



LAND DEGRADATION AND CONFLICT

Case studies from Sudan, Jordan and Niger

SECURING LAND AND PROPERTY RIGHTS FOR ALL

LAND DEGRADATION AND CONFLICT: CASE STUDIES FROM SUDAN, JORDAN AND NIGER

Copyright © United Nations Human Settlements Programme (UN-Habitat), 2022

This publication may be reproduced in whole or in part and in any form for educational or non-profit services without special permission from the copyright holder, provided acknowledgement of the source is made. No use of this publication may be made for resale or any other commercial purpose whatsoever without prior permission in writing from United Nations Human Settlements Programme.

HS Number: HS/022/22E

United Nations Human Settlements Programme (UN-Habitat)

P.O. Box 30030, Nairobi 00100, Kenya

Tel.: +254 20 762 3120

Fax: +254 20 762 3477

www.unhabitat.org

DISCLAIMER

The designations employed and the presentation of the material in this guide do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning delimitation of its frontiers or boundaries, or regarding its economic system or degree of development. The analysis and recommendations of this guide do not necessarily reflect the views of the United Nations Human Settlements Programme or its Executive Board.

ACKNOWLEDGMENTS

Task manager: Ombretta Tempra

Author: Fathi Egal

Reviewers and contributors: Clarissa Augustinus, Sina Schlimmer, Eleonora Francesca Serpi, Ombretta Tempra

Editing: Wycliffe Omanyia, Nikola Stalevski

Layout: Content Khana for Marketing & PR Services

Cover photo: IFPRI / Milo Mitchell (2013)

Strategic Partners: Federal Ministry for Economic Cooperation and Development (BMZ) of the Federal Republic of Germany, Swedish International Development Cooperation Agency (Sida) and Swiss Agency for Cooperation and Development (SDC)

For more information, please consult the referenced documents, visit **www.gltn.net** or write to **unhabitat-gltn@un.org**

LAND DEGRADATION AND CONFLICT

Case studies from Sudan, Jordan and Niger



TABLE OF CONTENTS



ACRONYMS	5
1. INTRODUCTION	6
1.1 Background	6
1.2 Objectives and target of the report	6
1.3 Land degradation neutrality, tenure security and land governance	7
2. LAND DEGRADATION AND CONFLICT	8
2.1 Root cause analysis	8
2.2 Land degradation as a manifestation of a root cause of conflict	9
2.3. Land degradation: a trigger for conflict	11
3. CONFLICT ACCELERATES LAND DEGRADATION	12
4. CASE STUDIES	13
4.1. Sudan	13
4.2. Jordan	16
4.3. Niger	20
5. CONCLUSIONS	24
REFERENCES	27

ACRONYMS



FAO	Food and Agriculture Organization
GLTN	Global Land Tool Network
LDN	Land Degradation Neutrality
UNCDD	United Nations Convention to Combat Desertification
UN-Habitat	United Nations Human Settlements Programme

1. INTRODUCTION

1.1. BACKGROUND

Land degradation is the “reduction or loss of the biological or economic productivity and complexity of rain-fed cropland, irrigated cropland, or range, pasture, forest and woodlands in arid, semi-arid and dry sub-humid areas resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patterns, such as soil erosion caused by wind and/or water; deterioration of the physical, chemical and biological or economic properties of soil; and long-term loss of natural vegetation” (UNCCD, 1996).

Globally, degraded land represents about 25 per cent of all land (Global Environmental Facility, 2021) and, if not addressed, this figure will continue to grow. The causes of land degradation – which include but go beyond the expansion of intensive agriculture, grazing and unregulated urbanisation – are not described in this report, but can be found in two recent publications: State of the World’s Land and Water Resources for Food and Agriculture (FAO, 2021) and the second edition of the Global Land Outlook, Land Restoration for Recovery and Resilience (UNCCD, 2022).

Avoiding, reducing and reversing land degradation is essential for the food security of current and future generations, for the conservation of biodiversity and the

achievement of climate targets (FAO and UNCCD, 2022). Left unattended, land degradation and its consequences will destabilize countries and entire regions, aggravating and escalating existing conflicts and leading to mass displacements. Land degradation is not only a challenge for rural areas. It also puts the urban environment under pressure, which in turn contributes to degrading land in the expanding peri-urban areas. With increasing demand and finite supply, competition over land resources is a key driver of conflicts. Land degradation magnifies these conflicts and produces large-scale instability, posing a rising global challenge.

1.2. OBJECTIVES AND TARGET OF THE REPORT

This report describes the nexus between land degradation and conflict, its main features, and how it plays out in Jordan, Sudan, and Niger. Conclusions are derived. The report builds on work carried out by UN-Habitat and the Global Land Tool Network (GLTN) on land and conflict, including on Somalia and Sudan, which demonstrates the link between land degradation and conflicts (UN-Habitat/GLTN, 2018 and UN-Habitat/GLTN, 2020).

The target audience is the broader community of experts and practitioners engaged in addressing land degradation, climate change, conflict resolution, peacebuilding and sustainable development.

1.3. LAND DEGRADATION NEUTRALITY, TENURE SECURITY AND LAND GOVERNANCE

In 2015, the member countries of the United Nations Convention to Combat Desertification (UNCCD) reached an agreement to encourage implementation of measures designed to avoid, reduce or reverse land degradation and achieve a state of no net loss of healthy and productive land. Land degradation neutrality (LDN) balances both the actual and anticipated losses of land-based natural capital, with initiatives that create and stimulate alternative gains through land restoration and sustainable land management. The concept of land degradation neutrality has been adopted into the 2030 Agenda for Sustainable Development Goals (SDGs) through target 15.3: “by 2030, combat desertification, and restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation neutral world”.

Land tenure security and land degradation are related under land degradation neutrality. The protection of the land rights of individuals and communities is essential to combat land degradation and reversing past degradation. Good land governance and functioning land management systems are key for the protection of land rights and to mitigate the causes and handle the effects of climate change, desertification and land degradation.

The 2019 UNCCD Conference of the Parties (COP) recognized the centrality of land governance and land tenure security for addressing desertification, land degradation and drought. It became clear that creating an enabling environment for land degradation neutrality would be, to a large extent, a land governance exercise.

This calls for an inclusive and participatory approach involving environmentalists, communities, and local authorities. Effective land policies, legislation and regulations are needed to enforce land management decisions and environmental standards. The aim is not only to address land degradation and desertification but also to prevent and mitigate the effects of the resulting conflicts. It also calls for gender-inclusive approaches, where the needs, the voices and the contributions of women are at the centre of the solutions.

In 2022, FAO and UNCCD released a technical guide on how to integrate good land governance as described in the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality. It informs policy and decision-makers on the potential and how legitimate and secure tenure can accelerate progress towards land degradation neutrality and other restoration commitments.

