

DADAAB SPATIAL PROFILE

June 2021

Google Earth

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Abbreviations

ASAL - Arid and Semi Arid Lands
CIDP - County Integrated Development Plan
CRRF - Comprehensive Refugee Response Framework
GCP - Gross County Product
GCR - Global Compact on Refugees
GISEDP - Garissa Integrated Socio Economic Development Plan
GoK - Government of Kenya
GNI - Gross National Income
HH - Household
HLP - Housing Land and Property
ISUD - Integrated Sustainable Urban Development
KNBS - Kenya National Bureau of Statistics
LAPSSET - Lamu Port South Sudan Ethiopia Transport
MCA - Member of County Assembly
NCAP - National Climate Adaptation Plan
NCCRS - National Climate Change Response Strategy
OSR - Own Source Revenue
PoC - People of Concern
RAS - Refugee Affairs Secretariat
SDG - Sustainable Development Goal
SWOT - Strength Weakness Opportunity Threat
UNHCR - United Nations High Commissioner for Refugees
WASH - Water Sanitation and Hygiene

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Foreword

In March 2021, the Government of Kenya announced that all refugee camps in Kenya are to be closed, with a road map developed in association with UNHCR aiming for closure by June 2022. This includes both the refugee camps that make up the Dadaab complex in Garissa County as well as Kakuma and Kalobeyei in Turkana, in the far north west. As this spatial profile was in the process of being finalised at the time of the announcement and having been prepared over the course of 2020 and early 2021 the perspective of the study aimed at understanding the historical trends that led to form the environment that Dadaab exists within today, as well as a view to the future. The future considered within this profile is broadly outlined in some schematic scenarios which consider options for the camps remaining and as well as gradual closure.

Following the current announcement, the future of the area looks increasingly uncertain, with a substantial amount of ambiguity remaining regarding the details within the roadmap to closure. Questions surrounding what the future holds for the hosting communities who live in the area and rely on the infrastructure and services as well as the economic vibrancy provided by the camps are yet to be answered. As of June 2021, UNHCR and RAS are preparing to undertake a refugee verification exercise and intention survey for all current refugees to understand their intention and willingness to voluntarily repatriate to their country of origin, or to a third country. The results of this survey will not be known until late 2021 but it is anticipated that a number of refugees will need to remain in Kenya under the protection of UNHCR. Where they will reside is also a question yet to be answered.

In any case, in light of this announcement, consideration must be given to a potential drastic reduction in refugee presence in Garissa County over the coming years. This will have immediate effects upon the host community in Dadaab and Fafi Sub-counties as well as an impact upon the wider County and surrounding region. In addition to reduced refugee numbers, consideration must also be given to a likely reduction in humanitarian aid in the near future, as this would be expected to be rolled back with reduced caseloads alongside donor uncertainty. As an example, as of June 2021, UNHCR is planning to reduce their planning period down to just one year going forward. Given that the Garissa Integrated Socio Economic Development Programme (GISEDPP) is also now currently on hold, the potential both to leverage the benefits of refugee hosting in the area as well as to secure long term development look all the more uncertain.

In light of these changing circumstances however, UN-Habitat advocates that the role of this study remains unchanged. The spatial profile provides a solid understanding of the current context of the area and provides a useful baseline for the future planning of the Dadaab area for whoever remains living in the area. The document can still assist decision-makers in prioritizing funding and implementation modalities on an informed basis. It is recommended that this study is used to understand some implications for the future of the area based on the scenarios set out in the last chapter and that humanitarian and development agencies, as well as the County government who have supported the formulation of this document consider this information well.



Introduction

Purpose

The human settlements that make up the Dadaab Complex are the largest agglomeration of population in Garissa County as well as its neighbouring Counties. The town of Dadaab and the refugee settlements of Dagahaley, Ifo and Hagadera are situated in Dadaab and Fafi Sub-Counties, and have played a critical role in hosting refugees and humanitarian organizations since the early 1990s.

This spatial profile aims to provide a succinct overview of the area and is part of a wider set of project initiatives that examines how the socio-economic development of the area can be enhanced, holistically to benefit both refugees and host communities living in the area. In order to design interventions of that nature, it is critical to begin with comprehending the socio-conditions related to the area. This is important given that Garissa County, a historically marginalized region of Kenya, with high poverty levels and poorly developed infrastructure, alongside decades of hosting refugees. This in combination with other factors have left households in the area to experience unique development challenges, which can now be responded to in new ways since Devolution as well as a focus upon linking humanitarian and development approaches. A strong focus upon refugee integration in the County Integrated Development Plan II 2018-2022 (CIDP II) as well as initiatives such as the Garissa Integrated Socio Economic Development Programme (GISED P) are key foundations to shifting the agenda and providing a base from which sustainable and concrete interventions can begin to take place.

The broad intention of a spatial profile is in support of this process, and aims to prepare a multi-scalar and multi-dimensional set of maps and supporting narrative which serve as a basis for informing further study and future development scenarios for the area. The document should be seen as a "snapshot" which can be developed upon, updated and improved. The spatial analysis data developed as part of this profile will also be shared with the Garissa County government for their own use.

Beginning with an analysis of the National context with relevance to Dadaab and the relevant plans, policies and trends that may influence the areas development this then progressively zooms into the County Context followed by spatial analysis of the Settlement Context and its more local considerations. The profile provides a framework for spatially and strategically analysing the settlement from a development perspective which aligns with National and County level priorities. By both collating data and observations from primary sources and field operations and synthesizing narratives and opportunities for tangible

development and potential integration, humanitarian actors, development agencies, local and national governments as well as other relevant stakeholders can be brought onto the same page.

Methodology

The methodology comprised primary and secondary data collection, field visits, alongside key informant interviews, consultations with local and national government actors as well as three focus group discussions. A desktop review of grey and academic literature was undertaken to triangulate information from the primary data collection methods. Practice based toolkits, reports, guidance notes and case studies comprised the majority of the literature reviewed. This was then supported by detailed GIS analysis at national, district and settlement scale to synthesise and distil information into graphics and maps with a supporting narrative. The information was finally reviewed and validated by specialist field and headquarter teams in both UN-Habitat and the Turkana County Government

Target Audience

The profile should provide entry points for country-level/ settlement-level practitioners to feed into both the profiles and longer term development process. The analysis aims to consider the various scales of work and the relevant outcomes, e.g strategic and country level information for senior humanitarian and development decision makers as well as settlement technical information to support the operational teams. It is envisioned that this could also be used as a basis for open and informed decisions with local government and community members. This profile will also aim to continue to support activities under the GISED P framework.

Kenya's Devolution in relation to refugees

In the Kenyan context, Devolution is key to any moves towards integration as local authorities are usually charged with responding to both the positive and negative impacts of refugee hosting.

The integration of refugees in Garissa County is complicated due to the region's historical marginalisation resulting from cultural differences between ethnic Somalis, who primarily inhabit the northeast of the country, and representatives in the national government, who don't usually reflect Somali interests in policy-making. As a result of a few violent episodes, Dadaab Refugee Complex has also had controversial moments in the past, but up until the early 2010's there was little in the way of terror induced conflict, and aside from inter-clan tensions, refugee/host social dynamics were relatively peaceful. It was not until Kenyan troops formally engaged in conflict in Somalia that terrorism became an issue.¹

Outside of ethnic and inter-clan tensions, competition over access to opportunities – including access to and use of infrastructure, education and healthcare facilities, markets, financial resources and land for grazing and agriculture – can also instigate conflict. These tensions are often exacerbated by historical underinvestment in infrastructure, social services and income-generating activities in the ASAL region of the country.

Garissa Integrated Socio-Economic Development Plan

Although now currently on hold following the GoK's announcement to close the Dadaab camps by June 2022, the GISED P was set out as an initiative led by the Garissa County Government that builds on existing county plans. Under the Comprehensive Refugee Response Framework (CRRF) umbrella, it aims to take a whole of society approach to humanitarian and development nexus programming in the county. This is particularly interesting given that the Plan will not only focus on the camps within Dadaab Complex, or the area outside the camps, but the whole county.

Driving factors in the potential for the area's future

The A3 highway links Nairobi to Somalia through Dadaab Refugee Complex, and links Dadaab to Garissa Town. The linkage between Dadaab and Garissa will be key as the planned Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) Corridor has the potential to bring an economic boost to the area through a regional rail connection and an export processing zone in Garissa.

Garissa County is one of the most underdeveloped regions in Kenya. It has the 2nd lowest Gross County Product (GCP) growth and the 8th lowest GCP between 2013 and 2017 across the country. The County also has the largest proportion of refugees in relation to its hosting population of any county in Kenya. Dadaab Refugee Complex is home to the largest cluster of urban residents in the County, indeed in all of the frontier counties. If it was classified as an urban district, it would be the third largest in Kenya, after Nairobi and Mombasa.

Despite the brief opening and closure of 2 of the 5 camps in the Dadaab Refugee Complex, the population of all the camps has since 2007 remained above 200,000. Without political pressure, population figures seem likely to continue to grow.

As a result of COVID-19, the health infrastructure in Dadaab is attracting Somali migrants from as far as Kismayo according to anecdotal reports. In general, Dadaab's access to water makes it somewhat uniquely positioned to host large populations in an otherwise drought stricken region.



NATIONAL



CONTEXT

National & International Setting

The Republic of Kenya is the economic, financial and transport hub of Eastern Africa, bordered by Somalia, Ethiopia, South Sudan, Uganda and Tanzania. It has a population of 51.4 million (2019)² which is heavily concentrated in and around the capital city of Nairobi (population 4.4 million),³ in the west of the country along Lake Victoria and along the coast around Mombasa. Apart from these areas, Kenya is relatively sparsely populated, in particular in the northern regions of the country. This results in the concentration of the majority of infrastructure and services in these highly populated areas.

In 2015, Kenya became classified by the World Bank as a lower-middle income country based on the country's Gross National Income (GNI) per capita, purchasing power parity (PPP) (current international \$). Kenya's GNI per capita, PPP continues to rise, currently standing at \$4,420 (2019).⁴ Kenya has a Human Development Index (HDI) of 147 out of 189 (2019)⁵ which has been increasing since the 1990's due to increased life expectancy, increased expected years of schooling and increased GNI per capita. Kenya also has one of the fastest growing economies in Africa, however the wealth generated from this growth is not evenly distributed, with over 40% of Kenyans living on less than a dollar a day.⁶ The majority of Kenya's poor live in rural areas, with 90% of Kenyans who fall into the bottom 40% of income distribution living in rural areas.⁷

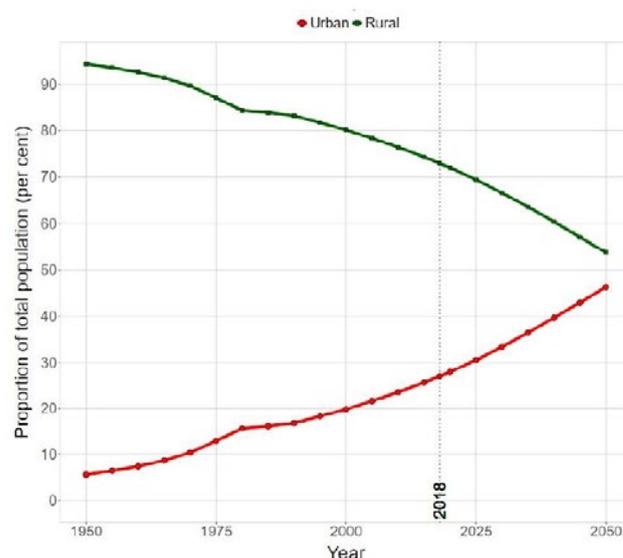
Like most African countries, Kenya is characterized by rapid urbanization and urban growth, with a current annual population growth rate of 2.3% (2018).⁸ Kenya's population is 73% rural and 27% urban (2018),⁹ with the rural population increasing at a rate of 1.7%¹⁰ and the urban population rate increasing at a rapid rate of 4%.¹¹ Kenya is the 19th most rapidly urbanizing country in the world.¹² By 2050, it is predicted that approximately half of Kenya's population will be living in cities.¹³

Historical drivers of urbanization include the colonial establishment of administrative, cultural, economic and recreational life in a small number of easily accessible centres. There are also economic, employment, and educational opportunities available in cities that rural areas cannot provide. This leads to high rates of rural-urban migration as Kenyans move to cities in pursuit of these opportunities. Another contributing factor to Kenya's high rate of urbanization is in-situ urbanization, which is when smaller settlements are absorbed into larger cities as those cities' boundaries spread.

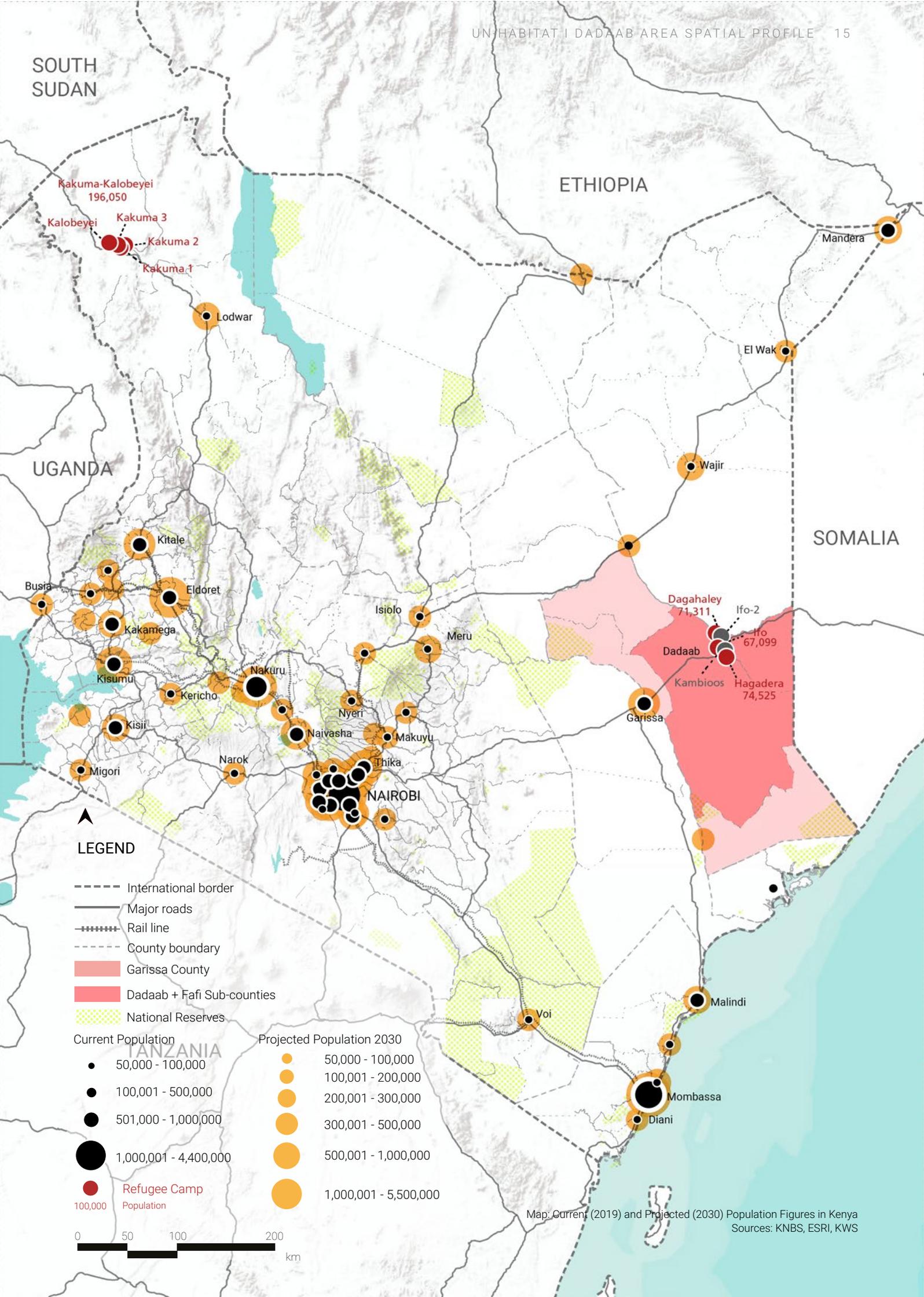
The present pattern of urbanization in Kenya follows various drivers, some of which include transport infrastructure corridors, dominant economic activities and

economic potential (e.g. agriculture, mining, pastoralism etc.), the presence of natural resources (e.g. oil, minerals, water bodies) and administrative functions. Historically, the majority of Kenya's urbanization has happened along the Northern Corridor, a transport route which connects Kenya's port city of Mombasa in the south-east to the border town of Malaba and on to Uganda in the west. Based on a 2016 Urbanization Review by the World Bank, about 85% of all urban dwellers in Kenya live within 35 kilometres of the Northern Corridor, while 75% of the total urban population live within just 15 kilometres of the corridor.¹⁴

Overall, despite Kenya's rapid urbanization rate, the country is currently under-urbanized. Rapid rates of urbanization mean that connectivity between rural and urban areas is going to become increasingly important as both people and goods travel between these areas. Greater focus and investment will need to be given to Kenya's urban-rural linkages to accommodate the levels of urbanization predicted to occur and to help raise the quality of life for everyone living in the country.



Urban and Rural Population as Proportion of Total (1950 - 2050)
Source: UNDESA 2018



SOUTH SUDAN

ETHIOPIA

UGANDA

SOMALIA

Busia

Kitale

Eldoret

Kakamega

Kisumu

Kericho

Kisii

Migori

Narok

Nakuru

Nyeri

Naivasha

Makuyu

Thika

NAIROBI

Isiolo

Meru

Voi

Malindi

Mombassa

Diani

Kakuma-Kalobeyei
196,050

Kalobeyei

Kakuma 3

Kakuma 2

Kakuma 1

Lodwar

El Wak

Wajir

Mandera

Dagahaley
71,311

Ifo-2
67,099

Dadaab

Kambioos

Hagadera
74,525

Garissa

LEGEND

- International border
- Major roads
- +— Rail line
- - - County boundary
- Garissa County
- Dadaab + Fafi Sub-counties
- National Reserves

- Current Population
- 50,000 - 100,000
 - 100,001 - 500,000
 - 501,000 - 1,000,000
 - 1,000,001 - 4,400,000
- Refugee Camp Population
- 100,000

- Projected Population 2030
- 50,000 - 100,000
 - 100,001 - 200,000
 - 200,001 - 300,000
 - 300,001 - 500,000
 - 500,001 - 1,000,000
 - 1,000,001 - 5,500,000



Map: Current (2019) and Projected (2030) Population Figures in Kenya
Sources: KNBS, ESRI, KWS

Governance & Administration System

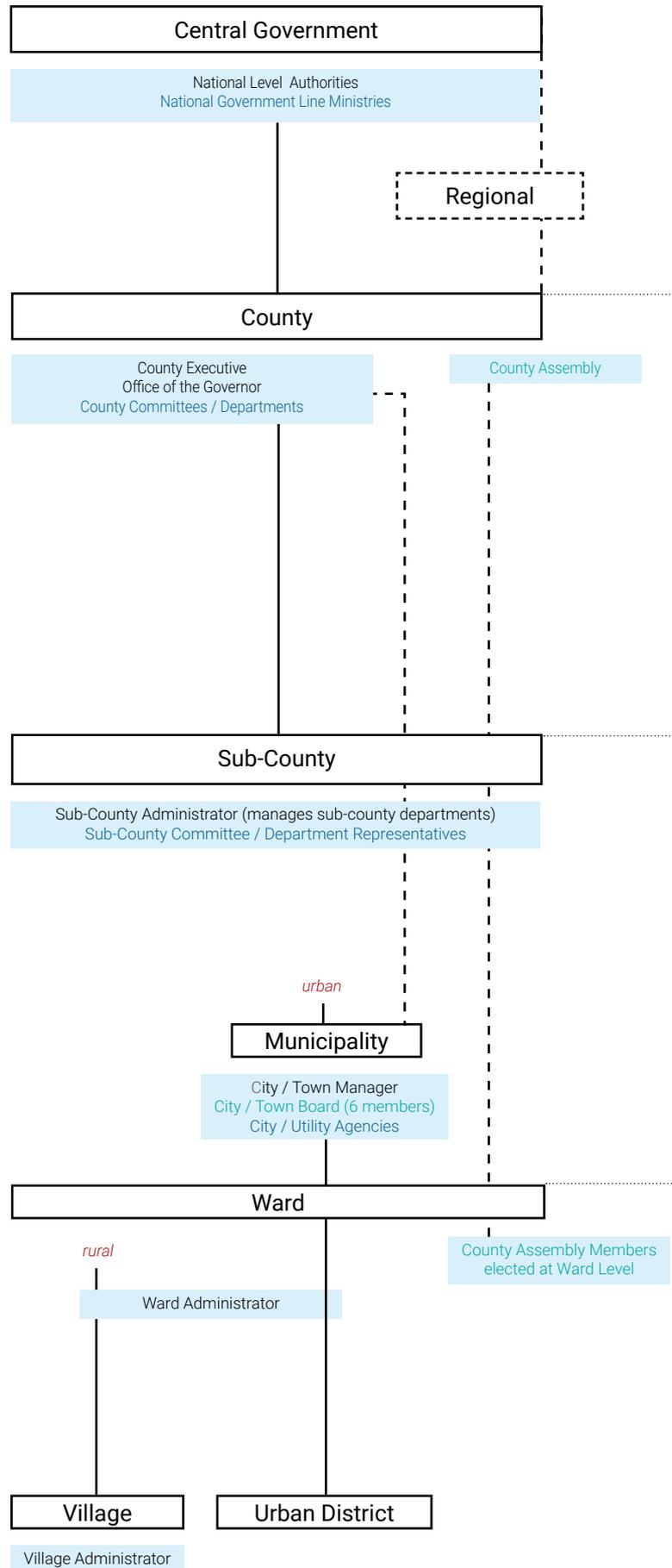
Kenya is politically structured as a democratic republic with two tiers of government, national and county, formed from a period of political reform which replaced the 1963 Independence Constitution with the Constitution of Kenya 2010.¹⁵

The County Government Act (2012) and devolution in general bring development and investment resources closer to local communities and present a unique opportunity for a balanced urban structure throughout Kenya. Driven by the decentralization of administrative functions which has already resulted in the rapid growth of county headquarters throughout Kenya, devolution is projected to significantly shape opportunities for a more equal distribution of resources between urban centres in regions previously under-represented at the national level. This is particularly key in the ASAL counties, where political marginalization has for decades slowed development. By assigning urban management duties to county governments, the County Government Act equally presents opportunities for urban planning as well as enhanced public participation in urban planning processes at the local level.

The 2012 Act assigned greater power to the 47 newly created county governments, giving counties the ability to manage their own affairs and development. It also aimed to give citizens a stronger sense of identity and self-empowerment, helping to protect minorities and marginalized communities through better representation in local government.¹⁶ Kenya's 47 counties are then further subdivided into 290 sub-counties, which are broken up into departments that mirror departments and committee functions at the county level.

Each county's government consists of three main arms - the Executive, Legislative (Assembly) and Judiciary branches. The County Assembly, which makes up the legislative branch, is composed of members elected at the ward level. The County Executive is responsible for facilitating access to financial resources, human capital and the facilities and equipment needed by County Departments to enact plans.¹⁷

With regard to planning, regional development authorities can also draft plans at a multi-county level. Such plans typically focus mainly on land use and resource management, as is the case with the Tana and Athi Rivers Development Authority.¹⁸ Plans prepared in respective county departments are submitted by the County Executive Committee of the Ministry to the Governor who then tables them to the County Assembly for approval.



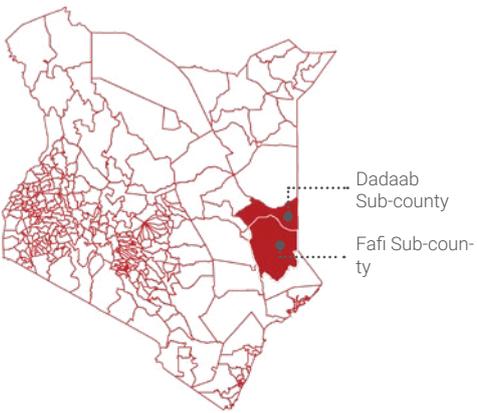
National boundary



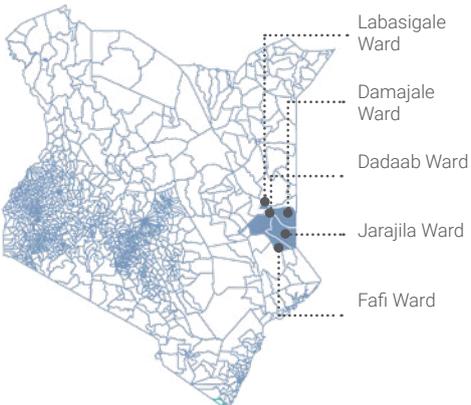
Counties



Sub-Counties



Wards



Kenya Vision 2030
 Kenya National Spatial Plan (2015 - 2045)
 Kenya National Adaptation Plan 2015-2030

Garissa County Integrated Development Plan (2018-2022)

Garissa County Spatial Plan

Sub-County Strategic Development Plan

Dadaab Town Spatial Plan

Existing
 Missing

Relevant National Planning Frameworks

Kenya Vision 2030

Kenya Vision 2030 is the country's long-term development blueprint. Its objective is to transform Kenya into a "newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment." The vision identifies the role of urbanization in the attainment of its objectives and creates special growth areas and a strategy to develop the infrastructure necessary for accelerated and sustainable urbanization.¹⁹ Anchoring the Vision's 3 pillars, land reform, is a key issue raised in the document that also plays a major role in Garissa's path to development (in this context, for community land). Emphasis is also placed on water harvesting, management, supply and sanitation, particularly in ASAL areas, which is crucial for diversifying Garissa County's economy. Moreover, Garissa was included as part of a flagship project for housing and urbanisation under the 'Metropolitan and Investment Plans Initiative'.²⁰

Kenya National Spatial Plan (2015 - 2045)

In Kenya's latest National Spatial Plan, the A3 highway is highlighted as a link between Nairobi and Somalia. The highway passes through the town of Garissa and Dadaab Refugee Complex, establishing Garissa as a 'gateway town' whose functionality and livability needs to be enhanced.

The Plan catalogues Zone 2, the 'North East' - including the urban centres of Wajir, Dadaab, Isiolo and Garissa - as a spatial growth zone with specific potentials, policies and strategies. Livestock production, mineral resources and irrigated agriculture are listed as areas worth pursuing due to their development potential in northeastern Kenya. Policies such as the sustainable use and exploitation of natural resources, balanced growth, increased investment in social and physical infrastructure and environmental conservation are underscored in support of the proposed potential areas of growth. The strategies that could then bolster such areas and policies include: selective development concentration; construction of key infrastructure to support resource exploitation and urban development; resource mapping and exploitation; urban development around key human settlement and investment hubs such as Garissa, Mandera, Wajir; and enhanced agriculture and food production along the Tana River.

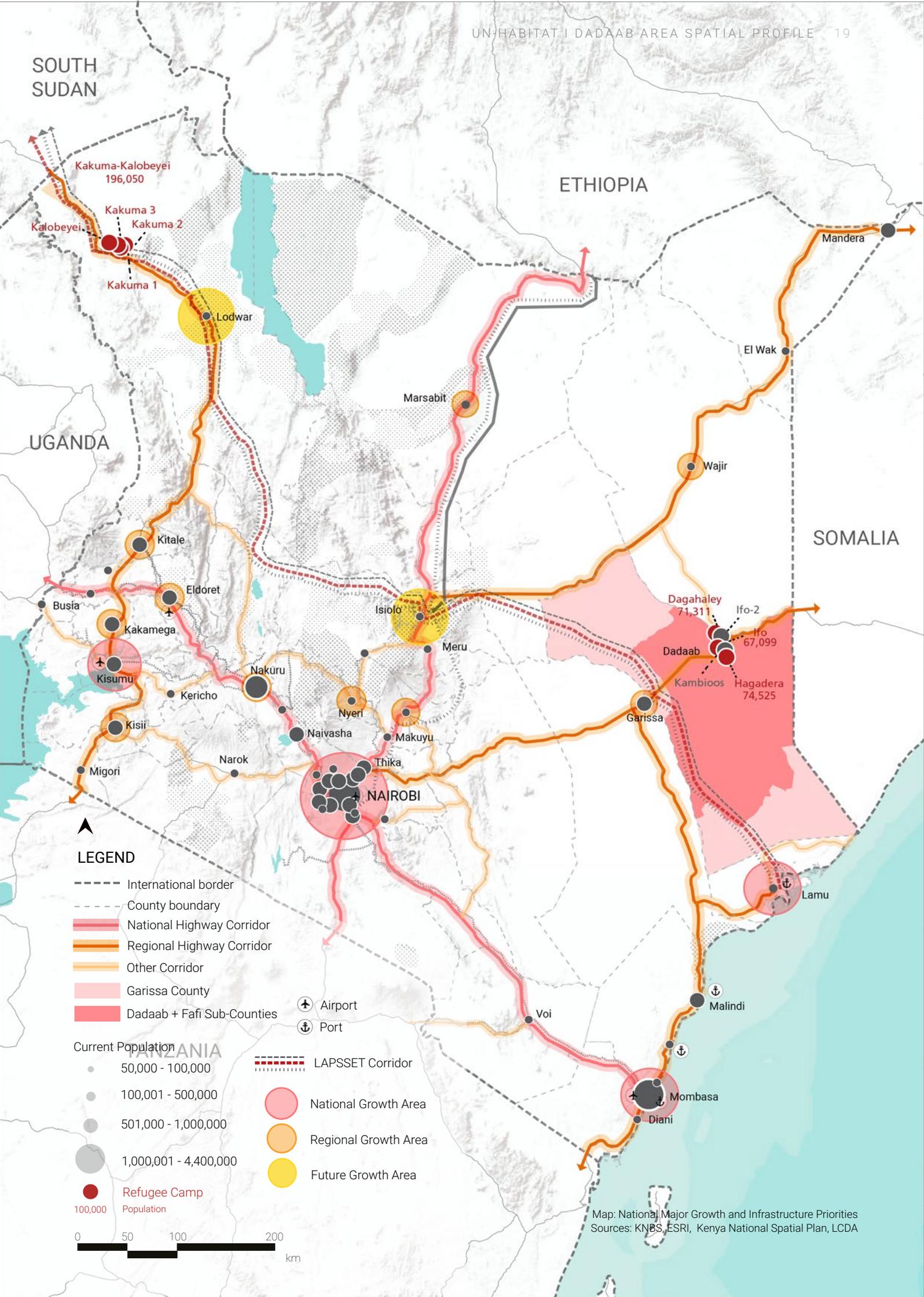
Kenya National Climate Adaptation Plan: 2015-2030

The 2015 - 2030 National Climate Adaptation Plan is Kenya's first plan to centre on the issue of climate adaptation. It builds on foundations laid by the National Climate Change Response Strategy (NCCRS, 2010) and the National Climate Change Action Plan (NCCAP 2013-2017) and is aligned with Vision 2030 in support of the Paris Agreement, integrating climate change scenarios into spatial planning through resilience strategies.

LAPSSSET

As part of a major transportation and investment corridor running through northern Kenya, the Lamu Port-South Sudan-Ethiopia Transport (LAPSSSET) Corridor proposal envisages a new road network, rail line, oil pipeline, oil refinery in Lamu, free port in Lamu, resort city in Isiolo, and international airports in Isiolo and Lamu. The full corridor is designed to move oil from South Sudan to a new refinery in Lamu, increase cross-border trade with South Sudan and Ethiopia, and provide "the backbone for opening up Northern Kenya and integrating it into the national economy."²¹ While uncertainties remain about some aspects of the project, LAPSSSET could deliver an estimated USD 25-30 billion in infrastructure investment across the region in coming years. This would be a remarkable turn of events for northern Kenya, which has previously attracted almost no government investment in its infrastructure.

A stop along the Corridor is planned in Garissa Town, which would help spur development in the Garissa-Bura Growth Area. LAPSSSET would also provide a secondary link connecting Garissa and Dadaab to Nairobi and Somalia.



SOUTH SUDAN

ETHIOPIA

UGANDA

SOMALIA

LEGEND

- International border
- - - County boundary
- ▬ National Highway Corridor
- ▬ Regional Highway Corridor
- ▬ Other Corridor
- ▬ Garissa County
- ▬ Dadaab + Fafi Sub-Counties

- Current Population**
- 50,000 - 100,000
 - 100,001 - 500,000
 - 501,000 - 1,000,000
 - 1,000,001 - 4,400,000
 - Refugee Camp
- 100,000 Population

- ▬ LAPSSET Corridor
- National Growth Area
- Regional Growth Area
- Future Growth Area

- ✈ Airport
- ⚓ Port



Map: National Major Growth and Infrastructure Priorities
Sources: KNBS, ESRI, Kenya National Spatial Plan, LCDA

Climate Risk Context

In 2010, Kenya developed a National Climate Change Response Strategy (NCCRS) which recognized the importance of climate change impacts for the country's development. This was followed by the development of the National Climate Change Action Plan (NCCAP) in 2012 and a draft National Climate Change Framework Policy in 2016.

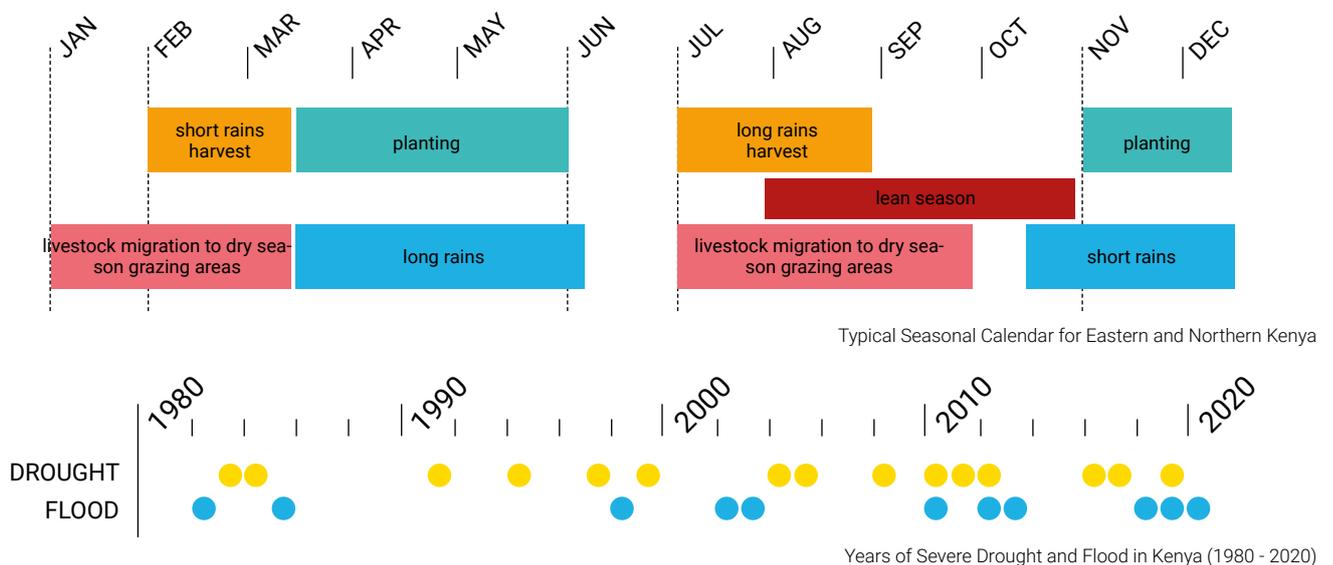
While these are clear steps in the right direction to acknowledging issues related to climate change in Kenya, more needs to be done to facilitate national and county governments' ability to implement climate adaptation measures immediately. According to the ND-GAIN Country Index, Kenya is ranked 152 out of 181 countries (2018).²² It is the 36th most vulnerable country and the 35th least ready country. Kenya's high vulnerability score (0.533) and low readiness score (0.283) mean that it is not well able "to leverage investments and convert them to adaptation actions" as measured by economic, governance and social readiness.²³ These scores indicate that the country has a great need for both investment and innovations to improve its readiness and reduce its vulnerability to climate change. Social readiness (0.190) scored particularly low in the vulnerability category and infrastructure scored particularly low (0.320) in the vulnerability category. This is especially worrying given Kenya's regional influence on the continent.

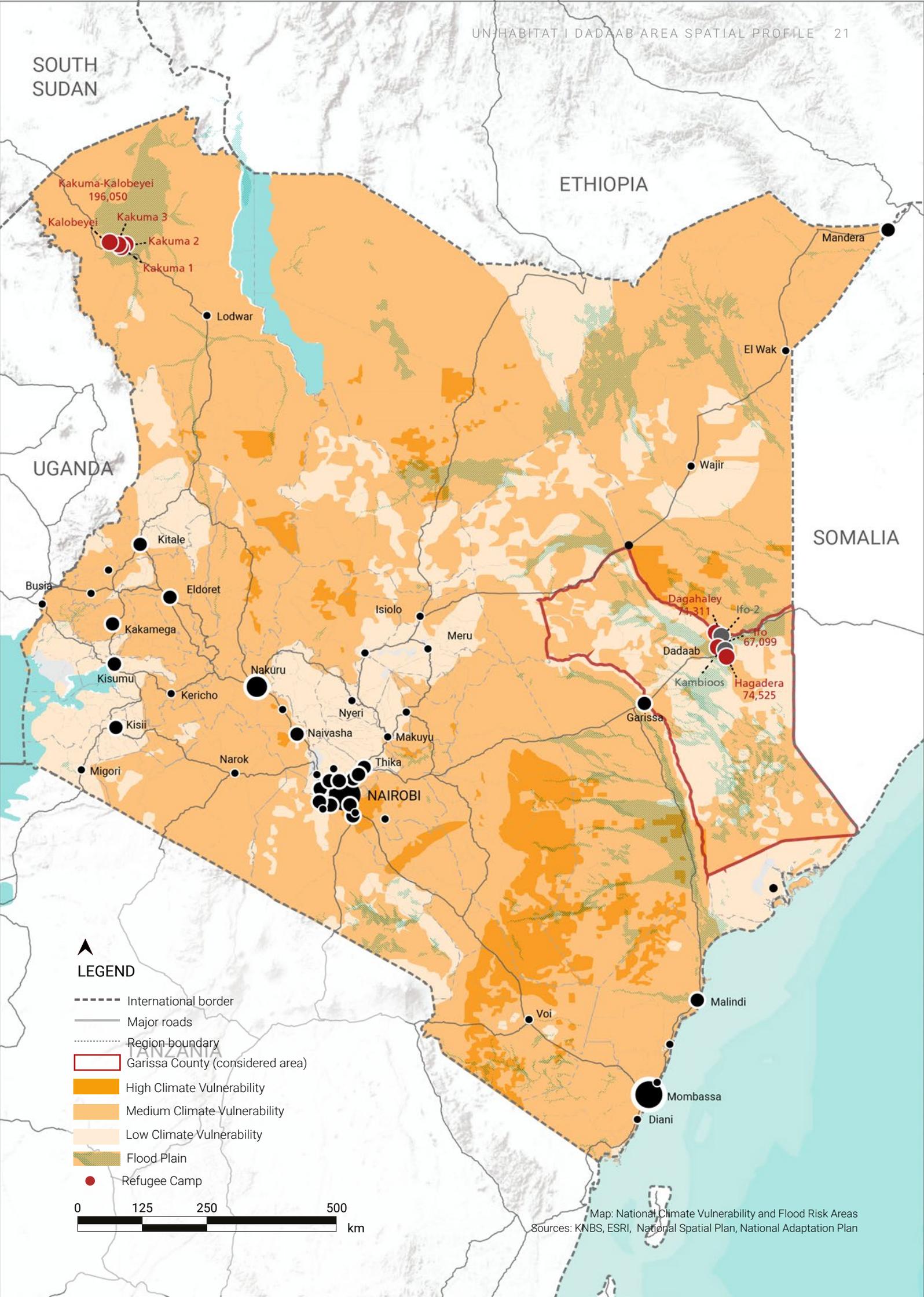
With the largest economy in East Africa and a population of 48.5 million, Kenya serves as the regions' financial, trade and communications hub. However, the country's economy is largely dependent on rainfed agriculture and tourism, each susceptible to climate variability and change and extreme weather events.²⁴ Climate change also intensifies existing vulnerabilities by introducing an additional level of uncertainty, particularly in the ASALs which cover over 80 per cent of the country.²⁵

Increased temperatures in the future are likely to worsen drought conditions and may have a significant impact on water availability and general well-being. Increasing inter-seasonal variability and declining rainfall in the main rainy season have impacted cereal production in recent years. Recurrent droughts and floods - likely to be exacerbated by increasing temperatures, heavy rainfall events and sea level rise - lead to severe crop and livestock losses, famine and displacement.

On the other end of the spectrum, excessive flooding in Kenya occurs relatively frequently (on average every three to four years) and is linked to El Niño or La Niña episodes that can lead to extreme weather in the country and region. Annual rainy seasons in Kenya are becoming progressively wetter, with sudden and/or late onsets bringing with them floods and inundation. Major floods periodically afflict the Winam Gulf of Lake Victoria, Lower Tana basin and the coastal regions. Seasonal floods in the wet seasons of March-April-May and October-November-December tend to affect the western, northern, eastern, central and south-eastern parts of the country. Riverine floods are the most dominant floods in Kenya, although the ASALs are particularly vulnerable to flash flooding. The economic costs of flooding to the country are very high, resulting in losses of 5.5 percent of GDP every seven years.²⁶

Climate vulnerability in the surrounding region (Somalia, Ethiopia) also impacts Kenya. Conflict sparked over diminished access to natural resources and land due to climate change can spillover into Kenya through forced displacement and migration trends towards urban centres. As Dadaab Refugee Complex is a historical centre of refuge and Garissa County is rapidly urbanizing, it will be increasingly critical to plan for resilient livelihoods and urban growth in the area in the years to come.





SOUTH SUDAN

ETHIOPIA

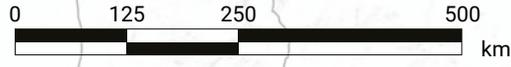
UGANDA

SOMALIA

NAIROBI

LEGEND

- International border
- Major roads
- REGION BOUNDARY
- ▭ Garissa County (considered area)
- High Climate Vulnerability
- Medium Climate Vulnerability
- Low Climate Vulnerability
- Flood Plain
- Refugee Camp



Map: National Climate Vulnerability and Flood Risk Areas
Sources: KNBS, ESRI, National Spatial Plan, National Adaptation Plan

Displacement Dynamics in Kenya

Kenya is a migration hub in Eastern Africa, acting as a destination, origin and transit country. The vast majority of immigrants into Kenya are from other African countries, in particular from other East African countries. Kenya has provided asylum to influxes of refugees since the 1980's and it is the third largest refugee hosting country in Africa. This is mainly due to the relative stability of the country and the instability of neighbouring Somalia and South Sudan. There are over 494,000 refugees currently seeking refuge in Kenya, predominantly from Somalia (54%) and South Sudan (25%).²⁷ The two major areas, outside of Nairobi, where refugees have been settled are Kakuma-Kalobeyei in the north-west of the country near the South Sudan-Ugandan border and Dadaab in the east of the country near the Somali border.

Prior to the 1990s, no large-scale camps had come into existence in Kenya, and limited support was provided from the national government. Refugee policy was mainly dealt with at the local level in the country, and churches and aid organizations were the predominant groups concerned with integration.²⁸ However, in the early 1990s, when hundreds of thousands of refugees fleeing conflict and insecurity in Somalia, Ethiopia, Sudan, Burundi, Rwanda and the DRC arrived in Kenya, locally-led integration policies were reversed. By the end of 1992, with the collapse of Somalia's central government in 1991 coupled with protracted drought, Kenya hosted the first mass influx of refugees in the country's history - almost 300,000 Somali refugees.²⁹

Close to 70,000 Ethiopians added to the huge number of Somalis seeking refuge in Kenya after conflict broke out in Ethiopia towards the end of 1992. An additional 22,000 Sudanese, half of whom are believed to have been unaccompanied minors, also added to the large influx. Throughout the 1990s, as tensions led to the Second Congo War in the DRC, refugees from the large land-locked country also started fleeing for Kenya. Whereas before 1990 refugee populations were estimated at between 12,000 and 15,000, in 1991 that figure rose to 120,000, reaching over 400,000 in 1992.³⁰

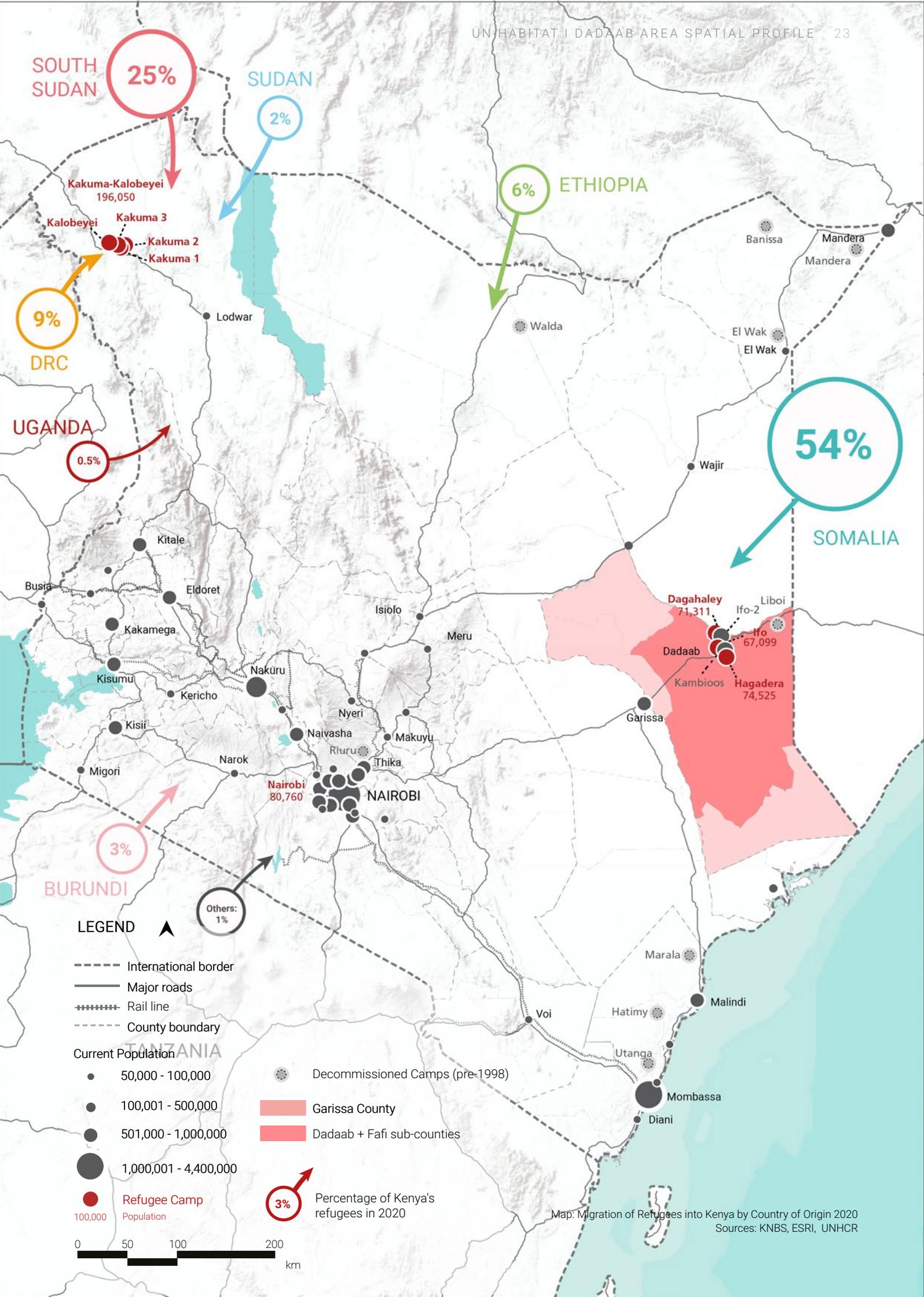
The unprecedented number and profiles of new arrivals to Kenya shifted refugee policy from integration to a primarily encampment-centred approach. Most refugees in the country were transferred to the relatively isolated and low density camps in Dadaab and Kakuma, locations which are reported to have been chosen in order to minimise the potential for conflict with Kenya. However, today settlements in Kakuma and Dadaab have grown substantially in number and density, with Dadaab accommodating the largest cluster of urban residents of any frontier county in Kenya.

