but raises the question of who decides on severity and pervasiveness of any given threat. On the contrary, a significant weakness of narrowly defined human security is its preoccupation with violent threats (Asaka, 2018; Owen, 2004). While there is nothing wrong with focusing on human security threats associated with violence, privileging such threats over others (e.g., aflatoxins) as is the case with the original conceptualization of narrow human security defeats logic because the essence of human security is to move the referent object of security from state to people either as individuals or communities. Therefore, any threat to human life falls under the ambit of human security (Alkire, 2003).

It is based on this understanding that we frame aflatoxin as a significant human security threat and explore its implications for human security in East Africa while providing suggestions for policy and future research. In this regard, the chapter specifically explores how aflatoxin impacts a set of three purposively selected dimensions of human security namely food security, health security, and economic security. Figure 8.1 shows the chapter's conceptual model of the link between aflatoxins and human security (i.e., food security, health security, and economic security).

Case analysis

This section presents the chapter's analysis and is organized into two parts. The first part discusses aflatoxins in relation to food security, health security, and economic security in East Africa. Food security "exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2001 p. 49). Health security is understood to mean the prevention of ill health and/or protection from disease, while economic security concerns "access to stable and dignified employment and income" (Asaka, 2020, p. 79). The second part of the section explores the control and prevention of the aflatoxin human security problem in East Africa and provides suggestions for better practice regarding the same.

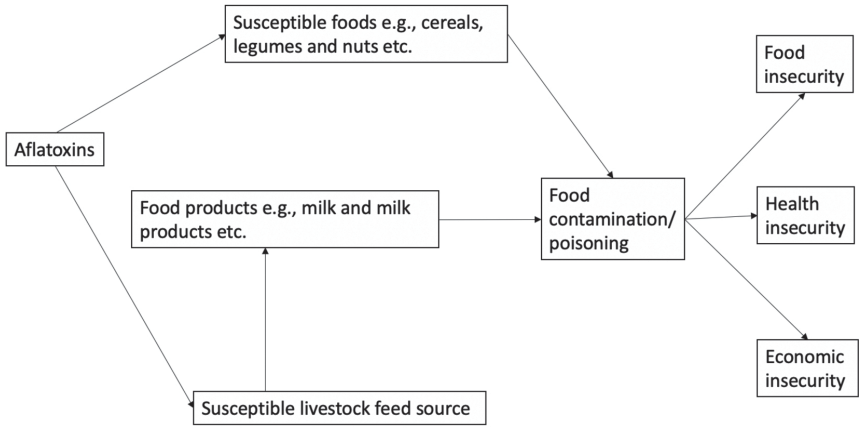

Figure 8.1 A conceptual model of the link between aflatoxins and human security.

Note: This figure shows the two pathways through which aflatoxin contributes to food insecurity, health insecurity, and economic insecurity: (1) contamination of susceptible foods and (2) contamination of susceptible livestock feed.

Source: Compiled by author(s).

Impact(s) of aflatoxins on food security, health security, and economic security in East Africa

Aflatoxin and food security

It is estimated that more than 25% of the world's food supply is contaminated by aflatoxins (Sserumaga et al., 2020; Torres et al., 2014). Aflatoxin contamination threatens food safety, a critical measure of food security. Naturally occurring *aspergillus* fungi thrive in warm humid tropical regions of East Africa, therefore aflatoxin contamination is unavoidable (Nabwire et al., 2020; Nishimwe et al., 2019). However, control strategies strive to maintain maximum contamination levels in food destined for human consumption as low as 10 μg/kg in East Africa, and 20 μg/kg globally. (EAC, 2020; Lewis et al., 2005; Mutegi et al., 2018). Despite widespread occurrence and contamination of numerous food products, testing is limited to grain processing facilities, whereas subsistence families are unaware of the safety levels of harvested food crops (International Livestock Research Institute [ILRI], 2015; EAC, 2020). Surveillance of food products for aflatoxin contamination revealed enormous challenges to food safety and security in East Africa (Kitya et al., 2010; Kuhumba et al., 2018; Mutegi et al., 2018). When tested for aflatoxin contamination, numerous food crops often have detectable levels of aflatoxins. For instance, in Somalia, among 140 samples of maize, cassava, finger millet, sorghum, wheat, and peanuts tested for aflatoxins, 93–100% of each food grain was contaminated with aflatoxins (Wielogorska et al., 2019). In Rwanda, maize, cassava, and peanut flours were

found to be contaminated with aflatoxins (Umereweneza et al., 2018; Matsiko et al., 2017).

In addition to cereals, legumes and nuts are susceptible to aflatoxin contamination, albeit at lower levels (El-Nagerabi & Elshafie, 2001; Mutegi et al., 2013; Torres et al., 2014). Microscopic examination of lentils, *Lens esculenta*, an ancient legume with average protein concentrations of 24.2% collected in Sudan were covered with aflatoxin producing fungi (El-Nagerabi & Elshafie, 2001). Peanuts, a source of supplemental proteins exhibit higher vulnerability to aflatoxin contamination because aflatoxigenic fungi colonize peanut pods while still in the soil (Mutegi et al., 2013; Torres et al., 2014). The Partnership for Aflatoxin Control in Africa (PACA) found more than 80% of the peanut products in Uganda to be highly contaminated by aflatoxins (Kitya et al., 2010). Peanuts pressed into edible oils are a major source of sustenance among inhabitants of Western Sudan (Omer et al., 1998; Omer et al., 2001). Furthermore, edible oil including sesame, sunflower, and cotton seeds collected in Sudan were contaminated by aflatoxins (Elzupir et al., 2009; Idris et al., 2010). A similar study in Tanzania reported high aflatoxin contamination in unrefined sunflower oilseeds and seeds (Mohammed et al., 2016). Aflatoxin contamination is prevalent in milk and milk products (Kemboi et al., 2020). Locally processed Ugandan bovine-based ghee which is popular in every family unit was contaminated with aflatoxin metabolites (Omara et al., 2020). Collectively, the presence of aflatoxins in food products cannot be ignored.

Surprisingly, aflatoxins are present in weaning foods across the region presenting early exposures to children as early as 6 months (Passarelli et al., 2020; Geary et al., 2016; Githang'a et al., 2019). Peanut-enriched complementary flours collected in Ethiopia and Tanzania for weaning children have been found to be contaminated by aflatoxins (Kuhumba et al., 2018; Ayelign & De Saeger, 2020). These flours are specially formulated with multiple food groups including but not limited to maize, wheat, teff, sorghum, beans, and chickpeas to curb malnutrition, (Kuhumba et al., 2018; Ayelign & De Saeger, 2020). Collectively these examples show that staple foods, and particularly food grains intended for young children should be routinely monitored for aflatoxin contamination. To guarantee food and, therefore, human security, the control and mitigation of aflatoxin in the food supply chain are imperative.

There are multiple routes for aflatoxins through dietary sources to the human population. For example, contaminated grains may be used as animal feed (Gizachew et al., 2016; Nishimwe et al., 2019). Food grains found to be unfit for human consumption is frequently used to process animal feeds further raising safety concerns in meat and milk products (Elzupir et al., 2009; Gizachew et al., 2016; Nishimwe et al., 2019). Aflatoxin metabolites are detectable in cow milk 12–24 hours after ingestion of aflatoxin-contaminated feed (Gizachew et al., 2016; Mohammed et al., 2016). Aflatoxin metabolites were present and detectable in eggs and cheese (Mutiga et al., 2019). Furthermore, aflatoxin-contaminated grains are used as a substrate for local beer. While locally brewed beer has been tested and found positive for aflatoxin metabolites

in both Kenya and Ethiopia, the practice of repurposing grain is widespread and socially acceptable (Ayelign & De Saeger, 2020; Okaru et al., 2017; Nigussie et al., 2018). Contaminated food products are hardly destroyed, instead, they are repurposed for local beer breweries and/or used for animal feeds (Nigussie et al., 2018; Okaru et al., 2017). These alternative uses of contaminated cereals are additional routes of exposure to the human population.

Aflatoxin and health security

It is estimated that more than 70% of subsistence farmers, and families living in rural areas are unintentionally exposed to aflatoxins (ILRI, 2015; Herrman et al., 2020). Aflatoxin poisoning is characterized by jaundice, malaise, hepatic failure, and in many cases, deaths have been reported in Uganda, Tanzania, and Kenya (Herrman et al., 2020; Omara et al., 2020; Geary et al., 2016). Of greater concern is human exposure from dietary sources during a lifetime. Dietary exposure to aflatoxins in low quantities compound over time and cause significant negative health outcomes in both children and adults. The compounding effects of long-term exposure to aflatoxins via dietary sources are immune suppression, interference with vaccine effectiveness, and growth impairments in children (Passarelli et al., 2020; Geary et al., 2016; Githang'a et al., 2019).

Fatal incidences of aflatoxin poisoning were reported in Kenya in 1981, 2004, and 2005 (Lewis et al., 2005; Mutegi et al., 2018). The true magnitude of aflatoxin poisoning in East Africa is underestimated because of scant data on occurrences, limited diagnostic capabilities in rural hospitals where aflatoxin poisoning is often mislabeled as acute hepatic inflammation of unknown etiology (Alpert et al., 1971; Mutegi et al., 2018; Nduti et al., 2016). Furthermore, aflatoxins are suspected to alter cellular and biochemical functions of the intestines, diminish nutrient uptake, and contribute to micronutrient deficiencies (Mutiga et al., 2019; Geary et al., 2016). In Uganda, human immunodeficiency virus (HIV) positive individuals with higher aflatoxin metabolites in serum experienced faster progression to acquired immunodeficiency syndrome (AIDS) disease and early deaths (Kang et al., 2015). Elderly populations and individuals with impaired immune systems suffer worse outcomes with continuous aflatoxin exposure due to immune suppression.

Aflatoxins are established group I carcinogens and a leading cause of primary liver cancers in adult populations (Alavian & Haghbin, 2016; Ocama et al., 2009; Omer et al., 2001). Liver cancer is the third cause of cancer deaths in the world, with an estimated range of 16–32 higher rates in Africa (Alavian & Haghbin, 2016; Wielogorska et al., 2019). Aflatoxin ingestion has been quantitatively measured in populations in East Africa in subgroups whose incidence of primary liver cancer vary over a wide range; and in each instance, elevated cancer incidence was associated with the highest level of aflatoxin intake from diet sources. Populations in Southwest Uganda, Somalia, and Kenya with prevalent exposures to higher aflatoxins levels suffer a higher burden of liver cancers (Maiyoh & Tuei, 2019; Ocama et al., 2009; Omer et al., 2001).

In a case-control study in Sudan completed between 1996 and 1998, a clear dose-response relationship was established between increased consumption of aflatoxin-contaminated peanut butter and the development of primary liver cancer (Omer et al., 1998, 2001).

Aflatoxins and economic security

The presence of aflatoxins in food products indicates that the availability of sufficient, safe, and nutritious food is not guaranteed in the region. Compared to neighboring countries in East Africa, Kenya has the largest economy and yet, the most food insecure. In 2020, the maize production in Kenya was a measly 3.8 million tons, not enough to feed the population (EAC, 2020; Omara et al., 2020). Kenya relies on maize imports from Uganda and Tanzania to supplement its own production. In 2020, for example, Kenya imported an estimated 277, 350 tons of maize of which 95% was imported from Uganda and Tanzania (EAC, 2020; Omara et al., 2020). In 2013, Kenya rejected more than 600,000 tons of maize from Uganda given that aflatoxin contamination levels exceeded the regulatory limit of 10 μg/kg (Omara et al., 2020). In March 2021, Kenya banned maize importation from Uganda and Tanzania due to high aflatoxin contamination levels (Njeru, 2021; Kenya Ministry of Agriculture, 2021). However, this ban has been lifted with stringent regulatory measures put in place. All stakeholders who need to import maize into Kenya are currently required to provide certification of conformity for aflatoxin levels (Njeru, 2021; Kenya Ministry of Agriculture, 2021).

The presence of aflatoxins in food supply introduces significant barriers to trade which further contributes to food insecurity (EAC, 2020). Ugandan farmers lost considerable revenues and diminished economic prospects in 2013 from rejected maize (Omara et al., 2020). In 2020, Kenyan farmers from Hola agricultural scheme in Tana River County lost close to 150 million Kenyan shillings when their produce was declared unfit for human consumption by the World Food Programme (Njeru, 2021; Kenya Ministry of Agriculture, 2021). Sudan, a leading exporter of peanuts have suffered economic losses from rejection of products due to high aflatoxin contamination levels ranging from 25 μg/kg to 600 μg/kg (Idris et al., 2010; Rodrigues et al., 2011). Taken together, aflatoxin contamination evidently presents significant threats to human security in East Africa.

Control and/or prevention of the aflatoxin human security problem

Aflatoxin contamination occurs during pre-harvest, post-harvest, and at any point in the food production chain. The need for the careful implementation of a multipronged mitigation strategy is urgent (EAC, 2020). Good agricultural practices encompassing timely planting, maintaining optimal plant densities, use of fertilizers and pesticides are recommended (Mutiga et al., 2019). Regular drip irrigation shields food crops from undue stress, especially in dry

climatic regions with virulent strains of *Aspergillus* fungi (Sserumaga et al., 2020; Torres et al., 2014). Crops should be harvested at maturity without further delays to limit aflatoxin contamination. In Kenya delayed harvests led to excessive aflatoxin contamination and post-harvest losses (Mutegi et al., 2013, 2018). Moreover, removing old stalks and plant debris shortly after harvest lessen the quantity of substrates available for *Aspergillus* fungi to thrive before the next planting season (Mutegi et al., 2018; Mutiga et al., 2019; Omara et al., 2020). Drying maize over an elevated platform with a protective sheet underneath limits interaction with fungi readily available in soil (Kamala et al., 2016). Food products should be dried to a moisture content below 13%, and stored properly in aerated, low humid, and pest-controlled storage facilities (Walker et al., 2018; Kamala et al., 2016). Shelling maize through mechanical means should be carefully done to prevent cracks from which aflatoxin-producing fungi proliferate. Sorting to remove damage, discolored, and moldy grains and use of airtight hermetic bags and temperature-controlled silos for storage, are associated with lower aflatoxin contamination (Nabwire et al., 2020; Walker et al., 2018; Kamala et al., 2016).

Overall, aflatoxins are invisible to the naked eye, therefore, testing, and routine monitoring is the only definitive way to determine aflatoxin contamination in food products (ILRI, 2015). Prior to preparing a meal comprised of grains, dehulling and/or soaking in alkaline solution reduce aflatoxin content by over 70% (Mutungi et al., 2008). Research and development have enabled use of improved seed varieties optimized for genetic resistance; and biocontrol with non-toxic *Aspergillus*, demonstrated to out compete toxic strains of *Aspergillus flavus* (IILRI, 2015; Mutiga et al., 2019). Increased awareness through education and training of all stakeholders including the public is imperative in controlling aflatoxins. Overall, attaining food security is possible because the foregoing recommendations are both context-specific and culturally appropriate.

Conclusion and recommendations

As the chapter has shown, naturally occurring aflatoxins are persistent in food supply and present a significant threat to human security, specifically food security, health security, and economic security. Nonetheless, ongoing efforts supported by the EAC trading block – including but not limited to increased testing, routine surveillance, standardized maximum limit of 10μg/kg for human foods and emphasis on a united approach – are encouraging and a step in the right direction. However, we consider creation of more testing facilities in rural areas coupled with increased investments in agriculture and food production to be critical to bolstering food security, health security, and economic security in the region. On top of these, testing and routine surveillance of aflatoxin contamination levels must be prioritized. Current testing protocols require not only extensive training but also costly equipment. In the future, appropriate technologies designed with subsistence farmers as end-users will enable easier monitoring of aflatoxins. Furthermore, training a select group of

farmers from multiple regions, with sampling and testing protocols, who ultimately are provided with resources to train other farmers will accelerate food security and human security broadly. Training farmers is poised to enable the establishment of a uniform surveillance system across the region further enabling easier monitoring of aflatoxins in the food supply.

On the research side, there is a need for improved study designs to characterize human exposures and health outcomes linked to aflatoxin contamination. Future studies should strive to account for individuals' dietary patterns in large population-based studies, and evaluate outcomes in vulnerable populations including children, and the elderly. Dietary exposure to aflatoxins is linked to negative health outcomes, including immune suppression and growth impairments in children, increased morbidity linked to liver diseases, aflatoxin poisoning, and increased incidence of liver cancers. Moreover, the compounded impact of aflatoxins in the food supply chain discount economic gains achieved in the previous decades. Thus, the presence of aflatoxins in the food supply presents a unique challenge to human security in East Africa including aspects which are still not well known or yet to be studied. For instance, considering the ongoing COVID-19 pandemic and compounding effects of long-term exposure to aflatoxins particularly immune suppression and interference with vaccine effectiveness, there is a need for research seeking to understand the interplay between COVID-19 and aflatoxins and what that relationship means for human security in the region moving into the future. All said and done, control and management of aflatoxin contamination are paramount to ensure a healthy and empowered population in East Africa.

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9 The governance dimensions of environmental security in 21st-century Eastern Africa

A review

Mumo Nzau

Introduction

As the third decade of the 21st century commences, the environment remains an integral component in the human security discourse. More than ever before, the environment features strongly as a core predictor variable in any recipe for a holistic and sustainable development outlook across nations and regions alike. Many processes that support life, livelihoods, and wealth creation on the planet depend, either directly or indirectly, on environmental sustainability. It is against this premise that the idea of conserving, protecting, and preserving the environment continues to persist in various academic and policy circles globally (Chasek, 2017: 18).

Africa holds a major stake in this process. Though lagging behind the rest of the world both economically and technologically among other aspects of human development, the continent is in many ways, resource rich (International Monetary Fund [IMF], 2019). The continent has the largest arable landmass in the world, in addition, to some of the largest and/or longest water courses and tropical forests on earth in addition to some of the most biologically important and diverse ecosystems in the world. Out of the 54 countries on the continent, 38 are coastal states. Further, the continent holds more than a quarter of the world's mineral reserves in addition to close to 10% of oil and natural gas deposits (Moon & Solomon, 2018: 16356; UNDP, 2019a: ix, 2019b). Yet, with a population of at least 1.2 billion, Africa is the fastest-growing continents in demographic terms. It is projected that this number will rise to 1.7 billion by 2030 (Leke et al., 2019). These projections have implications for resource availability/access and underscore why environmental security is a significant concern in the wider human security discourse on the continent. Nonetheless, Africa is neither a stranger nor an exception to these debates and concomitant emergent issues and/or concerns thereof.

A survey of the extant literature on this subject area reveals a growing interest in both academic and policy circles in examining issues around environmental security from the standpoint of governance (Bakker & Morinville, 2013: 5–11). A few empirical models have begun to be employed where governance

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has featured in accounting for environmental security in Africa. However, to date, the most empirically promising among these is Asongu and Odhiambo (2019: 16–17); who operationalize governance in four inter-related respects. These are political governance, economic governance, institutional governance, and general governance. Using a Generalized Moments Model (GMM), they used these governance parameters to predict for "environmental sustainability" as the outcome variable, which was operationalized through measures of carbon dioxide (CO_2) emissions. The findings pointed to a mixed picture at the empirical level in as far as the "governance-environmental security" correlation is concerned, they arrived at the conclusion that these findings generally pointed to the fact that improved governance can in fact improve various aspects of environmental sustainability. Subsequently, they recommended that future studies should zero-in on "country-specific frameworks" to address specific policy gaps thereof. Furthermore, other studies have argued that improvements on governance can help African countries to muster and effectively apply the ways and means needed for them to sustainably adapt or cope with the human security effects associated with the negative effects occasioned by environment-related insecurity (Detraz & Betsill, 2009: 303–320).

It is against such a background that this chapter sets out to examine the governance dimensions of environmental security within the wider human security agenda with a focus on the East African region of Africa. The chapter is based on qualitative and evaluative documentary analysis of secondary sources of data (King et al., 1994: 35–43). The process specifically entails a critical literature review of peer-reviewed academic works on the subject area including books and journal articles, in addition to authoritative policy-oriented reports and documented expert commentaries that directly speak to the governance-environmental security nexus in 21st-century East Africa. Relying mainly on desktop research, at least 95 pieces of literature (mainly journal articles) were examined. Further, the secondary data was supplemented with information gathered from informal conversations with twelve purposively selected interviewees including scholars, governmental policymakers and security practitioners, and civil society actors in the sub-region. The information was condensed and systematically organized into issue-based themes upon which critical and analytical prose discussions were based. As such, the methodological approach taken here does not purport to empirically interact and/or test the variables in question, in a manner that would invoke any causal inference. Rather, it purposively reviews works that have attempted to do so in a manner that conceptually and analytically teases out the human security nuances around the governance-environmental security nexus, with specific reference to East Africa.

The governance-environmental security nexus: An analytical framework

Environmental security is the outcome (dependent) variable here. As such, it is crucial to bear in mind that any analytical model that features governance,

the environment and security altogether can have these variables at different locations in the equation, depending on the analytical logic behind the research puzzle at hand. For example, environmental security can be a predictor variable for governance and vice versa. In a similar fashion, the two variables could feature as critical intervening variables in other models analyzing other aspects of human security and/or human development. The main analytical argument here is that governance is an important predictor variable in the discourse on environmental security in Africa. Further, the concept of "environmental security" is part and parcel of the more encompassing research program- the human security paradigm, the main intervening variable herein. As Ratner (2018:5) observes,

> environmental security views ecological processes and natural resources as sources or catalysts for conflict and as barriers or limits to human well-being, and conversely as means to mitigate or resolve insecurity. Environmental security is understood as a foundation of human security more broadly, essential to sustainable livelihoods, health, and well-being among households and communities.

This research contends the governance-environmental nexus has not been well harnessed in accounting for and confronting the human security challenges facing the Eastern Africa sub-region in the 21st century.

As shown in the conceptual model (see Figure 9.1), the analytical framework presented here, therefore, makes a case for "governance" as an important predictor variable (independent variable) in accounting for the success (or otherwise, failure) of "environmental security", in the 21st century. The conceptual model presented herein is deliberately conscious of a potentially "confounding relationship" between the two variables (governance and environmental security) as major facets in the wider human security discourse, hence the presentation herein, of "human security" as the main intervening variable in this relationship. The core assumption here is that the centrality of governance in explaining environmental security cannot be overemphasized.