2. LAND DEGRADATION AND CONFLICT

2.1. ROOT CAUSE ANALYSIS

To analyse the nexus between land degradation and conflict, the analytical framework presented in the Root Cause Analysis of Land and Conflict for Peacebuilding tool developed by the Global Land Tool Network in 2017 is used (UN-Habitat/GLTN, 2017). The tool aims to build a common understanding and foster strategic thinking about how to address the land-related dimensions in violent conflicts. Root Cause Analysis of Land and Conflict for Peacebuilding is also featured in the United Nations Secretary General Guidance Note The United Nations and Land and Conflict, released in May 2019.

the conflict. The Root Cause Analysis tool developed by GLTN helps disentangle the complex relationship between root causes, proximate factors and triggers of conflict, to inform more appropriate recommendations and programming. In this report, the focus is placed on root causes, proximate factors and triggers that are related to land degradation.

Using the analytical model described in the Root Cause Analysis of Land and Conflict for Peacebuilding, and based on the case studies of Sudan, Niger and Jordan, this report describes the land degradation and conflict nexus in two main ways:

Often, programmes are designed to addresses the symptoms or the triggers of conflicts, while insufficient attention is given to understand and target the root causes of

1. Land degradation as a manifestation of a root cause of conflict, and
2. Land degradation as a trigger or a contributing factor to creating conflicts.

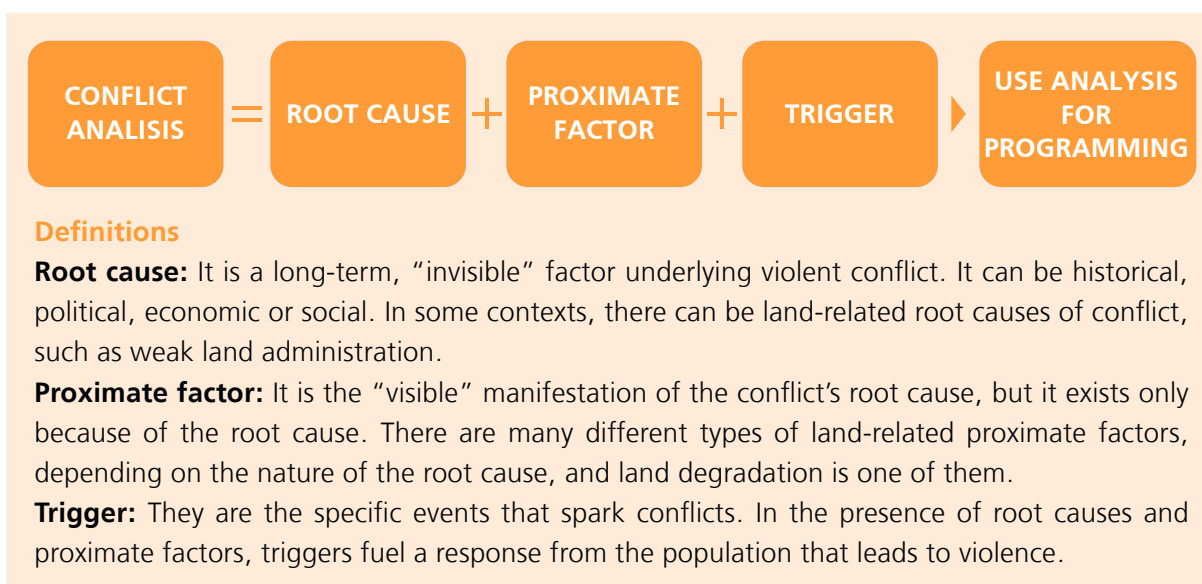


Figure 1: Schematic representation of the Root Cause Analysis of Land and Conflict for Peacebuilding

2.2 LAND DEGRADATION AS A MANIFESTATION OF A ROOT CAUSE OF CONFLICT

Conflicts can have a variety of root causes. The most recurring ones are: politics of exclusion, scarce natural resources, population pressure, capture of state instruments, competition over rights of use, natural resources exploitation and criminality, nation-state fragmentation, poverty, occupation of land, plural legal systems, competition between power blocks, weak land administration system, natural disaster, inter-generational violence, chaotic urbanisation (United Nations, 2019). Land degradation can be a proximate factor or a manifestation of one or several of the above root causes of conflict. Some of the root causes most associated with land degradation manifestations are described below.

Climate change. Climate change refers to long-term and significant changes to the global climate. This change is attributed directly or indirectly to human activities that alter the composition of the global atmosphere, and which, in addition to natural climate variability, is observed over comparable time periods (United Nations, 1992). Climate change in arid and semi-arid regions contributes to soil erosion, desertification and droughts, all leading to land degradation. During droughts, pastoralist communities face permanent loss of livelihoods which leads to their impoverishment. Due to erratic rainfall, moments of abundance cause herders to attempt to maximize their herd sizes as insurance against the long drought

periods, which drives competition even in times of relative comfort.

Scarce natural resources. Scarcity – either dependent on the characteristics of the ecosystems or caused by the increased needs of populations – often leads to over exploitation of available resources, contributing to land degradation. In Sudan, for example, overgrazing is a major factor behind land degradation and desertification.

Population pressure. With growing populations and increasing limitations on the availability and quality of land, population growth strains existing resources. Degraded areas have limited viability, increasing competition over land resources, which triggers conflict. For example, Jordan is experiencing an annual population growth of 5 per cent and hosts large numbers of Syrian, Iraqi and Palestinian refugees. About 16 per cent of the population live in rural areas and 84 per cent in cities. The population pressure and limited economic resources have contributed to unsustainable agricultural and water management practices, overexploitation of vegetative land and overgrazing – all leading to land degradation.

Cross-border dynamics. Land degradation is heavily influenced by local factors; however, it is also impacted by cross-border and international dynamics, such as the global agricultural production and consumption patterns or the mechanisms to offset the impact of national or regional regulations on external countries. Unsustainable land use practices that cause land degradation are at

times motivated by the need to meet growing economic and political pressures. In land- and resource-rich countries, small-scale farming may be abandoned in favour of corporate agricultural practices. Land degradation also makes agricultural productivity more dependent on external inputs, such as fertilizers, pesticides, and mechanization. This over-reliance weakens the ability of smallholder farmers to compete against the large-scale mechanized agricultural food industry. The ensuing ramifications are not only economic but also contribute to land degradation.

Weak governance. Weak governance of the resources, lack of inclusive decision-making, exclusion of communities from decision-making as well as inequitable, opaque and corrupt practices may lead to the mismanagement of the resources available and to land degradation.