Despite a major influx of Somali refugees in 2011, with the planned closure of Ifo 2 and Kambioos in Dadaab, Kenyan policy began to favour repatriation to Somalia beginning in 2015. This move reduced Garissa's refugee population, but Somalis, numbering 265,000 today, still make up over half of refugees in Kenya, the bulk (209,000) of whom are located in Dadaab. This continues to influence integration and security dynamics, particularly in Garissa County.³¹

Kenya's Refugee Bill 2009, specifically, outlines the rights and duties of asylum seekers in Kenya. The Bill states that no person shall be refused entry into Kenya, expelled, extradited or returned to any other country and that refugees shall be enabled to contribute to the economic and social development of Kenya by facilitating access to, and issuance of, the required government documentation.³² "The benefit of the subsection 1 may not, however, be claimed by a refugee or asylum seeker whom there are reasonable grounds for him or her being regarded as a danger to the national security or public order of Kenya."³³ It also stipulates that the Commissioner, in conjunction with national and county government authorities, "may require any refugee is [sic] within a designated areas [sic] to move to or reside in any other designated area." Similarly, the Cabinet Secretary is responsible for the control of designated areas, including "the organization, safety and discipline and administration of a designated area."³⁴



Riyad Minty 2011



Map: Migration of Refugees into Kenya by Country of Origin 2020
Sources: KNBS, ESRI, UNHCR

Displacement Dynamics - Dadaab in Kenya

Aside from the relative remoteness and low population numbers of their surroundings, Kakuma and Dadaab are not far from borders with Somalia, Ethiopia, Uganda, Sudan and South Sudan. Since many of the Somalis who sought refuge in Kenya in the early 1990s passed through the region along the trading route between Nairobi and Kismayo, in strictly geographic terms, Dadaab was a logical location to settle refugees. It is also possible that in addition to its proximity to the border, the availability of water resources were taken into account. In fact, Hagadera was the historical site of a sultan's fort, and during the second world war it served as a British Army chosen specifically because of its water supply.³⁵ Yet, although water resources are more readily available than in Kakuma, Dadaab was originally planned for 90,000 refugees. Had the settlement been planned for more refugees from the outset, perhaps the site selection and arrangement of individual camps would be different.³⁶

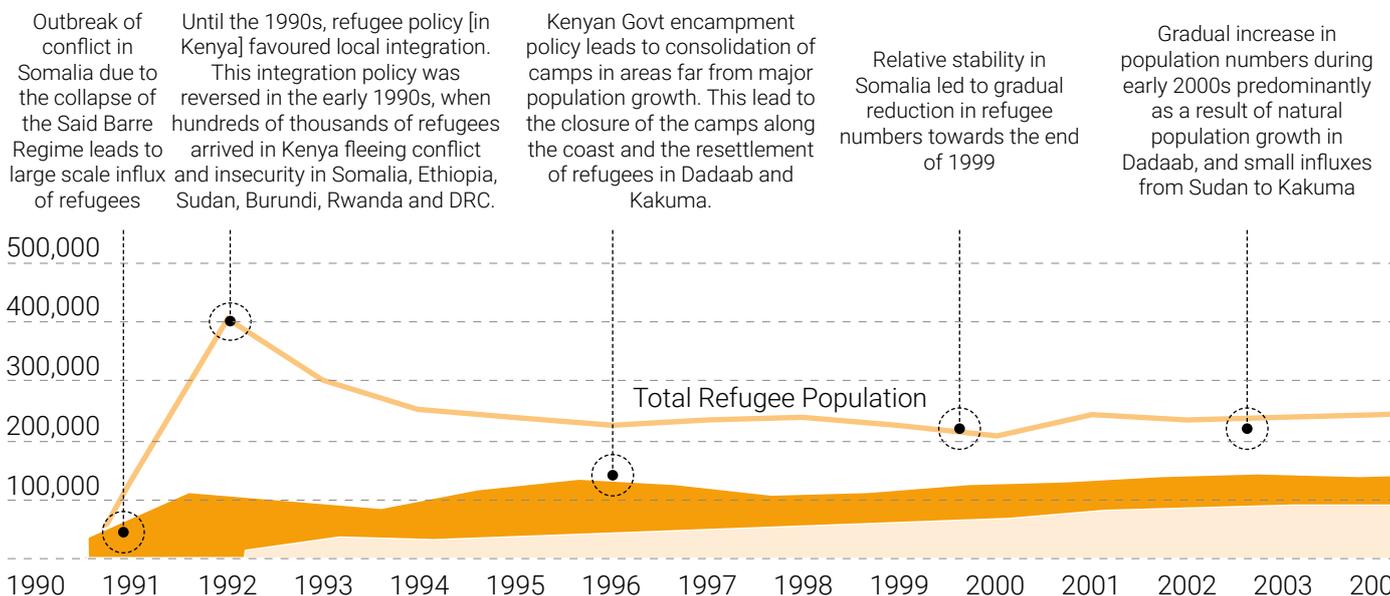
In many ways the similarities in cultural and linguistic backgrounds in frontier counties in Kenya have meant that there is little tension between host communities and refugees. On the other hand, secessionist conflict dating back to the 1960s in Kenya's former Northeastern Province (now split between Mandera, Wajir and Garissa Counties) led to emergency rule of the Province until 1991. It also caused discrimination against Kenyan Somali populations in the northeast that remains today.

Despite this backdrop, the region was considered relatively stable until the 2000s with the spillover into Kenya of renewed conflict between the Somali state and Al Shabaab. A downturn in the Kenyan economy, increases

in small arms sales, a dearth of arable land and general social unrest also fuelled refugee policy changes at the national level.

For the past decade security concerns, including very serious terrorist acts attributed to Somali refugees or allegedly committed with their support (such as the Westgate attack in September 2013 and the Garissa University shooting in April 2015), have tainted refugee issues and affected the public perception of refugees. The shooting in 2015 and the recent attack on the Dusit Hotel in January 2019 catalyzed the Government's wish to close the Dadaab camps. In May 2016, the Government of Kenya disbanded the Department of Refugee Affairs (DRA). The Refugee Affairs Secretariat was established several months later and tasked with a similar mandate as the DRA.

In 2017, the Kenyan High Court blocked the closure of Dadaab citing the unconstitutionality of the move due to both the country's international obligation to protect those in danger and the lack of confirmation on refugees' willingness to relocate. However, in 2017 and 2018, with the voluntary repatriation of many numbers of refugees, Ifo 2 and Kambioos closed. In February 2019, and again in March 2021 the Government reiterated its call for the closure of the Dadaab camps, but over 200,000 still remain in the three oldest camps - Dagahaley, Ifo and Hagadera. Although the future of the camps remains uncertain given recent political pressures, they have been a feature of the area for almost three decades, making it hard to foresee a durable solution that does not consider potential integration





Birdseye view of Ifo Camp, Dadaab © UNHCR 1992

Refugee influx from Somalia increases due to fighting between Ethiopian troops and the Islamic Courts Union (ICU), the emergence of Al-Shabaab

Refugee population in Kenya reaches its peak in late 2011, at approximately 566,487, with almost 470,000 housed in the Dadaab complex

Slowdown in the rate of repatriation of Somali refugees due to severe drought

IGAD adoption of Nairobi Declaration on durable solutions for Somali refugees, Kenya signs on to CRRF & IGAD adoption of Djibouti Declaration on Refugee Education

Despite Kenya's encampment policy, 75,000 refugees are registered as urban refugees outside the camps, with their presence implicitly endorsed by the Kenyan authorities

Refugee Act 2006 is passed, recognising statutory and prima facie refugees.

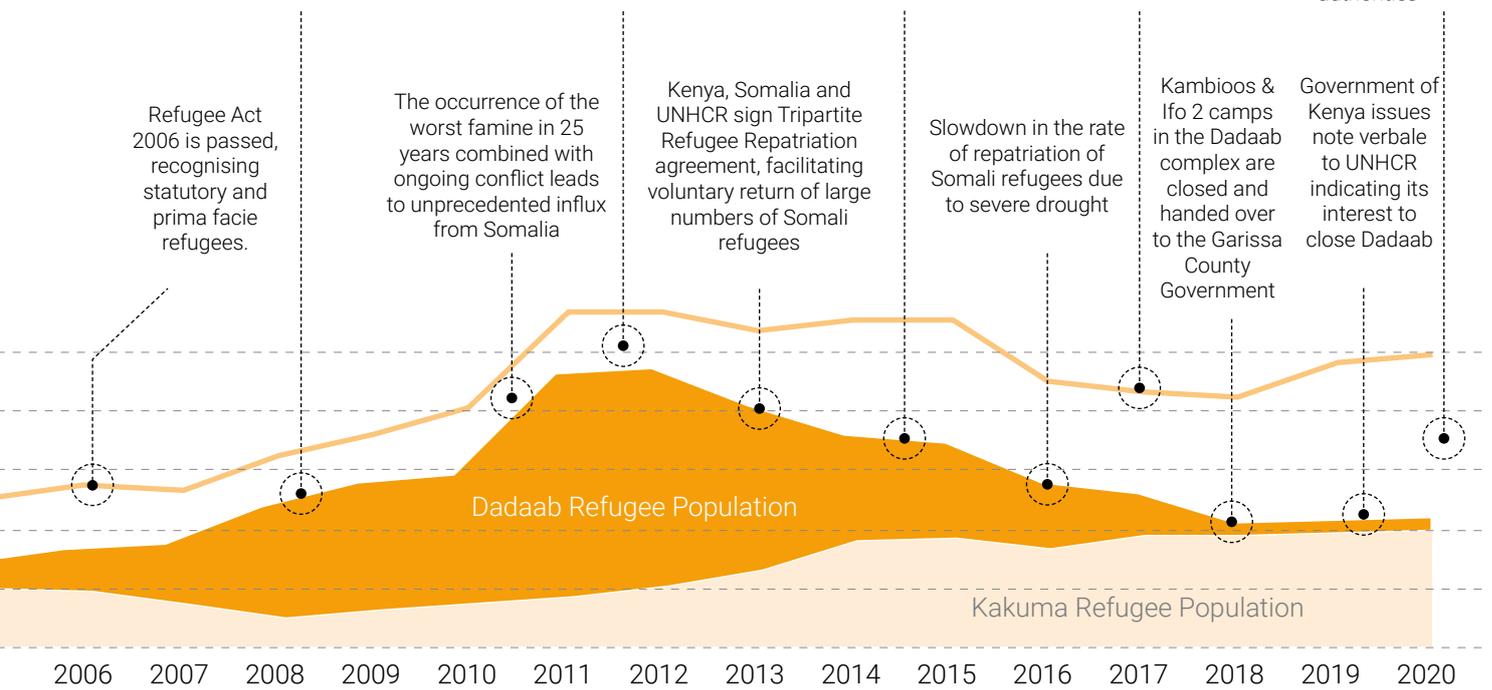
The occurrence of the worst famine in 25 years combined with ongoing conflict leads to unprecedented influx from Somalia

Kenya, Somalia and UNHCR sign Tripartite Refugee Repatriation agreement, facilitating voluntary return of large numbers of Somali refugees

Slowdown in the rate of repatriation of Somali refugees due to severe drought

Kambioos & Ifo 2 camps in the Dadaab complex are closed and handed over to the Garissa County Government

Government of Kenya issues note verbale to UNHCR indicating its interest to close Dadaab



Pivotal historical events in relation to refugee populations in Dadaab and Kakuma Refugee Settlements
Sources: UNHCR, World Bank, USAID



GARISSA COUN



UNITY CONTEXT

Garissa County Planning Context

Garissa County Government comprises three arms. They are the County Executive (Committee), the Legislature (County Assembly), and the Public Service (County Public Service Board). The Members of the County Assembly (MCA's) are the elected officials and represent their ward level constituencies. The last election was in 2017 with the next one scheduled for 2021.

With regard to planning, counties are tasked with articulating and implementing the physical planning policies outlined in the National Spatial Plan.³⁷ This is meant to be carried out through 5 key plans at the county level: The County Integrated Development Plan (CIDP), County Sectorial Plans, County Spatial Plans, County Urban Areas and Cities Plans, and County Performance Management Plans. These plans, in addition to humanitarian and development initiatives such as GISED, help set a baseline for county assemblies' structuring of annual budgets.

County Integrated Development Plan (CIDP)

CIDPs allow county governments to set a development agenda and articulate priority areas. They are also meant to provide a means for the active inclusion of public voices within that process.

The priorities for the Garissa CIDP II (2018-2022)³⁸ are organized under each of the 10 sectors under the Executive branch of the county government:

1. Health and Sanitation Services;
2. Roads and Transport;
3. Lands and Housing; Public Works and Urban Services;
4. Trade, Tourism, Investment and Enterprise Development;
5. Education, Public Service and Labour Relations;
6. Agriculture, Livestock and Co-operatives;
7. Finance and Economic Planning;
8. Gender, Culture, Social Services, Youth and Sport;
9. Environment, Energy, Natural Resources and Wildlife Management; and
10. Water and Irrigation Services

One of the main goals for the county in the next few years is to provide access to resources, services and opportunities. More specific objectives set out by the CIDP include:

- Identify spatial distribution of county resources;
- Assess existing infrastructure and future demand;
- Identify actions for the protection of fragile ecosystems;
- Spur rural development and rural-urban linkages;
- Enhance the capacities institutions and organizations;
- Propose an integrated spatial framework to guide sustainable regional resource use; and
- Prioritize areas of intervention

The Garissa County Government has committed to include refugees in its CIDP generation III (2023-2027) in addition to making adjustments in its Annual Development Plans under its CIDP Generation II.

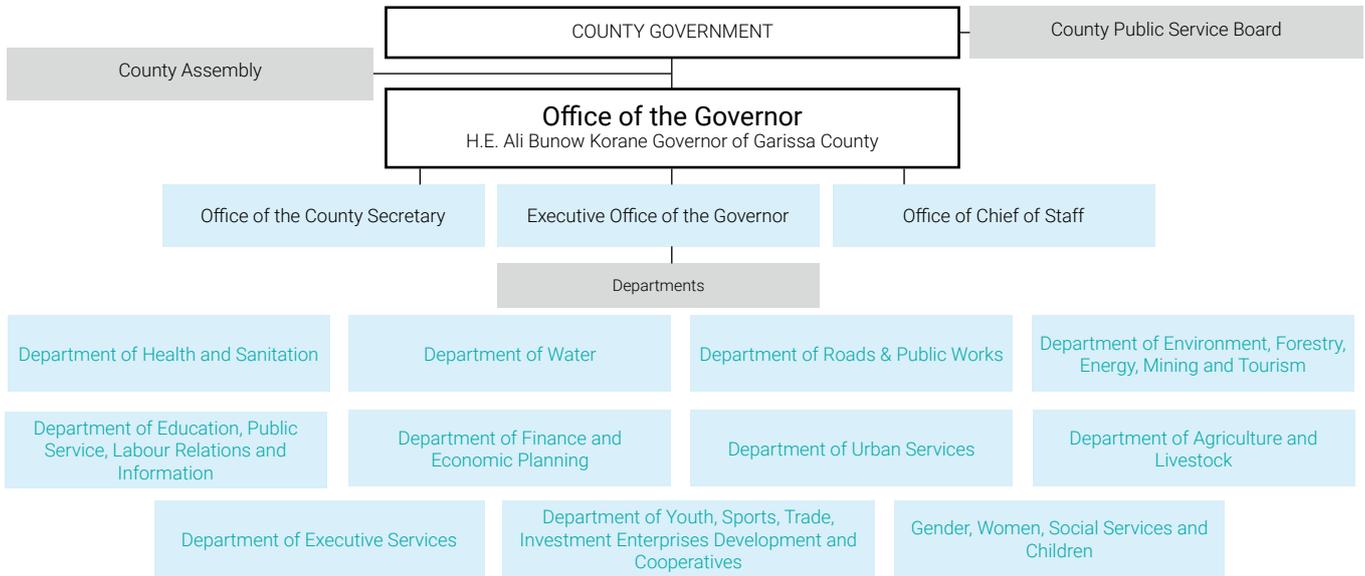
Garissa Integrated Socio-Economic Development Plan (GISED)

Following the GoK's announcement in March 2021, the future for the GISED is uncertain. However, it still has potential to add value to the wider county's development and as such this study still views the content as relevant at the time of publishing. The GISED is structured into 8 thematic components which are anchored in the Garissa County Development Plan (CIDP II), Vision 2030 and national priorities as outlined in the Medium-Term Plan III, "Big Four Agenda" along with international and regional commitments like the Global Compact on Refugees (GCR), the Sustainable Development Goals (SDGs) and Nairobi, Djibouti and Kampala Declarations. It is a government led initiative that builds on an approach that is both multi-stakeholder and area-based. By collaborating with various stakeholders - including the National and County Governments, UN agencies, development actors, bilateral donors, civil society, and the private sector - through the underlying 'centrality of communities' principle, GISED resolves to ensure that interventions are context-specific and positive for the communities they impact. Market development coupled with sustainable investing is another underlying principle of GISED that aims to stimulate private sector investments through private-public partnerships (PPPs) targeted at long-term value creation.

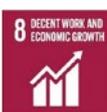
The Plan offers a framework and tool to manage the presence of refugees in a manner that is of benefit to all – both refugees and their hosts. Specific programmes and prioritized actions are identified, as well as the corresponding resources needed to strengthen the national and international protection systems and promote comprehensive and sustainable solutions.

Strategic objectives of GISED:

- Sustainable growth that is increasingly resilient, green, inclusive, and equitable which supports productive sectors of the economy and promotes diversified economic growth;
- Building on efforts and capacity deployed through a mixture of policy support, technical assistance, and capacity development for improved service delivery;
- Promoting inclusive, sustainable, and equitable access to quality basic services to all, with particular focus on key groups such as women and youth; and
- Create a peaceful and conducive environment to enable stakeholder investment for improved access to decent jobs and quality life for all.



Organigram of governance structure of Garissa County

Sustainable Development Goals	GISEDP Components	GISEDP Flagship Projects
 	Component 3 Health and Nutrition	<ul style="list-style-type: none"> Relocation and upgrading of Dadaab Sub-County hospital to level 4 Registration and accreditation of health facilities with MOH and NHIF Satellite facility of Kenya Medical Training College Supplementary equipment Enrolment of 340,000 in NHI
	Component 2 Education and skills development	N/A (not yet completed)
 	Component 5 / 4 Protection, Gender, Youth, Sports, Peace, and Security	<ul style="list-style-type: none"> Youth innovation and leadership hub Sharia-compliant County revolving fund and ensuring the policy incorporates the refugee population Rehabilitation and expansion of existing youth sports facilities
	Component 4 / 7 Water Services and Sanitation'	<ul style="list-style-type: none"> 4 x 250,000 m³ storage dams along the Lagdera near Kumahumato, Doyi, Rahole and Fafi plains for domestic, livestock & agricultural use 50km pipeline from Yumbis centre to Fafi centre Explore the potential of the Merti Aquifer to diversify water resources' potential in Dadaab
	Component 8 Sustainable Energy Solutions	<ul style="list-style-type: none"> 3 solar mini-grid hybrid power stations for communal institutions and livelihoods
	Component 1 Trade, Entrepreneurship and Private Sector Development	<ul style="list-style-type: none"> Garissa County Revolving Fund to increase access to affordable financial services to MSMEs One-Stop Shop (OSS) – /Biashara (Huduma) centres in Dadaab, Fafi and Lagdera sub-counties + incubation centres Centralised database on business information
 	Component 6 / 5 Spatial Planning, Infrastructure Development and Urban Governance	<ul style="list-style-type: none"> Upgrading of Modika – Dadaab Road to Bitumen standard
  	Component 7 / 6 Agriculture, Environment and Natural Resources	<ul style="list-style-type: none"> Rehabilitation of 3,000 hectares of degraded land Operationalization of the pivot farm in Ifo 2 closed camp to enhance fodder production and increase community resilience against negative impact of climate change
  	GISEDP's strategic objectives include promoting sustainable growth and inclusive and equitable access to quality basic services. It aims to mobilize the New Way of Working through collaborative partnerships between the GoK, Government of Garissa, humanitarian and development actors	

Social & Demographic Context

Cultural Identities

Dadaab complex was, at one time, the world's largest refugee camp and is one of the longest standing, with generations born there since opening in 1991. Prior to 1991, Garissa County was primarily home to nomadic ethnic Somali pastoralists. "Ethnic and clan identities are a major organizing principle in... social and political life."³⁹ The Darod Ogaden clan has the largest presence of any clan in Garissa County, with the Aulihan sub clan residing around Dagahaley, the Abuudwaq sub clan residing around Hagadera and the Abdalla sub clan dispersed across the County.⁴⁰

Because the majority of refugees in Dadaab are originally from Somalia (96.23% as of March 2020),⁴¹ many refugees and host community members speak the same language and share a culture. Marriages, friendships and business partnerships between the hosting community in Garissa and the refugee population are common.

Urban Centres

Garissa and Masalani are the only two townships classified as such under Kenya's current classification system. Balambala, Bura East, Dadaab, Modogashe, Nanighi and Hulugho are also considered urban centres, but are not officially classified.⁴² Since Dadaab developed as a base of

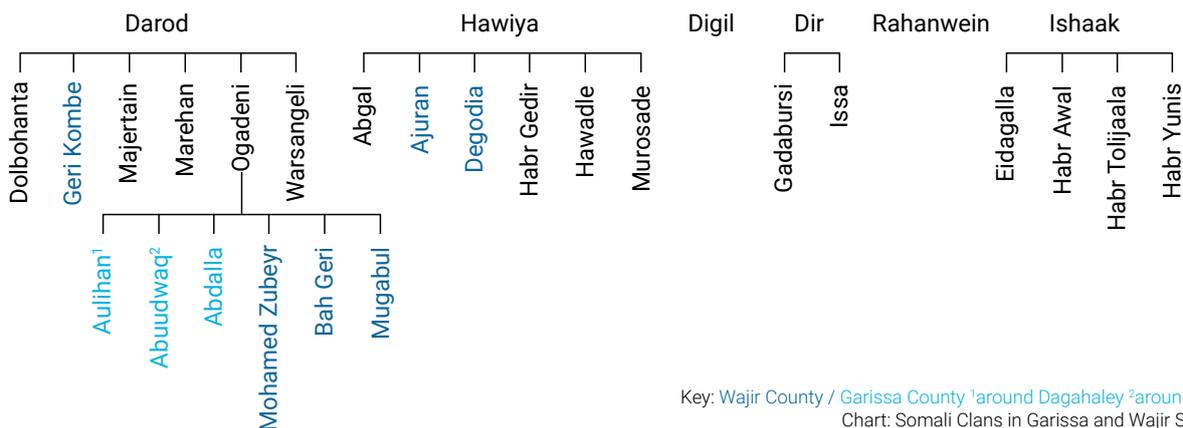
operations for humanitarian agencies and implementing partners working in the Dadaab camps, Garissa and Dadaab have become the largest population agglomerations in the County.⁴³ Garissa Town has developed more as a trading post, mainly for livestock traders, at the intersection of the Tana River and the A3 highway. Due to the fact that 75% of the non-refugee population in Garissa is rural, primarily traditional camel and cattle herders, other small villages in the County are clustered along livestock trading routes.

Demographic Data

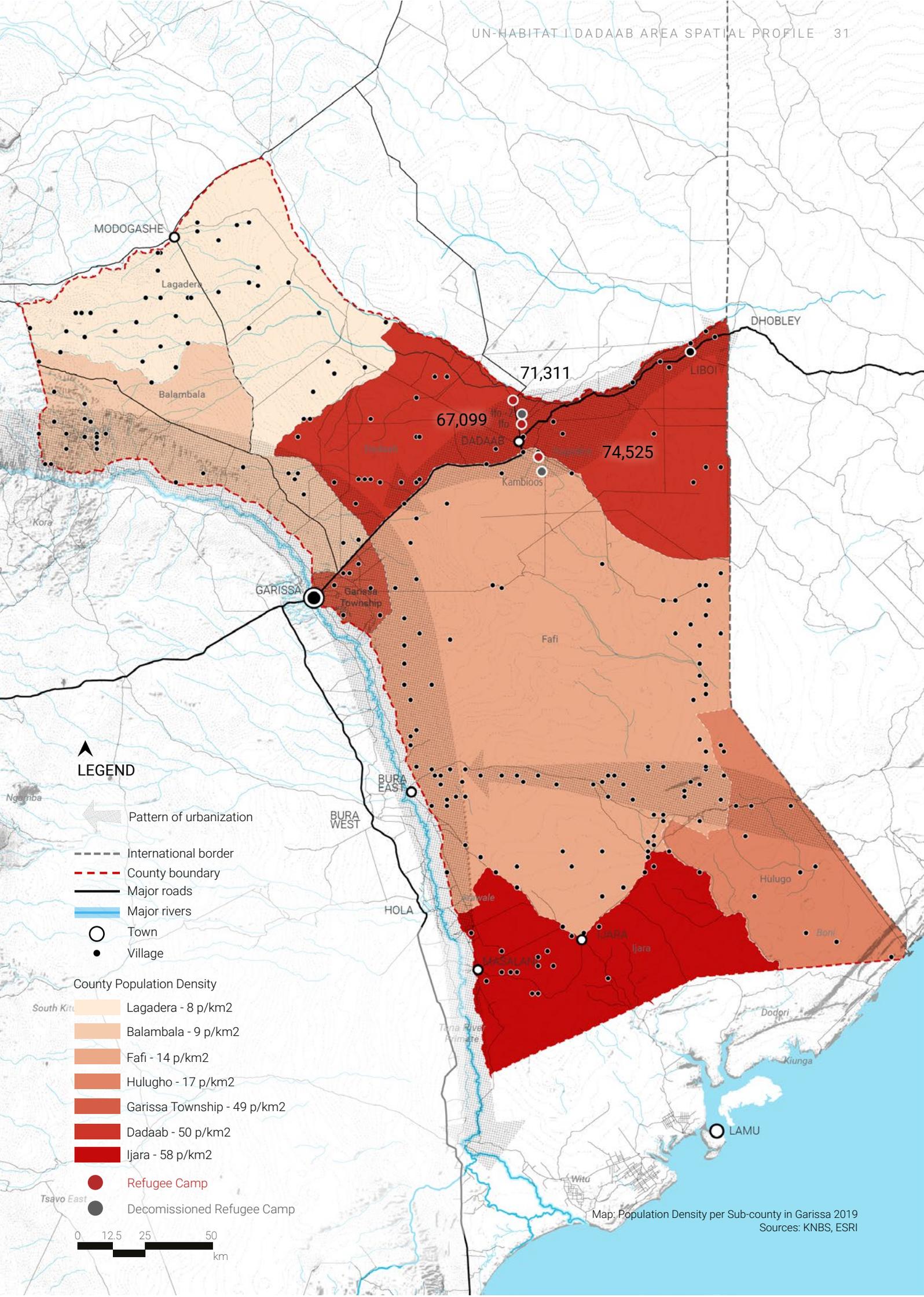
Due to the high refugee population, Dadaab Sub-county is the most populous sub-county and has the highest density of any sub-county in Garissa, with 50 people per km², 1p/km² higher than in Garissa Sub-county when the 141,384 refugees are factored in addition to the hosting population of 185,252. This is a huge increase from a calculated density of 29 p/km² when refugees are not considered. Although not quite as dense, Fafi Sub-county is the second most populous sub-county and hosts 76,127 refugees in Hagadera camp in addition to its hosting population of 134,040.⁴⁴ Garissa County's annual population growth rate is also notable, 3.05% compared to Kenya's overall average rate of 2.15%,⁴⁵ and will need to be accounted for in development planning.

Subcounty	Population 2019	Area (km2)	Density 2019 (p/km2)
Balambala	32,257	3,684	9
Dadaab	185,252 + 138,410 refugees	6,415	29 > 50
Fafi	134,040 + 74,525 refugees	15,050	9 > 14
Garissa	163,914	3,318	49
Hulugho	133,984	7,737	17
Ijara	141,591	2,453	58
Lagdera	50,315	6,096	8

Table: Breakdown of Population, Area and Density by Subcounty
Source: KNBS 2019

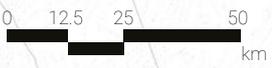


Key: Wajir County / Garissa County ¹around Dagahaley ²around Hagadera
Chart: Somali Clans in Garissa and Wajir Subcounties
Source: World Bank + LET4CAP



LEGEND

- Pattern of urbanization
 - International border
 - County boundary
 - Major roads
 - Major rivers
 - Town
 - Village
- County Population Density**
- South Kitui - Lagadera - 8 p/km²
 - Balambala - 9 p/km²
 - Fafi - 14 p/km²
 - Hulugho - 17 p/km²
 - Garissa Township - 49 p/km²
 - Dadaab - 50 p/km²
 - Ijara - 58 p/km²
- Refugee Camp
 - Decommissioned Refugee Camp



Map: Population Density per Sub-county in Garissa 2019
Sources: KNBS, ESRI

Security & Conflict Dynamics

The arrival of large numbers of Somali refugees in the 1990s came against the backdrop of long-standing discrimination against Kenyan Somalis after secessionist conflict between 1963 and 1967 in Kenya's North-Eastern Province (NEP). Consequently, the NEP - which has since been split into Wajir, Mandera and Garissa Counties - was subject to emergency rule until 1991 whereby "Kenyan Somalis there were subject to collective punishment, security screenings and forced repatriation."⁴⁶ However, this did not necessarily result in major insecurity in Garissa. In fact, in 2010, Interpol named Garissa Town as one of the safest towns in East Africa.⁴⁷ However, the situation has changed substantially since then; in 2020, the entire county remains on international security risk lists, the only county in Kenya to be so.

According to a 2015 study,⁴⁸ the following issues are seen to be potential risk factors that have contributed to continued insecurity in the county:

1. Continued dominance of exclusivist ethnic claims on resources in political narratives;
2. Mounting competition over both rural and urban land which risks being exacerbated as major infrastructure investments such as LAPSSSET are developed. This is linked to a lack of clear land tenure and speculative land-grabbing by various powerful actors in anticipation of major development projects and oil extraction; and

3. The twin stresses of Al Shabaab terrorism and Kenyan government counter-terrorism operations targeting the region.

The refugee and security narrative negatively impacts livelihoods in Garissa County, particularly around Dadaab Refugee Complex. The 2015 Garissa University attack committed by Al Shabaab and other incidents around the camp (although not for the past 2 years) were a tipping point - negatively affecting business and the perception of investment opportunities in the county, as well as slowing down donor activities focused on livelihoods and business development.⁴⁹

It is worth noting that whilst the security situation in Garissa County remains unstable, according to ACLED data from 2018 and 2019,⁵⁰ it is showing signs of gradually improving, with a reduced number of terror related incidents in the past few years. It is reasonable to suggest that the history of marginalisation, poor infrastructure, pressure on resources and proximity to still highly insecure areas of Somalia will remain a challenge. Thus, inclusivity is critical when planning development projects particularly in regard to key infrastructure that can improve access and service provision. Land tenure considerations must also be taken very seriously in order to enable sustainable development rather than exacerbating tensions.

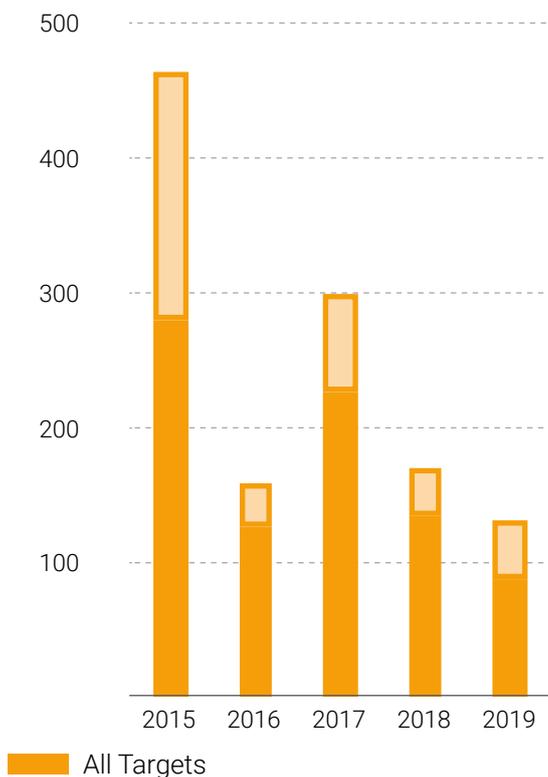


Chart: Number of Fatalities due to Terror Incidents
Source: ACLED Data 2019

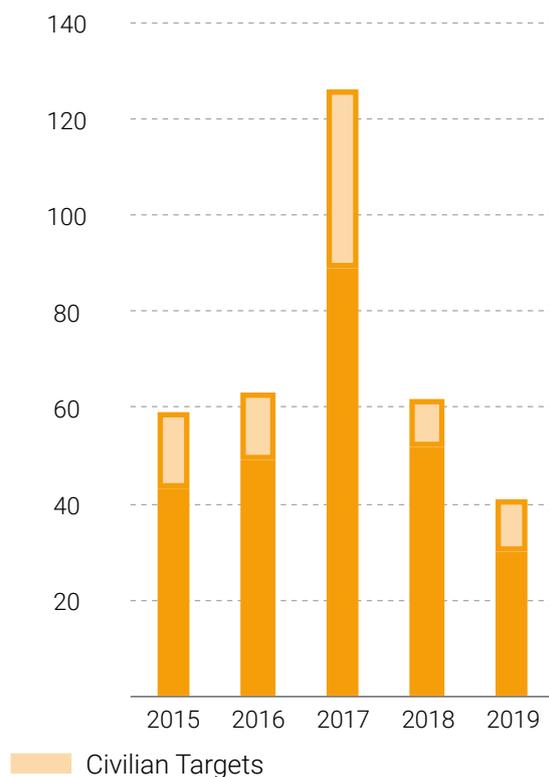
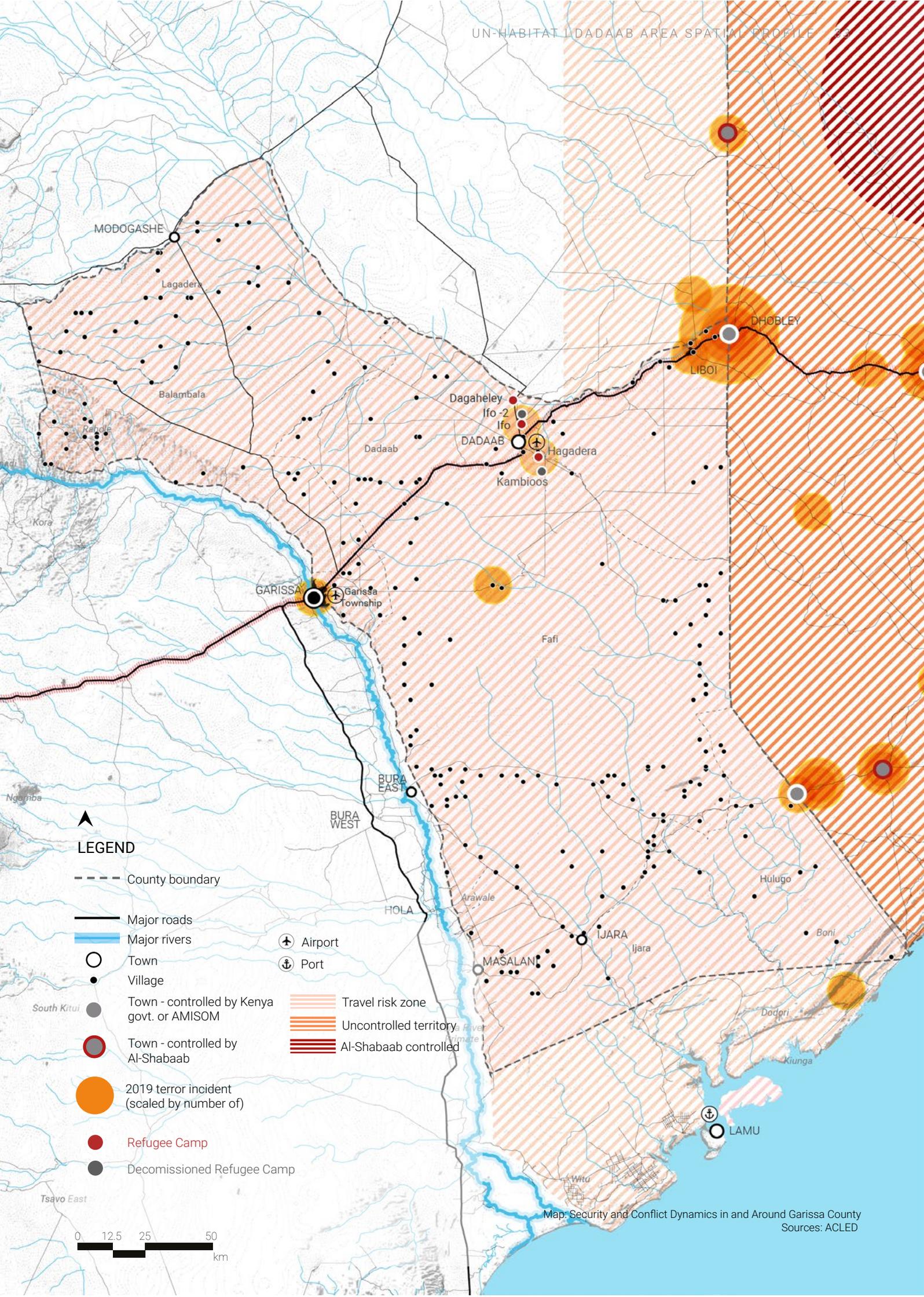


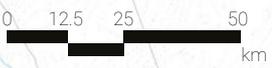
Chart: Number of Terror Related Security Incidents
Source: ACLED Data 2019



LEGEND

- County boundary
- Major roads
- Major rivers
- Town
- Village
- Town - controlled by Kenya govt. or AMISOM
- Town - controlled by Al-Shabaab
- 2019 terror incident (scaled by number of)
- Refugee Camp
- Decommissioned Refugee Camp

- Airport
- Port
- Travel risk zone
- Uncontrolled territory
- Al-Shabaab controlled



Map: Security and Conflict Dynamics in and Around Garissa County
Sources: ACLED

Location & Connectivity

Despite a history of relative underdevelopment in Kenya, Garissa County is intersected by the A3 highway, which serves as a historical link between Nairobi and Somalia. Garissa town has benefitted from its position along the highway, and is an important stopping point between the hinterland of Kenya and the journey onward to Somalia. As the land link between Nairobi, Kismayo and Mogadishu, the town is a major destination for livestock trading, which is the predominant economic base for the County.

In regard to future development of the area, under the National Spatial Plan, the A3 is defined as a strategic regional highway, and Garissa town is listed as an important regional growth hub. Although not as established as a trading hub as Garissa town, Dadaab Refugee Complex is also strategically located along the A3, and could in the future serve as a major trading centre between Somalia, inland Kenya and the Southern areas of Wajir County.

In terms of air connectivity, whilst there are numerous air strips across the county, only Garissa and Dadaab airports are tarmacked, and only Garissa receives commercial flights - limited to one per day.

Challenges

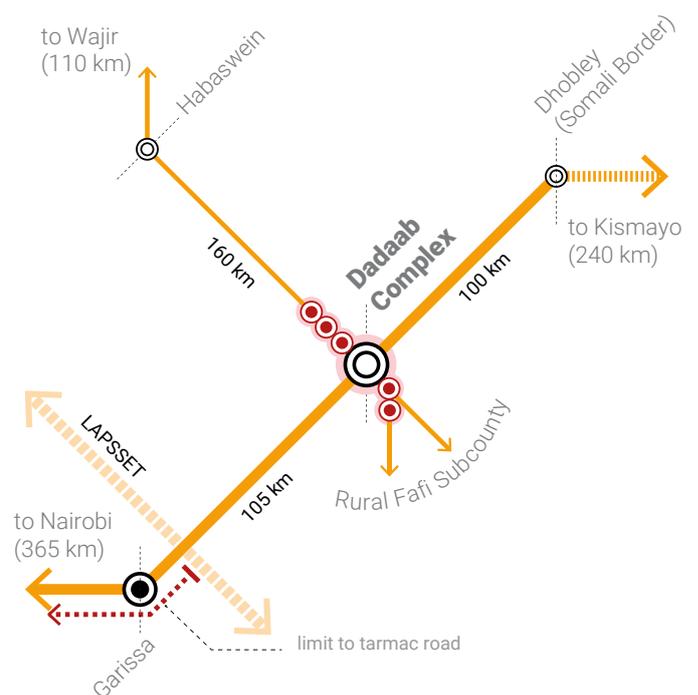
- Extremely low all weather road coverage, with less than 40km of tarmacked road in the whole county
- High transport costs as a result of the unpredictability of the state of the roads due to weather conditions, poor maintenance, etc.
- Significant limitations on trade potential due to the length of time it takes to travel between Garissa and the rest of the county.
- Security is an ongoing concern that has limited interest in investing in the area; however, it has not stopped trade crossing the border at Dhobley - in fact, because of its strategic importance, it is a target for Al Shabaab
- Poor infrastructure is both a driver of marginalisation and a barrier to facilitating development.

Opportunities

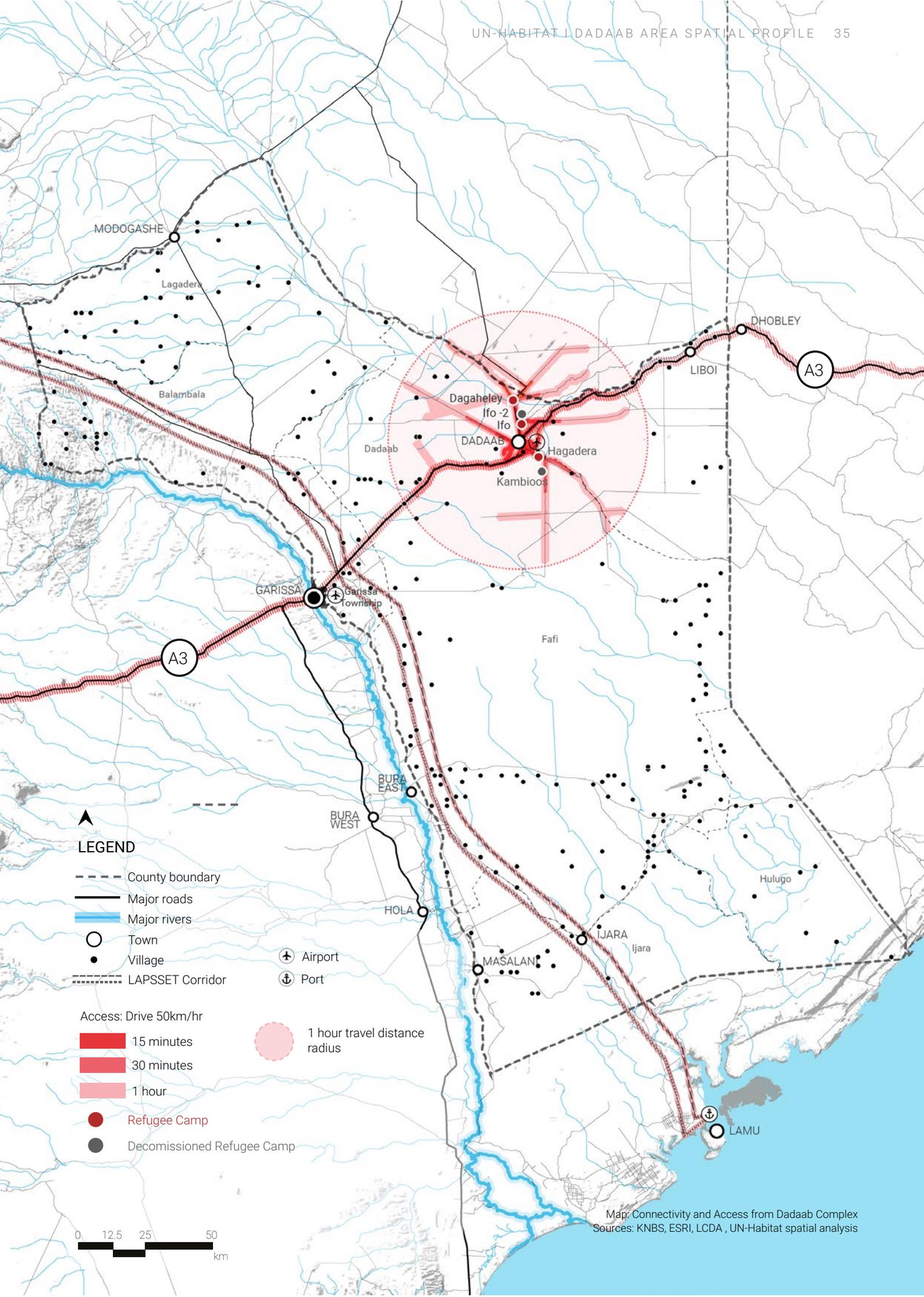
- Currently limited east-west connectivity should improve significantly with the development of the LAPSSET corridor which is planned to go through Garissa town.
- Strengthened linkages to Lamu Port (through LAPSSET) will place Garissa County at the hub of a major trade route across the ASAL regions of Kenya and within just a few hours of a major international port.
- Dadaab Complex, as the largest population centre in the region, could provide a promising potential labour market if the transport route between Garissa town and Dadaab camps was improved.