Environmental management in East Africa: Sub-regional and country-specific structures, actors, and processes

East Africa is well endowed in terms of natural resources and biodiversity. Three glacier-capped mountains namely Mt. Kenya in Kenya, Mt. Kilimanjaro, in Tanzania, and the Ruwenzori Mountains Uganda (straddling its border with the Democratic Republic of the Congo) are found in this region. The sub-region is also home to the world's second-largest freshwater lake (i.e., Lake Victoria). Moreover, except for Somalia and Djibouti, the other nine countries that constitute the region – Uganda, Tanzania, Kenya, Rwanda, Burundi, Ethiopia, Eritrea, Sudan, and South Sudan – are important riparian states of River Nile. The Sudd, which is found in South Sudan is the largest freshwater wetland in

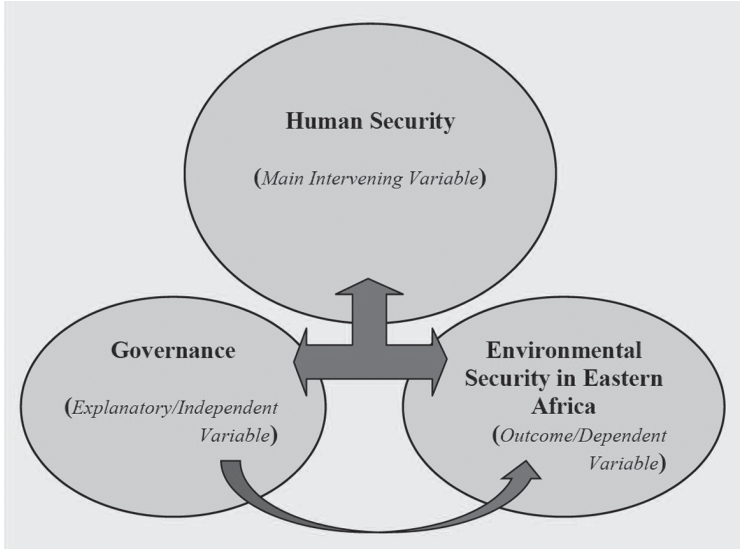

Figure 9.1 Conceptual model.
Source: Author.

the world, covering 1.7 million square kilometers. However, according to the United Nations Development Program (UNDP), Sub-Saharan Africa (which these countries are part of) is the poorest region in the world characterized by an average per capita growth of 0.16% between the late 1980s and 1990s. Nonetheless, since the early 2000s, the region has registered a steady pattern of economic growth, with an average per capita rate of 4.5% (Chauvin et al., 2012: 1).

The sub-region does not operate in isolation from the wider global framework as far as environmental security discourse is concerned. It has remained an active participant in global environmental governance, especially with the United Nations Environment Programme (UNEP) headquartered in Nairobi, Kenya. Indeed, one of the continent's aspirations as espoused by Agenda 2063 is about "a prosperous Africa based on inclusive growth and sustainable development" (African Union (AU), 2015: 6). At the sub-regional level, two important organizations are worth examining herein as far as environmental governance in Eastern Africa is concerned. The first is the East African Community (EAC), with a membership that brings together Kenya, Uganda, Tanzania, Rwanda, Burundi, and the Republic of South Sudan. Another major structure is the Intergovernmental Authority on Development (IGAD) with a membership that brings together Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda (AU, 2019: 144). These structures, which consist of Regional Economic Communities (RECs) – also referred to as Regional

Security Organizations (RSOs) – are part of the wider African Peace and Security Architecture (APSA) under the aegis of the African Union (Tieku, 2007: 26–37; AU, 2020: 74–79). It is upon these regional legal, policy and institutional frameworks that environmental governance is hinged. Issues to do with climate change, energy, water management, minerals and mining, biodiversity and food remain active in the policy agenda in East Africa (Koff, 2016: 672). In 2007, IGAD launched the IGAD Environment and Natural Resources Strategy which lay the foundation for a robust policy framework to guide member states on matters to do with the natural resource and environmental realm (IGAD, 2007). In 2015, the East African Legislative Assembly (EALA) enacted the EAC Forestry and Management Bill (2015) to protect trans-boundary forests in the sub-region as well as to prevent disasters and ensure sustainable utilization resources therein (EALA, 2015).

At the same time, there is a wide range of key global multilateral environmental agreements (MEAs) that the eleven countries under examination herein i.e., Sudan, Eritrea, Djibouti, Ethiopia, Somalia, South Sudan, Kenya, Uganda, Tanzania, Rwanda, and Burundi, have signed and/or ratified. These include the Ramsar Convention on Wetlands of International Importance (1971); Convention for the Protection of World Cultural and Natural Heritage (1972); Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES, 1973); Convention on the Prevention of Pollution from Ships (MARPOL, 1978); Convention on Long-Range Transboundary Air Pollution (LRTAP, 1979); the UN Convention on the law of the Sea (UNCLOS I & II), Convention on the Conservation of Migratory Species of Wild Animals (1983); 1985 and 1987: Vienna Convention and Montreal Protocol for the Protection of the Ozone Layer of 1985 and 1987 respectively; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989); Convention on Biological Diversity, CBD (1992); UN Framework Convention on Climate Change (1992); UN Convention to Combat Desertification (1994); Rotterdam Convention on Hazardous Chemicals in International Trade (1998); UN/ECE Aahus Convention on Access to Information, Public Participation, and Access to Justice in Environmental Matters (1998); Stockholm Convention on Persistent Organic Pollutants (1991); Minamata Convention on Mercury (2013), (WECD, 1987; Homer-Dixon, 1994, 1999; UNEP, 2007; InforMEA, 2017).

Beyond signing and/or ratifying these regional and international instruments, there have been efforts at the country level to domesticate and mainstream these mechanisms at different spatial levels and within varied sectoral contexts. All these countries have full-fledged government ministries, departments, and agencies dedicated to the implementation and enforcement of environmental policies, laws, and directives. For example, in Ethiopia, environmental matters are managed and administered under the Ministry of Environment, Forest, and Climate Change. Similar ministries, departments, and/or agencies can be found in other countries in the region. Other examples include Kenya's Ministry for Environment, the National Environment Management Authority (NEMA),

Kenya Forest Service (KFS) and Kenya Wildlife Service (KWS) (Government of Kenya [GOK], 2020); and Uganda's Ministry for Water and the Environment, National Forestry Authority, and the National Environment Management Authority (Government of Uganda [GOU], 2020).

The Kenyan constitution pays special attention to the preservation of the country's cultural and natural heritage, land resource management, and sustainability. Today, environmental integrity is treated as a human right in Kenya. This outlook has enabled the cultivation of an elaborate legal and policy outlook as far as environmental security is concerned. Several important structures are in place including NEMA. Some of the policy instruments to this end include elaborate environment actions plans informed by the Environment Management and Coordination Act (2015) as well as other policy directives relating to environmental governance, climate change, forest, woodland and marine ecosystems, environmental hazards, pollution, and energy resources among others. Kenya's Ministry of Environment in partnership with the NEMA, KFS and the KWS, has since undertaken an elaborate process to reclaim major wetlands, water towers and gazetted forests. Moreover, in 2020, NEMA developed national guidelines for the management of Covid-19 waste (NEMA, 2020).

Kenya's southern neighbor Tanzania launched a National Environment Management Act in 2004, an Environmental Plan of Action in 2012 and the Participatory Forest Management Policy in 2012, all of which are anchored onto the Tanzania Development Vision 2025. Similarly, Uganda has an Energy Policy (2002), the National Land Use Policy (2007), and the Climate Change Policy (2012) in place, all of which have been engrained in the Annual Development Plans.

On its part, Rwanda has an elaborate a National Forest Policy and an attendant statutory platform on the same. Further, as part of its national flagship Vision 2020, Rwanda has made policy commitments and targets regarding the rehabilitation of degraded ecosystems mainly through sound forest management and sustainable agroforestry. Ethiopia too has a National Environment Plan of Action which is implemented at the regional states level in additional to sector-specific polices dedicated to adaptation, protection, and rehabilitation, especially with regard mining, agriculture and livestock, forestry, energy, and the built environment. In 2012, Burundi launched a National Strategy and Action Plan on Climate Change which is supplemented by sector-specific policy initiatives directed at watershed management, land-based ecosystem management, community participation, and adaptation, especially in the context of sustainable agriculture and forestry (Food and Agriculture Organization [FAO], 2017).

It is noteworthy, however, that the Republic of South Sudan is a relatively young nation given that it was ravaged by civil war for most of its post-independence period, then under the greater Sudan, between independence in 1956 and 2011, when the Republic of South Sudan born. Nonetheless, the Government of South Sudan developed an Environment Policy Framework and Environment Bill which have been in the process of legislation during the

2016–2019 period as well as plans aimed at enhancing food security, access to water and climate change adaptation at community level. Similarly, following many decades of war and state collapse, Somalia is one of the least developed countries not only in the sub-region but also on the African continent. Over two-thirds of Somalia is arid and semi-arid while the rest consists of grass shrub land and interrupted woodland. Only 1% of Somalia's land is arable, mainly in the southern parts of Jubbaland. Nonetheless, 11% of the territory is aquatic since Somalia enjoys the longest coastline on the continent (Beier & Stephansson, 2012: 2). The Federal Government of Somalia, which came into place in 2012, is yet to effectively develop and nurture a truly versatile environmental governance framework. Nonetheless, the Federal Government does have ministries dedicated to Energy and Water Resources, Petroleum and Mineral Resources, Agriculture and Irrigation and Ministry of Livestock, Forestry and Rangelands (Federal Government of Somalia, 2020).

Though it is one of the smallest countries in Africa, with a population of less than one million people, Djibouti enjoys a favorable geostrategic outlook due to its location and blue economy potential. These endowments have drawn the interest of several international actors including leading global powers in the context of maritime security operations, fishing, sea-based infrastructure, and energy. Yet despite this potential, Djibouti has a small economy and continues to face many environmental challenges including the threat of desertification and loss of biodiversity (Farah, 2014). Unlike in Djibouti, livelihoods in Eritrea are largely agrarian and there is a high dependency on land and other natural resources. As such, 80% of Eritrea's economy is dependent on pastoralism and agriculture. Eritrea's environmental security challenges revolve around desertification, deforestation, and land degradation. Being a party to the Convention on Biological Diversity, Eritrea has had in place a National Biodiversity Strategy and Action Plan since the year 2000, with the latest one targeting the 2011–2020 period (Government of the State of Eritrea, CBD, UNEP, and Global Environment Facility [GEF], 2019: 114).

The Republic of Sudan has experienced many decades of civil war especially due to the secessionist struggle in the southern part of the country, the conflict in Darfur and along its border with the now independent Republic of South Sudan (United Kingdom Aid [UKAid] and DFID, 2012: 1–4). As an ecological zone, the Republic of Sudan falls within the wider Sahelian region where the threat of desertification and water scarcity is high. Sudan experiences drought periodically and is one of the most food insecure countries in the world. The temperature in Sudan is also projected to rise by 2^0C. Subsequently, the Government of the Republic of Sudan launched a National Climate Adaptation Plan in 2016 and began working on a State of the Environment Report, scheduled to be published in 2020 (Warrag, 2018). Also, the government has instituted several laws, policy directives and guidelines to augment the international commitments that the country has made regarding environmental governance and sustainability (Alkhalifa & Faldelmula, 2018: 32–33).

Emergent environmental security issues and the centrality of governance

Though Africa's contribution to global warming may easily be construed as "negligible", (given that it accounts for "a mere" less than 4% of the total global carbon emissions), the continent stands out as the most vulnerable to the adversities of global climate change with its average temperature rise expected to surpass the global average by 2050 (Oladije et al., 2018: 174). Based on country-specific data from Rwanda, Kenya, Tanzania, and Uganda, Mwabeza (2009) reported that there was a general decline in forested land with the four countries, losing up to 2,923,000 hectares of forest land in total, between 1990 and 2000 (Mwabeza, 2009: 6–14). Mwabeza further points out that, "in spite of the projected impacts of climate change in the region, little has been done by these countries to respond adequately to the impacts of climate change". These findings are corroborated by Mwangi, Cerutti and Nasi (2018: x) and FAO (2017: 1–7) who note that there was a persistent decline in forest cover in Kenya, Uganda and Tanzania, Ethiopia, Burundi, and Rwanda. Protected areas (PAs) have also either been degazetted, downsized or downgraded in several countries in this sub-region (Riggio et al., 2019: 2).

Further, the amount of greenhouse gas (GHS) emissions in the region was found to be generally on the rise between 1990 and 2011. For example, the percentage increase in total GHG emissions ($M_tC0_2e)^2$ was at 31% in Djibouti, 86% in Ethiopia, 56% in Kenya and 17% in Tanzania. The regional average increase was at 42%, with energy consumption in the sub-region doubling between 1990 and 2011 (United States Agency for International Development [USAID], 2015: 2–5). The United Nations Economic Commission for Africa (UNECA) observes that over 1.3 billion people in the world lack access to clean energy at the domestic level, with a substantial percentage among them (94%) being in Africa and parts of Asia. Up to 90% of the population in Eastern Africa depends on declining biomass-based energy sources occasioned by an increasing demand for firewood and charcoal. In South Sudan, for example, only 1% of the population has access to electricity. In Uganda, this number stands at 12%, while in Tanzania it is at 14%. In Kenya, only 18% of the population has access to electricity, while in Ethiopia, it is 22.5% (UNECA, 2014: xiii–5). This situation, in and of itself, sends a bleak signal in terms of energy security in the sub-region given that the global demand for energy continues to grow exponentially each year.

Moreover, several important environmental security challenges have continued to stand out in the eleven countries under focus here, during the 2015–2020 period. Water pollution persists in the region and people grapple with inadequate supply of potable water. Similarly, deforestation, desertification, loss of biodiversity, land degradation, environmental crimes (e.g., poaching), and invasive species (e.g., water hyacinth) are serious concerns in the sub-region (Criminal Investigation Agency [CIA] World Factbook, 2020).

These statistics point to a worsening environmental insecurity outlook in the sub-region. Pursuant to this outlook, it is timely at this juncture to zero-in on the governance-environmental security dynamic herein. The interest with governance herein, lay in the fact that it is an important realm that hinges and/or weighs heavily on the nature, form, content, and operational bounds, within which various legal, policy and institutional structures, as well as actors and processes involved in the management of the environment, exist, and operate. Sound environmental governance structures for example, would ensure that the processes relating to access, control and exploitation of resources are legitimate, safe, secure, and hence sustainable. A common theme from the author's conversations with policy actors and practitioners in the field of the environment is that, in terms of general "institutional governance" in the East Africa sub-region, there is no shortage of polices and laws on the environment. However, there are many flaws, discrepancies, and bottlenecks at the level of effective adaptation, implementation, and actualization. As a result, there are several pertinent issues that relate to environmental security in the sub-region, that are dependent on good governance. For instance, many of the eleven countries under analysis here face different (but also similar and/or common) security concerns, which are either directly and/or indirectly related to the environment. These threats include intra-state conflicts, proliferation of small arms and light weapons, terrorism and violent extremism, piracy, cross-border banditry and cattle rustling, landmines, illegal migration, human trafficking, and drug trafficking among others. Most of these security concerns have an environmental context to them. In Sudan for example, "poor environmental management is recognized as a factor of poverty and conflict. This is particularly true of rural areas, where communities depend on natural resources for their livelihoods" (UNEP, 2020). According to the World Food Program (WFP), "tension and conflict in Sudan are often resource-based, triggered by competition for already scarce natural resources and further exacerbated by climate change and environmental degradation" (WFP, 2019: 19). Similarly, physical insecurity within Somalia and South Sudan are due to presence of ungoverned vast spaces in the two countries. The lack of effective government presence in parts of these two countries is an issue of governance, because when such contexts manifest, there is the high likelihood that poaching, piracy and illegal logging among other systematic environmental crimes would prevail to the detriment of the environment. These settings are not unique to South Sudan and Somalia, but also apply to Kenya, Tanzania, Uganda, Rwanda, Burundi, and Ethiopia albeit to varied degrees. It is also notable that environmental destruction has also been employed as a tactic in violent conflict as was the case in the Darfur conflict, where fragile environmental systems at the community level were targeted for systematic destruction, thereby leading to forceful movement of affected populations leading to an internally displaced people (IDP) challenge. Climate change has also been linked to human migration in the region e.g., in South Sudan (Taqiya, 2019: 42–70).

Climate change and environmental stress leads to unhealthy and/or unfavorable competition for access, use and control of resources at community level. One of the resultant outcomes of such states of affairs is forced migration. Apart from the regular refugees from Somalia and South Sudan who mostly end up in refugee camps in Ethiopia, Kenya, and Uganda, there are also many migrants (many of them illegal) who are dangerously smuggled across to Europe and elsewhere in the world, partly because they are running away from the ravages of climate adversities and/or extremities back at home in Ethiopia, Eritrea, Djibouti, and Somalia. Populations fleeing from conflict at times find themselves in conflict with host communities in host countries especially due to access to scarce environmental resources especially energy and water. This has occurred in Kenya, which has hosted thousands of refugees from the sub-region over the years. At the same time climate change has worsened intra-communal conflicts between pastoralists and agrarian communities in parts of Kenya, Uganda, South Sudan, and Ethiopia.

It follows, therefore, that conflict prevention, management and peacebuilding in East Africa can be more sustainable if it is environment conscious (Freeman, 2017: 362–368). One of the "push factors" behind incidences of forced migration and illegal immigration in East Africa is weak structures of governance. When governance structures are weak, then communities lack the capacity to adapt to and overcome the negative effects of climate; then illegal immigration follows. In the same vein, the East Africa sub-region is faced with a serious challenge of violent extremism and terrorism. Environmental insecurity has been found to be a key driver of radicalization and recruitment into violent extremism in the sub-region. One of the adversities of climate change is the aggravation of poverty and loss of biodiversity. It has been argued for instance, that environmental insecurity has the potential to have negative implications on not only post-conflict peacebuilding, but also the countering and prevention of violent extremism (CVE/PVE). One way to prevent such an outlook would be by enhancing environmental governance. In Somalia for instance, CVE/PVE programs have become more sensitive to the likely adversities that climate change can have on the intended outcomes (Eklow & Krampe, 2019: 32–41).

Due to increased loss of biodiversity in the face of increased demand for water, arable land, and energy in countries such as Kenya, Burundi, Rwanda, and Uganda, there have been increased incidences of human-wildlife conflict. In Kenya, for instance, several species of animals, such as lions, elephants, rhinos; and plants, such as sandalwood, have been on the decline not only due to poaching but also physical attacks by humans. At the same time, injuries, and fatalities (both human and domestic animal) have been on the rise in Kenya, (Ogutu et al., 2016; Bond & Mkutu, 2018). Governance is about how well policymakers and implementers manage conflicting and competing interests over scarce resources. In this direction, governments in the region have begun to encourage community participation in wildlife management to address human-wildlife conflict. The government of Kenya, for instance, through the

KWS took steps during 2019 and early 2020 to compensate victims of attacks by wild animals (KWS, 2020).

Governments and other stakeholders in the field of the environment in the sub-region have also become keen on mainstreaming environmental security and management in processes involving constitutional design, democratic governance, national disaster preparedness and response, citizen participation and oversight, as well as land reform (Barriere, 2017). Transformative environmental governance requires citizen oversight and participation in the management of the environment (Chaffin et al., 2016). This outlook is increasingly being adopted in the protection of endangered animal species not only in Kenya but also in Uganda and Rwanda especially when it comes to the conservation of endangered mountain gorillas. Through its Conflict Early Warning Mechanisms (CEWARN), IGAD has become increasingly keen to factor-in environmental drivers of national and/or communal insecurity. This outlook has been identified as pivotal toward strengthening and enabling communities to overcome conflict among them as they grapple with governmental prescriptions on climate change adaptation among other issues (Roschel et al., 2018: 7).

However, in certain instances, climate adaptation and mitigation can attract political consequences, (many of which can be negative), that is not well anticipated and handled can have negative implications on environmental security (Dalby, 2013). For example, vested local political interests have at times convoluted government's efforts to protect water catchments, forests and wetlands. In Kenya for example, undertakings aimed at ridding key water towers such as the Mau Forest Complex (which is an important source for Lake Victoria and the Mara River) of illegal encroachers and loggers have at times elicited heated debate as politicians weigh options between appeasing potential voters or being "punished" at the ballot (Nzau & Mwanzia, 2016: 7–8). It is prudent, however, to appreciate the fact that though most of Africa's population in rural based, there continues to be a huge influx of populations into urban settings amidst a rising rate of urbanization on the continent. For instance, Africa's rate of urbanization was at "1.6% in 2019, compared to 0.8% in the developed world", (Osawe & Ojiefo, 2019: 4–10). This pattern was true of countries such as Ethiopia, Kenya, Rwanda, and Tanzania. One problematic issue associated with such urban growth is that it has largely been unplanned and hence unsustainable in many ways, especially in the context unprecedented water and air pollution experienced in cities such as Kampala, Mombasa, Nairobi, and Addis Ababa over the past decade. Governance here becomes critical in order to plan, build and grow greener, cleaner and hence environmentally safe and sustainable cities in East Africa. In addition, experts point to the centrality of governance in widening the scope of local-level actors toward environmental adaptation, protection, and sustainability. This calls for active community participation at the local level (Jama et al., 2020).

Further, governance plays a critical role in enhancing environmental security by providing the necessary legal, policy, and institutional grounding to make room for gender-inclusive processes of environmental resource management.

In recent years, governments have been keen on undertaking Security Sector Reforms (SSR) (Aning & Lartey, 2019). At times, however, these reforms fail to capture and/or rope-in the critical role of environmental consciousness among security personnel and the need for them to be alive to the human rights dimension of environmental protection. In a nutshell, there still are many governance gaps in the environmental security discourse in Eastern Africa. For example, A study by Bird and colleagues assessed public spending on climate change in Ethiopia, Tanzania, Uganda, and Ghana and revealed that when government spending on the environment is fully implemented and followed through with the necessary political will, then this does have the potential to better conserve and secure the environment and the livelihoods that depend on them in the sub-region (Bird et al., 2016).

From the foregoing, there is still much that can be done in the context of governance in order to actualize and materialize the ways and means of environmental security in East Africa. Governance is critical in closing the gaps associated with legislation, capacity, implementation, and mainstreaming in as far as environmental security is concerned. The question of commitment and the necessary political will is also a function of governance when it comes to the implementation and enforcement of policies such as Reducing Emissions from Deforestation and Forest Degradation plus (REDD+). A study commissioned by USAID covering four REDD+ projects (one in Uganda, another in Ethiopia, and two in Kenya) underscored this argument (Deshmukh et al., 2013: 46–53). It is also noteworthy that the versatility and authenticity of the common positions that African countries take, as a unified bloc, in terms of making gainful bargains and winning concessions to the greater benefit of environmental security in Africa, is also a function of governance at the regional and/or sub-regional levels (Werner, 2010: 1–25). At times, however, African countries (including the East Africa sub-region) tend to lose out due to undue competition. This if avoided, can go a long way to enhance environmental security and hence sustainable development in the sub-region.

