SAMUEL HALL.

Identifying Climate Adaptive Solutions to Displacement in Somalia

ASSESSMENT REPORT

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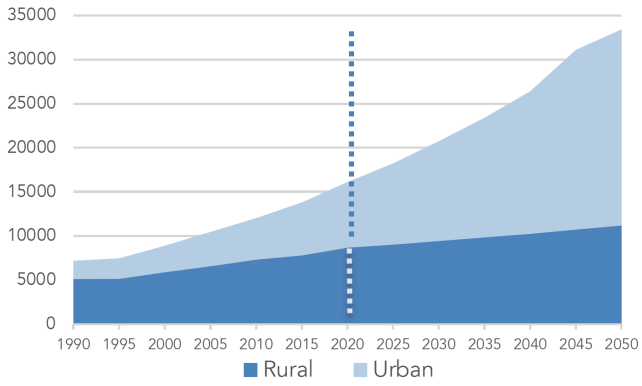
Executive Summary

The urbanisation – displacement – climate change nexus

The climate in Somalia is projected to become drier, warmer, more erratic, and more extreme than in recent decades and thus less favourable to crop, livestock, fisheries, and forestry-based livelihood systems. Other likely impacts include reduction of vegetation for grazing and more variable water availability, with grave impacts on livestock herding and livelihoods. Rising sea temperatures and acidification will reduce fish stocks and change their distribution. In a context of slow-onset natural hazard and environmental degradation, households and entire communities may have no other choice but to leave their place of origin in search of a more inhabitable area. **This study explores the interaction(s) between climate change, displacement and urbanisation.** The objective is to answer a dual question, in the context of the Somali cities of Baidoa and Kismayo: What factors trigger climate-induced migration? What adaptive and transformative solutions may contribute to building resilience amid displacement and climate change – at the community and policy levels?

Somalia has one the highest shares of urban population in the East and Horn of Africa region, with 46% of a total population of 15.2 million living in urban areas. It is currently experiencing a continuous and rapid urbanisation rate (around 4.3% per annum between 2015 and 2020; higher than the African average of 4%). By 2040, the urban population is estimated to grow to almost 60% of the total and expected to triple by 2050. Mogadishu (2.4 million people) and Hargeisa (1.2 million people) host half of this urban population, but other socioeconomic hubs and secondary cities also record a rapid demographic growth that is predicated to continue.

Figure I: Rural - urban distribution in Somalia (forecast 1990-2050, in thousands)



Sources: WB data, UNHABITAT, UNDESA.

Exacerbated climate conditions, with a combination of slow and sudden onset events, have the effect of deteriorating food security. Traditional livelihood practices of rural communities and nomadic pastoralists are highly reliant on regular and predictable rainfall to sustain their crops or cattle, camels, goats and sheep, creating an unsustainable situation where displacement remains the only option. The consequence, according to the World Bank, is that close to three-quarters of Somalia's 2.6 million internally displaced persons (IDPs) live in urban centres 'in disconnected pockets outside city limits, constraining their access to services and creating poverty traps.'1 1

However, while policymakers, practitioners, and communities often focus on immediate adaptive mechanisms and temporary solutions, this report advocates for a broader perspective, by considering a climate double-bind: 1) On the one hand, the consequences of climate change contribute to both the slow-onset degradation of natural and human ecosystems and also accelerate internal displacement in Somalia; 2) On the other, the subsequent rapid and unplanned urbanisation causes

1 According to UNHCR Data (November 2020) and World Bank, 'Somalia Urbanisation Review: Somali Cities as Anchors of Development'.

irreversible detrimental impacts on urban areas. What adaptive solutions may contribute to building resilience amid displacement and climate change?

Baidoa and Kismayo are fast-growing cities in Southern Somalia, and key locations of settlement for IDPs from rural areas. IDPs are a highly vulnerable group, with concerns over forced eviction, housing, land and property (HLP), as well as water sanitation and hygiene (WASH) co-existing with other protection risks – whether physical, material or legal safety. Baidoa received the largest number of drought displaced persons in 2017, with IDPs living either on unplanned sites, settlements or joining the ranks of the urban poor in this state and district capital. Under the leadership of its mayor, and support from a range of stakeholders, Baidoa Municipality has, in the last five years, focused on city/urban planning, sustainable urban development and housing, linked with continental African Union priorities on the protection of IDPs. The number of arrivals is lower in Kismayo than in other urban locations of Southern Somalia, but represents a significant proportion of its population. Displacement situations are protracted with both cyclical and chronic trends. Over the last decades, IDPs have settled in Kismayo on government-owned properties, raising concerns over land property issues, as well as poor living and sanitation conditions.

To ensure a robust methodology on such a complex issue, the research team used both quantitative and qualitative data collection tools, including an extensive desk review, a survey of 625 IDP and host community households, semi-structured interviews (SSIs), focus group discussions (FGDs), community observations, and key informant interviews (KIIs). The team conducted fieldwork in April and May 2020, in the urban areas of Calanley and Dalxiiska (Kismayo) as well as Barwaaqo and Towfiiq (Baidoa). Rural areas of origin were also assessed in Jubaland (Bulabartire) and South West State (Reebay). The full report details the methodology.

Table I: IDP sites and IDP households in Baidoa and Kismayo (source: UNHCR - CCCM, 2020)

Urban area	IDP sites (number)	IDP households	Individuals	Trend
Baidoa	483	55,005	293,350*	+7.2% in 6 months
Kismayo	144	12,010	64,051	+8.2% in 12 months

Sources: UNHCR-CCCM in Baidoa (February 2020) and Kismayo (September 2020). The number of IDPs in Baidoa is estimated by the author.

Defining climate-induced displacement in Baidoa and Kismayo

Internally displaced persons (IDPs) are "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognised State border"2. Within this group, climate-induced IDPs may be defined as persons or groups of persons whose displacement was mainly triggered by slowonset environmental degradation. Surveyed rural populations in South West State and Jubaland face long term environmental degradation (desertification and less fertile soil), in conjunction with an acceleration of the frequency of climateinduced disasters (droughts and floods) which reduces the recovery periods and leads to

2 Guiding Principles on Internal Displacement, UN Doc E/CN.4/1998/53/Add.2 (11 February 1998).

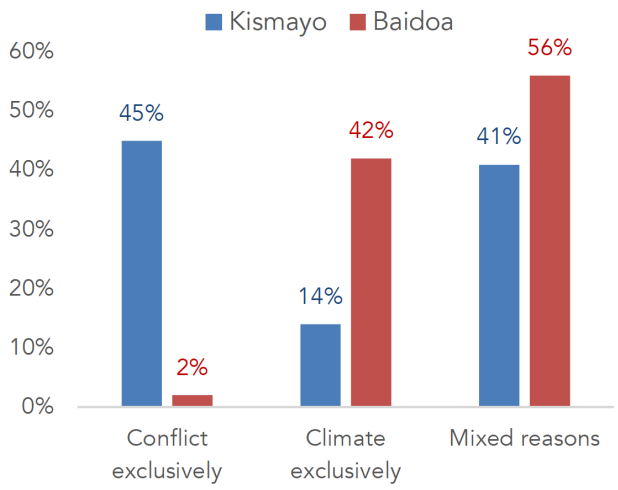
disruption of traditional livelihoods, food insecurity, poor access to services, and forced migration to the city. In many cases, the last incident of environmental disaster or insecurity was merely a tipping point within a pre-existing global horizon characterised by a degradation of the environment, living conditions and livelihoods. In this regard, the 'decision' to leave the host community should not be seen as a rational choice. Rather, it is akin to a lack of alternatives; and an incremental process that forces households to leave.

When asked if they wished to stay in their current residence or if they planned to leave in the future, 85% of surveyed climate-induced IDPs answered that they would stay – in contrast to 74% of conflict-induced IDPs. There is, however, an important distinction between climate-related and conflict-related displacement: the former is conceived as irreversible, as the consequences of years of regular droughts and floods have progressively made a community uninhabitable:

"What should they go back to? They have lost or sold their property, their land is eroded, droughts are increasingly severe, and some of them have even lost their know-how, their skills. So, it's a oneway trip."3

When asked to specify the reasons why they wanted to stay and not go back to their community of origin, climate-induced IDPs mentioned food aid as a key determinant (60%), which confirms their situation of extreme dependency. However, given that most conflict-related IDPs also mention climate shocks and stressors as reasons for leaving their community of origin, one can assume that one of the indirect and structural consequences of climate change is to dismiss 'return' as possible durable solution.

Figure II: Mixed versus single reasons for displacement in Jubaland and South West State



From vulnerability to precariousness and marginalisation

Climate-induced IDPs are torn between contradictory dynamics: between a world they no longer know (rural) and a world they do not know (urban), between past and present, between impossible resilience and the absence of adaptive strategies. This process can be described as 'precariousness' or double marginalisation: climate-induced IDPs in Dalxiiska and Towfiiq, in particular, run the risk of falling in the precariousness trap because of multiple compounding factors, such as 1) the lack of urban planning and governance (policy level), 2) the absence of socioeconomic integration mechanisms (community level), and additional 3) short-term maladaptive strategies (household level).

Three dimensions are of particular concern: housing, healthcare, and education. These indicators synthesise the situation of climate-induced in Baidoa and Kismayo: poor housing and fear of eviction are indicative of their structural instability; low healthcare scores confirm that their living conditions are particularly poor (specifically in terms of sanitation and hygiene); and finally the very low scores in education highlight the absence of primary or secondary schools in informal settlements and the lack of long-term prospects for families: in a situation of extreme deprivation and survival, the education

3 KII with an academic researcher, June 2020.

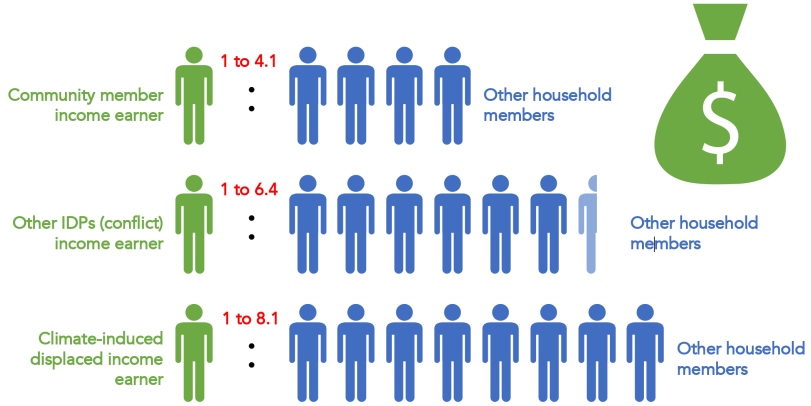
and development of the next generation is often perceived as secondary. Other key dimensions of the vulnerability of climate-displaced people in Baidoa and Kismaryo deserve to be highlighted.

Income pre-displacement: When asked to specify their income generating activity (IGA) before displacement, conflict- and climate-induced IDPs provide similar but heterogenous answers. Similar, because agriculture and livestock remain the most important sources of income; heterogenous, as 90% of surveyed climate-induced IDPs reported an agricultural livelihood and 46% a livestock-related income generating activity (respectively +25 and +15 percentage points compared to conflict-induced IDPs). Such a lack of diversification and overdependence on agricultural income is an index of greater vulnerability to the effects of climate change: the recurrence of natural hazards ends up deserting or eroding the land, destroying all biodiversity, to such an extent that it becomes impossible to maintain an agricultural activity or to raise livestock.

Women's situation post-displacement: Traditional sociocultural barriers and norms tend to have a different impact on women's agency and capacity. On the one hand, activities between men and women are less gender-dependent after displacement: similar percentages of male and female IDPs are present in agriculture (22% and 21% respectively), construction (24% and 18%) or mechanical services (12% and 10%). Only small retail (6% and 16%) and domestic work (2% and 8%) have more gendered characteristics. However, it would be wrong to attribute a positive impact on women's labour market status. Given the endemic vulnerability of most of the camps and settlements studied, IDPs, both men and women, simply cannot afford not to work, even in menial jobs or in extremely low-paying, temporary and potentially harmful jobs. This is one of the reasons why so many displaced women work as daily or casual employees in the construction sector.

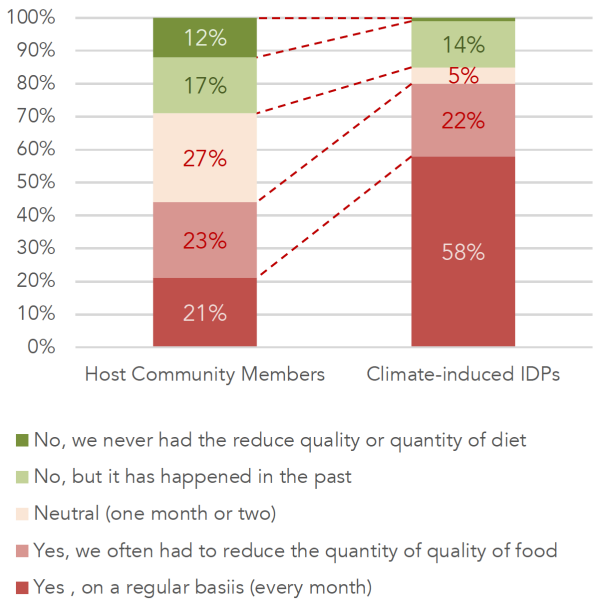
Financial inclusion: A household's financial capacity is linked to how diversified its sources of income are, and how it relies on multiple activities and/or different household members. Income diversification is a traditional coping strategy that can increase the resilience of the household. The ratio of income earners to total household members is dramatically lower for climate-induced IDPs (1:8), compared to host community members (1:4) and even conflict-induced IDPs (1:6) as shown below. The lower the ratio, the more pressure on income earners and the less diversified the household sources of income. Likewise, access to informal credit remains limited to neighbours and community members for climate-induced IDPs, which is indicative of a limited access to external financial resources. This confirms the higher socio-economic precariousness of climate-induced IDPs, but also the sudden nature and unpreparedness of the displacement that led thousands of them to Dalxiiska (in particular), as they do not have any safety net or network beyond the immediate circle of relatives and friends. The study data show that 18% of surveyed climate-induced IDPs reported not having access to credit (9% for host community members, 5% for other IDPs) and only 28% of them use formal credit schemes (microcredit).

Figure III: Ration of Income earners to household members



Harmful coping strategies: When asked whether they had to reduce the quantity or quality of food consumed to cope with an unexpected shock or stressor in the past 12 months before the interview, 80% of climate-induced IDPs answered they had to do it either 'on a regular (monthly) basis' or 'often' (74% for other IDPs and 44% for host community members). Focusing exclusively on the most harmful coping strategies ('on a regular (monthly) basis'), there is an almost linear trend between host community members (21%), conflict-induced IDPs (40%) and climate-induced IDPs (58%).

Figure IV: Harmful coping strategy (food quantity or quality) by displacement profile



Sanitation and hygiene: In Baidoa, 98% of the surveyed (climate-induced) IDPs use shared pit latrines, in contrast to host community members' more varied answers. In practice, 'sharing' a latrine means sharing access with 100 people on average, without any gender separation and no light at night. It is necessary to keep in mind the correlations between the type of sanitation facilities and the existing risks in terms of hygiene and health, in particular water borne diseases (diarrheal disease, cholera, norovirus infection, soil-transmitted helminths). Likewise, the percentage of households with a wastewater drainage system is an indication of people's vulnerability – just 2% of climate-induced displaced households have access to a drainage system in contrast to 34% for host community members.

Table II: Sanitation facilities (by displacement profile)

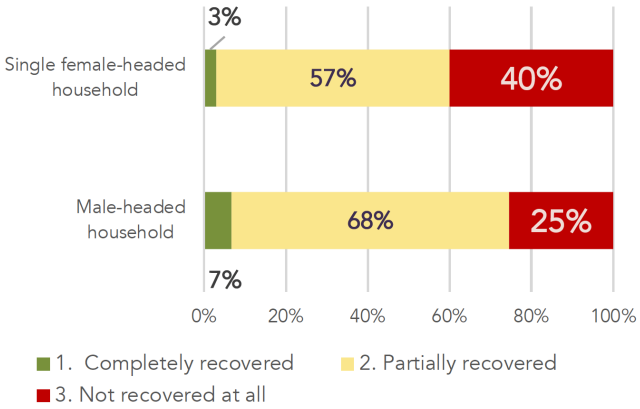
	Flush toilet (private)	Flush toilet (shared)	Pit latrine (private)	Pit latrine (shared)	Total
Host community	10%	6%	46%	38%	117
Other IDPs (conflict)	0%	0%	20%	80%	167
Climate-induced IDPs	0%	1%	4%	96%	342

Constant fear of eviction: In rural communities, land is a critical productive asset for the poor. In urban, peri-urban and immediately peripheral areas, land disputes remain the most relevant economic and political lens to understand past and existing dynamics between clans and sub-clans, between pastoralist and sedentary communities, as well as IDPs, returnees and local residents. In Baidoa and Kismayo, the lack of clear tenure security and title deeds mirror the local political history of conflict, contradictions between customary and municipal regulations, and of course inter-ethnic and clan dynamics. Displaced households live under constant threat of eviction and are not even allowed to improve their living conditions and be hopeful about the future: "*Why would landowners let them raise their living standards? IDPs cannot even build pit latrines or waste collection points, as it is not in the interest of landowners to make their property inhabitable. They are waiting for an opportunity to sell the land at a good price and want to make sure that squatters or tenants can be evicted easily.*" (NGO, November 2020).

Intersectionality: The situation of single female heads of households presents the interrelation of several grounds of discrimination that translated into an increased socioeconomic vulnerability, higher unemployment rates, which make them less resilient to climatic or economic shocks. When households were asked about their reaction to the last climate or security shock, 25% of male-headed IDP households state that they have not recovered from the shock, with the figure rising to 40% for female-headed IDP households, who suffer of their lack of options and alternatives for dealing with the unpredictable. "*Displaced women are often left in a humanitarian vacuum in IDP camps. More*

*than men. They suffer from their gender, their migration status, their marital status. Many of them are widowed, divorced, abandoned or single heads of household. They generally have no access to health care, mental health or even safe delivery. They live in constant fear of rape and sexual violence, which are very common in IDP camps. And the absence of formal judicial structures - and the gradual disappearance of traditional clan structures - makes recourse virtually impossible in the urban centres of Mogadishu, Baidoa or Kismayo."*4

Figure V: Capacity to recover from climate-induced disasters and climate-related shocks (by gender)



The experience of climate change and its consequences

According to the World Bank and the FAO, by 2014, forests covered only 10 percent of the Somalia's land area, down from 62% before 1980.5 Likewise, older people who participated in focus group discussions generally agreed that the weather used to be more predictable and rainfall more regular, which does point to a climatic evolution. As one community leader in Jubaland described it: 'We used to know the rainy and dry seasons. But in recent years we have seen that the rains do not come in the season we expect. It rains irregularly. Today, the land is less productive.' Surveyed displaced populations – both climate- and conflict-induced – generally perceived climate change through its most recent local symptoms and empirical consequences. When the IDP respondents were asked to define and describe climate change, 81% answered 'drought' and 46% 'high temperature', identifying the consequences of a global phenomenon.

History of climate change in communities of origin: When asked whether they had observed any significant climatic change over the past 10-30 years in their community of origin, before they left, displaced households mentioned several key trends:

- **Higher frequency of combined climate-induced** disasters (more frequent droughts, floods, erosion, etc.) While they may have had the capacity to cope with one or the other disaster alone, the combinations of different climate-related hazards are far more challenging to address.
- **Unpredictability of most climatic patterns** (irregular rainfall, seasonal change, etc.) Local farming systems are essentially based on predictability - with limited flexibility. Anomalies in the rainy seasons – Gu or Deyr – have disastrous effects on livelihoods and put rural communities at immediate risk.
- **Direct impact on livelihoods and well-being** (crop failure, sickness, etc.) Respondents in Kismayo identified pollution from the ocean as a disaster affecting their health: 'Our ocean is a dump site to the world where industrialised countries pour poisonous chemicals. The poison will come in the air during high temperatures' (Community leader in Dalxiiska).
- **Lesser crop diversification:** The major crops grown at the household or community level in South West State, for example, remain sorghum, maize, cowpea, and, to a lesser extent

4 KII, international NGO, Nairobi, January 2021.
5 FAO and World Bank, 'Rebuilding Resilient and Sustainable Agriculture in Somalia – Country Economic Memorandum Volume I' (International Bank for Reconstruction and Development, 2018).

sesame, along with fruits (bananas, watermelon, grapefruits) and vegetables (tomatoes). However, many participants who had left the community told the research team variable rainfall on already barren soils had resulted in more run-off, less water for plant growth and less crop diversification, with immediate impacts on livelihoods.