Road Conditions in Dadaab Sub-County



Distances between centres from Dadaab Complex



- LEGEND**
- County boundary
 - Major roads
 - Major rivers
 - Town
 - Village
 - ✈ Airport
 - ⚓ Port
 - LAPSSSET Corridor

- Access: Drive 50km/hr
- 15 minutes
 - 30 minutes
 - 1 hour
 - Refugee Camp
 - Decomissioned Refugee Camp
 - 1 hour travel distance radius



Map: Connectivity and Access from Dadaab Complex
Sources: KNBS, ESRI, LCDA , UN-Habitat spatial analysis

Ecological Framework

Garissa County is classified as part of the arid and semi-arid (ASAL) region of Kenya; as such, it is characterized by a lack of water and predominantly pastoralist land. However, compared to other ASAL counties, Garissa does have available water resources and was probably the main reason the British built a fort in 1941 on the site which is today Hagadera camp in Dadaab Refugee Complex.⁵¹

On average, the County receives 275 mm of rain per year, with most of this rain falling in one of the two rainy seasons. The 'short rains' are typically from October to December, and the 'long rains' are usually from March through May, with an average temperature ranging between 20 and 39°C for most of the year.⁵²

Cattle, camel and goat herdsman migrate with the rains primarily in the southwestern part of Garissa County along the Tana River where sandy soils "support scattered shrubs and grasslands which are ideal for livestock production."⁵³ Seventy-five percent of the land in the County is sparsely vegetated bushland,⁵⁴ but cattle grazing lands are concentrated in the southwest of the county in Fafi and Ijara Sub-counties, with core grazing areas concentrated around Bura West, Bura East and Hola.

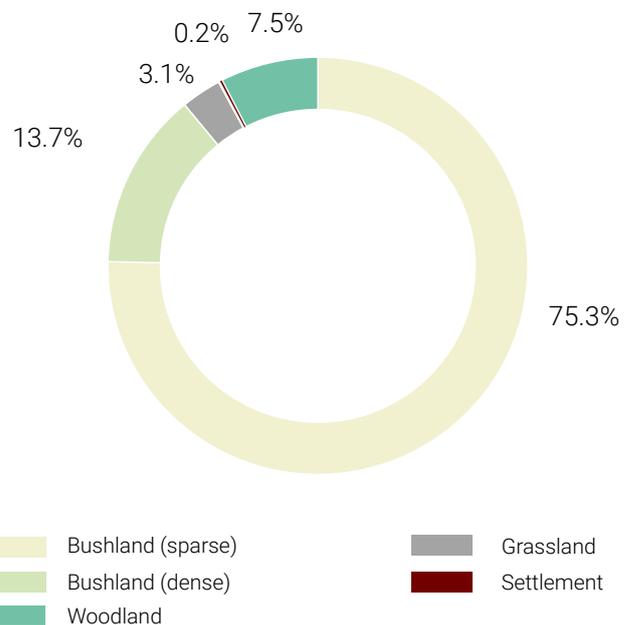
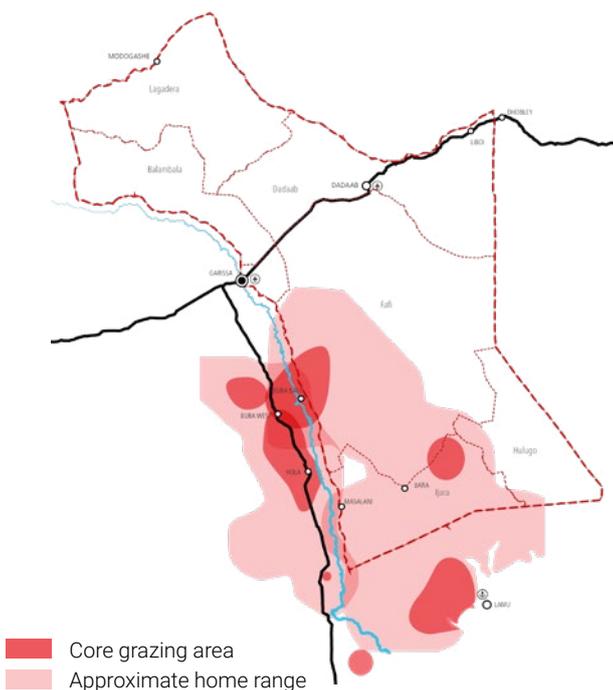
The Tana River not only plays a major role in pastoralist grazing patterns, but it also affects the climate as well as other land uses, settlement patterns and economic activity in the County. The River and seasonal laghas (streams) are the main sources of water for Garissa County; however, only 23.8% of the population of Garissa have access

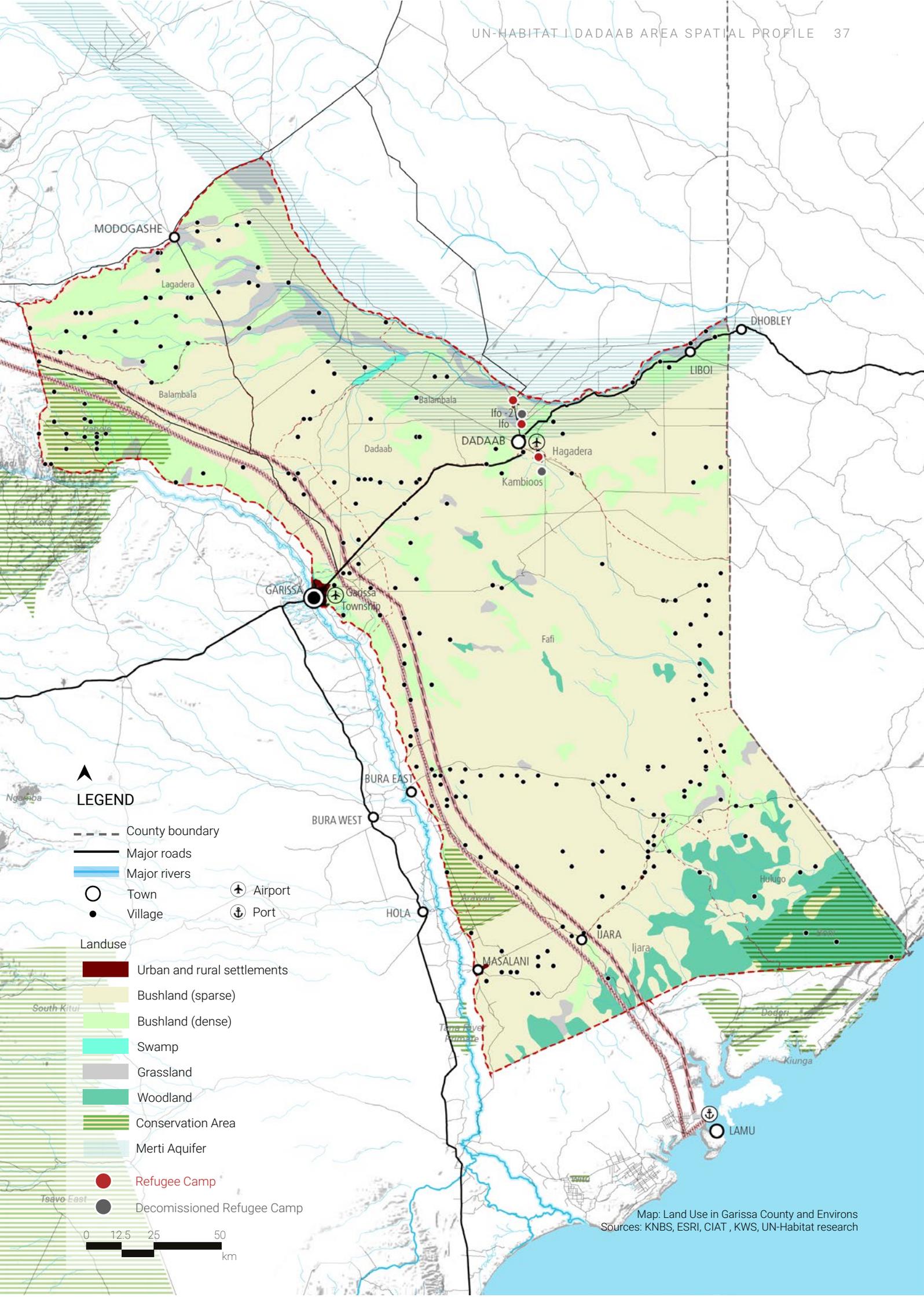
to safe water, which can be a source of conflict if not managed properly.⁵⁵ Water distribution in the County is primarily divided between livestock (53%), domestic (30%) and irrigation (10%) use.⁵⁶

The Merti Aquifer, an underground freshwater body, which spans between Garissa and Wajir Counties and is bordered by Mt. Marsabit in the northwest and Liboi and Somalia in the southeast, is one of the largest known aquifers in the region. Boreholes typically reach a depth of between 105-150m in order to reach aquifer water.⁵⁷

No geological surveys have been conducted in Garissa County, but some prospecting does occur. Van-Oil started exploring for oil in the contentious border area between Isiolo and Garissa, "but was forced to suspend operations due to security concerns... [potentially bringing] two powerful ethnic groups – the Boran and Ogaden – into political conflict in the event oil is discovered there."⁵⁸ Sand, primarily used for construction, is typically harvested from laghas. According to anecdotal reports from County officers, this occurs with little control or regulatory enforcement resulting in increased erosion along stream and river banks.⁵⁹ Gypsum is also harvested by local prospectors, but the County has yet to earn revenue from extraction activities.⁶⁰

Kenya Land Conservancy has delineated areas in the northwest and southeast of the County as Conservancy Land including: Bur-Algy Garissa Giraffe Sanctuary, Ishaqbin Community Conservancy, Waso Conservancy, Arawale National Reserve, Rahole National Reserve and Boni National Reserve.⁶¹





LEGEND

- County boundary
- Major roads
- Major rivers
- Town
- Village
- Airport
- Port
- Landuse**
- Urban and rural settlements
- Bushland (sparse)
- Bushland (dense)
- Swamp
- Grassland
- Woodland
- Conservation Area
- Merti Aquifer
- Refugee Camp
- Decomissioned Refugee Camp



Map: Land Use in Garissa County and Environs
Sources: KNBS, ESRI, CIAT, KWS, UN-Habitat research

Climate Context & Natural Hazards

Arid and Semi-Arid Land (ASAL) County

Cycles of drought and flood greatly affect settlement, livelihood strategies, health and survival in ASAL counties such as Garissa. As climate change creates less and less predictable conditions, food and water security are becoming increasingly challenging. Also linked to climate changes affecting weather patterns in the Indian Ocean, in 2020, Kenya experienced its worst outbreak of locusts in 70 years,⁶² compounding food security issues in the County. Moreover, the gradual deterioration of rangeland and soil quality will play an increasingly problematic role in food and livelihood security and need to be considered in strategies targeted at creating community resilience in Garissa County.

Vulnerabilities

Socio-economic challenges are a major barrier to implementing adaptation strategies. Insecurity, low literacy and high poverty levels exacerbate the effects of climate change, posing additional challenges for agriculturalists unable to adapt to climate impacts because such adaptations often require investments in technology, education or alternative livelihood strategies and a secure context in order to plan for the future. Women are also at increased risk of being left behind in adaptive strategies - according to CARE's "Climate Change Vulnerability and Adaptive Capacity in Garissa County, Kenya" report, "Somali society places limitations on women's voice, movement and participation in public and household decision-making, which in turn creates constraints on their adaptive capacity."⁶³

Current Coping Strategies

CIAT's Climate Risk Profile for Garissa County highlights the need for "critical short-term and long-term adaptation measures that target production systems and value chains key to the population's food security and livelihoods, including livestock and crop systems." Both crop farmers

and livestock farmers already employ a handful of strategies to cope with changing climatic patterns and unpredictable weather events. Current coping strategies employed by crop-farmers include: using early-maturing plant varieties, water harvesting, staggered cropping and post-harvest storage and processing.⁶⁴ Current coping strategies employed by livestock farmers include: construction of irrigation and water storage facilities, livestock migration, feed conservation, vaccination campaigns, de-stocking and change of livestock species; boiling and fermenting milk and salting and drying meat, which add value to livestock products are also employed to diversify income streams.⁶⁵

Adapting to Climate Change

Diversifying livelihoods is one way of addressing the impacts of climate change across genders. However, new strategies must be informed by an awareness of the social, ecological and economic context. For example, one currently employed strategy for diversifying livelihoods is the production of charcoal, which further contributes to the deterioration of rangeland carrying capacity, especially near Dadaab Complex.

As witnessed through COVID-19, fluctuations in food and oil prices can be buffered through local food production. Although meat products are produced locally, fruit and vegetable farming could be expanded. Extension services for skills development could provide an alternative means for helping diversify livelihoods and build peoples' capacity to adapt to climate change. Such services could include strategies for practicing integrated agriculture⁶⁶ and incorporating irrigation technologies in crop farming.

Financial and institutional resources, including access to loans, basic services (potable water, electricity, education) and reliable road infrastructure and connectivity will also be critical for responding to shocks and stressors.

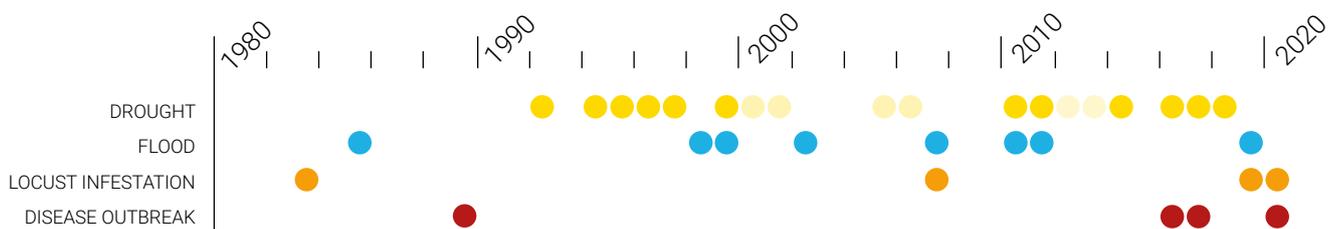
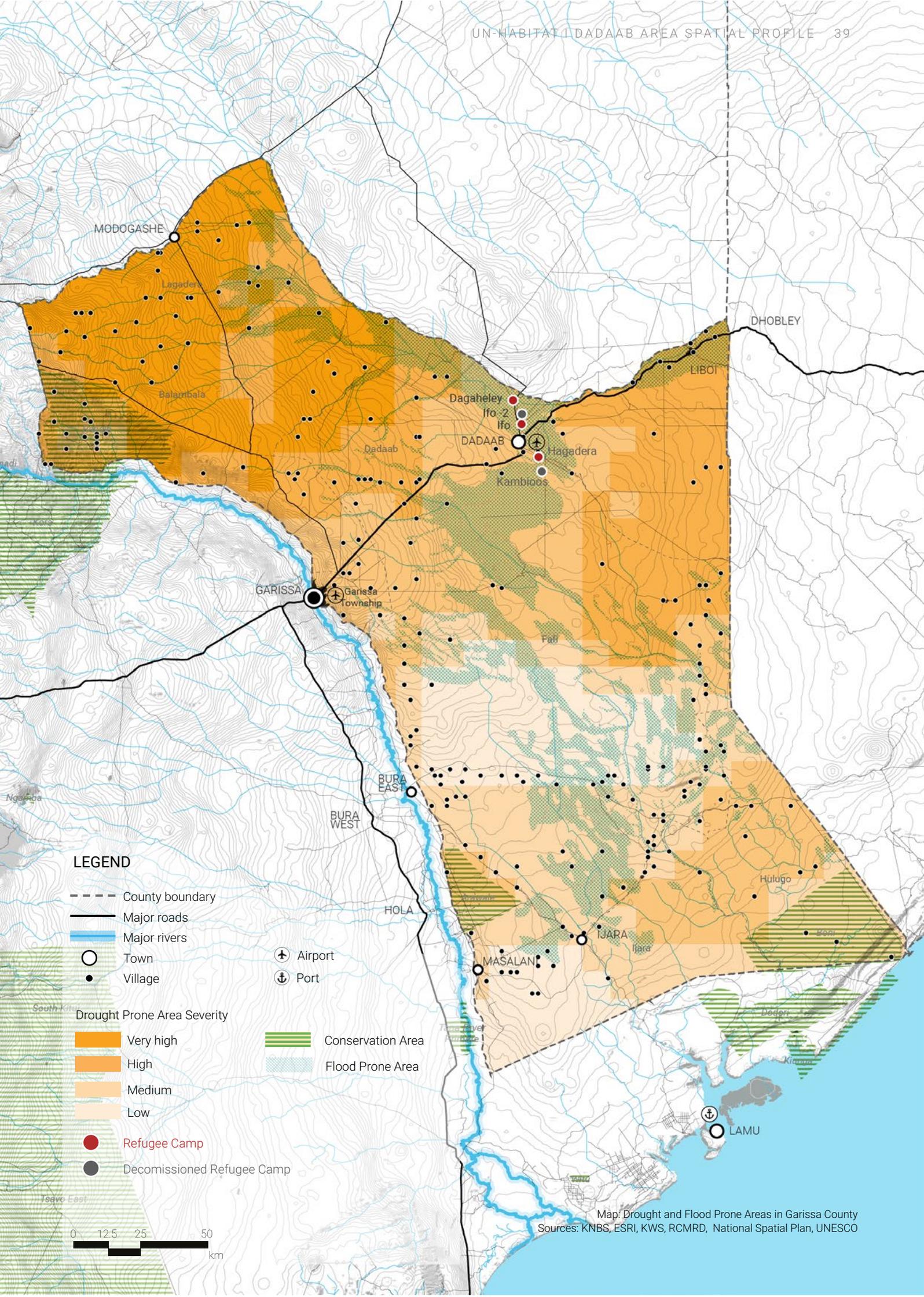


Chart: Years of Severe Natural and Health Disasters in Garissa (1980 - 2020)
Source: Climate Risk Profile Garissa County 2016, UN Environment 2020



LEGEND

- County boundary
 - Major roads
 - Major rivers
 - Town
 - Village
 - ✈ Airport
 - ⚓ Port
- Drought Prone Area Severity**
- Very high
 - High
 - Medium
 - Low
- Conservation Area**
- Conservation Area
 - Flood Prone Area
- Refugee Camp**
- Refugee Camp
 - Decommissioned Refugee Camp



Map: Drought and Flood Prone Areas in Garissa County
Sources: KNBS, ESRI, KWS, RCMRD, National Spatial Plan, UNESCO

Urban & Rural Economy

Introduction

Garissa's economy is significantly reliant on agriculture; 70% of livelihoods depend on it, and it contributes to 37% of the Gross County Product.⁶⁷ Thirty percent of the population is formally employed (62.2% male, 37.8% female), with national and county government departments, NGOs, donor agencies and business organizations listed in the CIDP as major formal employers in the County. These employers are representative of the role Dadaab Refugee Complex has played in the County's economy. Twenty eight percent of the county population is self-employed - engaged in "milk vending, jua kali, miraa selling, hawking and livestock selling among others."⁶⁸ Whereas another 28% is reported to be unemployed.⁶⁹

Agriculture

Notably, between 70 and 88% of the population of Garissa is involved in agricultural activities, with pastoralism as the main source of livelihood for the majority of agriculturalists in the County.⁷⁰ Major livestock products include meat, milk, hides and skin; however, in order to diversify and supplement their incomes, pastoralists also engage in crop farming and charcoal burning. Crops grown in the County include melons, mangoes, tomatoes, paw paws, bananas, cowpeas, simsim, rice, sorghum, maize and green grams.

With open avenues for export to other parts of Kenya, Somalia and Ethiopia, there is potential for growth of the vegetable and fruit value chain. According to "Doing Business in Dadaab", this would require:

1. Upskilling of farmers and potential farmers

2. Set up of experience sharing community conversation groups
3. Enhance and amplify extant skills and improve access to finance for future entrepreneurs
4. Set up support and strengthen approaches to irrigation systems
5. Coordinate approaches to inputs, fertilisers and pesticides

Current challenges include frequent drought, locust infestations, saline water infiltration, lack of equipment and water storage facilities and lack of irrigation infrastructure and electricity.

Tourism

A few conservancies and game ranches exist in the County, with Garissa town hosting a developed hospitality industry, particularly for domestic tourism for NGOs in the area.⁷¹ Yet there is still potential for the development of touristic facilities related to natural fauna, particularly big cats and game animals who move freely in the County.⁷² Piggy-backing on the development of the LAPSSET Corridor and Lamu Port, a link to Lamu Town could be established as part of a tourist circuit to draw additional tourists to Garissa County.⁷³

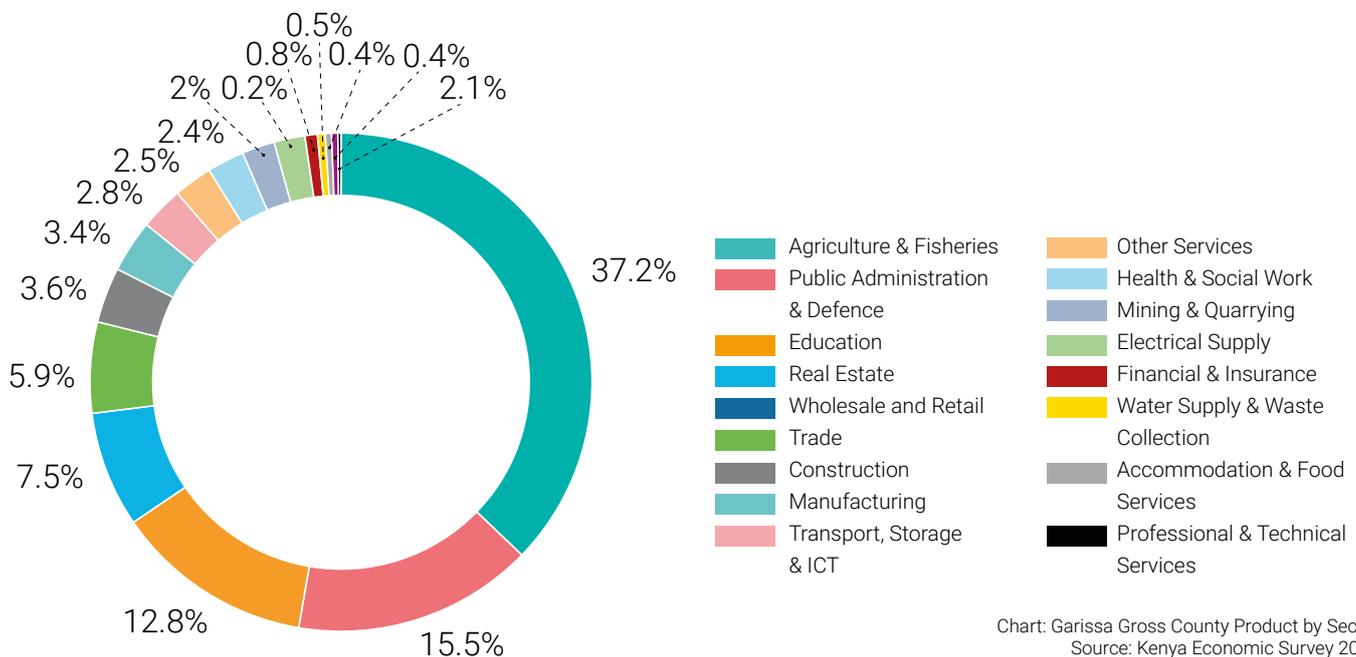
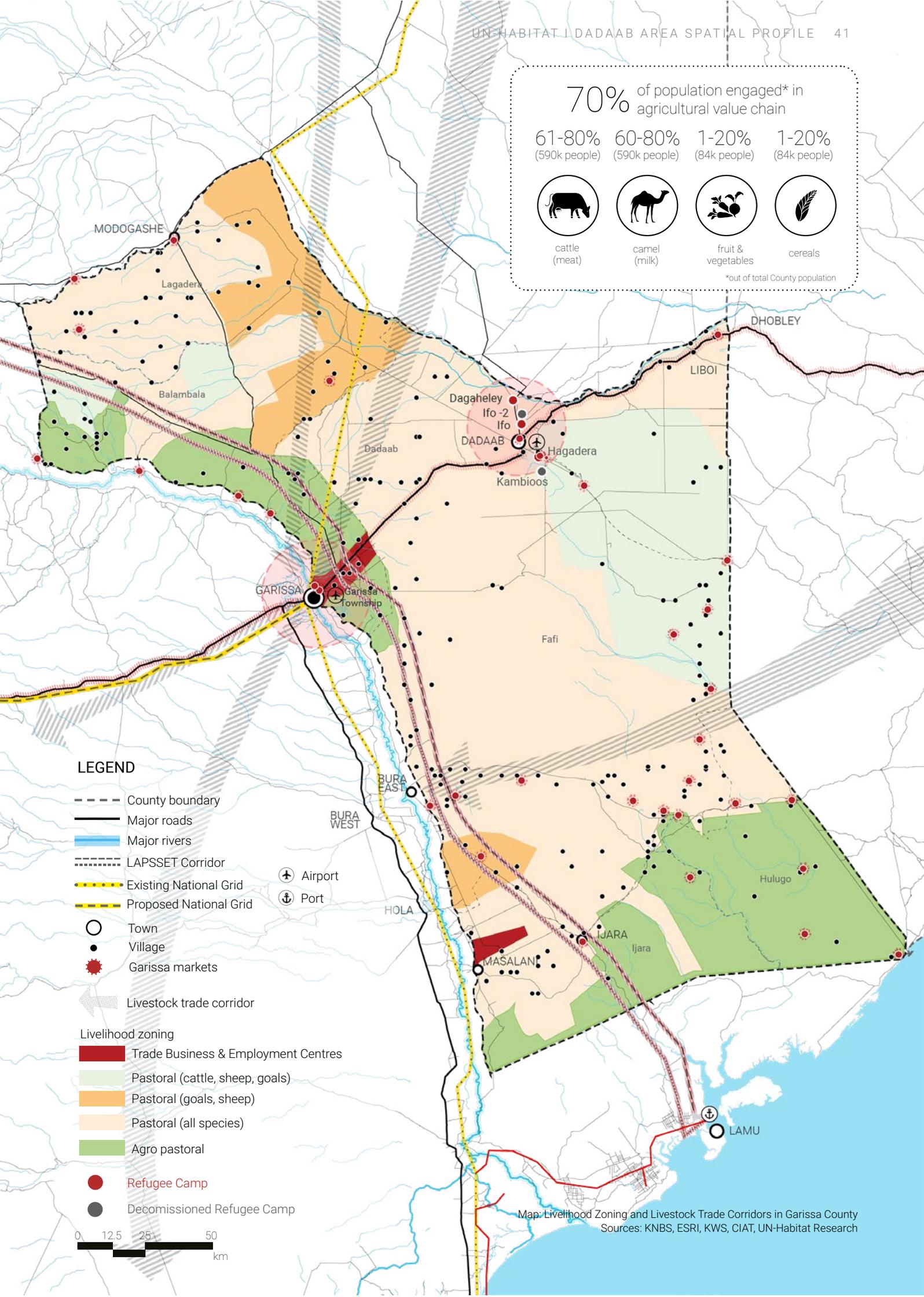


Chart: Garissa Gross County Product by Sector
Source: Kenya Economic Survey 2019

70% of population engaged* in agricultural value chain

61-80% (590k people)	60-80% (590k people)	1-20% (84k people)	1-20% (84k people)
			
cattle (meat)	camel (milk)	fruit & vegetables	cereals

*out of total County population



LEGEND

- County boundary
- Major roads
- Major rivers
- LAPSSET Corridor
- Existing National Grid
- Proposed National Grid
- Town
- Village
- Garissa markets
- ← Livestock trade corridor
- Livelihood zoning**
- Trade Business & Employment Centres
- Pastoral (cattle, sheep, goats)
- Pastoral (goats, sheep)
- Pastoral (all species)
- Agro pastoral
- Refugee Camp
- Decommissioned Refugee Camp



Map: Livelihood Zoning and Livestock Trade Corridors in Garissa County
Sources: KNBS, ESRI, KWS, CIAT, UN-Habitat Research

Urban & Rural Economy

Industry

Maua Milling is Garissa's only major industry, but is on the verge of closure "due to the current insecurity problems [and] lack of proper insurance coverage."⁷⁴ Smaller industries include Salama Bakery and water treatment plants. Otherwise, "Jua Kali" the Swahili term for "hot sun" refers to an informal sector of traders and artisans who work under the hot sun on the side of roads and constitute the primary micro-industrial base in the County.⁷⁵ Sheds for Jua Kali workers, who are known for the production of almost anything on demand, have been proposed in all major townships in the county to help boost economic growth.

Businesses

Types of businesses in Garissa County include: hotels, bakeries, retail shops, whole sale shops, kiosks, bars and restaurants, software shops, chemists and agro dealers, cyber café, millers, transport hawking, Jua kali and butcheries.⁷⁶ However, the number of businesses and their exact locations is difficult to ascertain because most are not registered.

What is clear, is that urban centres are distributed along the Tana River and A3 highway connecting Nairobi to Ethiopia and Somalia through Garissa township and Dadaab Town towards Liboi/Dhobley. Livestock trade routes pass through Garissa town and Bura East. These trade routes are critical for the formal as well as informal economy, but the lack of investment in road infrastructure (only Garissa Township has asphalt roads) limits efficiency and potential development gains.

The trade of smuggled goods is also common and includes foodstuffs, sugar, basic consumer goods, light electronics, fuel, and small arms.⁷⁷ Cross-border trade has contributed to peace in some cases and in others has "led to communal armed conflict over control of lucrative trade routes; rival business elites sometimes instigate these clashes."⁷⁸

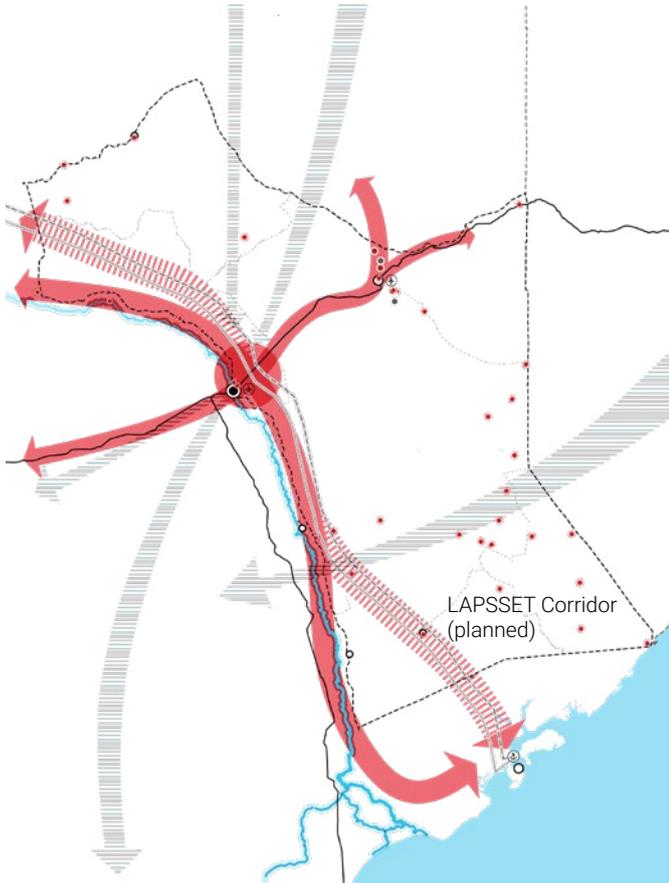
Diversifying Livelihoods

Climate change puts at risk 48.6% of Garissa's own-source revenue, with agriculture and fisheries contributing to 37.2%, real estate 7.5%, transport/storage 3.4%, mining/quarrying 2%, and water supply/waste collection 0.5%.⁷⁹ Since County land is predominantly used for pastoral grazing which serves as the traditional means of livelihood for the majority of host community families, it is of critical importance that land degradation and other impacts of human use as well as climate change are addressed.

Agricultural practices and livelihoods more generally need to be adapted to increasingly unpredictable and extreme climate conditions - one way of adapting is through diversifying economic opportunities.

Two recommendations for alternative value chains cited in Doing Business in Dadaab include the vegetable and fruit value chain and the recycling value chain. Natural population growth will also provide opportunities to expand economic activity in Garissa County, particularly as the population tends towards urbanisation; however, limited water resources will need to be accounted for as it is a limiting factor for agriculture as well as industry and housing. Additionally, "lack of equipment and storage facilities to provide sufficient water for small scale irrigation was cited as a major hindrance in all the other villages."⁸⁰

Other opportunities for economic growth arising at the regional level should also be capitalized on. Solar generation rose from 13.7 GWh in 2018 to 92.3 GWh in 2019 as a result of the commissioning of the Garissa Solar Power Plant - a 50MW solar energy plant built in Mbalambala in 2018.⁸¹ In addition to supplying half the County's energy, the plant raises prospects for future solar potential in the area. As aforementioned, the LAPSSET Corridor is also planned to bring rail connectivity, enhanced road quality and natural gas connections from Lamu Port through Garissa Township and Dadaab Town towards Isiolo, with connections to Nairobi, Ethiopia and South Sudan. Promoting compact and sustainable land use, supporting planning processes that include all voices in the County, and encouraging the growth of industries that respect sustainability and inclusivity while leveraging natural population growth and infrastructural projects in the region will be key to ensuring equitable and resilient development.



“Somali refugees began stepping over the border seeking safety in Dadaab in the early 1990’s... Around what was a rural unknown town in Garissa grew an **ecosystem that would bring infrastructure, economic activity, and previously non-existent services to the area.** The presence of refugees brought humanitarian actors to the area, and with humanitarian actors came **roads, a proper town center, the massive and expansive infrastructure of the camps, which could with the years be considered an effectively functioning urban center.** Funding for education, health, and water infrastructure and services was made available, and a host community that was mainly pastoralist began ... in some cases **to establish businesses near the camps.**” *

- Livestock trade route
- Trade route

Key Trade Routes Across Garissa County

* Quote from Doing Business in Dadaab
<https://reliefweb.int/report/kenya/doing-business-dadaab-market-systems-analysis-local-economic-development-dadaab-kenya>



Market stalls in Dadaab settlement
 Source: UN-Habitat

Housing, Land & Property

Land Ownership Types in Kenya

Kenyan government has instigated land reforms to improve tenure security in the past decade. A key approach is the adoption of the National land policy in 2009 and the passage of the 2010 Constitution simplifying land laws and land management systems in the country and the Community Land Act of 2016 which is of particular importance to Garissa County.

The three forms of Land ownership in Kenya are as follows:

1. Public land – reserved for public use or environmental protection. It is administered and managed by the National Land Commission (NLC) on behalf of the people of Kenya.
2. Community land – held by communities on basis of ethnicity, culture or similar community interest. It is administered under the Community Land Act No. 27 of 2016. Any unregistered land that is community land is held in trust by the county governments for the community.
3. Private land – held by natural or legal persons. The Ministry of Lands is tasked with the registration of any interest in private land. This can be under the Freehold or Leasehold land tenure system which gives the holder absolute ownership of the land for life.⁸²

Community Land in Garissa

The land in Garissa County is generally designated as Community Land. According to the CIDP II, 1% of Garissa County land had been titled⁸³ but it is unclear to what extent this information is, however up to date. It is also unclear what the proportion of land is under the status of private or public land. In discussions with the Ministry of Lands Department of Garissa County Government, it has been indicated that the decommissioned camps of Kambioos and Ifo 2 are considered as Public Land to be held in trust by the County after being handed back from UNHCR in 2019. It is however unclear at this stage what the precise boundaries of the camps, and to what extent documentation exists over these parcels of land. It is however imperative to ensure that public good is retained if there was conversion of community land to public land and that any investment is judiciously managed. If it is however deemed as Public Land, the National Land Commission has a mandate in ensuring the public good of this land.

According to the 2016 Act, Community land in Kenya shall vest in the Community. In this respect, the term "Community" has been defined to mean a consciously distinct and organised group of users of community land who are citizens of Kenya and share any of the following attributes: common ancestry, similar culture or unique

mode of livelihood; socioeconomic or other similar common interest; geographical space; ecological space; or ethnicity. The constitution of a community is therefore not limited to ethnic lines. The Act requires a community claiming an interest in or right over community land to be registered, the process outlined in the figure adjacent.

The main role of the County Government under the Act is to hold in trust on behalf of a community unregistered community land and any monies payable as compensation for compulsory acquisition of any such unregistered community land. Any such monies shall be deposited in a special interest earning account by the County Government and shall be released to the community upon registration of the community land.

A County Government is prohibited from selling, disposing, transferring, and converting for private purposes or in any other way disposing of any unregistered community land that it is holding in trust on behalf of a community.

Community Land Ownership and Pastoralism

The history of community land is very much tied into the cultural background of Garissa where Somali clan related land management practices have long been in place. The livestock sector, on which this land relies, contributes an estimated 12 percent to the country's GDP and 47 percent to agricultural GDP. The livestock population is concentrated in the Arid and Semi-Arid Lands (ASALs) (75 percent of total surface area) where the livestock sector accounts for 90 percent of employment and more than 95 percent of family incomes. These areas have the highest incidence of poverty and very low access to basic social services.

Pastoralists in Boran, Gabra and Garri in the border areas of northern Kenya and southern Ethiopia have long relied on moving herds between dry and wet season pastures based on primary and secondary rights of use negotiated with different pastoral groups in order to regulate sharing of water and pasture. The viability of these systems has been historically weakened by state policies that have failed to recognize the legitimate right of pastoralists to rangeland resources. Conflict has escalated, traditional rules and practices have eroded and pastoral livelihoods have been weakened as a result. Kenya's Community Land Bill offers a new approach to securing the rights of pastoralists to land, grazing and water through devolved governance and greater influence over decisions affecting their livelihood.

COMPONENT 1 - REGISTRATION OF COMMUNITIES

- 1 Community Land Registrar (CLR) invites community members to a public meeting
- 2 Community Assembly elects members of the Community Land Management Committees (CLMC)
- 3 The CLMC submits to the CLR the community name, registered members and minutes of meeting registration

A community claiming an interest in or right over community land must register its rights under the Land Registration Act. They must have a plausible justification for why they are registering the community land as a collective, e.g. common ancestry, similar culture, etc.



REGISTERED COMMUNITY LAND

→ **Land Tenure Options Explored**



COMPONENT 2 - REGISTRATION OF LAND

- 1 The Cabinet Secretary (CS) issues a gazette notice of the adjudication programme
- 2 The CS appoints an adjudication officer (AO)
- 3 The CS issues a public notice valid for 60 days of intention to survey land
- 4 The AO facilitates the demarcation of the land and delineation of the boundaries
- 5 The AO submits the cadastral map to CLR for registration
- 6 Certificate of title issued by CLR

Using a general map of the area from the Survey of Kenya Folio Register (FR), a licensed surveyor must provide ground coordinates, with beacons placed to mark the area. Using the deed plan that shows the reference point, the new points, and the resultant maps, this must be verified by the land control board. Once the process is verified and submitted to Survey of Kenya for confirmation, the parcel is given a parcel number. At that point the registrar can submit register the ownership of the land and issue a title to the relevant community.

Financial Context

Overview

Public finance and sound fiscal management are key to supporting local development goals and establishing a solid financial base that strengthens the public sector's role in supporting local economic development.

County governments receiving funding from two sources: transfers, and own source revenues. Transfers are of three kinds:

- Unconditional equitable share transfers, which allocate the county share of revenue (determined by the Division of Revenue Act) according to a formula agreed by Parliament and set out in the County Allocation of Revenue Act.

Conditional transfers which are of two types:

- Conditional grants included in the County Allocation of Revenue Act, which cover devolved donor projects and funding for level 5 hospitals
- Conditional grants embedded in the national budget, which include grants for the operation and maintenance of health facilities, and funding to compensate them for loss of revenue from the free maternity and free primary health care policies of the national government.

According to the Garissa Annual Development Plan 2018/2019, 86% of the County Budget is currently financed through National Transfers, making the county hugely reliant on the National government. The draft budget for 2019/2020 reduced this share to 79% with the difference was made up by additional conditional allocations focused on specific sectors such as healthcare.

Currently only 4% of the budget is proposed to be financed through own source revenue but even this is potentially unclear as the most recent budget places this only as an estimate. According to the Actual Revenue collected in 2018/2019 this was as low as 1.5% in 2018/19.

The draft budget for 2019/2020 revised the estimated OSR to a 2% aim.

Expenditure Breakdown

In terms of budgeting, currently 30% of the county expenditure is focused on healthcare.

In terms of other service provision, Water and Roads received 8% each with Education coming next at 6%. Environment, Energy and Natural Resources are only 2% despite the fragile environmental context of the region.

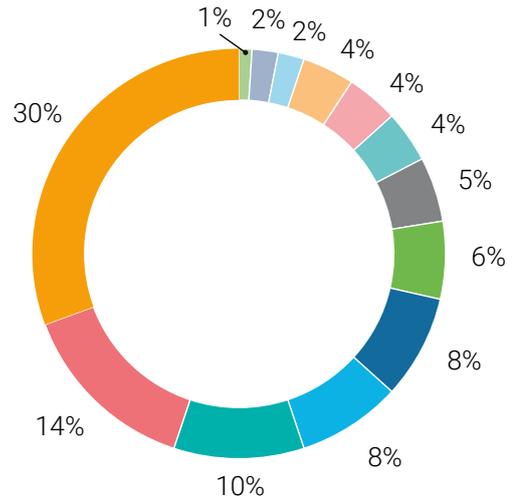
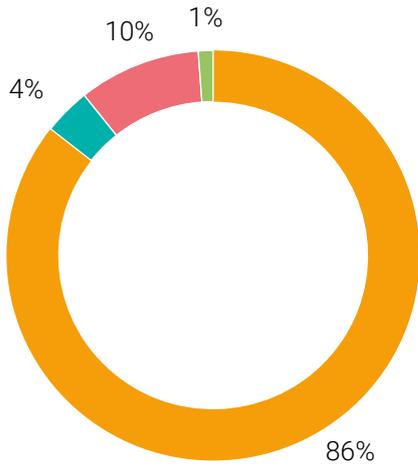
Revenue Breakdown

Far and away the largest proportion of own source revenue comes from healthcare related fees at 35%. The next two largest sectors are livestock at 15%, which reflects the large proportion it plays within the economy with business permits at 13%.

Utility fees, which is often a major component of municipal income however makes up less than 1% of the OSR - which despite the fact that water, waste and public works (including roads) make up 16% of the counties regular expenditure.

Potential for Local Economic Development

Given the particularly low own source revenue collected in Garissa - it is very difficult for the County Government to invest in improvements to infrastructure and service provision. It also implies that the cost of maintenance of infrastructure will be particularly burdensome and risk rapid deterioration. It is crucial therefore for improvements in OSR to be prioritised in tandem with infrastructure investment and associated development projects to have any potential for sustainability.



- National Transfers
- Own Source Revenue (est.)
- Conditional Allocations
- Other Conditional Loans & Grants (donors, etc)

- Health and Sanitation
- Finance & Economic Planning
- County Assembly
- Water
- Roads, Public Works, Lands & Planning
- Education, Public Services, Labour Relations
- Executive Services
- Livestock & Pastoral Economy
- Urban Services
- Agriculture & Fisheries
- Youth, Sport, Trade & Investment
- Environment, Energy & Natural Resources
- Womens Affairs & Culture

Chart: County Income 2018/2019
Source: Garissa Annual Development Plan 2018/2019

Chart: County Expenditure 2018/2019
Source: Garissa Annual Development Plan 2018/2019

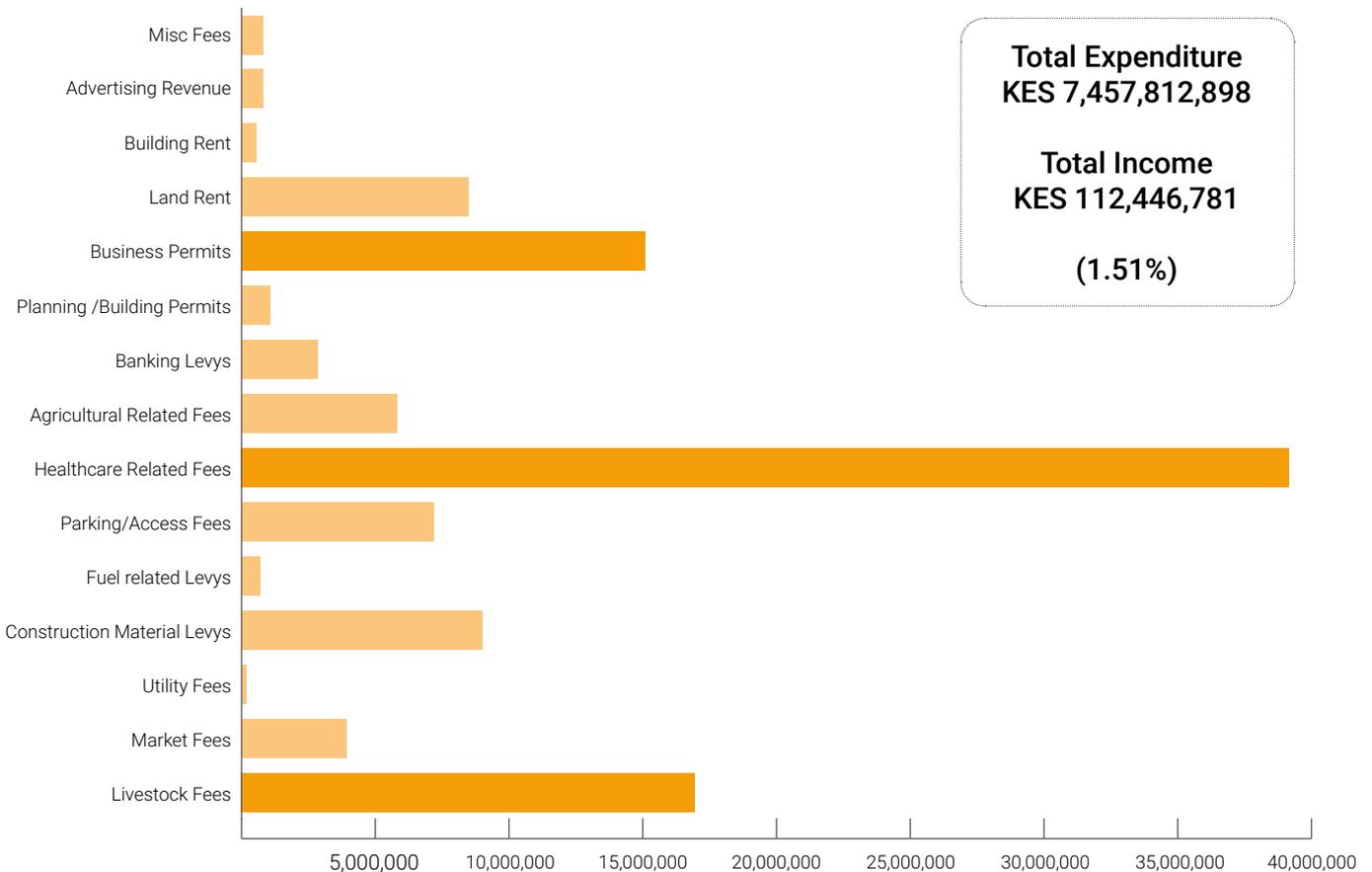


Chart: Own Source Revenue (Actual 2018/19)
Source: Garissa Annual Development Plan 2018/2019



DADAAB ARE



EA CONTEXT

Dadaab & Fafi Sub Counties

Governance & Land Administration

The Dadaab Complex centred around the town of the same name sits within Dadaab Sub-county, close to the border with Fafi Sub-county. These are the two sub counties which host refugee settlements within Garissa County - Ifo and Dagahaley being in Dadaab and Hagadera in Fafi. Decommissioned in 2018, the site of Ifo 2 is situated between Dagahaley and Ifo 1 in Dadaab Sub-county whilst the site of Kambioos which was decommissioned in 2017 is situated south of Hagadera in Fafi Sub-county. The three wards hosting refugees within the sub counties are Labasgile, Dadaab and Jarajila.