However, environmental security is only a means to an end: sustainable development (Khagram et al., 2003: 289–313). To actualize environmental security through governance is not the only vital ingredient in the entire recipe for sustainable development in East Africa (Purkitt, 2009). This is the point at which other intervening human security factors come into play. For instance, poverty pervades the wider East Africa sub-region, which is faced with unemployment and general inequality. The African Development Bank (AfDB) reported that the sub-regions real gross domestic product (GDP) grew by about 5.9% in 2017, 5.7% in 2018 and it was projected that it would grow by 5.1% in 2019 and up to 6.1 in 2020 (AfDB, 2019: 1–3). However, the devastating effects of the COVID-19 pandemic, which began in late 2019, have since dampened these projections, with Sub-Saharan Africa's economy expected to contract by 2.8% in 2020 (World Bank, 2020). This means that the capacity to actualize environmental aims of governance is likely to be challenged as the sub-region

struggles to recover from the macroeconomic effects of the COVID-19 pandemic at least in the medium-term. Economic stability will enable countries in the sub-region to cope with the ever-rising demand for water, food, and energy all in a manner that will inform sound and sustainable protection of environmental resources now and in the future (Khan, 2014).

Conclusion and recommendations

This chapter set out to undertake a holistic review of the governance dimensions of environmental security in East Africa. Based on data collected mainly from secondary sources and presented in a systematic analytical descriptive fashion, the discussion sought to make a strong argument for governance toward the attainment of environmental security in the region, while considering the critical intervening dynamic associated with general aspects of the human security dynamic thereof. In this direction, the analysis interrogated various actors, structures, processes, and emergent issues associated with the governance-environmental security nexus in eleven countries that make up the East Africa region namely Uganda, Tanzania, Kenya, Rwanda, Burundi, Somalia, Ethiopia, Eritrea, Djibouti, Sudan, and South Sudan. Ultimately, the study findings underscore the centrality of governance in matters to do with environmental protection and sustainability. However, this role is best tempered with critical human security ingredients to achieve the ideal of sustainable development in the 21st-century East Africa.

Therefore, in terms of policy and practice, the chapter recommends that governments in the sub-region continue to take bold steps in the direction of strengthening governance institutions, as this will translate into sustainable environmental security among many other critical facets constituting the broader human security realm. With regards to theory, the chapter notes that there is room for further research on the governance-environmental security nexus, for example, through empirical models that will explore the nexus using quantitative data, thereby adding value to theory building in this subject area going forward.

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10 Impact of climate resilient rural road transport on human security in Kenya

Evaristus M. Irandu

Introduction

Investments in road transport have implications on human security. Road transport infrastructure and services facilitate the distribution of goods and services within and between countries and ease access to schools, markets, and health services. Food security and vaccination programs require functioning roads to move critical supplies to people especially in isolated areas of a country. While there is general agreement on the need for greater connectivity, debate still ranges on how to deliver it given the challenges posed by climate change (World Bank [WB], 2015).

Poor road connectivity may hinder transport of farm inputs and farm produce to markets. This may aggravate food insecurity in an area and limit peoples' opportunities to access jobs, schools, and hospitals. Poor connectivity may contribute to hunger, starvation, illiteracy, and poverty. The importance of improved connectivity in rural areas has been highlighted by Department for International Development (DFID) and others (DFID, 2013; Starkey & Hine, 2014). These studies demonstrate that improving rural access leads to increased agricultural production, lower costs for farm inputs, and lower transport costs for marketed outputs. Besides, having a road within a certain distance will impact on poverty by supporting incomes and by enabling poor and marginalized people to access public services such as education and health more easily (Dercon et al., 2009; Starkey & Hine, 2014).

This chapter examines critically the impact of climate resilient rural road transport on human security in Kenya. It focuses on how roads that are well adapted to climate change enhance accessibility, mobility, and food security in rural areas of Kenya. The study combined several methods to bring together evidence about the impact of climate resilient rural road transport on human security. Literature search and review were based on relevant studies on impact of climate resilient rural roads on human security globally, as Kenya-specific studies could not be found. Interviews were held with five key informants in the Ministry of Agriculture, Livestock and Fisheries of the Republic of Kenya. A questionnaire survey was administered to 200 small-scale farmers randomly selected in five selected counties to examine the distribution of their trips.

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The farmers were identified with the assistance of field agricultural officers in those counties. Content analysis was used to critically review available literature on the topic. Qualitative and quantitative analysis of available information was carried out. Multiple regression and correlation analysis was utilized to establish the relationship between poverty and paved roads, level of primary education, and the number of women who delivered in a nearby health center in 30 selected counties. Analysis of variance (ANOVA) was used to establish whether the selected regression model was significant in making predictions of the relationships that existed between the variables analyzed. The major policy implications and further research areas are suggested.

Literature review and conceptual framework

To provide a detailed discussion of the role of climate resilient rural road transport on human security in Kenya, it was necessary to undertake a comprehensive review of available literature on the topic. This section explores previous research undertaken on the impacts of rural road transport on promoting food security, health security, and job security. The importance of climate resilient rural road transport infrastructure is highlighted and how it may impinge on human security.

It is estimated that rural transport provides a lifeline for about 50% of the world's population. This is so because rural transport facilitates people's access to jobs and markets; schools and health clinics; social events and religious activities. It supports the movement of essential goods into rural areas, such as inputs to agricultural production, as well as the movement of goods out of rural areas, such as food and other products destined for urban markets. Without rural transport, the people who provide essential services to rural residents, such as agricultural extension officers, teachers, and health workers, would not be able to reach them; nor would rural residents be able to access such services in nearby urban centers (United Nations Economic and Social Commission for Asia and the Pacific [UNESCAP], 2019).

In many developing countries, spatial patterns of poverty, food insecurity, maternal health, and child mortality highly correlate with remoteness and lack of transport. According to the World Bank (2008), transport puts development goals within reach through its enabling role to other sectors of a nation's economy. Achievement of many development targets such as the ones proposed in the Sustainable Development Goals (SDGs) are highly dependent on the availability, reliability, and affordability of transport. Available literature strongly supports the idea that limited transport connectivity is a critical constraint to accessing social and administrative services, especially in rural areas where the majority of the poor live. Rural access is key to realizing economic potentials and alleviating poverty in many developing countries. In the short term, transport costs and travel time can be reduced by improved road conditions (Danida, 2010). Over the longer term, agricultural productivity will be increased (Khandker et al., 2009; Bell & van Dillen, 2012).

According to the Global Mobility Report (2017), isolation has been identified as one of the major factors hindering rural development in many parts of the world. Globally, 1 billion people live more than 2 km (25–30 minutes of walking) from an all-season road. Lack of all-season roads is problematic in countries with rainy seasons such as Kenya, where earth or dirt roads often become impassable by both motorized and non-motorized traffic (Sieber, 2009). This makes local communities adopt subsistence farming as opposed to commercial agriculture because markets become inaccessible. The poor condition of rural roads results in a lot of damage to farm produce before reaching markets, thereby reducing their value and incomes earned by farmers. This fact has been confirmed by a recent literature review by Starkey et al. (2014) and Sieber and Heather (2016) on the impacts of rural transport improvements. Both literature reviews reveal that improved rural roads lead to increased incomes, job opportunities, and poverty reduction.

There are numerous studies that support the relationship between rural accessibility and poverty reduction (Arethun & Bhatta, 2012; Karema et al., 2017a; Bakht, Z. et al., 2009), economic growth and development (Bryceson et al., 2006), and decreases in maternal deaths and infant mortality (Irigoyen, 2007). Throughout the developing world, the lack of adequate road infrastructure and the long distances to markets and essential services have been a major concern for rural communities. It is evident from studies and observations that rural isolation poses an obstacle to rural development. There is a strong link between the socio-economic development and livelihoods of rural communities and the provision of rural access. Empirical studies on the impact of rural road transport have shown that rural roads can play a meaningful role in improving rural income, fostering consumption, and reducing poverty.

An efficient rural road transport system is very important in promoting agriculture and reducing rural poverty. Reducing rural transport costs can raise farm-gate prices, increase farmers' incomes, and help reduce prices of food prices in urban areas. It can also facilitate the timely distribution of farm inputs such as fertilizer, insecticides, increase agricultural yields, reduce post-harvest losses, and increase hectarage of cultivated areas. Yet, today, in most developing countries, especially in Sub Saharan Africa (SSA), rural transport is far from optimal (Research for Community Access Partnership [ReCAP], 2020). Increased agricultural production is crucial in achieving the SDGs, particularly ending poverty (SDG 1), achieving food security (SDG 2), and ensuring healthy lives (SDG3). The Sustainable Development Goals (SDGs) include a goal to increase rural accessibility, but they do not set a target. Specifically, SDG indicator 9.1.1 refers to the proportion of the rural population who live within 2 km of an all-season road. An all-season road is one that is motorable all year round by the prevailing means of rural transport (ReCAP, 2020). As Bryceson et al. (2006) observe, agriculture is the main occupation of rural communities, and for the poor, subsistence agriculture is often combined with working on other farms to reduce food insecurity. Accessibility to land, agricultural inputs, credit, equipment, information, and

markets are all determinants of rural wealth creation, and despite the apparent rise in non-farm activities, transport is clearly crucial in rural income generation. Rural road infrastructure is crucial in supporting delivery of essential utility services and has great strategic, political, economic, and social significance. Improved all-season road infrastructure and the availability of transport services are effective ways to increase food security and curb hunger as it allows farmers to sell their produce to a larger market, more frequently during the year, at competitive prices. It furthermore enables the goods and services which support farming to reach farms more efficiently and at less cost. Good all-season access improves the efficiency of food distribution, by providing better connectivity throughout the year and lower transport costs via shorter journey times, lower fuel consumption rates and less vehicle wear and tear. In turn, these enable reductions in costs, wastage, and damage of produce during transportation (i.e., post-harvest loss). For example, poor road links were shown to increase transport costs greatly in parts of rural Tanzania while improved road condition reduced the transport costs of bananas in Kenya by 14 % (African Community Access Program [AFCAP], 2013**)**.

Good access enables farm yields to increase and production costs to be reduced by facilitating access to fertilizers, mechanized equipment and high yield seed varieties and enabling supporting activities including labor, agricultural extension workers and veterinary services to reach farms more easily, thus directly improving food security and reducing hunger. For example, investment in rural roads contributed to approximately 25% of agricultural produce growth in India during the 1970s and was responsible for the largest impact in poverty reduction. Good rural access also positively impacts the development of the rural economy thus indirectly leading to improved food security and zero hunger. For example, improved access leads to a rise in the profits realized by local producers, and therefore their purchasing power, by reducing post-harvest losses and transport costs to competitive input markets and remunerative output markets. It encourages the development of local markets, small-scale businesses, and farming, as demonstrated in Vietnam where improved rural access was shown to increase the number of local markets and India where improved road access helped farmers set up small non-farm businesses and market their products beyond their villages and towns. Employment opportunities for rural inhabitants are also closely linked to improved rural transport infrastructure. Daily waged employees and migrant laborers often rely on bicycles and buses for their travel (Asian Development Bank [ADB], 2002**)**. Similarly, these modes enable mobility of more vulnerable social groups (for example, women, children, and older people). Thus, good access also serves as an enabling factor in income generation and the fulfillment of daily tasks.

Although most studies of market access focus on road connectivity to markets, rather than on the role of transport services, observations across Africa suggest that an all-season road is more likely to be associated with regular motorized transport services than a poor road and, if agricultural conditions are favorable, production and associated prosperity in the farming population

will be higher than in remoter areas with poor access (Dorosh et al., 2012). In the case of perishable products such as tomatoes, cassava or bananas, motorized transport often plays a crucial role in travel time for ensuring adequate market access while produce is still fresh. Kaumbutho and others have observed the high cost of the first mile of produce evacuation for fresh fruit and vegetables in Kenya (Kaumbutho et al., 2013). They found out that in the Mwea area of Kirinyaga County, the shift from porterage to oxcart reduced overall transport costs by half, while in Meru County, changing from head-porterage to motorcycle reduces overall costs by roughly one-third.

In remote areas, costly access to markets is a major hindrance to growth: farm-gate prices for agricultural produce, often the mainstay of livelihoods in those areas. Such prices are likely to be very low compared to those prevailing in more accessible locations. There will also be limitations on the nature of produce which can be sold since perishability limits market potential. These are some of the problems encountered in Nyandarua County of Kenya. If markets have to be accessed on foot, or delays are experienced because of sparse, unreliable transport services, sellers may arrive at market too late to obtain a good price or even to meet any potential purchasers; if their produce is perishable it may spoil in transit (Farrow et al., 2011).

One of the most challenging barriers to providing quality health care is the lack of transportation. Maternal, neonatal, and infant mortality are inextricably linked to access to health. A growing body of literature acknowledges that poor physical access is a significant factor in the limited number of women giving birth in health facilities in Sub-Saharan Africa and in the significant number of rural women who die when giving birth because of medical complications (Transaid, 2013). Recently, evidence regarding the specific role that transport services play in shaping access to health facilities has been increasing. For example, travel time has been found to significantly affect levels of clinic attendance. Tanser and others established that about 65% of rural homesteads in KwaZulu-Natal, South Africa, took about one hour or more attending the nearest clinic, but there was a significant logistic decline in usage with increasing travel time (Tanser et al., 2006). Low-cost, timely transport also improves prenatal care (McCray, 2004) and access to antiretroviral (ARV) therapy (Chileshe & Bond, 2010; Feldacker et al., 2011). The role of transport in promoting maternal health and emergency obstetric care is particularly evident (Masters et al., 2013). According to Porter (2002), health facilities of any kind are rare in off-road locations. A study from a Pakistan household survey revealed that villages with all-weather roads had increased access to prenatal consultation and higher chances that births would be attended by skilled attendants than villages without all-weather access roads (Irigoyen, 2007). The percentage of maternal deaths and mortality rates is also higher for rural areas with limited to low connectivity. Hence, transport also improves access to maternal and pediatric health care.

Better access to roads improves labor force mobility, which results in an increase in job opportunities for households. It also increases income from farming activities, contributes to making prices more stable and thus allows

the poor people living in these communities to reduce risk which improves risk management. An impact evaluation of the Njombe-Makete Road project in Tanzania found that improvements to the road infrastructure not only increased the participation of sellers at local markets but also increased the variety of available agricultural products and consumer goods (Arethun & Bhatta, 2012). In addition, evidence from other national studies show that the annual average income and expenditure for households with limited to very low connectivity is lower and that the average transportation costs for goods becomes higher as the road conditions worsens (Irigoyen, 2007). In many areas across Africa, people, particularly women, rely on petty trading for a basic regular income, even though returns are low. They often walk long distances to access local markets but, when appropriate transport is available, may be able to travel to distant markets with better prices and possibly less competition for their local products. For such women, the importance of reliable, regular, cheap, and safe transport cannot be overemphasized. Moreover, reliable transport for the journey home so that they can fulfill their domestic chores is as crucial as reaching market on time (Starkey et al., 2013).

Rural road transport and climate change

Several studies have attempted to address the impact of climate change on road transport infrastructure. The studies focus mainly on using predictions in weather conditions to show the potential impacts on road infrastructure. Serrao-Neuman and colleagues, in their work on climate change impacts on road infrastructure systems and services in Southeast Queensland, observe that changes in average rainfall, temperature and evaporation patterns can alter the moisture balance in the pavement foundation of roads and recommended a rethink on how roads are designed, constructed, and maintained (Serrao-Neuman et al., 2011). Increase in the water table due to rising sea level can also lead to a reduction of the structural strength of pavements.

The demand for safer, more efficient, and more affordable transport in Sub-Saharan Africa is enormous. Two-thirds of Africa's rural population still lives more than 2 km away from an all-season road. In some of the countries on the continent, transport costs represent up to 30% of the poorest households' monthly income (WB, 2016). Like elsewhere in the world, African people depend on transport to bring their children to school, to go and sell their products at local markets, to access job opportunities as well as other social and economic services. Transport is also essential to African rural economies: increased transportation connectivity is needed to allow increased harvests to find their way to markets, to enable efficient distribution of agricultural inputs, and to allow for efficient movement of food products. Moreover, disruption to the main road network has a major impact on the economy at various levels, both in terms of trade at the national level and for affected communities who face a loss of marketing opportunities, and shortages and higher costs of household consumables (WB, 2016; Koetse, 2009).

Natural hazards can have a serious effect on transport infrastructure, particularly on road networks. For example, heavy rainfall may cause erosion and scouring of roads and bridges, flooding may result in road closures and limited use of roadways, and strong winds may bring debris that obstructs traffic flows. A road transport system that has low resilience to actual and expected climate change can impose high costs for maintenance and repair. As a result of intense and frequent precipitation, roads may deteriorate faster, or bridges may collapse. Such vulnerability can have far-reaching social, fiscal, and economic consequences, impairing people's ability to access jobs, markets, schools, and hospitals (WB, 2015, 2017; TRB, 2008).

Improving the resilience of transport infrastructure is generally not cost neutral. Much of the investment in SSA's infrastructure will support the construction of long-lived infrastructure such as roads that needs to be capable of delivering services under both current and future climates. Temperatures are projected to rise across the continent and very high temperatures can result in the softening and rutting of asphalt roads. Some parts of Africa will see an increase in precipitation, which can lead to reduced load-carrying capacity and lifespan of roads (WB, 2017).

Many parts of Africa are expected to face more intense precipitation, which can increase flooding frequencies. These floods can overrun and erode roads, particularly unpaved roads (Niang et al., 2014). Some recent literature also provides insights about the potential economy-wide implications of severe climate events that affect the road network, particularly implications for food security. Ndiaye and colleagues established that in Burkina Faso, maize price volatility was greatest in remote and poorly connected markets (Ndiaye et al., 2015). As climate change further reduces connectivity, it tends to increase the possibility for food shortages and economic shocks to vulnerable areas. In addition, after tropical storm Agatha struck Guatemala in 2010, per capita consumption fell by 13%, raising poverty by 18%; food expenditures fell 10%, accounting for 40% of the total consumption drop (Baez et al., 2014). This stemmed from a major loss in food infrastructure and transport, resulting in a 17% increase in food prices 10 months after the storm. This storm caused a logistical problem rather than a decline in domestic production, since it occurred in the middle of the first planting season, at a benign time with respect to local agricultural cycles.

The 2030 Agenda proposes the principle: "Leave no one behind**".** This implies that regardless of ethnicity, gender, geography, disability, race, or other status, no one should be denied universal human rights and basic economic opportunities. Studies by Tanzarn (2013) and Lucas (2012) reveal that lack of mobility is inextricably linked to multiple forms of exclusion and marginalization. Accessibility in terms of ease and ability of reaching desired destinations is the most defining predictor of choice, opportunity as well as utilization of services. Accessibility is also important for the disadvantaged because of its role in maintaining the social relations forming the safety net of poor people (Njenga et al., 2014).

Conceptualizing human security

In the previous section, it has been established that improved rural road connectivity can enhance food, health, job, and social security. It has also been demonstrated that climate change can adversely affect rural transport infrastructure, with deleterious effects on human security if not addressed. The human security approach was introduced in the 1994 global human development report (HDR), which led to a range of literature and initiatives building on the idea. The HDR listed seven essential dimensions of human security: economic, food, health, environmental, personal, community and political (UNDP, 1994). Central to the approach is the idea that people have the right to live in freedom and dignity, free from poverty and despair with an equal opportunity to enjoy all their rights and fully develop their human potential (UN, 2012). The term human security refers to the security of people in every aspect of their lives. It includes food security, job security, health security, community security, personal security, and environmental security. Human security provides opportunities by which people can increase their choices thereby promoting human development (Alkire, 2003; UNDP, 2015). Besides, human development by enhancing people's capabilities, also contributes to improving human security. Thus, poverty alleviation and human security are mutually reinforcing.

Poor people are the most vulnerable in terms of economic insecurity, health insecurity, food insecurity, personal insecurity, and environmental insecurity. Transport improvement in rural areas, by increasing food production, improving distribution, and ensuring better access to markets, contributes to food security directly by enhancing nutrition and indirectly by increasing incomes. A public works program such as rural road construction, by providing employment to poor people, ensures economic security and better transportation infrastructure expedite people's access to health care (UNDP, 2015; Gabrysch et al., 2011). In terms of personal security, better transportation by ensuring quick access to law enforcing authorities, can improve personal security of the communities. A well-designed road transport infrastructure can be critical for environmental security by reducing flooding, increasing protection from, and facilitating quick response to natural disasters, and in some cases reversing past environmental damage from poorly designed and implemented projects.

Empirical evidence suggests that there is a positive relationship between the extent and efficiency of a country's road network and its ability to address internal conflict (Tanzarn, 2014b; Porter et al, 2010). Transportation infrastructure shrinks time-space and cost-space, thus enabling the government to respond to security challenges more efficiently (Do & Iyer, 2010). Among other things, violent conflicts are attributed to physical isolation arising out of poor provision, funding, and maintenance of infrastructure.

This chapter uses the sustainable human security framework as the conceptual framework (see Figure 10.1). The notion of sustainable human security is a paradigm that suggests most of the contemporary understanding on human security, human development, human dignity, and human sustainability. The

framework involves four pillars. The first pillar, freedom from fear is about human survival and the protection of individuals and communities from natural and human-made disasters along with other situations of violence and conflicts. The second pillar, freedom from want is about human development and includes freedom from want often visible in extreme poverty. The third pillar, freedom from shame is about human dignity and the recognition of the fundamental human rights of every individual, including respect and protection of all aspects of diversity. The fourth pillar, freedom from vulnerability is about human sustainability and the protection of people from short and long-term natural disasters, especially through the reduction of human-made threats in nature (www.weinstitute.org/human-security.html).

From literature, it is apparent that the concept of human security is still evolving, and there is no universally agreed definition of the term. As Tadjbakhsh (2005) argues different scholars, policymakers and academicians have defined the term differently, as a new theory or concept, as a starting point for analysis, a world view, a political agenda, or as a policy framework. But there is growing consensus that attention should shift from state-centric to people-centric approach to human security. This is what sustainable human security entails. It focuses on addressing threats to human security such as environmental degradation, overpopulation, spread of infectious diseases, food supply, energy crisis, physical/mental harassment, racism, and others that endanger the well-being of our daily lives (www.gdrc.org/sustdev/husec/index.html). The concept of sustainable human security provides the necessary integrated framework for addressing the root causes of conflict and human, economic, environmental, and social insecurity. It aims at proposing adequate solutions through sustainable peace-building and human rights based sustainable development. Sustainable human security incorporates intergenerational equity in which future generations are entitled to a clean and healthy environment.

The chapter argues that the basic needs approach to human security should be considered as the Kenyan perspective. This is so because the basic needs approach identifies the seven core elements of human security such as: economic security, food security, health security, environmental security, personal security, community security and political security. These seven core elements of human security cover the fundamental issues such as income, economic and physical access to food, health services, freedom from disease, protection of global and local ecosystems from degradation, security from violence and so on (UNDP, 1994).

Impact of climate resilient rural road transport in Kenya

The previous section reviewed available and relevant literature on the role performed by rural roads in linking farms and markets and facilitating delivery of essential services to the rural population. The effects of climate change on rural roads and the need for constructing climate compliant roads was reviewed. In this section, the impact of rural roads on human security in Kenya is examined.