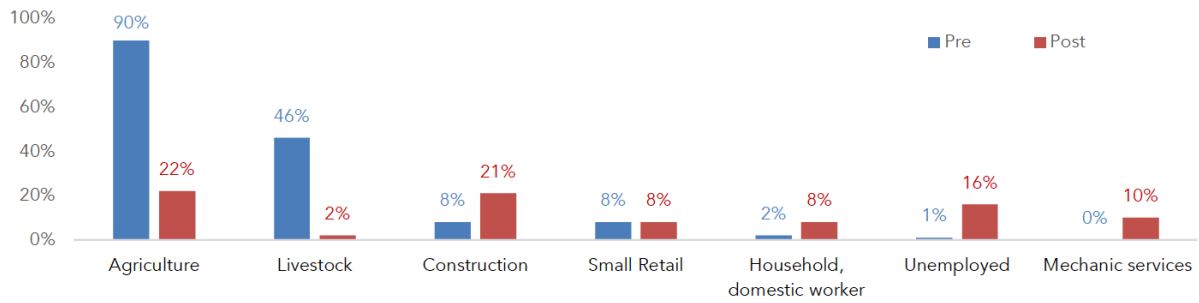
The weight and burden of agriculture and pastoralism: Climate-induced IDPs reported a significant impact of the consequences of climate changes on their life (livelihoods, wellbeing), with nuances between rural, periurban and urban communities of origin: 92% of climate-induced IDPs from rural communities reported a huge or great impact of climate change on their household pre-displacement (vs. 85% for periurban and 57% for urban respondents). In both Jubaland and South West State, this significant difference stems from the nature of livelihoods and activities in rural areas: people who had agropastoral activities as their only activities were more likely to perceive the impact of climate change on their household as huge or significant. Indeed, surveyed climate-induced IDPs in Kismayo and Baidoa, when referring to losses in their place of origin, reported the loss of domestic animals, the loss of crops and the loss of their income source as the three important impacts triggered by climate-induced disasters and slow onset events. Climate-induced IDPs from Jubaland and South West State are overrepresented in agriculture (72% and 95%), livestock (42% and 47%), and fishing (7% and 1%). Respondents who engage in another activity in addition to or outside agriculture, pastoralism or fisheries are less likely to report that the impact of climate change on their household is huge or important. This indicates greater resilience to climate change for households with diversified livelihoods.

Livestock as a savings account and then as condemnation: Households stay longer to save their cattle, feed them with leftover food, and are less mobile due to their farming activities. In our study, they displayed a higher perceived vulnerability to climate change as they invest food and money to save their livestock in time of environmental shock, a strategy which can make them more vulnerable. Rural households tend to invest their savings in livestock, and as a consequence livestock becomes a burden in times of drought. The reduction in grazing land requires livestock owners to rely on crop residue (such as sorghum) to feed the animals. Owning cattle delays the decision to migrate, as the animals cannot be taken to urban areas. Cows, camels, and goats cannot easily be sold on the market either, as they lose their market value in times of drought. Vulnerable households (no alternative livelihood and no social network) have no choice but to stay in rural areas to take care of the cattle, hoping they will survive the drought. For them in particular, migration is often a desperate solution and a last resort, after losing everything.

Twin impacts and loss: rural and urban areas are linked to each other, due to livelihood interlinkages and social networks. A significant part of the displaced and the host community in urban areas have mixed livelihoods: they are involved in pastoralism and agriculture and rely on the support of social networks located in rural areas. On the other hand, when rural livelihoods (cattle and farming products) are affected by a drought or a flood, the prices of food items increase in urban areas. Therefore, the impact of drought and floods on the livelihood of rural households indirectly impacts urban households.

Change in livelihoods: the most impressive trend is the shift from individual and household agro-pastoral occupations to non-agricultural activities. Such an 'exit from agriculture and animal husbandry' is illustrated in the graph below: -68 percentage points for agriculture, -44 for livestock. In contrast, other sectors experienced significant increases and most alternative livelihood diversification strategies in the new urban environment include daily work in various sectors: construction, mechanics, clothing maker, garment launderers, domestic workers, plasterers, as well as petty trade.

Figure VI: Pre- and post-displacement activities (as reported by climate-induced IDPs)



Coping with and adapting to the consequences of climate change

How is adaptation to the consequences of climate change understood? Is it a question of adjusting the household's living conditions to respond to the dramatic consequences of a flood or drought? Or is it about modifying the environmental ecosystem in which the household survives or struggles to avoid future shocks and mitigate the dangers of climate change? At the household level, in particular, adaptation strategies can be multifaceted: aimed to either cope with unusual and abnormal climatic event or process by optimising existing resources (e.g. shifting livelihoods or selling livestock) or mitigate the impact of natural hazards on the household (e.g. from internal displacement to planting trees or creating drainage systems). Finally, adaptive strategies can yield negative effects if they put more pressure on natural resources, exacerbate effects of climate change, and increase existing vulnerabilities of local populations. In Somalia, maladaptation can take several forms. In rural areas, environmental resources, particularly those from woodlands (e.g. acacias in Somalia), are cited as important for coping with exposure to hazards, which can lead to accelerated deforestation and soil erosion. More broadly, and in the context of internal displacement to Baidoa and Kismayo, displacement in the face of climate change can be considered a maladaptation when it places new or additional pressure on places of destination already under stress.

Adaptive measures to the consequences of climate change

At the household level: According to survey respondents (both host community members and climate-induced IDPs), adaptation strategies to climate-induced disasters and climate change remain uneven. The level of awareness and concrete actions are much higher among host community households – 52% reported taking measures to mitigate and adapt to the impact of climate-induced disasters or climate change (vs. 23% of those displaced by climate change). Host communities seem to have: 1) more means to cope with the consequences of climate change; and 2) a better historical perception of the degradation of the local environment. Qualitative discussions suggest a significantly higher level of awareness among women. When asked what adaptive accommodations had been made, men and women's answers varied: female climate-induced IDP respondents favour longer-term strategies (planting trees, 43%, + 16%) over shorter term measures (raising the level of the house, 13%, - 20%; migration to another part of the city, 8%, - 4%). Both men and women consider complementary sources of income (19%) and trenches (13%) as valid options. Respondents who had not made arrangements state their inability to modify their environment due to lack of knowledge (75%), technical skills (14%) or financial resources (13%). According to a complementary qualitative assessment, the threat of eviction and pressure from landowners, which is probably the main

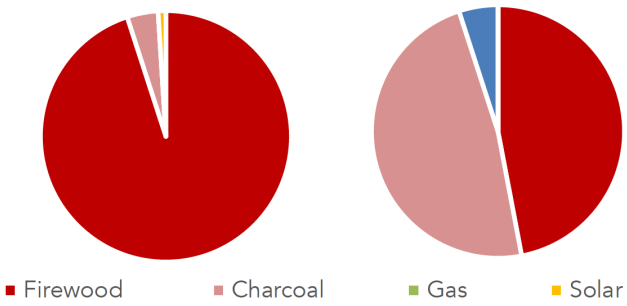
obstacle, fall within the 'lack of knowledge' responses, as people feel helpless and unable to take positive actions.

At the community level: There is a relatively clear and shared understanding of possible solutions for the community, both among men and women, before and after displacement. The five priority measures show that climate-induced IDPs see the community as the relevant perimeter for developing adaptation strategies: stopping logging, tree plantations, canals, river dams and drainage are long-term adaptation measures that reduce soil erosion and contribute to improved waste management (area included in the green dotted line). Again, as focus group participants pointed out, these conclusions apply to both home and host communities, as 'the problem is the same regardless of the location' (IDP, Male, Baidoa).

Maladaptive measures to the consequences of climate change and environmentally hazardous practices.

Deforestation and erosion (firewood and charcoal) in communities of origin in Baidoa: Livelihood diversification strategies include the extraction of resources (mainly wood, water, and grass that grows along the river in Jubbaland but also wildlife hunting) for selling and charcoal production water, etc. Households might cut acacias for their personal use or turn acacias into charcoal and sell it in the city. This has dramatic consequences: rapid land degradation and erosion, soil destabilisation (water and nutrients), flood risks, and acceleration of droughts. Entire regions have become desert like and uncultivable in neighbouring districts of Baidoa and Kismayo. Logging is a typical example of a maladaptation strategy: climate-displaced people are aware of the negative consequences of logging on soil erosion and reduced crop diversity but consider not having a choice but to cut acacia trees to cope with increased socio-economic vulnerabilities and to adapt to the consequences of droughts and floods. According to the survey, most IDPs surveyed use firewood for cooking (80% in Kismayo and 98% in Baidoa; 81% of the conflict-related IDPs and 95% of the climate-related IDPs). In addition, host communities use firewood (47%) and charcoal (48%) equally, putting disastrous pressure on local forests. The catastrophic impact of deforestation on the Somali soil and subsoil calls for an effort by policymakers: a progressive reforestation of areas not yet desertic, a major awareness raising campaign and the provision of alternative and sustainable livelihood opportunities and fuels to reverse ahighly compromised trend.

Figure VII: Type of fuel used for cooking (surveyed climate-induced IDPs and host community members – Baidoa and Kismayo)

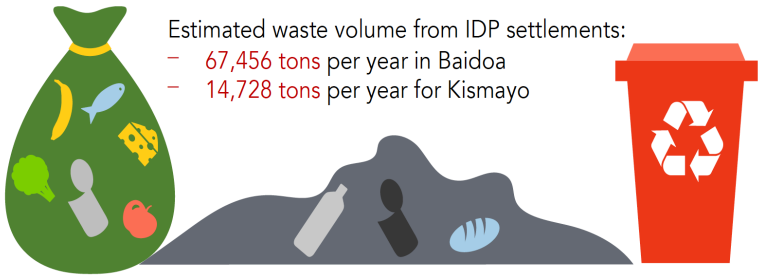


Managing the aquifer in Kismayo: While boreholes can play an important role in ensuring water security – especially for drinking water – they are associated with environmental degradation. The yield of groundwater-fed boreholes is less vulnerable to short-term fluctuation in rainfall than other sources: such as berkads, open dams, shallow hand dug-wells and springs. This makes boreholes an important source of water in times of severe drought especially for humanitarian response – and particularly in non-riverine regions of Somalia. However, heightened pressures on pasture around these boreholes during drought events can cause long-term damage to surrounding rangeland, creating so-called 'sacrifice zones'. Deep boreholes are also not a good solution for increasing

agricultural productivity as their operation and maintenance costs are much higher than for shallow water sources. Accessing groundwater remains a challenge due to the lack of infrastructure and equipment which would be needed to ensure access, and adaptive implementation in the face of growing populations has been lacking. With the rising population and the consequent proliferation of wells and boreholes, the situation in Kismayo in particular is likely to deteriorate, with the risk of compromising irreversibly the water table. As in all the coastal areas, the fresh groundwater floats on salty water, which is denser. The movement of the saline/freshwater wedge of the underground aquifer of the town has been considerable, progressing inland in years with less rains. While some water pipelines within the city do exist, these serve mostly higher income groups and only run along the two main axes of the city.

Waste management in urban IDP settlements in Baidoa and Kismayo: For climate-induced IDPs, there is only one adaptive strategy: 64% burn their trash in the camp or settlement; and 20% send it to the bush to be burnt. In other words, 84% of surveyed climate-induced IDPs burn their trash directly or indirectly. By replicating the analytical framework and calculation model of a recent study conducted by ILO, UNHCR and Samuel Hall in Kenya's Dadaab refugee camp, the waste volume of the 483 IDP camps in Baidoa could be estimated at about 67,456 tons per year (and 14,728 tons per year for Kismayo). Given these figures, even indicative, the impact of inappropriate strategies on the environment (soil, hygiene, sanitation) and the climate (CO_2, toxins) would be disastrous.

Figure VIII: Estimated annual volume of solid waste from IDP camps in Baidoa and Kismayo (author's calculations)



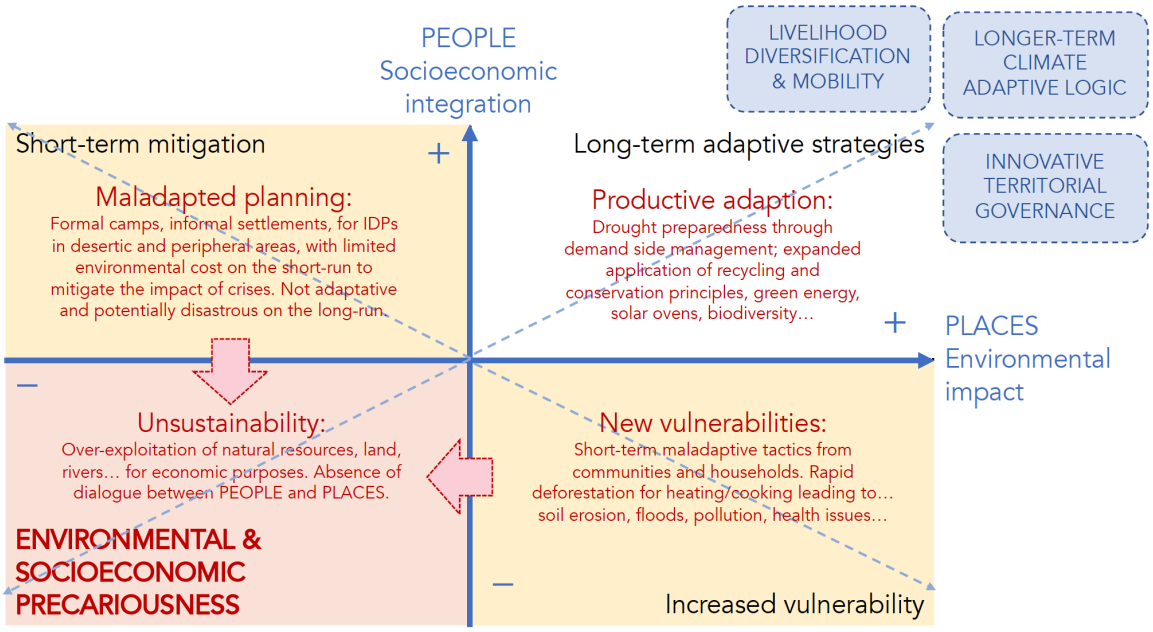
80 to 85% of the waste is burned, contaminating the soil and releasing carbon monoxide (CO), carbon dioxide (CO_2) and nitrogen oxides (NO_x) into the air

Recommendations

Climate change and environmental degradation in Somalia are still not considered crucial political and societal issues by most stakeholders, unlike security and land availability.6 It is time to 'rethink the narrative around climate change in Somalia: it is not a side issue, it is at the origin of all the other social, economic, and security problems.'7 The conclusions and recommendations of the study argue for a paradigm shift: from the city as a precarious space of refuge to the city as a space of inclusion and resilience.8 Durable solutions planning can bridge the gap between urban and rural planning, bringing the focus on municipal actors and territorial planning between urban, peripheral, and rural spaces. This will result in a holistic approach to territorial governance, able to manage climate adaptive strategies while taking into account impacts on both ends of the territory. Practically, a decentralised territorial management in Baidoa and Kismayo can contribute to developing more ambitious livelihoods strategies – at the community and household levels.

6 KII with UN Agency staff, June 2020
7 KII with EU Delegation
8 Conceptually, the people in places approach resonates with Appadurai's characterisation of locality (the being of a place) as the result of a production of locality In other words, a place is not a pre-determined or empty medium; on the contrary, social, cultural, economic and societal activities are linked to a local space and contribute to its elaboration. Arjun Appadurai, Modernity at Large: Cultural Dimensions of Globalization, Public Worlds, v. 1 (Minneapolis, Minn: University of Minnesota Press, 1996).

Figure IX: Adjusting policies and practices towards productive adaptation



I. Favour participatory and longer-term climate adaptive logics over immediate gains

1. Engage all stakeholders in a participatory manner: Participatory exercises with key governmental counterparts, humanitarian and development partners and community representatives help integrate local perspectives. The challenge is to move beyond traditional models of participation. For example, notions of conditionality, sustainability or reciprocity could be discussed: under what conditions is private sector involvement in services acceptable? How to maximise the contribution of the Somali diaspora from abroad?

2. Co-managing urban spaces: Community action plans (CAPs) aim at integrating the decision making of communities into broader urban and durable solution planning, through codesign and participation. Several issues have been identified to optimise the initiative: i) stronger involvement of governmental actors to ensure consolidated district level action plans; ii) more transparent funding to implement the priorities identified by communities; iii) pedagogic support to youth to better assess the scale and impact of environmental change.

3. Include IDPs and host communities in environmentally friendly and environmental protection activities. Positive externalities include, beyond raising the awareness and the environment-related knowledge of communities, a stronger inclusion of IDPs in the community and enhanced social cohesion, in particular through Community Based Disaster Management and Cash for Work Activities.

4. Protect the nature and dynamics of the ecosystems in place and avoiding maladaptive strategies. To take into account the potential threats of climate change on the evolution of environmental conditions (direct and indirect impacts on resources in rural and urban areas), it is essential to develop an active and coordinated agenda in Baidoa and Kismayo (in particular on biodiversity and green belts, green financing, improved energy mix, housing conditions, low-carbon cookers).

5. Minimise exposure to disasters through better housing strategy and planning. Overall, stakeholders interviewed agree that the environmental aspect has been missing from the shelter debate and should be included as an absolute prerequisite: 'So, let's plan accordingly: no more

temporary agendas, no more quick-and-dirty job. We must plan better, coordinate, and respect the dignity of IDP communities.'9

II. Develop innovative territorial governance models that overcome the traditional urban / rural divide

6. Rethink the connection and relationship between urban centres and their hinterlands by supporting a clear demarcation and collaboration between national, state, district, municipal and community-level authorities. At a time of massive displacement and generalised mobility, building administrative walls and containment strategies between rural and urban areas is not only politically and ethically questionable, but also counterproductive from a social and economic standpoint. Both a better demarcation and collaboration between all stakeholders (starting with national, state, district, Baidoa, Kismayo, and rural/periurban community-level authorities) should be implemented to include displacement and mobility as a structural characteristic of Somali cities. Here, the notion of territory which refers to a continuum between naturally interlinked urban and rural areas – seems more adequate for both Baidoa and Kismayo.

7. Enhance land management by initiating a dialogue with landowners and improving land services. Legislation on urban planning and land governance takes time and should be supported by other smaller scale initiatives enabling urban planning activities and acquisition of land from the government. Action points include: strengthening existing land registration processes; continuing to build the legislation around urban planning and land governance; monitoring transhumance to prevent conflicts and improve adaptation to climatic hazards, through the creation of water points and transhumance corridors; rehabilitating irrigation infrastructures to cope with climatic hazards; and developing innovative approaches towards formalising and securing IDP informal settlements (land swaps, rental assistance, home improvement grants, communal leases and social housing development).

8. Support sustainable spatial integration through a better governance of integrated service facilities for IDPs and host communities. Focus investment and development initiatives on the maintenance, renewal and upgrade of the existing infrastructure to mitigate the impact of future shocks (floods and drought) while contributing to the socioeconomic development of the two areas. Both the host and climate-induced IDP communities should benefit from any upgraded infrastructure: roads and water in priority, green belts, water supply master plan, water storage and recycling.

9. Adapt the placemaking model and framework to new peripheral areas and IDP historical settlements. While the placemaking approach is generally applied to high or middle-income countries, its key attributes and measurements may be considered in socially challenging and economically deprived areas like Towfiiq, Dalxiiska or Barwaaqo. By creating places where people can participate in the ways they prefer, by giving people an active stake in the design and activities of public spaces, they are more likely to become active socioeconomic agents.

III. Consider livelihood diversification and mobility as positive coping strategies – economically, socially, and environmentally

10. Promote mobility zones around Baidoa and Kismayo as dynamic mobility territories, where the exchange of goods and the movement of people contribute to reducing the environmental risks of desertification and socioeconomic risks of precariousness. Programmes focusing on diversifying

9 KII with an academic researcher, June 2020.

livelihoods strategies, improving community resilience or promoting disaster risk reduction strategies should consider mobility between rural and urban areas as a positive adaptive strategy, that requires pre-displacement training modules (focusing on urban sources of income and skills needed by urban markets). By strengthening essential links between urban centres and peripheral rural areas, it would help to mitigate the risk of disruption of food supply chains between rural/peri-urban agropastoral areas and urban centres in the event of a crisis (natural hazards, pandemic, economic crisis, etc). Relevant territorial perimeters for Baidoa and Kismayo based on the following variables: 1) mobility dynamics; 2) food supply chains and economic exchanges; and 3) existing roads, infrastructure and services. By contrast sociocultural or linguistic homogeneity should not necessarily be considered as priorities to avoid possible tensions or fragmentations between territorial platforms.