These varying administrative zones present a series of complexities when it comes to land and urban management processes. It is worth noting that as the refugee hosting areas overlap two sub-counties, there are both the national government MPs as well as the three MCAs for each of the relevant wards who are responsible for representing the interests of the local communities.

Population Dynamics

This study compared the refugee population numbers⁸⁴ against the most recent census of host communities⁸⁵ to show that the refugee population of Dadaab Sub-county makes up almost 43% of the total population. In neighbouring Fafi, refugees make up almost 36% of the Sub-county's population. Refugee population impacts density of both sub counties, with Dadaab's density rising from 29 to 50 p/km² when accounting for the refugee population, and Fafi's rising from 9 to 14 p/km².⁸⁶

The demographic breakdown of the two sub counties is similar to that of the wider counties with over half the population below 30 years of age, and a growth rate of approximately 3.05% per annum according to regression analysis based on KNBS 2019, 2009 and 1999 data. The working age population makes up approximately 40% of the population. The location of Hagadera and Kambioos being so close to Dadaab Town and the other refugee settlements of Ifo and Dagahaley mean that although administratively they sit within the Sub-county of Fafi - in practice, the population in these areas have more interaction with Dadaab Sub-county due to the proximity and scale of population agglomeration.

Challenges & Opportunities

In terms of challenges facing the area, the fact that the borders of both Dadaab and Fafi Sub-County with Somalia are to some extent porous have resulted in these particular sub-counties being particularly affected by insecurity, particularly Dadaab near the Liboi border crossing.⁸⁷ The densely populated refugee camps with poor service

delivery and limited potential for community self-reliance also acts as a potential driver of insecurity. Furthermore, the generally isolated location with very poor connectivity infrastructure and extremely arid climate (whilst being a driver behind the reasoning for locating the refugees camps in this area in the first place), has historically played a constraining factor in the areas wider development and remains a constraint till today.

Since devolution in 2013 however has led to the growing support of the Garissa County Government in the search for more durable solutions and in recent years as the security risks have slightly eased the renewed effort in joined up programming such as GISEDPA offers a new chance for inclusive development. This aims to build upon the infrastructure and service delivery systems that UN entities and other NGOs have invested in over the years which has had a positive impact upon living standards including employment, in the area as a whole. The fact that this area has now the largest agglomeration of population in the surrounding counties provides it with a large labour force that can be tapped into. Furthermore, the infrastructure left behind in both decommissioned settlements can be taken into account in order to accommodate projected population growth in the sub-counties as well as Garissa County as a whole, both in terms of housing, and in terms of livelihoods.

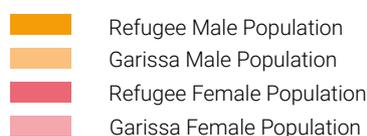
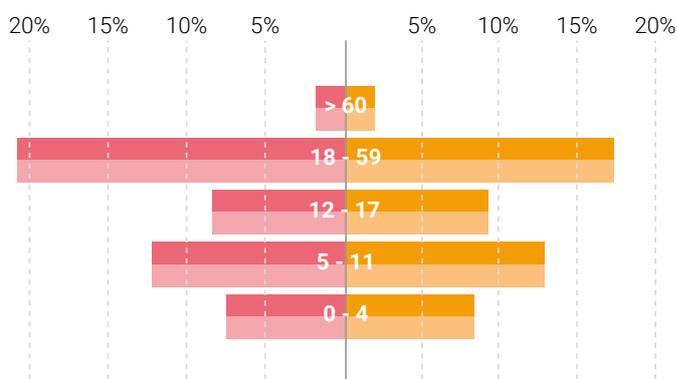
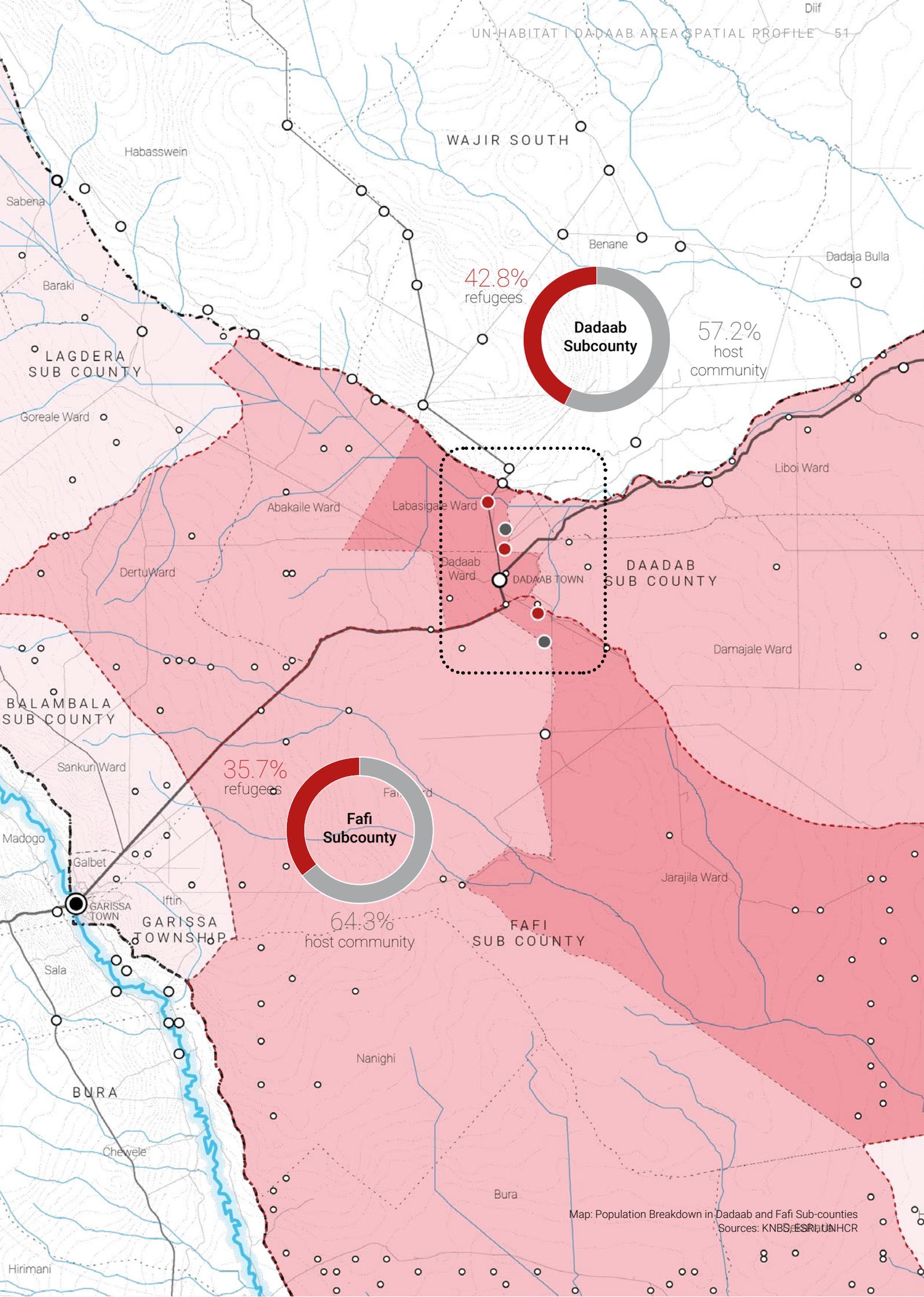
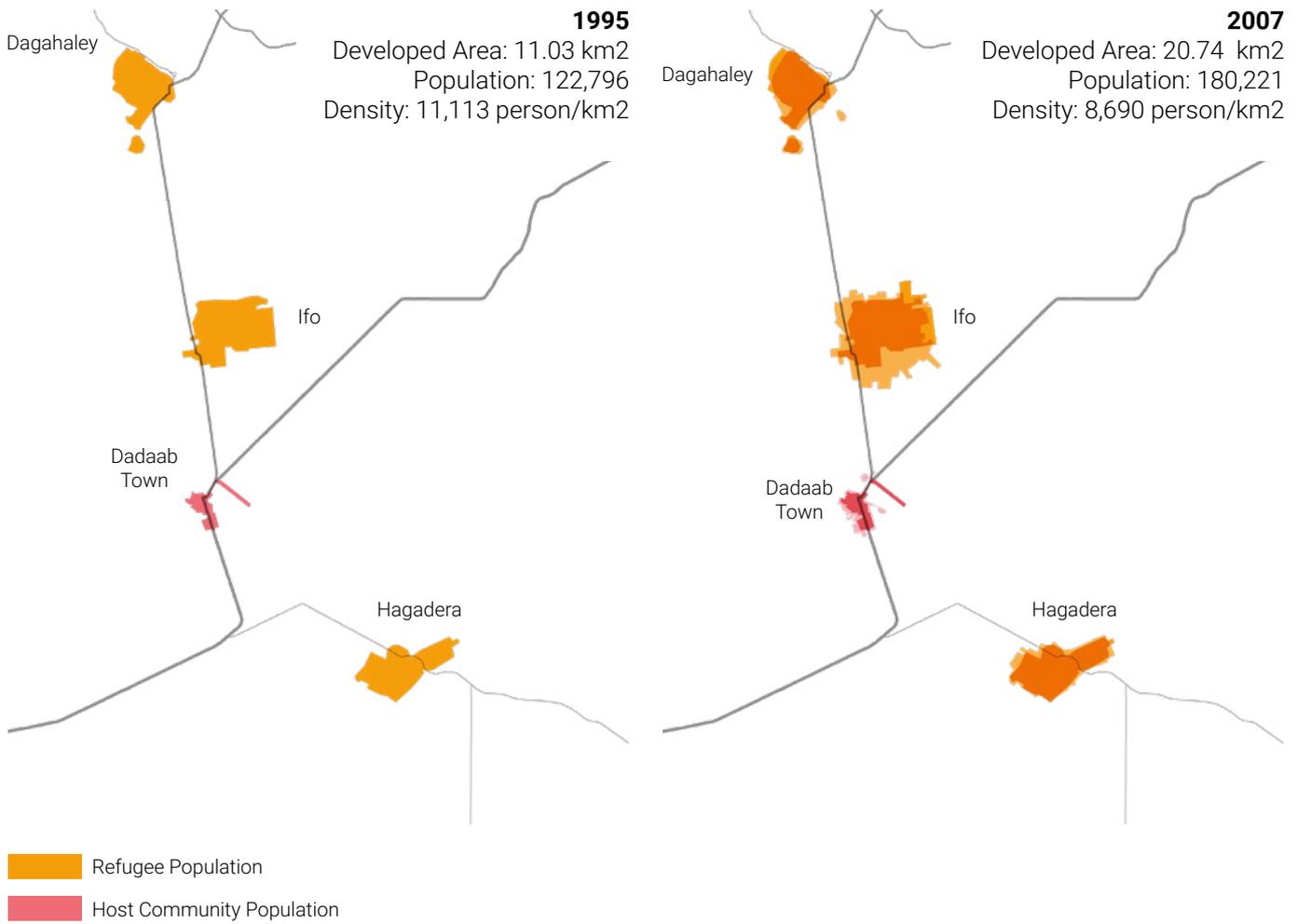


Chart: Demographic Breakdown in Dadaab and Garissa
Source: KNBS 2019



Map: Population Breakdown in Dadaab and Fafi Sub-counties
Sources: KNBS, ESR, UNHCR

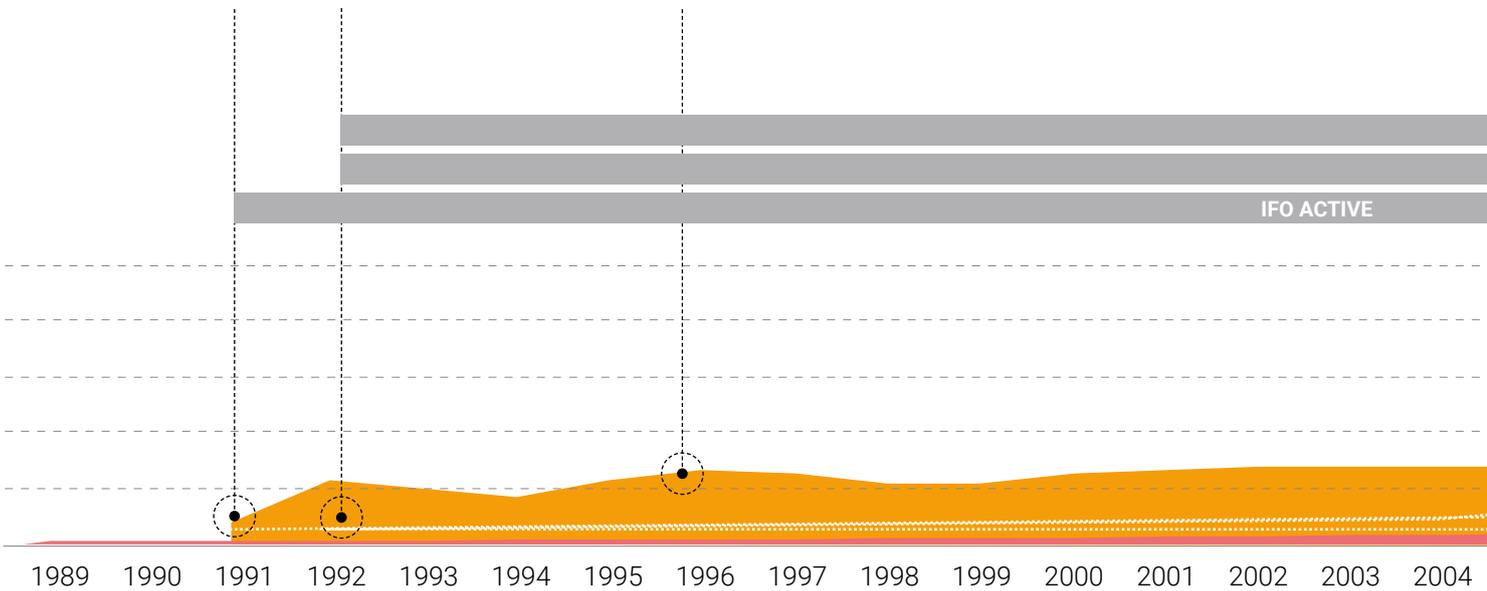
Spatial Impact of Influx

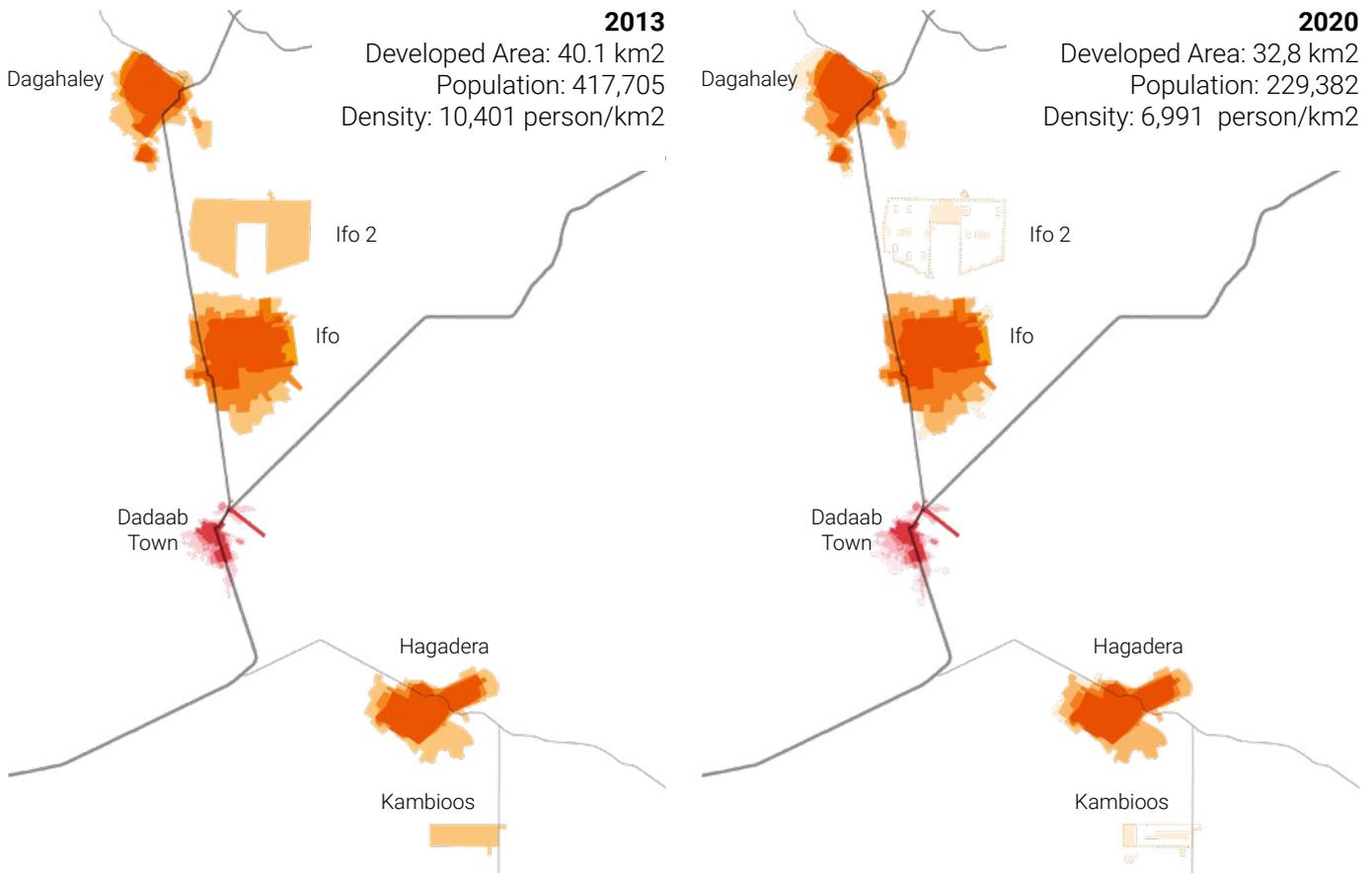


Ifo 1 developed to house refugees fleeing as a result of conflict in Somalia

Hagadera & Dagahaley planned and opened due to scale of refugee influx

Population increase due to Kenyan govt policy to consolidate refugee settlements





Increase in influx rate due to increased insecurity & droughts in Middle & Lower Juba

Ifo 2 planned and developed to aid decongestion

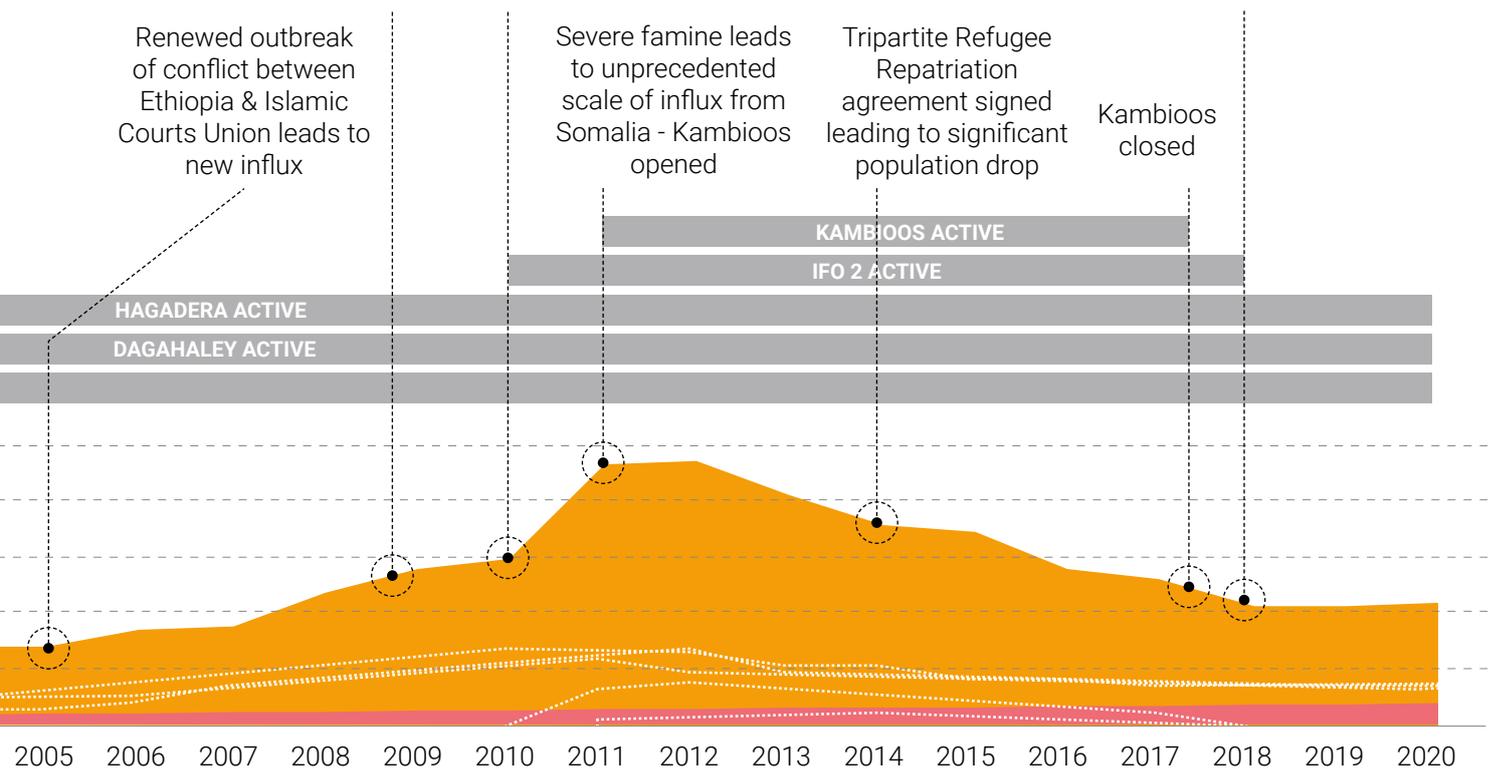
Ifo 2 closed

Renewed outbreak of conflict between Ethiopia & Islamic Courts Union leads to new influx

Severe famine leads to unprecedented scale of influx from Somalia - Kambioos opened

Tripartite Refugee Repatriation agreement signed leading to significant population drop

Kambioos closed



Pivotal historical events in relation to refugee populations in Dadaab camps
Sources: UNHCR, World Bank, USAID

Dadaab Complex Accessibility

Overview of Accessibility

Dadaab Town is the administrative centre, growing substantially in importance since the emergence of the camps in the early 1990s.⁸⁸ It is also where all the main bases of the various agencies are located, making the main hub of the area. The Dadaab refugee operations are coordinated by UNHCR Sub-Office Dadaab and UNHCR Field Office Alinjukur. Despite this, it is by far the smallest settlement. Its location on the A3 main route between the Somali Border and Garissa provides it a key strategic location, also as a crossing point between the rural range lands of Fafi Sub-County to the South where pastoralists tend their livestock and the adjacent counties of Wajir to the north.

The camps are all located off sub-arteries from the A3 roads either connecting south into rural Fafi sub-county or north into Wajir County. The road conditions are particularly poor, but in terms of distance - if the road conditions were improved, the centres of Hagadera and Ifo camps are within a 15 minute drive (dependent on road conditions) of the centre of Dadaab Town, with Dagahaley and Kambioos within a 30 minute drive.

In terms of wider connectivity to Garissa Town and the hinterland of Kenya, there are direct buses to Eastleigh Nairobi which departs from Hagadera, which serves as a direct link between urban Somali diaspora in the two regions and Mogadishu. Further assessments need to be carried out to understand the transport situation between Dadaab Town and the surrounding settlements as well as the surrounding host community areas.

Implications for Improved Connectivity

Whilst this structure of settlements, (placing them approximately 5km from each other) was likely a deliberate decision made in the 1990's to allow for more manageable camp sizes as per UNHCR's administrative policies - this now presents a challenge in terms of how they should operate in a more integrated manner between each other. Assuming that the majority of local inhabitants do not have access to vehicles - the distance and climatic conditions now pose a challenge for future sustainable development due to the large distances between the settlements.

Implications of separating camps for administrative purposes has ramifications on functionality in the long term. Currently they function as a system of interconnected but separate settlements, but in the long term this has significant cost implications in terms of constructing and maintaining infrastructure as well as providing equitable services. For a future scenario, sustainable transport will necessarily be a key requirement. It will also, in terms of likely demand due to opportunity cost and transport costs, make Ifo 2 much higher in relevant demand due to its proximity between two large settlements which provide large potential labour markets and for integration of infrastructure etc.



Buses between Garissa and Dadaab
Source: UN-Habitat

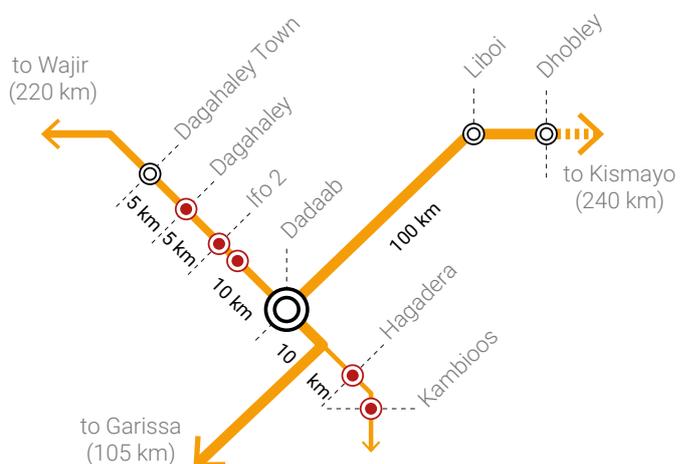
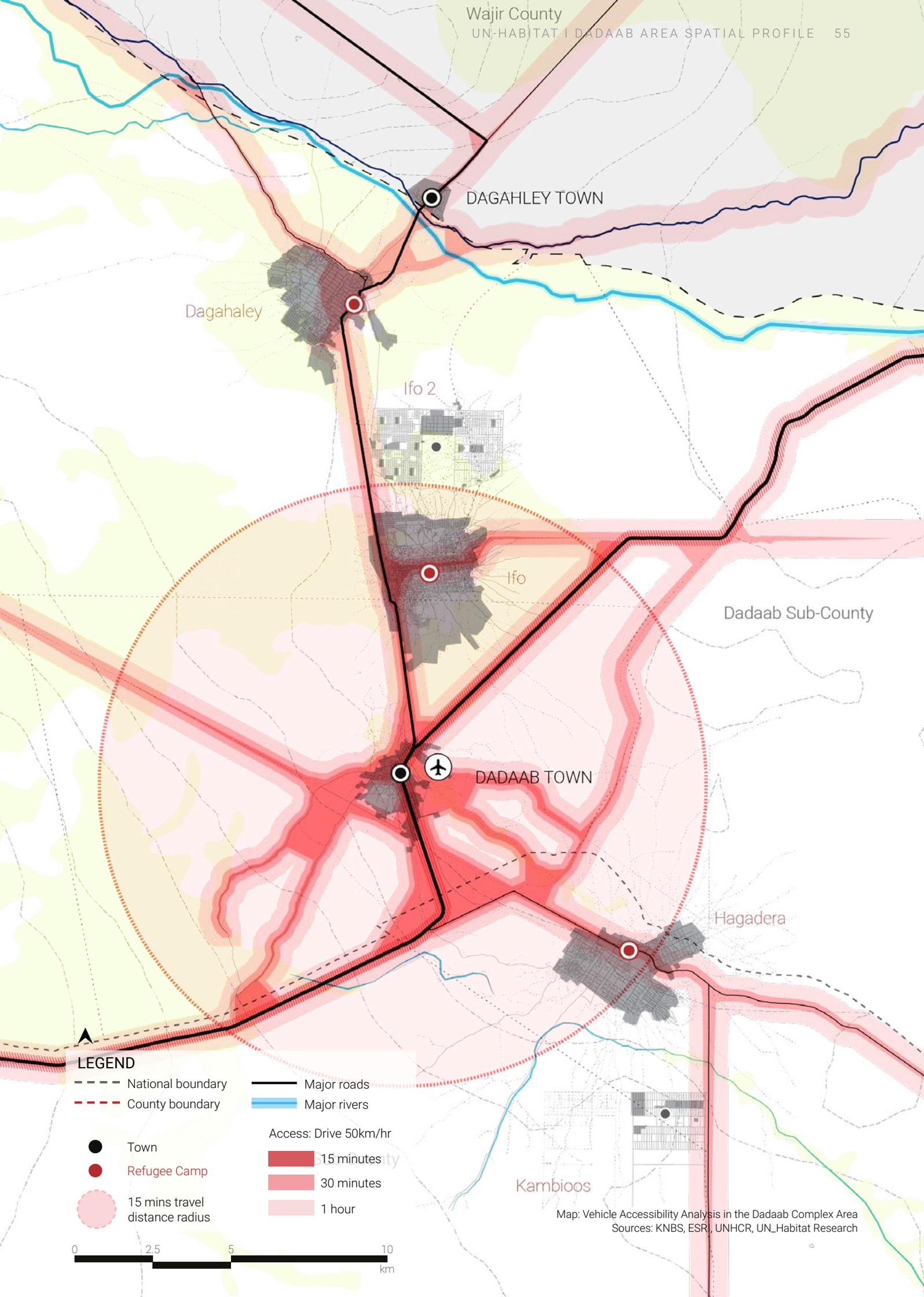


Figure: Distances between Dadaab camps



LEGEND

- National boundary
- County boundary
- Town
- Refugee Camp
- 15 mins travel distance radius
- Major roads
- Major rivers
- Access: Drive 50km/hr
- 15 minutes
- 30 minutes
- 1 hour



Map: Vehicle Accessibility Analysis in the Dadaab Complex Area
 Sources: KNBS, ESR, UNHCR, UN_Habitat Research

Local Economic Activity & Markets

Dadaab Area Markets

An accessibility analysis based on walking speeds from each of the market centres in each of the camps emphasises the distinct population catchment of each market centre. It is more than 60 minutes walking distance from each market centre to another. Whilst the market area in each settlement has a degree of specialisation as is outlined further below, they each play a strong role in catering to the populations within each settlement and help to explain the reason why each settlement has such a large market place as its core.

While restrictions on movement limit the ability of refugees to pursue livelihoods outside of camps, Hagadera, Dagahaley and Ifo have relatively dynamic marketplaces.⁸⁹ Hagadera has the largest and most lively of the three, possibly because it is the oldest and largest camp, but likely also due to the range of products available to residents in the camp. Many items in Hagadera are also sold at a higher price than in Ifo or Dagahaley because of their urban origin. Since many of the refugees in Hagadera are from Mogadishu and other urban centres in Somalia, they have strong social and business ties across a network of cities, likely accounting for their access to such goods and the richer culture of business and trade in Hagadera compared to the other two camps.

Nevertheless, host community members are the primary business owners in Hagadera, with men leading the trade of livestock (camels and goats) and running slaughterhouse operations, women dominating the sale of fruits, vegetables and milk and both men and women in charge of the sale of retail goods. Other services and items for sale include tailoring and dressmaking, tie dyed fabrics, clothing, soap and detergent and electronics and repairs. The market's location on the main route through the camp to the south also contributes to its primacy by taking advantage of high footfall.

The market in Dagahaley is also primarily run by host community members and, similarly to in Hagadera, benefits from both host communities and refugees as customers. The types of goods and services offered in Dagahaley are also akin to those offered in Hagadera but are known to be cheaper. Since refugees residing in Dagahaley come from more rural backgrounds than those in Hagadera, farming and the sale of fruits and vegetables is more developed in and around the camp. The location of the marketplace where the camp abuts the main road, similar to Hagadera makes it very accessible and enables multiple communities to buy and sell goods easily in this market

Ifo's market is smaller and less vibrant, offering fewer goods and services than markets in the other two camps. It is also located deep inside the camp, far from the main road. Residents in Ifo are also known for being more isolated than in Hagadera or Dagahaley, with reports of some security incidents in the county being traced back to Ifo.⁹⁰ Moreover, due to under-developed facilities and infrastructure, and limited access, host communities do not play a major role in the commercial life of the camp. Businesses are mainly owned by refugees, who also make up the customer base. Without a robust presence of host community members, livestock are not typically available in Ifo, nor are slaughterhouses. Primary market goods include fruits, vegetables, meat (butcheries), clothing and electronics, with many of those goods originating in Nairobi or Mombasa, as is the case with goods available in Dagahaley.

The scale of the market in Dadaab Town is understood to be much smaller than the camps due to the presence of cheap food and scale of consumer base that exist in the three refugee camps (consisting of both refugees and locals). Whilst this is likely a result of simple market forces in action, this means that locals in Dadaab Town who wish to purchase goods at lower prices must travel more than 10 km to access the best markets.

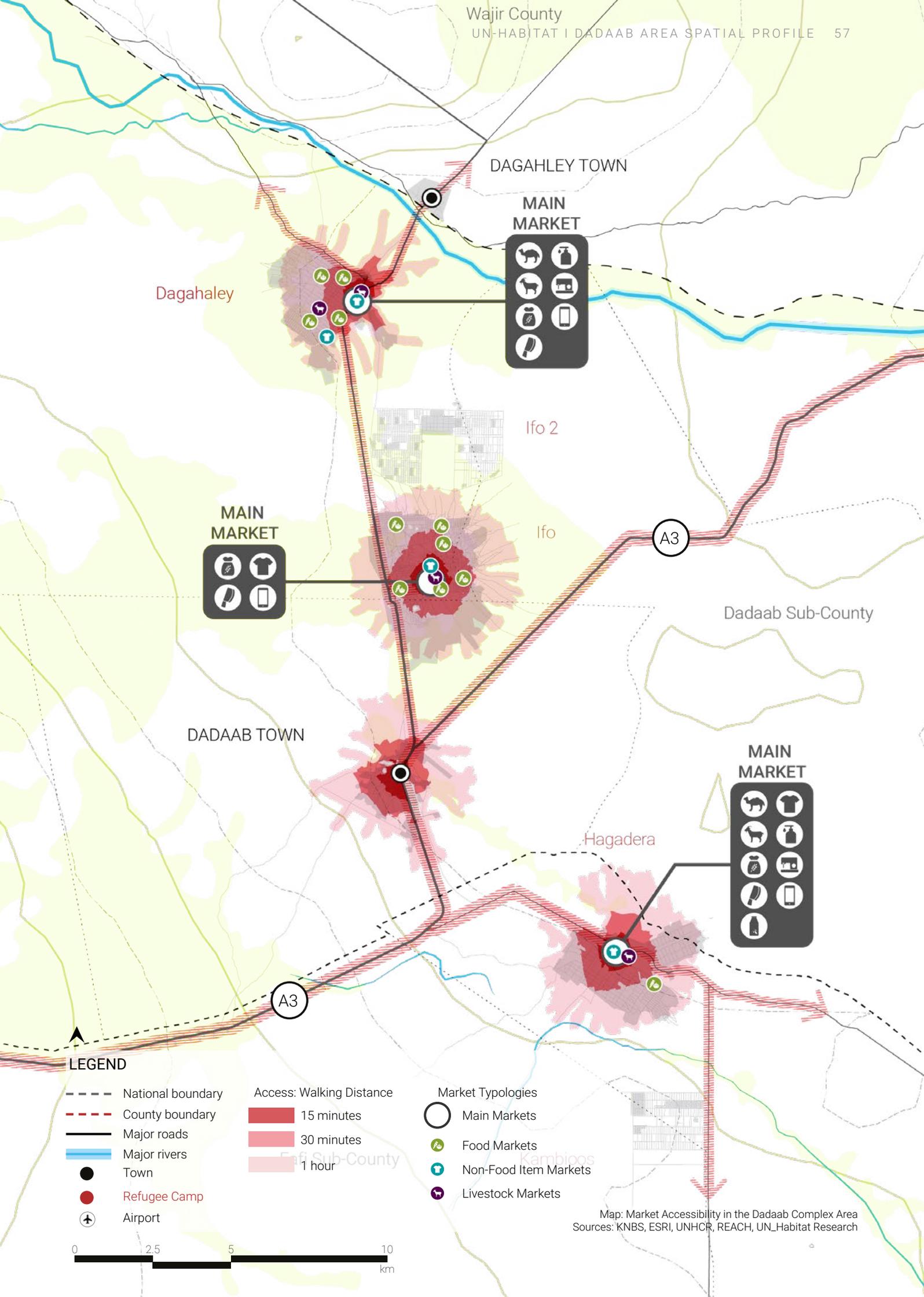
Local Business Revenue Collection

There is an annual licence for the traders in the various markets, with the fees payable to GCG. Furthermore, it is required that a business pay this license to become a Bamba Chakula agent. The annual fees in KES are as follows:

- Wholesale traders - 9200
- Medium Enterprises - 6500
- Small Enterprises - 6300
- Retail Shops - 4250
- Groceries & Kiosks - 2000 - 2200

The various classes of businesses are determined after an assessment by GCG Officials.

Existing traders are required to produce the previous licence before they can make the payment. New traders must apply for an assessment by GCG officials which is free of charge, and then issued for an invoice which they use to make the initial payments. Both the Host and Refugees are treated equally, during registration and annual renewal of Permits. There is a local revenue office in Dadaab Town which is responsible for administering this process.



Dagahaley

DAGAHLEY TOWN

MAIN MARKET

- Food Markets (f)
- Non-Food Item Markets (t)
- Livestock Markets (l)
- Main Markets (circle)

Ifo 2

Ifo

MAIN MARKET

- Food Markets (f)
- Non-Food Item Markets (t)
- Livestock Markets (l)
- Main Markets (circle)

A3

Dadaab Sub-County

DADAAB TOWN

Hagadera

MAIN MARKET

- Food Markets (f)
- Non-Food Item Markets (t)
- Livestock Markets (l)
- Main Markets (circle)

A3

LEGEND

- National boundary
- County boundary
- Major roads
- Major rivers
- Town
- Refugee Camp
- Airport

- Access: Walking Distance
- 15 minutes
 - 30 minutes
 - 1 hour

- Market Typologies
- Main Markets
 - Food Markets
 - Non-Food Item Markets
 - Livestock Markets



Map: Market Accessibility in the Dadaab Complex Area
Sources: KNBS, ESRI, UNHCR, REACH, UN_Habitat Research

Dadaab Complex - Land Cover & Natural Hazards

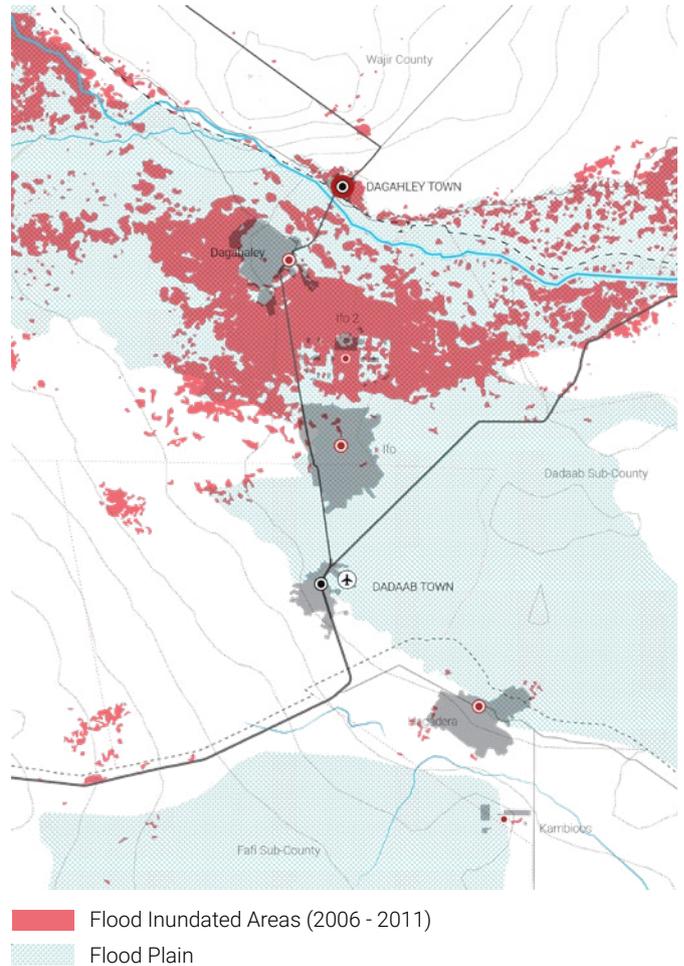
The topography of the area is extremely flat with no perennial rivers in the area. The ASAL nature of the region has meant that in terms of land cover, it is predominantly open low shrubs common with most rangelands in the region. Along the intermittent waterways, and slightly less dry areas there is limited herbaceous vegetation which has also tended to correlate with pockets of agricultural land, around Dagahaley, and Ifo camps. The vegetation in these areas tends to grow rapidly during rainy seasons and die off during the dry season, however this has been impacted by an increasingly irregular flooding regime and rainfall pattern. The soils in Dadaab and Hagadera tend to seal strongly on the surface leading to a low infiltration rate and hence a lot of run-off.⁹¹

The area is within a major flood plain and thus liable to flood during heavy rain. The particularly flat topography and potential for torrential downpours tends to exacerbate the issue and has meant that flood hazards are a regular occurrence in the area, particularly in and around Dagahaley and the site of the now decommissioned Ifo 2 camp.⁹²

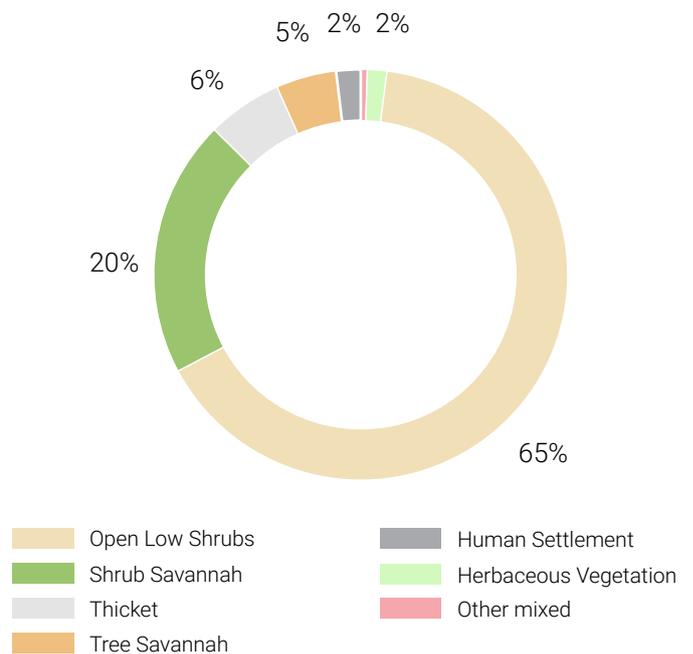
This area however also benefits substantially from large underwater reserves provided by the Merti aquifer. It is clear that the decision to locate the settlements in the first place was in part due to the likelihood of access to water which was well known as the site of Hagadera was historically a sultan's fort which was chosen for its close proximity to a well.⁹³ The benefit provided by the aquifer continues to today as despite the ASAL context of the region and the number of people living in the area, water supply challenges are not reported to be an issue.⁹⁴

It is also noted that the area in general has a strong water harvesting potential as is generally low lying ground where water collects during the rainy seasons with defined inflow channel/laggas that carries large volumes of water from as far as Somalia. Dagahaley has the biggest potential arising from its location being closer to the large lagga/dry riverbed.⁹⁵

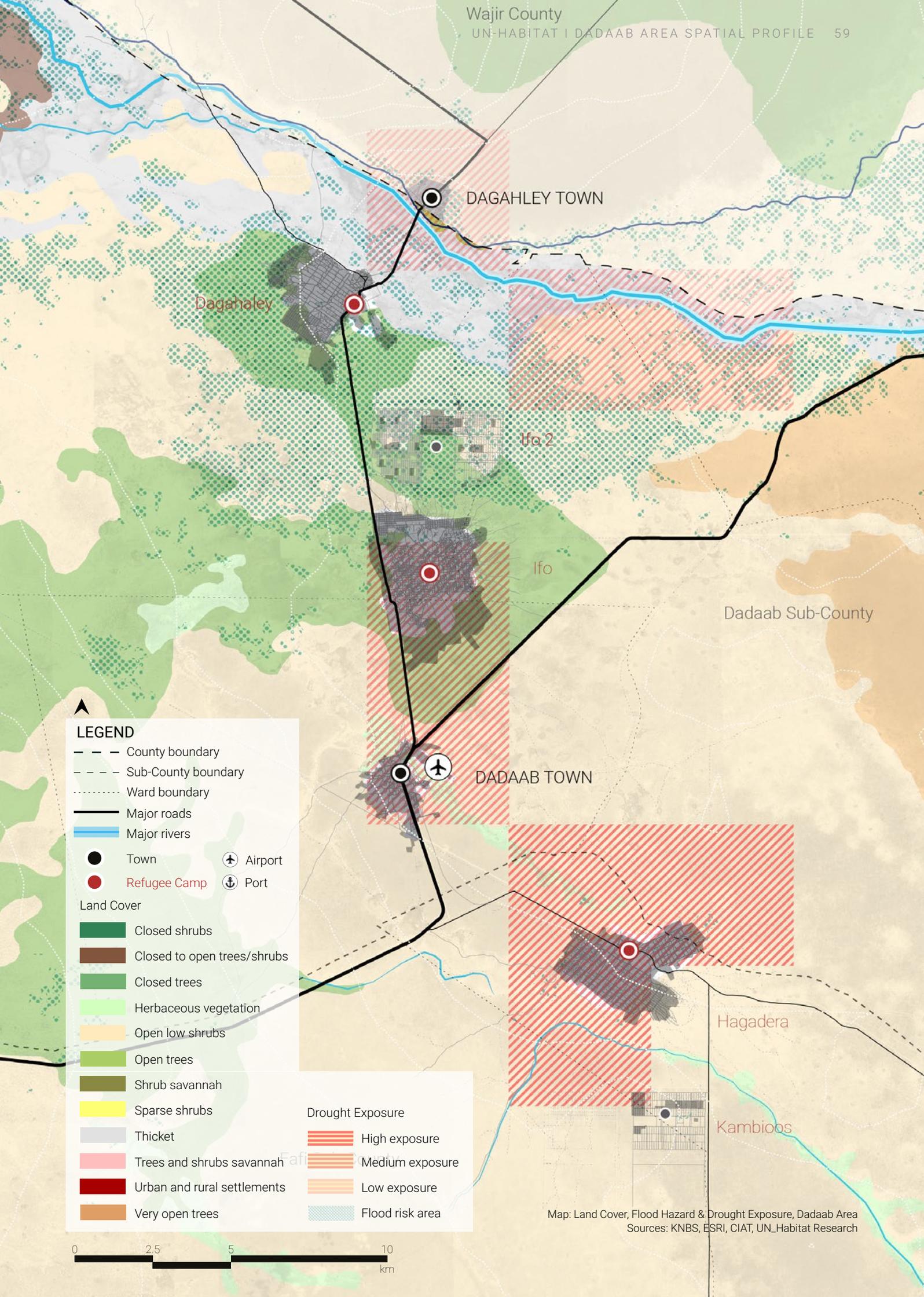
What needs to be understood further however is the extent to which the water resources can be utilised sustainably as the area is also particularly prone to severe drought exposing the livelihoods that rely on agricultural production to ever increasing risk as population grows and climate impacts increase. The importance of land resource management to support pastoralist livelihoods should also not be underestimated. As such, the range-lands surrounding the area must be protected from desertification alongside water supply systems to allow the settlement areas to be developed as service and economic centres that support mixed livelihoods.