Dysfunctional land administration. Land administration regulates the processes related to determining and documenting land rights, land use and land development practices. Land administration systems include all the infrastructure necessary for the implementation of such processes: institutional arrangements, legal frameworks, land information systems, standards, and the management and dissemination of systems and technologies necessary for implementing these processes (Williamson et al., 2010). When land administration systems are weak or dysfunctional, land resources cannot be sustainably managed, resulting in a variety of negative repercussions, including different types of land degradation. When communities

do not have security of tenure, they are unlikely to invest in sustainable land use practices, which leads to land degradation. Unregulated urban sprawl, for example, causes excessive consumption of land in peri-urban areas and leads to the degradation of agricultural land in the urban fringes. Lack of clarity of who makes decisions over the use of land increases the risk of unsuitable and short-sighted decision over the use of land and the exploitation of land resources, leading to degradation. The lack of data on soil quality and land degradation trends is also an aspect of a dysfunctional land administration system and hinders land degradation neutrality interventions.

Plural legal systems. In many contexts, land decisions are regulated by a plurality of legal system (statutory, customary, religious, community practices). Rural communities, where land degradation and its effects are most pronounced, rely heavily on informal or customary systems of land tenure allocation and dispute resolution. Unresolved gaps and overlaps between the informal and formal systems negatively affect land management, exacerbate tensions and fuel conflict. In Sudan, the lack of regulation over land use and the unacknowledged customary systems for land ownership have created an environment rife with unsustainable land use and the resulting degradation. In pre-colonial Niger, land was customarily managed; during colonialism, a contrasting western-inspired system was introduced, leaving a legacy of challenges for sustainable management of land resources, resulting in the degradation of land.

Politics of exclusion. Resources and investments can be allocated by those in power based on political, ethnic or religious allegiances. Excluded communities become over-reliant on the short-term exploitation of local resources, without being able to introduce structural ameliorations to their lands (irrigation and crop diversification). This negatively impacts the quality of lands and causes tensions, disputes and conflicts.

2.3. LAND DEGRADATION: A TRIGGER FOR CONFLICT

In the presence of root causes and proximate factors, land degradation can be a trigger or a contributing element to violent conflict.

In displacement and migration. When land degradation affects areas where people depend on the land for their livelihood, displacement and migration occur. Migration and displacement induce great instability leading to violent confrontations when the influx of displaced is high, the host communities

are poor, and history of pre-existing ethnic, religious or linguistic tensions exist.

In the case of food insecurity. Degraded land loses its capacity to sustain crop production and pastoral activities. It even limits the viability of water areas that are necessary for food production and causes imbalance to the entire ecosystem. In communities dependent on locally produced food, this creates food insecurity or famine, which can destabilize society and lead to conflict. The cross-section between land degradation and food insecurity is one of the biggest threats to peace and stability.

In competition over resources among land users. Rural communities depend on land-based resources for their livelihood. Land degradation reduces the available volumes of key resources (crops, pasture, wood), increasing competition and generating tensions between different land users and communities, which may trigger violent confrontations.

3. CONFLICT ACCELERATES LAND DEGRADATION

Conflict can significantly raise the pace of land degradation. Instability and insecurity caused by conflict push communities into increased armed violence, destroy crops and pastures, damage irrigation systems. Local residents are forced to cut woods for shelter and cooking and undertake other practices to ensure their immediate survival rather than long term sustainability. Communities in conflict feel insecure and unable or unwilling to carry out the necessary measures to preserve and protect land from degradation.

Conflict also constrains the actions of institutions and limits access to financial and other resources required to address, mitigate and prevent land degradation. It takes political will and political leverage to develop and implement policies and strategies that can address land degradation and land governance challenges, and conflicts weaken the states'

capacities on this front. Furthermore, policies and initiatives to deal with land degradation require proactive measures and targeted responses to not only deal with pressing issues but also anticipate and mitigate future concerns. Political and social tensions can sideline this issue as low priority, at the same time as under-resourced and weak institutions struggle to implement actions.

Of the 1.5 billion people that live on land impacted by degradation, most are small-scale farmers (UNCCD, 2014). Their vulnerability is more pronounced as many hold informal land tenure rights and have little access to credit or financial safety nets. This disadvantage is exacerbated during conflicts, when the financial capacity of the state is stretched, the effectiveness of the banking sector is compromised, and international financing might be blocked.



Figure 2: Displaced Darfuris farm in rainy season, Tawila, Sudan.
Source: UN Photo/Albert Gonzalez Farran

4. CASE STUDIES

The nexus between land degradation and conflict has global and regional patterns and recurring trends. However, while commonalities do exist, the factors that shape such interrelation are context specific and local realities must be analysed and understood to develop appropriate solutions. The specifics in three countries – Sudan, Jordan and Niger – are presented below via case study analysis.

4.1. SUDAN

Located in North-East Africa, Sudan was under British control during the first half of the twentieth century. The Egyptian Revolution of 1952 brought Sudan under the joint control of Egypt and Britain. After gaining independence in 1956, Sudan transitioned to a parliamentary system that struggled to govern populations of different ethnicity, religion and language. Sudan endured instability, military dictatorship, the separation of South Sudan in 2011, and the death of hundreds of thousands of people in relapsing civil wars across its territory. As of 2008, Sudan had an estimated population of 40 million people, including 5-6 million displaced by conflict, particularly in the south.

Politically, Sudan is a federation composed of 18 states. Before the independence of South Sudan, its economy was heavily dependent on oil revenues from the south. After 2011, the country suffered high levels of inflation and

unemployment. Agriculture is now the most important economic sector. Between 60 and 80 per cent of the working age population rely on agriculture as their source of livelihoods. In 2020, the agricultural sector contributed 20 per cent of gross domestic product (Statista, 2022).

Land degradation and conflict

Land degradation in Sudan is caused by various factors: the growing population, number of livestock beyond the carrying capacity of the ecosystem, the exploitation of natural resources, and the increase of scarcely regulated corporate agricultural practices. The loss of quality land in the rangelands exacerbates tensions between pastoralists and farmers and is resulting in conflicts that can escalate in the broader community. The weakness of the land administration system constrains its ability to put in place sustainable and inclusive land use practices and to resolve conflicts arising from land-related disputes. Some of these factors are described in more detail below.

Population pressure. Population pressure encouraged destructive forms of agriculture to meet the needs of the population. In southern Sudan, traditional farmer employ unsustainable practices to ensure a short-term food supply. These practices include burning and clearing forests to produce a few crops of low-intensity maize instead of longer-term strategies to develop higher-value agroforestry plantations. “Sudan’s land is under more pressure than ever before. An increasing human and livestock

population has intensified competition for resources and speeded up the process of land degradation” (Sullivan et al., 2010). Population pressure also intersects with other root causes of conflict such as natural resource exploitation and chaotic urbanization. Population growth and urbanization increased the pressure on peri-urban land for cropping, grazing and biofuel. Signs of desertification in the Sudano-Sahelian areas became first apparent in highly populated areas and livestock watering points. The situation is aggravated by the increase in animal populations in areas affected by desertification and land use conflicts. Land degradation is accelerated in urban and peri-urban areas by the underserved and substandard settlements that emerged with influx of displaced people and refugees.