11. Diversify incomes and leverage rural skills in urban areas. The example of urban farming in Towfiiq shows, at a small scale, how to support the provision of livelihoods while simultaneously avoiding inordinate extraction of natural resources. This approach is a good example of an adaptive strategy that combines positive social and economic outcomes without negative environmental externalities. More specifically, the focus on livelihood diversification is based on: i) the optimisation of pre-displacement skills of IDPs (agriculture); ii) a complementary source of income linked to identified needs in the urban market (telephone charger, place of consumption); and finally iii) unconstrained mobility between urban, peri-urban and rural areas.

12. Target marginalised groups (through the lens of intersectionality in particular) to reduce vulnerability and build resilience. The 'Leave no one behind' principle of the 2030 Agenda for Sustainable Development calls for the inclusion of the most vulnerable groups in climate-induced IDP and host communities (women, youth, elderly, people with disabilities, linguistic or ethnical minorities) in land management, placemaking, and urban planning exercises.

13. Consider not just the economic (job creation) but also the social, societal, psychosocial, and environmental aspects of integration. Integration is a multidimensional process that has economic but also social (networks), societal (inclusion, non-discrimination), psychosocial (mental health) as well as environmental (sustainable) dimensions.

14. Encourage green jobs and economies. Parallel approaches include investing in and financing private clean energy projects given the high potential in renewables; financing more environmentally friendly agricultural investment projects; developing targeted vocational training and creating 'green' jobs; promoting the greening of enterprises, workplace practices and the labour market; generating decent employment opportunities; enhancing resource efficiency and building low-carbon sustainable societies, through a focus on renewable energies, waste management, and recycling value chains; and/or promoting green value chains linking rural and urban activities to avoid extraction of resources (waste and recycling; urban farming).

15. Streamline diaspora investments into eco-responsible productive sectors. Diaspora investment and increased presence of international business in Baidoa and Kismayo areas may create more job opportunities for youth in the construction and agribusiness sectors in particular. National and local governmental counterparts, private sector intermediation agents, banks and microfinance institutions, as well as international agencies (ILO, the World Bank) may play a key facilitating role in this regard while including conditionality measures (e.g. grants tied to the compliance with environmental and social standards).

IV. Streamline education and learning on climate change into decision-making processes and durable solutions programming

16. Support a long-term durable solutions approach to the reintegration of climate-induced IDP communities (while addressing the immediate needs). Integrated and harmonised policies, strategies, and programmes for recovery, resilience and disaster risk management – such as the Drought Impact Needs Assessment (DINA) and the Resilience and Recovery Framework (RRF) – are fundamental milestones towards sustainability and integration. Commitments have already been made at policy and planning levels and already integrate durable solutions under the SDRF Resilience Pillar, and resilience in the regional durable solution strategies. The Joint Durable Solutions Programmes (REINTEG, Midnimo, Danwadaag etc), under government leadership, can build on evidence from this report to draw a blueprint to effectively include climate-induced IDPs into programmatic responses.

17. Develop awareness raising, education, and training on climate change and environment. Awareness raising with climate-induced IDP and host communities may benefit from the support of religious and cultural leaders, as they offer a unique audience among rural populations and can play a bridging role in raising the awareness of communities on the spiritual dimension of the fight against the consequences of climate change. Training and capacity strengthening with Governmental counterparts, and in particular the urban planning unit in Jubaland and South West State, should also be prioritised.

18. Map the urban and rural critical perimeter (routes, flows, hubs). To better anticipate, mitigate and adapt to potential climatic shocks, it is crucial to consider the essential supply chains, as well as the most relevant networks, such as hubs, secondary cities, supply chains, alternative routes, marketplace(s), labour, information flows, but also internal displacement corridors). To do so, it is important to consider migration and urbanisation as possible adaptive strategies (in programmes focusing on diversifying livelihoods strategies or disaster risk reduction strategies).

19. Build on harmonised data joint analysis and shared evidence. All surveyed stakeholders insisted on the need for data on environment (temperature, soil, land, hydrology, as well as drone mapping, etc.) to further develop common standards, build on the SDGs (SDGs 3, 6, 10, and 11 in particular) and update the ReDSS Durable Solutions framework. It could strengthen the existing urban planning in Baidoa and Kismayo, using climate projections, geospatial information, vulnerability assessments, and resource management across each state to develop mobility and urbanisation scenarios (and action plans).

20. Monitor and evaluate climate adaptive initiatives. Building on the ReDSS framework, which contains 28 Inter Agency Standing Committee (IASC) indicators, would enable the integration of dimensions of vulnerability linked to natural hazards, but also the interlinkages between other layers of vulnerability and the capacity to cope with natural hazards. It would in particular help measure and support operational partners to incorporate environment sustainability in their Durable Solutions Programming and evaluate environmental sustainability in durable solution processes.

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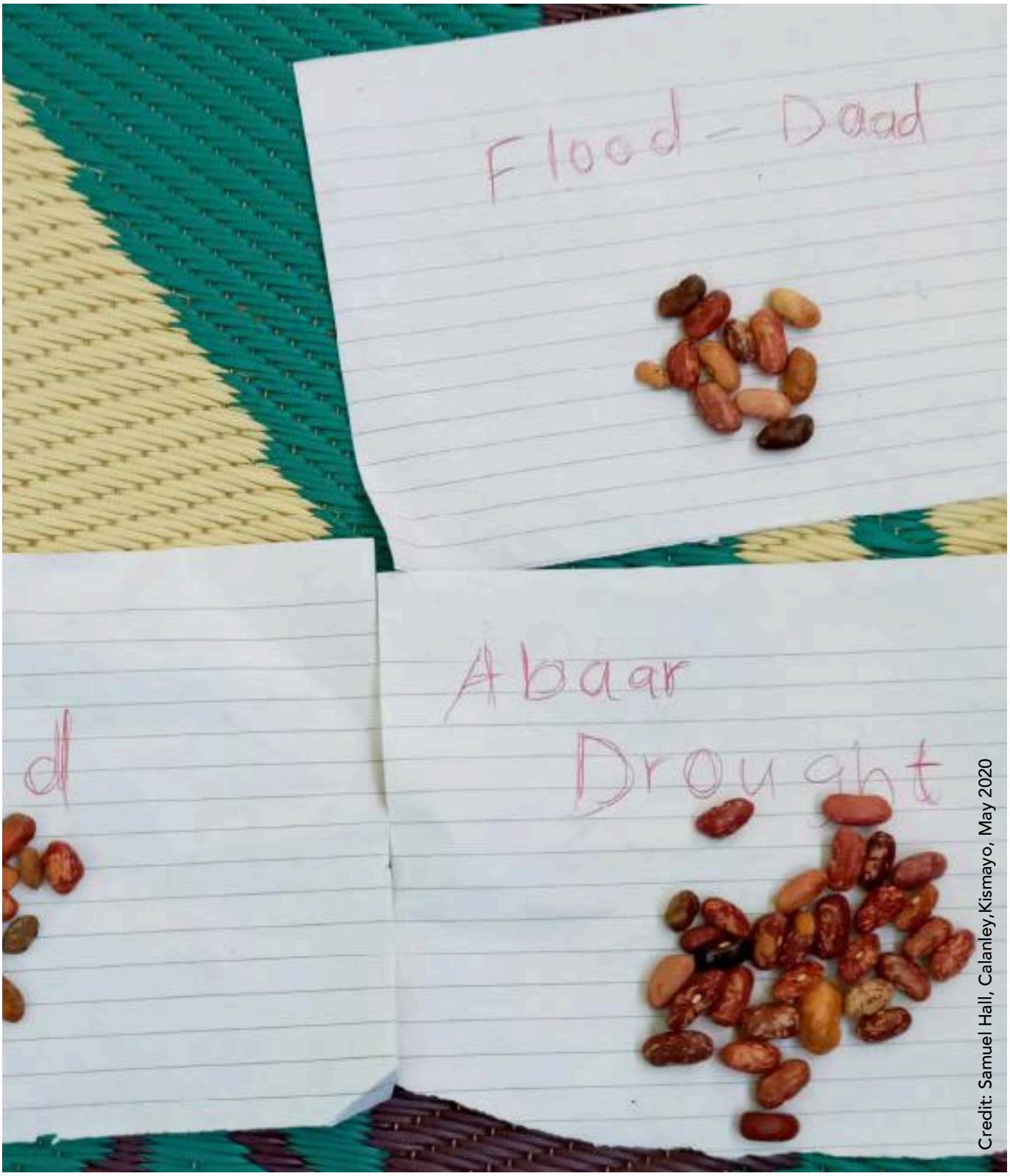
Abbreviations

ACAPS	Assessment Capacities Project
AS	Al Shabab
AfDB	African Development Bank Group
CAP	Community Action Plan
CCCM	Camp Coordination and Camp Management
CfW	Cash for Work
COVID-19	Coronavirus Disease 2019
DINA	Drought Impact and Needs Assessment
DRC	Danish Refugee Council
DS	Durable Solutions
EIA	Environmental Impact Assessment
EbA	Ecosystem-based Adaptation
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FCDO	Foreign, Commonwealth & Development Office
GPS	Global Positioning System
HLP	Housing, Land and Property
IDMC	Internal Displacement Monitoring Centre
IDP	Internally Displaced Person
IFRC	International Federation of the Red Cross
IGA	Income Generating Activity
INGO	International Non-Governmental Organisation
IOM	International Organisation for Migration
IPCC	Intergovernmental Panel on Climate Change
IRC	International Rescue Committee
JRIA	Jubba Land Refugee and Internally Displaced Person's Agency
KII	Key Informant Interview
KWA	Kismayo Water Agency
LORA	Local Reintegration Assessment
MoET	Ministry of Environment and Tourism
MoPIC	Ministry of Planning and International Cooperation (Jubaland)
NRC	Norwegian Refugee Council
NRM	Natural Resource Management
PCCAA	Participatory Climate Change Adaptation Appraisal
PPP	Public Private Partnership
PRMN	Protection and Return Monitoring Network
PSU	Primary Sampling Unit
ReDSS	Regional Durable Solutions Secretariat
SWS	South West State
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Agency for Environmental Protection
UNFCCC	United Nations Framework Convention on Climate Change
UNHABITAT	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNHCR	United Nations Refugee Agency
USAID	United States Agency for International Development
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation and Hygiene
WB	The World Bank



Credit: Samuel Hall, Calanley,Kismayo, May 2020

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The climate in the Horn of Africa, and Somalia in particular, is projected to become drier, warmer, more erratic, and more extreme than in recent decades and thus less favourable to crop, livestock, fisheries, and forestry-based livelihood systems. Other likely impacts include reduction of vegetation for grazing and more variable water availability, with grave impacts on livestock herding and related livelihoods. Rising sea temperatures and acidification will also reduce fish stocks and change their distribution. In a context of slow-onset natural hazard and environmental degradation, many households and sometimes entire communities have no other choice but to leave their place of origin in search of a more inhabitable area.

Given the thin line between voluntary and forced displacement, and the collision of different time scales (climate change, human life), it is necessary to move away from the theoretical model of decision making (rational choice theory) and consider the notion of "tipping point": at some point, the place of residence becomes uninhabitable, the herd of livestock has considerably diminished or is sick, health care, education and other basic services are no longer accessible, and the only remaining adaptation strategy is displacement. The Nansen Protection Initiative and the Cancun Climate Change Adaptation Framework acknowledge this complexity when stating that migration refers to "human movements that are predominantly voluntary insofar as people, while not necessarily having the ability to decide in complete freedom, still possess the ability to choose between different realistic options. In the context of slow-onset natural hazards, environmental degradation and the long-term impacts of climate change, such migration is often used to cope with, 'avoid or adjust to' deteriorating environmental conditions that could otherwise result in a humanitarian crisis and displacement in the future."[10] There is a "tipping point" at which communities shift from voluntary, adaptive migration into forced displacement, as pointed out by Kälin: "*when their coping capacities are exhausted, they risk falling into a gradual process of impoverishment, eventually leading to their displacement*".[11]

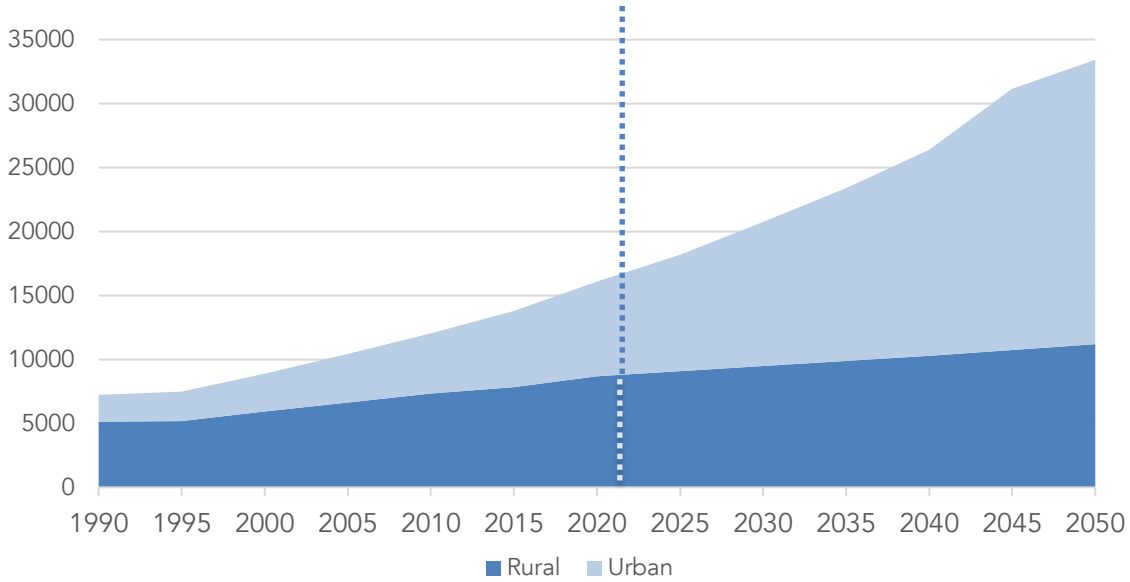
In the face of these massive displacements from rural areas to primary or secondary urban centres, the accelerated and unplanned urbanisation in an emerging and already fragile Somali ecosystem poses multiple challenges to people's wellbeing – such as poverty, social inequality, gender discrimination, unemployment or environmental depredations, as strongly emphasised in the UNHABITAT World Cities Report 2020.[12] At a time when the COVID-19 pandemic is further testing the resilience of existing development models and urban structures, these considerations are not only of political, social, economic, or environmental interest, but above all highlight an immediate humanitarian risk in the centres and outskirts of many cities around the world.

Somalia is no exception to this observation. The country has one the highest shares of urban population in the East and Horn of Africa region, with 46% of a total population of 15.2 million living in urban areas.[13] It is currently experiencing a continuous and rapid urbanisation rate (around 4.3% per annum between 2015 and 2020; higher than the African average of 4%). By 2040, the urban population is estimated to grow to almost 60% of the total and expected to triple by 2050, as shown in the graph below.[14] Mogadishu (2.4 million people) and Hargeisa (1.2 million people) host half of this

10 The Nansen Initiative, 'Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change, Volume 1', 2015. UNFCCC, 'Report of the Conference of the Parties on Its Sixteenth Session, Held in Cancun from 29 November to 10 December 2010', 15 March 2011.
11 Kälin, W. (2010) 'Conceptualising Climate-Induced Displacement', *in Climate Change and Displacement: Multidisciplinary Perspectives*, ed. Jane McAdam, 1st ed. (London: Hart Publishing, 2010), 81–104.
12 UN-HABITAT, WORLD CITIES REPORT 2020: The Value of Sustainable Urbanisation. (UNITED NATIONS, 2020).
13 United Nations Population Division, 'World Urbanisation Prospects: 2018 Revision' (United Nations, 2018).
14 Idib. Triple in numbers compared to 2020.

urban population,[15] but other socioeconomic hubs and secondary cities also record a rapid demographic growth that is predicated to continue.

Figure 1: Rural - urban distribution in Somalia (forecast 1990-2050, in thousands)



Sources: WB data, UNHABITAT, UNDESA.

Climate-induced displacement in Somalia

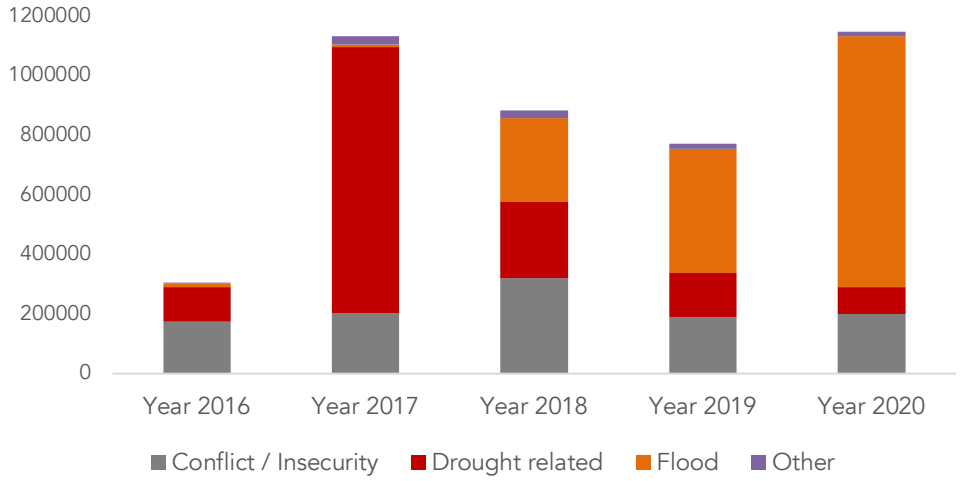
The Somalia Drought Impact and Needs Assessment (DINA) highlights that increased movements to cities, sprawling and uncontrolled urbanisation bring challenges of congestion, unsustainable land consumption, inaccessible service provision, overstretched resources, disconnected infrastructure, public space deficit and environmental degradations.[16]

What are the drivers of these massive, almost chronic and unprecedented displacements to fragile urban areas in Somalia? While rural to urban migration and seasonal pendular mobility are 'pulled by the promise of jobs and services'[17], forced internal displacements have become the main factor, often due to: 1) the alarming recurrence of climate-induced disasters, and their impact on crops or herds in rural areas; as well as 2) worsening local security situations.

Displacements triggered by environmental disasters and conflict are often interrelated as increased competition over scarce resources can increase tensions between communities or clans. Figure 2 shows that 72% of the new displacements recorded by the UNHCR Protection and Return Monitoring Network (PRMN) in Somalia were either drought- or flood-related between 2016 and 2020.

15 David Kilcullen, 'Hargeisa, Somaliland – Invisible City', DISCUSSION PAPER (Johannesburg, South Africa: Brenthurst Foundation, 2019).; DEMOGRAPHIA, 'World Urban Areas', 2020.; World Bank, 'Somalia Drought Impact and Needs Assessment: Synthesis Report' (Washington, D.C.: World Bank, 2018).
16 World Bank, 'Somalia Drought Impact and Needs Assessment: Synthesis Report'.
17 World Bank, 'Somalia Urbanisation Review: Somali Cities as Anchors of Development' (World Bank, 2020).

Figure 2: Displacements monitored by UNHCR-Somalia (PRMN) 2016-2020



The most recent severe drought episodes (2011 and 2017) are often seen as 'historical turning points and accelerators'.[18] Between 2017 and 2018, the number of displaced persons due to conflict and climate-related hazards in Somalia more than doubled, from 1.10 million to 2.65 million, bringing the displaced population from 7 to 17% of the population.[19] For a population primarily earning their sustenance by growing crops or raising livestock, cyclical natural hazards – with lower and more erratic rainfalls as well as prolonged drought – exacerbate vulnerabilities and have disastrous effects on food security: nearly one million people who depend mostly on agriculture and livestock for survival were forced to leave their homes in the latest drought in 2017/2018.[20]

However, whilst migration is undoubtedly a universal adaptation strategy in the face of environmental and climate change, it is also driven by a set of complex, contextual and multilinear motivations.[21] What is the tipping point? And under what circumstances do people decide to settle in urban areas or return to their community of origin? As highlighted by Walter Kälin, "the phenomenon of people displaced by the effects of climate change is highly complex and, in many ways, little understood".[22] As a result, it is critical to identify which environmental factors can lead to displacement in the Somali context. Since different climate conditions can engender different types of movement, there is also a need for contextually tailored durable solutions and livelihoods support.