Map: Historical Flood Hazard Areas
Sources: UNOSAT & National Spatial Plan 2015



Land Cover Breakdown, Dadaab Complex Area
Source:



LEGEND

- - - County boundary
- - - Sub-County boundary
- Ward boundary
- Major roads
- Major rivers
- Town
- ⊕ Airport
- Refugee Camp
- ⚓ Port

Land Cover

- Closed shrubs
- Closed to open trees/shrubs
- Closed trees
- Herbaceous vegetation
- Open low shrubs
- Open trees
- Shrub savannah
- Sparse shrubs
- Thicket
- Trees and shrubs savannah
- Urban and rural settlements
- Very open trees

Drought Exposure

- ▨ High exposure
- ▨ Medium exposure
- ▨ Low exposure
- ▨ Flood risk area



Map: Land Cover, Flood Hazard & Drought Exposure, Dadaab Area
Sources: KNBS, ESRI, CIAT, UN_Habitat Research

Dadaab Complex - Basic Services

The data displayed in the maps has been compiled from REACH, UNHCR, and UN-Habitat field research, however it remains incomplete. It is apparent from the available information that basic services are available throughout most of the three older camps of Ifo, Hagadera, and Dagahaley. There are however gaps in the data, in particular in regards to electricity infrastructure coverage. Further infrastructure profiling is required to illustrate the complete infrastructure coverage across the newer decommissioned camps of Ifo 2 and Kambioos. The data displayed also does not indicate the condition nor the functionality of the infrastructure.

WASH

Across the three older camps of Dadaab (Ifo, Hagadera, and Dagahaley), water is widely accessible, because the camps have benefited from over two decades of investment. Solarized boreholes have made water available at rates that generally surpass volume per capita recommendations.⁹⁶

In Ifo, Hagadera, and Dagahaley, the majority of households report being within a 30 minute walk of a water access point; however, more than half report encountering some challenges in collecting water. The primary challenges reported across all three camps were not enough water at the collection point and not enough containers to carry or store water. In the two newer decommissioned camps (Ifo 2 and Kambioos), infrastructure is significantly more limited, as is information on the quality and functionality of that which does exist. In Ifo and Hagadera, the majority (63%⁹⁷ and 77%⁹⁸ respectively) of households report collecting water on a daily basis; however, in Dagahaley, only 31% of households report collecting water on a daily basis, while half (50%) collect water only once (15%) or twice (35%) a week.⁹⁹

Water available in Dadaab complex originates from a treatment plant and is distributed to 42 storage tanks with a capacity of 4,950 m³.¹⁰⁰ From there, it travels a 236km network of pipes to 774 tap stands with around 2,822 individual taps.¹⁰¹ With 22 operational boreholes across Ifo, Dagahaley, and Hagadera as of September 2020, daily water production averaged 10,460m³. Of this, 68.6% (7,238m³) was made directly available to the refugee population, while the remaining 32.2% (3,431m³) was directed to other uses such as agencies, markets, institutions, hospitals, and livestock, or lost through leakage and other losses.¹⁰²

Across Garissa County, around half (46.76%) of the population used pit latrines as their primary means of sanitation, while only 2.6% were using VIP (ventilated

improved pit latrines) and the majority (50.63%) were using other means such as bushes.¹⁰³ Sewerage connections are sorely lacking, with the only connections in Garissa Town.¹⁰⁴

Within the Dadaab complex (Ifo, Hagadera, and Dagahaley camps), the majority of households report having access to and using a latrine. In September 2020, reporting by UNHCR identified 37,322 household latrines and 250 communal latrines across Dadaab, which translates to coverage of 80%.¹⁰⁵

While access is generally good, where access is limited in Ifo and Hagadera, the primary challenge is that children under the age of three are unable to access the latrines. In Dagahaley, however, more than a third (34%) of households report that the biggest challenge to access is that the facilities are unsafe, while a quarter (23%) report unclean conditions, and another quarter (23%) report insufficient facilities.¹⁰⁶ A major concern is that 22% of households in Hagadera and 12% in Dagahaley reported that at least one member of their household does not have access to and use a latrine, which exposes these households to a higher risk of diseases such as cholera.¹⁰⁷

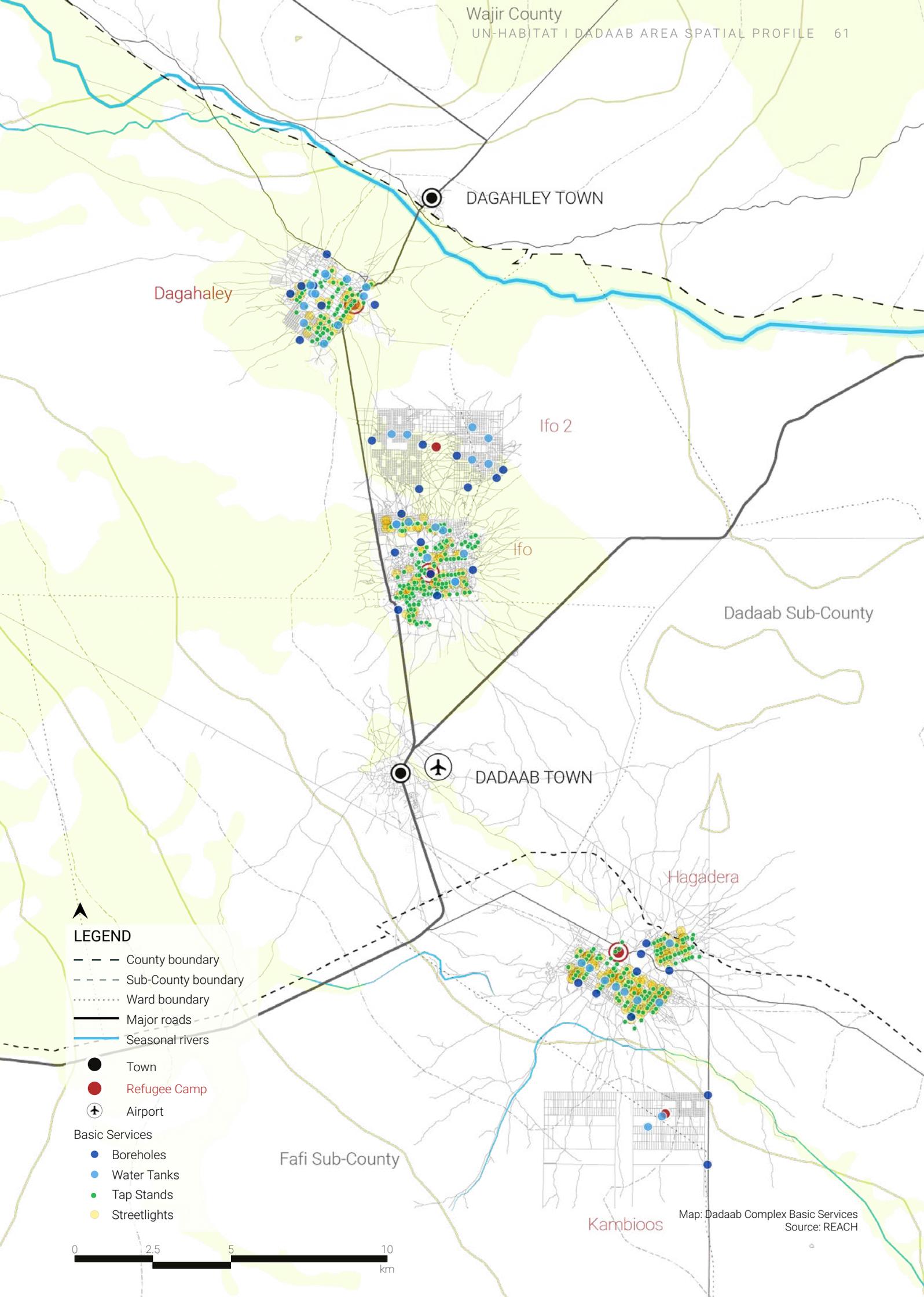
Waste Management

As of 2019, waste management remained a central challenge within the Dadaab complex. The streets are littered with trash in a way that is very noticeable and has elicited complaints from the host community.

Based on a survey of 100 households conducted in October of 2018, it was estimated that the average household produced 3.8 kilograms of waste per day, which translates to a total of 149,165 kilograms per day for all of Dadaab complex or 54,445 tons per year.¹⁰⁸ Of surveyed households, about half (51%) reported storing waste generated by their household in rubbish pits, while nearly another half (45%) used dust bins and a small number composted (3%) or used another method of disposal (1%).¹⁰⁹

The collection of waste within Dadaab Complex is reliant on a combination of donkeys, handcarts, and tricycle wagons that are used to bring waste from households to an initial sorting location. From there, waste is generally transferred by small trucks to a final disposal site. When it comes to disposal, most households report relying on either incineration or dumping/burying, with a smaller number of households recycling or landfilling their waste.¹¹⁰

Most of the waste disposal strategies employed in the Dadaab complex come with consequences. For waste that is dumped at sites these include health risks



Dagahaley

DAGAHLEY TOWN

Ifo 2

Ifo

Dadaab Sub-County

DADAAB TOWN

Hagadera

Fafi Sub-County

Kambioos

Map: Dadaab Complex Basic Services
Source: REACH

LEGEND

- County boundary
- Sub-County boundary
- Ward boundary
- Major roads
- Seasonal rivers
- Town
- Refugee Camp
- ✈ Airport

Basic Services

- Boreholes
- Water Tanks
- Tap Stands
- Streetlights



Dadaab Complex - Basic Services

(disease), environmental degradation, negative perception of refugees, risk of spontaneous combustion, and risk of water contamination with flooding. For waste that is incinerated in selected areas, aside from the environmental risks, the health risks include polluted air and the release of toxic substances.¹¹¹

Various actors in the commercial waste management and recycling industries in Kenya have expressed an interest in entering the market presented by the situation in Dadaab. Some early stage programs are being tested, but a social stigma still remains around participation in these.¹¹² In 2015, the Global Waste Management Outlook of the United Nations Environment Programme (UNEP) estimated that the costs associated with the current situation could range from US\$20-50 per person per year, while a more thoughtful and strategic approach could reduce this to US\$5-7 per person per year.¹¹³

Energy

As of 2017, only about 1.5% of the total population of Garissa County received electricity from the national grid, though connections did exist in Garissa Town, Ijara, Dadaab Town, Bura East, Balambala, and Modogashe.¹¹⁴ Unfortunately, as of 2016, the Dadaab camp complex was not connected to the national electrical grid, leaving households there entirely dependent on standalone or off-grid power sources.¹¹⁵ Dry-cell battery torches were the primary source of household lighting for the majority (60.8%) of households, at a total cost of US\$1.6 million per year.¹¹⁶ After that, a minority of households rely on indirect lighting from street lights, neighbouring households, electricity from generators, solar lanterns, or kerosene lamps.¹¹⁷ As in the camps, host communities in the area are heavily reliant on dry-cell battery torches and firewood for light and cooking fuel.

Due to the current lack of a central supply, households with the means and capital have invested in individual stand-alone power systems that run on low-quality diesel generators or photovoltaic solar. Households in this position often distribute energy informally to neighbors for a negotiated fee. It is estimated that around the Dadaab area there is an untapped energy market of around US\$18 million per year, with the refugee population accounting for 80% of that.¹¹⁸ After food and clothing, energy accounts for the third greatest domestic expense for refugee households in Dadaab.¹¹⁹

As of 2016, access to fuel for household cooking in the Dadaab camps was very poor. In a survey conducted at that time, almost all (98%) households relied on wood as their primary source of cooking fuel.¹²⁰ It was estimated

that households spent US\$6.3 million per year on wood for cooking fuel, while almost half (49%) of households collected firewood from the surrounding woodlands at no financial cost.¹²¹ In addition to firewood, charcoal is sourced from the burning of *Prosopis Juliflora* (commonly called Mathenge), which is permitted, because it is an invasive plant.¹²²

Most households reported cooking in indoor kitchens, of which 90% had no chimney for proper ventilation. This, combined with the poor quality of fuel, puts many households across Dadaab at risk of sustained exposure to indoor air pollution.¹²³ Though improved cookstoves have been widely distributed, meeting the demand for firewood is still a major challenge. This significant burden on local biomass resources along with the limited benefits of improved cookstoves means that Dadaab is in serious need of an alternative fuel source for cooking. A 2015 study indicated an 11.8% decrease in natural resources (water and foliage) in the area five kilometres around Dadaab complex.¹²⁴

Telecommunications

Garissa County is served by three mobile phone service providers; coverage is limited to around 62% of the county with almost no coverage in Balambala and Fafi sub-counties.¹²⁵ There are only around 800 landline connections within the county, however radio coverage stands at over 95% and remains the primary means of accessing news coverage, especially in rural areas.¹²⁶ There are a number of internet cyber cafés. Additionally, there is one Huduma Centre (Government Services Facilities) in the county and four post offices, located in the towns of Garissa, Modogashe, Dadaab, and Masalani.¹²⁷

As of 2016, almost every household (98%) in Dadaab owned a mobile phone.¹²⁸ However, since most households lack a domestic electrical connection, charging is an issue; about half (48.9%) of households rely on kiosks and shops, where they must pay to charge, another third (30.4%) charge at neighbours' homes, and the rest charge either at home through an electrical connection (11.5%) or a solar lantern that produces enough energy to charge from (9%).¹²⁹ At that time, with about half of households paying to charge their mobile devices, this presented an important income-generating opportunity within the camps.



Dadaab Complex - Public Facilities

Healthcare Facilities

With a high poverty rate and very few benefiting from health insurance, residents of Garissa County typically pay out-of-pocket for access to healthcare services, which has a negative impact on household finances. Prior to devolution, the healthcare system in the area was managed by the central government, but was significantly underfunded and forced to rely on insufficient donors and fees. Since Garissa County took over responsibility, it has invested heavily in expanding and improving services and facilities, though much remains to be done.

In Dadaab complex, the majority of camp residents reported being within a 30 minute walk of a healthcare facility. In Ifo, the majority (70%) of households report being within a 30 minute walk of a healthcare facility, while only 7% report being more than an hour away.¹³⁰ In Hagadera, just over half (52%) of households report being within a 30 minute walk of a healthcare facility, while only 11% report being more than an hour away.¹³¹ In Dagahaley, the majority (82%) of households report being within a 30 minute walk of a healthcare facility, while 16% report being within an hour, and the remainder (only 2%) do not know.¹³² Across the camps, of households who reported recently visiting a healthcare facility, almost all were facilities run by NGOs and almost all reported not needing to pay for the services that they received.¹³³

Education Facilities

As of September 2020, 68,781 refugee children were enrolled in schools within the Dadaab complex,¹³⁴ which left about a quarter of school-aged children across the three camps not attending school.¹³⁵ As of September 2019, this meant that 27% of female and 26% of male school-aged children in Ifo,¹³⁶ 27% of female and 22% of male school-aged children in Hagadera,¹³⁷ and 33% of female and 22% of male school-aged children in Dagahaley were not attending school.¹³⁸

Among households with school-aged children not attending school, the most common reported reason across all three camps was either the perception that the children were too young to attend or that the facilities were too far away.¹³⁹ Additionally, there was a belief in Ifo that the children needed to complete work (male) or attend to domestic chores (female),¹⁴⁰ in Hagadera that there was no space to enrol,¹⁴¹ and in Dagahaley that enrolling in school could impact a family's efforts to leave the camp.¹⁴²

Of the households in Ifo and Hagadera who reported that their children were too young to attend school, the majority (54% in Ifo¹⁴³ and 69% in Hagadera¹⁴⁴) attributed this belief to a desire to send their children to a madrasa

first, while just under half (46% in both camps) attributed this to the travel distance being too great.¹⁴⁵ In Dagahaley, of the households who reported that their children were too young, the majority (79%) attributed this belief to the distance to travel being too great, while notably, more than a quarter (26%) feared violence either on the way to (21%) or at (5%) school.¹⁴⁶

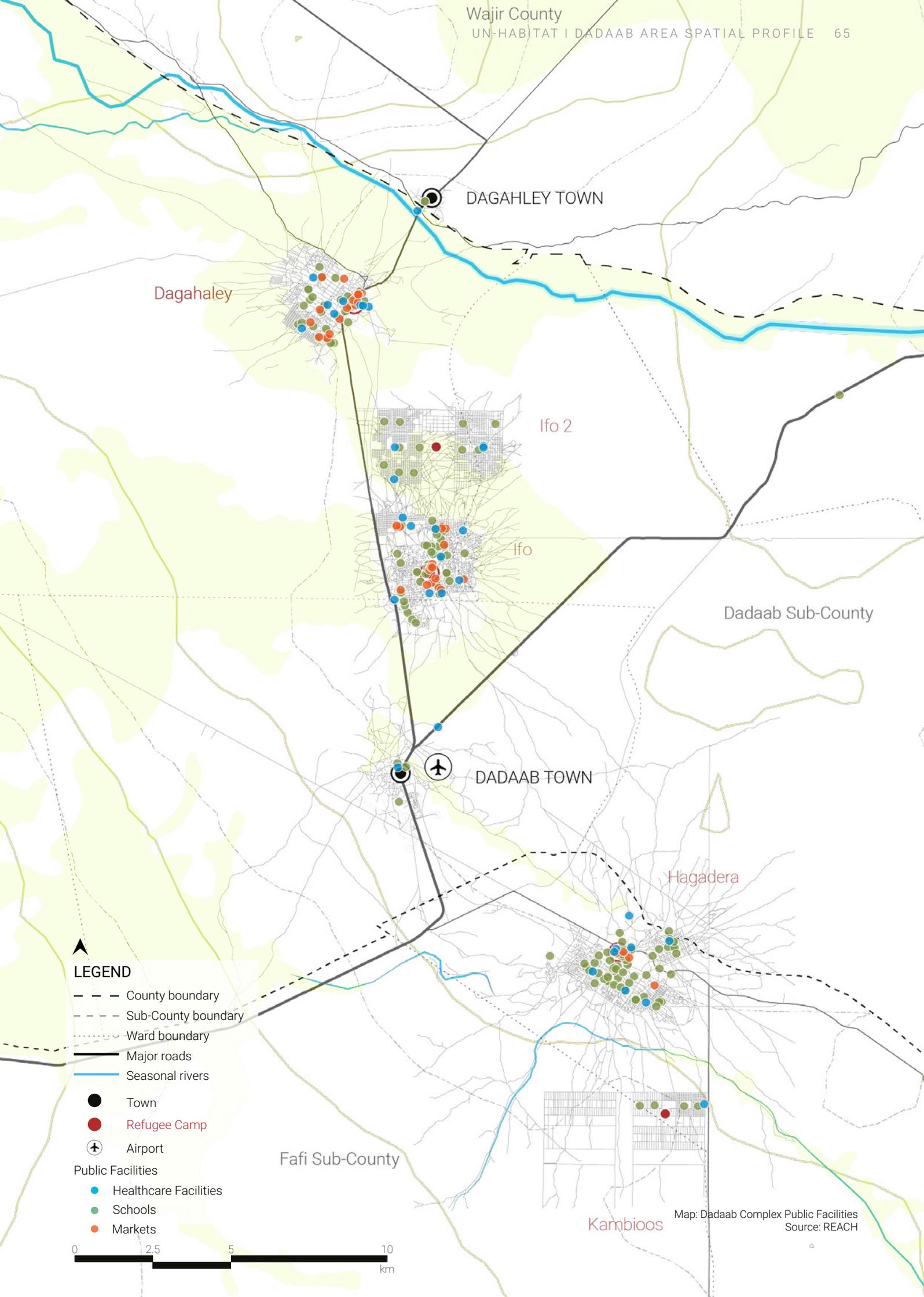
Across the three camps, a higher proportion of children are attending primary school than are attending secondary or certainly tertiary school, demonstrating that student retention and the transition to higher levels of education remain challenges.¹⁴⁷ For those who do not continue with their education, the primary reasons reported were the inability to pay the fees and afford supplies or a preference for work over schooling.¹⁴⁸

Security

Security facilities within the Dadaab complex are predominantly police stations and police posts. As of January 2019, there was one police station in Ifo camp,¹⁴⁹ while Hagadera¹⁵⁰ and Dagahaley¹⁵¹ camps each contained two police stations or posts. Additionally, there were county offices in each of the camps, one in Ifo,¹⁵² four in Hagadera,¹⁵³ and two in Dagahaley.¹⁵⁴

Communal Spaces

A variety of communal spaces were available across Dadaab Complex as of January 2019. In Ifo, there were six Child-Friendly Centres, two Youth Centres, and a Community Livelihood Centre.¹⁵⁵ In Hagadera, there were four Child Friendly Centres, three Community Livelihood Centres, three Youth Centres, four Community Centres, and four Women's Centres.¹⁵⁶ In Dagahaley, there were three Youth Centres, five Community Centres, as well as a Child-Friendly Centre and a Women's Centre.¹⁵⁷



Dagahaley

DAGAHLEY TOWN

Ifo 2

Ifo

Dadaab Sub-County

DADAAB TOWN

Hagadera

LEGEND

- County boundary
- - - Sub-County boundary
- Ward boundary
- Major roads
- Seasonal rivers
- Town
- Refugee Camp
- ✈ Airport
- Public Facilities
 - Healthcare Facilities
 - Schools
 - Markets



Kambioos

Map: Dadaab Complex Public Facilities
Source: REACH

Settlement Structure - Spatial System

The overall pattern of development for the Dadaab complex is characterised by a form of corridor development, with the settlements distributed along two secondary roads that extend off the main A3 highway. Whilst Dadaab Town is the central hub in locational terms, the major population centres are the refugee settlements themselves.

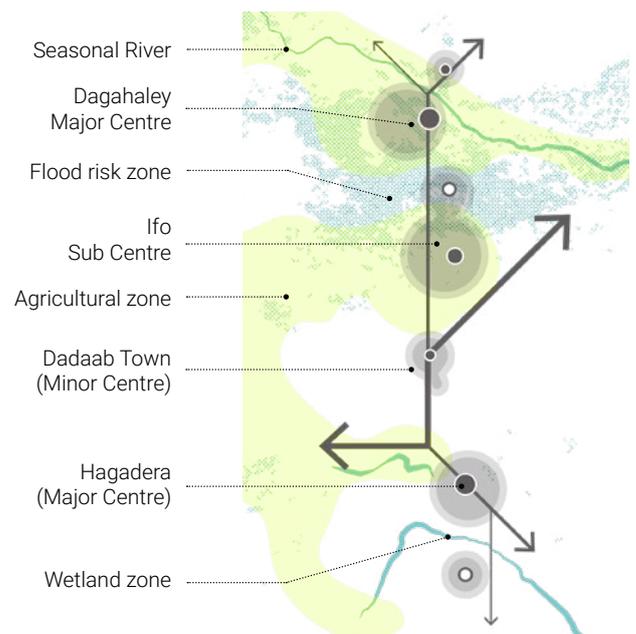
Due to the fact that the camps were planned to support the refugee influx they clearly demonstrate clear access and structure, particularly Dagahaley and Hagadera which are clustered into large blocks of dwelling areas divided by large bands of open space. These settlements have grown substantially and the peripheral areas demonstrate a much more haphazard structure as they also integrate with surrounding host community settlement areas.

Ifo was the first camp with evidence showing a less structured older section of the settlement which was likely spontaneously settled with access and services added later, although the newer Eastern & Northern sections show clear planning structures. The centre of the settlement was set away from the main road in the centre of the older and newer sections of the settlement which may have contributed to the weaker market as it is simply less accessible.

Dagahaley and Hagadera act as end points, despite being the largest market centres, although this may reflect the needs of the highly rural community in the surrounding areas therefore making the market and facilities to some extent more accessible. The local host community settlements, particularly Dadaab Town, in contrast are clearly unplanned and are characterized by low density. The spatial structure is radial, with plot sizes very irregular and the road structure fitting around existing land ownership patterns.

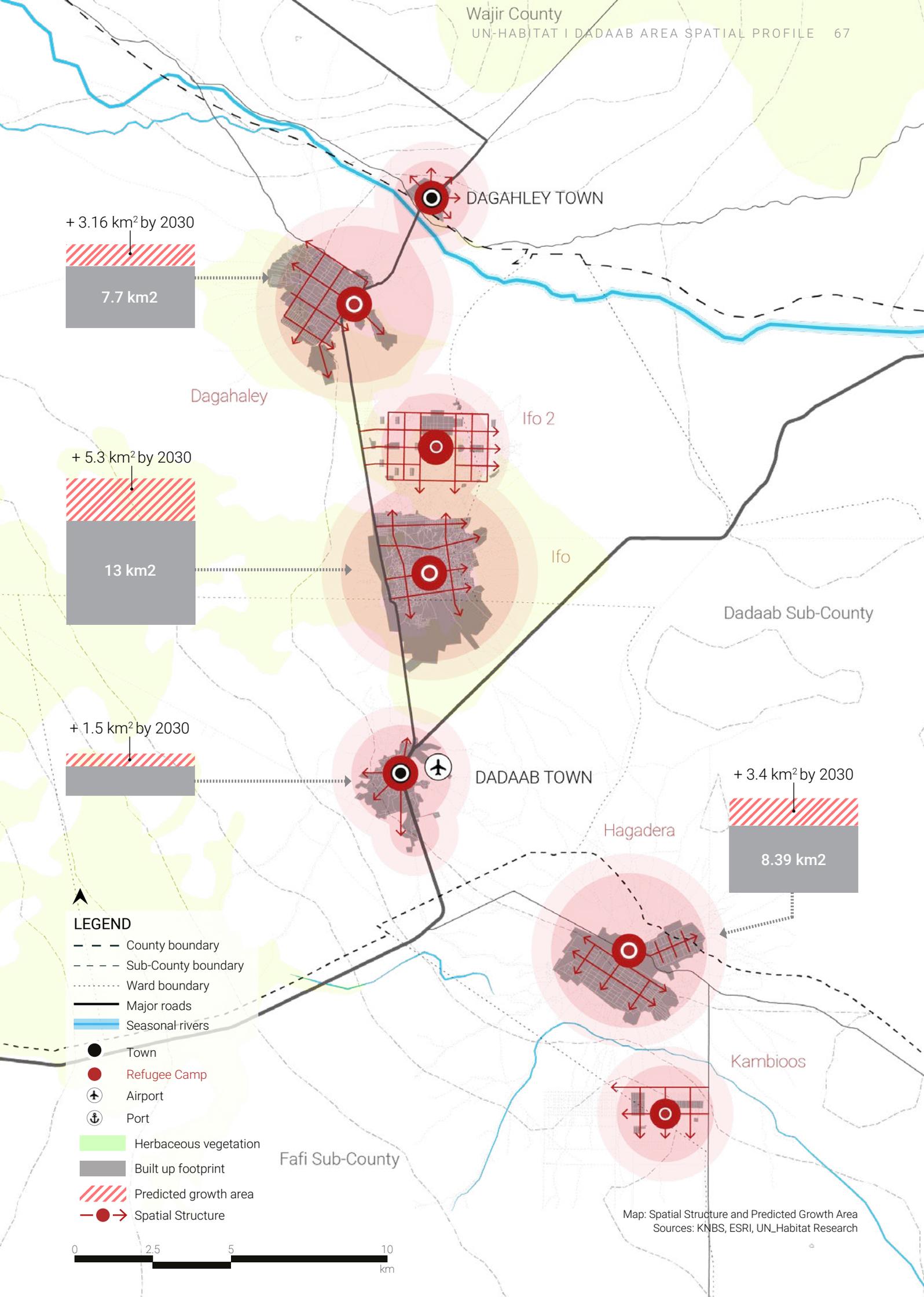
In terms of estimated developed area footprint, Ifo remains the largest settlement area, but much less dense than the other camps. This may be in part due to the large areas that have been used for agricultural activities, mainly on the periphery of the settlement. Dagahaley is the densest settlement, with the most dense areas closest to the main road and market places.

Calculations based on existing density and average population growth for Garissa County (3.05%) suggest that if the settlements remain in existence for the coming 10 years, the total demand for land area will increase by 40% from 32.8km² in 2020 to an estimated 46.2km² in 2030. The sites of Kambioos and Ifo 2, accounting for a combined land area of 32.42km², will therefore be critical in ensuring a manageable urban development growth strategy.



	Dadaab Town	Ifo	Dagahaley	Hagadera	TOTAL
Urban Extent 2020 (km ²)	3.75	13.01	7.69	8.38	32.81
Population 2020 (est)	11,871	67,099	71,311	74,525	229,382
Population Density (p/km ²)	3,174	5,162	9,273	8,893	6,991
FORECAST					
Population 2030 (est)	16,000	92,900	98,700	103,160	310,705
Urban Extent 2030 (km ²)	5.24	18.3	10.85	11.78	46.17

Current and future population estimates, urban extents and densities
Source: KNBS 2019 & UNHCR 2020



Map: Spatial Structure and Predicted Growth Area
Sources: KNBS, ESRI, UN_Habitat Research

Settlement Structure - Land Use Allocation

Land Use analysis of the various settlements is particularly useful in understanding the existing urban function as well as what may be needed in the future for the redevelopment of the Kambioos and Ifo 2 sites.

Old Camp Land Use (Dagahaley, Hadagera, Ifo):

- Predominantly residential
- Market at the centre + clear administrative centre
- Residential on the periphery
- Large residential blocks surrounded by roads, with pedestrian only access internally
- Avenues of public space
- Public facilities distributed
- Ifo oldest and some parts show history of being spontaneously settled
- Hagadera and Dagahaley planned with clear intent

New Camp Land Use (Kambioos & Ifo 2):

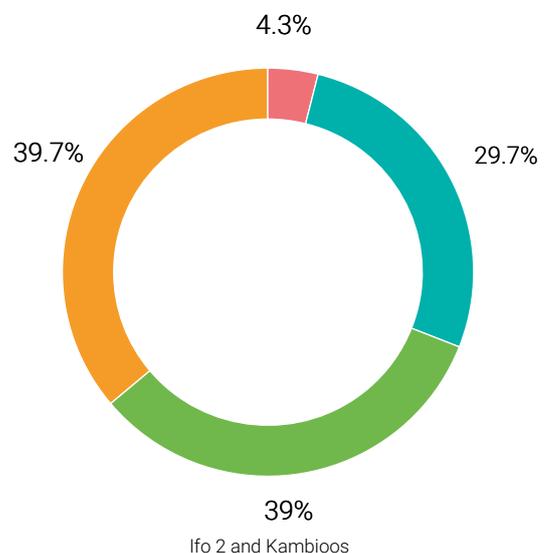
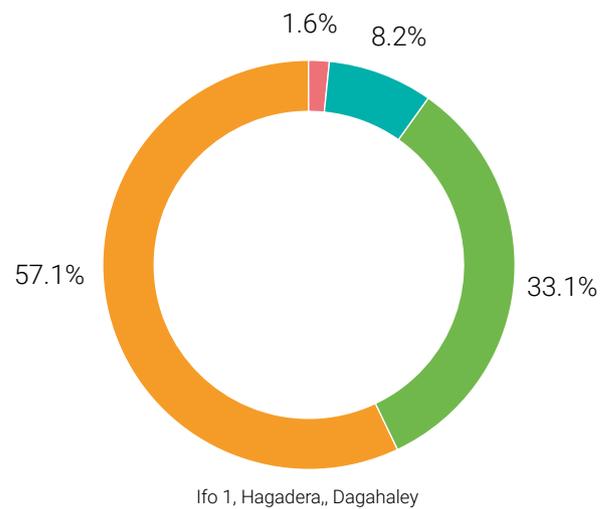
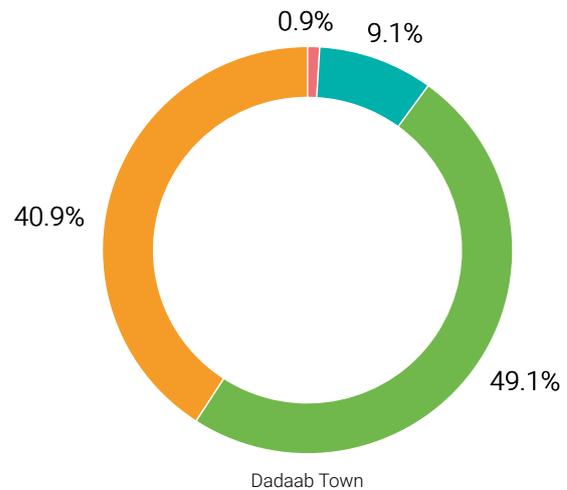
- More equitable allocation of land use in general but unclear centre, mixed use approach with no clear hierarchy
- Indications of market on main road edge for IFO 2 but never implemented. Market seen as link between host community and refugees
- Block structure very small in comparison to previous settlements

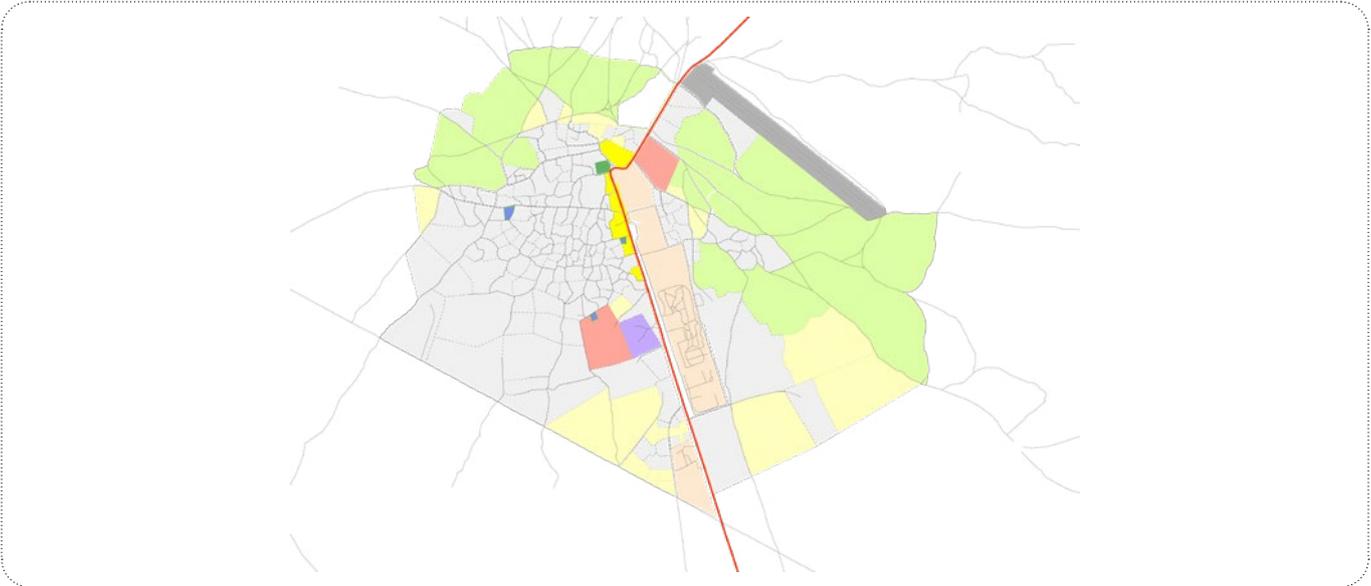
Dadaab Town Land Use:

- Fully reflects local demand as it is in no way planned
- The huge land footprint of the agencies emphasises the value to the towns existence in itself, (approximately 6% of the town area)

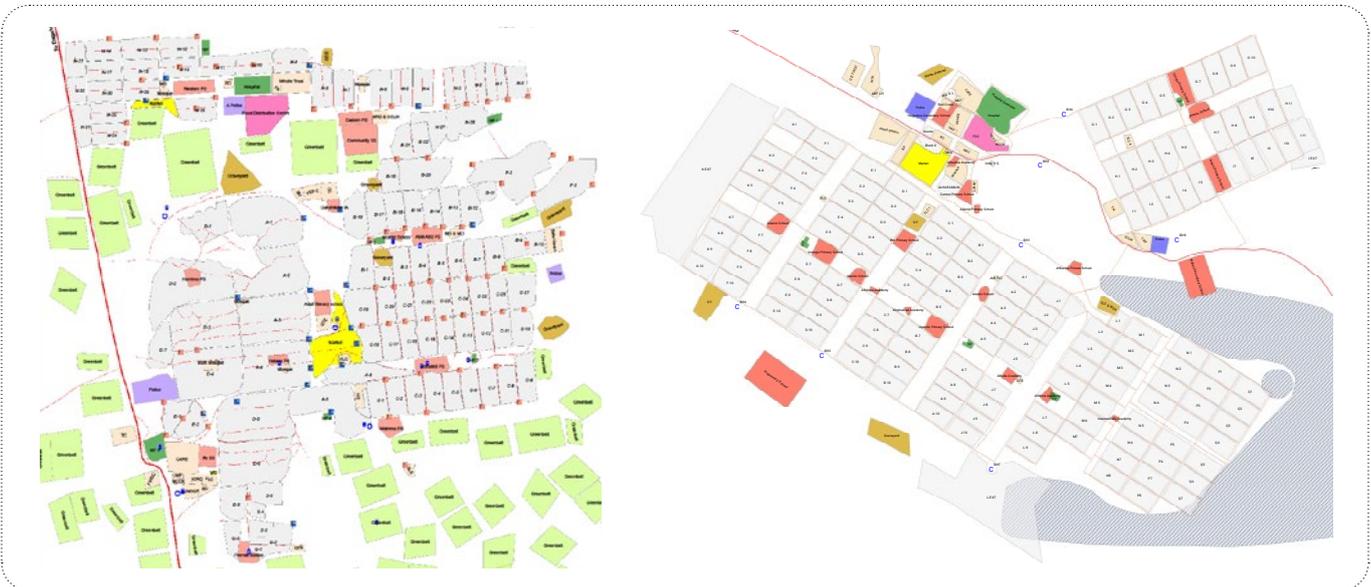
It is clear that there is a substantial variation in planning; as the old camps highlight a strong structure which generally remains clear to this day, a large proportion of land allocated over to residential/shelter space (approx. 57%) and a very large block structure with few roads.

New camps have more equitable allocation of land use and a better mix of land use. However there is no clear centre, nor any clear hierarchy being characterised by a very rigid layout, with a residential block which is very small in comparison to previous settlements requiring a huge investment in road infrastructure. Going forward, it is recommended to clarify the overall role that the two decommissioned camps will play within the wider area to ensure a future land use allocation that is in line with the local needs and can align with a proposed plan for Dadaab Town.

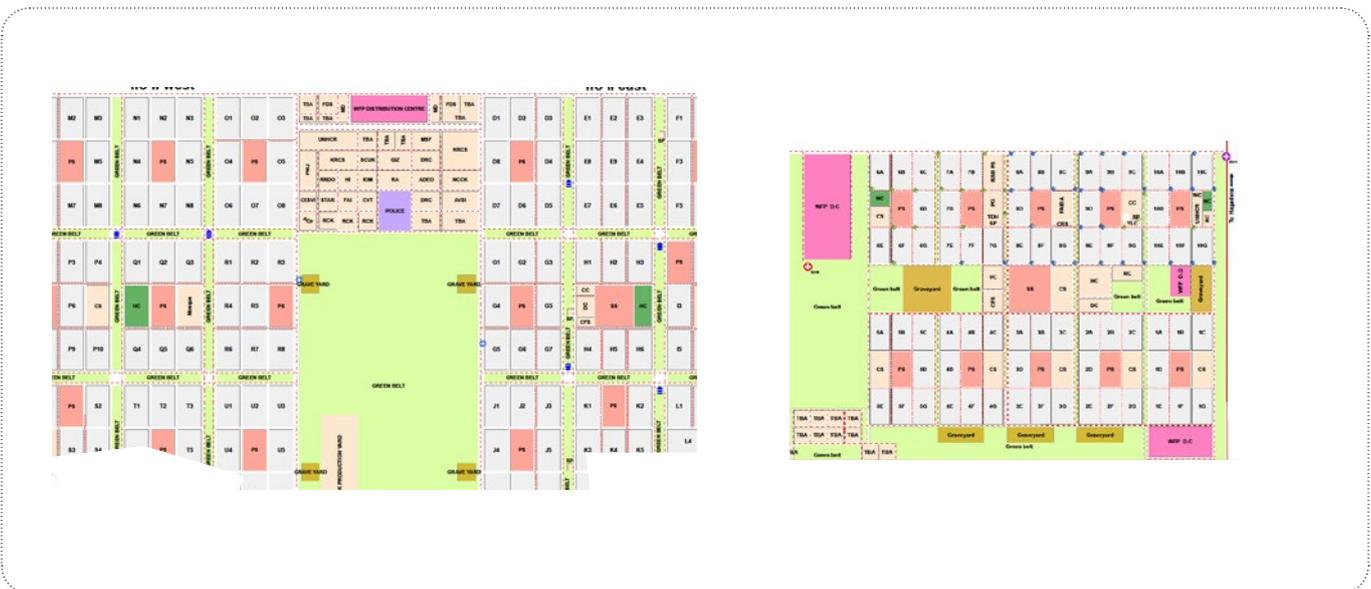




Dadaab Town Existing Land Use



Ifo 1 and Hagadera Camps Existing Land Use



Ifo 2 and Kambioos Camps Planned Land Use

Population Density & Distribution

The average population density of Dadaab and Fafi sub counties when including refugees is 50 and 14 p/km² respectively. The largest host community settlement in the area, Dadaab Town has an approximate density of 3,174 p/km² which is substantially higher than the average designated urban population density of Garissa according to KNBS 2019 which is 1,199 p/km². This however is still much lower than the average density of the refugee settlements which is approximately 8,356 p/km².

Dadaab Town's relative low density in comparison to the refugee settlements is likely in part due to the host communities tendency to have much larger plot sizes, and the refugee camp being constrained in terms of growth both due to land access as well as their allocated plot sizes.

Within the refugee settlements themselves, taking the full extent of area associated with the camps, Dagahaley is the most densely populated with an average density of approximately 9,273 p/km², with Hagadera following with 8,893 p/km² and Ifo with the lowest overall density of 5,162 p/km². As Ifo 2 and Kambioos are currently officially not inhabited no figures have been given for these areas.

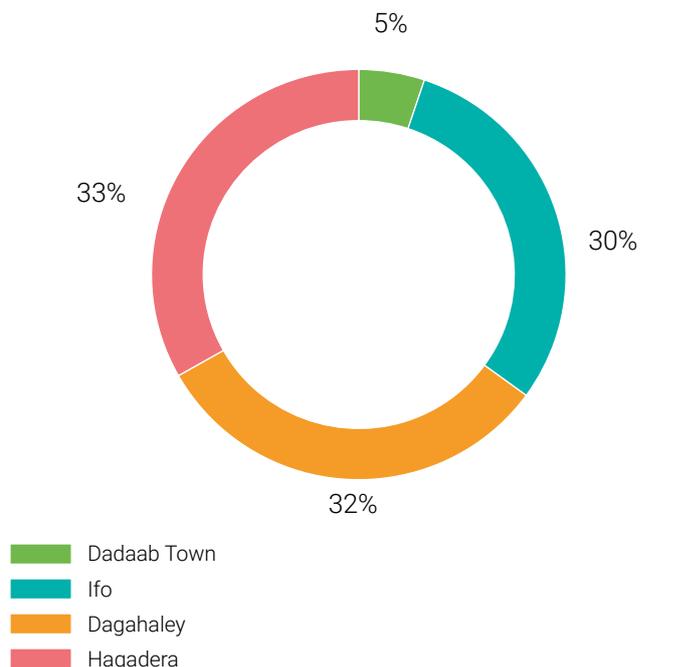
It is important to note however, that the figure for Ifo is somewhat misleading as a large proportion of the camp area is actually under agricultural use which therefore implies that the built up area is less dense than it actually is. As demonstrated in the spatial analysis carried out for the purposes of this study (see map adjacent) the most densely populated zones within the overall area are actually within Ifo which also demonstrates the highest built up density of all, particularly in the centre closest to the market. The areas around Dagahaley and Hagadera Markets demonstrate a similar very high density. As the markets are central to the informal livelihoods, they are thus the areas where there is the highest demand to live.