Natural resource exploitation. About 70 per cent of the Sudanese population depends on agriculture for their livelihood. Rangelands are being overgrazed, as pastoral land uses overlap other farming activities¹. The reduction in quality land for traditional agriculture leaves farmers little choice but to continue farming the same land, degrading the soil. When the soil becomes impoverished, more fertilizer is used. Small farms, reliant on labour-intensive cultivation techniques, make up most of the agricultural production; however, mechanized farming is on the rise. Mechanized corporate agriculture requires large tracts of land and is carried out with little regulation. The result is land degradation and land abandonment in

some traditionally fertile areas. The loss of rangelands quality, caused by climate change and overgrazing, exacerbates tensions between pastoralists and farmers, leading to violence, particularly as expanding agriculture encroaches on the migratory routes of ever increasing livestock herds.

Weakened disputes resolution mechanisms. In the past, customary dispute resolution methods were largely effective in quelling these types of disputes. However, their effectiveness has been eroded by the changing power dynamics among the stakeholders, by the increased competition over diminishing resources, and by the readily accessible weapons among the local population.

Weak land administration and management systems. Land use, ownership and access to land have been sites of historical grievances. The coexistence of the statutory and the not officially recognized customary land administration is an increasing source of conflict and mismanagement of land-based resources. The lack of regulation of land use and the unacknowledged customary systems for land ownership have created an environment where land resources are exposed to unsustainable use and resulting degradation.

Unregulated trade and investment. In a region where land for agriculture is scarce, Sudan is the main breadbasket. Sudan is a major exporter of crops to Egypt, Jordan and Saudi Arabia. The increasing number of large-

1 UNEP (2007) estimates that rangelands have shrunk between 20 and 50 per cent within the past generation.

scale land acquisitions are often conducted in opaque legal and business environments, where rule of law and the application of the Responsible Agricultural Investment guidelines are weak. In a context where the bargaining power of local communities is low, this fuels

conflicts and disenfranchises local communities, contributing both to land degradation and conflict².

² Foo, Audrey. [Land Acquisition in Sudan and South Sudan: Emptying the Breadbasket](#).

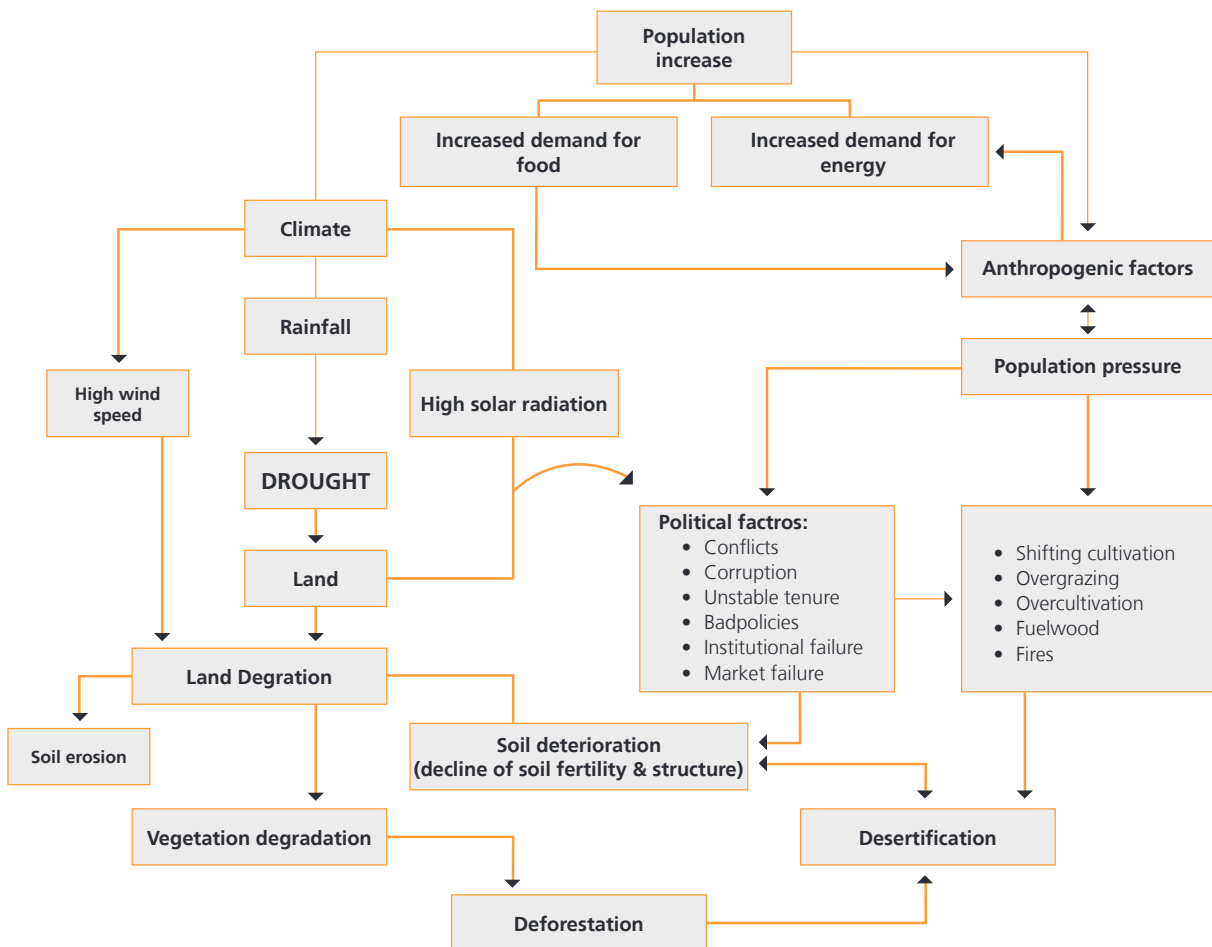


Figure 3: Forces causing desertification in Sudan.
Source: Omar et al. (2013).

4.2. JORDAN

Jordan borders Saudi Arabia, Iraq, Israel and Palestine. Its population is concentrated in the northwest around the country's capital of Amman. The outbreak of the civil war in Syria added new economic pressures from the influx of displaced refugees. More than 90 per cent of Jordan's land can be classified as arid and receives minimal rainfall. About 16 per cent of the population live in rural areas; the remaining 84 per cent is urban³. Desertification, and the resulting lack of fodder for livestock, have forced many of the Bedouin to abandon pastoralism and migrate to urban centres. With an annual growing rate of 5 per cent, Jordanian cities are under pressure. The conflict in Syria has increased the inflow of refugees, adding to the already present Palestinian and Iraqi refugees.