- **Sudden-onset disasters,** such as flooding, windstorms, heatwave, or mudslides caused by heavy rainfalls, can trigger large-scale displacement and have an immediate humanitarian impact. As pointed out by Kälin, "*while all of these disasters are climate-related, they are not necessarily an effect of global warming and the ensuing change of climate patterns (…) And such causality is difficult, if not impossible, to prove in a specific case.*"[23]

- **Slow-onset environmental degradation** is caused by the long-term effects of recurrent flooding, as well as droughts or other forms of changing rainfall patterns.[24] Conditions of life will progressively deteriorate in affected areas and communities become uninhabitable over

18 KII with UNDP, August 2020.
19 UNHCR Data, 'Horn of Africa Somalia Situation', 2020, https://data2.unhcr.org/en/situations/horn.
20 ACAPS, 'Briefing Note: Somalia Food Security and Nutrition Crisis', 24 February 2017.
21 François Gemenne and Julia Blocher, 'How Can Migration Serve Adaptation to Climate Change? Challenges to Fleshing out a Policy Ideal', The Geographical Journal 183, no. 4 (December 2017): 336–47.
22 Kälin, W. (2010) 'Conceptualising Climate-Induced Displacement', in Climate Change and Displacement: Multidisciplinary Perspectives, ed. Jane McAdam, 1st ed. (London: Hart Publishing, 2010), 81–104.
23 Idem.
24 World Bank, 'Somalia Drought Impact and Needs Assessment: Synthesis Report'.

time, finally leading to complete desertification, permanent flooding of coastal zones, land and forest degradation or loss of biodiversity – according to the United Nations Framework Convention on Climate Change (UNFCCC) typology.[25] This type of longer-term and progressive degradation can impact migration dynamics from rural districts of deteriorating environmental conditions to urban areas with a better access to services and income generating options.[26] And when rural populations reach a tipping point where leaving is perceived as the only option, this type of climate-change induced forced displacement is more likely to be permanent.

Box 1: 2010-2020, or the worst climatic decade in the recent Somali history

With the global and regional warming of the last century, Somalia has become arid at a rate unprecedented in the last 2,000 years.[27] A higher frequency of climate-induced disasters has also been observed, as shown in the last decade.

- 2010-11: The worst drought in 60 years. Famine is officially declared but the coordination remains ineffective and late. Approximately 260,000 people died during the famine (50% of them being children under the age of 5).
- 2013-2013: More than 100,000 people affected by heavy floods and displacement.
- 2015-16: Prolonged drought due to el Niño weather cycle and poor rainy seasons.
- 2017: Another "worst drought in decades", with reduced humanitarian consequences due to improved coordination, but a massive and prolonged impact on internal displacement.
- 2018-2020: The combination of drought, floods, and insecurity contributes to additional internal displacement and cyclical rural to urban migration phenomena.
- 2020: Compounding factors (locusts - also related to climate change,[28] COVID-19 pandemic) may also have lasting disastrous consequences on both rural and urban households.

Sources: UNOCHA (2015, 2018, 2020) and WB (DINA 2018).

Assessing the climate double-bind

Exacerbated climate conditions, with a combination of slow and sudden onset events, have the effect of deteriorating food security. Traditional livelihood practices of local rural communities and nomadic pastoralists are highly reliant on regular and predictable rainfall to sustain their crops or cattle, camels, goats and sheep, creating an unsustainable situation where displacement remains the only option.[29] The consequence, according to the World Bank, is that close to three-quarters of Somalia's 2.6 million IDPs live in urban centres "*in disconnected pockets outside city limits, constraining their access to services and creating poverty traps.*"[30] However, while policymakers, practitioners, and communities often focus on the immediate adaptive mechanisms and temporary solutions, this report advocates for a broader perspective, by considering the climate double-bind in the equation:

25 UNFCCC, 'Slow Onset Events. Technical Paper', Framework Convention on Climate Change (United Nations, 26 November 2012).
26 Michael Todaro, 'Internal Migration in Developing Countries: A Survey', in Population and Economic Change in Developing Countries (National Bureau of Economic Research, Inc, 1980), 361–402-
27 Jessica E. Tierney, Caroline C. Ummenhofer, and Peter B. deMenocal, 'Past and Future Rainfall in the Horn of Africa', Science Advances 1, no. 9 (October 2015).
28 For the link between locust infestations and climate change, see https://www.unenvironment.org/news-and-stories/story/locust-swarms-and-climate-change. In February 2019, the Somali government declared a national emergency due to large swarms of locusts spreading across East Africa after abnormal rain patterns.
29 Mixed Migration Centre, 'Weak Links: Challenging the Climate & Mixed Migration Paradigm in the Horn of Africa & Yemen', MMC Briefing Paper, 2020.
30 According to UNHCR Data (November 2020) and World Bank, 'Somalia Urbanisation Review: Somali Cities as Anchors of Development'.

- On the one hand, the consequences of climate change contribute to both the slow-onset degradation of natural and human ecosystems and also accelerate internal displacement in Somalia;
- On the other, the subsequent rapid and unplanned urbanisation also causes irreversible detrimental impacts on urban areas. High urbanisation rates and the absence of urban planning puts enormous pressure on urban hosting environments. Urban areas themselves are indeed not shielded from climate disruptions: landslides, floods, and heatwaves worsen already-poor living conditions for disadvantaged groups in cities – amongst which are IDPs themselves, some of whom already moved precisely to mitigate the impacts of environmental catastrophes.

The different phases of this complex and often circular process can be synthesised as follows:

At the global level:

- The consequences of human activities have contributed to modifying the climate and increasing the frequency of climate-induced disasters worldwide.
- The resulting and recurring environment crises have progressively disrupted fragile local ecosystems and peoples' way of living.

In the Somali context:

- People, households and sometimes entire communities may reach a tipping point: their survival is threatened due to the sale or death of livestock and poor harvests, and they have no other option but to move (increasingly to urban centres) to improve their access to livelihood opportunities and essential services.
- Newly, internally displaced households are likely to increase the already-high pressures on scarce resources and limited services in urban environments.
- Without comprehensive support and adequate planning, there is a further risk that IDPs will be forced to adopt short-term, maladaptive[31] strategies to mitigate the impact of droughts, floods, or climatic anomalies, making them even more vulnerable to adverse climate impacts in the future.

An underlying tension exists between the people most directly vulnerable to climate catastrophe and the places – both rural and urban – affected environmentally by their attempts to cope with this catastrophe. Short-term maladaptive strategies people use for survival might lead to longer-term, negative, environmental externalities. The prisms of people, places, and spaces are central to our study of the multiple dimensions of climate and environmental fragility in Somalia, and possibilities for identifying best possible ways to: mitigate the impact of maladaptive strategies at the local level, inform policies and programmes, and adapt climate-sound approaches to the Somali context.

31 Short-term maladaptive solutions (at the local level) result in 'increased vulnerability to climate variability and change, directly or indirectly, and/or significantly undermines capacities or opportunities for present and future adaptation.' (Magnan, 2014)

Research Objectives

It is not the objective of this report to identify the myriad ways in which climate change has impacted the Somali environmental and social landscape – this has been documented elsewhere.[32] This study explores *the interaction(s) between climate change, displacement and urbanisation*. More specifically, the objective is to answer a dual question, in the context of the two vibrant Somali cities of Baidoa and Kismayo: What factors contribute to triggering climate-induced migration? And subsequently, what adaptive and transformative solutions may contribute to building resilience amid displacement and climate change? Table 1 provides an outline of key research questions framing this study.

Table 1: Research questions and sub-questions

Objectives	Research Questions
What factors contribute to triggering climate-induced migration?	• Why do some people affected by climate events migrate while others choose (or are forced) to stay? How do environmental migration drivers interact with other economic, social, and political factors in influencing migration decision-making? • What strategies are adopted by communities in rural and urban Somali areas to cope with environmental degradation? What role does perception of climate risk play in the adoption of these strategies? What effects are these adaptation strategies having on IDP, returnee, and host communities' resilience to climate shocks within urban settings? • How is displacement increasing pressure on natural resources and exacerbating effects of climate change in urban and peri-urban settings?
What adaptive solutions may contribute to building resilience amid displacement and climate change?	• What opportunities exist for integrating the coping strategies of local communities into the durable solutions framework, as well as broader urban development planning and climate change adaptation policy? • How do macro-structures in Somalia influence the level of resilience of vulnerable communities to environmental events? In the case of durable solutions in Somalia, how effectively do they build the resilience of IDPs, returnees, and host communities to climate change hazards in the short-, middle-, and long-term? • What connections exist between governance of migration and governance of sustainability in Somalia? Which level(s) of government is most appropriate for fostering synergies between governance of migration and governance of sustainability? How can the Somali context be benefitted by best practices for climate-adaptive durable solutions exhibited in similar regions and countries?

The choice of locations: Baidoa & Kismayo in Southern Somalia

Baidoa and Kismayo are fast-growing cities in Southern Somalia, and key locations of settlement for IDPs from rural areas. IDPs are a highly vulnerable group, with concerns over forced eviction, housing, land and property (HLP), as well as water sanitation and hygiene (WASH) co-existing with other protection risks – whether physical, material or legal safety.

32 Federal Republic of Somalia, 'National Adaptation Programme of Action on Climate Change', 2013; Linda Ajuang Ogallo et al., 'Land Cover Changes in Lower Jubba Somalia', American Journal of Climate Change 7, no. 3 (2018): 367–87; Linda Ajuang Ogallo et al., 'Climate Change Projections and the Associated Potential Impacts for Somalia', American Journal of Climate Change 7, no. 2 (2018): 153–70; Karolina Eklöw and Florian Krampe, 'Climate-Related Security Risks and Peacebuilding in Somalia', SIPRI Policy Paper No. 53 (SIPRI, 2019); J.-F. Maystadt and O. Ecker, 'Extreme Weather and Civil War: Does Drought Fuel Conflict in Somalia through Livestock Price Shocks?', American Journal of Agricultural Economics 96, no. 4 (1 July 2014): 1157–82.

Baidoa

Baidoa received the largest number of drought displaced persons in 2017[33], with IDPs living either on unplanned sites, settlements or joining the ranks of the urban poor in this state and district capital. Although "*Baidoa has gone through many conflicts, it has evolved to be one of the safer areas of South-Central Somalia*"[34]. Under the leadership of its mayor, and support from a range of stakeholders, Baidoa Municipality has, in the last five years, focused on city/urban planning, sustainable urban development and housing, linked with continental African Union priorities on the protection of IDPs in Africa.[35]

The IDP population of Baidoa alone is estimated at 360,000 settled in 485 sites in and around the city[36], according to the former mayor of Baidoa, Mr. Watiin. Population growth, internal displacement, and the return of refugees from Kenya, have increased the overall population to an estimated one million individuals. An UN-Habitat 2017[37] urban profiling exercise offered three possible scenarios forward: no intervention, an urban crisis response and/or a long-term development approach. A combination of the latter two was recommended in the report, in recognition of the need to adopt a strategic framework that can solve crises while starting an urban planning process.

A recent Solutions Analysis[38] showed that social cohesion, education and HLP ratings had improved due to the Baidoa District Development Plan, and the community-based approach to durable solutions adopted locally with the support of the Municipality, IOM and other key stakeholders and donors. The challenge for 2019/2020 was to link gains in social cohesion to social protection policy, in order to address protection gaps and to integrate IDPs in food security, livelihoods, and other forms of local economic development.

Kismayo

The number of arrivals is lower in Kismayo than in other urban locations of southern Somalia, but represent a significant proportion of its population, and displacement situations are protracted with both cyclical and chronic trends. Over the last decades, IDPs have settled in Kismayo on government-owned properties, raising concerns over land property issues, as well as poor living and sanitation conditions[39]. The response by authorities had traditionally focused on eviction and relocation to the outskirts of the city. Arrivals in Kismayo continue at a regular pace. Floods regularly produce new displacement – in June 2020[40] alone 3,000 people moved to Kismayo – and reveal the structural limitations of the city, with non-functional roads and draining system. The physical and social infrastructure are lacking despite the role that Kismayo plays as "*an urban centre of national strategic importance and a regional hub of service delivery*"[41]. As destroyed homes and livelihoods on the

33 Dyfed Aubrey and Luciana Cardoso, 'Towards Sustainable Urban Development in Somalia and IDP Durable Solutions at Scale' (United Nations Somalia, 2019).
34 Research and Evidence Facility (REF), 'Baidoa Municipality Initiatives on Population Displacement and Urbanisation: Key Lessons Learned and the Way Forward' (London: EU Trust Fund for Africa (Horn of Africa Window) Research and Evidence Facility, 2020).
35 See the text of the Kampala Convention (Adopted in 2009 and entered into force on 6th December 2012) here: https://au.int/sites/default/files/treaties/36846-treaty-kampala_convention.pdf
36 Ibid.
37 UN Habitat, 'Baidoa Urban Profile, Working Paper and Spatial Analyses for Urban Planning Consultations and Durable Solutions for Displacement Crises', 2017.
38 ReDSS, 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo' (Research conducted by Samuel Hall and SDRI, 2019).
39 UN Habitat 2017.
40 OCHA, 'Somalia: Hagaa Season Floods Update 1', 19 July 2020.
41 UN Habitat, 2017.

coastlines due to rains and strong winds are driving new arrivals, displacement to Kismayo requires a structural urban response.

Displacement solutions have been addressed by the municipality, in collaboration with the aid community, through the provision of land as a basis for durable solutions. "*Planning ahead of infrastructure needs*" was seen as a prerequisite for social cohesion, service provision, and ensuring that the displaced would not be found living as urban poor populations in informal settlements in and around the city[42]. The formalisation, by the Jubaland Land Authority, of a master plan for the city is aimed at not only reducing land grabbing, but also to map services in need. The aim then has been to ensure that strengthened tenure is applicable to all – displaced and hosts. An additional sixth district was created in the city with the aim of integrating the displaced and improving services for all[43].

Table 2: IDP sites and IDP households in Baidoa and Kismayo (source: UNHCR - CCCM, 2020)

Urban area	*IDP sites (number)*	*IDP households*	*Individuals*	*Trend*
Baidoa	483	55,005	293,350*	+7.2% in 6 months
Kismayo	144	12,010	64,051	+8.2% in 12 months

Sources: UNHCR-CCCM in Baidoa (February 2020) and UNHCR-CCCM-JRIA in Kismayo (September 2020). The number of IDPs in Baidoa is estimated by the author.

Methodological framework

The research team adopted a mixed-methods approach and applied the Maladaptation Assessment grid as an analytical tool to understand the impact of slow and sudden-onset environmental events on the vulnerability of urban and rural communities; the different strategies to cope with environmental related-shocks; and the role played by macrostructures on the level of resilience of vulnerable populations to environmental events. To ensure a robust triangulation, on such a complex issue, the research team used both quantitative and qualitative data collection tools, including an extensive desk review, an individual survey, semi-structured interviews (SSIs), focus group discussions (FGDs), community observations, and key informant interviews (KIIs).

Within the context of the COVID-19 pandemic, particular measures were adopted to ensure that the research team and respondents were not put at risk during data collection. Measures included decreasing the number of FGD participants (5 instead of 8), strict social distancing between field enumerators and survey respondents and participants, as well as the distribution of gloves, masks, and sanitisers regularly. The team conducted fieldwork in both urban and rural areas in Jubaland and South West Federal States (Table 3) in April and May 2020.

- In Jubaland, the research team collected qualitative data in Bulabartire (a rural area 20 km outside of Kismayo), and quantitative and qualitative data in Calanley and Dalxiiska (two urban neighbourhoods in Kismayo). In urban areas in Kismayo (Calanley and Dalxiiska), participants included migrants[44] and host community members randomly sampled, whereas in Bulabartire participants were exclusively members of the host community.

42 IGAD, 'Background Paper on Experiences in Supporting Resilience and Durable Solutions to Internal Displacement in the IGAD Region' (12th IGAD Regional Consultative Process (RCP), Addis Ababa, Ethiopia, 2019).
43 ReDSS, 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo'.
44 Amongst the migrants, the majority are IDPs, who were forcibly displaced by conflict or (a) climate-induced disaster(s). Other migrants moved to the urban area for reasons which do not qualify them as IDPs: employment, family reunification etc. However, we will see later in this report that different migration reasons are often interlinked. In this report, protracted IDPs are IDPs who were displaced for more than three years. There

– In South West State, the research team collected qualitative data in Reebay (a village 20 km outside of Baidoa), and quantitative and qualitative data in Towfiiq (an IDP camp within Baidoa), and the newly established resettlement site Barwaaqo (10 km outside of Baidoa). In urban and peri-urban areas in Baidoa (Barwaaqo and Towfiiq), participants consisted exclusively of migrants, whereas in Reebay, participants were only host community members.

Surveyed migrants in Kismayo and Baidoa were asked to provide answers relative to both their current location and their area of origin (income-generating activity, labour position), or exclusively relative to their area of origin (perception of climate change, its impacts and their adaptation strategies).

Table 3 Surveyed locations

Location	*Rural*	*Urban*
Jubaland, Kismayo area	Bulabartire	Calanley Dalxiiska
South West State, Baidoa area	Reebay	Barwaaqo Towfiiq (IDP camp)

Figure 4 Surveyed areas in Baidoa

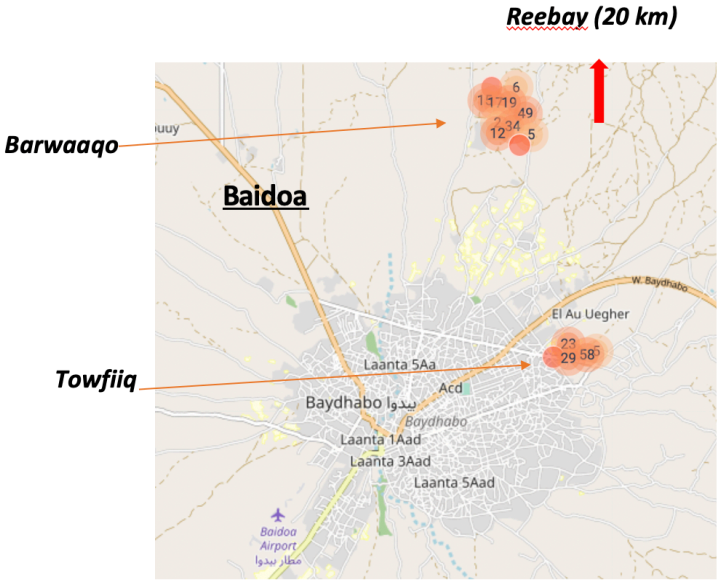
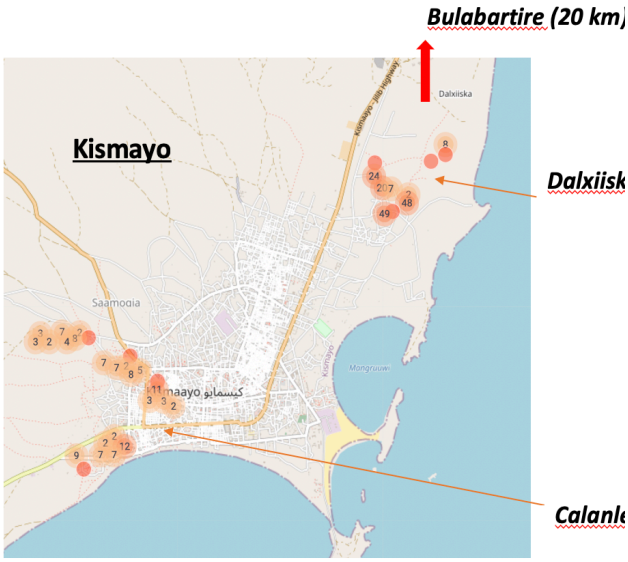


Figure 3: Surveyed areas in Kismayo



is no consensus on the time definition of protracted internal displacement (OCHA, 2018). While three years is an arbitrary cut-off, it is one that has been used in other studies as well (see Crawford al, 2018).

Quantitative survey and sampling

An individual survey was conducted with 625 migrants and host community members without any quota (see Table 4). The survey covered: (i) social, economic, and cultural profiles; (ii) migration history; (iii) demand and use of natural resources; (vi) consumption practices (including services); (v) shelter type and land tenure; (vi) coping strategies; and (vii) perception of climate risks. For the survey, the sample size of 100 questionnaires per urban or peri-urban community/cluster allowed for both credibility and legitimacy of representative findings to support assumptions and work hypotheses of the study. The sampling enabled the research to stay below 9% margin of error and above a 95% confidence level.