Land Use Demand & Floor Area Ratios

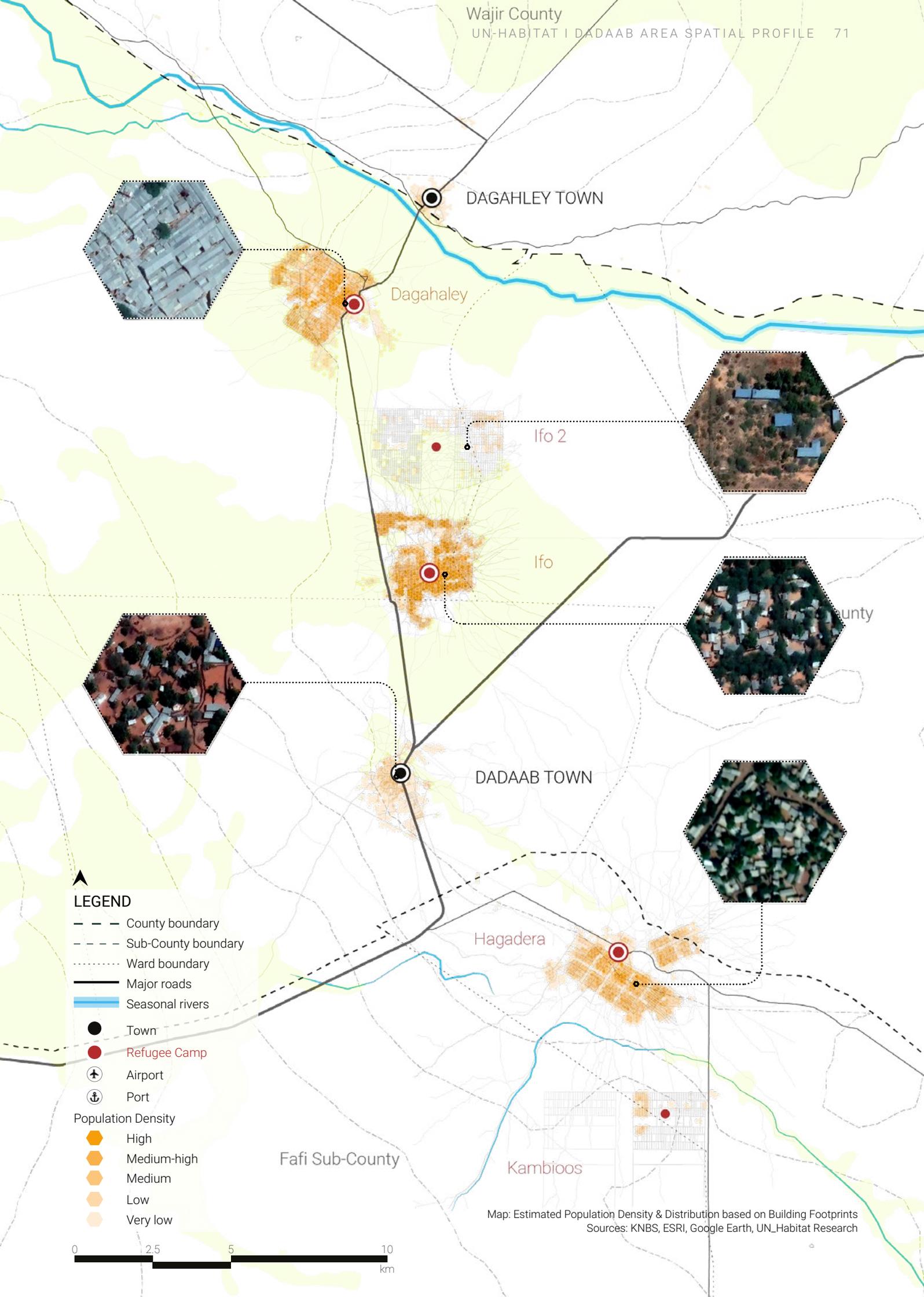
As shown on the following pages, when comparing the average floor area ratios (FAR) of the various settlement areas, the older refugee settlements of Dagahaley, Ifo and Hagadera tend to demonstrate a similar pattern of FAR. This is generally a range between 0.5 - 0.7 for commercial areas e.g. markets and 0.25 for residential in a typically central area of each settlement. By comparison Dadaab Town shows a FAR of 0.23 for its commercial centre and 0.1 for a typical residential block. This in itself highlights the demand for land use in the refugee settlements. Furthermore, if services appropriately, allows for more compact development models to be implemented.



UN-Habitat



Population Distribution, Dadaab Complex Area
Source: KNBS 2019 & UNHCR 2020



LEGEND

- County boundary
- Sub-County boundary
- Ward boundary
- Major roads
- Seasonal rivers
- Town
- Refugee Camp
- ✈ Airport
- ⚓ Port
- Population Density
 - High
 - Medium-high
 - Medium
 - Low
 - Very low

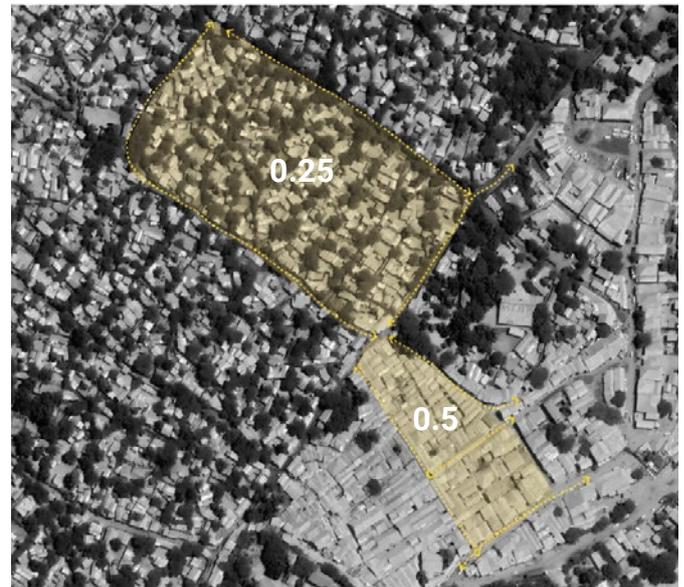


Map: Estimated Population Density & Distribution based on Building Footprints
Sources: KNBS, ESRI, Google Earth, UN_Habitat Research

Settlement Structure - Block Structures

Dagahaley Settlement

	Commercial	Residential
Area (HA)	0.98	3.17
Length (m)	165	240
Width (m)	60	127
Number of Shelters	70	120
Block Density (p/ha)	360	190
Typical Shelter Area (m ²)	65	65
Typical FAR	0.5	0.25



Hagadera Settlement

	Commercial	Residential
Area (HA)	0.7	1.15
Length (m)	127	125
Width (m)	55	90
Number of Shelters	44	45
Block Density (p/ha)	310	195
Typical Shelter Area (m ²)	60	65
Typical FAR	0.4	0.25



Dadaab Town

	Commercial	Residential
Area (HA)	1.79	1.04
Length (m)	200	135
Width (m)	110	80
Number of Shelters	16	11
Block Density (p/ha)	44.5	52.7
Typical Shelter Area (m ²)	252	81
Typical FAR	0.23	0.1



Ifo Settlement

	Commercial	Residential
Area (HA)	0.79	3.1
Length (m)	95	240
Width (m)	80	120
Number of Shelters	42	120
Block Density (p/ha)	273	194
Typical Shelter Area (m ²)	130	62
Typical FAR	0.7	0.25

**Ifo 2 Settlement (during occupation)**

	Commercial	Residential
Area (HA)		0.94
Length (m)		130
Width (m)		70
Number of Shelters	N/A	36
Block Density (p/ha)	N/A	191
Typical Shelter Area (m ²)		45
Typical FAR		0.17

**Kambioos Settlement (during occupation)**

	Commercial	Residential
Area (HA)		0.72
Length (m)		130
Width (m)		53
Number of Shelters	N/A	40
Block Density (p/ha)		300
Typical Shelter Area (m ²)		30
Typical FAR		0.17



Ifo 2 - Remains of Original Plan

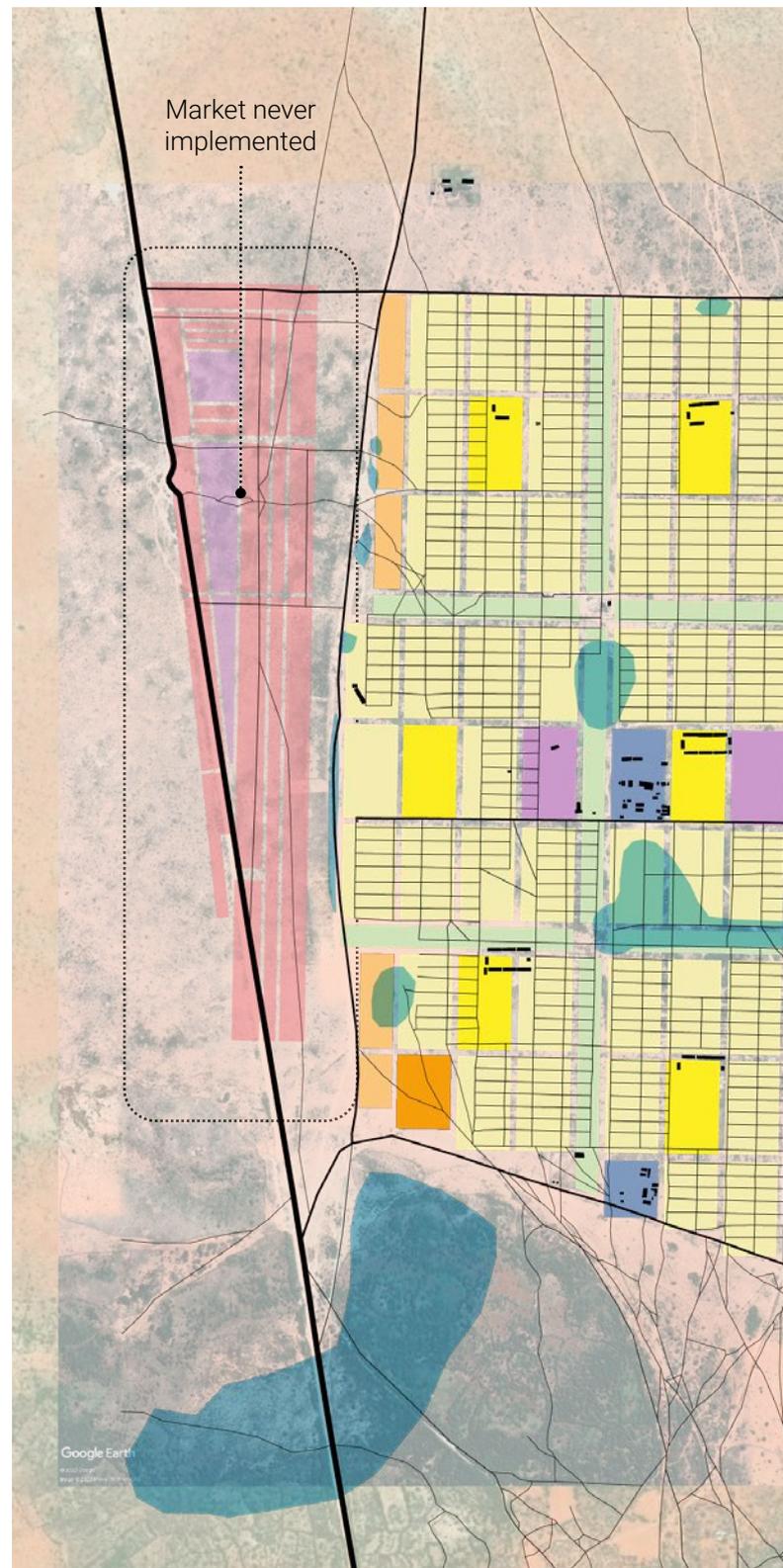
Ifo 2 was planned for a total capacity of 120,000, although it never housed more than 75,000 people at its peak of occupation in 2012. It was planned to occupy a total area of 1125 HA, with a planned maximum density of approximately 107p/HA. The settlement's main challenge is that it is located in a flood prone area with 91.5 HA in and around the camp mapped as such and 40.2 HA (3.9%) lying within the camp area.

Land Use	Area (Ha)	% of Total
Residential Blocks	384.5	35.9%
Green Belt	243.6	22.7%
Transport	164.8	15.4%
Markets	76.8	7.2%
Agency Compound	52.4	4.9%
Education Centres	50.4	4.7%
Flood Areas	40.2	3.7%
Community Facilities	18.4	1.7%
Security	15.3	1.4%
Health Facilities	10.7	1.0%
Food Distribution Centre	6.3	0.6%
Public Area	4.7	0.4%
Graveyard	4	0.4%
Totals	1072.1	100.0%

Remaining Infrastructure

The handover document between UNHCR and the county government only covers the infrastructure and does not clarify information regarding the situation with land ownership or property rights. Furthermore, some documentation was missing and is unclear in sections. In order to provide a comprehensive overview of the infrastructure on site when Ifo 2 was handed over to the county, a full copy of the handover document is required.

Furthermore, a full infrastructure audit needs to be carried out on the ground, as many of the facilities may have been looted or damaged since the handover and may require repairs/renovation.





- | | | | |
|----------------------------|--------------------------|--------------------------|---------------------|
| Residential/Shelter Blocks | Agency Compounds | Flood Risk Areas | Remaining Buildings |
| Education | Camp Facilities | Graveyards | |
| Food Distribution | Security | Public Space/Agriculture | |
| Marketplace | Social/Communal Facility | Roads/Tracks | |



Map: Original Land Use Plan for Ifo 2
Sources: UN_Habitat Research, UNHCR, Google Earth

Ifo 2 - Basic Services & Public Facilities

Infrastructure Type	Value (USD)
Education Facilities	3,114,784
Health Facilities	1,342,415
Other Facilities	630,777.40
WASH Facilities	2,375,450
Totals	9,902,840

WASH

As of August 2015, prior to the camp's closure in 2018, Ifo 2 possessed seven operational boreholes that, at the time, provided water to the refugee population, schools, health facilities, and agency compound.¹⁵⁸ Six out of the seven boreholes were PV solar-diesel hybrids, while the seventh was pure PV solar. In addition, six storage tanks, with a total storage capacity of 900m³ (500m³ in the West and 400m³ in the East) were used to distribute water to tap stands through a gravity-fed system.¹⁵⁹ When active, the rate of water distribution was 24.6 litres of water per person per day.¹⁶⁰

In addition, 80% of households in Ifo 2 benefited from the use of a family latrine, while the construction of an additional 350 latrines were planned at the time.¹⁶¹ It is unclear if these were completed.

Based on focus group discussions, it is understood that members of the host community have continued to make use of boreholes and other existing infrastructure in Ifo 2 camp since its closure.¹⁶²

Waste Management

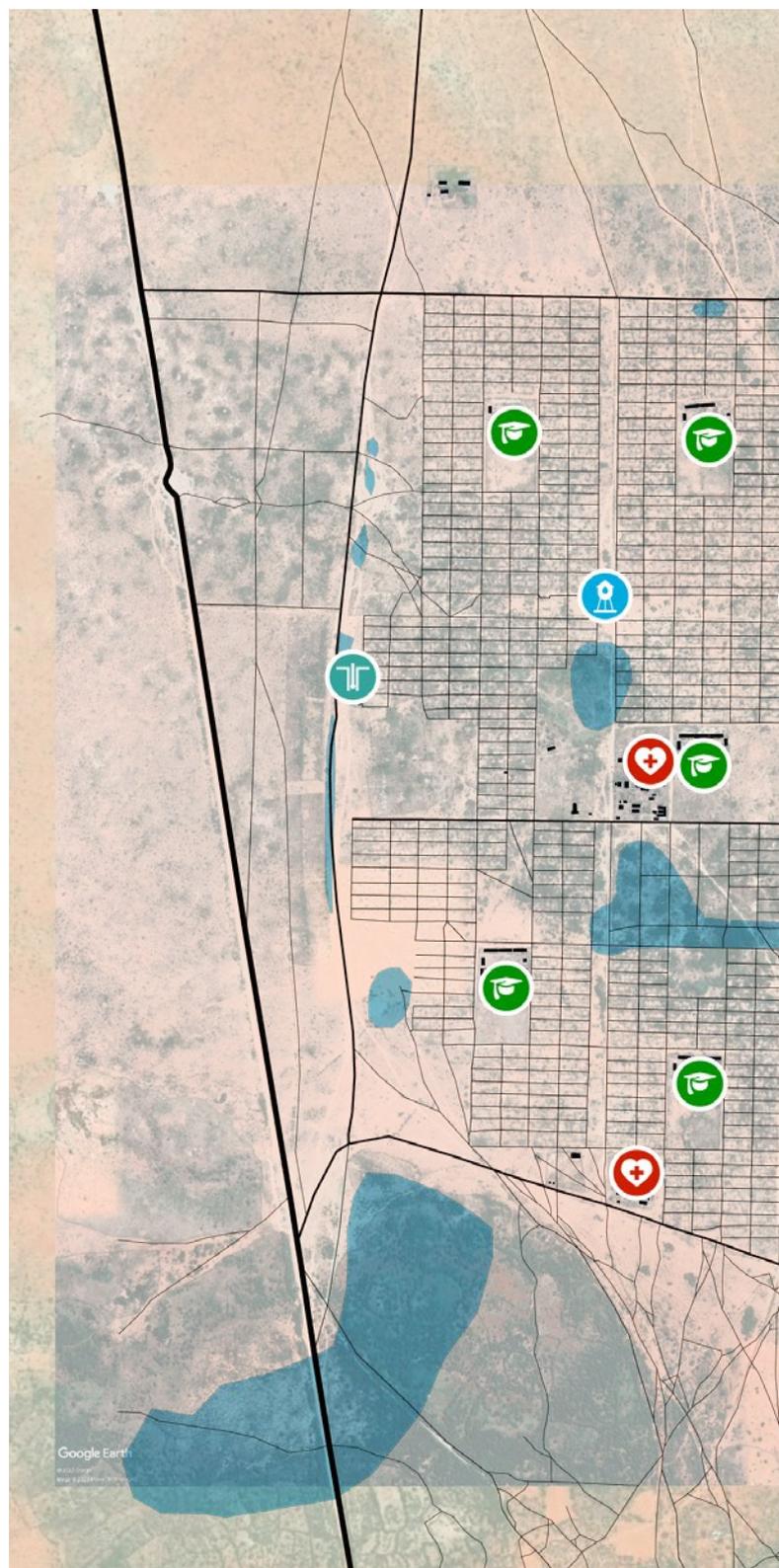
Prior to the camp's closure in 2018, there was a solid waste landfill that was shared by both the refugees living within Ifo 2 camp and the host community.¹⁶³

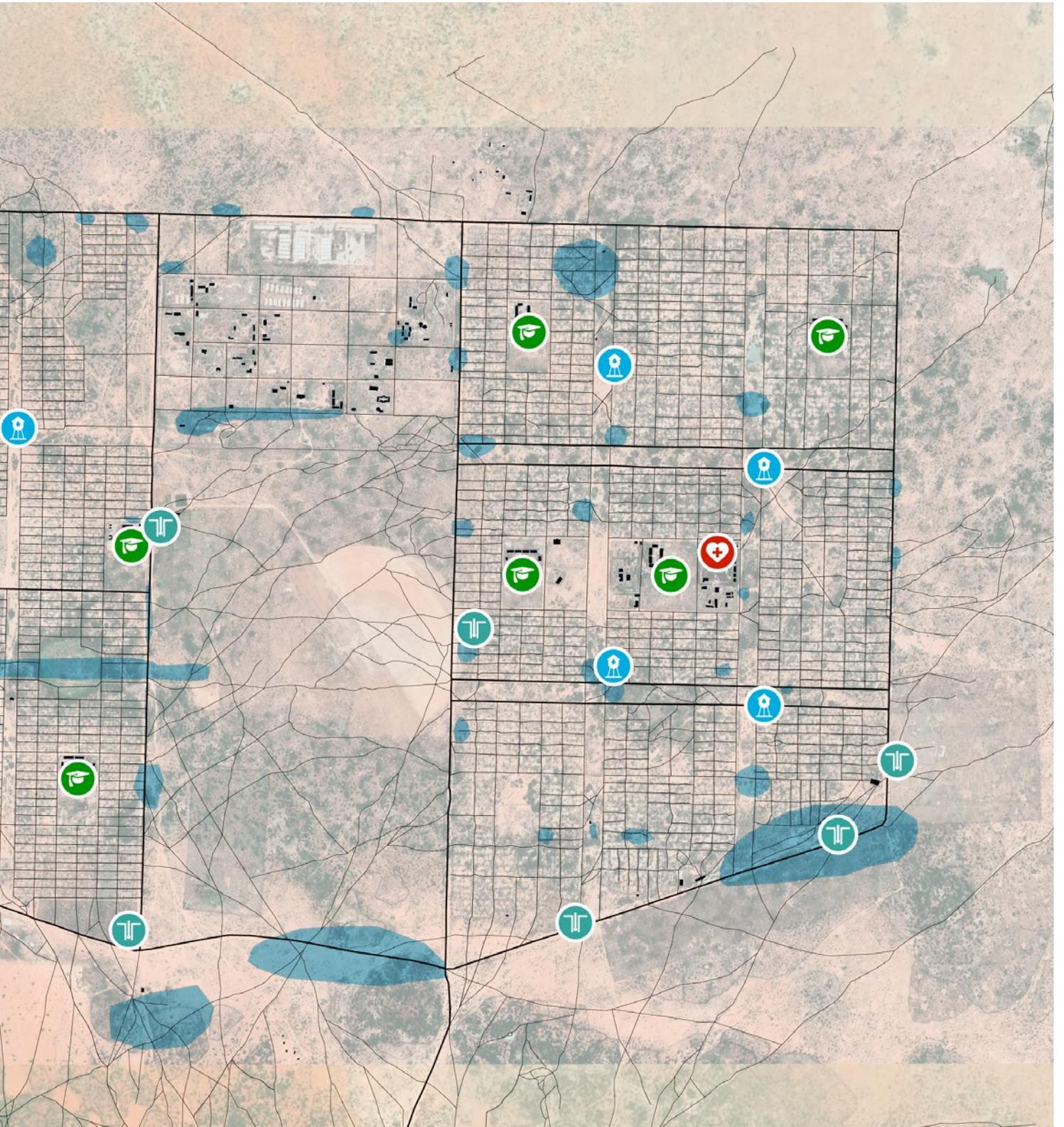
Education Facilities

As of August 2015, prior to the camp's closure in 2018, Ifo 2 had ten primary schools (three in the East and seven in the West) and one secondary school serving a total of 28,410 pupils at the time.¹⁶⁴

Healthcare Facilities

As of August 2015, prior to the camp's closure in 2018, Ifo 2 had one level 5 hospital,¹⁶⁵ which originally opened in June 2013.¹⁶⁶ In addition, there was a maternity hospital and three health posts that served both refugees and members of the host community.¹⁶⁷





Public Facilities

-  Schools
-  Health Facilities

Basic Services

-  Boreholes
-  Water Tanks

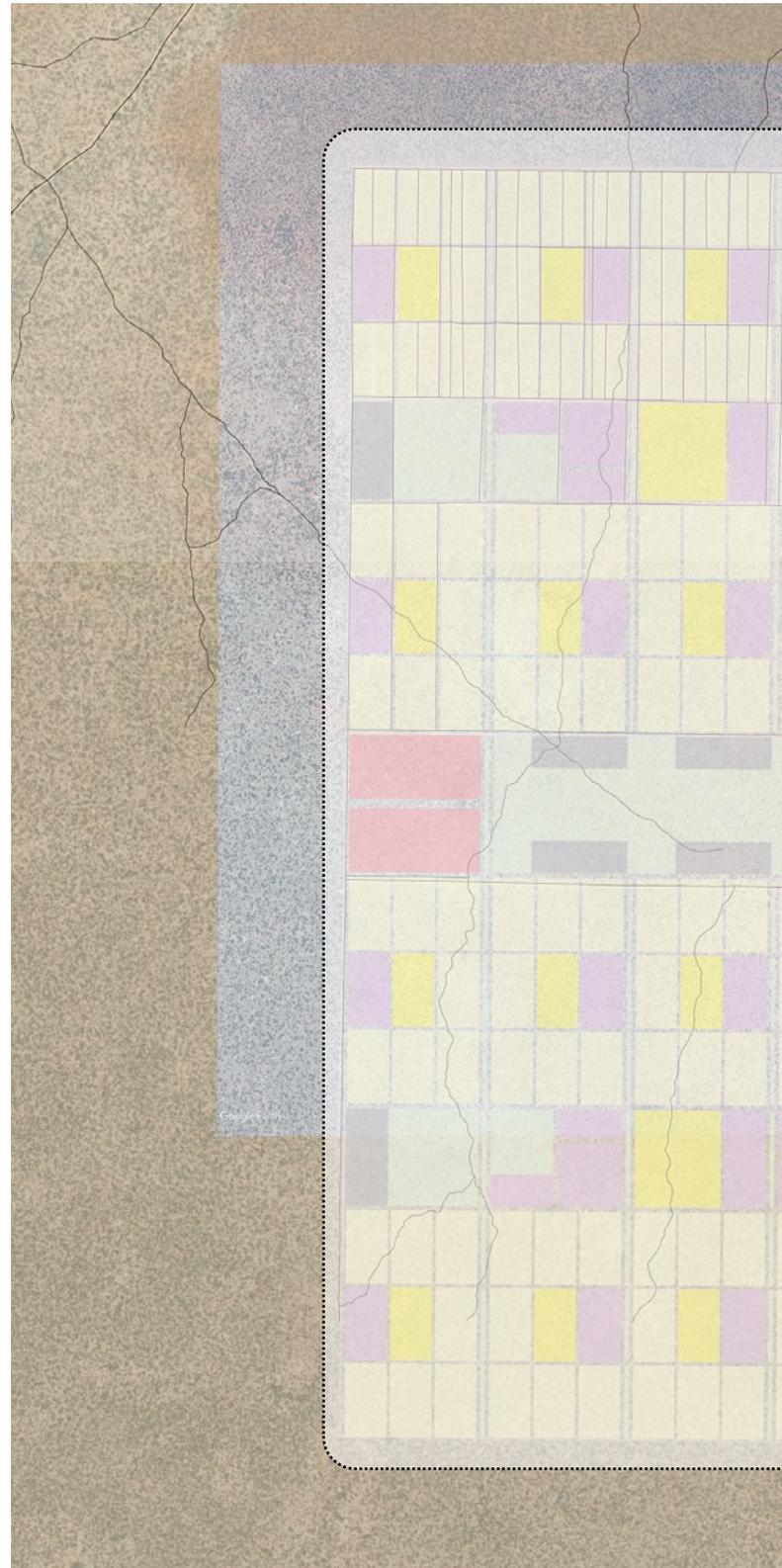


Map: Overlay of remaining infrastructure for Ifo 2
Sources: UN_Habitat Research, UNHCR, Google Earth

Kambioos - Remains of Original Plan

Kambioos was planned for a total capacity of 100,000, although it never housed more than 22,000 people at its peak of occupation in 2014. As a result, only the northeastern section of the settlement was well populated and is where the remains of most infrastructure lies. As such, other than track marks being cut into the ground there is no notable infrastructure in the southern section of the planned area. It was planned to occupy a total area of 2170 HA, with a planned maximum density of approximately 46p/HA. The settlement's current main challenge is that it is somewhat isolated from the main population agglomeration and suffers from insecurity in the area. However it has a plentiful water supply with highly productive boreholes and the soil type renders it fairly low risk in terms of flooding.

Land Use	Area (Ha)	% of Total
Residential Blocks	837.2	38.6%
Environment	465.3	21.4%
Transport	345.7	15.9%
Community Services	201.1	9.3%
Education Facilities	152.5	7.0%
Sanitation (Graveyard)	90.2	4.2%
Food Distribution	57.1	2.6%
Market	9	0.4%
Security	9	0.4%
Health Facilities	3	0.1%
Totals	2170.1	100.0%





- | | | | |
|----------------------------|--------------------------|------------------|--------------------------|
| Residential/Shelter Blocks | Agency Compounds | Flood Risk Areas | Remaining Buildings |
| Education | Camp Facilities | Graveyards | Public Space/Agriculture |
| Food Distribution | Security | Roads/Tracks | |
| Marketplace | Social/Communal Facility | | |



Map: Overlay of remaining infrastructure & Original Land Use Plan for Kamboos
Sources: UN_Habitat Research, UNHCR, Google Earth

Kambioos - Basic Services & Public Facilities

Remaining Infrastructure

As per the situation in Ifo 2, there is ambiguity around the total amount of infrastructure that remains in Kambioos. The information received is set out below, but in addition to the full infrastructure audit, this study would recommend further ground surveys as set out below to confirm:

- Existing plot boundaries within the settlement area,
- Detailed topography and watersheds/wetlands etc,
- Land boundaries

Infrastructure Type	Value (USD)
Education Facilities	1,325,842
Health Facilities	78,652
Other Facilities	649,439
WASH Facilities	522,790
Totals	2,924,162

WASH

As of August 2015, prior to the camp's closure in 2017, Kambioos possessed two operational boreholes with a capacity to pump 60m³ of water per hour each, but only one was in use at the time due to limited demand.¹⁶⁸ The current condition of these boreholes is unknown, though it is understood, based on focus group discussions, that members of the surrounding host community have continued to make use of boreholes and other existing infrastructure in Kambioos camp since its closure.¹⁶⁹

Waste Management

Prior to the camp's closure in 2018, there was a solid waste landfill that was shared by both the refugees living within Kambioos camp and the host community.¹⁷⁰

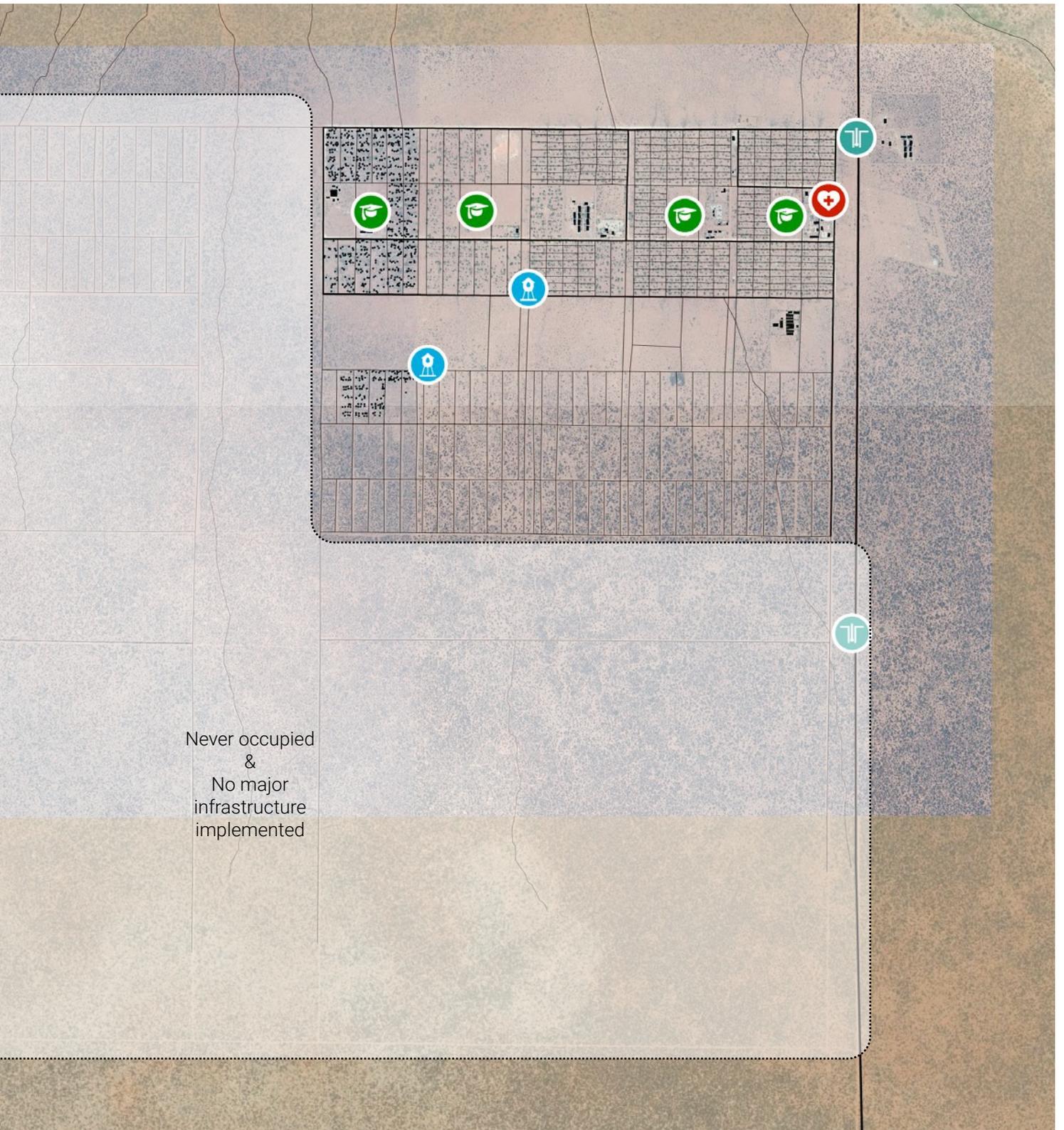
Education Facilities

As of August 2015, prior to the camp's closure in 2017, Kambioos had three primary schools that served a total of 8,274 pupils.¹⁷¹ At the time there was no secondary school, though it had been identified as a major need.¹⁷²

Healthcare Facilities

As of August 2015, prior to the camp's closure in 2017, Kambioos had no hospitals and only one primary health post, which was sorely insufficient, resulting in overcrowding, long wait times, and poor quality of services.¹⁷³ As a result, at the time, clinical cases were typically referred to the IRC hospital in Hagadera.¹⁷⁴





Never occupied
&
No major
infrastructure
implemented

Public Facilities

-  Schools
-  Health Facilities

Basic Services

-  Boreholes
-  Water Tanks



Map: Overlay of remaining infrastructure & Original Land Use Plan for Kamboos
Sources: UN_Habitat Research, UNHCR, Google Earth



STAKEHOLDER



ENGAGEMENT

Stakeholder Engagement Workshop

UN-Habitat, in collaboration with the County Government of Garissa, hosted the first semi-virtual Stakeholder Engagement Workshop as part of the Advisory Strategy for the Regeneration of Ifo 2 and Kambioos. Attendees included members of Garissa County Assembly Lands Committee, Dadaab and Fafi Sub-Counties, UNHCR and UN-Habitat.

As the first phase of developing the Advisory Strategy for the Regeneration of Ifo 2 and Kambioos, the purpose of the workshop was to present the findings of the spatial assessment that UN-Habitat has developed so far and receive feedback from the stakeholders. Additionally, a preliminary planning session was carried out to consider the opportunities and challenges that the decommissioned sites present which stimulated lively discussion and constructive action points for further exploration as the planning process gathers momentum. Garissa County Executive Member for Trade, Tourism and Enterprise Development Hon. Adow Kalil Jubat called on participants to contribute tangible ideas in order to create a sustainable development plan that will benefit local communities.

The morning session of the workshop comprised presentations by UN-Habitat on the key messages taken from the spatial assessments, followed by feedback and discussion. In the afternoon session, participants broke

off into groups to prepare SWOT (strengths, weaknesses, opportunities and threats) analyses of Ifo 2 and Kambioos camps.

While various threats and weaknesses were identified for both camps, there was great emphasis on the opportunities the camps presented. These opportunities spanned a wide range of themes including the agricultural potential of existing green belts and orchards, the educational potential of Ifo 2's underutilized school facilities, the climatic opportunities of harvesting rainwater and solar energy and the economic opportunities of encouraging new small businesses and industries such as bee-keeping in Ifo 2 and bottling of borehole water in Kambioos.

The stakeholder workshop was an especially vital component of the project, particularly as COVID-19 has placed limitations upon-the-ground data gathering and fieldwork that was initially planned for this project. In response to travel limitations, UN-Habitat has been remotely developing and digitizing new spatial data which, in addition to contributing to the Ifo 2 and Kambioos spatial profile development, will have the added benefit of providing Garissa County and development agencies with a more extensive database of spatial information in the future. This is due to be developed and validated as part of the field survey due to kick off imminently.



Participants from Garissa County at the Spatial Assessment Review Session
Source: UN-Habitat 2020



5 10:16

Participants from Garissa County at the Spatial Assessment Review Session
Source: UN-Habitat 2020

Ifo 2 - SWOT Analysis

STRENGTHS

- Strategically located
- Availability of water, boreholes, land for development and markets
- Reliable weather conditions for agriculture
- Community willingness to relocate to site
- Reduced vandalism due to the presence of police station
- Existing social infrastructure, including health infrastructure and education facilities
- Health infrastructure could be used as the hospital for the whole catchment area and serve both host and refugee communities
- There has been private sector investor interest expressed to UNHCR to allow private actors to gain access to the existing education facilities to run private schools and academies, increasing access to education

WEAKNESSES

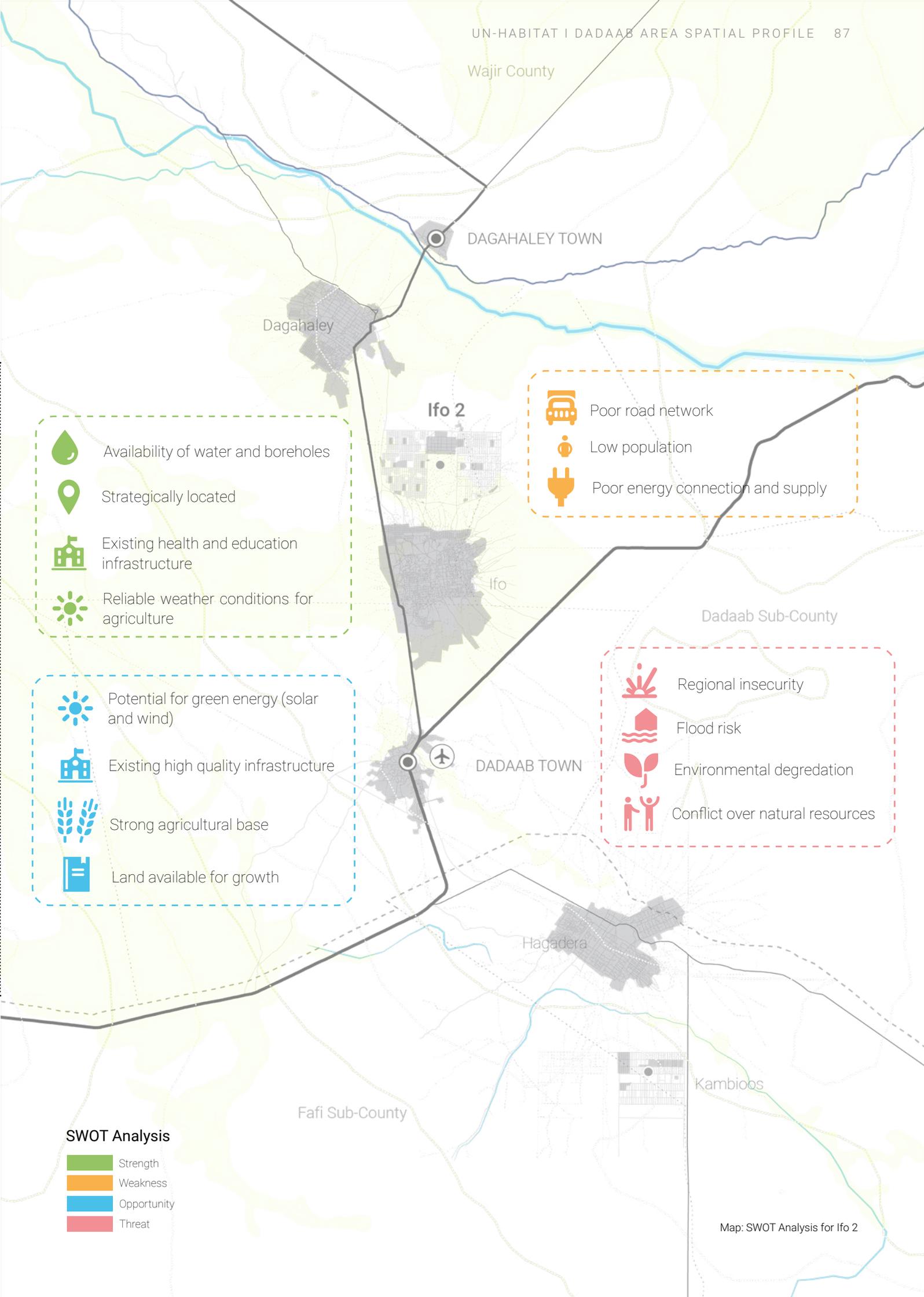
- Camps closed down in 2017/18. This resulted in negative consequences such as reduction in population, reduced flow of capital and negative impacts on the surrounding economy.
- Poor road network in the area
- Low population in the closed camp
- Low community awareness of the project
- Power supply
- Unplanned settlement within the camp
- Boreholes are not used to full potential in Ifo 2. There are over 6 boreholes that could be activated for agriculture

OPPORTUNITIES

- Potential for green energy (solar and wind)
- Alluvial soil deposits which are beneficial for agriculture.
- Crop machinery available
- Existing high-quality infrastructure
- Opportunity for tourism and cultural activities
- Diversification of livelihood approaches e.g. future potential of bee-keeping in forests
- Ifo 2's agricultural base has been established over time with over 90 Ha of green belts having been established. The existing orchards are already doing well in Ifo 2
- The A3 highway could open up Dadaab on northern and southern fronts
- Potential of population as consumers if given socio-economic opportunities
- Need to look at the local economy holistically and allow people access to finance for farming
- Functional settlement with available lands for future settlements

THREATS

- Insecurity of region
- Conflict between host and refugee communities
- Poor topography forming a lowland that, in conjunction with rains, results in flash floods
- Adverse climate leading to flooding and dusty dry seasons
- Tree cutting which results in environmental degradation
- Low investor confidence
- Conflicts over natural resources



Wajir County

DAGAHALEY TOWN

Dagahaley

Ifo 2



Poor road network



Low population



Poor energy connection and supply



Availability of water and boreholes



Strategically located



Existing health and education infrastructure



Reliable weather conditions for agriculture



Potential for green energy (solar and wind)



Existing high quality infrastructure



Strong agricultural base



Land available for growth

DADAAB TOWN

Dadaab Sub-County



Regional insecurity



Flood risk



Environmental degradation



Conflict over natural resources

Hagadera

Kambioos

Fafi Sub-County

SWOT Analysis

- Strength
- Weakness
- Opportunity
- Threat

Map: SWOT Analysis for Ifo 2

Kambioos - SWOT Analysis

STRENGTHS

- Rich in vegetation, which is good for pastoralism
- Geology does not promote flooding. The sandy soils and hard rock surface means that it will only flood in certain areas (between Hagadera and Kambioos) and there is not much flooding in Kambioos itself
- Proximity and connectivity to Hagadera market
- Water table is close to the surface
- International connectivity via proximity to Somalia
- Presence of access roads promoting good accessibility and security
- No land conflicts
- Existing available Infrastructure
- Good sun intensity
- Northern side has higher population catchment compared to the south side

WEAKNESSES

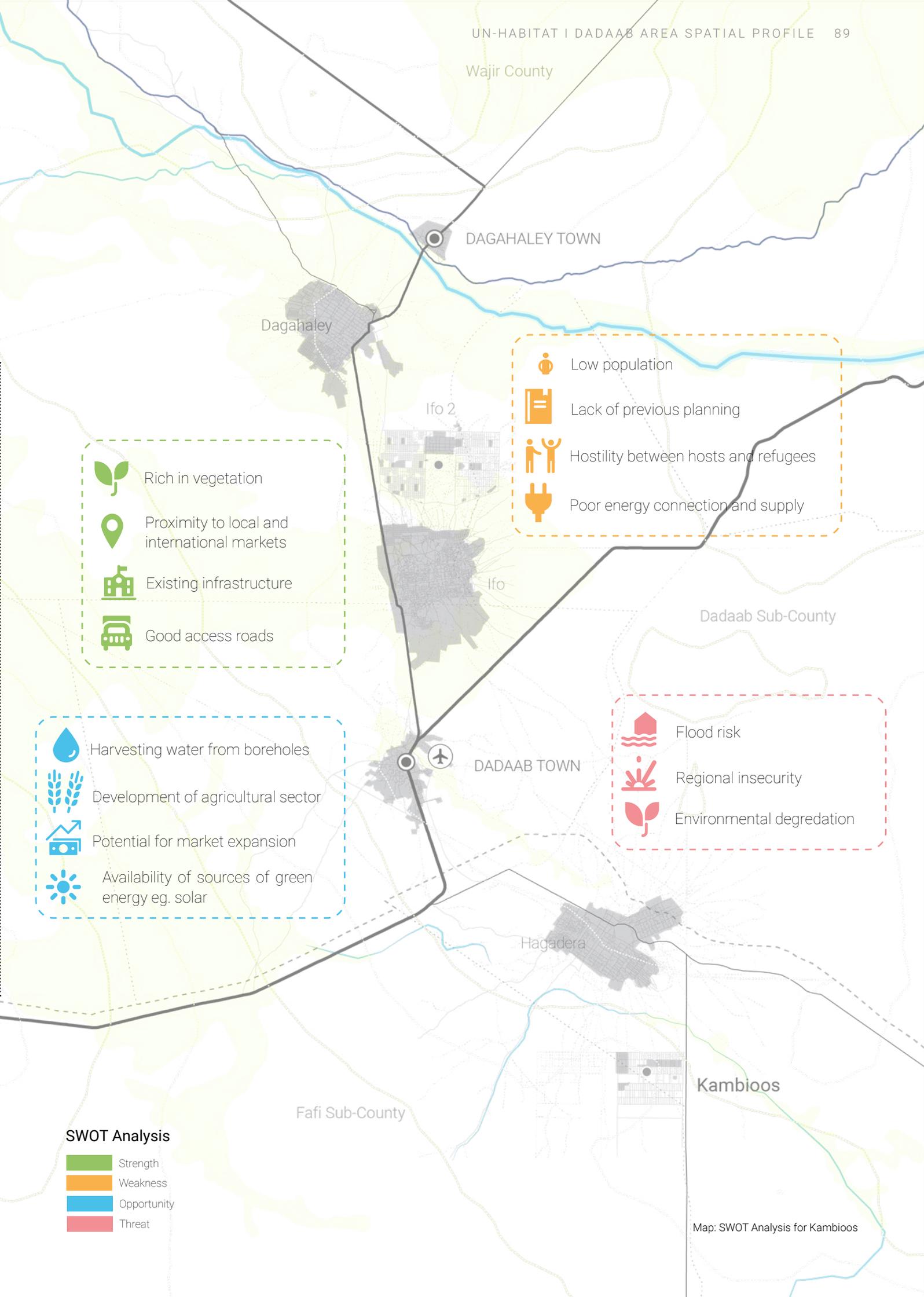
- Low community awareness
- Lack of planning as the settlement was initially planned for refugees
- There is a small population with most being concentrated in Hagadera rather than Kambioos. This makes it difficult for health and education facility provision in Kambioos
- Hostility between host and refugees
- There is a poor energy (electric) connection and supply

OPPORTUNITIES

- Water from boreholes could open up 20Hs of agricultural land for orchards
- Fertile soils
- Potential for harvesting water from boreholes. Potential for small scale water bottling industry. Potential for exploitation
- Local economic development of agriculture sector
- Need for coordination between all players (e.g., government NGOs, UN, complementary institutions, banks)
- Need to look at the local economy holistically and allow people access to finance for farming
- Potential for market integration and expansion, e.g., expansion to Nairobi. The government needs to provide a good environment to stimulate the local economy
- Existing native vegetation can be harnessed for pastoralism
- Tourism and cultural activities
- Land available for future settlements
- Social infrastructure such as enhanced school facilities
- Potential harvesting of solar energy
- Potential for small industries such as processing and a slaughterhouse

THREATS

- Insecurity
- Environmental degradation
- Vandalism resulting from resource conflicts
- Borehole water being used in agriculture causes salinity (over time)
- Flood risk between Kambioos and Hagadera limits accessibility between the camps



Wajir County

DAGAHALEY TOWN

Dagahaley

Ifo 2

Ifo

DADAAB TOWN

Dadaab Sub-County

-  Low population
-  Lack of previous planning
-  Hostility between hosts and refugees
-  Poor energy connection and supply

-  Rich in vegetation
-  Proximity to local and international markets
-  Existing infrastructure
-  Good access roads

-  Harvesting water from boreholes
-  Development of agricultural sector
-  Potential for market expansion
-  Availability of sources of green energy eg. solar

-  Flood risk
-  Regional insecurity
-  Environmental degradation

Hagadera

Kamboos

Fafi Sub-County

SWOT Analysis

-  Strength
-  Weakness
-  Opportunity
-  Threat



LOOKING F



FORWARD

Development Challenges

Strategic Challenges



Unequal Urbanisation

- Kenya is one of the fastest growing economies in Africa, however the wealth generated from this growth is not evenly distributed, with counties such as Garissa suffering from long term marginalisation. In addition to generously sharing increasingly scarce resources with more than 200,000 refugees living in the county, poor infrastructure and sheer distance from large urban centres have limited the local community's access to opportunities.