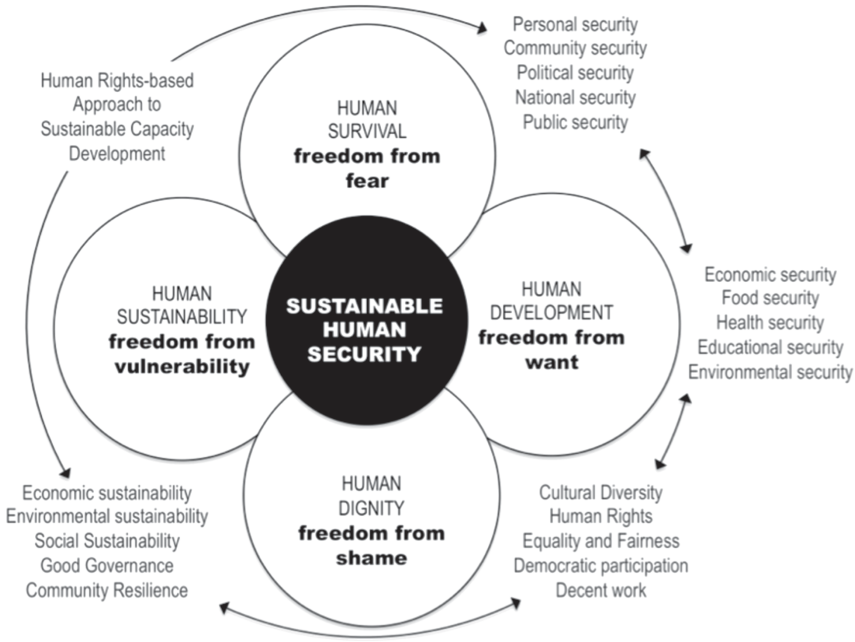

Figure 10.1 Framework of sustainable human security.
Source: www.weinstitute.org/human-security.html.

Findings from desktop review, questionnaire survey, key informants, and statistical analysis are discussed.

Effect of climate change on rural roads

Rural roads are mostly unpaved and vulnerable to extreme climate events such as floods. With heavy precipitation, road surface materials are easily washed away. Kenya has a total road network of 161,451km. This gives a high road density of 28.4 km per 100 km² of land. Generally, the length and coverage of the official road network is sufficient to provide basic regional and national connectivity. Still, only about 11,200 km or 6.9% of the total roads are paved. Paved roads are mostly in good or fair condition. But road maintenance remains a challenge in many areas, with 25% of secondary roads and 40% of tertiary roads in poor condition (Ministry of Transport [MOT], 2009; WB, 2016).

According to the Kenya Roads Act of 2007, there are three national institutions: the Kenya National Highways Authority is responsible for international and national trunk roads, as well as the primary roads (Classes A, B, and C, respectively); Kenya Rural Roads Authority is responsible for secondary and minor roads (Classes D and E) and other roads, and the Kenya Urban Roads

Authority is responsible for urban roads. Kenya's 2010 constitutional devolution delineates roads as either national or county. While the national government is responsible for Class A, B, and C roads, county governments handle Class D and E and unclassified roads. Regional, trunk, and primary roads connect major towns and ports and are mostly in good condition. As the population is located primarily along the Mombasa-Kisumu corridor, much of the country's road network follows a similar path, with density much lower in the sparsely populated north. In the northern and eastern provinces, roads are limited and mostly in poor condition.

The Rural Access Index (RAI) measures the proportion of the rural population who live within 2 km of an all-season road. The RAI of Kenya is estimated at 56.8%, leaving about 13.4 million rural residents unconnected to roads in good or reasonably fair condition. The RAI is generally high around Nairobi and Lake Victoria, where populations are concentrated. It is highest, at 96%, in Vihiga County, followed by Kirinyaga (86%), and Kiambu (83%). These are high-potential agricultural areas. By contrast, the RAI is low in the north (and especially northeast) counties, with Garissa, Madera, and Wajir Counties all below 10%. (WB, 2016). In Kenya, about 22–23% of the total roads are in flood prone areas. More than 85% of these roads are in poor condition (see Figure 10.2). They are particularly vulnerable and need to be properly adapted to extreme climate events. Earth or dirt roads become impassable during the rainy season and are full of dust during the dry season. Such roads are very important in the *first mile* as they link farms with collection and market centers. They form a vital link in the supply chain. To make the road network climate resilient, more resources may be needed (Ministry of Transport [MOT], 2009). The effect of climate change will lead to roads and paths being flooded more frequently. This will impact mobility and accessibility to goods and services (see Figure 10.3). Roads in flat areas are at great risk from flooding, and roads in mountainous areas are more at risk of damage from the actions of rapidly flowing water in the drains and in cross streams.

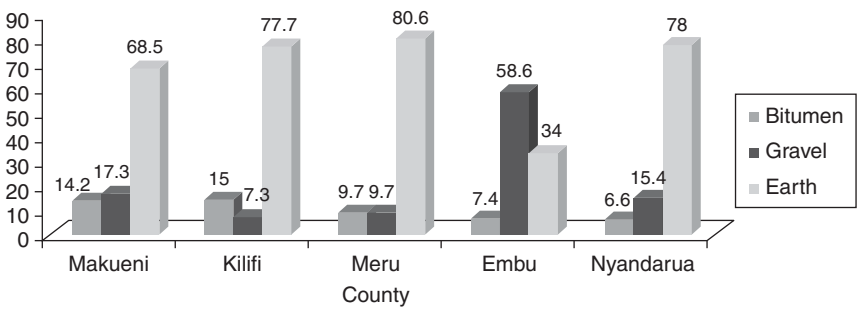

Figure 10.2 Road condition in selected counties in Kenya (percentage of total length in km).

Source: Author.

In Figure 10.2, it is apparent that most of the roads in the selected counties are earth or dirt roads. Both see communities becoming cut off and journeys taking much longer. At the very least, this leads to problems in transporting crops to markets and delivering agricultural inputs to villages. It will also lead to fewer visits being made by clinic staff to all sections of the community and to increased absenteeism from school. Even the collection of safe drinking water and fuelwood can become more difficult.

Poverty reduction and livelihood improvement

The existing spatial pattern of road transport infrastructure in Kenya demonstrates significant imbalances. There is a high concentration of road infrastructure development along the Mombasa-Nairobi-Malaba transport corridor that served the former white highlands. This concentration is partly the result of relatively high population concentrations and the presence of the main route linking the Port of Mombasa to the rest of the land-locked countries in East Africa. However, as explored in later sections, it is also closely related to the historical legacy of colonialism and the uneven distribution of power in post-independence Kenya. In contrast, the northern, eastern, and southern parts of the country are poorly served by roads and existing networks are in poor condition (MoT, 2009). Connectivity is particularly poor in the arid and semi-arid areas in the north-east. The former Eastern Province comprising the present-day Counties of Garissa, Mandera, and Wajir covers approximately 30% of the country's landmass but has less than 1% of its roads network paved (MoT, 2009).

Poorer counties tend to have less access to roads. There is a strong negative correlation at the county level between the proportion of households within 10 km of a paved or gravel road and the share of people in the bottom wealth quintile. This holds for both paved and gravel roads, with the impact effect on the former being particularly strong. More than one out of every ten households in ten counties of Turkana, Samburu, Garissa, Lamu, Wajir, Isiolo, Mandera, Marsabit, Tana River and Kitui are located 5 km or more from a road. These figures are even more striking for paved roads. Ninety percent of households in Lamu, Marsabit, Samburu and Wajir are more than 5 km from a paved road, while in a further 21 counties over half of all households are located 5 km or more from a paved road (Overseas Development Institute [ODI], 2016).

Trip refers to the movement from origin to destination. The respondents most frequent trip ranges from farm trips, social trips, market trips, and other trips such as work trips. Data obtained shows that farm trip has the highest percentage of trip in the counties surveyed. This implies that the majority of the people in these counties are farmers. Therefore, the condition of the road in a county has a significant effect on farming activities. Considering the perishable nature of farm produce, most farmers in the rural areas find it difficult to transport their produce from farm to urban areas, where they have better patronage to boost their economic ability. Efficient and effective road facility will enhance the transportation of these produce to urban areas where they are processed,

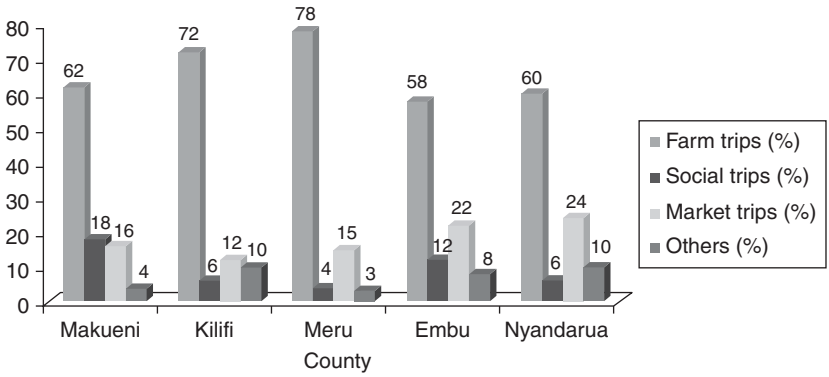

Figure 10.3 A truck headed to Lodwar in northern Kenya is swept away by raging floods.

Source: Raging floods destroy costly infrastructure in East Africa. The East African, Nation Media Group. 19th May 2018. www.theeastafrican.co.ke/business/Raging-floods-destroy-costly-infrastructure-East-Africa/2560-4570392-jf9cpsz/index.html.

Figure 10.4 Trip distribution in selected counties in Kenya.
Source: Author.

distributed locally, and exported for the growth of the nation's economy (see Figure 10.4).

From Table 10.1, it is apparent that the proportion of women who delivered in the health center had the highest value of 84.0 representing Nyeri County while the paved road had the lowest value of 0.1 representing Garissa, Isiolo, and Samburu Counties. The proportion of the population with primary education had the highest mean of 67.923 with paved road having the lowest mean of 1.677 and lowest standard deviation of 1.8864. The proportion of women who delivered in the health center had the highest standard deviation of 18.2832. This implies that richer counties such as Nyeri County had better quality roads while poorer ones like Garissa, Isiolo and Samburu had poor road condition. The condition of the road also influenced the proportion of women who accessed health facilities.

Table 10.1 Descriptive statistics

	N	*Minimum*	*Maximum*	*Mean*		*Std. deviation*
	Statistic	*Statistic*	*Statistic*	*Statistic*	*Std. error*	*Statistic*
Poverty	30	6.2	42.4	18.527	1.4571	7.9808
Paved	30	0.1	7.0	16.77	0.3444	1.8364
Education	30	58.5	73.5	67.923	0.7327	4.0131
Women	30	13.6	84.0	37.550	3.380	18.2832
(Valid N	30	58.5	73.5	67.923'	0.7327	4.0131
List wise 30)	30	13.6	84.0	37.550	3.380	18.2832

Source: Author, 2020.

The highest correlation was between proportion of women who delivered in the health center and paved road at 0.427 (significant at the 0.05 level). The lowest correlation was between poverty gap and proportion of population with primary education at −0.047. Lack of physical access to markets, agricultural inputs, and affordable modes of transport can dramatically inhibit the agricultural productivity of small scale and isolated farmers. This leads to poverty, insecure livelihoods, and limitations to the cumulative effects of socio-economic development and economic growth, through sub-regional, regional, national, and international trade. Roads have the potential to enhance the quality of public administration by improving access to governance-related services such as police, fire services, disaster management, courts and the system of justice, and civil society organizations. It is important that public transportation and law and order and other service organizations take cognizance of the provision of road connectivity in planning their outreach services.

To determine whether there is any interrelationship between poverty, level of education, road condition and proportion of women delivering in health centers, multiple regression and correlation analysis was used. The data analyzed was obtained from the County Integrated Development Plans (CIDP), 2018–2022. The counties selected represented a good cross-section of the country's socio-economic profiles. The multiple correlation coefficient (R) of 64.9% shows a strong linear relationship between the variables. R squared (R^2), the coefficient of determination was 42.2%. This meant that 42.2% of the variation of the poverty existing in various counties was explained by the three independent variables. The adjusted R squared (R^2) was 35.5% showing the contribution of the independent variables to the poverty gap. The regression model, however, failed to explain 64.5% of the other variables that influence the poverty gap.

Analysis of variance (ANOVA) statistics was computed to determine the goodness of fit in the model and to establish whether the selected regression model was significant in making predictions of the relationships that existed between the variables analyzed. The F critical value at the 5% significance level

Table 10.2 ANOVA[a] statistics

Model	*Sum of squares*	*Df*	*Mean square*	*F*	*Sign*
Regression	778.716	3	259.572	6.317	.002[b]
Residual	1068.382	26	41.092		
Total	1847.099	29			

[a] Dependent variable (poverty).

[b] Predictors (constant), women, education and paved roads.

Source: Author, 2020.

was 2.98 while the *F* calculated was 6.317. The model was higher than the critical value indicating that it was statistically significant. *P* value found was 0.002 which was lower than the 5% significance level. The relationship of the variables was significant (see Table 10.2).

Studies have established that development is significantly impeded in rural communities which do not have access to all-season roads connecting them to other markets, urban or peri-urban settlements. The relationships between isolation and poverty have been observed in the Asia and the Pacific region, where 40% of the rural populations are not connected to a wider transport network through a reliable road link (UNESCAP, 2015). For example, evidence from the Lao People's Democratic Republic supports the notion of isolation by demonstrating that poverty incidence in unconnected rural villages is much higher than the national average. While findings of the studies reviewed in literature are consistent with those in this chapter, it should be borne in mind that poverty cannot be exclusively explained by isolation. Rather, many factors determine the livelihoods of rural populations, and the variety of rural life must be acknowledged (Lucas, 2012). This explains why the *R* squared (R^2), the coefficient of determination was 42.2%. This meant that 57.8% variation of the poverty existing in various counties in Kenya could be explained by other independent variables not examined in the study.

Conclusion and policy implications

This chapter has discussed the critical role that an improved and climate compliant rural transport can play in enhancing human security in Kenya. The "Sustainable Human Security" framework was used as the conceptual framework to demonstrate how climate resilient rural roads can promote sustainable development through reduction or alleviation of poverty, hunger, disease, and want of any kind. It has been established that poverty is predominantly a rural phenomenon and agriculture is the main source of income for the majority of the population. Poor rural road transportation makes markets, jobs, education, and health services inaccessible to the people. The chapter has examined how

paved rural roads may be more useful in promoting food security, providing access to rural markets and in alleviating poverty.

However, the roads can play this vital role if they are climate resilient. Due to extreme weather changes such as unusually heavy rains, flooding may occur, leading to wash away of bridges and cutting off connectivity in many parts of a country. As already discussed, this would constrain the marketing of perishable agricultural produce, cause food prices to soar, and lead to food insecurity. Inaccessibility would also make communities vulnerable to attacks by other communities competing over natural resources such as pasture and water like is the case in northern Kenya.

From the review of published and unpublished literature, it has been established that there is some lacuna in certain aspects concerning rural transport-climate change-poverty nexus. It is crucial to undertake such research to support poverty alleviation measures and promote sustainable development in rural areas. Below are suggestions on how to improve the road transportation network in the rural areas of Kenya to spur sustainable development.

1 There is a need to raise the levels of roads and paths to allow water to drain away from the road surfaces. In doing so, attention should be paid to the provision of adequate channels, culverts, and drainage.
2 The planning and design of new rural roads and paths should consider future rainfall and flood trends. Flood frequency modeling would assist in ensuring bridges are constructed at a sufficient height to prevent being washed away.
3 There is a need to adopt new technology in road construction such as the use of new road building materials that are weather resistant. Where such materials are not available, research should be carried out by engineers in local institutions of higher learning to develop some.
4 There is a need to avoid constructing roads in steep or hilly areas to reduce the probability of occurrence of landslides and mudflows.
5 Many rural communities fear blasting of rocks and vibrations during road construction. This is because vibrations may shake the foundation of houses and may even make some collapse thereby injuring people. This should be mitigated by adopting the green road concept, which involves phased construction without blasting or heavy machinery.
6 To formulate policies to promote and popularize the use of non-motorized transport (NMT) especially bicycles and oxcarts in rural areas. Non-motorized means of transport would be amenable to use on rural tracks and thereby promote accessibility and mobility in rural areas. They could also replace carriage of goods through head or back loading. Access to non-motorized transport modes should be open to men and women.

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11 Climate change, food security, and the challenge of sustainable development in East Africa

Alice A. Oluoko-Odingo

Introduction

The link between climate change and human security is a matter of many controversies as some researchers scarcely capture the relationship between rainfall and conflict (Meierding, 2013), whereas to those in the affirmative, complex pathways that underlie the association relates with resultant adverse impacts on the environment and risk factors of violence (Ruppel & Wyk, 2013; Ruppel & Ruppel-Schlichting, 2013). More than one-half of cumulative anthropogenic carbon dioxide emissions occurred in the last 40 years (Intergovernmental Panel on Climate Change [IPCC], 2014). Though an indication of anecdotal research, Box 11.1 is an example, which shows how challenging it is, to many scholars, to split hairs between the problem of climate change and other environmental challenges such as water scarcity, biodiversity loss, population growth, human settlement, and health issues and the resultant impact on human security as both problems became more pronounced in the last 40 years. This chapter explores food security as a dimension of human security in East Africa. The chapter starts from the point of view that the impacts of climate change witnessed in the recent past could provide insight into lasting solutions with regards to human (in)security challenges.

Today, climate change is considered one of the important environmental challenges that threaten human security either individually or jointly with other environmental factors (Brown et al., 2007). In Box 11.1, the impacts of climate change in the last 40 years could point to the possibility of finding lasting solutions to the threat of climate change on human security.

This chapter is based on a desktop review of literature in addition to other relevant secondary data. The chapter adopts a human security analytical framework and argues that food security is a fundamental component of human security, without which, it is impossible to attain other forms of human security. Biodiversity, agriculture, water, and human settlements are important food security resources that support food security at various levels. The chapter considers justice and equity essential to the realization of human security. Conclusions are based on the need for a paradigm shift in the approach to human security for a more equitable, just, and sustainable world.

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Box 11.1 Climate change and environmental degradation: The past 40 years

As a young girl, I grew up in a place called Masumbi in Siaya county of Kenya, in a land adjacent to a large, swampy valley, occupied by papyrus reeds and extensive grazing areas. A three feet dig into the ground produced a thrashing spring of fresh, clear, and cool water into the surface which we tapped for our use. The leopards lived side by side with us, the Giant hornbills – presumably the Southern ground hornbill – would roam below the Mauritius thorn (locally known as *osiri*). The jackals would leave a trail of dung in sensing human interference with their path during cultivation and the hedgehog would sprinkle its spines all over which we would pick as toys after our daily chores. A little stream across would provide fish on the day when chicken and vegetables were not preferred and a piece of land cleared for cultivation would produce two to three cobs of maize per stalk without any irrigation or addition of soil inputs. This is just over 40 years ago. Today, more people have settled into the area (whether through natural increase, immigrations or both is still a matter of research), most of the vegetation has been cleared for farming and one will have to dig down for more than 30 feet and ably get water on a lucky day. Whether this is the problem of climate change or human settlement/population growth, science still has a lot to establish. My mother who is over 80 years old blames it on seasonal unreliable and inadequate rainfall, which continue to decline over the years.

Source: Alice 2020.

Anthropogenic climate change in East Africa

Climate change and food security in East Africa

Natural occurrence of climate change is well researched (Roschmann, 2013; IPCC, 2007). Much more recent is the anthropogenic climate change (i.e., attributed to human activity), blamed on the emissions of greenhouse gases (GHGs) into the atmosphere, leading to global warming. There is congruence between anthropogenic climate change and industrial revolution, associated with heavy use of fossil fuels and deforestation.

In the 1970s and 1980s, the anthropogenic climate change was viewed by policy makers as peripheral environmental phenomenon, relegated to Ministries of Environment in respective countries (Brown et al., 2007). A decade later, there was urgency to combat climate change with advances in climate modeling, accompanied by the revelation of actual patterns of climate in regional climate conditions. Climate change metamorphosed into an economic and energy policy issue with realization that tackling climate change would demand

reducing greenhouse gases (GHGs) from the use of fossil fuels. More recently, climate change has gained prominence as a threat to international peace and security (Brown et al., 2007). Climate change, along with drought, desertification, and land degradation, failing fresh water supplies, deforestation, fisheries depletion, and ozone layer depletion are seen as environmental threats to human security. As anthropogenic climate change continues to adversely impact societies, Lorenzoni (2013) emphasizes the need to interrogate the rationale for development aligned to mass material consumption with heavy loads on the environment and perpetuated by powerfully maintained hegemonic structures.

All the impacts of climate change are inter-related with agriculture and food security. Water security is key in ensuring successful and sustainable agriculture and food security, while security of land resources (biodiversity and soils) is essential in maintaining agro-biodiversity and soil fertility to accommodate diversified, resilient, and more productive farming. The health of the agricultural and food security resources (crops and livestock), as well as the health of the farmer as the main provider of labor or coordinator of farm activities are also important for farm productivity now and in the future.

The anthropogenic fossil fuel-related carbon dioxide emission has significantly increased over the years and the average temperature increase of 4.8^0C compared to pre-industrial times is an indication of climate variability. The annual increase in anthropogenic GHG emissions originate from energy supply (47%), industry (30%), transport (11%), and building sector (3%) (IPCC, 2014). The trend is expected to persist driven by growth in population and economic activities if no efforts are made to reduce GHG emissions beyond what is in place today. Currently, though there are attempts to minimize the use of fossil fuels by focusing on renewable energy resources like solar, hydro, and geothermal and wind energy, their effects would take a bit of time to neutralize the already threatening situation to human security.

At lower latitudes, crop productivity is projected to decrease for small temperature increase of 1–2 °C. Droughts and floods are also expected to increase in frequency at low latitudes and affecting food production (IPCC, 2007). Industries, human settlements, and societies in coastal and river flood plains, those whose economies are linked to climate-sensitive resources as well as those in areas prone to extreme weather events, particularly in urban areas will be most impacted. In 2020, about 75–250 million Africans were suffering from water stress and climate change. Coupled with increased demand, water stress will affect livelihoods, resulting in water-related human insecurity in the form of food, environmental, economic, health, personal, community, and political security. The areas suitable for agriculture, the length of the growing season and yield potential (particularly those at the margins of Arid and Semi-arid areas) are expected to decrease. In some countries, yields from rain-fed agriculture are expected to have reduced by 50% in 2020, while rising water temperature will decrease fishery resources (IPCC, 2007).