Table 4 Survey sample (by location)

	Kismayo area		Baidoa area	
	Calanley	Dalxiiska	Towfiiq	Barwaaqo
Sub-Total	**138**	**184**	**127**	**176**
Total	**322**		**303**	
Men	68	86	59	91
Women	70	98	68	85

The research team selected respondents, in each community, through a stratified random approach, with the identification of Primary Sampling Units (PSUs) (random selection in a listing of geographical areas defined by the research team) and sampled individuals using a fixed-point and fixed-interval approach. The community was divided along geographical lines into smaller segments (PSUs) and from there, teams of researchers walked from fixed geographical points (usually a mosque or market) and sampled participants in a systematic, pre-defined manner (e.g. odd doors every even street; every third door starting from the mosque). The sampling per PSU was tracked daily using GPS locations points collected throughout the phone-based surveys.

Overall, out of 625 respondents, 509 (81%) were IDPs – either conflict- or climate-induced –[45] which is not surprising given the surveyed locations and areas. Out of the 509 surveyed IDPs, 217 had settled in Kismayo and 292 in Baidoa. When considering the main driver of surveyed IDPs' displacement, 67% reported being climate-induced and 33% conflict-induced, which is also coherent with the recent migration history of both cities: in Baidoa a large majority of the respondents who settle during and after the 2017 drought said they had migrated from their community of origin for environmental reasons; in Kismayo, the picture is more nuanced, with insecurity and conflict as key drivers, especially in 2018 and 2019.

Table 5 Survey sample (by migration and displacement profile)

	Kismayo area		Baidoa area		Total
	Calanley	Dalxiiska	Towfiiq	Barwaaqo	
Host community members	97	8	1	10	116
Conflict-induced IDPs	33	123	8	3	167
Climate-induced IDPs	8	53	118	163	342
Total (respondents)	138	184	127	176	625

45 The definition of 'climate-induced IDPs' is further explained in the first section.

Box 2: Comparing climate- and conflict-induced displaced communities?

Why make a comparison between climate-induced and conflict-induced IDPs? There are at least three valid reasons, a priori, for not supporting this type of comparison…
First, because the variables and determinants of their displacement are often ambiguous and not mutually exclusive: families often cite climate and security causes (among others) as direct or indirect drivers of their displacement. Second, both groups are often exposed to the same difficulties of integration into the urban fabric of Baidoa or Kismayo and often tell the same stories of social marginalisation and economic exclusion. Third, from a methodological point of view, climate-induced IDPs interviewed for this study were mainly located in Baidoa, whereas the conflict-induced IDPs were more likely to reside in Kismayo, which implies a certain contextual bias. Finally, we can add a more ethical – but also programmatic – caveat regarding the risk of 'prioritising poverty', by putting the relative well-being of one community over another, while both are at the bottom of the socio-economic ladder in Somalia, as has been strongly emphasised in recent years in reports by ReDSS or the World Bank.46

So, why and according to which methodological choice should the two groups be distinguished, beyond the more traditional comparison with host communities? The main purpose of this report is to allow a dialogue between the different stakeholders on what is now a major political issue in Somalia: the nexus between climate – displacement – urbanisation. To launch this necessary debate, it is imperative to show the specificity of climate-induced IDPs. Only a strict comparative work can show the relevance of certain questions and identify possible answers. To what extent is the situation of communities in arid or semi-arid rural areas around cities such as Baidoa (or Kismayo, to a lesser extent) different today? How can we understand the possible link between climate change and the current urbanisation phenomenon in all Somali cities? What are the particular motivations behind the decision to migrate of rural households, whose survival is often exclusively linked to agricultural income? What are the obstacles to their integration and to the identification of durable solutions? The hypothesis of this study is precisely that specific answers can be found through comparisons between different groups, without denying the socio-economic difficulties of each of these groups – starting with host community members.

Qualitative research tools and sampling

The qualitative tools for this study were adapted from the Urban Participatory Climate change adaptation appraisal (PCCAA) framework developed by Moser and Stein.[47] The approach allows vulnerable groups to identify how climate-related problems affect their communities and encourage them to assess their vulnerabilities. The framework is premised on the assumption that individuals, households and communities are not passive, but active actors who possess resources that they deploy to respond to emergencies such as extreme weather conditions. These resources, in the context of asset adaptation, are referred to as asset portfolios, a bundle of assets, capital assets or endowments and entitlements. It comprises of human, financial, physical, psychosociological, natural and social assets. The following table provides an overview of the adopted qualitative research tools. The long FGDs and SSIs included participatory exercises which are outlined below.

46 Among others: ReDSS, 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo'.
47 Caroline Moser and Alfredo Stein, 'Implementing Urban Participatory Climate Change Adaptation Appraisals: A Methodological Guideline', Environment and Urbanisation 23, no. 2 (October 2011): 463–85.

Long focus group discussions: To allow a deeper comprehension of the vulnerability and the adaptation to weather events, the long FGDs drew on a range of participatory tools[48]:

1. Community sketch mappings
2. List and ranking of weather events impacting the participants
3. Seasonal calendar
4. List and ranking of important assets based on the prioritisation of challenges technique
5. Causal flow diagram to identify linkages between important assets, vulnerability, environmental degradation and adaptation strategies
6. Institutional mapping

Community sketch mapping exercise: the participatory mapping exercise was conducted to identify locations of (i) natural resources (water, wood, land) and who has access to these resources; (ii) informal settlement; (iii) infrastructures, (iv) transportation routes; and (v) areas vulnerable to or affected by severe weather associated with climate change and the type of vulnerability (flooding, heat, landslide, waterlogging) and relating to inadequate drainage, sewerage and garbage collection. Participants were provided with large sheets of paper and asked to circle the location of the aforementioned reference points in different colours. The sketch mapping was conducted before FGDs to foster collective discussion on climate change, perception of associated risks, and subsequent adaptation strategies.

Semi-structured Interviews and Case studies using the W-Curve[49] and ecosystem models: Two case studies with SSIs were conducted per urban and rural community/cluster. In the rural communities, case studies with host community members provided an in-depth understanding of the roles of factors unrelated to livelihoods and access to resources, such as social structures, social networks, political affiliation, in the adoption of certain strategies. In urban clusters, case studies were conducted with IDPs secondarily displaced due to environmental stress. The W-Curve Model is a framework used to identify key moments that shape decisions to stay or migrate. It explains the process by which potential migrants experience life at the cross-section of multiple facets (i.e. economic, social and psychosocial elements) in their environment over a given period. These model drafting exercises were conducted in one-on-one settings with the research participant. The participant was asked and prompted to trace their migration decision-making process over a determined period. Following the case studies, the research team identified the impact of economic, social, political, and environmental factors.

48 See annex 1 for details and examples of the participatory exercises included in the focus group discussions.
49 See for example: IOM and Samuel Hall, 'Setting Standards for an Integrated Approach to Reintegration' (IOM, 2017).

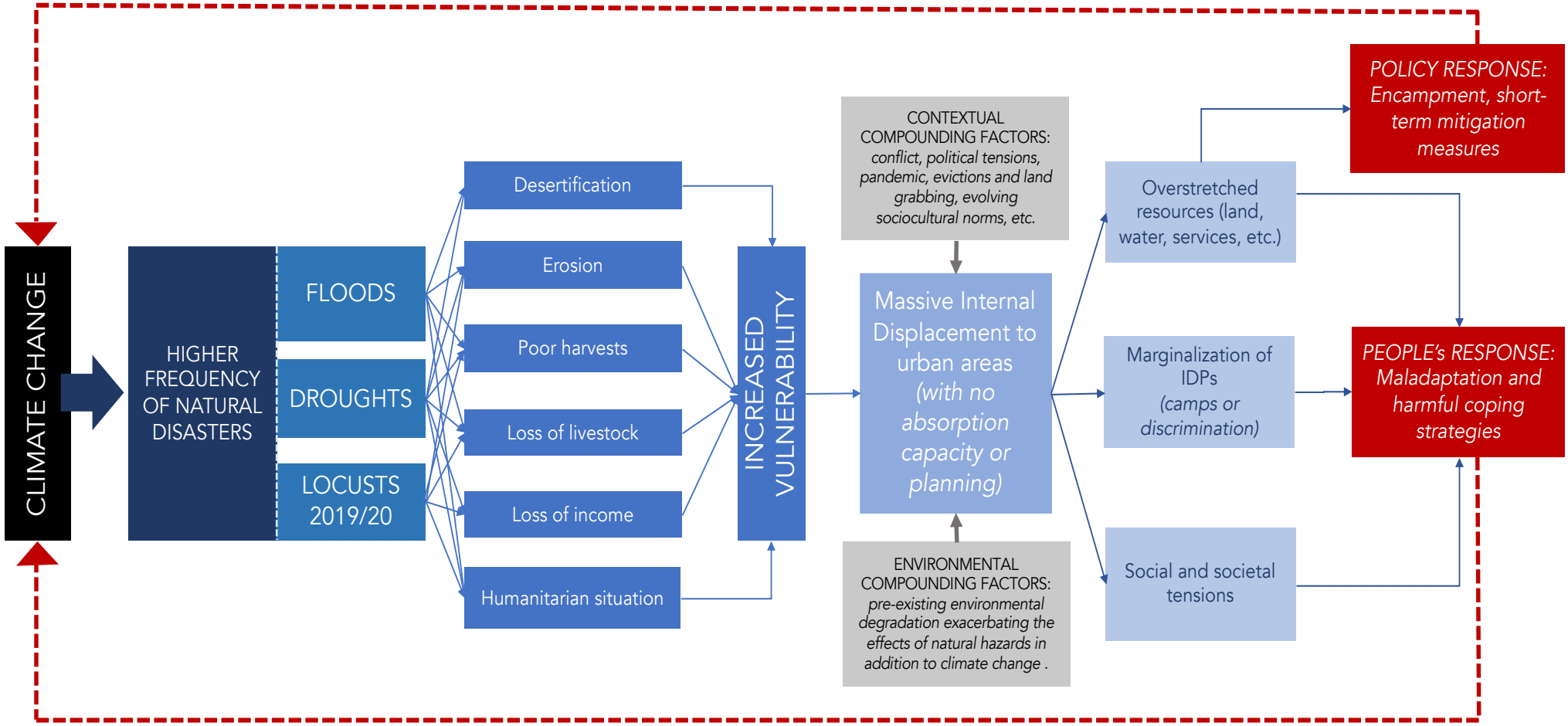
Table 6 Qualitative tools and sample

Research Tool	Description	Kismayo	Baidoa	Total
Long FGDs with participatory exercises	Conducted with host communities (rural and urban areas) and IDPs (in urban settlements and camps). Each group had 5 participants on average to assess (i) perceptions of climate change and climate risk; (ii) decision-making processes related to particular strategies; and (iii) coping strategies for environmental stresses, shocks, and displacement.	4 Calanley 4 Dalxiiska 1 Bulabartire	4 Towfiiq 4 Barwaaqo 1 Reebay	18
Short FGDs with community leaders	Focused on (i) main characteristics of the community (geographical patterns; public services, population; migration; transport; mapping); and (ii) timeline of severe weather events having had impacted the community in the past six years	1 Calanley 1 Dalxiiska 1 Bulabartire	1 Towfiiq 1 Barwaaqo 1 Reebay	6
Semi-structured Interviews (SSIs)	Conducted with host community members impacted by climate change who did not migrate (rural areas), and host community members impacted by climate change (urban areas). It resulted in case studies to identify the multiple factors leading to rural-urban and urban-urban displacement and interactions with environmental degradation.	2 Calanley 2 Dalxiiska 2 Bulabartire	3 Towfiiq 2 Barwaaqo 2 Reebay	13
Key Informant Interviews (KIIs)	The research team interviewed the following list of government officials, community leaders, humanitarian and development organisations, and scholars to obtain insights into the sustainability of policies, programmes and projects aimed at providing durable solutions for IDPs in Somalia. The full list of KIIs is provided in Annex 2.			25
Desk Review	Focused on (i) slow and sudden-onset environmental events in the areas of study; (ii) adaptation strategies to environmental stress and shocks of rural communities; (iii) the effects of displacement on natural resources and resilience of urban IDPs; (iv) durable solutions, urban planning, and climate adaptation policy frameworks in Somalia; (iv) benchmark of climate adaptive durable solutions.			

Picture 1: Calanley IDP camp (April 2020)

Figure 5: Visual representation of the Climate Change – Displacement – Urbanisation nexus (double bind)

The exclusive focus on short-term mitigation responses and lack of adaptive and transformative agenda massively increase the humanitarian, environmental and socioeconomic cost of climate change and displacement for urban and rural areas.



Short-term maladaptive solutions (at the local level) result in *'increased vulnerability to climate variability and change, directly or indirectly, and/or significantly undermines capacities or opportunities for present and future adaptation.'* (Magnan, 2014)

DADKA (people)

DADKA (people)

Defining climate-induced displacement

The progressive and general deterioration of rural and periurban households' conditions of life, as a consequence of cyclical droughts and floods, may prompt people to look for alternative income generating options and better access to services in urban areas. This 'movement can be seen as a particular strategy to cope with and adapt to environmental and ensuing economic changes triggered by the effects of climate change' Kälin (2010). The acronym IDPs refers to internally displaced persons who are 'persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognised State border'[50]. Within this group, climate-induced IDPs may be defined as persons or groups of persons whose displacement was mainly triggered by slow-onset environmental degradation.[51]

Table 7 presents the main drivers of internal displacement in the surveyed areas and confirms its complex and non-linear causal model. Intensifying environmental degradation in rural areas further triggers or exacerbates existing challenges such as insecurity, disruption of traditional livelihoods, food security, poor access to services, and forced migration to the city. The tipping point is often difficult to identify but climate-induced disasters (67%), conflict (60%) and economic reasons (25%) are by far the most frequent answers. When disaggregated by duration of displacement, the data mirror the recent Somali history. First, a large majority of the most recently displaced (0 to 3 years) cite climate-induced disasters as a cause of their displacement: 95% of those who settled in the last 12 months and 81% of those whose duration of stay was between 1 and 3 years (vs. 46% for those in a protracted[52] situation). Such a significant difference can be attributed to the historic drought of 2017, which led to massive internal displacement, particularly in Baidoa and to a lesser extent in Kismayo. Secondly, conflict and insecurity remain significant and constant drivers, especially for respondents who have been settled for more than a year (62% and 71%, and an average 32 percentage point difference with the recently displaced). Lastly, the two predominant drivers are often interrelated – and so are they with the other secondary drivers – given the complexity of the displacement phenomenon.

50 Guiding Principles on Internal Displacement, UN Doc E/CN.4/1998/53/Add.2 (11 February 1998). Protocol on the Protection and Assistance to Internally Displaced Persons (adopted 15 December 2006, entered into force 21 June 2008) ('Great Lakes IDP Protocol'). This is a Protocol to the Pact on Peace, Security, Democracy and Development in the Great Lakes Region (adopted 15 December 2006, entered into force 21 June 2008). And finally, African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (adopted 22 October 2009) known as 'Kampala Convention', which came into force on December 6, 2012. The Kampala Convention describes the rights of IDPs and the obligations of states and non-state actors. It is important to note that Somalia is a signatory but not yet a party to the convention.

51 Here, we follow Kälin's seminal distinction and definition. Climate-induced IDPs: 1) were victims of slow-onset events (recurring droughts or floods) that progressively made their community of origin uninhabitable; and 2) are more likely to settle permanently. Applied to Somalia – and more particularly to Baidoa and Kismayo – this definition does not require the predetermination as to: 1) whether a specific natural hazard is causally linked to climate change or not; and 2) if the displacement is induced by a slow-onset degradation or sudden-onset disaster. By contrast, IOM's definition of 'environmental migrants' is broader as it includes sudden and progressive changes. See IOM, (2007) 'Discussion Note: Migration and the Environment' (1 November 2007) Doc MC/INF/288, para 6: 'Environmental migrants are persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad'

52 See the glossary – according to IOM, a protracted situation is characterised by the inability to return to the habitual residence for 3 years or more without any durable situation in sight.

Table 7: Drivers of internal displacement (all IDPs, n = 509) – multiple answers

	Climate-induced disasters	Conflict, insecurity	Economic reason	Better education	Family reunification	Seasonal migration	Total respondents
1 to 12 months	95%	36%	10%	1%	2%	2%	117
13 months to 3 years	81%	71%	32%	7%	4%	4%	144
3 years to 5 years	51%	62%	28%	12%	3%	1%	147
More than 5 years	40%	71%	30%	8%	4%	1%	101
Total	67%	60%	25%	7%	3%	2%	509

To do justice to local realities, this should be put into perspective using UNHCR-PRMN[53] data, visualised in the figures below. Between 2017 and 2019, almost 350,000 people were displaced as a result of the 2017 drought in Baidoa, by far the most significant driver of displacement to urban centres in South West State, with consequences spread over time; in Kismayo, drought (21,000 IDPs between 2017 and 2020) and floods (2,600 in 2020) are essential drivers of displacement, while 15,000 IDPs reported fleeing and armed groups from neighbouring districts (mainly Jamaame and Jilib).

Figure 6: Displacement to Baidoa (by year and driver)

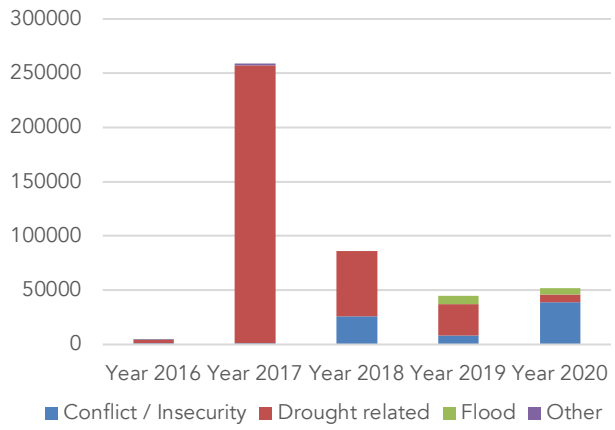
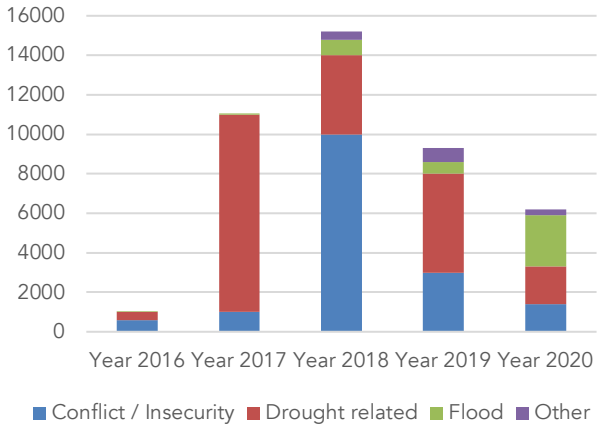


Figure 7: Displacement to Kismayo (by year and driver)

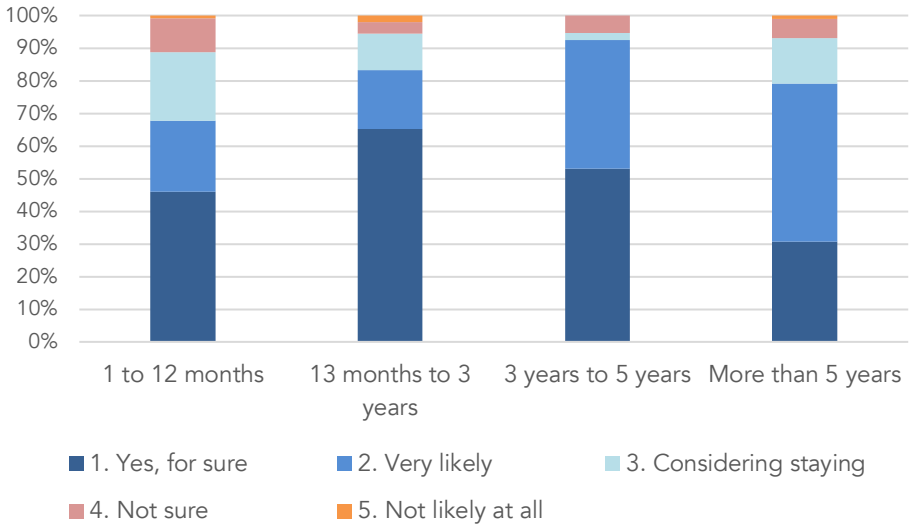


Source: UNHCR-PRMN

A very large majority of the climate-induced IDP respondents do not wish to return to their community of origin. There is no striking difference between climate-induced IDPs who arrived in Baidoa and Kismayo recently and those who are in a protracted situation (3 years and more): 68% of the former and 70% of the latter said they would stay 'for sure' or were 'very likely' to stay. This confirms that climate-induced displacement is often related to slow-onset events that progressively turn a land and community into an uninhabitable area (desertification, soil erosion): 'at some point people have no other choice but to leave for good and never come back.'[54]

53 The PRMN (Protection and Return Monitoring Network) is a UNHCR-led project (implemented in partnership with NRC) which reports on displacements and protection risks and incidents underlying such movements.
54 KII with INGO, August 2020.