Demographic Profile

- Garissa County is a primarily rural county with 70-88% of the overall population involved in agricultural activities and the majority of agriculturalists in the county dependent on pastoralism as their main source of livelihood.
- Garissa County's annual population growth rate (not including refugees) is very high, 3.05% compared to Kenya's overall average rate of 2.15%. Calculations based on existing density levels and average population growth for Garissa County suggest that if the areas around the refugee complex in Dadaab and Fafi sub-counties remain in existence for the coming 10 years, the total demand for land area in Dagahaley, Ifo, Dadaab Town and Hagadera could increase by 77% from 32.81km² in 2020 by 25.33km² to an estimated 58.14km² in 2030. Currently there are no spatial plans in place to manage this growth, which forebodes a sub-optimal and unsustainable development model going forward.

Refugee Policy

- Despite Kenya being a signatory to the Comprehensive Refugee Response Framework (CRRF), it has yet to adopt a formal CRRF structure or road map toward implementation.¹⁷⁵ As such, there is a gap in clear policy which has led to a fracture between the national and local government in perspectives on hosting refugees. Whilst the Refugee Bill of 2019 states that "Refugees shall be enabled to contribute to the economic and social development of Kenya by facilitating access to, and issuance of, the required documentation at

both levels of Government", there is no mention of an issuance of work permits for those who have obtained refugee status, nor are rights given regarding self-employment or social security, which limit potential for refugee inclusion and for local communities to benefit fully from hosting refugees. This is particularly problematic with respect to where refugees are able to work and source goods sold in markets in the camps.

Climate Change

- Current impacts of climate change may be exacerbated by climate vulnerability in the surrounding region (South Sudan & Ethiopia), potentially sparking conflict over resources and further contributing to climate-induced displacement and migration trends towards urban centres. This will add to the pressures Garissa already faces due to its high vulnerability to climate change.
- An increasingly unpredictable climate, in combination with high population growth also impacts the viability of pastoralism as a livelihood for a large proportion of the host community. More resilient livelihoods need to be explored to support resilience to droughts and floods which affect food security and result in an increasing reliance on aid.
- Women can be disproportionately affected by adaptation strategies because their participation in decision-making is traditionally limited in Somali society.

Land Management and Planning Boundaries

- There is general uncertainty over land status and land tenure within Garissa, with both formal and informal land tenure systems being used. A critical lack of information on exactly the extent of what land is held and by whom further complicates planning in the county. Clarity regarding the delineation between community land and public land, for future planning purposes, is much needed. This lack of clear land tenure enables speculative land grabbing by various powerful actors in anticipation of major development projects and oil extraction and can potentially lead to future conflict.
- In the context of Kambioos and Ifo 2, the Garissa County Government is yet to officially degazette the land where the two de-commissioned camps sit through the Ministry of Interior, GoK, meaning that the formal status of the land identified for planning is also unclear. Furthermore, there is no defined site boundary for the two site areas which poses potential risks for any future formal planning process. In order for this

to be resolved, the GCG should lead a stakeholder process to engage respected community leaders in defining the clear site boundary as part of any future formal Notice to Plan for Ifo 2 and Kambioos.

Environmental + Natural Hazard Challenges



- The area is prone to severe drought which threatens pastoralism dependent on rain-fed vegetation and rangeland areas. Currently, 70-88% of livelihoods rely on pastoralism, but with predicted population growth, the number of people affected by severe drought is likely to increase.
- The characteristically flat topography in the area around Dadaab coupled with its location in a flood plain, as well as the relatively low infiltration rate of soils in the area, puts it at major flood risk both in the normal rainy seasons and during particularly heavy downpours. This is predominantly felt in the area around Dagahaley and Ifo 2 which are particularly flood-prone.
- Seasonal flooding leads to blocked roads which cause the price of transport and goods to spike, majorly inhibiting development in the county.
- Energy access is another key challenge, particularly as larger populations (both host and refugees) settle in the area. The majority of Dadaab's refugee settlements rely on firewood or charcoal for cooking purposes. However, gathering wood for fire and charcoal production in the resource-scarce environments around the camps has exacerbated arid conditions and resulted in further land degradation and deforestation.

Socio-Economic Challenges



Security

- Refugee and security narratives negatively impact livelihoods by detrimentally affecting businesses and the perception of investment opportunities in Garissa County. This has also affected donor activities focused on livelihoods and business development which have slowed as a result of perceived security threats.
- The close proximity of the settlements to the Somali border means that trade routes centred on the border town of Dhobley have become targets for Al Shabaab, which has significantly limited the formal growth of potentially robust cross-border trade networks.

Economy and Jobs

- The scale of the market in Dadaab Town is understood to be much smaller than markets in the camps due to the availability of cheap food and the scale of the consumer base (comprising both refugees and locals) that exists in the three refugee camps. Whilst this is likely a result of simple market forces in action, this means that locals in Dadaab Town who wish to purchase goods at lower prices must travel more than 10 km to access the best markets.
- Over 70% of livelihoods and 37% of the county's economy is dependent on agriculture, however climate change is placing these livelihoods increasingly at risk. This has the potential to also impact Garissa's already minimal own-source revenue, which is predominantly derived from fees related to agriculture and livestock.
- There is a lack of skilled labour within both the host and refugee population; at the same time, limited formal livelihood opportunities exist in the area beyond petty trade activities, which has led to poor employment opportunities for all.

Development Challenges

- Investors are not incentivised to develop large businesses in the area despite the potential large consumer market due to the high cost of commodities due to relative isolation from major production centres, poor transport and energy infrastructure, and perceived security risks.
- Unemployment levels are very high (approximately 28.4%)¹⁷⁶ and those who have a job are usually hired by international agencies or NGO. This strong reliance on aid and unstable employment contingent from the refugee presences with little private sector business development has led to a trend where educated and skilled workers migrate to Nairobi or other major centres for better employment opportunities.

Spatial Challenges



- The overall pattern of development in and around Dadaab complex is characterised by a form of corridor development, with settlements distributed along two secondary roads that extend off the main A3 highway. Whilst Dadaab Town is the central hub in locational terms, the major population centres are the refugee settlements themselves. A major challenge will be to encourage development that helps consolidate urban growth so that residents can benefit from the advantages of compact urban form.
- The structure of Dadaab Town is unplanned in character, with growth between 2007 and 2020 showing both infill and densification towards the centre and a clear tendency towards low-density development on the outskirts of the Town. As a result of the sprawling nature of development as well as the low population density and high population growth, the projected future land demand based on 3.05% population growth and existing densities is estimated to be:
 - Dagahaley Camp +3.16km²
 - Ifo Camp +5.3km²
 - Dadaab Town +1.5km²
 - Hagadera Camp +3.4km²
- It is important to emphasise that the land allocated for Kambioos (21.70km²) and Ifo 2 (10.72km²) should not be used to support suboptimal sprawling growth, as they present an opportunity for more sustainable trajectories.

Accessibility and Connectivity

- Roads are very poor quality, with very limited all-weather road coverage. Less than 40km of tarmacked roads currently exist across the whole County. Furthermore, due to the unpredictable state of the roads due to weather conditions, poor maintenance, etc., there are high costs for transport of people, goods and livestock. This poor infrastructure is both a driver of marginalisation and a barrier to facilitating development.
- The settlements in the Dadaab complex area are so spread out (more than 60 minutes walking distance from the centre of each, and approximately 30 km from Dagahaley to Kambioos) it is unclear to what extent there is complementarity and potential for streamlining of services.



Development Opportunities

Strategic Opportunities



- Despite Garissa's history of marginalisation in Kenya, the country is now benefiting from higher than average national transfers that support accelerated development in the county.
- The initiation of the GISED P planning process as a joint Garissa County Government and international agency framework for integrated programming around complementary and mutually reinforcing components provides a basis for integrated planning activities to take place and for improved coordination in identifying and implementing sustainable interventions. It will also provide an opportunity for the Garissa County Government to take a lead on the implementation of policies that benefit a whole-of-society approach ensuring improved equity for host and refugee populations.
- More specifically in Dadaab and Fafi Sub-counties, Garissa County Government's initiation of the formal planning process through the degazettement and Notice to Plan for Ifo 2 and Kambioos will help activate a process of land, economic and population growth management, leveraging leftover infrastructure and the large potential workforce and consumer base.
- The LAPSET Corridor, when completed, if linked to improved road infrastructure between Garissa Town and Dadaab settlement will facilitate trade and investment opportunities between Garissa County and the Dadaab area.

Environmental Opportunities



- In order to both bolster resilient livelihoods as well as minimise impact on the environment, land usage patterns that employ strategies to cope with changing climatic patterns and unpredictable weather events should be considered in future development plans for the decommissioned camps. Examples could include, water harvesting, facilities for post-harvest storage and processing, construction of irrigation and water storage facilities as well as value-added livestock product processing (e.g. boiling and fermenting milk,

salting and drying meat).

- Whilst the county in general suffers from water stress, the area around the Dadaab complex benefits from access to large underwater reserves provided by the Merti Aquifer, which remains highly productive. If this is well managed and combined with wider water harvesting and conservation practices, there is the potential to help combat desertification of rangelands supporting pastoralist livelihoods and expand economic opportunities on under-utilised land, supporting mixed livelihoods. In the former sites of Ifo 2 and Kambioos, there is the opportunity to test this and further invest in water harvesting due to low-lying topography which collects in seasonal rivers (laggas).
- Given that energy access is a major challenge for communities in the area, the construction of the new Garissa Solar Power Plant could be assessed for replication in future investments in solar energy capture and use in areas closer to Dadaab given the high solar radiation in the area as well as the large population base.

Socio-Economic Opportunities



- The value of the local economy in the Dadaab complex area is yet to be assessed empirically, but it can be reasonably assumed that it plays a major role, as WFP alone injects more than USD 800,000 per month into the local markets through the Bamba Chakula schemes, whose business owners are also required to pay levies to the Garissa County Government, providing much needed local revenue.
- Markets in the Dadaab complex area are particularly vibrant and support local consumers across Dadaab Sub-county as well as part of Fafi Sub-county. Each camp has its own dynamic and relatively large marketplace with its own specialisations, which could be further supported by proposing complimentary value added industries in the areas where Ifo 2 and Kambioos are located. As Dagahaley and Hagadera's markets are the most strategically located, along the main roads connecting each respective camp to Dadaab Town and the wider county, these should be considered in more depth to understand what additional functions may improve the efficiency and scale of their value chains and support improved livelihoods. Hagadera specifically is reported to be particularly integrated in numerous supply chains

as many of the refugees in that settlement are from Mogadishu and other urban centres in Somalia, meaning they tend to draw upon strong social and business ties across a network of cities. Example opportunities that have been identified in the Doing Business in Dadaab study include, improving the fruit and vegetable value chain and expanding waste segregation and processing facilities and services to sell recycled materials to Nairobi and other larger cities.

- Further mapping of the types of businesses that exist in the Dadaab area and their specific locations would provide more insight into the spatial planning, skills development and investment needs in the county.
- Fluctuations in food prices and issues with road access, particularly during rainy seasons, could be buffered through increased local food production. Extension services for skills development could provide an alternative means for helping diversify livelihoods and build peoples' capacity to adapt to climate change. Such services could include strategies for practicing integrated agriculture and incorporating irrigation technologies into crop farming.
- The social - cultural context of a traditional Somali background also plays a role in supporting longer term planning opportunities as the majority of refugees in Dadaab are originally from Somalia. Marriages, friendships and business partnerships between the hosting community in the area and the refugee population are common.

Spatial Opportunities



- The large supply of land as well as the remnants of public facility infrastructure available from the de-commissioned camps can be used to expand the remaining settlements to accommodate projected population growth. The existing initiatives being carried out on the decommissioned sites to improve water availability and develop areas for agricultural production could support the basis for an integrated spatial development strategy that accommodates areas to live as well as the space for livelihood supporting activities.
- If proposed as part of a strategy to strengthen Dadaab Town, Ifo 2's location between Dagahaley and Ifo could be strategic as a way to consolidate the overall development area, contain sprawling population

growth and improve the protection of surrounding rangelands.

- The relative isolation of Kambioos may not present strong potential for large areas of residential development, but its considerable water supply and relatively fertile soils may allow for it to support large scale agricultural and small scale industrial functions that could provide a source of livelihood for the communities living in and around the settlement of Hagadera.
- With regard to accessibility and connectivity, there are many opportunities for interventions that would further unlock potential development in the area. For example, if conditions along the A3 highway connecting Garissa Town to Dadaab Refugee Complex (100km) were improved, the whole county could profit from demographic dividends and the mobilisation of a promising labour market.
- Additionally, upgrading the Habaswein-Dadaab Road, between Dadaab Town and Wajir County, to an all-weather tarmac road would significantly reduce travel time between the settlements as well as to towns to the north, allowing for faster transport of goods and services and improving price stability and food security. The development of the LAPSSSET Corridor which is planned to go through Garissa Town, should improve currently limited north-south connectivity across the county and, if linked to improvements to the A3 highway, could allow for a transit nodes on the LAPSSSET corridor to strengthen connections to Lamu Port as well as serve as a hub along a major trade route across the ASAL regions of Kenya.



DEVELOPMENT



T SCENARIOS

Introduction

Moving from Assessment to Scenario Building

The spatial profile so far has established and summarized the challenges and opportunities that impact Dadaab. Understanding these challenges and opportunities, which span across the themes of demographics, climate change, economics, refugee policy, and land management, provides a contextual framework for understanding the current status of Dadaab. More specifically, Dadaab faces the challenge of accommodating natural population growth alongside uncertain refugee population numbers; the need to invest in sustainable infrastructure that improves connectivity and integration; and the mounting urgency of building environmental and socio-economic resilience (diversify livelihood possibilities) in the face of climate change. Both challenges and opportunities have been both verified in a stakeholder engagement session through a SWOT analysis and aligned with the UN's Sustainable Development Goals (SDGs).

Moving forward, the verified and aligned challenges and opportunities point to certain trends that will affect the area's development trajectory. These trends, or variables, are used to project possible future scenarios for Dadaab's development through 2030. The complex interrelationships between variables, priorities and realities have been simplified in this section of the profile to provide 3 scenarios of how Dadaab could be spatially and functionally configured in 2030. The optimal scenario has also been aligned with the Garissa Integrated Socio-Economic Development Plan (GISED P) to establish a clear link between what should be done to move Dadaab towards a sustainable and resilient future and how different sectors can support that transition.

Methodology

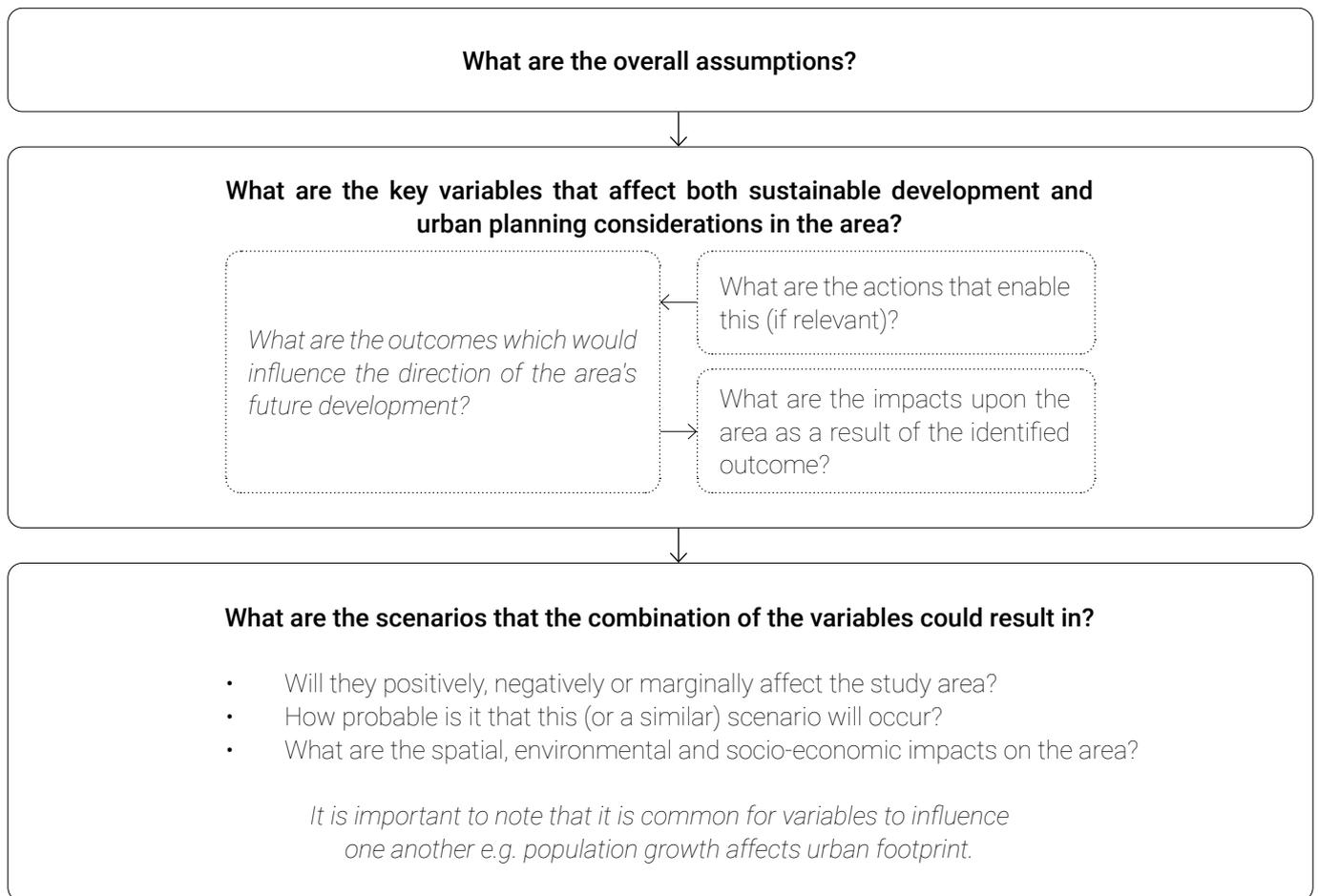
A typical scenario-building approach for contexts experiencing forced displacement is the chain of plausibility approach, which includes a detailed review of all possible events and developments. Scenario building, using this approach, starts with establishing assumptions or conditions that are a required minimum in order for any of the scenarios to develop. Next, variables are identified that are likely to spark a chain of events resulting in a series of potential impacts. Based on the information developed in the profile, the most important variables are selected together with the likely direction of these variables. The variable is a development or event that has the potential to cause a change in a humanitarian situation and outcomes are directions that a variable can take (e.g. increase, stable or decrease). The impacts of each isolated variable outcomes are broadly outlined, but are explored in a more composite manner when combined together as part of the potential scenario.

In the following section, the research questions for scenario building are "Given the opportunity to regenerate the decommissioned camps of Ifo 2 and Kambioos, how can the area be developed to ensure a positive impact in the communities?" and "Which events would lead to large changes in the built environment, what is the expected impact and likelihood?" Below, the selected variables are explained more broadly and their interlinkages are analysed.

The approach to identifying the variables, the associated outcomes and impacts is outlined below:



Riyad Minty



Overall Assumptions

1. There is continued political stability in Kenya and national level refugee policy does not deteriorate;
2. There is continued support from the Garissa County Government to work towards durable solutions for host and refugee communities in Dadaab and Fafi Sub-counties;
3. The demographic trend of Kenya and East Africa as a whole will continue to occur, shifting the population breakdown to one dominated by economically productive working adults;
4. In order to realize any transformative scenarios, the security situation remains stable or improves to allow for structural changes and investor confidence to take hold.

Variables

The key variables for scenario building were selected as follows:

1. Population growth/decline
2. Urban footprint
3. Climate risk and natural resources
4. Catalytic projects
5. Local economic development

Variable: Population Growth/Decline

Context

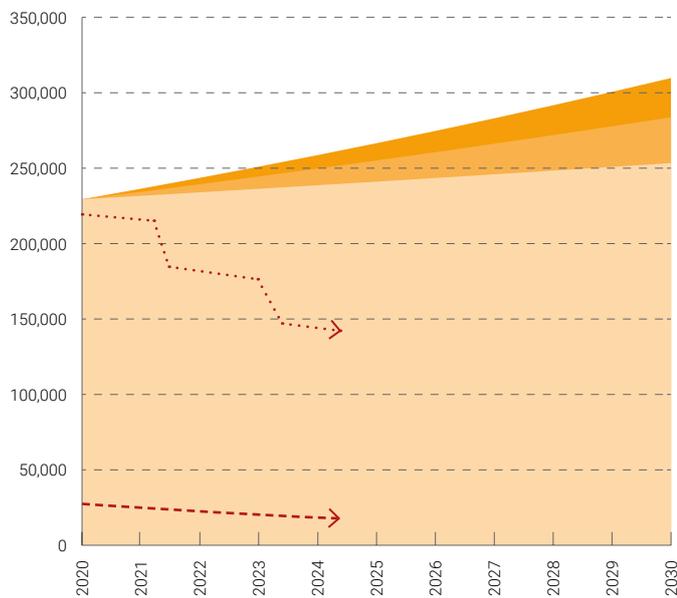
Unplanned urbanization puts pressure on basic services, public facilities, and the environment, while often leading to an inefficient use of resources. A major variable that will impact the future of Dadaab Complex is population size. The growth or decline of both the host and refugee communities will determine future infrastructure provision and potential economic growth, heavily impacting settlement development scenarios.

Population Growth

Natural population growth can drastically change the built environment. The natural population growth rate in Garissa County is 3.05% and will be used as one of the possible outcomes. While the Kenya National Bureau of Statistics has reported a 4.1% growth rate among refugees in Dadaab, because this figure also accounts for small influxes of new refugees to the area, a 3.05% growth rate will also be used for the potential population growth of the refugee community. Outcomes using Kenya’s national growth rate of 2.15% are also calculated in addition to outcomes using a 1% growth rate (for the sake of comparison). These three growth rate scenarios are depicted below.

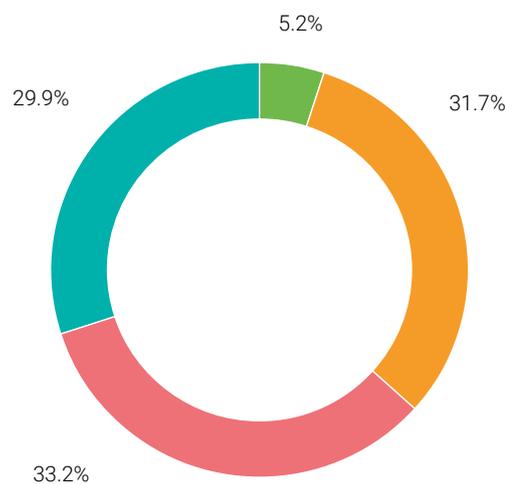
The projected growth outcomes are shown in the graph, illustrating high, medium, and low growth scenarios. If the Dadaab area (including the population in the 3 remaining refugee camps as well as Dadaab Town) were to maintain a growth rate of 3.05% per year, matching the current growth rate of Garissa County, this would result in an additional 80,388 people by 2030, a 35% increase from the current population. If growth in the Dadaab area were to fall to Kenya’s average national growth rate of 2.15%, this would result in an additional 54,373 residents by 2030, or a 24% increase from the current population. Finally, if the Dadaab area’s population growth rate were to slow to only 1% per year over the next ten years, this would still result in an additional 23,998 residents, or an increase of approximately 10%.

In addition to these projected growth rates, refugee surges may occur within the next 10 years, which could cause a sudden spike in population. Refugee surges like this however are difficult to predict. The predominant country of origin of refugees in Dadaab Complex is Somalia, accounting for over 96% of the population. Of the remainder, most are from Ethiopia, with only a very small number originating from elsewhere. Therefore, the



Population Distribution

- High Growth Rate at 3.05%
- Medium Growth Rate at 2.15%
- Low Growth Rate at 1.00%
- - - Host Community Population Decline
- - - Refugee Population Decline



Population Distribution

- Dadaab Town (5.2%)
- Hagadera Camp (33.2%)
- Dagahaley Camp (31.7%)
- Ifo Camp (29.9%)

Chart: Projected Population Growth of Dadaab Complex

Chart: Population Distribution of Dadaab Complex by Settlement (2020)

population growth outcomes outlined in the table focus on the natural growth of the existing host and refugee population without considering any major refugee influxes.

Population Decline

While population growth in both the host and refugee communities is the most likely outcome over the next 10 years, there is also the possibility of population decline in both communities.

Though the host population within Dadaab Town is already quite small, at only approximately 11,871, large-scale repatriation of refugees currently living in Dadaab Complex would likely lead to population decline in the host community, as well. Migration to more productive rural areas could be seen as a necessary option for many of the residents whose livelihoods rely predominantly on pastoralism. Alternatively, potential livelihood opportunities in larger urban centres could also serve as a driver for migration out of Dadaab Town.

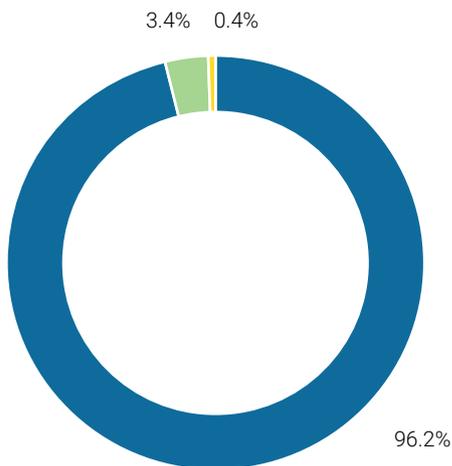
Voluntary repatriation is an option for members of the refugee community and could have a significant impact on the growth rate of the Dadaab area, as refugees

make up nearly 95% of the total population. Though the Government of Kenya has, over the past five years, repeatedly expressed a desire to see the Dadaab camps closed, in 2017, the Kenyan High Court blocked their closure citing the unconstitutionality of the move due to both the country's international obligation to protect those in danger and the lack of confirmation on refugees' willingness to relocate. In February 2019, the Government reiterated its call for the closure of the Dadaab camps, but today over 200,000 refugees still remain in the three oldest camps - Dagahaley, Ifo, and Hagadera. Although the future of the camps remains uncertain given recent political pressures, they have been a feature of the area for almost three decades, and are in many ways tied into the socio-economic foundation of the area, thus making it hard to foresee a durable solution that does not consider longer-term integration. If one or more of the remaining camps does close, it is important to note that the population of Kenyans living in Dadaab Town and surrounding areas would also likely decline as livelihoods of host community members are strongly linked to humanitarian and NGO operations surrounding the refugees as well as the markets located in the camps.

Total Persons	217,511 ¹⁷⁷	Persons per year	21,900
Persons per day	60	Total Years	9.93

Table: Repatriation projections based on population March 2020

For the current refugee population of Dadaab Complex to be repatriated over 10 years, approximately 60 persons would need to be relocated each day. However, since the majority of the refugees who are currently residing in Dadaab have been in Kenya for 30 years, most do not have homes to return to, which, with an average family size of 6, would require approximately 10 homes to be built per day for 10 years.



Country of Origin
 ■ Somalia (96.2%)
 ■ Ethiopia (3.4%)
 ■ Other (0.4%)

Chart: Population Breakdown of Dadaab Complex by Country of Origin (2020)

Variable: Population Growth/Decline

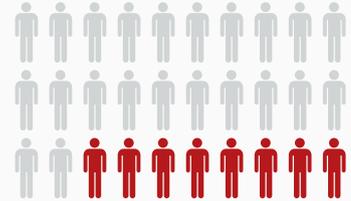
VARIABLE: POPULATION GROWTH/DECLINE OUTCOMES

KENYAN HOSTING + HOSTED REFUGEE POPULATION

Outcome 1: Substantial Natural Growth (3.05%)

Using the Garissa County annual population growth rate of 3.05%, forecasting shows that if the settlements around the refugee complex in Dadaab and Fafi Sub-counties remain in existence for the coming 10 years, there will be a population increase of 80,388 or approximately 35.1%.

+35.1%
population
increase
by 2030

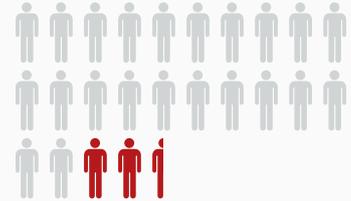


KENYAN HOSTING POPULATION

Outcome 2: Static or low population growth (1.00%)

If no investment is made in planning and development while climate and environmental risks become more pronounced, pressures on natural resources mount, and livelihoods are further strained, it is possible that the Kenyan population will not increase at a particularly high rate as livelihood opportunities locally are limited and younger people move to other cities and towns to seek jobs and a better education.

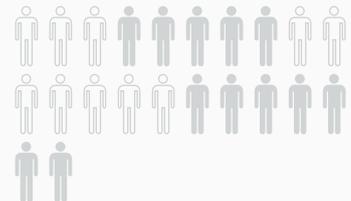
+10.5%
population
increase
by 2030



Outcome 3: Decrease in Population (Unpredictable)

It is also possible that, if refugee populations are repatriated and Dadaab Refugee Complex closes, the Kenyan population will also decline as humanitarian and NGO resources are pulled from the area and there is a major reduction in the few formal employment opportunities that do exist. This will be compounded by the fact that vendors in the major markets in the area (located in the camps), many of whom are host community members, will lose a large proportion of their customer base.

-??%
unpredictable
decrease in
population



VARIABLE: POPULATION GROWTH/DECLINE OUTCOMES

HOSTED REFUGEE POPULATION

Outcome 2: Decrease in Population (Unpredictable)

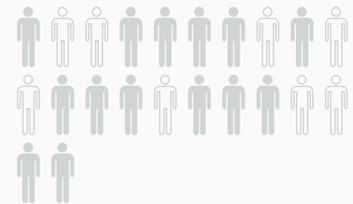
Though entirely unpredictable, population decline resulting from the voluntary repatriation of some portion of the remaining refugee population may occur.

As exemplified by the closure of Kambioos Camp in 2017 and Ifo 2 Camp in 2018, there is recent precedent for large-scale repatriation from Dadaab Complex and consequent population decline. The Kenyan government has, as recently as 2019, continued to express a desire to pursue closure of the remaining camps, which would have a broad impact.

Local interests will likely prevent this from occurring in totality, recognizing the economic catastrophe that would result. As the refugee population in the region outnumbers that of the national population, its presence is key to improved economic opportunities and long-term planning and development initiatives.

If repatriation were to occur, a substantial number of the refugee population are likely to remain since a generation of camp residents have never lived outside of Kenya and are unlikely to find this outcome desirable.

-??%
unpredictable
decrease in
population

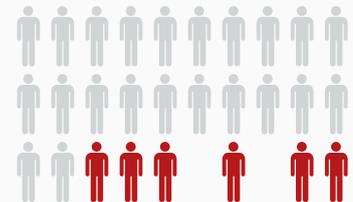


Outcome 3: Large increase in population due to new influx (Unpredictable)

If conflict, natural disaster or related life-threatening events in Somalia or the surrounding region ensue, it is possible that another influx of refugees will be settled in Dadaab.

It is also possible that refugees from elsewhere are relocated to Dadaab; however, this does not seem very likely given that Kalobeyei, which is situated closer to the D.R.C., Sudan, South Sudan and Ethiopia, still has the capacity to shelter additional refugees.

+??%
unpredictable
growth in
population



Variable: Urban Footprint

Context

Natural population growth, as discussed previously, has the potential to affect the expansion of the urban footprint of the Dadaab area. This, in conjunction with the density of the built areas, will define how much more land needs to be developed to accommodate various potential outcomes of projected population growth. Based on the population growth projections from the previous variable, the overall Dadaab area could see growth of between 23,998 and 80,388 additional inhabitants by 2030 (inclusive of both host and refugee communities).

An analysis of the existing settlements demonstrates different densities as shown in the table below:

- Dagahaley Camp is the most densely populated of all of the settlements in Dadaab Complex, with a density of approximately 9,472 p/km² over 7.69km².
- Hagadera Camp is fairly similar, with a density of approximately 9,084 p/km² over 8.38 km².
- Ifo Camp covers the largest land area of the active camps with 13.00 km², but has the smallest population,

resulting in a lower density of approximately 5,272 p/km².

- Dadaab Town is by far the smallest of the settlements in the Dadaab area. Covering an area of only 3.74km² and with a population of approximately 11,871, it has a low population density of only 3,174 p/km².

While less land will be required for proposed growth at higher densities, high density growth is only preferable if investment in infrastructure to support it follows.

Growth at the density of Dadaab Town, however, would not be cost-effective and would require a very hefty investment in infrastructure. Infrastructure networks (such as electricity grids, water pipelines and sewage lines) are very expensive when they service a large area. Generally, it is cheaper and more efficient to provide infrastructure for a smaller area with a higher density. This also applies to non-network types of infrastructure such as schools and health facilities. The lower the density of a settlement, the longer the walking distance to the nearest facility. Higher density development allows for a higher opportunity index.

2020	Dadaab Complex	Dadaab Town	Refugee Settlements	Dagahaley	Hagadera	Ifo
Built-Up Area (km²)	32.81	3.74	29.07	7.69	8.38	13.00
Percentage of Total	100.0%	11.40%	88.60%	23.5%	25.5%	39.6%
Population (2020)	229,382	11,871	217,511	72,843	76,127	68,541
Percentage of Total	100.0%	5.2%	94.8%	31.7%	33.2%	29.9%
Population Density (p/km²)	6,991.22	3,174.06	7,482.32	9,472.45	9,084.35	5,272.39

Table: Comparison of urban footprint, population, and population density

While both the projected population growth and land requirement of the Dadaab area, are themselves variables, the spatial form that growth takes, outlined below as the type of expansion, is a key factor in outcomes related to the quality and efficiency of infrastructure and access to services. Dadaab Town, Ifo Camp, Dagahaley Camp, and Hagadera Camp could each expand in multiple directions, so coordinated settlement planning and good decision-making on this issue are essential to ensure the sustainable growth of the area as a whole.

Outcomes

There are many potential consequences for how the urban footprint can manifest in the area over the coming years, but three distinct plausible outcomes based on density and population growth that are worth considering are elaborated here:

Projected Population Change (2020 - 2030)	Low Density 3,174 p/km ² (Current Unplanned Density of Dadaab Town)	Medium Density 5,700 p/km ² (Planned Density for Kalobeyei)	High Density 9,472 p/km ² (Current Density of Dagahaley Camp)
Decline	Unpredictable		
Low Increase +23,998 (1.00%)	+7.56km ² +23.0%	+4.21km ² +12.8%	+2.53km ² +7.7%
Medium Increase +54,373 (2.15%)	+17.13km ² 52.2%	+9.54km ² 29.1%	+5.74km ² 17.5%
High Increase +80,388 (3.05%)	+25.33km ² 77.2%	+14.10km ² 43.0%	+8.49km ² 25.9%

Table: Additional Area required depending on population changes 2020-2030

VARIABLE: URBAN FOOTPRINT OUTCOMES

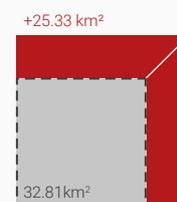
**Outcome 1: Large demand on land (+25.33km²)
High Population growth (3.05%) at Low Density (3,174 p/km²)**

This outcome is based on the assumption that moderate population growth across both host and refugee population groups will continue at a rate in line with the Garissa County average of 3.05% and that the additional land needed to support this growth will not be proactively planned or developed but settled organically in a sprawling low density manner comparable to that seen in Dadaab Town.

Accommodating the projected additional 54,373 residents by 2030 at a low density of 3,174 p/km² will require an additional 25.33km² of land, expanding the inhabited area by a vast 77.2%.

The impact of this will be predominantly negative. Very large and unsustainable investments will be required to provide services and the maintenance of this infrastructure is likely to prove cost-prohibitive. This will result in a lack of implementation and it is unlikely that any significant improvement in service delivery will take place, resulting in an increase in competition over the limited resources available. Therefore, the potential for increased access to opportunities for all will be limited and further environmental degradation will likely continue. This, in turn, may lead to increased risk of conflict between various groups as well as increased vulnerability of those unable to easily access the limited services and infrastructure.

+77.2%
more land required



Variable: Urban Footprint

Outcome 2: Medium demand on land (+14.10km²) High Population increase (3.05%) at a Medium Density (5,700 p/km²)

This outcome is based on the assumption that high population growth across both host and refugee population groups will continue and that the land needed to support this growth will be proactively planned and developed in a way that utilizes the area previously occupied by the decommissioned camps and promotes a more compact development approach within Dadaab Town. In addition, some infill between the settlements may be required.

This outcome assumes an additional 80,388 residents by 2030 based on Garissa County’s current high growth rate of 3.05%. To accommodate this growth at a high density of 5,700 p/km², the current rate demonstrated in the planned integrated settlements such as Kalobeyei in Turkana, will require an additional 14.10km² of land area, or an expansion of the inhabited area by 43.0% from today.

It is also anticipated that redeveloping the land from the decommissioned site of Ifo 2 camp, which accounts for 10.72 km², could likely satisfy a large proportion of this growth and leverage aspects of the remaining infrastructure and facilities across the site.

The impact of this will be that large investment will be required up front, but improved infrastructure and services can be provided to more of the community in a cost-effective and sustainable manner, limiting further impact on the surrounding environment and avoiding development on risk-prone areas.

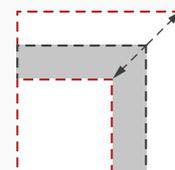
+43.0%
more land required



Outcome 3: Unpredictable Spatial Demand Less land required overall as a result of refugee repatriation

This outcome is based on the assumption that large-scale voluntary repatriation of the Dadaab refugee population occurs, resulting in a significant decline in the overall population. Due to the unpredictability of potential repatriation in terms of when it may start, how long it might take, as well as how many refugees will actually wish to return, it is impossible to make informed estimates regarding the impact of refugee repatriation on land demand. What is clear however is that in this case, the uncertainty and lack of clarity will make it impossible to plan effectively, limiting the potential for sustainable land use and resource management practices to be implemented. In addition to this, the socio-economic impact will be severe.

-??%
more or
less land required



Type of Expansion

Dadaab Town, Ifo Camp, Dagahaley Camp, and Hagadera Camp could each expand in multiple directions. Potential growth options can be summarised as:

- Urban expansion of existing settlements
- Infill of existing settlements
- Resettlement and regeneration of decommissioned camps

SUB-VARIABLE: SPATIAL DEMAND OUTCOMES

<p>Outcome 1: Unplanned expansion or reduction of existing settlements through sprawl or abandonment</p> <p>This option would involve the expansion of the existing settlements, requiring additional land for growth.</p> <p>If expansion occurs at the current density of Dadaab Town or at an even lower rate, the built footprint will follow a pattern of sprawl.</p>	<p>Outcome 2: Infill of existing settlements</p> <p>This option would increase the density of existing developed areas within the Dadaab area. This has the benefit of potentially utilising existing infrastructure.</p>	<p>Outcome 3: Resettlement and regeneration of decommissioned camps</p> <p>The area of land available from the two decommissioned camps (Ifo 2 and Kambioos) presents the opportunity to repurpose an additional 32.42km², limiting greenfield development and further detriment to the natural environment. In addition to this area being in proximity to the existing settlements, these sites possess the remains of infrastructure and facilities that were only recently decommissioned.</p>

Variable: Climate Risk & Natural Resources

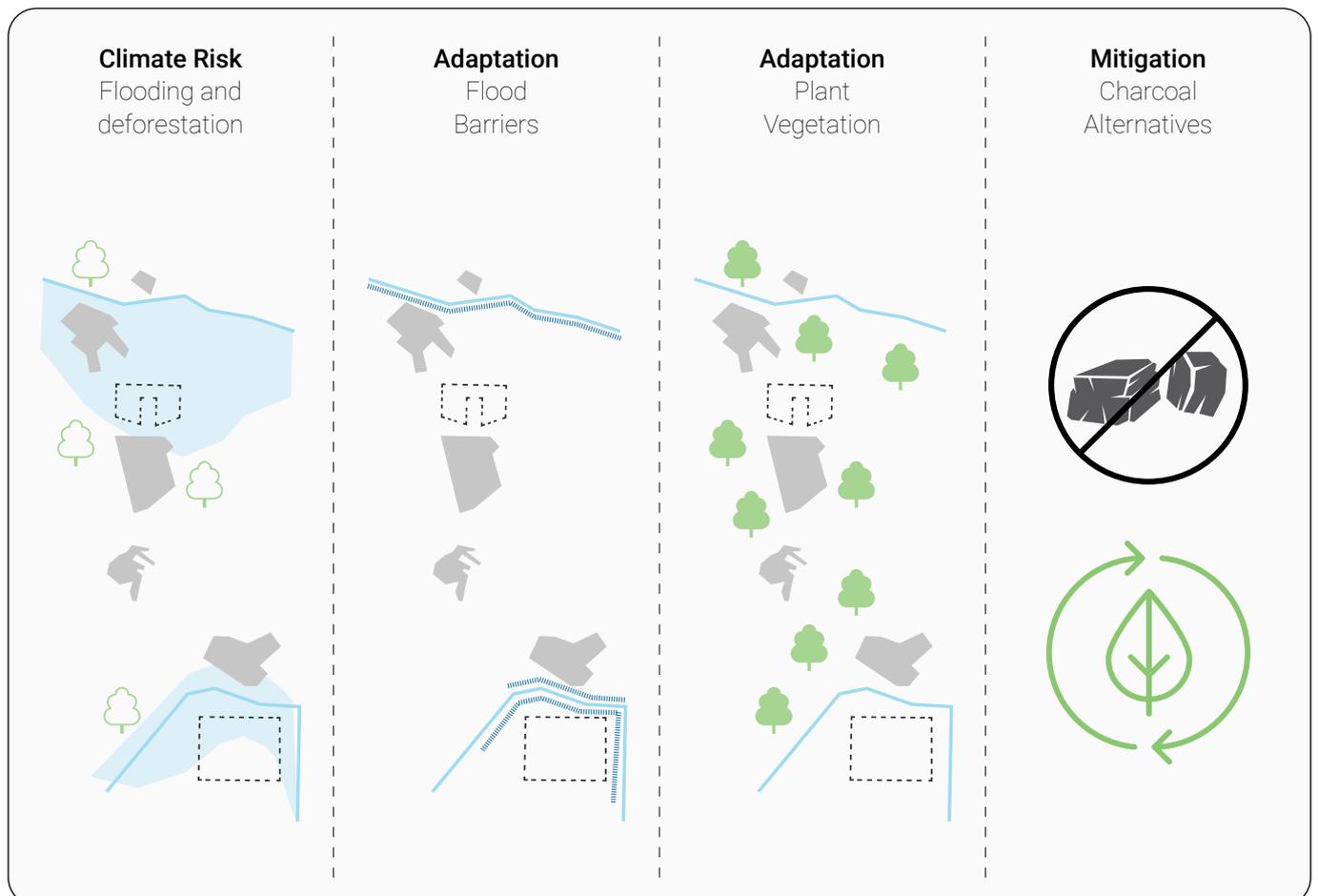
Context

Climate change is a reality that threatens to impact Dadaab Complex in multiple ways, predominantly through the increasing severity and frequency of flooding and drought, natural resource depletion, and the impact that these challenges have on the livelihoods of those living in the region.

Adaptation to climate change refers to the process of adjusting to the actual or expected effects of climate change. Mitigation refers to interventions that reduce the sources of greenhouse gases or increase the capacity of carbon sinks e.g. wetlands, woody vegetation, soil to absorb greenhouse gases. Combining both adaptation and mitigation interventions is the most effective way to combat the short and medium-term impacts of climate change, and contribute to long-term climate change reduction goals.