The Jordanian desert, also known as the Badia, is experiencing different types of land degradation, especially decline in soil fertility, water and wind erosion, and habitat destruction. Jordan is an example of how economic pressures exacerbate land degradation. Evidence shows that poverty is forcing dryland farmers and herders into unsustainable practices to produce more food to meet their basic needs, leading to degradation of their land resources. Much of this can be attributed to growing population and urban sprawl into the Badia, leading to unsustainable agricultural and water management practices, overexploitation of land and overgrazing.

About 41 per cent of Jordan's total land area is considered degraded (Khresat, 2013). The soils of the irrigated highlands and of the Jordan Valley are also affected by salinisation and alkalinization. In addition to human induced factors associated with the country's high population growth rate and the expansion of cities into agricultural areas, natural factors such as erratic rainfall and periodic drought contribute to the problem. This drives more people into the already dense urban areas to seek employment. The impact is not only limited to the rural areas where it is first experienced. When displacement or migration occur, it puts additional strain on limited land resources in urban areas. Without strong and land tenure systems, increase in land-related disputes and conflicts are likely to occur.

To respond to these challenges posed by land degradation and the increasing economic vulnerability of farmers, the Government of Jordan led the Agricultural Resources Management Project, *Al-Karak*, "to improve the income of vulnerable, resource-poor farmers while at the same time safeguarding and improving the productive potential of their natural resources and enhancing their return to labour" (ESCWA, 2007). The project aimed at preventing soil degradation and restoring soil fertility. Another programme by the Jordanian government in partnership with the International Fund for Agricultural Development (IFAD) and the Arab Fund for Economic and Social Development (AFESD) is the Yarmouk Agricultural Resource Development Project. Implemented from 1999 to 2009, it aimed at promoting rural

3 USAID (2018) [Land Links Jordan](#).

development and alleviating the pressure on the rapidly degrading land resources in the Irbid area.

The traditional rangeland management system known as *Hima* (“protection” in Arabic) has been put at the centre of the land restoration initiatives. *Hima* sets aside land and key resources so that communities can conserve them and regulate their use. It provides hope that degradation and biodiversity loss can be restored in Jordan’s arid rangelands and is a great example of how land degradation neutrality could be achieved at the country level.

Enhancing land dispute resolution mechanisms is necessary. In any system, some level of disputes on land tenure rights will be inevitable. Land disputes are currently either managed through the judiciary or by specialized committees in the Department of Land and Survey. As most conflicts take place at the local level, local disputes resolution interventions would be most appropriate. This would also have a positive impact in tackling land degradation.

Land degradation and conflict

Climate change. While not a great contributor to climate change, Jordan is heavily affected by it. It has begun to suffer from climate change with increasing temperatures, increase in drought-affected areas, erratic rainfall, heat waves and declines in available underground and surface water. The country is expected to experience a 15–60 per cent decrease in precipitation and a 1 to 4 degrees Celsius increase in temperature

between 2011 and 2099, which will have serious impacts on natural ecosystems, river basins, watershed and biodiversity (National Climate Change Policy, GoJ 2013-2020). Recurrent droughts, climate change and unsustainable land management are the main causes of land degradation. Most of Jordan’s arid and semi-arid lands suffer from some degree of land degradation and several studies and surveys indicate that the rate is high (UNCCD, 2019).

Unsustainable land use. Natural processes have been exacerbated by unsustainable land uses that include overgrazing, cultivation and ploughing of marginal soils and deforestation in the higher rainfall zones. A water and climate change expert from the Jordan office of the International Union for Conservation of Nature (IUCN-ROWA) stressed that farmers’ and herders’ practices are among key triggers of land degradation in Jordan: “the farmers and herders are increasingly adopting unsustainable land use practices to produce more food in order to meet their needs in the country’s rangelands”⁴. While the major issues are overgrazing, unsustainable agricultural and water management practices, over-exploitation of vegetative cover compounds the problem. The expert further shares that the current land tenure system, in which the State supersedes customary management methods is enshrined by law but not necessarily practised. This disconnect also contributes to the destruction of natural vegetation in the steppe and desert rangelands.

⁴ Interview with Faizah Slehat, Projects Officer at Water and Climate Change Programme, IUCN.

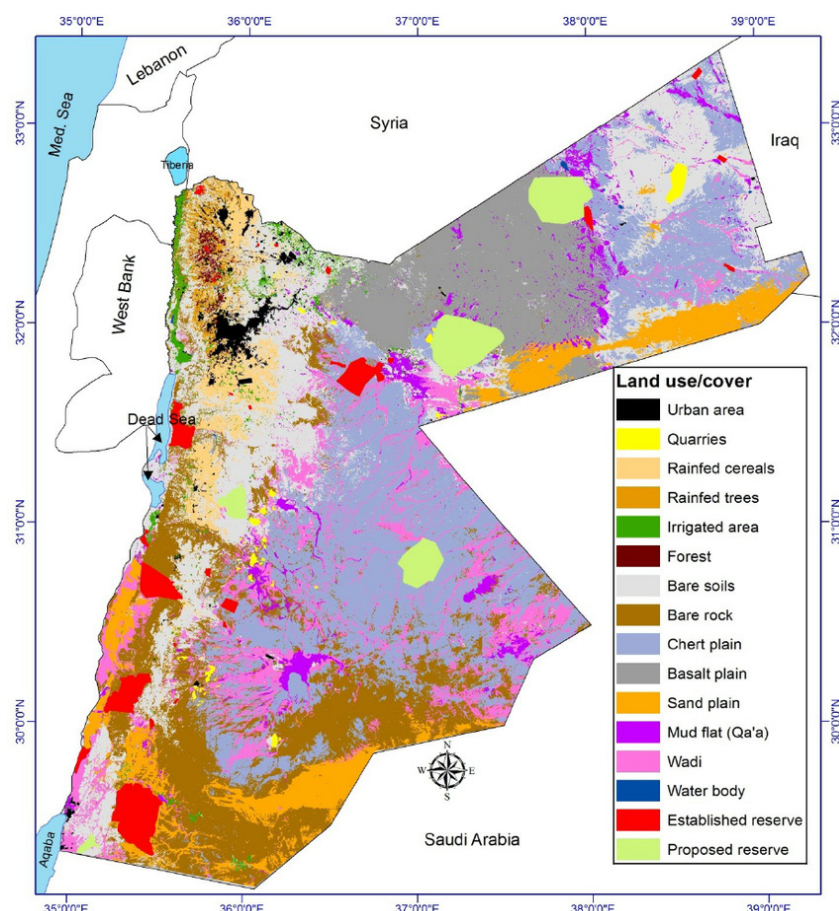


Figure 4: Jordan Land Use/Cover Map
Source: Al-Bakri et al. (2013).

Poverty. Disparity in economic power and high levels of poverty impact on almost every facet of private and public life. An official from the Department of Land and Survey notes that while land degradation has not directly caused armed conflict, its impact has primarily been seen through its intersection with economic development, and although it's on the radar for the government to address land degradation, it is not a priority. About 14.4 per cent of the population is said to be living under the poverty line (UNICEF, 2020). The poor are usually made up of farmers with limited access to decent

resources and alternative sources to generate a livelihood. Considerable evidence indicates that poverty is forcing dryland farmers and herders, in particular, into unsustainable practices to produce more food to meet their basic needs, often leading to degradation of their land resources.