Figure 8: Migration intent among climate-induced IDPs (n = 342, by duration)



Assessing people's vulnerability and adaptation capacity

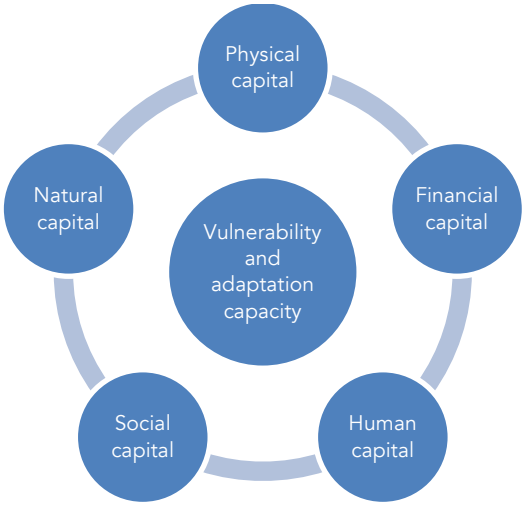
While there is no universally approved definition of vulnerability, approaches have highlighted its circumstantial and mutable nature, linked to the concept of capacity.[55] The International Federation of the Red Cross (IFRC) defines vulnerability 'as the diminished capacity of an individual or group to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard. The concept is relative and dynamic'.[56] This section draws on Moser's (2011) asset-based vulnerability and adaptation framework, [57] where individuals, households, and communities have an asset portfolio which determines their adaptive capacity "*to reduce risk and to cope with and adapt to increased risk levels*".[58] According to Moser (2011), the most important capital assets for individuals, households and communities when absorbing and adapting to a climatic shock can be distinguished as follows:

1. **Physical and natural capital:** the equipment, infrastructure, livestock, and other productive resources owned by individuals or households.

2. **Financial capital:** the financial resources available to people (income, remittances, savings, supplies of credit).

3. **Human capital:** investments in education, health and nutrition of individuals, all correlated to people's capacity to work and generate an income.

Figure 9: Asset-based vulnerability and adaptation framework



55 Global Protection Cluster, 'Protection & Prioritising the Most Vulnerable Persons in the Gaza Humanitarian Response', 2020.
56 IFRC, 'What Is Vulnerability?'.
57 R Simatele, 'Urban Climate Change Adaptation and Assets: A Background Review of Current Community-Focused Conceptual and Methodological Approaches', GURC Working Paper No. 3 (University of Manchester, Global Urban Research Centre, 2009). and later adapted by Moser (2011) to fit climate change specificities.
58 Caroline Moser, 'A Conceptual and Operational Framework for Pro-Poor Asset Adaptation to Urban Climate Change', in Cities and Climate Change, by Daniel Hoornweg et al. (The World Bank, 2011), 225–53.

4. **Social capital:** an intangible asset, defined as the rules, norms, obligations, reciprocity and trust embedded in social relations, social structures, and societies' institutional arrangements.

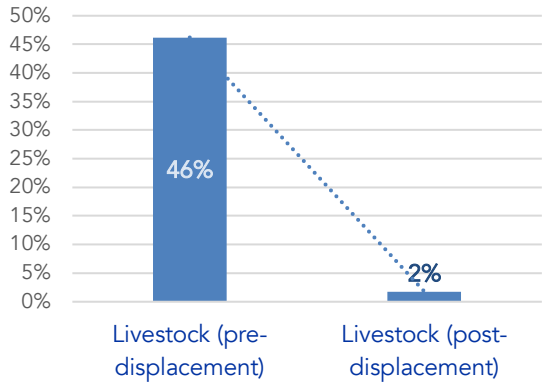
5. **Natural capital:** environmental assets such as soil, atmosphere, forests, minerals, water and wetlands. As highlighted by Moser, 'In rural communities land is a critical productive asset for the poor; in urban areas, land for shelter is also a critical productive asset'.

This section examines each capital asset through this framework, to better identify the characteristics of host community members and IDPs (with a distinction between conflict-induced, and climate-induced IDPs). It further asks: what are the respective vulnerability and adaptation levels of each of these groups? How do existing programmatic and support structures align with existing vulnerabilities, decision making, and adaptation strategies?

Physical Capital

Internal displacement to urban areas like Kismayo or Baidoa represent the end of a way of life and associated assets. Of the 342 climate-displaced households interviewed for this research, 158 reported earning a living from livestock (46.2%) before their displacement. Post-displacement, this figure drops to 6 households, either as a primary or secondary source of income: 'At some point, our goats and camels got sick and we could not even sell them for a good price. So, we had to leave. Feeding them had become too costly' shares a former nomadic pastoralist who moved from Waajid to the outskirts of Baidoa in Barwaaqo.

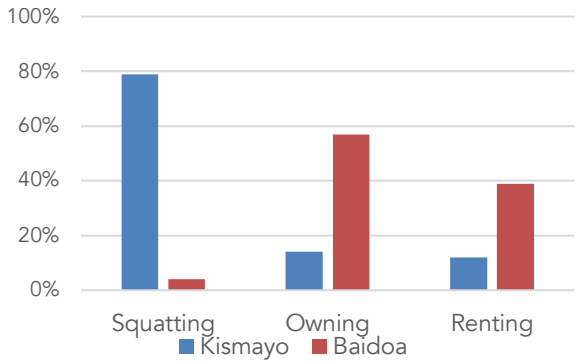
Figure 10: Livestock as a primary or secondary source of income for climate-induced IDPs (pre- and post-displacement)



Housing and shelter

In the context of IDP camps in Baidoa and Kismayo, housing is regarded as IDPs' main physical asset, given that many of them had to sell their livestock before displacement, as a last resort coping strategy before migrating.[59] In both places, migrants are much less to own their house than the host community. Amongst the respondents of our survey, 14% of migrants owned their house in Kismayo, compared to 2% in Towfiiq.

Figure 11: Housing status (by location)



The exception is the relocation site of Barwaaqo settlement (Baidoa), where a project to improve HLP rights granted specific land rights. Here, everybody owned their house as highlighted by an IDP there: 'Before, we were not at ease because the owner of the land knocks the door at the end of every month claiming rents of 10$ in every household. Now we are 100% better because we live on our own plot where no one will ask you for rent.'. Paying rent is more common for migrants in Baidoa (89% in Towfiiq) than for migrants in Kismayo (40% in Calanley and only 6% in Dalxiiska).

59 Shelter materials (as assets) are not discussed due to a lack of representative complementary information. However, it does not seem that poor and extremely poor rural households really have the opportunity of selling their assets (including shelter materials) before they are displaced: 'who would buy it?' (Focus Group Discussion, Male, 32, Displaced in Towfiq).

In Kismayo, majority of IDPs are squatting the land where they are settled (79%). Climate-induced IDPs are more likely to squat than other IDPs, especially in Dalxiiska (90% vs. 80% for the overall group). Arrangements exist between landowners and the Ministry of Interior to let the IDPs settle for 3 to 5 years (sometimes more). In Baidoa, amongst the small portion of (climate-induced) IDPs squatting (10% in Towfiiq), protracted displaced households are overrepresented (26.5% of protracted IDPs are squatting the land they are settled on). The amount of rent is indicative given that a limited number of respondents agreed to provide the information and that many IDPs do not pay rent in formal IDP camps. However, it seems that the figures given in the FGDs are lower than those obtained in the survey: USD 26 on average for host community households and USD 18 to 21.5 for IDPs.

Table 8: Average rent (indicative data, by displacement profile)

Average rent (in USD, with 1 Somali Shilling = 0,00004 USD)		
Host community members	USD 26	n=27
Other IDPs (conflict)	USD 21.5	n=15
Climate-induced IDPs	USD 18	n=20

Finally, having a dwelling remains a relative notion if one does not take into account the type of housing. Is it sustainable? How is it built? Half of the host community respondents in Kismayo live in permanent concrete houses (mainly in Calanley), while 53% of conflict-induced IDPs (mainly in Kismayo) and 44% of climate-induced IDPs (mainly in Baidoa) live in makeshift shelters. The makeshift shelters are usually made of tree branches and thick or thin fabrics (from torn clothing and rags). One displaced woman in Dalxiiska described the process of building these shelters: 'The hut is constructed by fetching poles and branches of trees. To cover the house, we use torn clothes and rags thrown to garbage sites where we collect them and sort them out to choose the one that can benefit us. We also collect wires to tie the poles together from the garbage sites.' These shelters are often constructed collectively, under the supervision of the camp leader, as explained by an IDP from Jilib in Calanley: 'During daytime I spent my time out of the camp to look for work and also give space to my family to shade well. After two months the camp leader organised a group of able men to help me get sticks from the forest using axes as equipment.'

The situation of climate-induced IDPs, in particular, can vary significantly. Overall, in Baidoa climate-induced IDPs have lower living standards: the majority live in makeshift shelters (87% in Towfiiq). It is not the case in the relocation site of Barwaaqo, where IDPs live mostly in corrugated galvanised iron (92%) provided by local and international NGOs. In terms of gender difference, single female-headed households (widows, divorced, left-behind) are worse-off with a higher proportion living in makeshifts shelters, in particular in Baidoa. In contrast to the extremely worrisome situation of displaced persons, with emergency shelters becoming protracted housing realities, members of host communities generally use more durable materials: concrete (49%) and galvanised corrugated iron (40%), which both suggest that host community households feel confident that they will not be evicted and that they can make longer-term investments for their home.

Table 9: Materials used to build the house (by displacement profile)

What type of house do you live in?	*Host Communities*	*Other IDPs (Conflict)*	*Climate-induced IDPs*
Makeshift shelter	7%	53%	64%
Concrete/permanent house or apartment	49%	5%	0%
CGI (Corrugated galvanised iron)	40%	10%	26%
Local materials (Barako)	3%	28%	4%
Tents in plastic and materials provided NGOs	1%	4%	6%
Total respondents	117	167	342

Coping strategies

Another relevant way to assess the physical capital of climate-displaced people, relative to other groups and to members of the host community in particular, is to examine their coping strategies. Faced with a socio-economic stressor, how do households adapt and cope with immediate shocks?

- **Climate-induced displaced respondents** (right columns in Table 10) **have fewer coping strategies** whilst host community members' strategies are more diversified. Host community members have more opportunities to sell assets, rent land or get a loan from multiple sources. The absorption and adaptation capacity not only depends on the location and migration status, but also on sociocultural parameters (dominant clans vs. marginalised clans, ethnolinguistic differences, etc).

- Host community members tend to spend their savings (first choice for 26% of surveyed respondents, which shows that some of them have a safety net), before decreasing their expenditures or reducing the quantity/quality of their meals (28% and 27% respectively – more harmful coping strategies) and finally getting a loan from their relatives and friends (third choice for 28%). This step-by-step strategy clearly demonstrates the **relative autonomy of host community households**, since it responds to a rational assessment that takes into account short and long-term dimensions, personal well-being, as well as social representations.

- By contrast, **climate-induced IDPs adopt more homogenous strategies, characterised by a lack of options:** first, they decrease expenditures (56%), before reducing quantity or quality of food (52%) and finally seeking assistance from direct relatives (50%). Most IDPs simply have no safety nets because they had to use savings or assets to cope with their prior displacement and have lost the social support networks from their communities of origin; 'IDPs in Baidoa only have harmful coping strategies. They generally do not own their land, have nothing to sell and no savings. So their only options are indebtedness and displacement.' (NGO, Baidoa, September 2020)

A more comprehensive and detailed analysis of coping and adaptive strategies is developed in the 'Climate' section, with an emphasis on their impact at the household and community level.

Table 10: Coping strategies (by displacement profile)

Prioritised coping strategies	Host Community Member			Climate-induced IDPs		
	1st	2nd	3rd	1st	2nd	3rd
Decreased expenditures	21%	28%	9%	56%	25%	6%
Loans from family / friends	16%	9%	28%	12%	15%	50%
Reduced quantity / quality of food / diet	14%	27%	9%	8%	52%	17%
Spent savings	26%	20%	21%	16%	4%	6%
*Sold reproductive livestock_*	3%	3%	4%	1%	0%	11%
Relocated to a safer location	3%	5%	5%	1%	1%	3%
Loans from employers / money lenders	3%	3%	6%	3%	1%	1%
Rented out land	6%	1%	5%	0%	0%	0%
Other answers	*8%*	*4%*	*13%*	*3%*	*2%*	*6%*
Respondents	116	116	116	342	342	342

Other answers given by respondents included (less than 2% each): *begging, sold house or land, sold belongings (furniture, home appliances, doors, windows, etc.) increased child labour, joined military, migration abroad of household member.*

Financial Capital

According to FGDs with host community members, both Kismayo and Baidoa provide a higher share of wage employment and a broader spectrum of jobs, even if the market is still dominated by petty trading and micro-sized enterprises or family businesses. This is the conclusion that the World Bank (2020) applies to all urban areas in the country. However, in practice, most surveyed IDPs do not have the same experiences in the job market, with clear differences between conflict-induced and climate-induced IDPs.[60] This subsection focuses on four key dimensions of climate-IDPs' financial capital: i) activity or job (pre- and post-displacement) with a dual focus on displacement profile and gender; ii) position vis-à-vis the formal and informal labour market; iii) diversification of income sources; and iv) access to credit and loans.

Activity pre- and post-displacement (by displacement profile)

When asked to specify their income generating activity (IGA) *before* displacement, conflict- and climate-induced IDPs provide similar but heterogenous answers (multiple choice question). Similar, because agriculture and livestock remain the most important sources of income; heterogenous, as 90% of surveyed climate-induced IDPs reported an agricultural livelihood and 46% a livestock-related income generating activity (respectively +25 and +15 percentage points compared to conflict-induced IDPs). Such lack of diversification and overdependence on agricultural incomes is of course an index of greater vulnerability to the effects of climate change: the recurrence of natural hazards ends up deserting or eroding the land, destroying all biodiversity, to such an extent that it becomes impossible to maintain an agricultural activity or to raise livestock. People could not survive any longer in their community of origin and had to leave.

Regional differences: The most common IGAs were agriculture and livestock, but to a greater extent in South West State (SWS) (94% and 47% respectively) than in Jubaland (65% and 32% respectively). Pastoralism is a more important main IGA in Jubaland than in SWS: 20% of migrants in Jubaland declared being involved exclusively in livestock, but only 3.8% in SWS. In SWS, livestock raising is seen as a complementary IGA and fulfils the role of a 'savings account', i.e. people invest in their cattle as a way of saving money.

The importance of the construction industry: A relatively high percentage of surveyed IDPs (both conflict and climate-induced) replied that they worked in the construction industry. FGDs confirmed that these respondents were generally from periurban communities and hired as day labourers in the nearest urban hub; it suggests pre-displacement rural–urban migration dynamics, shifting the labour force from less productive agricultural sectors to more productive industrial sectors in urban hubs.

Table 11: Occupation or job before displacement (by type of displacement)

Previous jobs (before displacement)	*Other IDPs (conflict)*	*Climate-induced IDPs*
Agriculture	65%	90%
Livestock	31%	46%
Fishing	4%	1%
Construction	6%	8%
Transportation	4%	3%
Small retail	9%	8%
Household, domestic worker	6%	2%
Other	12%	1%

60 World Bank, 'Somalia Urbanisation Review: Somali Cities as Anchors of Development' (World Bank, 2020).

Lack of diversification of activities and skills: The lack of diversification of activities and skills in the community of origin (pre-displacement) seems to have consequences on the labour market in urban communities (post-displacement). In the table below, climate-induced IDPs are: 1) more affected than other surveyed groups by unemployment (16% vs. 11% and 9%); and 2) typically employed in casual and unskilled jobs in the agriculture (22%) and construction sectors (21%). The high percentage of conflict-induced IDPs who reported working in the construction sector is related to the construction boom in Kismayo where the demand for day labourers in the construction sector steadily increasing.

Kismayo: The main and current IGAs identified were construction, transportation, and small retail. Displaced communities are over-represented in the construction sector, particularly in Dalxiiska, with women and men equally represented in this growing sector, as unskilled day labourers. Only a limited proportion of host members (4%) and displaced individuals (6%) were involved in agriculture. Agriculture is dominated by men amongst the IDP population in Kismayo. IDPs in a protracted situation display slightly higher unemployment rates than other IDPs in Kismayo (12% versus 10%) and find employment opportunities in the same sectors: construction, small retail, and agriculture.

Baidoa: The main current IGAs for displaced individuals are agriculture, construction, and mechanical services. 20% of the IDP respondents declared being unemployed (against 10% in Kismayo) and more than half of protracted IDPs (54.2%) reported being unemployed, suggesting a higher level of vulnerability for them in Baidoa. Protracted IDPs are also involved in agriculture to a lesser extent than other IDPs (4.2% compared to 26% for the overall group of IDPs). This suggests that the practice of agriculture is decreasing over time, perhaps following the untying of rural-urban linkages.

Figure 12: IDPs' current occupation or job at the time of the interview (by city)

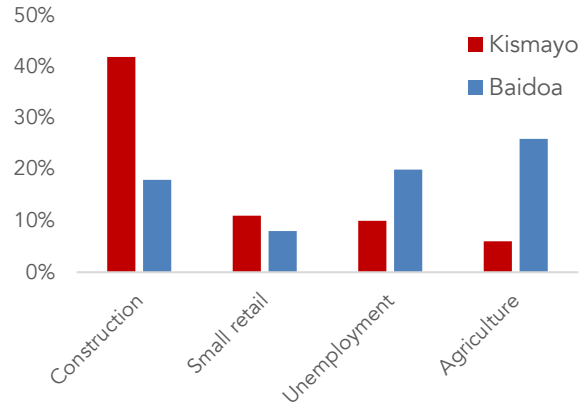


Figure 13: Current occupation or job at the time of the interview in Baidoa (by displacement profile)

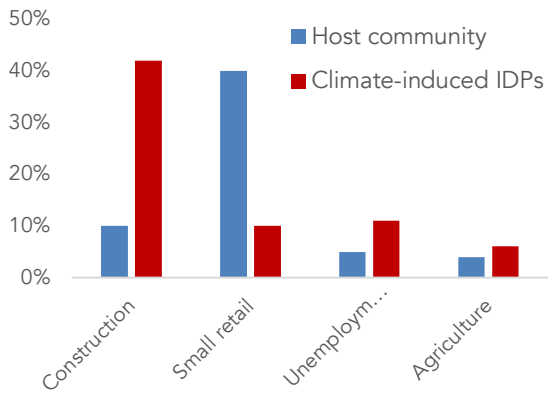


Table 12: Current occupation or job at the time of the interview (by displacement profile)

Jobs	Host Communities	Other IDPs (conflict)	Climate-induced IDPs
Agriculture	6%	10%	22%
Construction	12%	43%	21%
Unemployed	*9%*	*11%*	*16%*
Mechanic services	6%	5%	10%
Small Retail	35%	11%	8%
*Household, domestic worker**	5%	11%	8%
Transportation	9%	5%	3%
Livestock	5%	2%	2%
Teacher	2%	3%	1%
Fishing	7%	1%	1%
Restauration services	2%	1%	1%
Manufacturing	3%	1%	1%
Sewing, embroidery, tailoring	3%	1%	0%
Electricity, plumbing	3%	1%	0%

**=This category does not include housewives, which does not mean that domestic workers are remunerated.*

Activity pre- and post-displacement (by gender, for climate-induced IDPs)

The focus on gender highlights existing discrimination in the local labour market, as gender inequality clearly intersects with other variables (displacement, age, clan, marital status, etc.). However, the situation significantly differs between rural (pre-displacement) and urban (post-displacement) areas.

Pre-displacement situation: Men and women in pastoral and agro-pastoral communities have clearly defined roles and responsibilities in livestock and crop production activities. In the livestock subsector, men take care of all the activities related to camels, including buying, owning, grazing, milking, slaughtering, and selling them;[61] women and children are tasked with raising and tending sheep and goats, processing livestock products, including camel milk and ghee. In the agricultural subsector, women provide more than 60% of labour, according to the FAO (2018), even if 'the productivity of women, however, has been constrained by even weaker land tenure and more limited access to extension services than for men, with negative implications for food security, rural poverty, and overall economic growth.' (FAO, 2018) In the periphery of Kismayo (coastal areas), women and men also maintain distinct roles in the fisheries value chain. Men typically do the fishing, while women are engaged in processing, trading, and support activities.