In East Africa, some of the impacts of climate change include severe floods and prolonged droughts, sea-level rise, crop failure, loss of livestock, lower

water availability and quality as well as increase in vector-borne and water-borne diseases. The challenges have led to internal displacement of people, food shortages, increased disease transmission with human security implications. For instance, disease vectors and pathogens have led to community risks of malnutrition, diarrhoeal diseases together with other environmental health problems (Mboera et al., 2011). Seasonal temperature increases of 2 °C by 2050 will reduce acreage of maize, sorghum and rice yields by 13%, 8.8%, and 7.6%, respectively (Kahimba et al., 2015). Inadequate adaptation and less resilient farming practices and socio-economic systems compromise on food security, thus raising human security concerns. The impacts of climate change in Kenya are more pronounced for maize and sorghum, while beans and millet are said to be unresponsive (Yator, 2016; Kabubo-Mariara, 2015). A decline of 69% in yields is predicted by 2100, thus showing some of the impacts of climate change on food security with implications on human security. West Pokot is one of the food-deficit counties in Kenya with some of the conditions attributed to climate change (Obwocha, 2015).

Vulnerability of East Africa to climate change

Anthropogenic climate change is responsible for multiple challenges that confront humanity today: flooding, drought, food insecurity, disease prevalence, conflict over resources, population displacement and migration, among others are seen as impacts of climate change (Mwaniki, 2019). Africa is the most vulnerable continent to climate variability and climate change and would be the worst hit due to several factors: its geographic position, heavy dependence on climate-sensitive sectors, and prevalence poverty among her citizens. Other reasons for vulnerability include unstructured and opaque governance systems, inadequate infrastructure (portable water, clean energy, and other social service) as well as limited access to markets and inadequate financial resources (Africa, Climate Change, Environment and Security (ACCESS) Dialogue Process (n.d); Ruppel & Wyk, 2013; Roschmann, 2013). All these present different forms of insecurities to humanity.

Human-induced climate change is already impacting human settlements and associated land uses – residential areas, commercial space, and infrastructure (harbors, streets, and industrial plants) due to sea-level rise. Several islands would be submerged, soil fertility would be compromised, with increasing global water scarcity. Ecosystem malfunction will arise from intrusion of salt water into riverine ecological systems and agricultural lands, decline in food and water security would lead to famines, while enhanced evapotranspiration and unreliable rainfall could advance desertification, thus compromising agriculture and human settlements (Roschmann, 2013; Ruppel & Schlichting, 2013). Biodiversity, agriculture, water, and human settlements are important food security resources necessary in ensuring sustainability of food production systems. For instance, major migratory movements associated with crises and disease prevalence among unprepared communities with low immunity

as in East African highlands is expected, thus, disproportionately affecting the poor, women, children and people with disabilities, and indigenous communities (Roschmann, 2013).

Scholars have, however, noted incongruence between climate change patterns and civil war, which implies that climatic irregularities themselves are not causative to conflicts but can be a trigger or accelerator of conflicts (Moran et al., 2014). Moran and colleagues noted that climate change may increase the frequency and intensity of climatic hazards that change the operating environment, thereby, creating opportunities and grievances that threaten human security (Ibid). Excessively wet or dry weather may predispose communities to several types of violence, with the usual abnormally dry conditions characterized by conflicts involving governments and rebel forces while the wet periods are dominated by communal militias.

Climate change also threatens water and food security, allocation of resources, coastal communities with possibilities of forced migration arising from tensions, and other threats to human security. The main concern about climate change is its potential to influence threats to human security in a way that can retrogressively impact development of many nations.

Drivers to environmental degradation (e.g., illegal excision, land distribution, logging and use of forest fires to clear land for different uses) around Mt. Kenya Forest have destroyed almost 30% of the indigenous forest cover since 1970s. Climate change has been blamed for compromising the sustainability of the ecosystem as receding glaciers of Mt Kenya pose a threat to the sustainability of associated ecological goods and services. Recurrent droughts and unreliable rainfall patterns affect water supplies during dry conditions, with impacts on agricultural productivity and food security (crop, livestock, and fisheries). On the other hand, health, and population growth and finite and diminishing environmental resources contribute to incidents of crime, human-wildlife conflicts, and resource-based clashes (Chaudhry, 2016). These challenges could advance the frequency and intensity of those conflicts, thus threatening not only food security but other dimensions of human security as well (Mwaniki, 2019; Moran et al., 2014). Climate variability and change have the potential to impose additional pressures on human security and overwhelm adaptive capacity of communities (see e.g., Mbenywe, 2020; Odiwuor, 2015), besides influencing diverse arrays of conflicts.

Place of human rights and human security

The chapter recognizes the connection between human rights and human security (Gasper, 2007). In other words, guaranteeing/protection of human rights is a crucial element in ensuring human security. O'Brien and colleagues view human security as a catalyst for creating new science of climate change that integrates social sciences, humanities, and physical sciences by putting more emphasis on policies toward justice, ethics, responsibility, and human security (O'Brien et al., 2011). For many scholars of human security, the greatest threat

to security originates from internal conflicts, disease, hunger, environmental contamination, or criminal offence which are epitomes of human rights violations. This is measured by quantitatively analyzing the number of years of future life spent outside a state of generalized poverty or avoidable civilian deaths (Newman, 2010). For instance, human rights violations through conflicts in Kenya can be attributed to cattle rustling, warrior culture, resource competition, climate variability and change, proliferation of small arms, political incitement, banditry, and marginalization (Asaka, 2018). These directly relate with the human security analytical framework.

It is often assumed that state sovereignty and legitimacy is based on the government's control of territory, state independence and recognition by other states and the citizens have the responsibility of supporting the system. Conversely, human security approach requires that the state and state sovereignty serve and supporting the people from which it draws its legitimacy to remain preventive and people centered. Because over-emphasis on state security can compromise human welfare needs with implications for human security (Newman, 2010).

Newman notes that the term human security is used to refer to four major issues: under-development, poverty, and deprivation as well as armed conflict, dangers of repressive governments and state failure (Newman, 2010). All the four issues form an integral part of literature between climate change, human rights, and human security as climate change contributes to resource-use conflicts and other gendered impacts. Human security also refers to a range of "non-traditional" security issues such as HIV/AIDS, drugs, terrorism, small arms, inhumane weapons, and human trafficking, thus raising the visibility of neglected problems to influence policy, and theoretical debates concerning issues of threats, referents, responses as well as the gendered aspects to security (UNDP, 1994). Gasper links human security to good governance (i.e., the governance that effectively promotes values of human rights, human security, and human development) (Gasper, 2014). Thus, human security becomes the intersection between justice, human rights, and socio-economic development (Gasper, 2007).

Food security in East Africa

While human security is commonly considered under seven dimensions/categories namely environmental security, food security, economic security, health security, political security, personal security, and community security (Ruppel & Ruppel-Schlichting, 2013; UNDP, 1994), food security emerges as a particularly important component of human security especially in the East Africa context (Asaka, 2018; Abaho et al., 2019; Kumssa, n.d.; Nzibo, 2015). Nzibo notes that even the refugee situation in East Africa has a food (in)security dimension as it impacts negatively on food security (Nzibo, 2015). In this case, food security can be seen as an economic problem, a political tool or an environmental threat being made worse by climate change. Exploring the nexus between human

security and biodiversity conservation in Kenya's northern rangelands, Asaka (2018) identifies food security as a particularly important aspects of human security in that context. Finally, Kumssa, studying the situation of human security in northern Kenya, notes that Kenya's Garissa, Marsabit, and Laikipia counties, falling within the arid and semi-arid lands (ASALs) and mainly occupied by pastoralists, experience challenges of food insecurity among other concerns (Kumssa, n.d.). Thus, considering centrality of food security in the grand scheme of things, it can be argued that by focusing on food security, most other components of human security would be attained.

The number of undernourished people in Sub-Saharan Africa has increased due to climate change from 200 million in 2015 to 224 million in 2016, accounting for 25% of the 815 million people undernourished in the world in 2016 (Food and Agriculture Organization of the United Nations [FAO], 2017a). Climate change has economic impacts on crops and livestock farming systems and associated food systems, particularly in farm revenues thus affecting food security (Ruppel & Wyk, 2013). Periods of droughts and floods have negative loads on availability and access to food. Impacts of sea-level rise, droughts, heat waves, floods and rainfall variation pushed about 600 million people into the state of malnutrition in 2018 and increased the number of people facing water scarcity by 1.8 billion (Ruppel & Wyk, 2013). These climate change extremes have repercussions on food security in Africa.

Sub-Saharan Africa accounts for nearly 90% of children with stunted growth in the world – attributable to poverty, food insecurity and gender inequality (Motala, 2010). The adverse climatic conditions in Sub-Saharan Africa are blamed on El Nino phenomenon, which affects agricultural production for both crops and livestock. Other factors affecting food security in the continent include lower commodity prices, increasing challenge of global economic conditions, outbreak of conflicts as well as high concentration of disasters- droughts and floods, with adverse effects on food resources (FAO, 2017a). According to FAO, over one-third of the world conflicts took place in Sub-Saharan Africa and the region harbors nearly 70% of all conflict affected countries in protracted crises (FAO, 2017b). The conflicts in the region have affected mostly rural areas, with severe effects on agriculture and food production, thus disrupting food systems. Investing on food security and agriculture is therefore a prerequisite to achieving lasting human security, equity, and justice.

The right to food becomes a reality when "every man, woman, and child, alone or in community with others, has physical and economic access at all times to adequate food or the means for its procurement" (FAO, 2009). Food security is assured by the four components: food availability, accessibility, utilization, and stability, (Oluoko-Odingo, 2006, 2011). Inadequate food security can be due to chronic food insecurity i.e., long-term, or persistent period in which people are unable to meet their minimum food requirements over a sustained period due to extended periods of poverty, lack of assets and inadequate access to food productive or financial resources. Transitory food insecurity is

a short-term or temporary food insecurity arising from a sudden drop in the ability to produce or access enough food to maintain good nutritional status. It results from short-term shocks and fluctuations in food availability and food access, including annual variation in domestic food production, food prices and household incomes (FAO, 2009), which could result from the impacts of climate change on food resources. These two types of food insecurity are both common in East Africa and are a threat to human security.

Linking climate change to food security: A conceptual framework

According to Brown et al. (2007), climate change creates an alternative path to scarcity and collapse. Climate extremes affect production systems thus exacerbating food, water, and energy scarcities. Climate change also contributes to population movements and other natural disasters, including diseases which can create conflict and stretch out resources. Through another lens, climate change and other environmental factors can be considered as part and parcel of global ecosystems, comprising of human (the socio-economic components – energy, industry, transport and building sector) and ecological (physical and biological) environments. Human security then becomes important component of ecosystem security (O'Brien et al., 2011). It is influenced by impacts of climate change on agriculture and health, which is interconnected with the seven components of human security including food security. Climate change also impacts the biological component of the environment (i.e., plants, animals, and other microorganisms through loss of species) threatening biological security. The much more common and widely discussed impact of climate change is on the physical environment (i.e., the problem of land use and greenhouse gas (GHGs) emissions, which has impacted on global rainfall and temperatures) compromising on physical security. These three aspects of security (i.e., the physical, biological, and human/social security) are interrelated, and all have effects on food security (directly through reduced land productivity due to loss of soil fertility, loss of cropland due to desertification or competition of financial resources) or indirectly (through effects on water resources and other farm inputs). See Figure 11.1 which shows the nexus between food security, biophysical environment, and implications for human security.

Literature gaps in climate change and human security studies

The concept and understanding of human security are an ongoing process and is of interest to the world (United Nations General Assembly [UNGA], 2020). Brown et al. (2007) also note that neat and objective indicators pointing to the formation of insecurity and conflict are often missing. According to Newman (2010), human security scholars wish to remain relevant to policy cycles and therefore they avoid overtly critical security studies. Furthermore, scholars

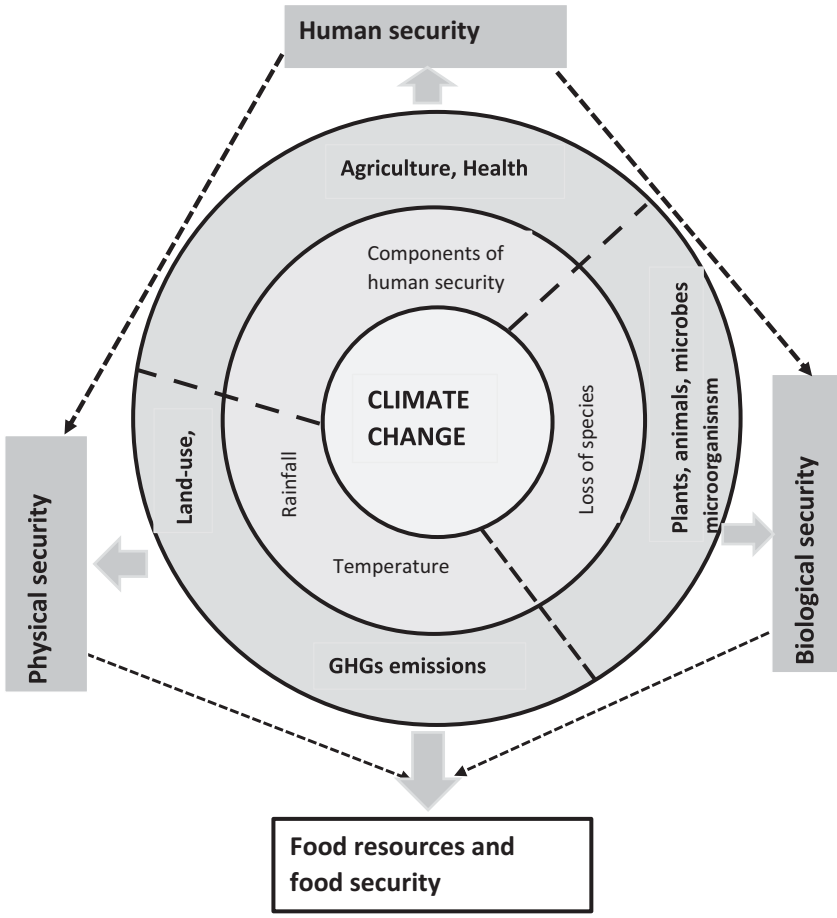

Figure 11.1 Food security, biophysical environment, and human security.
Source: Author.

pursuing human security studies have backgrounds from those professions of development which are less critical and therefore concentrate on challenges.

These gaps could be contributing to injustices and inequities and, therefore, human insecurity. Furthermore, there is uncertainty on how short-term changes in ecosystems influence human security, for instance the challenge of corona virus 2019 which has become a major global threat. Besides, most studies concentrate at the certainty level and ignore the heterogeneity in local climatic and socio-economic conditions (Rowhani et al., 2011). Rowhani and colleagues established that ecosystem variability which has association with malnutrition and armed conflict was more likely in regions with more vegetation (Ibid). In East Africa, increased level of malnutrition was related to armed conflicts.

Discussions

The role of adaptation in addressing climate change threats to human security

In 2014, African Union (AU) member states meeting in Malabo, resolved to, among other things, prioritize agriculture-led growth as main strategy to achieve targets on food and nutrition security and shared prosperity, allocate at least 10% of public expenditure to agriculture as part of enhancing instant finance in agriculture, end hunger in Africa by 2025 and reducing poverty by the year 2025, boosting inter-Africa trade and improved resilience of livelihoods and production systems (African Union Development Agency [AUDA], 2014). Africa is known to have diverse adaptive strategies, running over the centuries. Some of the strategies include livelihood diversification, restructuring governance systems, changes in agricultural practices, exploring opportunities for off-farm employment and migration (Brown et al., 2007). Though appearing numerous, these strategies are considered inadequate to tackle anthropogenic climate change. The constraints arise from processes and forces entirely not related to environmental conditions: chronic under-development and poverty, regional economies centered on economic rent of natural resources, inefficient and wanting leadership glued to the history of colonization, rapid urban growth, livelihoods dependent on the natural environment and a large population of rural farmers. In East Africa, cattle raiding as a conflict and opportunistic attack by armed bandits compromise the ability of pastoralists to undertake seasonal movements to other grazing areas in the highlands as a coping strategy. Capacity building can prevent resource-related conflicts through: Strengthening measures that protect and diversify livelihoods, ensuring access to and availability of key natural resources, and support conflict resolution institutions, and early warning systems.

Even though food insecurity is both a cause and a consequence of poverty, food insecurity and poverty still share similar causes. Poor people are all vulnerable to climate change and are all food insecure (Oluoko-Odingo, 2006, 2011). O'Brien and colleagues recommend that climate change and poverty be tied together in global political responsibility to protect human security (O'Brien et al., 2011). In this context, urban areas are seen as hotspots for insecurity from the poor due to inadequate resources and services impacting on food security.

Understanding the relationship between climate change and human security makes it possible for policy responses to potentially prevent the adverse impacts of climate change on human security (Moran et al., 2014). Government policies on food distribution, migration, land and water use, natural resource management, adaptation, and distribution, among others impact on how people experience climate change and thus the grievances that conflict actors may leverage to drive conflict. FAO (2017a, 2017b) note that the number of undernourished people in Sub-Saharan Africa increased due to climate change and conflict and emphasized the need to build resilience among the affected communities, while also finding peaceful solutions that strengthen food security.

The role of environment

While human development may focus on the entire range of attainable values, human security concentrate on the basics of being human, with emphasis on human species and inter-connected threats (Gasper, 2014). The focus on human security may go beyond humans to embrace and appreciate the human interconnectedness with nature that provides resources to address "freedom from want" and "freedom from fear". Climate change impacts the other species/resources that ensure human security and therefore brings on board the direct link between environmental resources and human security (Gasper, 2014). Brown and colleagues point out the failing of environmental security as indicated in human security to represent the whole concept of the environment as it leaves out other environmental factors that impact on human security (Brown et al., 2007; Lorenzoni, 2013). This failure of human security to embrace all aspects of the environment (biophysical and socio-economic-cultural and political issues) when dealing with human security requires attention.

Adaptation for food security

The literature has shown that it is the responsibility of each government to ensure that the right to food is respected by acting against any issue that reduces people's enjoyment of their right to food, ensuring that the food is not contaminated, and individuals can access food through production or earning adequate income to buy food as may be necessary. The process begins by securing food production resources through addressing climate change and other environmental degradation challenges causing poverty and food insecurity among populations, leading to human insecurity. Thus, the root causes of poverty and food insecurity must be tackled for more lasting human security.

Food insecurity and poverty can be viewed as denial of rights relating to certain fundamental freedoms- to be free from hunger, disease, and ignorance (Gaiha, 2003). The right to food is like the right to life and one facet of the right to life is the right to livelihood, important as a means of living. This calls for the governments to provide necessities of life- food, clothing, shelter, and medical care, among others as a package toward food. The United Nations in post 2015 Agenda promised to end poverty and hunger in all its forms and dimensions and to ensure that all human beings can fulfill their potential in dignity and equality and in a healthy environment (United Nations, 2015). The document is a commitment to end poverty and hunger everywhere, build peaceful, just, and inclusive societies, to protect human rights and promote gender equality. The new agenda was the commitment to the 17 sustainable development goals (SDGs) with the 169 targets. The SDG 2 is on food security: End hunger, achieve food security and improve nutrition and promote sustainable agriculture. It is therefore hoped that by 2030, there shall be global security as a response to the post-2015 Sustainable Development Agenda.

The way forward: Need for paradigm change

Among the different components of human security, food security stands out and seems to be more worrisome to many nations in East Africa and, therefore, its importance in finding lasting solutions to threats to human security. Thus, it can be said that, without food security, it is impossible to attain human security. Yet agriculture in Africa, particularly, Sub-Saharan Africa, with a majority of undernourished populations, still remains less prioritized in comparison to other ministries like defence. With or without climate change, the role of agriculture in supporting livelihoods is unparalleled among poor societies and, therefore, until and unless the African citizens all graduate to middle-income category, able to survive on purchased food, food security will remain in the radar of sustainable solutions toward human security. But East Africa specifically, and much of the African continent generally, continues to grapple with poor governance (e.g., inefficient and wanting leadership, malpractice in finance management, opaque governance systems, and legal structures deterring funding due to loss of trust) with implications for human security today and tomorrow. Climate change disaster is, therefore, inevitable in such circumstances causing not only human insecurity but also total collapse of the adaptation and other response mechanisms.

The effect of climate change on human security is like a prism whose refraction dictates the viewpoint of academia. From the agricultural point of view, climate change impacts agriculture and food security indirectly through water stress, thereby causing forced migration or resource-use conflicts among communities (intra- and inter-group), providing grievances for conflict actors to leverage on, thus threatening human security. The water security perspective shows climate change, the result of long-term reduced, unreliable, unpredictable (frequency and amounts) rainfall and increasing temperature that either leads to droughts or flooding, affecting water-sensitive sectors – agriculture and fisheries, energy, health, human settlement, among others, due to water scarcity. The resulting water insecurity causes communities to fight over a few remaining water points, with effects on agriculture and fisheries contributing to food insecurity, leading to migration, influences on energy cause developmental challenges on domestic use, industrial and other uses, providing opportunities for crime. The third perspective relates to those who view climate change as impacting land use/human settlements, particularly urban areas, among vulnerable groups. The groups are seen as voiceless and so cannot generate adequate pressure to cause reasonable conflict.

Whatever way one looks at the situation, there is agreement that climate change has security implications at the individual (malnutrition), household (food security and water security), national and global levels. Second, climate change contributes to human rights violations – food insecurity, lack of peace, and other deprivations – thereby threatening human security. Third, the frequency and intensity of human rights violations may provide grievances that actors can leverage on to trigger threats to human security. Fourth, in the event

of climate change, passively, the victims may decide to migrate (which may also create insecurity in destination areas) but alternatively, they may decide to engage in conflict. Fifth, the people with resources may choose to migrate or provide their own personal security, with implications on human security, and sixth, conflict of securities may degenerate into higher-order conflicts at community and national levels and provide leverage for armed conflict to occur (ACCES, n.d).

The foregoing begs the question, what is the main concern with human security? Looking at the two pillars, i.e., freedom from fear and freedom from want, it is obvious that fear comes due to lack of justice, while want emanates from deprivation, thus providing the intersection between climate change and human security (see Figure 11.2), "justice and equity", showing a direct relationship between climate change and human security/conflict (denial of justice and equity) (O'Brien et al., 2011). Thus, the more sustainable pursuit of human security lies not in firearms and conflict machinery acquisition, but in prudently channeling revenues to ensuring justice and fighting deprivation for a more peaceful, just, equitable and sustainable world.