There are challenges in diversifying the agricultural industry and shifts in the environmental landscape are contributing to these challenges. There is a lack of access to water, untenable soil, and physical conditions

of the land that make large-scale farming impossible. Unsuitable land, coupled with a lack of access to financial resources also prevents long-term investments. The increasing levels of poverty, limited access to economic leverage, and the growing unsuitability of land for farming can become a volatile mix for the igniting of conflict and sometimes its perpetuation. Poverty is a significant root cause of land-related conflict. It increases homelessness, forced evictions, displacement and food insecurity. Land degradation disproportionately impacts those who depend on the land as a source of livelihood, throwing them into poverty when viable land is no longer available in the same quantity.

Chaotic urbanization. Jordan is an example of how land degradation poses a threat in both rural and urban settings. There is an urban sprawl as cities expand into Badia and unsustainable land use practices also occur in peri-urban areas. While many of the environmental changes are seen as natural and out of human control, the possibility to curb the effects of climate change that contributes to land degradation is there. Urbanization, when left unmanaged, can add strain to cities and increase tensions between host communities and newcomers when there are limited resources and urban services. Land degradation has also contributed to the urbanization of Jordan as more people leave rural farming communities to seek housing and livelihoods. Growing population has led to an urban sprawl into Badia which has contributed to unsustainable agricultural and water management practices.

Weak governance. Weak governance perpetuates land degradation, by not setting parameters on land use, lack of sustainable land management practices and inability to resolve land disputes and grievances. There are existing and functioning formal land tenure systems in Jordan, primarily limited to urban areas and sometimes peri-urban areas where these systems are well established. In rangelands, or rural areas where land was historically considered low value, it became difficult for the State to exercise control over the formal and codified system of land tenure in a systematic way (Rae, 2012). Currently, the application of formal land tenure systems has reached the Badia. According to the latest statistical information, 95 per cent of land in Jordan is claimed to be registered. However, statistics do not paint the full picture. While private lands are for the most part registered, this cannot be said of State land, where 80 per cent of the country's total lands are poorly defined and documented (USAID, 2018).

Scarcity of natural resources. Scarcity of natural resources is one of the most significant ways land-related conflict and land degradation intersect. The scarcity of arable land not only causes conflict but also impacts the amount of usable land. Jordan lacks effective regulations on overgrazing, unsustainable agricultural and water management practices and over-exploitation of vegetative cover. In some ways, scarcity of natural resources in Jordan has also contributed to a phenomenon known as farmland ownership fragmentation. This phenomenon appears when "land parcels are frequently so small that they cannot be

individually farmed, and their owners are forced to rent the land to become part of the larger wholes of large agricultural holdings. This process can be seen as gradually alienating owners from their land, resulting in clear negative impacts on most aspects of sustainable land use” (Sklenicka, 2016). Fragmented land ownership can lead to degradation – either where the land ownership is in multiple parcels or where there are many owners of the same parcel. “High farmland ownership fragmentation is an underlying cause affecting tenure insecurity as an immediate cause for various types of land degradation” (Sklenicka, 2016).

4.3. NIGER

Niger is part of the Sahel region. The country gained independence in 1960 from France. After some relative peace and political stability, the country began experiencing political turmoil and a series of coups. The population of Niger predominantly live in rural areas with less than 17 per cent of people living in urban centres (United Nations, 2018). Niger has a population density of only 14 people per km². The rural population is composed of both nomadic and sedentary groups with agriculture making up the largest economic sector of the country. The economy of Niger is heavily reliant on agriculture and animal husbandry, which is also a significant driver of the labour force. Therefore, the impact of land degradation is not only straining on farmers and pastoralists but it can have devastating impacts on the economy as a whole (ILC and Oxfam, 2020).

Because of the natural climate cycles and human-induced climate change, the Sahel is expanding. This causes land degradation and threatens human security. Niger’s natural resource management policies, developed during both its colonial and post-independence period, have contributed to land degradation. Climate change manifested in prolonged droughts, which heavily impacted the country and those segments of the population are heavily reliant on natural resources.

Conflict between pastoralists and farmers has been on the rise. While pastoral areas are recognized by law as public land for pastoral use, there is a lack of enforcement of the law leading to conflict. These experiences were a wakeup call and forced the country to adapt its policies and strategies.

Customary methods of handling land disputes are becoming overwhelmed and ineffective in dealing with conflict at the local level. This is leading to growing concern about full blown land conflicts. Nonetheless, as positive outcomes emerged from the customary methods of dispute resolution, such methods are becoming more recognized and acknowledged.

The reduction of greenhouse gas emissions has been successful. Targeted efforts, community mobilization and the incentivizing project initiated and implemented by the World Bank’s carbon project have supported this initiative. The project was launched in 2006, involving 26 rural communities spanning over 6 regions. The communities planted *Acacia Senegal* trees on abandoned land and

over 14 years nurtured them as part of this afforestation agro-forestry project. They earned carbon credits of which they were able to sell and on 21 February 2020. In Kone Beri, Niger celebrated with 26 village leaders the first ever carbon credit payment made to Niger to reduce emissions. The six regions of the country earned a combined total of USD 450,000. The planting of the trees not only yielded carbon revenue but achieved the overall objective of supporting environmental regeneration.

Niger is a success story in effectively responding to land degradation challenges with a focus on reversing or mitigating the impact of land degradation. The government gave communities a mandate to manage natural resources and incentivized land users to benefit from their investment. The preservation of land is not only critical to reduce and manage land-related conflict but also to saving the country's economy.

Addressing the land tenure security and land degradation nexus is still a necessary focus in addition to efforts to make land administration systems efficient. Improvements to make the land administration systems more efficient have also been underway. In 2018, Niger made progress in enhancing efficiency of property registration. It now takes 13 days and 4 procedures to register a property compared to the original 35 days and 4 procedures. Efforts to address land disputes are enhanced with the creation of a specialized court in Niamey to enforce contracts. Further, a new land policy was adopted as a good practice.



Figure 5: Map of Niger.
Source: World Atlas.