Post-displacement situation: The situation of post-displacement women presents important differences, in a context of extreme household vulnerability. Traditional socio-cultural barriers and norms tend to have a different impact on women's agency and capacity. On the one hand, the table below shows that activities between men and women are less gender-dependent than pre-displacement: similar percentages of male and female IDPs are present in agriculture (22% and 21% respectively), construction (24% and 18%) or mechanical services (12% and 10%). Only small retail (6% and 16%) and domestic work (2% and 8%) have more gendered characteristics. However, it would be wrong to attribute a positive impact on women's labour market status to displacement. Given the endemic vulnerability of most of the camps and settlements studied, IDPs, both men and women, simply cannot afford not to work, even in menial jobs or in extremely low-paying, temporary and potentially harmful jobs. This is one of the reasons why so many displaced women work as daily or casual employees in the construction sector. As the group interviews and key informants suggest, women's work is indeed less paid and more precarious: 'We do not have any permanent source of income.' (FGD in Barwaaqo, Female participant), '(Compared to men) we may work for two days and then have nothing for several weeks' and (FGD in Dalxiiska, Female participant), and finally 'We are less paid than men and sometimes not even paid at all, for the same job in construction sites' (FGD in Towfiq, Female participant).

Table 13: Current occupation or job at the time of the interview (by gender)

Climate-induced female IDPs	*Male*	*Female*
Agriculture	22%	21%
Construction	24%	18%
Mechanic Services	12%	10%
Small retail	6%	16%
Household / Domestic Worker	2%	8%
Transportation	4%	1%
Livestock	1%	3%
Fishing	2%	1%
Other jobs or not reporting any job	27%	22%
Frequency	169	173

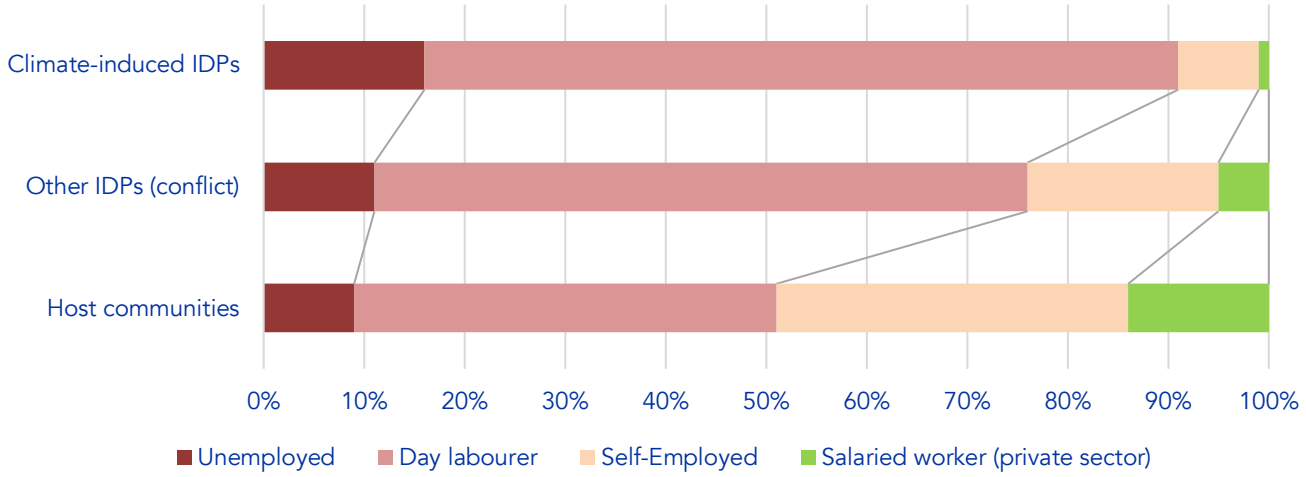
61 FAO (2018), confirmed by Focus Group Discussions in rural communities in the periphery of Baidoa.

Position, formality, informality

The diagram points to the increased vulnerability of climate-induced IDPs on the labour market: beyond the mere absence of activity (16% of respondents, compared to 11% of conflict-induced IDPs), extreme precariousness characterises their economic situation, with 75% of respondents defining themselves as "day labourers". Whilst 42% of host community members also see themselves "day labourers", another:

1. 35% define themselves as "self-employed" (pink) vs. 8% for climate-induced IDPs, which indicates a different relationship to the labour market, less dependence on external supply conditions and more agency;
2. 14% define themselves as "salaried workers" (light green), which underlines a certain degree of integration in the formal economy (contract with the employer, labour rights, possibility of legal recourse), while climate-induced have no access to this type of opportunity (1%) and only have access to the informal sector, which provides no security or protection.

Figure 12: Position on local labour markets (by displacement profile)



Source of income diversification

A household's financial capacity is linked to how diversified its sources of income are, and how it relies on multiple activities and/or different household members. Income diversification is a traditional coping strategy that can increase the resilience of the household.[62] As shown in the previous two tables, however, it is often difficult for displaced households to shift from their original single source of income (mainly agricultural, sometimes associated with revenues from livestock) to the realities of Baidoa and Kismayo urban labour markets. The ratio of income earners to total household members is dramatically higher for climate-induced IDPs (1:8), compared to host community members (1:4) and even conflict-induced IDPs (1:6) as shown below. The higher this ratio is, the more pressure is put on income earners and the less diversified the sources of income of the household are.

Why would climate-induced IDPs have such a significantly higher ratio? Findings from qualitative FGDs with climate-induced IDPs (in particular) suggest that the transition from rural or peri-urban ecosystems to urban labour markets is often a failure. In communities of origin, 'agriculture' is not a commercial activity but more geared to meet the subsistence needs of the household, with a farm

62 Dercon, S. (2002). Income Risk, Coping Strategies, and Safety Nets. World Bank.

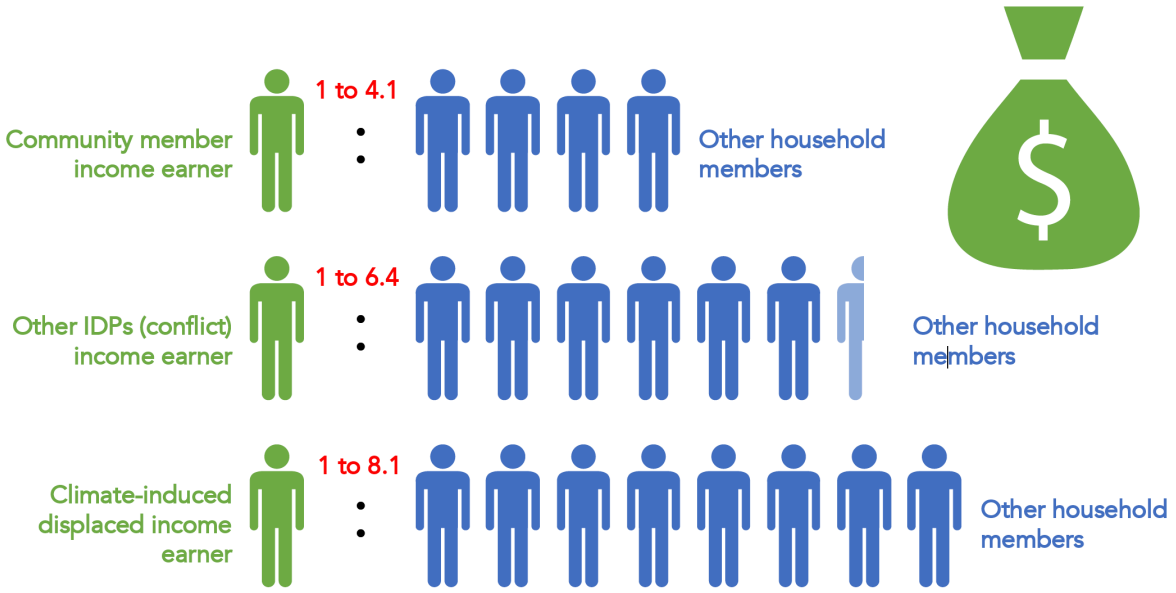
size of 2-4 ha. So very often, participants mentioned several complementary activities – such as livestock (e.g. camel milk and dairy in Baidoa, fishery in Kismayo) or construction (in peri-urban communities), as highlighted in Tables 12 and 13. The situation is radically different in the new urban context, whether it is an informal settlement or an IDP camp, as agriculture is no longer just subsistence farming but fully integrated to the economic market. And now, in Baidoa's informal labour markets, IDPs from neighbouring rural areas do not have the skills to claim employment in sectors they are not familiar with.

In Baidoa, a typical example is a climate-induced IDP family of 6 or 7 members with one income earner only generating an income from agricultural activities – either as a casual labourer or through subsistence agriculture (kitchen gardening). With the accumulation of disastrous climatic events, natural hazards, which also affect urban areas, as well as seasonality, the income earner is at permanent risk of losing his or her job. Such a lack of quantitative (number of earners) and qualitative (different sectors) diversification significantly weakens the resilience of the household.

Table 14: Income earner to total household members ratio (disaggregation by displacement profile)

	Average size of the household	*Average number of income earners*	*Ratio income earner vs. household member*
Host community	6.8	1.6	1: 4.1
Other IDPs (Conflict)	7.6	1.2	1: 6.4
Climate-induced IDPs	7.2	0.9	1: 8.1

Figure 13: Infographic representation of the income earner vs. total household members ratio (disaggregated by displacement profile)



Access to credit and loans

The qualitative assessment in Kismayo shows that access to informal credit remains limited to neighbours and community members for climate-induced IDPs, which is clearly indicative of a limited access to external financial resources. This confirms the higher socio-economic precariousness of climate-induced IDPs, but also the sudden nature and unpreparedness of the displacement that led thousands of them to Dalxiiska (in particular), as they do not have any safety net or socioeconomic network beyond the immediate circle of relatives and friends. The table below validate these findings, even if the differences between conflict- and climate-induced IDPs seem less significant: 18% of

surveyed climate-induced IDPs reported not having access to credit (9% for host community members, 5% for other IDPs) and only 28% of them use formal credit schemes (microcredit).

Table 15: Access to credit (by displacement profile)

Access to credit	*Microcredit*	*Bazaar, informal loans*	*Relatives and friends*	*Other (banks, self-help groups, dahabshil)*	*No access to credit*
Host community	40%	9%	46%	10%	9%
Other IDPs (conflict)	24%	15%	59%	2%	5%
Climate-induced IDPs	28%	26%	44%	0%	18%

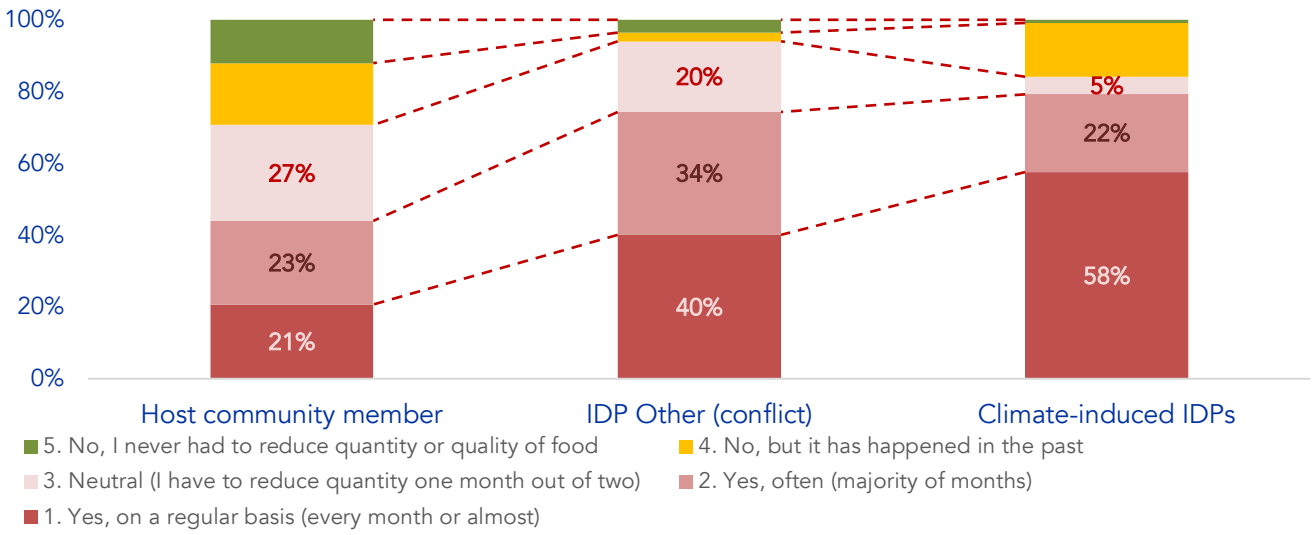
Human Capital

Human capital relates to the investments in education, health, hygiene, and nutrition of individuals. Within the scope this study, complex health and nutrition issues could not be addressed. However, survey findings on food consumption, hygiene, and education draw a clear picture of climate-induced specific vulnerabilities.

Food quality and diversity

When asked whether they had to reduce the quantity or quality of food consumed to cope with an unexpected shock or stressor in the past 12 months before the interview, 80% of climate-induced IDPs answered they had to do it either "on a regular (monthly) basis" or "often" (74% for other IDPs and 44% for host community members). Focusing exclusively on the most harmful coping strategies ("on a regular (monthly) basis"), there is an almost linear trend between host community members (21%), conflict-induced IDPs (40%) and climate-induced IDPs (58%).

Figure 14: Harmful coping strategy (food quantity or quality) by displacement profile



Sanitation and hygiene

Access to good sanitation and hygiene is another central dimension of human capital and an excellent indicator of the level of integration within the urban network. When a household is related to the sanitation system, its wastewater will be captured, stored, transported, treated and disposed; by contrast, shared or private latrines are generally not connected to the urban sanitation system and

are symptomatic of a relatively higher isolation. Informal settlements and shelters fall in this category. Table 16 confirms the initial vulnerability trends, in both Kismayo and Baidoa, with local nuances.

In Kismayo, 80% of (conflict-induced) IDPs share a pit latrine with neighbours in the community. This figure is higher in Dalxiiska (85%) than in Calanley (58%). In Calanley, 39.5% of respondents use private pit latrines, which once again shows better access to basic services in Calanley. In Baidoa, 98% of the surveyed (climate-induced) IDPs use shared pit latrines, in contrast to host community members' more varied answers. In both Barwaaqo and Towfiiq, respondents complained about the weak structure of the toilets, such as their shallowness which means they get filled very quickly, leading to increased incidences of flooding. As noted by a respondent in Towfiiq: "*We have toilets, but we no longer use them. The rains flooded them. Children openly defecate in nature, but adults share one toilet that has not been completely damaged by the floods.*" For this reason, even respondents from Barwaaqo site having to defecate in the open air, as highlighted by an IDP: "*Toilet water for hygiene purpose is hardly available. We use sticks and stones to clean ourselves. We become vulnerable to diseases such as cholera that leads to death cases*".

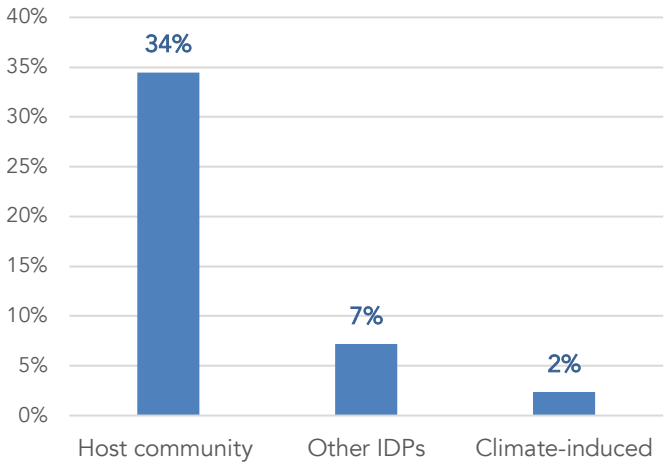
In practice, 'sharing' a latrine means sharing access with another 100 people on average, without any gender separation and no light at night. It is necessary to keep in mind the correlations between the type of sanitation facilities and the existing risks in terms of hygiene and health, in particular water borne diseases (diarrheal disease, cholera, norovirus infection, soil-transmitted helminths).[63]

Table 16: Sanitation facilities (by displacement profile)

	Flush toilet (private)	*Flush toilet (shared)*	*Pit latrine (private)*	*Pit latrine (shared)*	*Total*
Host community	10%	6%	46%	38%	117
Other IDPs (conflict)	0%	0%	20%	80%	167
Climate-induced IDPs	0%	1%	4%	96%	342

The percentage of households with a wastewater drainage system is an indication of people's vulnerability – just 2% of climate-induced displaced households have access to a drainage system in contrast to 34% for host community members. It also provides a tangible idea of the level of integration of the community within the urban network: "*While donors tend to see sanitation and hygiene as secondary, it is the foundational step that will later support actual durable solutions and integration within the city. If you don't put efforts in this crucial step, you more or less accept a pocket of poverty and chronic diseases at the outskirts of the city*" (NGO, Mogadishu, October 2020).

Figure 15: Percentage of households with a drainage system for wastewater (washing, laundry, businesses) - disaggregated by displacement profile



63 P. S. Ramlal et al., 'Relationships between Shared Sanitation Facilities and Diarrhoeal and Soil-Transmitted Helminth Infections: An Analytical Review', Journal of Water, Sanitation and Hygiene for Development 9, no. 2 (1 June 2019): 198–209.

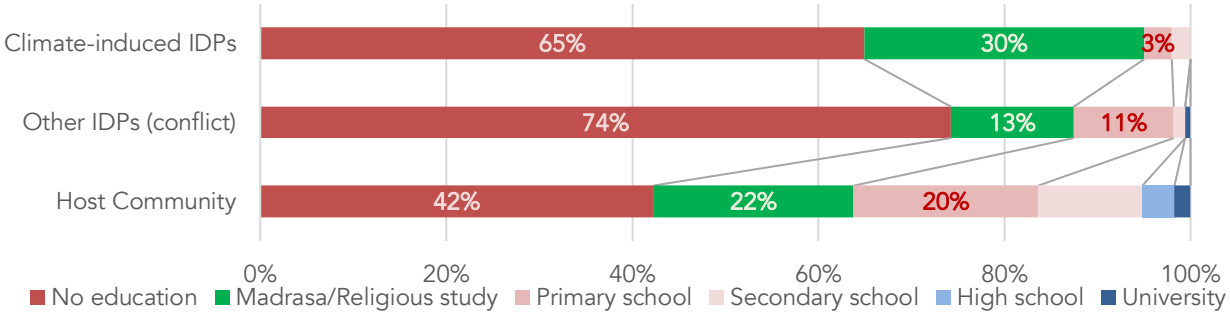
Education

On educational capital, this study is limited: the only question on education (on the highest level of education achieved by the survey respondent) is purely indicative and should be complemented with a more comprehensive and detailed analysis at the household level, along with a proper community assessment. The issue of 'school attendance' remains very low, especially at secondary level, for socio-economic reasons. Families often choose not to send their children to school because of the costs associated with schooling and the low short-term return on investment. With these caveats in mind, it should first of all be noted that the overall education level of the three groups remains extremely poor with a low of 42% of respondents who say they have received no education at all among the host communities. This threshold rises to 74% for conflict-induced and 65% for climate-induced IDPs.

Given that 75% of interviewees are included in the three age deciles 26-35, 36-45 and 46-55, it is likely that their level of education was directly or indirectly impacted by the 1991 civil war and subsequent collapse of an already fragile educational system. Low education levels are therefore hardly surprising. However, respondents can be divided into two specific groups: urban (host community) or rural (conflict- and climate-induced IDPs) background of origin. Using this variable, the specific vulnerability of climate-induced IDPs is better highlighted: only 3% of them reported attending primary school and 2% secondary. These figures go up to, respectively, 20% and 11% for host community members.