In Figure 11.2, to break the cycle, one must deal with the environment in attempt to address climate change, leading to reduced climate change-related conflict or insecurity. Adaptation strategies must focus on all three aspects of the environment- physical, biological, and human (socio-economic) or simply ecosystem security for lasting human security. The physical security will address issues of carbon dioxide emissions and curtailing temperature rise; the biological security would ensure the sustainability of biological resources, while

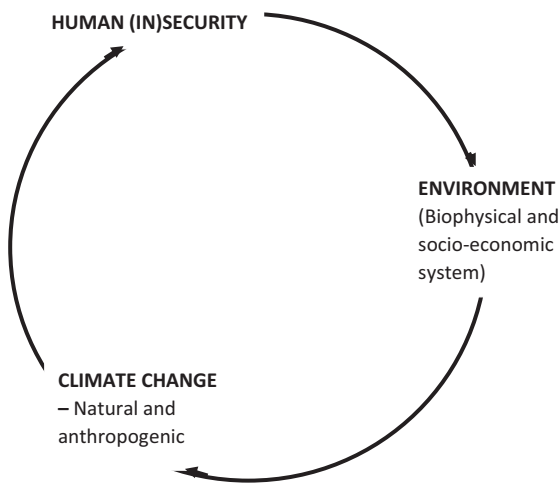

Figure 11.2 The direct relation between climate change and human security.
Source: Author.

the human security or the citizen's security (socio-economic, cultural, and political security) would dwell on fighting deprivation through justice and equity for all. It is the people's security that remains a challenge to many African nations (Lorenzoni, 2013). The citizen's security remains impossible without food security and the conservation of food production resources.

Lastly, according to Gasper (2014), the link between human security and governance negates the passive position taken by the global bodies on non-interference among member states regarding human security issues. As a result, just as we have the United Nations charter, it is equally important to have human security charter for member states to ensure justice and equity not only for sustainable food security but the entire spectrum of all components of human security.

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12 Housing and human security in Kampala, Uganda

Assumpta Nnaggenda Musana and Doreen Kyosimire

Introduction

The urban population in Africa is expected to increase by 50% by the end of this decade (United Nations Human Settlement Programme [UN-Habitat], 2014). This implies that there is great urban planning potential and need. Although Africa's population is still less than the 50% urban threshold, the continent houses over 25 of the world's 100 fastest-growing cities (UN-Habitat, 2014). In the predictable future, East Africa will face urban population growth rates remarkably higher than the average on the African continent (UN-Habitat, 2008). The challenges of rapid urbanization, population growth rate, and development in East Africa are contributing interdependencies to various foreknown human securities with physical, environmental, social, economic, and political implications. East African cities have faced city fragility, which includes rapid population growth without related economic growth. A key manifestation of rapid urbanization and underdevelopment is the recurrence of informal settlements and associated informal sector activities. Adequate housing, job opportunities, and other goods and services can be generated by well-managed cities because they provide a conducive economic environment.

Housing as human security

Traditionally, security was connected to relationships of mainly a military character between states/nation-states. However, a militarily secure state/nation-state does not automatically translate to a secure citizenry (Hove et al., 2013). Defending citizens from foreign attacks may be an essential condition of their human security, but it is not sufficient. Today, human security has emerged as an alternative approach for responding to new and old security challenges including soft and hard threats. The concept was introduced in the United Nations Development Program (UNDP) human development report of 1994 as a people-centered framework for thinking about and acting on security concerns. Increasing human security includes investing in human development, and not in arms (UNDP, 1994). Human security is essential in response to the interrelated and complex old and new security challenges, which include

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climate change, poverty, pandemics, and crime among others. These tend to be tackled at the national level through external military aggression means (Center for Human Security [CHS], 2003). Human security threats cannot be solely tackled conventionally, they require a new understanding, which acknowledges the associations and interrelationships between development, security, and human rights. Security can be interpreted not just as security of territory but of people. Security not through arms, but development (Haq, 1995, p. 115). Hindrances to development generate human insecurities, hence improvements in human development will improve human security. Simultaneously, human development is unachievable when the slightest conditions for human rights and human security are non-existent.

Access to adequate housing allows people to appreciate "several human rights, including the rights to work, health, social security, vote, privacy or education" (Office of the United Nations High Commissioner for Human Rights [OHCHR], 2009, p. 9). The impacts of the continued rapid growth in East Africa include acute housing shortages, uncontrolled peri-urban housing sprawl, flooding, traffic congestion, and pollution. Informal settlements rapidly growing in East African cities undeniably display elevated levels of poverty and inequality. For urban poverty and household vulnerability to be reduced, effective urban planning should be emphasized. A human rights-based approach was adopted by the United Nations (UN) since the 1990s with aim of promoting all human rights through its various development projects. The objective was to realize the intrinsic dignity of all human beings, which is similarly intended by human security. The thesis of this study is that cities do contribute to human security. The right to adequate housing is explored as a means of human security.

This study employs the vulnerability framework adapted for the Ugandan context. Kampala, Uganda's commercial and administrative capital city is used as a case study to identify housing as a key driver of vulnerability in informal communities. The study determines that the main drivers of vulnerability in Kampala's informal settlements are housing and flooding. Kampala is located on about 24 low hills bounded by wetland valleys, which are characterized by a hallmark of sprawling unplanned settlements (UN-Habitat, 2007). Kampala continues to experience rural to urban migration due to rural poverty and industrialization, natural growth, and in-migration, causing a population surge in her urban centers. With an annual growth rate of 5.6%, Kampala is one of the fastest-growing cities in Africa. The city is experiencing urban sprawl due to inefficient land use (Vermeiren, et al., 2012). Many people arrive in urban centers with nowhere to live (Mukwaya et al., 2011) and have ended up constructing substandard houses in the suburbs of the city, mainly in the wetland valleys, which increases the vulnerability of poor communities to natural hazards like flooding.

Housing vulnerability in Kampala

Poorly managed sprawling houses (see Figure 12.1) encroach on the wetlands resulting in the flooding of housing areas, thereby jeopardizing human security.

Figure 12.1 Informal settlements in Kampala constructed in wetland valleys.
Source: Author(s).

A key cause of urban sprawl in Kampala has been the rising need for housing, yet the government of Uganda has no political will to develop housing for most of the population. This has brought about the construction of detached low-density one-storey houses leading to the loss of new marginal land. Sprawling low-density housing and house types consume valuable land, increases infrastructure and services costs, and invariably leads to poor accessibility to areas of employment due to the increased travel time, bigger travel expenses, and wasted time, thus disrupting people's lives in various ways.

Kampala city has a population of close to 1.75 million people, 60% of these reside in informal settlements. Informal housing construction and other informal activities have led to the extensive encroachment on Kampala city's low-lying wetlands causing intense flooding in the city. Housing development in the wetlands degrades water sources since natural water filtrations systems, which the wetlands would normally provide, get obstructed. These wetlands drain and purify wastewater from the city before it discharges into Lake Victoria, which is Africa's largest freshwater lake. Lake Victoria is Kampala city's main source of water as well as a major biodiversity hot spot (Isunju et al., 2015).

Kampala has experienced an increase in waterlogging and flooding gradually as the construction of informal housing advances into the wetlands. Research has predicted that further encroachment onto the wetlands

will increase imperviousness and surface runoff causing more flooding. Households living in the wetlands face various dangers and numerous vulnerability circumstances like exposure to floods, waterlogging, dampness, disease vectors, communicable diseases, vermin, poor human waste disposal, pollution, collapsing of houses thus possible loss of life (Molina, 2014). Flooding takes a toll, especially on the poor households' wellbeing and housing needs, and so do the households equally pose a pollution threat to the wetlands, and the environment generally.

Houses built hurriedly in the informal settlements are overly spaced, appear substandard, and largely encroach on the wetlands. Development plans for Kampala since colonial times were influenced by a city that was less populated and do not suit the accommodation needs in the city today since they are not up to date. The occurrence of urban sprawl the way it has was unforeseen. This study focuses on observations of how low-income households practice space in the informal settlements of Kampala. The aim is to develop house types that prevent urban sprawl but are adequate for low-income households. Such house types should combine attributes like narrow plots, a possibility for incremental housing development, and extensive use of outdoor space (Nnaggenda-Musana, 2004), which are common, features of the houses in the informal settlements. Land saving strategies like building at higher densities have gained awareness globally. The housing and housing types that contribute to the sprawling nature of Kampala city are the low-density detached one-storey house types found in the informal housing areas or the informal settlements.

This study focuses on two informal settlements in Kampala city namely Mbuya (*Giza-giza*[1]) and Kitintale (*Mubikere*[2]), as case studies to examine low-density housing as significant drivers of vulnerability in the informal settlements. Situated roughly 5 km from Kampala's central business district, Mbuya and Kitintale and other informal settlements are increasingly densifying due to urbanization and population growth. The informal settlements were the choice of study because they are mushrooming and are marked by low-density housing spreading out to the wetlands where the water table is high. The State of the Environment Report for Uganda 2001/2002 states that the increase in informal settlements coupled with their water, sanitation, and solid waste management are the main issues affecting urban areas in Uganda (National Environment Management Authority [NEMA], 2000, 2002). Lying Northeast of Kampala city, the two informal settlements (i.e., Mbuya and Kitintale), have developed alongside each other even though they are each located on different types of land tenure systems. The Mbuya informal settlement is one of a kind where informal housing has mushroomed on public/government land, while Kitintale informal settlement has developed on privately owned land (locally referred to as *Mailo*). The land in Mbuya was vacant land reserved for future developments. While Kitintale developed as people continuously settled on large vacant privately owned land, which was difficult to supervise or develop by the owners. In Kampala, there is a common belief that vacant *Mailo* land contributes to the development of informal settlements. The study, however,

elucidated that the pattern of house-type development did not depend on the land tenure system. Plot sizes in both informal settlements Mbuya (public land) and Kitintale (private land) are difficult to determine due to the lack of formal plot boundaries.

Urban sprawl

Housing is a cross-cutting component of the Sustainable Development Goals (SDGs). Target 11 of the SDGs clearly expresses the need for all people to have access to adequate housing and basic services. The global campaign emphasizes the provision of adequate housing for low-income households and is a crucial aspect of the realization of SDGs. House types that curb urban sprawl but are adequate for low-income households and protect them from vulnerability need to be developed. These new housing solutions should be able to prevent urban sprawl and should have appropriate spatial qualities for low-income households. The house types should be able to accommodate the rising population to prevent the effects of floods, overcrowding, infrastructural deficits, and unsanitary conditions, which arise from land and house owners' aspirations (Kombe & Kreibich, 2006). "The new housing solutions should be able to decrease costs of infrastructure, services and transport, and discourage encroachment on agricultural land, assuming that there are benefits derived from concentrating people and activities" (Nnaggenda-Musana, 2008, p. 12). Can compact housing be the solution to densified informal settlements? Searching for new low-income house types requires the identification of relevant variables for use in their analysis.

The study draws theoretical insights from research related to the characterization of house-type elements that can curb sprawl and thus protect households from flooding vulnerability. Urban sprawl is an occurrence brought about when development on land disperses in such a way that more land than necessary is taken up by new development. It relates to urbanization and the way the urban footprint affects urban areas. There is an urgent need to develop house types that can accommodate higher densities while still providing appropriate spaces for low-income households, perhaps with spaces to allow for income generation or sustenance (e.g., small-scale urban agriculture) activities since these practices are common in Kampala's informal settlements.

Urban sprawl definitions

Generally, there appears to be no single, clear, and succinct definition of sprawl. The descriptions of sprawl vary from suggestive characterizations of the indiscriminate destruction of wetlands, cities, farms, and forests to simple portrayals of a transitional landscape. Gillham states that Ewing's characterizations of sprawl are more widely accepted by many professionals (Gillham, 2002). Ewing's definition of sprawl is basically a list of descriptors that have been used by groups working to curb sprawl as well as those defending the status quo. Gillham states:

> It will be what a logician would call a connotative definition of sprawl – that is, an analytical definition by genus and difference, or by class and subclass. In this kind of definition, sprawl is a type (or subclass) or urbanization (the broader class of urban development as a whole). As a subclass, sprawl has a set of distinct attributes that differentiates it from all other types of urbanizations.
> (Gillham, 2002, p. 8)

Using the connotative method, Ewing's different descriptions and principal indicators of sprawl and set of characteristics and indicators are translatable into a broad definition "Sprawl (whether characterized as urban or suburban) is a form of urbanization distinguished by leapfrog patterns of development, commercial strips, low-density, separated land uses, automobile dominance, and a minimum of public open space" (Gillham, 2002, p. 8). Quoting Ewing, Gillham identifies four types of development among the most commonly mentioned features of sprawl: "Leapfrog or scattered development, commercial strip development, low-density, and large expanses of single-use development" (Gillham, 2002, p. 4). Several scholars dating back to 1957 have cited one or more of these characteristics as descriptors of sprawl in North America. Unsatisfied with these definitions or descriptions of sprawl Ewing names two other indicators, which he feels help to define the term more accurately: "Poor accessibility, and lack of functional (that is, public) open space" (Gillham, 2002, p. 4). Apart from point three (i.e., low-density), most of these descriptors are relevant mainly to North America. To understand the kind of sprawl occurring in East Africa, we now turn to a discussion on the meaning and applicability of each of Ewing's descriptions in the context of Kampala, Uganda.

Leapfrog or scattered development

Leapfrog development occurs when subdivisions, shopping centers, and office parks leapfrog over dominant areas of farmland or forest (Gillham, 2002).

> The result is a haphazard patchwork, widely spread apart and seeming to consume far more land than contiguous developments. Unless preserved or unbuildable, the remaining open tracts are usually filled in with new development as time progresses. Familiar to most people, this pattern characterises many rapidly developing suburban and exurban fringe areas.
> (Gillham, 2002, pp. 4–5)

In Kampala, neither is leapfrogging development observed nor are rapidly growing suburban and exurban fringe areas.

Commercial strip development

Commercial strip development is characterized by "huge arterial roads lined with shopping centers, gas stations, fast-food restaurants, drive-thru banks,

offices complexes, parking lots, and many large signs" (Gillham, 2002, p. 5). This situation is irrelevant to Kampala since commercial strip development is not a threat.

Low-density

Low-density is a situation where the suburban houses are usually one-storey and are widely spaced, with intervening parking lots and roadways (Gillham, 2002, p. 5). It can be understood as midway between a crowded urban core and an open countryside, though in varying degrees. Low-density urban sprawl is relevant to Kampala since detached one-storey houses are the most frequent constructions.

Single-use development

Single-use development is the low-density pattern of sprawl that is often characterized by the deliberate segregation of land uses with housing, predominantly one-family homes on individual plots (Gillham, 2002, p. 7). Since informal settlements dominate the landscape, this is not a typical feature of urban development in Kampala even though it was the kind of development applied during the colonial times and is stipulated by the building regulations.

Poor accessibility (or automobile dominance)

Poor accessibility or automobile dominance is the low-density development, combined with segregated land uses affecting the efficiency of household travel patterns. Houses are distant "from out-of-home activities, or out-of-home activities may be far from one another" (Gillham, 2002, p. 7). This type of development is relevant to Kampala since long distances to job locations is a vulnerability caused by urban sprawl in Kampala's informal settlements. Low-income households have had to create activities that generate incomes or home-based enterprises (HBE) within the informal settlements for sustenance and subsistence. Tipple notes that

> As with rental rooms, there is believed to be a symbiotic relationship between housing and HBEs. Owners may be enabled to consolidate their houses through income generating activities. Many low-income households would not have their houses without the HBE. Likewise, many enterprises would not exist without the use of the houses.
>
> (Tipple, 2000, p. 52)

Lack of public open space

Lack of public open space refers to the type of sprawl characterized by an unbroken fabric of privately owned land divided only by public roads

(Gillham, 2002, p. 7). This type of development is irrelevant to Kampala since there are no extremely large pieces of privately owned land subdivided by public roads.

Immense rural to urban migration is one of the main reasons for the rapid growth of cities in East Africa and the trends of development that have taken place in them. The immigrants move to the cities at a tempo faster than the capacity to arrange for the provision of even the most basic infrastructure. This form of urban growth is usually characterized by vast built-up areas sprawled in all directions with detached one-storey house types, which produce low residential densities.

Type and typology

Lawrence argues that the scrutiny of recognized house types is very important to guarantee reliable conclusions. He further argues that a type refers "to a kind, class, or category of people or things that have" common characteristics.

> Hence, it is possible to identify particular types of objects, events, settings, and people with respect to specific characteristics. These characteristics underline the general form, plan, or design of each type and enable one or more to be distinguished from others.
>
> (Lawrence, 1994, p. 271)

Lawrence's studies accentuate the multifaceted nature of the definitions of type and typology.

He notes that various disciplines like the natural sciences, philosophy, and linguistics have embraced theories and applications of type and typologies for a long while in our history (Lawrence, 1994, p. 271). Contributions from the different disciplines share the understanding that a type is an analytical tool used during the application of systematic study methods. In architectural discourse, contributions related to type though rarely mentioned deserve ample attention. According to Lawrence "classes or types are denoted by implicit, cognitive structures that define and demarcate conceptual boundaries between categories of people, settings, objects, and events. Consequently, all types (not just architectural ones) are constructed by humans" (Lawrence, 1994, p. 272). Moudon notes that an analyst of a family of real objects considers type as an "abstract object built through analysis", which reproduces the properties they are considered essential in defining the type (Moudon, 1994). She notes four other steps that define the type as follows.

Choice of scale: The choice of scale at which the enquiry is. The level suitable for architectural design is considered at this point, whether the building or the parcel. This category involves another level, which is the group of buildings and related *spaces*, as, for example, a group of blocks or a city block. According to Moudon, the scope of a study can be limited by the choice of scale or level of the typological analysis (Moudon, 1994, p. 305).

Classification of building types: This includes the typological process and the selection criteria it centers on, for example, architectural style, functionality, volume, and the like. In this case, the classification process that ensues based on analyses and comparisons of similarities founds itself on trial and error (Moudon, 1994, p. 305).

Available tools: This comprises of the classification process's tools available for refining. These include rules, variation, and exemplars presented as concepts supporting the comparative and analogous classification process.

Type relationship: This involves the process of relating one type to an alternative type, therefore generating a typology (Moudon, 1994, p. 305). Moudon's argument is relevant to this study since it mainly focuses on the description, classification, and analysis of house types. During the analysis of types, reflection on these procedures occurs in context with the conditions in the study areas. The restrictive factor in the scope of a study can be the choice of level or scale of the typological analysis. These four steps present useful systematic parameters/frameworks for analyzing house types in Kampala.

Rådberg's classificatory studies on urban residential blocks in Sweden conclude that an all-inclusive theory on typology needs formulating (Rådberg, 1996, p. 385). Rådberg notes that in built environment studies, there is a boundless misunderstanding in the fields of quality and sustainability because theories are formulated both at abstract and general levels. He stresses that they are a necessity for empirical observations and facts, and theoretical frameworks for the empirical observations. Rådberg contends that a systematic classification of the built environment should be at the micro-level, which is the urban block, this enables processing of the information collected on existing urban environments. Rådberg argues that the classification of typologies, a typomorphological urban analysis (as opposed to functional typology[3]) be made on buildings that are studied in their context including the surrounding private and public spaces. He further argues that the focus of such analyses should be an urban block (a group of buildings with open space), building lots, or the street pattern. According to Rådberg, Floor Area Ratio (FAR), (e = ratio of the total residential area to an area of land) is the parameter to consider during the analysis of house types (Rådberg, 1996, p. 386). He emphasizes the significance of FAR since the costs of services, infrastructure, and different public utilities depend on the improvement or optimization of layout solutions, and the percentage of land allocated, for example, to public space, semi-private space, residential use, and the standard and level of the required services. At the urban-block level Rådberg states that the semi-private space includes public amenities, school areas, playgrounds, and recreational grounds, while public space embraces pedestrian paths, streets, parking areas, and traffic. In a study, Rådberg carried out on Swedish urban types, he used the parameters of residential density, building height, and percentage of the built-up area, and proposes that in principle the fundamental methodology for typological classification should be the same for different countries (Rådberg, 1996, p. 387). Rådberg's methodology even though employed on planned housing areas in Sweden is applicable for the

classification of housing typologies in Kampala's informal settlements, because three simply identifiable factors are measured: net residential density, number of floors, and percentage land coverage. The methodology can be contextualized and modified.

Housing classification criteria

House types are identifiable from numerous sources of knowledge. Researchers' can get a better understanding of architectural types by studying the built environment about the way people in a given culture recognize and use their environment. Basing himself on a study of urban rental dwelling units in Switzerland, Lawrence (1994) notes that the classification of house types is possible according to one or more of the following: (1) Stylistic conventions concerning the configurations of building façades, for example, modern neo-classical, Gothic, and the like. This is the explicit professional knowledge of architects and builders; (2) Socio-economic variables associated with the expertise and income of the inhabitants, for example, low-income, middle-income, and the like. Generally, people in all occupations are conscious of their status in society; (3) Residential building numbers, sizes, and layout of apartment units on each floor level, for example, one, two, or three rooms, a through floor plan, or only one façade with fenestration. Architects and builders use these criteria to assess and classify urban house types; (4) Buildings' construction techniques and layouts, for example, stone- or brick-walled, timber-framed, and the like, are not used only by professionals during the interpretation of nature of physical boundaries (like door openings, fenestration, walls), but also by laypersons when attributing social values to housing; and (5) Floor plan spatial organization concerning access from the street (public territory) to the house (private realm) for example moving from a communal space, an internal private space, and the like (Lawrence, 1994, pp. 272–276).

In the previous discussion, the works of Lawrence, Rådberg, and Moudon have been analyzed. Lawrence classifies types according to style, socio-economic variables, and physical variables. Rådberg argues for a systematic classification of the built environment on the micro-level, whereby buildings are studied in conjunction with the surrounding environment, like roads and communal or public spaces. Moudon defines steps that can be followed when analyzing types. Her arguments are like Lawrence's although like Rådberg she argues that buildings should be studied in relation to the surrounding spaces and adds that the choice of level of the scale of analysis of types may limit the scope of a study. Defining a concept facilitates its use as an analytical tool to identify the inferred and evident interconnected dimensions of shared knowledge linked to the uses of the built environment and spatial ordering. Such an analytical approach leads to an appropriate comprehension of the manifold dimensions of architectural and urban types in specific settings. Lawrence's criteria are applicable exclusively or in combination with one or several others. His criteria outlined in point 3 are applicable to the situation in Kampala

to identify adequate house types in the informal settlements, but with some modifications.

Strategies for housing densification

Housing in the informal settlements is built mostly out of makeshift materials, it is located in low-lying flood-prone wetland areas, without adequate infrastructure, services, and utilities like drainage channels. Housing construction is haphazard with some houses raised on pedestals to curb indoor flooding. The vulnerability caused by substandard housing and flooding issues can be assuaged by adequate urban planning.

This study sought to investigate ways of developing higher density house types that would prevent encroachment on the wetlands but would be adequate for the low-income households in the informal settlements of Kampala. The core components of the low-income houses were identified and analyzed, and the necessary ones were incorporated into the new proposed housing solutions. The focus was on improving the housing conditions of low-income households in the informal settlements. The study aimed at bringing forth appropriate guidelines that would promote increased residential densities to prevent the sprawling of houses in flood-prone areas, while concurrently creating essential spatial qualities to support household activities. The housing preferences and requirements of low-income households were examined and evaluated to work out alternative house types that can be adequate for the urban poor, and additionally to create elective prototypes inspired by the local informal housing processes observed in the field. The proposed house types should provide appropriate spaces for the low-income households while at the same time increasing densities.