Land degradation and conflict

Cross-border dynamics. Land degradation, land conflict and displacement are not confined to the boundaries of a nation or State. In the case of Niger, it is affected by regional dynamics that are shaped by the ongoing issues in neighbouring States such as Mali and Burkina Faso. Growing tensions in Mali between pastoralist farmers and nomadic herders over access to land and water points has escalated to a series of attacks on the civilian population in Central Mali⁵. The escalation of the conflict and involvement of armed groups has spilled over into Niger. Tension between communities is increasing,

⁵ In March 2019, more than 150 Fulani herders were killed by Dogon militias in Central Mali. In June, a raid by Fulani herdsman on Dogon villages claimed at least 35 lives. Africa Center for Strategic Studies, "Mitigating Farmer-Herder Violence in Mali," August 8, 2019.

leading itself to a growing number of violent attacks against civilians. The conflict has escalated so much that there are armed groups operating across the borders. The level of displacement has also increased. The number of IDPs rose from 500 in 2018 to over 62,000 in 2019 (ACAPS, 2019). Without strong administrative and institutional interventions to manage conflict and prevent further escalation, this can have devastating impacts on the lives of civilians as well as the real threat of destabilizing regions. This shows a perfect example of how climatic shifts have led to land use changes and competition over resources, with conflict over access to land and land use directly leading to conflict. A briefing note on conflict and displacement looking at the displacement issue in Niger noted that “the reasons behind those attacks are unclear, though historic rivalry and control over resources are often behind intercommunal clashes in the area” (ACAPS, 2019).

Weak land administration systems.

Countries with weak land administration systems tend to experience more land tenure insecurity. Less effective mechanisms for the resolution of disputes and lack of recognition of customary-held land rights can be a formula for land conflict. Before colonialism, Niger's land tenure system was rooted in customary practice. There was an unwritten but widely accepted right that the farmer who clears land owns it, known as *the right of axe law* (Gnoumou and Bloch, 2003). However, by 1935, French colonial powers instituted a new law, the Aubreville Decree, which made all

vegetation the property of the government and farmers were required to purchase permits to cut and use wood – even when such trees were on their own farms (Brough and Kimeny, 2002).

In addition to the overhaul of common social practice with the introduction of colonial rule, this change also signified a new dichotomy between customary view of land and the western inspired insistence on formal land tenure systems. To expand on the right of axe law, it is important to understand that in pre-colonial Niger, the customary frameworks that guided land tenure were rooted on the notion that land belonged to those who cleared it and therefore brought “value” through their labour on the land. The improvements to the land were seen as investments that allowed them customary ownership rights that could even be passed down to their descendants through a patrilineal system (Terraciano, 1998). While this protected those whose forefathers were able to clear and thus own land, newcomers were commonly granted user rights.

In Niger, customary tenure arrangements are a more dominant method of holding land tenure as opposed to formal recognition. While they are common, they have not always been recognized by the State as a valid means of holding land tenure rights. However, between 2005 and 2009, the State officially recognized customary rights. There is existing literature and evidence pointing to the fact that Niger's colonial and post-independence natural resource management policies contributed to

land degradation. Also, in 1935 another decree stipulated that all lands not occupied or used for more than 10 years became State property — even when such land belonged to a farmer but lying fallow (Boffa, 1999). Predictably, these laws served as a disincentive for tree planting and protection. “In Niger, both private property and various customary tenure systems are common. Privately held land is characterized by exclusive use and by the possibility to lease or sell, while the customary systems are characterized by different levels of restrictions on the transferability of land. Niger enacted a Rural Code in 1993, which recognized private land rights acquired through customary tenure, and the Forest Law of 2004 that gave tree tenure to landowners.

Farmers then made ingenious modifications to traditional agricultural practices that led to more than 12 million acres of land being restored over 30 years by 2011. The trees provide fuel, fodder for livestock, food and

soil improvement. The first five million hectares re-greened produced 500,000 tonnes of food per year, enough to feed 2.5 million people (Carey, 2020). The 1993 Rural Code aimed at increasing land security for both women and men through individualizing and enabling registration of customary land use rights and decreasing the influence of community chiefs. This law grants women and men equal rights to land but the provisions are not well understood or implemented” (Slavechevska et al., 2016).

Poverty. Poverty increases homelessness, forced evictions, displacement and food insecurity. Land degradation disproportionately impacts those who depend on the land as a source of livelihood, throwing them into poverty when viable land is no longer available in the same quantity. Stagnation in economic growth adds strain to natural resources and is a root cause of land degradation. Poverty also contributes to unsustainable land use practices.

5. CONCLUSIONS

Avoiding, reducing and reversing land degradation is essential for the food security of current and future generations, for the conservation of biodiversity and the achievement of climate targets. In the current context of increased competition over land resources, rising food insecurity, and inequalities, combating land degradation can prevent and mitigate conflict and mass displacement, which can potentially destabilize countries and entire region.

Land degradation can be managed, mitigated and also reversed with appropriate commitments. Securing land rights of individuals and communities is vital to combat land degradation. All legitimate tenure rights should be recognized, recorded and protected by the state, in line with the continuum of land rights approach. This would enable all the land rights holders – individuals and communities – to engage in and contribute to land degradation neutrality initiatives as decision-makers and benefit from the positive impact achieved (FAO and UNCCD, 2022). It would also contribute to a more sustainable use of land and a reduction of the conflicts over its ownership or use.

Good land governance and functioning land management systems are crucial for the protection of land rights; create an enabling environment for land degradation neutrality; and, are indispensable for the resolution of land conflicts and the sustainable use of land resources.

Conflict sensitive fit-for-purpose land administration has a key role to play to document the land rights and protect land tenure security, support sustainable land use, and prevent and resolve land disputes — all, essential elements to combat land degradation and ensure good land governance. Fit-for-purpose land administration also supports voluntary returns of people who have been displaced, contributes to securing women's land rights and helps addressing land-related historical injustices and the politics of exclusions, which are frequent root causes of conflict, therefore constituting a critical component of peace building (Augustinus et al., 2021).

Land degradation and conflict are deeply intertwined, especially in fragile countries. Land degradation fuels conflict. Conflict accelerates land degradation and jeopardises the capacity of states and communities to engage and invest in land degradation neutrality.

At times, land degradation is the manifestation of deeper root causes of conflict, such as population pressure, scarce natural resources, cross-border dynamics, weak governance, dysfunctional land administration, politics of exclusion, plural legal systems. In the presence of root causes of conflict, land degradation can be the triggering factor of conflicts and violence, particularly in situations of mass displacement and migration, food insecurity and competition over land use by different groups. Undertaking a root cause analysis of

conflict that pays attention to land degradation can help in structuring land degradation neutrality actions.

Enhancing access to justice and strengthening multiple disputes resolution mechanisms that may co-exist on the ground can mitigate land-related conflicts and address some of the causes of land degradation. These include the lack of investment in sustainable land use practices, the reluctance to invest in land restoration and land degradation neutrality actions, and the cutting of trees.

Effective and enforceable land policies, accompanying legislation and regulations are an important step for the sustainability of land degradation neutrality actions.

Sensitization of international, national and local stakeholders on the intersection between land governance, land tenure security, land degradation and large-scale conflicts and displacement is vital. Local experts and practitioners from different disciplines should come together and collectively develop a good understanding of the different aspects of the land degradation neutrality discipline (science-policy interface, financial elements, institutional arrangements and policy or regulatory elements), of land governance, sustainable land use, and conflict sensitive fit-for-purpose land administration. The understanding of global literature at the local level and the creation of local context-specific knowledge should be encouraged and supported.