These types of actions respond to the direct impacts of climate change with the aim of reducing loss of life, property and infrastructure. Examples of actions from the Kenya National Adaptation Plan 2015-2030:

- Flood protection measures are put in place
- An effort is made to diversify livelihood opportunities so that not as many people are reliant on diminishing pastoralist land
- Re-assess infrastructure vulnerability and upgrade infrastructure to withstand climate impacts with the latest technology
- Measures are taken to limit unsustainable resource use and regenerate additional natural resources
- Conduct participatory county level climate risk and vulnerability assessments
- Develop and implement county adaptation plans
- Increase solar, wind, and other renewable energy provision to existing and currently off-grid areas
- Continue the rehabilitation of water catchment areas in order to provide sustainable ecosystem services, including energy production
- Develop a climate change adaptation manual for public sector enforcement and compliance
- Conduct an assessment of whether existing and planned infrastructural assets are compatible with a low carbon climate resilient economy
- Integrate climate change scenarios into spatial planning (climate resilient spatial planning)



VARIABLE: CLIMATE RISK AND NATURAL RESOURCES OUTCOMES

Outcome 1: No specific climate change mitigation or adaptation actions are taken leading to increasing vulnerability for local communities

Impact: If no measures are taken, the impacts of climate change will continue to worsen for the foreseeable future. Flood events will increase in severity and frequency, causing increasing levels of damage to housing and infrastructure and greater numbers of injuries and deaths. Land that has been identified as being particularly flood prone, particularly around Dagahaley and Ifo 2, may eventually have to be abandoned due to the impact of constant severe flooding. Outbreaks of waterborne diseases are also likely to become commonplace. In addition, longer and more frequent droughts will impact directly on water and food security of both the host and refugee communities. Loss of livestock and widespread famine is a likely outcome.

**No Adaptation
or Mitigation
Measures
Taken****Outcome 2: Climate change adaptation actions are taken leading to reduced vulnerability for local communities, while no mitigation actions are taken**

Impact: While these adaptation actions will protect local communities from some of the impacts of climate change, i.e., move people from flood prone areas and improve flood protection in vulnerable areas, the extent of protection will be limited and their effect relatively temporary. These actions will not have any impact upon wider climate change challenges, such as reducing overall greenhouse gas emissions, which is necessary to slow climate change on a global level. As such, the impacts are likely to continue to worsen, for example in the form of increased droughts, potential outbreaks of desert locusts, etc., which impact food security and livelihoods reliant on agriculture and livestock.

**Partial
Adaptation
Measures
Taken****Outcome 3: Both mitigation and adaptation actions are taken leading to reduced vulnerability and improved resilience of local communities**

Impact: In addition to stabilizing the current situation, the above activities will contribute to reducing the detrimental impact of climate change on the communities who live in the Dadaab area. This assumes local action will occur in conjunction with both national actions (highlighted above), as well as global efforts. Acknowledging and addressing the most risk-prone communities will help decision-makers implement measures that increase the number of climate-resilient homes and infrastructure projects, and provide additional livelihood opportunities that build community resilience to the impacts of climate change. At the same time, mitigation measures will help to reduce communities' impact on the environment, for example through the shift from charcoal cooking fuels to green energy sources such as solar and wind. This will both result in a reduction in environmental degradation and provide a more reliable and sustainable energy source, enabling communities to spend their time on more productive activities. Overall this outcome will help to support an increasingly resilient place for communities to live.

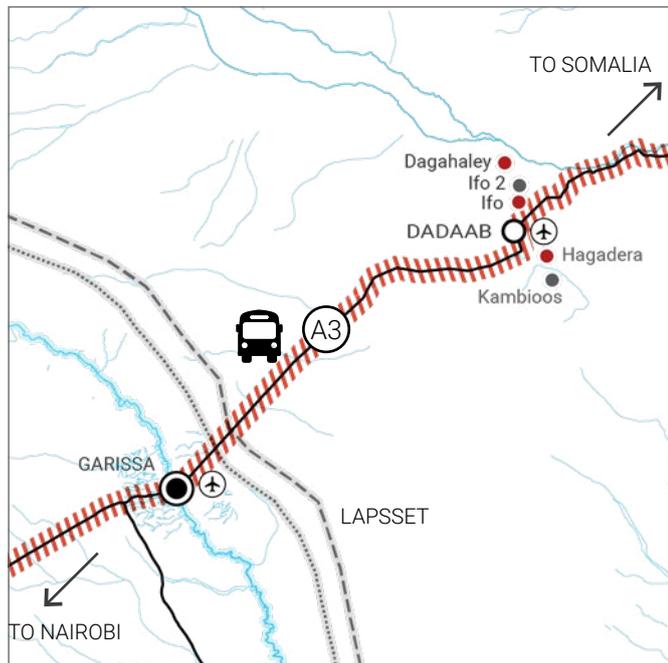
**Adaptation
and Mitigation
Measures
Taken**

Variable: Catalytic Projects

Context

Whilst there are multiple projects that could be considered as critical as enablers for transformative change in the area, three catalytic projects have been identified which, if implemented, would transform the Dadaab area into a more vibrant, self-reliant and equitable urban centre. These projects will increase the economic development potential of the area, increase demand to live and work there, and allow for greater investor confidence. Each of the catalytic projects will involve multiple stages over many years, noting however that specific timeframes are currently undetermined.

While there are other infrastructure projects planned for in and around the region, these catalytic projects have been identified as being particularly impactful to the future growth of the area. Each project on its own will yield specific benefits over time, however the combined impact will be significant, as they are mutually beneficial. Investment in these infrastructure projects will have a powerful multiplier effect as their implementation is likely to spur additional investment and infrastructure projects.



Catalytic Project #1: Improvements to the A3 Highway and extension of regional public transportation network

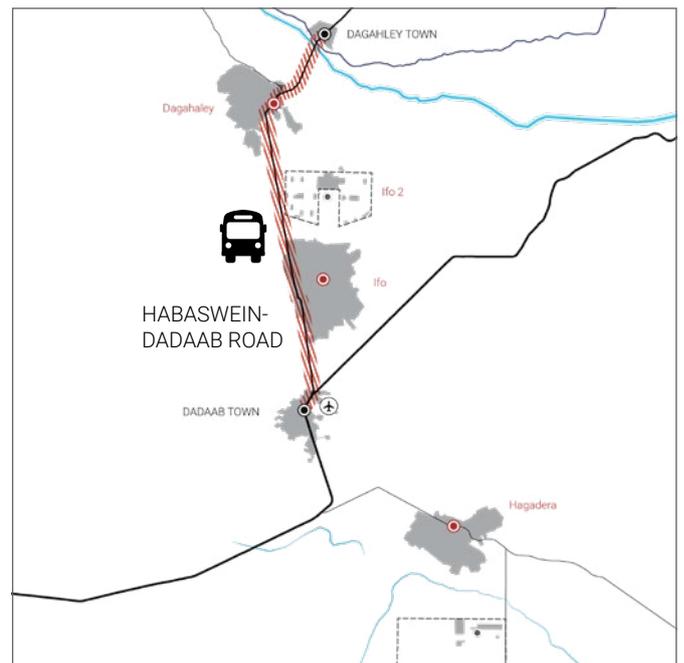
With regard to accessibility and connectivity, there are many opportunities for interventions that would further unlock potential development in the area, however the most important involves making improvements to the A3 Highway. Further opportunities would be unlocked with

improvements to public transportation, as well.

The A3 Highway, which intersects the Dadaab Complex, serves as an important link between Nairobi and Somalia. It also connects Dadaab to Garissa Town. As the primary land route between Nairobi, Kismayo, and Mogadishu, the highway has established Garissa Town as a major destination for livestock trading, which forms the foundation of the county's economy.

In regard to future development of the area, under the National Spatial Plan, the A3 Highway is defined as a strategic regional highway, and the Dadaab complex, as the largest population agglomeration in the area, could in the future, serve as a major trading centre between Somalia, inland Kenya, and the Southern areas of Wajir County.

The development of the LAPSSET Corridor, which is planned to go through Garissa Town, may also incentivize improvements to north-south connectivity across the county, which are currently limited.



Catalytic Project #2: Improvements to the Habaswein-Dadaab Road and expansion of the local public transportation network

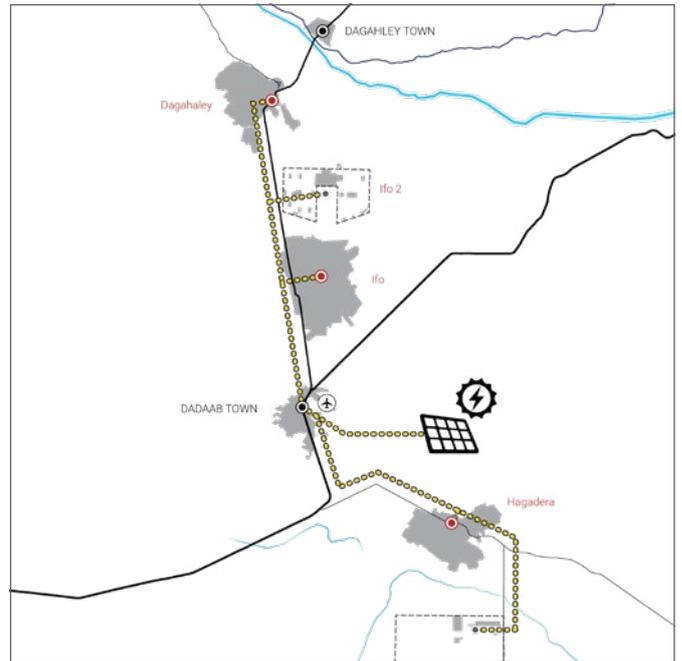
At a more localized scale, upgrading the Habaswein-Dadaab Road, between Dadaab Town and Wajir County, to an all-weather tarmac road, would significantly reduce travel time between the various settlements that compose the Dadaab area. It would reduce travel time to the north, allow for faster transport of goods and services, and improve price stability of goods and increase food security.

Catalytic Project #3: Improved access to energy in the region through extension of electricity lines and construction of solar mini-grid power stations

As previously identified, access to energy is a major challenge in the region with no local connection to the national energy grid in the Dadaab area. The majority of residents rely on informal sources for lighting and phone charging and heavily depleted natural resources for cooking.

As outlined in the GISED, critical projects that would go a long way to address these challenges include:

- Extension of electricity lines to Ifo, Dagahaley, Alinjugur, Kambioos and adjacent host villages;
- Construction of three solar mini-grid hybrid power stations (60 KW each) to power both communal facilities and livelihoods



Map: Catalytic Project #3
Sources: KNBS, ESRI, UNHCR, UN-Habitat Research

0/3

catalytic projects implemented

Outcome 1: No implementation of catalytic projects resulting in no improvements to roads or access to energy

If none of these catalytic projects are implemented, sustainable growth of the economy in and around the Dadaab area will be prevented. As such, there will be few new employment opportunities and many residents may choose to move to other urban centres.

2/3

catalytic projects partially implemented

Outcome 2: Partial implementation of catalytic projects: A3 Highway and Habaswein-Dadaab Road are improved

Improvements to the A3 Highway and Habaswein-Dadaab Road will allow for the potential economic growth of the Dadaab area to begin to be realized. Improved links to Garissa Town and the greater region will directly support the growth of the Dadaab area by providing the transportation infrastructure necessary to help lower the cost of transport for people, goods and services to access the area.

3/3

catalytic projects fully implemented

Outcome 3: Extensive implementation of catalytic projects: A3 highway and Habaswein-Dadaab Road are improved, public transportation is expanded, electricity lines are extended, and solar mini-grid power stations are constructed

In addition to the improvements associated with greater connection to Garissa Town and the wider economy, improved public transportation and access to energy within the Dadaab area will catalyse knock-on benefits such as economic development, access to more diverse livelihoods, and the stabilisation or even lowering of prices for goods and services.

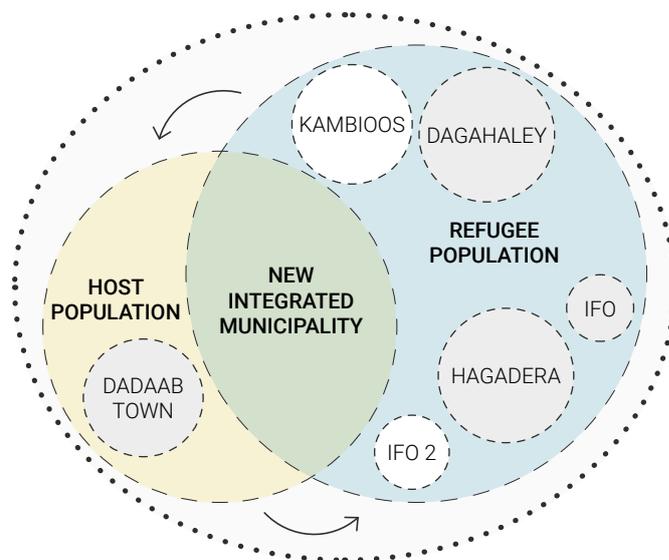
The optimal scenario would be for all three catalytic projects to be implemented, as each would be able to strengthen the others and provide a strong enabling environment to spur development.

Variable: Local Economic Development

Context

A key factor in promoting solutions that integrate refugees with host communities in a planned and coordinated way is to leverage the potential inclusive economic benefit that the investments in the area can have for all. This is also premised on the basis that the sheer scale of population in Dadaab and Fafi Sub-counties in itself has great potential for economic development. This is due in part to a combination of factors including the significant young working-age population, the existing base of infrastructure as well significant government and international agency focus in the area.

According to the ILO, "There is optimism about the potential of the CRRF/GCR process to contribute to a vibrant and economically strong "Dadaab city" which would benefit both refugees and host communities, linking Dadaab Town and camp with Garissa county, Nairobi and other parts of the country."¹⁷⁸ Furthermore, despite the large scale repatriation of refugees since 2013, Dadaab remains a vibrant community with multiple markets each with their own distinct characteristics where both host and refugee community members provide and purchase a diversity of goods and services. There are also strong opportunities for growth through leveraging basic value chains in the area through providing opportunities to produce and sell more value-added products. The environmental conditions in Dadaab together with a generally positive relationship between host and refugee community members ensures that cooperation is both present and possible to build upon.



Key challenges surrounding the national encampment policy and limitations on mobility set major constraints for refugee entrepreneurs or business owners in terms of potential growth. For example, limitations on land access can impede attempts to further develop agricultural initiatives. As such, when considering the potential for how this could impact the future economic development of the area, there are various outcomes that should be considered that are tied to spatial dynamics. These are generally based on both policy measures, infrastructure investments and land usage strategies that would help enable (if implemented) or continue to constraint (if not implemented) the economic vibrancy and development potential in the area.

VARIABLE: LOCAL ECONOMIC DEVELOPMENT OUTCOMES

Outcome 1: Economic decline resulting in significantly reduced access to opportunities for all

This is likely to be driven by events or actions such as:

- There is large scale refugee repatriation due to significant improvement in conditions for return to the various countries of origin leading to a large scale reduction in humanitarian presence and major reduction in both the aid driven economy as well as the market demand. This is however viewed to be unlikely in the short to medium term.
- There are policy measures put in place that may further prevent the refugee population from taking part as active members of the workforce in the Dadaab area, or inhibit refugees' legal and regulatory access to free movement and ability to grow businesses.

Impact:

- The impact of this on the Dadaab area would result in a severe deterioration of the situation. The few formal jobs in the area are generally all tied to the aid sector and therefore would likely be lost. This would also mean that the vast numbers of traders and local businesses would lose their customer base, harming local host businesses as well as impacting informal employees and supply chains that they rely upon. It is important to emphasise that the situation would predominantly impact the remaining host communities as they rely significantly upon the aid driven economy for their livelihoods. The few refugees who may remain would suffer from drastic cuts in service provision and similar impacts upon their access to socio-economic opportunities.

VARIABLE: LOCAL ECONOMIC DEVELOPMENT OUTCOMES

Outcome 2: Economic stability/small growth resulting in marginally improved access to opportunities

This outcome assumes that there will be few actions that will affect a substantial change in economic growth. The few activities that may continue to occur could include:

- Improvement to future infrastructure development would be made, but at a slow pace
- Limited concrete improvements to refugee rights enacted in line with the draft refugee bill

Impact:

- Practical limits to refugee movement due to the need to acquire written authorization from the Kenyan government to legally leave the camp would likely remain in place and would affect consumers, producers, and suppliers since refugees cannot usually travel outside the camp to acquire the goods or materials needed for shops or construction. The reliance therefore on middlemen to negotiate results in significant inefficiencies for business owners and higher prices for consumers. This negatively affects both hosts and refugees, reducing their productivity and placing limits upon growth potential.
- The constraints facing freedom of movement also have implications on the ability of refugees to apply for the work permits that they are entitled to as they are practically often unable to visit the necessary offices in Nairobi to obtain a work permit. This restricts them to a much smaller pool of livelihood opportunities.
- Since refugees do not have access to property rights, the potential for a large proportion of the local inhabitants to invest in their homes and businesses is limited. This, in turn, further limits refugees' ability to leverage collateral and their ability to expand business operations since banks are unlikely to provide credit to individuals or businesses without reliable assets such as property.

Outcome 3: Significant economic growth resulting in substantially improved access to opportunities for both hosts and refugees

The actions that could possibly enable significant improvement in economic growth would include:

- The expediting of the implementation of the various infrastructure interventions such as the catalytic projects highlighted earlier, including, road and energy infrastructure implementation. These pieces of infrastructure will also result in multiplier effects.
- Improving the regulatory environment to mitigate challenges to freedom of movement and the potential for refugees to obtain work permits.
- Improving access to formal education and business training.

Impact:

- Investment in road and energy infrastructure would potentially improve people's access to markets, help build the logistics system in the area and connect local business to larger wholesalers. Currently, the Dadaab area struggles with market integration as poor road conditions hinder the movement of goods and people.
- Easing the legal and regulatory limitations for refugees to work, move and own, and operate property will support sustainable business growth in grocery markets and the current informal real estate markets. This will be achieved by reducing the time and money consumed in the business chain and increase people's access to financial services with property ownership.
- Action in attracting the private sector and social enterprises to the Dadaab area and supporting local and refugee entrepreneurs has the potential to expand job opportunities, improve services, provide more choice, and reduce prices. In turn, this could enhance the self-reliance of both communities and their socioeconomic integration, while contributing to the development of the hosting region.
- Ensuring people's access to financial services, built on the existing mobile money system and supporting financial literacy campaigns to raise awareness, will equip refugees and host community members with the enabling environment, skills and know-how to set up a business and maintain operations.

Scenario A - Business As Usual

Variables	Population		Urban Footprint		Climate Risk and Natural Resources	Catalytic Projects	Local Economic Development
	Hosting Population	Refugee Population	Spatial Demand	Type Of Demand			
Outcome #1	Substantial Natural Growth (3.05%) 35.1% (+80,388) increase by 2030		Large demand +17.13km ² required to accommodate High Population Growth (3.05%) at Low Density	Unplanned expansion or reduction of existing settlements through sprawl or abandonment	No specific climate change mitigation or adaptation actions are taken leading to increasing vulnerability for local communities	No implementation Roads are not improved, public transportation not extended Access to energy not improved	Decrease Livelihood opportunities are not diversified Limited to no investment in businesses and industry
Outcome #2	Static or low population growth (1%) 10.5% (+23,998) increase by 2030	Decrease in population due to repatriation (Unpredictable)	Medium demand 14.10km ² required to accommodate High Population Growth(3.05%) at a Medium Density	Infill of existing settlements through compact development	Climate change adaptation actions are taken leading to reduced vulnerability for local communities, no mitigation actions are taken	Partial Implementation Roads are improved, public transportation extended Access to energy not improved	Stable
Outcome #3	Decrease in Population (Unpredictable)	Large increase in population due to new influx (Unpredictable)	Unpredictable spatial demand Less land required to accommodate remaining refugees and host communities	Resettlement in, and regeneration of, decommissioned camps	Both mitigation and adaptation actions are taken leading to reduced vulnerability and improved resilience of local communities	Extensive implementation Roads are improved, public transportation extended Access to energy improved	Increase Business and livelihood opportunities are increased, providing additional jobs and local economic stimulus which can be reinvested in urban development

PROBABILITY	HIGHLY UNLIKELY	UNLIKELY	MARGINAL	LIKELY	HIGHLY LIKELY
IMPACT	SIGNIFICANT DETERIORATION	SLIGHT DETERIORATION	MARGINAL	SLIGHT IMPROVEMENT	SIGNIFICANT IMPROVEMENT

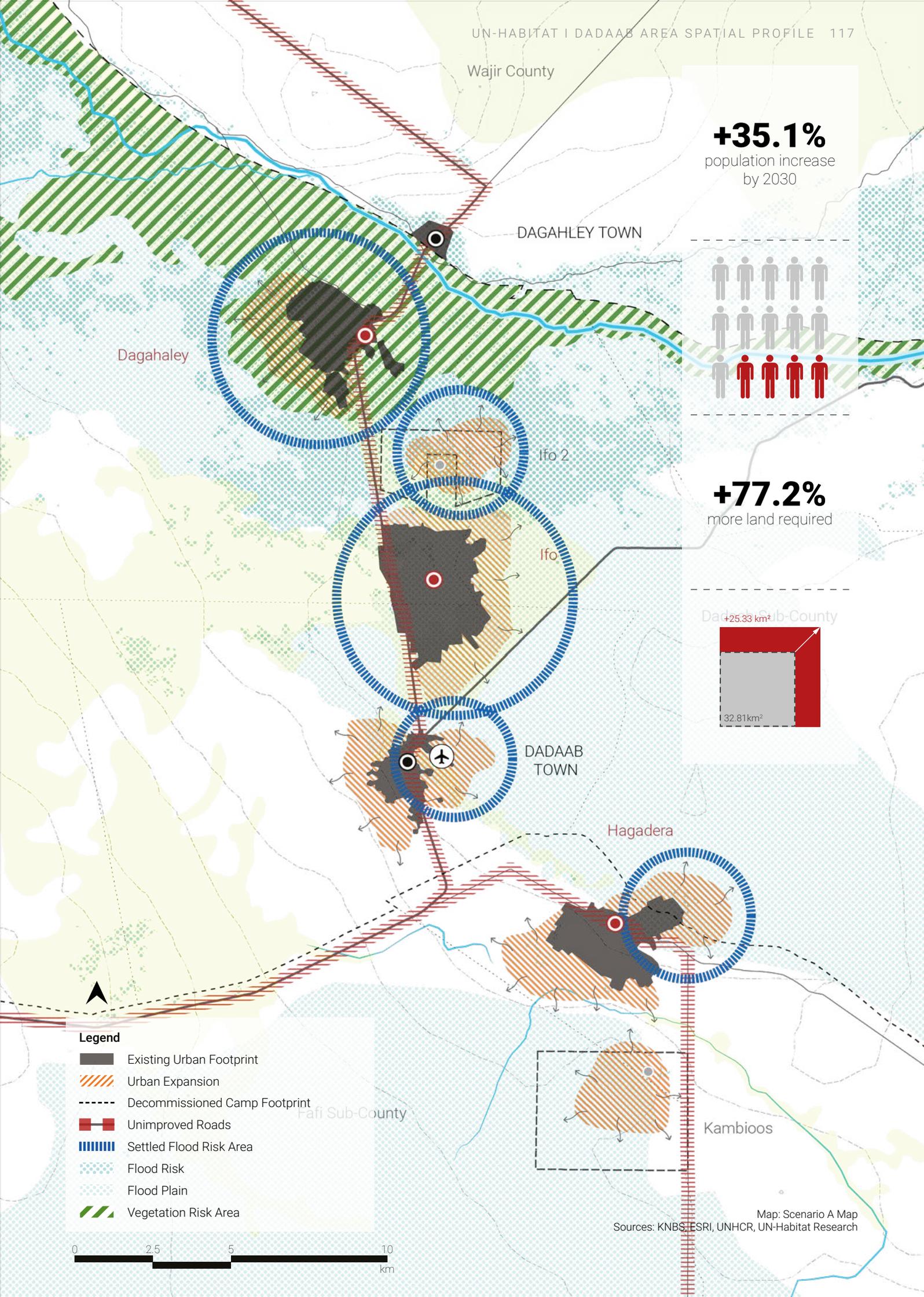
Scenario

If natural population growth remains at 3.05% amongst host and refugee communities without any committed actions taken to address planning and development measures...

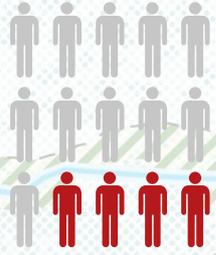
Likely Impact

The built footprint will continue to expand in an unstructured manner on the outskirts of Dadaab Town, and on the periphery of the refugee settlements, significantly exacerbating the **pattern of sprawl** that is increasing. Due to the lack of regulation on land and resource use and lack of promotion of sustainable alternatives, degradation of the natural environment and grazing land will continue and **access to basic services and infrastructure will become almost impossible to guarantee**. This is due to both dwindling natural resources as well as the vast capital and maintenance costs that would be required to implement and deliver services over the large distances dictated by a sprawling development model. **Conflict over land ownership and access to natural resources** that pastoralists require will ensue. **Floods and droughts are likely to become more frequent** as vegetation, which protects soil quality and prevents erosion, is stripped from

the land. Nomadic pastoralists will increasingly struggle to support themselves and their families as the land no longer supports large grazing herds. The price of food and commodities will increase and/or become unstable as more frequent flooding makes it more and more difficult to import and export which will be compounded by the lack of investment in paving the A3 Highway - a critical link between Dadaab, Wajir, and Garissa Town and the major connection between Nairobi and Mogadishu. The quality of the road will also continue to deteriorate, worsening delays and further reducing any potential productivity gains. Moreover, significant **investment in businesses and industries in the area will be unlikely** because of the obstacles posed by transportation challenges and higher likelihood of conflict over land and resources. This will further contribute to **diminishing job and livelihood opportunities**, without which, own-source revenue will limit further investment in development, including in healthcare facilities and schools, **diminishing health and education outcomes**.

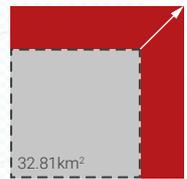


+35.1%
population increase
by 2030



+77.2%
more land required

Dadaab Sub-County +25.33 km²



Legend

- Existing Urban Footprint
- Urban Expansion
- Decommissioned Camp Footprint
- Unimproved Roads
- Settled Flood Risk Area
- Flood Risk
- Flood Plain
- Vegetation Risk Area



Scenario B - Dadaab Camp Closes & Large-Scale Repatriation

Variables	Population		Urban Footprint		Climate Risk and Natural Resources	Catalytic Projects	Local Economic Development
	Hosting Population	Refugee Population	Spatial Demand	Type Of Demand			
Outcome #1	Substantial Natural Growth (3.05%) 35.1% (+80,388) increase by 2030		Large demand +17.13km ² required to accommodate High Population Growth (3.05%) at Low Density	Unplanned expansion or reduction of existing settlements through sprawl or abandonment	No specific climate change mitigation or adaptation actions are taken leading to increasing vulnerability for local communities	No implementation Roads are not improved, public transportation not extended Access to energy not improved	Decrease Livelihood opportunities are not diversified Limited to no investment in businesses and industry
Outcome #2	Static or low population growth (1%) 10.5% (+23,998) increase by 2030	Decrease in population due to repatriation (Unpredictable)	Medium demand 14.10km ² required to accommodate High Population Growth(3.05%) at a Medium Density	Infill of existing settlements through compact development	Climate change adaptation actions are taken leading to reduced vulnerability for local communities, no mitigation actions are taken	Partial Implementation Roads are improved, public transportation extended Access to energy not improved	Stable
Outcome #3	Decrease in Population (Unpredictable)	Large increase in population due to new influx (Unpredictable)	Unpredictable spatial demand Less land required to accommodate remaining refugees and host communities	Resettlement in, and regeneration of, decommissioned camps	Both mitigation and adaptation actions are taken leading to reduced vulnerability and improved resilience of local communities	Extensive implementation Roads are improved, public transportation extended Access to energy improved	Increase Business and livelihood opportunities are increased, providing additional jobs and local economic stimulus which can be reinvested in urban development

PROBABILITY	HIGHLY UNLIKELY	UNLIKELY	MARGINAL	LIKELY	HIGHLY LIKELY
IMPACT	SIGNIFICANT DETERIORATION	SLIGHT DETERIORATION	MARGINAL	SLIGHT IMPROVEMENT	SIGNIFICANT IMPROVEMENT

Scenario

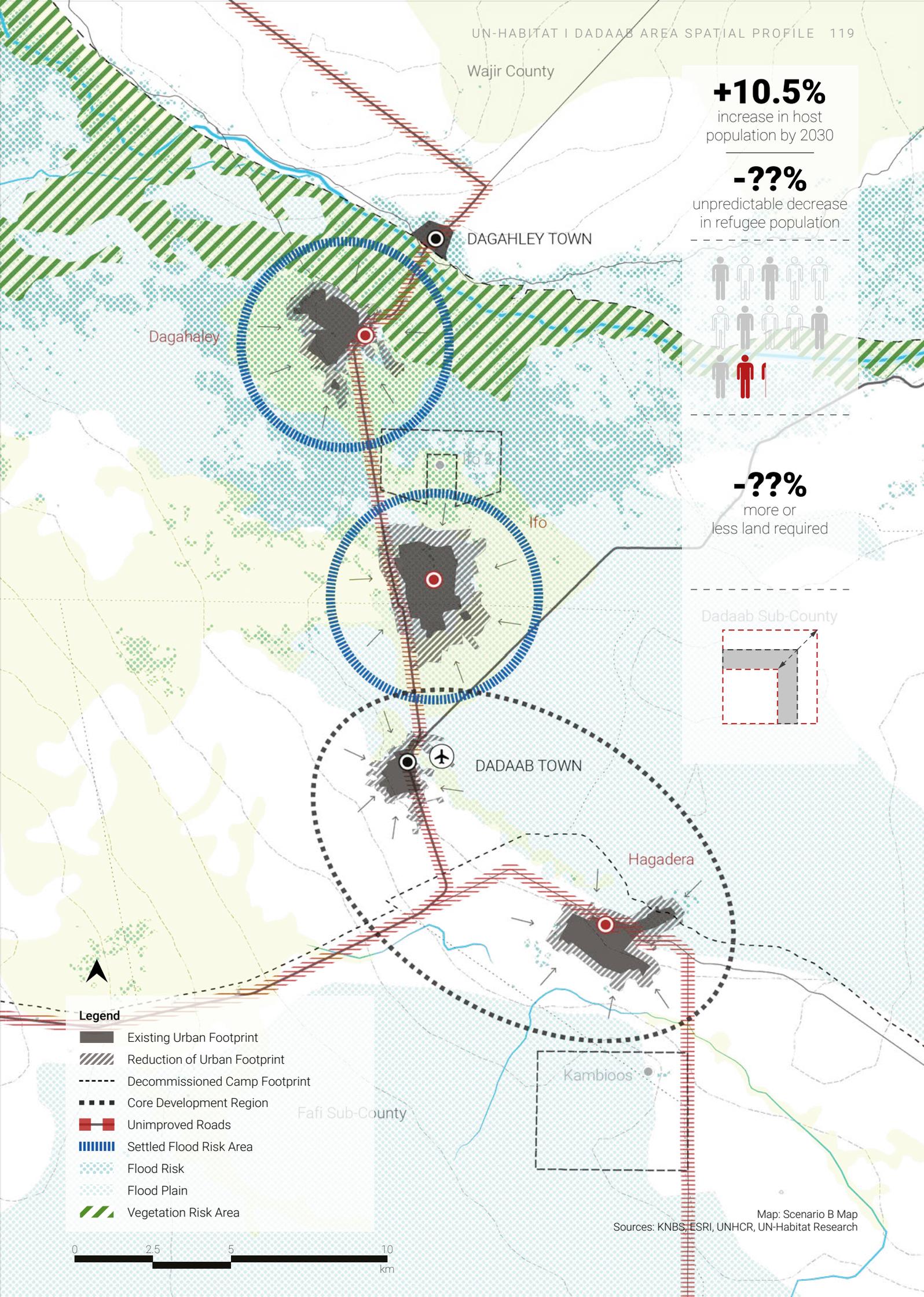
If refugees are repatriated and camp closures ensue, it is likely that the Kenyan population will remain stable in the short-term (neither growing nor shrinking) and then slowly begin to decrease....

Likely Impact

This scenario would lead to substantial unpredictability going forward. The unpredictability results from the problematic nature of any form of large scale refugee repatriation which **would be slow, subject to interruptions, and reliant on the willingness of the refugees to return.** It is worth noting that in an intention survey across Dadaab from 2019,¹⁷⁹ 35% of households (HHs) said that they will not return to their country of origin, while only 4% said that they were certain to return. The impact of such **unpredictable outcomes for planning would be significant** as it is extremely difficult to forecast how the demographic situation may change. Therefore, sustainable interventions that support the environment, the economy or improved service delivery are unlikely to take place. Furthermore, younger generations sensing limited potential for development in the area as the impacts of

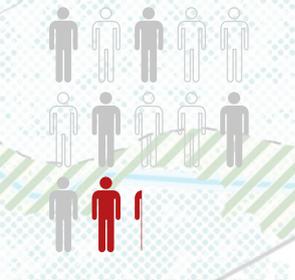
repatriation take shape **will increasingly leave to find jobs elsewhere.**

Most significantly - and as witnessed in other contexts where humanitarian activity has driven the local economy - the large scale repatriation of refugees is also likely to **minimise, if not eliminate, humanitarian operations and NGO assistance** in the area. The resulting resource vacuum, as well as the gap in markets both on the supply and demand side, will require stronger ties to economies outside of Dadaab, which as yet do not exist. The **A3 highway will need to be tarmacked** if there is any hope to connect to regional supply chains, however with fewer people living in the area, **resources may be shifted to prioritise development in other locations.** Without creating the enabling conditions for increased trade with Dadaab Town, there is little likelihood that intensive agriculture will flourish and the cost of importing food and goods could outweigh the benefits of remaining in the area. The only likely positive outcome for the area, if the population around Dadaab decreases, is that there will be less pressure on natural resources and there could be renewed opportunities for the diversification of livelihoods, which would help the remaining population, however small, adapt to the effects of climate change.

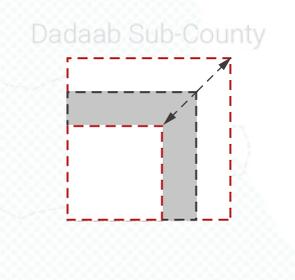


+10.5%
increase in host
population by 2030

-??%
unpredictable decrease
in refugee population



-??%
more or
less land required



- Legend**
- Existing Urban Footprint
 - Reduction of Urban Footprint
 - Decommissioned Camp Footprint
 - Core Development Region
 - Unimproved Roads
 - Settled Flood Risk Area
 - Flood Risk
 - Flood Plain
 - Vegetation Risk Area



Scenario C - Planning for Growth & Resilient Development with the Redevelopment of Ifo 2 & Kambioos (Best Case)

Variables	Population		Urban Footprint		Climate Risk and Natural Resources	Catalytic Projects	Local Economic Development
	Hosting Population	Refugee Population	Spatial Demand	Type Of Demand			
Outcome #1	Substantial Natural Growth (3.05%) 35.1% (+80,388) increase by 2030		Large demand +17.13km ² required to accommodate High Population Growth (3.05%) at Low Density	Unplanned expansion or reduction of existing settlements through sprawl or abandonment	No specific climate change mitigation or adaptation actions are taken leading to increasing vulnerability for local communities	No implementation Roads are not improved, public transportation not extended Access to energy not improved	Decrease Livelihood opportunities are not diversified Limited to no investment in businesses and industry
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PROBABILITY	HIGHLY UNLIKELY	UNLIKELY	MARGINAL	LIKELY	HIGHLY LIKELY
IMPACT	SIGNIFICANT DETERIORATION	SLIGHT DETERIORATION	MARGINAL	SLIGHT IMPROVEMENT	SIGNIFICANT IMPROVEMENT

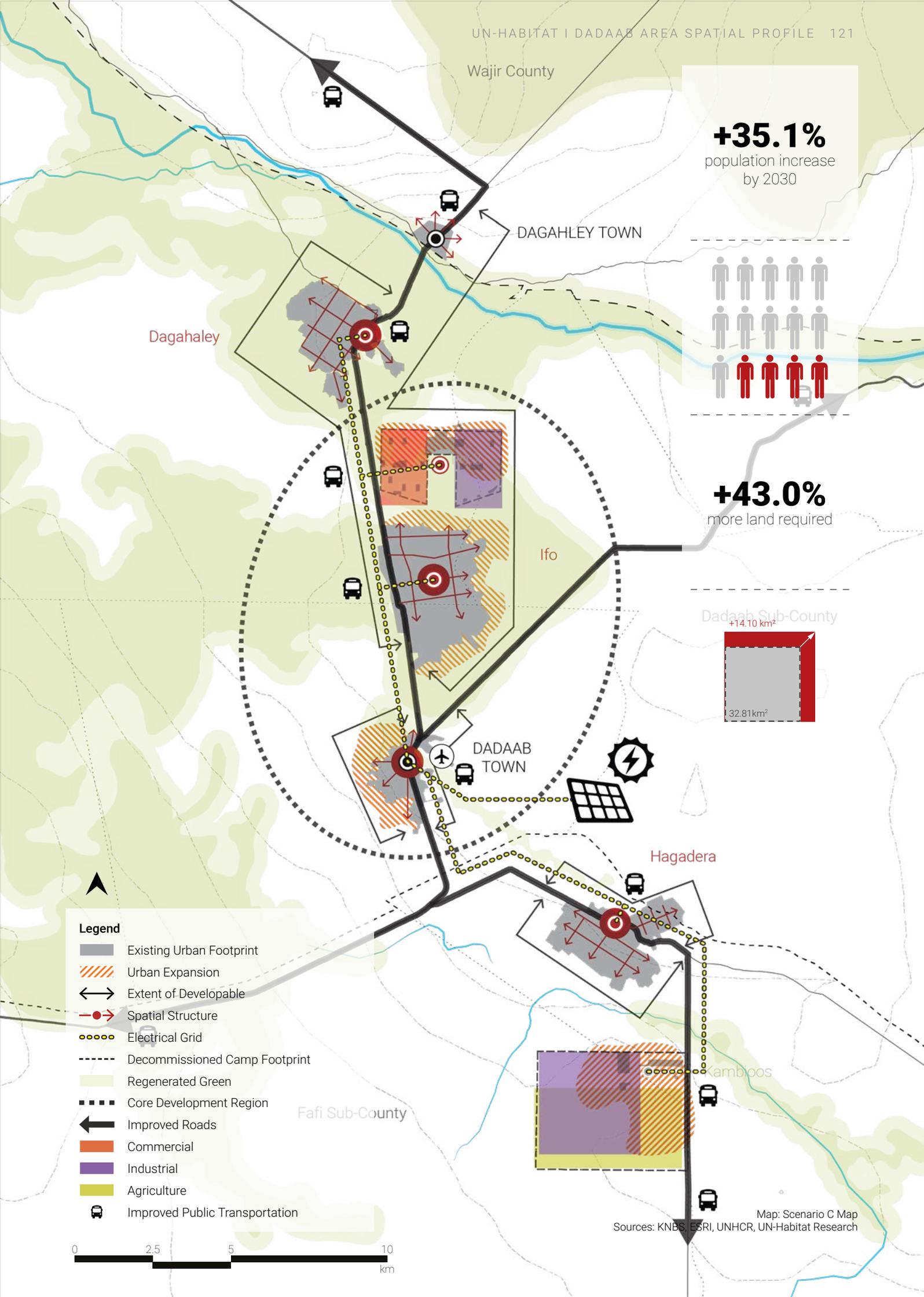
Scenario

If natural population growth amongst host communities remains at 3.05% while refugee communities maintain the same growth rate...

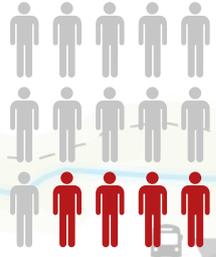
Likely Impact

Strategies that support **compact development will become essential** in order to promote sustainable models of growth. Since the former site of Ifo 2 contains more remaining infrastructure, is located in close proximity to Dagahaley and Ifo 1 and not far from Dadaab Town, it is better positioned to serve as a mixed-use area in the future. **Homes, commercial enterprises and industry could be developed by revitalising existing infrastructure** previously used for basic services and public facilities. By providing designated space for such uses, as well as targeted improvements in water, energy and road infrastructure to support new industries, a robust foundation can be created for supporting improved economic activity and livelihood opportunities in Dadaab. On the other hand, due to its more remote location and security concerns in the area, the former site of Kambioos could be retrofitted to accommodate **higher yielding agricultural activities**.

The Red Cross and WFP have already planned pilots for the site. By leveraging the strengths of both sites and encouraging compact models of growth across the existing camps and Dadaab Town, the environmental impact of an increasing population can be minimised. In tandem, measures to adapt to climate change, such as the diversification of livelihoods, can help ensure that interrelated socio-economic and environmental factors are taken into account holistically. Compact development patterns, together with **formal policies to regulate and enforce land use and management, as well as tenure, will help reduce conflict** in the area, but environmental restrictions and regeneration strategies also need to be conceived and enforced in order to **encourage climate change mitigation**. Population growth and concurrent economic growth would be further incentivized through catalytic development projects. Extending electricity lines and constructing solar mini-grids will improve quality of life and education outcomes in addition to increasing productivity, while **tarmacking the A3 highway will facilitate improved trade** between Garissa County, Somalia and Nairobi.



+35.1%
population increase
by 2030



+43.0%
more land required



Legend

- Existing Urban Footprint
- Urban Expansion
- Extent of Developable
- Spatial Structure
- Electrical Grid
- Decommissioned Camp Footprint
- Regenerated Green
- Core Development Region
- Improved Roads
- Commercial
- Industrial
- Agriculture
- Improved Public Transportation



The Way Forward - Leveraging the GISED P Platform

GISED P is a critical vehicle for action where the concerns identified in the Spatial Profile can be addressed and the platform on which the proposed sustainable development initiatives can be launched. The GISED P is a comprehensive programme that takes an inclusive approach to the needs of both the refugee and host communities with the aim of promoting inclusive economic growth, political stability, social cohesion, and sustainability, led by Garissa County Government and supported by the various humanitarian and development actors active in the county. It is designed to achieve these goals through a coordinated government-led multi-sector effort involving participation by multiple stakeholders from the public, non-profit, private, development, and humanitarian sectors.

A key principle of GISED P is the recognition that the protracted presence of those compelled to flee war and persecution can represent an opportunity, rather than a burden. Studies¹⁸⁰ have demonstrated that the economic impact of refugees in the county has been largely positive (although with negative impact upon the local ecological system which needs to be mitigated), creating a stimulus and opening the region to development opportunities. Including the refugee community in the long-term planning of the area, in line with local, county and national priorities can help unlock these benefits as well as prevent aid dependence and increased reliance on negative coping mechanisms.

In support of its outlined goals, the GISED P identifies a need for **“more comprehensive data on socio-economic**

impacts of refugees, both positive and negative, comprehensive socio-economic profiling and market studies.”¹⁸¹ In response, the Spatial Profile for Dadaab area delivers the following:

- Support to the development of a spatialised data set alongside a deeper baseline of analysis for decision making and to ensure that the physical context of the refugee hosting areas in Dadaab and Fafi Sub-counties are fully understood by all stakeholders.
- Contributing to future planning and investment initiatives that are informed by a comprehensive spatial understanding to allow for coordination of investments and to enable sustainable growth that is resilient, green, inclusive and equitable.

Through these aims, interventions can be jointly-owned, coordinated and aligned with government-led multi-stakeholder programming, ensuring more sustainable, inclusive and integrated development is achieved. The Spatial Planning and Infrastructure Working Group under the GISED P framework is therefore targeting to establish a nexus between humanitarian aid and development planning through tangible planning recommendations.

As that process kicks off, three key areas that will underpin any considerations will be infrastructure improvements such as connectivity, access to energy, and sustainable access to water. As outlined earlier in this profile, each of these is critical for any further development or increased economic growth to occur, and will be prioritized.

GISED P Component		Support Needed
1	Trade, Entrepreneurship & Private Sector Development	Diversification of livelihood opportunities by enabling mixed use development in former Ifo 2 site and encouraging irrigated agriculture on the former Kambioos site; provide education programmes and skills training so that the local community is well suited to new job opportunities and agricultural strategies available through the redevelopment of the decommissioned camps
2	Education & Skills Development	
3	Health & Nutrition	Access to a more diverse range of crops grown on the Kambioos site
4	Water Services & Sanitation	Irrigation of former Kambioos site and water recycling strategies for new development in former Ifo 2 site
5	Protection, Gender, Youth, Sports, Peace, & Security	The equitable and transparent allocation of resources and land use, which will reinforce the triple-nexus (humanitarian-development-peace) through proactively addressing drivers of conflict
6	Spatial Planning, Roads, & Infrastructure Development	Compact development patterns, connectivity between camps, Dadaab Town and renovated sites and tarmacking of A3 highway
7	Agriculture, Environment, & Natural Resources	Restrictions on use of natural resources through the introduction of more renewable sources of energy such as the extension of electricity lines and construction of Solar mini-grids; maintenance/servicing existing renewable energy infrastructure
8	Sustainable Energy Solutions	

Next steps in the planning process

In addition to supporting the wider GISED P framework, the spatial profile is the first step in formulating the regeneration strategy for the decommissioned camps of Ifo 2 and Kambioos. These activities will take place in collaboration with the Garissa County Government Ministry of Lands and the various agency and community stakeholders between 2021 & 2022. In line with the participatory planning process as well as to ensure resilient aims are embedded throughout, the planning work will continue to ensure that the interconnected challenges of climate change, economic stability, geopolitical volatility, and conflict will be taken into account.

Q1 2021

- Finalise and validate findings from the socio-economic survey focusing on areas influencing the decommissioned camps
- Disseminate the spatial profile to validate its findings and scenarios
- Support to the Spatial Planning and Infrastructure Working Group under the GISED P initiative led by the Garissa County Government
- In partnership with local actors, form community planning group to engage in the planning process
- Initiate the visioning process for the regeneration of Ifo 2 and Kambioos
- Map out existing activities and initiatives in the decommissioned sites carried out by other Humanitarian and Development actors

Q2 - Q4 2021

- Develop a vision for the future of the regenerated sites
- Prepare for concept planning for the regenerated sites
- Formulate spatial regeneration strategies
- Prepare an outline of financing and legal measures to support the regeneration strategies
- Ongoing stakeholder engagement process including Garissa County Government, host and refugee communities, as well as operational actors
- Continue support to the Spatial Planning and Infrastructure Working Group under GISED P

2022

- Finalise spatial planning proposals in partnership with Garissa County Government
- Validate spatial regeneration strategies
- Continue support to the Spatial Planning and Infrastructure Working Group under GISED P

Additional ongoing support to Garissa County Government

- Utilise planning process for regular and continued capacity building
- Support Spatial Planning and Infrastructure Working Group under GISED P
- Continue to lobby and provide technical advice in support of:
 - Initiation of the notice to plan for the regeneration of Ifo 2 and Kambioos
 - Degazettement of the land within Ifo 2 and Kambioos Detailed Infrastructure Audit of remaining facilities within the sites of Ifo 2 and Kambioos



ENDN



NOTES

Endnotes

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- 180 GISED P notes however, that only basic information exists for the Dadaab area to date. For more comprehensive data on socio-economic impacts of refugees, both positive and negative, socio-economic profiling and market studies will need to be undertaken.
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