Flooding and lack of basic infrastructure and services in the informal settlements have been major negative traits of self-help low-income housing. This study proposes minimum infrastructural services like access roads and water lines (water stands), which can be improved with time following further upgrading. The design decisions should empower low-income households during preparations for upgrading and accessibility to formal housing. This way, low-income households can be in control of their surroundings thereby upholding their dignity and confidence while empowering them in the process.

The study recommends two-storey ground-related low-rise houses that allow households to easily access open-air spaces, and adaptable rooms grouped around spaces that can be easily modified. The study also considers access to house clusters for circulation of vehicles, for example, access by service automobiles like fire trucks and cesspool trucks for pit latrine emptying. Building professionals undervalue the importance of open-air space to low-income households. The study finds that, in informal settlements, open-air space is utilized more than indoor space.

Households in informal settlements also tend to modify their homes. The study considered space allocation for HBEs and other activity patterns.

According to field observations, HBEs are a significant tool by which low-income household members can generate incomes. HBEs provide a small income for many households on a regular basis, which can make the difference between subsistence and destitution. HBEs are particularly invaluable to women because they stay longer at home than their male counterparts. This study presents general design guidelines on the best ways to design an empowering urban condition for low-income households, based on adaptability, incremental growth, and self-help. However, the study does not suggest that these specific solutions are directly applicable to different urban areas or conditions. Instead, the authors recommend contextualization to ensure compatibility and success.

During the study, the houses in Mbuya and Kitintale were broken down into clusters (see Figures 12.2 and 12.3). FAR calculations made in each of these clusters generated land coverage of 40% and FAR of 0.4 indicating low residential densities.

There was free ample space between most houses, which was a good indicator since this would allow for compaction or densification during upgrading processes. Most house clusters studied in Mbuya and Kitintale formed courtyard-like configurations around such open space. Housing clusters selected in Mbuya (see Figure 12.2) and Kitintale (see Figure 12.3) portray the empty spaces between the houses. The lone structure in the courtyard space (see Figure 12.2) is used communally as a cooking space by some households in the area, while others cook on the verandas. The free ample space between the houses enables carrying out of domestic chores, socializing, and allows for housing transformation through extensions.

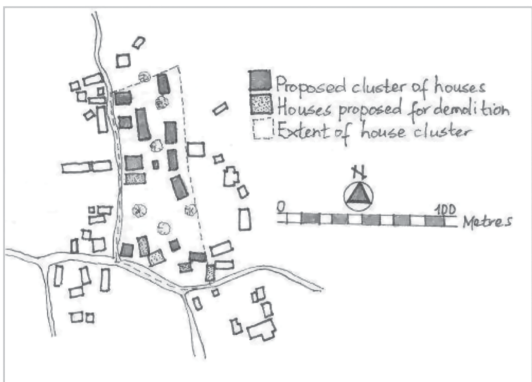

Figure 12.2 An example of a house cluster studied during the analysis of house types in Mbuya.

Source: Author(s).

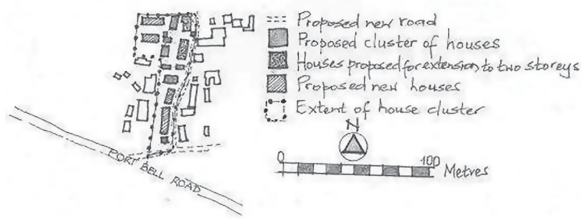

Figure 12.3 An example of a house cluster studied during the analysis of house types in Kitintale.

Source: Author(s).

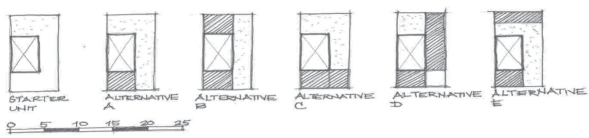

Figure 12.4 An example of how house extensions can take place.

Note: The starter unit is marked X, while the hatched areas represent the space that is available for households to extend into so as to accommodate different activities such as HBEs, etc.

Source: Author(s).

The study proposes that the concepts of the one- and two-room houses that are common house types in the informal settlements can generate starter units for various proposals.

The one-room houses have interior areas ranging from eight to 10 square meters; considering the lowest figure, a starter house of approximately three rooms can be about 24 (6 × 4 m) square meters. The existing one- and two-room houses are the basis for the various proposed house types. During the upgrading processes, extensions of the proposed starter house can proceed incrementally both horizontally (see Figure 12.4) and vertically (see Figure 12.5) as the incomes of the households allow.

Increasing residential densities from the FAR of 0.4–1.0 in the informal settlements is imperative so as to protect the low-income households from vulnerability to floods, and also to prevent encroachment on wetlands. One way of providing higher FAR could be the grouping or attaching of the one- and two-room houses side by side to form single-strip houses (Nnaggenda-Musana, 2004). However, attaching houses implies the elimination of windows on some walls; nevertheless, from observations houses in the informal settlements have few or no window openings. For example, sometimes there are window openings only on the front walls of the one or two-room houses, and none on the back or sidewalls. Ventilation and daylighting are key in any house. To cater

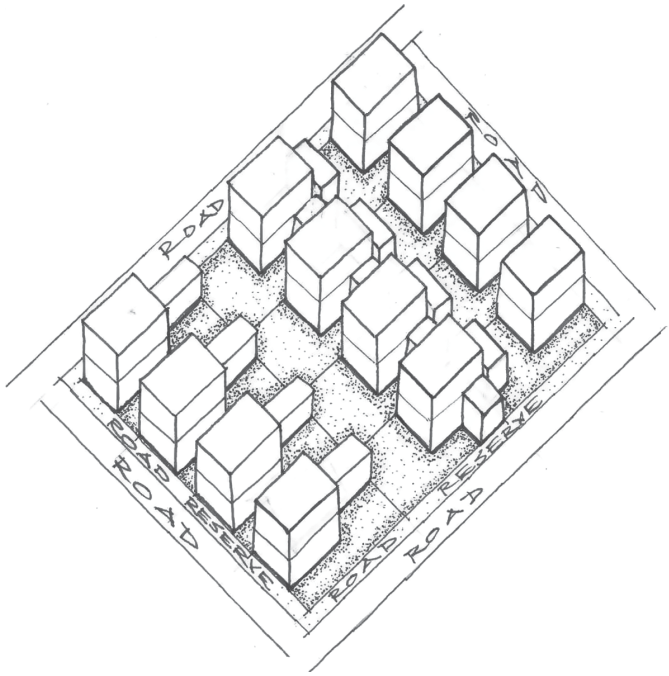

Figure 12.5 Grouped houses allowing for horizontal (backwards or sideways) and vertical extensions, through the addition of rooms to the two-storey starter house.
Source: Author(s).

for this, the windows of the proposed houses can be located on opposite walls. Smaller intimate outdoor spaces emerge when the houses are grouped. These function better because they can be personalized by different households living in a particular area.

Grouping houses (see Figure 12.5) increases residential densities and prevents the encroachment on new land via the phenomenon of urban sprawl. Several households can be accommodated on a piece of land, and if they extend their houses vertically, the outdoor spaces can be used more intensively, than when the houses are one-storey and spaced. The limited indoor spaces can be easily linked to the outdoor spaces to increase on the areas. Extensions to the main house can be used for HBEs and rentals. High-density cluster types that provide for indoor to outdoor linkage need to be developed if urban sprawl is to be controlled. The proposed houses should be low-rise to permit the household members to carry out outdoor activities with ease, for instance child play, gardening, cooking on charcoal stoves and on firewood, and accessing outdoor sanitary facilities. Indoor sanitary facilities that require water to function are unaffordable for low-income households because of the involved requirements for sewage lines and septic tanks.

As was observed in the informal settlements the outdoor facilities can be used communally in some cases since the households still live side by side. If the informal settlements are upgraded with low-rise house types, the different households can acquire more space on the ground, since the residual space can be filled. The houses thus will no longer have to sprawl to the flood-prone wetland areas. When housing clusters emphasize community with the possibility for a mixture of diverse functions, facilities, and space for income-generating activities, they create prospective employment possibilities which would address income poverty.

Conclusions and recommendations

This chapter has addressed key issues that arise in implementing the human security approach to housing development with the background that Kampala, Uganda's administrative and commercial capital city, will continue to grow. The chapter argues that to accommodate the projected growth in a way that reduces risk, proper urban planning is necessary. Urban planning must tackle the main vulnerability drivers in Kampala such as inadequate housing and flooding, particularly in the informal settlements.

Informal settlements are a significant part of any city's fabric. But as they grow the burden on physical resources increases. Urban planning using bottom-up approaches can reduce the pressure by influencing the appropriate location for houses, subsequently eliminating the risks related to the lack of adequate housing. A city's health and sustainability can directly improve from sufficient funding, and effective and efficient planning for adequate housing. The findings of this study highlight the importance of considering specific community needs during urban planning. Most of the studied communities are vulnerable because of the lack of adequate housing. However, the actual drivers of housing vulnerability are community-based. Therefore, community members should be involved in decision-making because well-managed cities provide immense opportunities and possibilities. If the government and other authorities understood and identified the possibility of bottom-up schemes in Ugandan cities the realities on the ground would be recognized by regulatory guidelines. The drivers of vulnerability and how they affect human livelihoods should be considered by planners if cities are to become major assets for development.

The study establishes that Kampala city's informal and formal housing areas are characterized by low-density types of development with detached one-storey, widely spaced, houses on large plots. Unlike in cities of developing countries where the suburbs contributing to sprawl are significantly housing high-income households, in Kampala the suburbs are mixed income. Literature on the phenomenon of urban sprawl in East African cities is limited. Existing research tackling urban sprawl in the region is limited and it concentrates mainly on the structure of cities, overlooking the significant role of housing or house types as human security, and the part they can play in contributing to the

wellbeing of poor households. Therefore, further research in this area is desirable and recommended.

Policy making should not be merely a vertical process, it should be a flexible and networked horizontal partnership emerging from research and a coalition of approaches conforming to a multifaceted paradigm. Moreover, if East African urban planners are provided with community-specific needs, they can contribute to identifying risks, implementing policy, and designing effective urban environments. For example, the involvement of communities in planning can assist urban planners in deciding what their housing needs are. At present, architects and planners in East Africa have not addressed the issue of rapid informal urbanization well.

Notes

1 The name *Giza-giza* signifies darkness or a place of darkness.
2 *Mubikere* refers to where the frogs live, that is in the swamp.
3 Rådberg notes that functional typology considers solely the functional content of buildings and not buildings' immediate surroundings.

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13 Exploring the urbanization-migration nexus in Nairobi City, Kenya

A human security analysis

Elias H. O. Ayiemba

Introduction

The global Corona virus (COVID-19) pandemic contextualizes the urgent need for national and international actors on human security to re-examine the place of urbanization-migration nexus in the context of sustainable development. Target 11.3 of goal 11 of the sustainable development goals (SDGs)

> emphasize inclusive and sustainable urbanization, which enhances capacity for participatory, integrated and sustainable urban planning and management by 2030; and the increasing global dominance of the process of urbanization is the most important channel of social transformation of the 21st century.
>
> (International Organization for Migration (IOM)-Kenya, 2018: 33–34)

The population density in metropolises and cities coupled with the denial of basic human rights and abject poverty, demonstrate threats to human security because of challenges in access and utilization of existing basic needs services which are attributed to poor governance.

Globally, the dire situations of migrant workers illustrate the impact of migration and urbanization nexus on human security. International and national population mobility is the channel through which pandemics and different types of criminal activities are spatially distributed (Ayiemba, 2011). Cities experience a greater burden in the provision of human security services compared to rural areas because of greater disparities in urban landscapes associated with population densities, population inequalities, and vulnerability to environment disasters, among others. The city of Nairobi is, therefore, used as a model to unravel the relationship between urbanization, migration, and human security using the human security model developed by the United Nations in 2016 (United Nations [UN], 2016a). Urbanization of the Nairobi City refers to its annual population growth rate since independence in 1963 as measured by the spatial extension of the city's landscape horizontally and by

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its growth vertically. This is reflected by an increase in the proportion of the total population of Nairobi residents as a ratio of the total population in Kenya according to successive national population censuses including natural population increase of the city residents, in-migrants, immigrants, and populations added by political extensions of the city's boundaries. Lastly, it is measured by the "unique evolution of the political culture of Nairobi residents" (Katumanga, 2010: 353; Maupeu, 2010: 389). Consequently, it is still the most preferred destination by the majority of local and international migrants. However, urbanization as used in the chapter refers to the transformation of the city's landscape through human spatial activities, extension of the landscape, inequalities in access, and use of basic services and culture.

The migration concept used is broad and is based on the IOM definition. The IOM defines a migrant

> as a person or a group of persons found to reside in another administrative boundary at the time of a census regardless of the duration of residence. It is a population movement embracing different composition, causes, refugees, internally displaced persons, economic migrants, and persons moving for other purposes including family reunification.
>
> (IOM-Kenya, 2018: 3)

Nairobi City as the administrative capital of Kenya has a complex migrant population structure and composition largely constituted by rural-urban migrants, refugees, individual entrepreneurs, and foreign labor immigrants working for international agencies and multinational organizations. The population diversity thus complicates human security issues, and the availability of consistent data to show the trends in the proportion of migrants as a ratio to the total population of Nairobi City is lacking.

Problem statement

The concept of human security is complex in definition, analysis, and policy strategy (UN, 2016a; United Nations Development Program (UNDP), 1994; Owen; 2004). Human security threats are dichotomized into two categories by Owen (2004: 375). One category is "the narrow and traditional conceptualization as violent threats with policy-orientation solutions based on military or policing". The other category is a broad framework consisting of many "non-violent threats with no clear policy strategies". Owen further reiterates that the current debate on the subject could benefit more from "contribution to theory, practice and the critique" (Owen, 2004: 374).

The chapter, therefore, focuses on the risks and vulnerability causative factors to human security threats. These factors, if not controlled could eventually surpass what Owen refers to as "the threshold analytical framework of human security" Owen (2004: 382). In a nutshell, beyond this threshold, they become actual threats to human security. The Commission of Human

Security (2002) conceptualizes broadly a threshold of human security threats and suggests that "factors causing death, should incorporate violence in all its manifestations, physical, psychological, emotional, and disruption of daily life" (Owen, 2004: 374). The chapter, therefore, presents a theoretical and conceptual framework on human security threats that prioritizes risks that disrupts normal patterns of daily life in Nairobi City.

Since the study depends on secondary data from different sources, the use of hypotheses is unfeasible, because the quality of such data has not been verified. Conclusively, the discussion is guided by the following assumptions namely: (i) the absence of migration policy contributes largely to rising cases of human security threats in the city, (ii) poor governance is a strong factor causing human security threats in the city. It is these assumptions that the chapter focuses on in the context of urbanization-migration nexus and human security using Nairobi City as a case study.

Study objectives

The discussion is not intended to contribute to the debate on human security definitions and categorization of policy strategies. Its main objectives are three namely, (i) to examine the nature and scope of human insecurity associated with migration to the city, (ii) to develop a conceptual framework for analyzing the relationship between urbanization-migration nexus and human security, and (iii) to discuss the role that governance or lack thereof plays in abating/creating risks or vulnerability that exacerbate human security threats.

Literature review and theoretical framework

Understanding the growth of Nairobi City and its development challenges could shed light on governance issues that predispose migrants to risks and vulnerability to different human security threats. The national population census of 2019 indicates that the city's average annual population growth trend declined from 3.4% during the intercensal period 1962–1969, to 2.2% during the intercensal period 2009–2019. This decline reflected the declining rate of rural-urban migration as youthful adults sought alternative employment opportunities and other livelihood strategies in other rapidly growing towns (Kenya National Bureau of Statistics [KNBS], 2020). The city's current average population growth rate of 2.2% annually means that, in the next 32 years, by 2051, the current population size of Nairobi City will double itself, ceteris paribus, thus raising the current dilemma in youth unemployment to unimaginable levels and causing greater pressure on the provision of basic services that are essential in ensuring human security of the city's residents. Nairobi's total population today is 4,397, 073 representing 9.2% of the total national population of 47,564,333 persons, with a sex ratio of 98 males per 100 females and an average household size of three persons (KNBS, 2020). Analysis of urban landscape

reveals a different picture showing tremendous spatial differences in population density, segregation based on socio-economic and cultural differences and access to basic needs services. The 2019 Kenya Population census reported average population density for Nairobi City as 6,247persons per km^2. The situation is critical when the population densities of the 200 informal settlements are considered (The National Aeronautics and Space Administration [NASA] Earth Observatory, 2020). The two largest urban slums in Nairobi City namely; Kibra has an average population density of 15,311 persons per km^2 and Mathare 68,941 persons per km^2. The increase in the number of slums commenced immediately after independence, when "political influence extended the city's boundary to absorb parts of neighboring Kikuyu reserve and rural populations of Kikuyu, Kawangware, Dagorretti and Mathare, which were annexed to be part of the city" (Medard, 2010: 7).

The spatial disparities in population density reflect the history of segregation, segmentation, and exclusion during colonial administration's planning for the city's development (Rodriguez-Torres, 2010; Medard, 2010). The disparities in spatial development structures continued after independence and largely determined rural-urban migrants' residential spaces, and the concomitant social differentiation and widening inequalities due to absolute poverty among the low social class. Such landscape features portend critical development planning challenges because the city's population has been on several occasions extended due to political influence, thus creating different types of land ownership characteristic of most peri-urban settlements in Nairobi City. Such land tenure systems "often are contested between individuals and private landowners with political patronage" (Medard, 2010: 7)

Features of the City linked to migration processes

Nairobi City's rapid growth since its establishment in 1899 is historically linked with the immigration of colonial administrators, World War II soldiers, foreign migrant workers such as Europeans, Indians, Pakistanis, Arabs, Nubians, and later rural-urban migrants from all regions in Kenya after independence (Rodriguez-Torres, 2010; Medard, 2010). They contend that the colonial government perceived the city as insecure because of the increasing population of African migrants into the city. Consequently, colonial administrators introduced the apartheid system of spatial planning and governance that continued after independence in another form. Subsequently, inequalities and social class differentiation increased as a permanent feature of contemporary Nairobi City. Therefore, the perception of African population as a security threat was associated with their urban livelihood activities, their status and identity (Katumanga, 2010; Medard, 2010).

Today, approximately 62.4% of the total city population live in informal settlements and migrants constitute the majority (IOM-Kenya, 2018: 41: Hope, 2012; Oxfam GB, 2009). The major urban slums hosting migrants are; Kibra, Mathare, and Korogocho. The rural-urban migrants in the city are

"predominantly adult youths in the peak of their reproductive cohorts, thus contributing to the city's' rapid growth" (Hope, 2012: 9), and represent diverse ethnic groups, are unemployed or underemployed. Consequently, as they seek alternative ways of earning livelihoods, they drift into urban crimes that characterize city slums. Available census data for 2009 indicates that between 1989 and 1999 in-migration accounted for 17% of the total population in Nairobi City (Republic of Kenya [ROK], 2004a).

The International Monetary Fund (IMF) notes that, though migration brings opportunities and challenges in development to the Kenyan nation, the greatest impact is in terms of human security (IMF, 2010). Furthermore, IOM-Kenya reiterates that the "New York Declaration for Refugees and Migrants, urged member states of the UN to prioritize migration and refugee matters in the international agenda. This was perceived to enhance global cooperation on matters of migrant's safety and orderly mobility" (IOM-Kenya, 2018: 117). Nairobi City has a sizeable proportion of both national and international migrants. In 2018, approximately 174,349 refugees were in Nairobi City and the majority were residents in four sections of Eastleigh namely, Eastleigh south, Eastleigh north, Airbase, and the informal settlements of Kiambu (IOM-Kenya, 2018: xviii). Nairobi City also hosted 12% of the total refugees in Kenya (Hope, 2012: 11). Moreover, governments undermining international laws, international human rights, and humanitarian laws could push migrants and refugees to psychological trauma and increase their roles in criminal networks (IOM-Kenya, 2018: 120: IOM, 2017)

A theoretical framework interconnecting urbanization-migration nexus and human security

The world-wide desire for a New World Order in the 21st century is becoming elusive due to the increasing population movements that create threats to human well-being. The exponential growth in the numbers of rural-urban migrants and international migrants is triggered by poor governance, regional conflicts, environmental disasters, regional economic disparities and wide spread absolute poverty and inequality, to mention a few. Consequently, thousands of rural-urban migrants and undocumented immigrants voluntarily or involuntarily (coerced), seek alternative livelihood survival strategies in either the urban centers in their home country or emigrate crossing borders to neighboring countries or distant countries. Activists on the plight of migrants are in two groups of actors namely: the pro-migrants and anti-migrants. The supporters of migrants argue that this category under the international human rights laws have certain rights that must be protected by the host government (Society for International Development [SID], 2003). Conclusively, the responsibility of their protection is upon the Government of Kenya (i.e., national government) and the government of the Nairobi City County.

The Government of Kenya (GOK) is a signatory to the International human rights instruments and is expected to implement relevant laws such as the

Universal Declaration of Human Rights; Convention on Status of Refugees; International Convention on Civil and Political Rights and International Convention and Economic, Social and Cultural Rights, among many other regional conventions (SID, 2003; IOM-Kenya, 2018). The host governments are, therefore, obliged to provide human security services to migrants in Nairobi City. Under international human rights treaties including national laws, citizens are covered by basic human rights such as "rights to life, prohibition of torture and cruel inhuman or degrading treatment or punishment, prohibition of slavery, servitude, prohibition of retroactive criminal penalties, right to recognition as a person before the law, freedom of thought, conscience and religion" (SID, 2003: 21–29). In most developing countries where democratic system of governance is underdeveloped, not all these human rights laws are effectively implemented and Kenya is not an exception, especially in Nairobi City with 200 informal settlements where the majority of in-migrants and immigrants reside. The other group constitutes opponents of migrants who perceived them as competitors in local employment, business opportunities, and criminals and subject them to discrimination, denial of human rights, and xenophobia.

The foregoing discussion on a myriad of factors causing violent threats and non-violent threats reinforces the need to conceptualize human security threats from a broader analytical framework which this chapter adopts. This is in tandem with UNDP (1994) definition of human security as "safety from chronic threats such as hunger, disease, and repression, including protection from sudden and hurtful disruption in the patterns of daily life". In the same perspective, the Commission of Human Security (2002) defines human security as "the protection of the vital core of all human lives from critical and pervasive threats", the United Nations (2016b: 4a) summarizes discussion on human security as driven by three pillars namely: "freedom from fear, freedom from want, and freedom to live in dignity." Available literature, however, conceptualizes human security threats by either supporting the narrow traditional concept as violent threats or supporting the broad non-violence causes of security threats, thus supporting the global consensus that there is no unanimity in its definition (Alkaire, 2003; UNDP, 1994; Cilliers, 2004). Owen's summary of debates on conceptualization issues on human security threats, suggests that there is a need for "a threshold analytical framework" that will minimize the differences between the narrow and broad definitions of human security to benefit theory and practice (Owen, 2004: 382–385).