Local action to combat land degradation and related conflicts is important. Developing the capacities and empowering local and national actors to lead land governance efforts over time should be a priority. The leadership of national and local governing institutions – statutory, customary, community-based – is indispensable to achieve the desired results. Local authorities and communities need to work together.

Local action should be supported by national commitments. Global normative frameworks are in place to guide the countries in their actions on good land governance, land tenure security and land degradation neutrality: the Sustainable Development Goals, the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security, the United Nations Convention to Combat Desertification and Land Degradation Neutrality. The international human rights obligations underpinning the principles contained in these frameworks were also signed and ratified by most countries. Under the UNCCD, 129 countries committed to set voluntary national land degradation neutrality targets and, as of early 2022, over two thirds of these already did (FAO and UNCCD, 2022). Such commitments must be honoured with the leadership of national governments and the support of international funding.

Women are disproportionately affected by conflicts and are more vulnerable to the effects

of land degradation, as often they directly depend on the land they farm, even if they do not own it in their name. Their marginalisation in decision-making processes not only has negative consequences on their lives, but also leads to decisions that do not incorporate women's valuable experiences and undermine

the sustainability of the interventions. Successful land degradation neutrality programmes require a gender-responsive approach in terms of process and outcomes. Implementation plans should be developed with the leadership and contributions of men and women alike.

REFERENCES

- ACAPS (2019). [Conflict and Displacement in Mali, Niger and Burkina Faso](#).
- Augustinus, C. and Tempra, O. (2021). Fit-for-Purpose Land Administration in Violent Conflict Settings, Land, MDPI, vol. 10, no. 2, pp. 1–18.
- Bertelsmann Stiftung (2020). [BTI 2020 Country Report – Niger](#). Gütersloh: Bertelsmann Stiftung.
- Boffa, J. M. (1999). [Agroforestry Parklands in Sub-Saharan Africa](#). FAO Conservation Guide 34. Rome: Food and Agriculture Organization of the United Nations (FAO).
- Brough, W. & Kimenyi, M. (2002). “Desertification” of the Sahel—Exploring the Role of Property Rights. Bozeman, Mt: Property and Environment Resource Center.
- Carey, J. (2020). [News Feature: The Best Strategy for Using Trees to Improve Climate and Ecosystems? Go Natural](#). Proceedings of the National Academy of Sciences of the United States of America, vol. 117, no. 9, pp. 4434 - 4438.
- ESCWA (2007). Land Degradation Assessment and Prevention: Selected Case Studies from the ESCWA Region, p. 23.
- FAO (2021). [State of the World’s Land and Water Resources for Food and Agriculture – Systems at breaking point](#). Synthesis report 2021. Rome.
- FAO and UNCCD (2022). [Technical Guide on the Integration of the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security into the Implementation of the United Nations Convention to Combat Desertification and Land Degradation Neutrality](#). FAO, Rome and UNCCD, Bonn.
- Global Environment Facility (2019). [Land Degradation](#).
- Gnoumou Y. & Bloch, P. (2003). Niger Country Brief: Property Rights and Land Markets.
- GoJ (2013b). [Ministry of Environment. The National Climate Change Policy of the Hashemite Kingdom of Jordan 2013–2020](#).
- Khresat, Saeb (2013). Soil Erosion and Land Degradation in the Highlands of Jordan.
- Mahgoub, F. (2014). Current Status of Agriculture and Future Challenges of Sudan. Current African Issues, 57. Nordic Africa Institute.
- Omar A. A., Edinam K. G. and Olavi L. (2013). Causes and Impacts of Land Degradation and Desertification: Case Study of the Sudan, International Journal of Agriculture and Forestry, vol. 3, no. 2, pp. 40–51.
- Rae, J. (2012). An Overview of Land Tenure in the Near East Region.

- Slavchevska, V., De La O Campos, A. P., Brunelli, C. and Doss, C. (2016). Beyond Ownership: Women's and Men's Land Rights in Sub-Saharan Africa. *Oxford Development Studies*, vol. 49, no. 1, pp. 2–22.
- Statista (2022). [Sudan: Share of Economic Sectors in the Gross Domestic Product \(GDP\) from 2010 to 2020](#). (Accessed on 3 May 2022)
- Sullivan, P. J. and Nasrallah, N. (2010). Improving Natural Resource Management in Sudan: A Strategy for Effective State Building and Conflict Resolution. United States Institute for Peace. Special Report 242.
- Terraciano, A. M. (1998). "Contesting Land, Contesting Laws: Tenure Reform and Ethnic Conflict in Niger." *Columbia Human Rights Law Review*, vol. 29, no. 3, p. 723.
- UNCCD (1996). [United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa](#).
- UNCCD (2022). [Global Land Outlook, Second Edition: Land Restoration for Recovery and Resilience](#). UNCCD, Bonn.
- UN-Habitat/GLTN (2017). [How to do a Root Cause Analysis of Land and Conflict for Peace Building](#).
- UN-Habitat/GLTN (2018). [Land and Conflict in Jubaland: Root Cause Analysis and Recommendations](#).
- UN-Habitat/GLTN (2018). [Land and Conflict: Lessons from the Field on Conflict Sensitive Land Governance and Peacebuilding](#).
- UN-Habitat/GLTN (2019). [Land Tenure and Climate Vulnerability](#).
- UN-Habitat/GLTN (2020). [Darfur Land Administration Assessment: Analysis and Recommendations](#), UN-Habitat Sudan/Global Land Tool Network; UNON: Nairobi, Kenya, pp. 1–91.
- UNICEF (2020). Geographic Multidimensional Vulnerability Analysis – Jordan.
- United Nations (1992). United Nations Framework Convention on Climate Change.
- United Nations (2019). [Guidance Note of the Secretary-General. The United Nations and Land and Conflict](#).
- United Nations (2019). [Joint Statement on Post-2020 Global Biodiversity Framework](#).
- United Nations Population Division. [World Urbanization Prospects: 2018 Revision](#).
- Williamson I., Enemark S., Wallace J. and Rajabifard A. (2010). Land Administration for Sustainable Development. ESRI Academic Press.



HS Number: HS/022/22E

UNITED NATIONS HUMAN SETTLEMENTS PROGRAMME

UN-Habitat

P.O. 30030, Nairobi 00100, Kenya

Tel: +254 20 762 3120

Fax: +254 20 762 4266

www.unhabitat.org

For more information please contact us:

GLTN Secretariat

Facilitated by UN-Habitat

P.O. 30030, Nairobi 00100, Kenya

Tel: +254 20 76 5199

Fax: +254 20 762 4256

E-mail: gltn@unhabitat.org

www.gltn.net