Globalization has transformed the economy of Nairobi City where the growth of slum settlements promotes a booming underworld economy and offers refuge to undocumented migrants in small and medium family enterprises that dominate slums and commonly ignore the labor laws. Moreover, migrant workers also supplement their meager wages by engaging in underworld criminal activities. Additionally, their inability to join or form a trade union to protect their human rights in the host community imply that they are often victims of unjust national policies which deny them their rights. This exposes them

to cultural bias and behavior and prejudices of the host area. Immigrants are often exposed to different forms of discrimination, exclusion, and xenophobic behavior (IOM-Kenya, 2018: SID, 2003).

The discussion is contextualized by applying two theories: Social network, and vulnerability. Social network theory is key in understanding the push and pull factors in rural-urban migration because social networks are equated with social capital (Haug, 2008; Boyd, 1989; Da Vanzo, 1981). The theory explains decision-making in all stages of the migration process as indicated by human capital models. It explains why migrants stay in the city instead of emigrating as determined by several factors such as his/her level of education, work skills, ability to find a job, accommodation, gender, and personal security, among many other non-monetary considerations. As a result, social structures also referred to as social stressors, family networks and other social, economic and political networks are vital in explaining whether a migrant's stay will last or be temporary. Social relationships, therefore, provide essential capital that is locality-specific to the area of residence. This enables the migrant to weigh the benefits and costs of his place of residence and may decide to stay or move on (Brown & Moore, 1970; Wolpert, 1965: Faist, 1997). Social networks, whether national or international, provide channels for information flow and patronage to migrants and therefore assist in reducing the costs and risks in the migration process though this is not always the case in transnational migration networks which may involve illegal or legal migrants. (Faist, 1997; Pries, 2004).

Informal networks in slums of Nairobi City are vital in the establishment of ethnic communities in specific localities. Relatives and friends encourage and channel migrants to their own localities in the urban center through information, material assistance, and other forms of assistance (Choldin, 1973: Ritchney, 1976). This explains why, most informal settlements in Nairobi are dominated by specific ethnic groups and the emergence of gangs or militia groups such as *Taliban*, *Jeshi La Mzee*, and *Mungiki*, which are found in their ethnic enclaves in the city. Although the social network is relevant in explaining survival and risks of migrants, it fails to explain the negative perception and reaction of the host population and the security measures the host government has in place to reduce vulnerability of such people. Choldin and Ritchney argue that vulnerability theory compliments the social network theory in explaining the factors that determine security of migrants in the destination area. Vulnerability theory accounts for resilience and adaptation strategies of migrants and refugees whose livelihood strategies are threatened by locality-specific insecurity matters. Insecurity caused by unemployment, inability to access decent housing, education, and health services, gender violence and other forms of discrimination, marginalization, and exclusion often force migrants to resort to criminal enterprises of the underworld economy. They join criminal groups of city gangs and militia in order to survive (Kenya Police Annual Report, 2018). These situational conditions of their adaptation strategies are not explicitly explained by the social network theory. More importantly, social network theory does not

discuss security infrastructure and services available for citizens and non-citizens in residential places as explained by the human security models.

Conceptual framework linking urbanization migration nexus and human security

The contemporary world is perceived by global citizens as overwhelmed with various threats rooted in poverty, environmental disasters, wars and conflicts, disease pandemics, international and domestic terrorism, and declining economies (UN, 2016b). Human vulnerability is therefore a common phenomenon of the world cities. The crises of metropolis and cities are therefore complex and require multi-sectorial and multi-disciplinary approaches.

Nairobi residents will feel secure if they are guaranteed equal access to services that enhance their well-being and their rights, and dignity assured. Achieving these conditions require the development of human capital that is founded on three key pillars of human security namely, "freedom from fear, freedom from want and freedom to live in dignity" (UN, 2016a: 4). Human security that ensures development of human capital should enhance resilience and adaptation to all types of vulnerabilities which are residence-specific. Moreover, human security paradigm is relevant to the objectives of global Agenda (2030), which stipulates that realization of sustainable development must be people centered.

The global Agenda 2030 embraces development strategies that promote resilient societies in which people feel secure from all types of environmental threats. In brief, the human security approach is a new paradigm in global response to the contemporary security challenges. The United Nations General Assembly in 2012 adopted these guiding principles for the implementation of human security approach namely: "the right of people to live in freedom and dignity; freedom from fear and freedom from want" (UN, 2016a: 4). Nairobi residents who live in slums, are entitled to freedom from fear and freedom from want as experienced mostly by households in abject poverty. These residents should have equal opportunity to enjoy all their rights and develop fully their potential. The situation of migrants without strong family network to depend on is often pathetic.

Human security issues are "impacted by the interrelationships between peace, development, and human rights conditions of the host region" (UN, 2016a: 6). This awareness does not undermine the responsibility of the government of the Nairobi City County and GOK to offer security services to protect all people under its jurisdiction. The human security approach also does not condone extra-judicial killings as common in Nairobi. However, security personnel defend such actions as a strategy to control criminal acts by city gangsters, organized militia, terrorists, and criminal syndicates. These security operations instill fear among Nairobi residents. Conclusively, human security is based on the country's system of governance because insecurity threats are locality-specific and manifest spatiotemporal variations. The support in providing security services rendered by international and local non-governmental

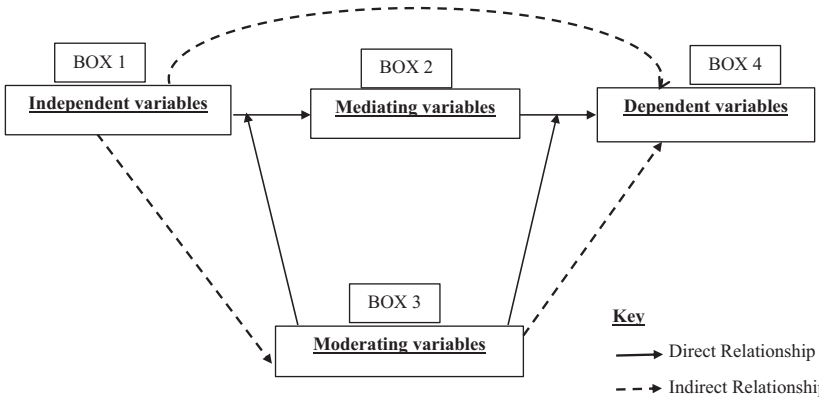

Figure 13.1 Conceptual framework showing links between urbanization-migration nexus and human security.

Source: Author.

organizations (NGOs) and other bi-lateral arrangements should be seen as complimenting state security.

This section, therefore, embraces seven different types of insecurity as proposed by the UN. These include: "economic insecurity, food insecurity, health insecurity, environmental insecurity, personal insecurity, community insecurity, and political insecurity" (UN, 2016a: 7). Figure 13.1 shows the selected independent variables (Box 1 variables), which determine the growth of Nairobi City and are categorized into two groups namely, factors which are space specific and affect horizontal growth of the city and characteristics of city migrants. These independent variables have direct impact on dependent variables which are listed as indicators of the nature and scope of security because of their direct measure of the level of insecurity.

The measurable dependent variables of human security (Box 4) variables fall within the seven broad categories detailed in UN (2016a). Nairobi residents are vulnerable in many aspects though the actual impact of vulnerability is mediated (Box 2 variables) and moderated (Box 3 variables) by various groups of factors. Under mediating variables are governance issues because systems of governance could precipitate insecurity or promote security depending on how national resources are distributed and shared by citizens/non-citizens and how the economic growth is stimulated by effective economic policies. In addition, family-based networks are vital in enhancing security of its members through bonding and sharing resources. In-migrants to the city could be assisted to find accommodation, employment and join family-based self-help groups that are legal to support their migrant kinsmen and women (Haug, 2008; Boyd, 1989).

Moderating variables (Box 3) reduce the direct impact of independent variables on dependent variables. The GOK and Nairobi City County

government have institutions that enforce policies that are expected to provide safety and security within Nairobi City. The laws, city by-laws, and regulations should benefit all residents equally without discrimination or prejudice. The existing policies cover a wide range of human security issues such as citizenship rights, rights of the child, labor laws, disaster management, urban property and land ownership laws, urban housing schemes, trade and commercial regulations and small arms and light weapons control, among others. These policy instruments are complemented with international humanitarian and refugees' conventions, among others.

However, there are certain thorny community security issues such as gender equity, citizens' rights versus immigrants' rights, refugees/asylum seekers rights, which the GOK is not enthusiastic to implement for political expediency (IOM-Kenya, 2018). Consequently, the UN agencies, international and local NGOs have been pushing the government to act on these human security matters. Effective institutions help citizens and immigrants to build resilience and adapt to local vulnerability conditions in order to enhance their well-being (Haug, 2008). Therefore, the moderating effects of variables, assume that the GOK is effectively promoting human security approaches. Where weak institutions exist or are absent, insecurity is likely to thrive. The former President of Kenya, Daniel Arap Moi, used to proclaim in political rallies that, "*siasa mbaya, maisha mbaya*," loosely translated to mean bad politics lead to bad standard of living.

Research gaps

Identified research gaps are that there is no consensus on the threshold of human security events in the context of their severity (Owen, 2004: 375). This contributes to the absence of universal conceptual framework on security issues due to a myriad of factors involved and variations in conceptualization between advocates of the narrow and traditional violent threats and supporters of the broad non-violence models with no acceptable policy solution. This difference emerges from the confusion between views on human development (social well-being) and human security (Owen, 2004). Consequently, this situation has limited prioritization of human security threats for policy action. Finally, policy on human security has not effectively benefited from research data on human security.

Methodology

The justification for identifying Nairobi City as the most appropriate landscape for the study is reinforced by four key factors. Nairobi is the political, cultural, socio-economic, and administrative capital of Kenya. Consequently, it has been the regional magnet for rural-urban migration in the country since its establishment in the 19th century. The city, also for many years, experienced an apartheid system of governance and spatial planning that still characterize its

landscape into distinct upper-class, middle-income, and low-income residential areas. Nairobi City also hosts several UN agencies, international/multinational corporations, international/local NGOs, and private business enterprises. In addition, Nairobi is the international hub for air travel and the gateway to Eastern and Central Africa. All these factors have attracted local and international migrants of all shades of character to the city

Since available data on human security for the city is not disaggregated between migrant and non-migrant populations, the discussion is therefore largely based on assumptions inferred from national data collected through desktop research on the internet, government publications, and other published materials. It is emphasized that focus is on personal and community aspects of human security.

In 2010, Kenya promulgated a new Constitution which created a two-tier system of government comprised of a national government and forty-seven county governments. The new structure of government affects the analysis and quality of data used because of Nairobi City County boundary extensions. Urban planners use the concept of Nairobi Metropolitan Area to promote an integrated planning system for the city and its surrounding environment. Furthermore, the 2010 Constitution renamed the city as the Nairobi City County for administrative purposes. However, the concept of Nairobi City area is the same as the Nairobi City County. Furthermore, the establishment of the Nairobi City County government complicates the management of human security issues because security matters are shared by the two levels of government. Yet international consensus is that human security threats demands action from both state and non-state actors.

Case analysis and discussion

Good governance is the cornerstone for peace, security, and socio-economic development (UN, 2016a; Hope, 2012; Alkaire, 2003). Conclusively, poor governance that characterizes the administration of the city from the colonial era to today is the root cause of insecurity to Nairobi residents. Poor governance by the Nairobi City County government has faced many challenges (Mittulah, 2010: 325; ROK, 2004b). Maladministration causes inequalities in access and utilization of basic needs services that are core to human security (UN, 2016b; Cilliers, 2004, Alkaire, 2003). Poor governance often yields poor policies and ineffective implementation of good policies, laws, by-laws and regulations which may exist. Poor governance therefore permeates all sectors of the Nairobi City County's administration, economic sectors and political system which are the major components of human security (UN, 2016a).

Nairobi's slums are unplanned according to construction standards. They are often built on vulnerable environmental spaces such as riverbanks and land reserved for industrial development and government land earmarked for construction of basic needs facilities such as schools, health facilities and leisure

parks, among others. This is the consequence of political patronage enabled by corruption and policy failure. Medard (2010: 44) uses the concept of "slumlord" to illustrate how well–connected politicians, civil servants, business entrepreneurs and others can easily access and dispose of city land which they have acquired illegally. Sometimes, the slumlords invest on illegally or legally acquired land to construct uncertified residential flats and housing structures which are unsuitable for human habitation.

Consequently, such residential structures become environmental disasters when they collapse. Medard further argues that "ownership of land property which is influenced by political patronage in land allocation reflects policy failure and causes the poor Nairobians to be denied of equal access and ownership of land property" Medard (2010: 44). Moreover, eviction of illegal squatter settlements has become a culture of slumlords who repossess their parcels of land unabated. Unfortunately, the national and the Nairobi City County governments frequently resort to violence and demolition of squatters' property which is today a common feature of Nairobi City. Katumanga also refers to this "behavior as privatization of public violence and appropriation of private violence" (Katumanga, 2010: 343).

The GOK often deploys the Administration Police force to evict squatters on government land, while the Nairobi County government deploys its *Askaris* (guards employed to enforce city by-laws) to perform the job. The frequency of evictions and street riots caused by petty traders hawking their merchandise on the streets has yielded a new "political culture of urban banditry" in the city (Katumanga, 2010: 343; Medrad, 2010; Lonsdale, 2010: 8). The culture of urban banditry is illustrated by the Matatu transport industry. Matatu is a Swahili word for three cents, and originally was the cheapest mode of city transport though this is not the case today. City transport today is dominated by a group of youths called *Mungiki,* a Kikuyu word for people. *Mungiki* often resort to violence on their competitors and passengers, especially women and are famous for their behavior in controlling their transport routes to estates in Nairobi. The Transport Licensing Board and the Matatu Welfare Association who are mandated to regulate and manage the transport system within the city have failed to discipline the Matatu bandit groups. Furthermore, the GOK traffic police officers who manage daily traffic flow have also failed in their duty, because they have been compromised by Matatu operators through regular corrupt hand-outs (Katumanga, 2010).

The "Bandit Economy" (Katumanga, 2010: 363), refers to unstable market prices for goods and services as influenced by the underworld economy. The main actors are the unemployed youths and highway robbers. The unemployed youths operate on Nairobi streets engaging in petty thefts, car thefts, mobile phone thefts, house burglary, and sometimes use guns to rob victims. Their stolen merchandise is sold in the underworld market at prices either below or higher than that of formal market prices, and often, causes price wars with regular market traders (Katumanga, 2010). The group of highway robbers who dominate highway bandit economy are

> bankrolled by well-established business men and industrialists. These prominent entrepreneurs are engaged in dismantling of hijacked vehicles to sell as spare parts in the country or sell them in the neighboring countries of Uganda, Tanzania, Democratic Republic of Congo, Rwanda, Burundi, and their networks extend to Southern African countries.
>
> (Katumanga, 2010: 360)

This lucrative business depends on cross-border networks of criminal syndicates with strong political patronage (Katumanga, 2010: 360). Conclusively, Nairobi City experiences high incidents of personal vehicles hijacked at gun-point. According to a 2001 UN-HABITAT- ITDG-EA report, about 40%, 22%, and 18% of Nairobians had been victims of robberies, theft, and physical assault respectively (UN-Habitat, 2001). With COVID-19 pandemic dealing the country's economy a major blow, these figures have likely gone up considerably in the recent past.

Women migrants dominate the most vulnerable employments such as domestic work, sex work and are subject to the most inhumane treatment at work (IOM-Kenya, 2018: 107). Nairobi City as the most preferred destination by migrants (United Nations High Commission for Refugees [UNHCR] Kenya, 2018), has a lion's share of the noted aspects of human insecurity. The situation is so dire that the draft 2018 Kenya Migration Policy aims to adopt gender-sensitive and rights-based approach in order to effectively manage migration (IOM-Kenya, 2018). Women and children who dominate street vendors hawking food and other items are harassed and physically assaulted by city *Askaris*. Access to food and basic education constitutes basic human rights, however, Nairobi residents of informal settlements are highly vulnerable to inadequate educational services and food insecurity due to poverty. The spirit of the Kenya (2010) Constitution guarantees every citizen the right to food of acceptable quality, the highest standard of health care, accessible and adequate housing, reasonable standard of sanitation and freedom of movement, among others (Oluoko-Odingo, 2018: 70). These basic human needs are the pillars of human security, though they are disproportionately accessed by Nairobi residents particularly refugees and asylum seekers (Ayiemba, 2011: 372).

Analysis of reported national and Nairobi County insecurity cases, 2015–2018

The Kenya Police has been reporting the state of national security since 2014, although this discussion excludes the 2019 data which was not ready. Moreover, the data for 2014 was also omitted because it had many gaps compared to the later publications. The reports cover reported crime with emphasis on personal and community criminal cases. The various reports show a rising trend in crime for both the nation and the Nairobi City County. The upshot for 2017 is attributed to the impact of the national elections in which inter-tribal and

community conflicts were triggered by political competitions by politicians who marshaled their militias to terrorize opponents as a strategy to rig election process. Criminal cases for Nairobi City County during elections were therefore the highest in the country representing 9.5% of the national cases (Crime Situation Report, 2017: 22). Election campaigns, especially presidential, gubernatorial, and parliamentary are dominated by unlawful or unauthorized activities such as civil protests, which sometimes, cause deaths and property destruction. The reports indicated cases on the rise as: assault, thefts, defilement, drug abuse, and malicious damage to property and public disturbances. These crimes were also associated with alcohol and drug abuse particularly cannabis sativa. Different types of criminal cases of concern for Nairobi City County for 2017 and 2018 are under-reported because of corruption and family reprisals as they were based on what was reported by individual witnesses, victims, and police officers. Under-reporting probably affected domestic violence, traffic offences, and many underworld activities.

In 2016, Nairobi City County accounted for the largest number of foreigners and undocumented immigrants arrested. Eastleigh in Nairobi City continue to be the preferred destination because it is a key hub in East African region for smuggling immigrants as well as trafficking women, mostly young girls for sex industry, domestic labor, and child labor (Police Annual Report, 2016: 6). Vehicles transporting Khat from Nairobi to Somalia often return with cargo of trafficked persons who end in Nairobi brothels or are transited to other parts of the world. Majority of the undocumented persons arrested were undocumented immigrants and were arrested in Eastleigh in Nairobi. Such arrests represented the tip of the iceberg because it excluded legal immigrants and those who escaped the police dragnets by entering through porous national borders, which Al-Shaabab, a terrorist group based in Somalia and other transnational migrants frequently use. The category of other nationals includes international crime syndicates from West Africa, Middle East, Asia, Europe, North America, India, and Asia. The majority of African migrants were escaping political instability in their countries to seek better livelihood opportunities, or were using Kenya as a transit route to other countries (Police Annual Report, 2018: 5).

Terrorism is a major security threat targeting security personnel, communication facilities, public transport vehicles and hotels patronized by foreigners. These activities are perpetrated by Al-Shaabab terrorists and their sympathizers who dominate the underworld economy in Nairobi City. Terrorist cells in Nairobi are dominated by unemployed youths who are radicalized by Muslim Clergy. Migrants, therefore, play a key role in terrorism and "Americans, Somalis, Ugandans and Tanzanians were singled out as key actors" (Police Annual Report, 2016: 5). Criminal cases are soaring in the city because of the proliferation of small arms and light weapons illegally owned by individuals, city bandits and militia groups. And most of the firearms recovered or surrendered have been in Nairobi County. Drugs and narcotics substance abuse is also a security concern and migrants are vital peddlers in this illegal trade.

Nairobi City is also an important international transit route as Jomo Kenyatta International Airport is known as a hot spot for trafficking drugs (Police Annual report, 2016: 10).

The 2017 Police Report listed road traffic accidents as a security concern, and since 2015, it caused about three thousand deaths annually and more injuries of temporary and permanent disability that reduce labor force and economic productivity, and 38% of nationwide accidents involved pedestrians. Data for Nairobi City has not been provided in spite of its large population of vehicles and pedestrians. Cybercrime was also listed as a security matter in 2017 with a total of 123 cases country-wide. It targets financial institutions, and money transfer businesses with the majority of cases in Nairobi city due to its large concentration of international organizations. Moreover, domestic violence as a criminal offence was also reported as a security concern in 2018. The victims are mostly boys, girls, and women who endure physical abuse, psychological violence, and emotional abuse, and in rare cases death. The majority of cases are unreported due to stigmatization and family reprisal (Police Annual Report, 2018).

Conclusion: Policy issues and future research recommendations

The discussion on the urbanization, migration, and human security nexus as based on the city of Nairobi gives vital lessons for policymakers and scholars to redress. Data on local and international migration processes and human security matters for Nairobi City is grossly incomplete in terms of variables collected for effective management of security of Nairobi residents. Moreover, the rapid growth of Nairobi City is partly attributed to the high annual rate of in-migration and immigration.

Furthermore, governance and spatial planning for the city started on a wrong footing. The colonial system of apartheid and the perception of rural-urban migrants as prone to criminal behavior continued after independence in a different form of social class differentiation, which exacerbated the growth of informal settlements which are today characterized by inequality, poverty, lack of access to basic needs services and ineffective implementation of international human rights which are the pillars of human security. These features of poor governance have pushed undocumented migrants to join the underworld economy in informal settlements as a strategy for survival. It is noted that Kenya is a signatory to several international human rights conventions but has not implemented some affecting immigrants.

Political elections, political patronage in ownership of public land, evictions of street vendors and boundary extensions, are the major causes of conflicts and city riots. Slumlords perpetuation of the culture of city banditry, use of militia, and gangs have also enhanced city insecurity. All these features reflect poor governance and policy failures as the government is increasingly participating in city violence by inhuman evictions of those settling illegally on public land.

Moreover, poverty is the dominant factor in most of the insecurity phenomena in the city. It is a product of poor governance and bad policy. It enhances gender-based vulnerability, food insecurity, and incomplete education in slums, risky environmental sanitation and poor housing, among others.

It is recommended that city administrators should pressurize the release of migration policy for effective management of migration actors because migration is beneficial in supplying needed skilled labor, creating employment, promoting technology transfers, and opportunities for innovations. In fact, partnership involving UN agencies, international NGOs, Civil Society Organizations (CSOs) and private sector could compliment government's security services in Nairobi and elsewhere in the country. They are effective in advocacy campaigns against the proliferation of small arms and light weapons. They could provide expertise for early warnings systems against environmental disasters and support mitigation measures in local conflicts. Such interventions require clear policy support by both the national and county governments. Moreover, policy should be broad to embrace critical events that trigger mass human deaths.

Finally, human security requires a multi-disciplinary and sectorial approaches and internationally integrated research to effectively resolve the effects of globalization which is pushing migrants to the underworld economy and causing their inhuman treatment in the host destination areas. As Owen notes, "collaboration in research is essential in enhancing policy implementation and focusing on appropriate theory, practice, and critique" (Owen, 2004).

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