This initial analysis is corroborated by national education data. In particular, UNICEF points out that Somalia has one of the lowest primary net attendance ratios (NAR) with only 30% of boys and 21% of girls attending primary schools: 'While numerous inequities exist within Somalia, the most socially excluded groups are rural children (particularly those from pastoralist communities), children from households with the lowest wealth quintiles (including 'urban poor'), and children from IDP households. This is demonstrated by the primary school NAR of 39% in urban areas compared to a dismal 11% in rural areas (…) while those with the lowest access to education are pastoralist and IDP children.'[64] Given the rural origin of most climate-induced IDPs, both the data collected for the study and national-level analyses call for 'more attention being paid to child and adult literacy and education.' (NGO, Kismayo, October 2020)

Figure 16: Survey respondents' highest level of education (by displacement profile)



64 UNICEF Somalia, Education Strategy Note 2018-2020 –http://files.unicef.org/transparency/documents/Somalia%204.%20Education.pdf

Social Capital

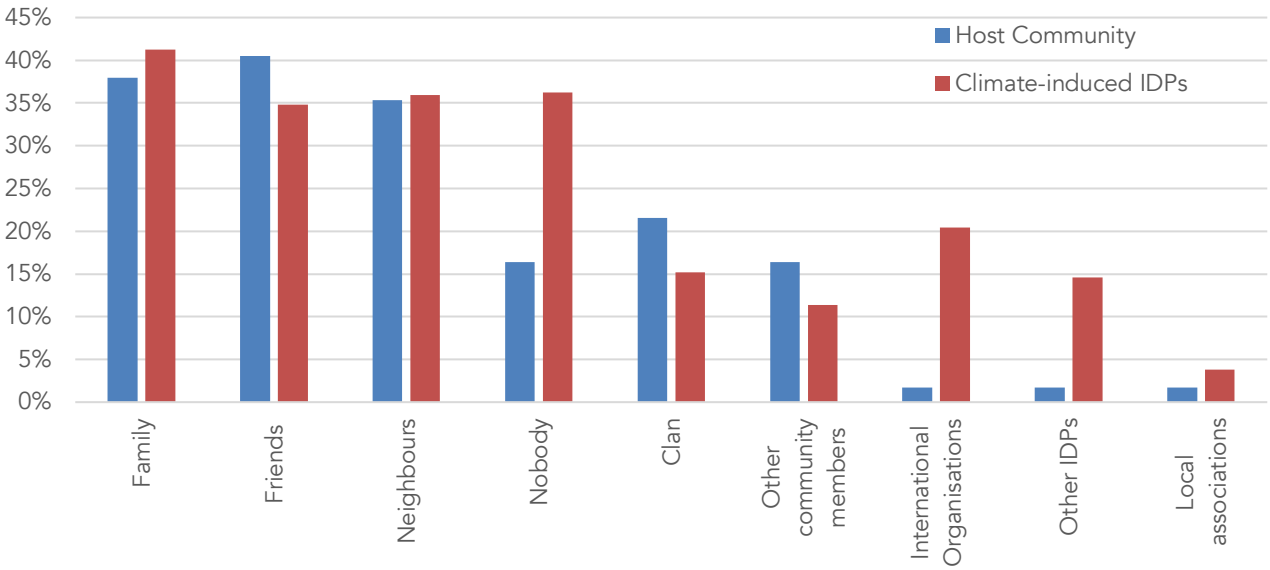
The definition of social capital is less tangible than those of human or financial capitals; it describes the effective functioning of interpersonal relationships within a community and therefore provides an essential measure of the values, cooperation, and reciprocity shared by its members. Individuals who can rely on strong and diversified social networks are able to seek for financial and in-kind assistance to mitigate negative shocks on the household. Less connected individuals are more vulnerable to external shocks and more dependent on assistance from local and international NGOs.

Survey data indicate that rural households in Somalia have different circles of social networks they can tap into.[65] They first seek help from neighbours, followed by the second circle which comprises of relatives (family) and friends, the third includes clan members, and as a last resort extended relatives living abroad. Severe natural hazards, because they affect all individuals of a given location, reduce or destroy the first social network circle (neighbours and friends), and therefore erode significantly the capacity of individuals to resist and recover from the shock. This subsection mainly focuses on two aspects of the social fabric, to give a representation of climate-induced IDPs' actual inclusion within the 'new' urban environment: first, by assessing their network; and secondly, by identifying existing (or past) drivers of tensions in the community.

Societal inclusion

When asked to identify their main social support network, both host community members and climate-induced IDPs prioritise the immediate circle of family (41% and 38%), friends (41% and 35%) and neighbours (35% and 36%). Nuances relate to a nexus of exclusion, assistance, and deprivation that perpetuate IDPs' (and particularly climate-induced IDPs') social isolation. Each of these key dimensions of climate-induced IDPs' social and societal vulnerability is further explained below.

Figure 17 Social support network by displacement profile



– **Clan: inclusive exclusion**

  The interplay of clan affiliation, displacement, and conflict has contributed to shaping the social, political, and territorial dynamics in many areas, such as Lower Shabelle, Juba Valley, Mogadishu and of course Kismayo and Baidoa. As highlighted in a 2014 World Bank report, 'such

65 This is also mentioned by Nisar Majid and Daniel Maxwell in their book "Famine in Somalia: Competing Imperatives, Collective Failures, 2011-12" (2016)

demographic impacts of displacement have served to both concentrate groups previously more mingled, as well as socially diversify the urban centres where people settle. (…) The question of durable solutions for IDPs is therefore closely related to clan dynamics.'[66] Historically, in Baidoa, the Rahanweyn clan is predominant among both host community members (especially in peripheral areas) and climate-induced displaced, who generally come from neighbouring areas. Under the generic Rahaweyn label, the Digil sub-clan consists of sedentary farmers, in contrast to the Mirifle who are mainly nomadic pastoralists. This homogeneity should not hide the extreme and fast-changing complexity of sub-clan affiliations that can lead to punctual clashes, historical resentments and active discriminations. For IDPs, supporting the clan structure and receiving the support of the clan remains essential, especially in a new urban environment, where traditional norms and references tend to get eroded.

– International organisations: assistance and dependency

In line with the 2012 Kampala Convention, IDPs are entitled to legal protection and assistance from their national government. UNHCR, IOM, NRC, and other agencies or NGOs assist IDPs in specific situations, but there is no single or specifically mandated UN agency or legal treaty covering their rights. The label itself – IDP – can be perceived as a stigmatisation by IDPs and host communities, which calls for a nuanced approach when it comes to IDPs' rights and access to assistance. Based on the quantitative data collected in Baidoa and Kismayo, there is undoubtedly a high level of assistance, in terms of coverage or outreach. Most respondents admitted to receiving some form of assistance, in particular climate-induced IDPs: 92% of climate-induced and 57% of conflict-induced IDPs, vs. 20% of host community members. These data and the complementary qualitative information collected in Baidoa and Kismayo corroborate the findings of the REF (2018) study on two specific points:

1) Assistance is perceived as a short-term band aid; an 'extremely limited and often one-off contribution' (REF, 2018) confirmed by all the focus group participants who accepted to share their views on the topic – 'the support from international NGOs is welcome and needed, but it will not solve our problems and prevent us from falling into poverty';[67]
2) Levels of assistance were significantly higher in Baidoa (92% for the present study and 83% for REF) than in Kismayo (57% and 63%,), which can be attributed to the presence of programmes with a heavier and clearer focus on urban issues and IDP protection in Baidoa.

In this regard, assistance from international NGOs or UN agencies cannot be seen as contributing structurally to the resilience of IDP households, given its uncertainty, scarcity and uneven frequency.

The breakdown by type of assistance confirms that international aid generally consists of emergency interventions: water and food (82% of surveyed climate-induced IDPs who reported receiving some assistance), shelter and housing (32%), and medical treatment and hygiene (30%). The status of cash assistance (73%) is more positively ambiguous and the REF (2018) study notes that while cash is generally depleted almost immediately, it can also contribute to strengthening the resilience of rural communities through internal remittances and assistance sharing: cash-based interventions may be 'an efficient way of providing assistance to less accessible areas, which are often out of reach of conventional service providers. This assistance can help support community resilience, thereby preventing the further displacement of people into urban centres.'

66 World Bank, 'Analysis of Displacement in Somalia, Social Development - Global Programme on Forced Displacement' (Washington, D.C.: World Bank, 2014). From an interview with Ken Menkhaus in July 2013.
67 Research and Evidence Facility (REF), 'Return and (Re)Integration After Displacement: Belonging, Labelling and Livelihoods in Three Urban Cities' (London and Nairobi: EU Trust Fund for Africa (Horn of Africa Window) Research and Evidence Facility, n.d.).

Table 17: Level, modalities and type of assistance received from international organisations (by displacement profile)

	Host Communities	Other IDPs (conflict)	Climate-induced IDPs
Since you settled in your current location, have you received any assistance from international NGOs? - Yes	**23%**	**57%**	**92%**
If yes… Water and food	59%	57%	82%
Financial Support / Cash grant	21%	42%	73%
Shelter, housing	22%	17%	32%
Medical treatment and hygiene	41%	53%	30%
Education	7%	17%	17%
Job placement	7%	4%	15%
Business start-up	4%	1%	15%
Information, Legal counselling	11%	4%	10%
Training or TVET classes	1%	4%	1%

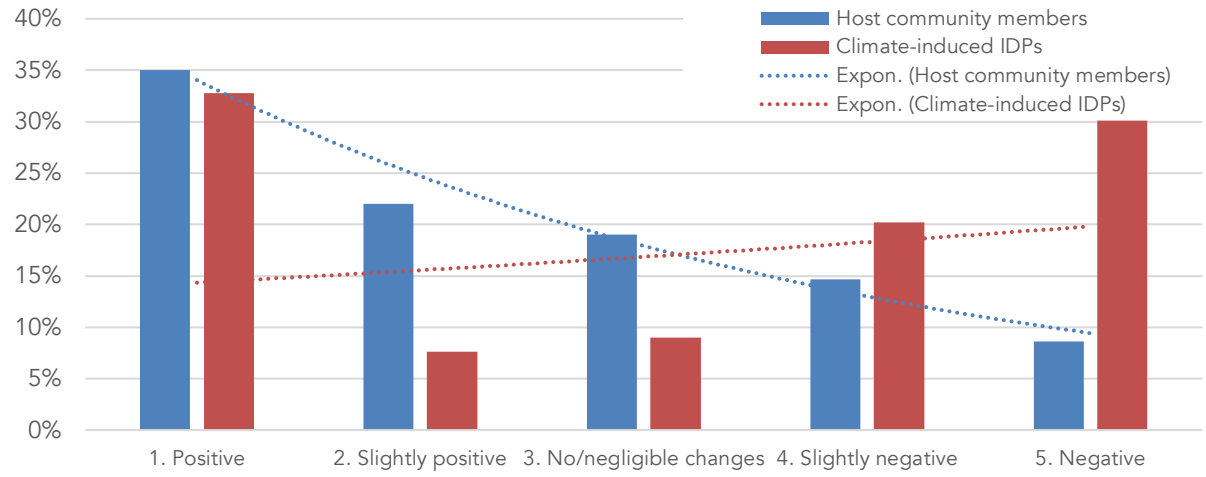
– **Nobody: deprivation with nuances**

Overall, a significantly higher percentage (36% vs. 16% for host community members) of climate-induced IDPs reported having nobody to revert to in case they need support. Given the concentration of climate-induced IDPs in Baidoa, it is not surprising to observe that the percentage of respondents who have "nobody" (40%) represents twice the percentage of Kismayo: climate-induced displaced populations generally left rural areas that had gradually become uninhabitable, so they carry with them the only resources they have and concentrate all their tangible and intangible assets in the new camp or settlement. There were, however, some nuances, due to specific local dynamics and history: the figure was lower in Barwaaqo (34%) and much higher in Towfiiq (49%). This is consistent with the fact that IDPs in Towfiiq declared being highly dependent on external assistance from NGOs throughout the data collection. Likewise, in Kismayo, a significant number of surveyed IDPs (both conflict- and climate-induced) have inexistent or weak social networks: 23% of respondents declared having nobody to revert to in case of negative shocks on the household. Similarly, though local nuances can be noted indicative of different degrees of integration: IDPs in Calanley have stronger networks in place – especially when it comes to the second and third circle identified earlier (relatives and clan members): they reported being able to revert to family (34% versus 24%), friends (35% versus 22%), and clan members (18% versus 2%) at a higher extent than migrants in Dalxiiska.

Societal fabric

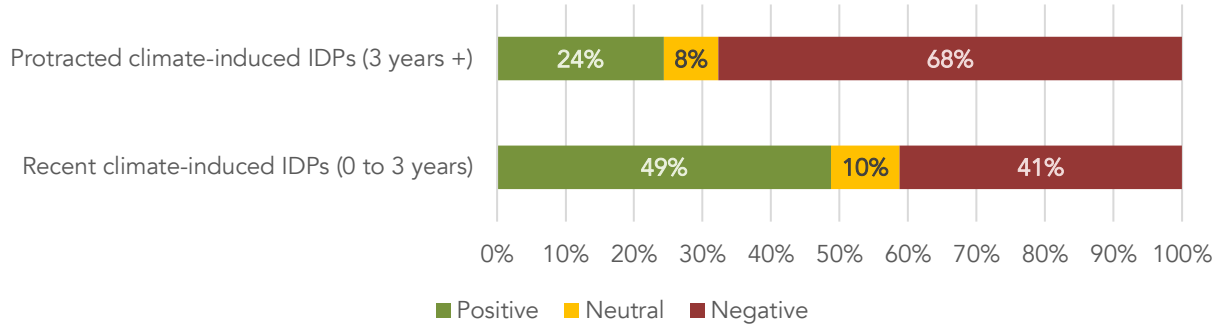
How do local communities perceive a sudden influx of displaced persons in their direct neighbourhood? Counter-intuitively, the views of local residents are generally more positive: 76% of host community members consider that IDPs bring 'positive', 'slightly positive' or 'negligible' changes to their new environment, while only 50% of surveyed climate-induced IDPs believe so. More interestingly when looking at the trends (red-dotted line on the graph below), there is a striking tension between 'positive' (33%) and 'negative' (30%) in the spectrum of climate-induced IDPs' answers, while the trend is more linear and decreasing for host community members (from 35% positive to 9% of negative views – blue-dotted line).

Figure 18: Perceptions of IDPs' presence (by displacement profile)



Such an unusual polarisation in the responses of climate-induced IDPs is explained by the "duration of stay". In contrast to recently displaced households, who tend to value the contribution of other displaced people, protracted IDPs seem more critical, as shown in Figure 21. Even if long-term displaced people are only slightly better off than those who have recently arrived, they tend to consider that an additional influx of displaced households from rural areas cannot contribute to their own integration into the local urban service network: "*protracted IDPs see themselves as caught between the hammer and the anvil. They are not integrated yet and they are less likely to receive assistance from NGOs or emergency interventions anymore*" (NGO, Baidoa, September 2019).

Figure 19: Perceptions of IDPs' presence among climate-induced IDPs (by duration of stay - recent/protracted)



What are the areas of disagreement or grounds for conflict between communities? The main bone of contention relates to the sharing of resources: according to the climate-induced IDPs interviewed who reported some tensions between IDPs and local communities, competition for water (90%), food (69%), and land (68%) is the triad that explains not only conflicts within the group itself but also with local communities. In a semi-arid environment where water management remains poorly regulated and where private actors do not have any interest in covering peripheral areas, IDPs experience the consequences of competition for resources all the more: "*In the absence of state-led service delivery, private sector companies did step in to provide public services like water, sanitation and electricity. The quality and reliability of these services can vary but is generally positively perceived in both Kismayo and Baidoa. However, the absence of regulation (quality and prices) makes these services unaffordable to a majority of people.*" (EU, Mogadishu, June 2020)

At the same time, IDPs significantly contribute to accentuating the competition for resources, as confirmed by UNHABITAT (2019) and the World Bank (2020). Conflict-induced IDPs (mainly in Kismayo) and host communities tend to downplay the importance of competitions over natural resources. Only 20% of conflict-induced IDPs see competition for land as a driver of conflict (-48 percentage points vs. climate-induced IDPs), and 62% of host community respondents perceive competition for water as a source of tension with IDPs (-28 percentage points vs. climate-induced IDPs). Rather than highlighting any vulnerable difference between climate- and conflict-induced IDPs – which would be purely contextual, as both groups are similarly exposed to multiple risks – these data further highlight how critical the situation is in Baidoa for climate-induced IDPs.

Table 18: Main areas of disagreement between host community members and climate-induced IDPs

	Competition for land	Competition for water	Competition for food	Crime and violence
Host community	43%	62%	48%	24%
Other IDPs (conflict)	20%	78%	37%	56%
Climate-induced IDPs	68%	90%	69%	32%

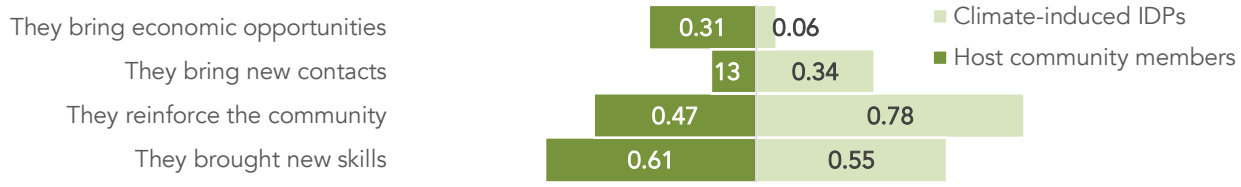
On the positive side, respondents unanimously consider that IDPs:

- **Bring new skills,** mainly agricultural, to their new urban environment. A breakdown by displacement profile shows that 61% of host community members and 55% of climate-induced IDPs mention it as a positive contribution;

- **Reinforce the community** (47% of surveyed host community members and 78% of surveyed climate-induced IDPs). This more surprising finding may have to do with the common belonging to the Rahanweyn clan (and Digil subclan);

- The perception of IDPs' economic and social added value are drastically opposed: 31% of surveyed local residents consider that IDPs have an **economic potential**, because they attract international assistance and create pockets of agricultural development, while IDPs see the economic issue through the prism of integration into the existing local labour market (hence their very low percentage of positive responses - 6%). This analysis is – negatively – corroborated by survey host community members' scepticism about IDPs capacity to '**bring new contacts'** and create social and professional networks: only 13% perceive it as a positive contribution.

Figure 20: Perceptions of the positive contributions of IDPs' presence (by displacement profile)



Respondents who are critical of IDPs' presence and sceptical of their contribution put emphasis on:

- **Competition for resources** (63% of surveyed host community members and up to 86% of surveyed climate-induced IDPs) and;

- Additional **pressure on the local labour market** (46% and 47%). FGDs with local community members illustrate these findings: situated at the centre of Baidoa, the Isha spring has been

providing water for centuries to the region and residents are strongly attached to it. According to host community members, the Isha spring has been massively polluted with household wastewater as well as solid and liquid waste from burgeoning economic activities. Such visible and tangible consequences of rapid urbanisation dynamics – whatever the role played by IDPs –contribute to degrading their image among local communities.

– Lastly, only IDPs perceive **crime and violence** as a direct negative consequence of their presence. It suggests that criminality levels remain concerning in IDP camps and informal settlements in both Kismayo and Baidoa. The extreme socioeconomic vulnerability of these populations is probably the main driver of this heightened insecurity and violence.

Figure 21: Perceptions of the negative contributions of IDPs' presence (by displacement profile)

Natural Capital (water and land)

In rural communities land is a critical productive asset for the poor. In urban, peri-urban and immediately peripheral areas, land disputes remain the most relevant economic and political lens to understand past and existing dynamics between clans and sub-clans, between pastoralist and sedentary communities, as well as IDPs, returnees and local residents. In Baidoa and Kismayo, the lack of clear tenure security and title deeds mirror the local political history of conflict, contradictions between customary and municipal regulations, and of course inter-ethnic and clan dynamics. As highlighted by the World Bank (2020), "*insecure land tenure and contested titling have made purchasing and maintaining possession of valuable urban real estate a fraught endeavour.*"

Given the absence of policies regulating land rights, use and management system in both cities, the entanglement of these different formal and informal strata can easily lead to forced evictions and the violation of housing, land and property rights of IDPs. They are easy prey for opportunistic landowners who often seek to expropriate them as the progressive inclusion of IDP settlements in the urban fabric leads to a revaluation of land. And in this fierce competition over land, IDPs have no effective rights or bargaining power to seek restitution or compensation: 'When you invest to have access to water on private land – due to public land scarcity, you never know how sustainable this is because the individual can just decide one day to use the land for another purpose once the value has increased. It is possibly the main barrier for Baidoa but also for most of the urban centres within Somalia.'[68] IDPs are de facto at higher risk of eviction. As mentioned by REF (2018), forced evictions are a violation of several provisions of international human rights law: from human rights violation (gender-based violence, child protection concerns, family separation) to inadequate notice period and destruction of personal belongings. Finally, forced evictions lead to new displacements and further delay the prospect of a sustainable solution and real integration into the urban network in Baidoa or Kismayo.

Land ownership: Overall, 39% of the surveyed climate-induced IDPs reported having a written agreement or document for the land they live in (to be compared with 57% for host community

68 KII with INGO, Baidoa, May 2020.

members). The situation of the conflict-induced and few climate-induced IDPs in Kismayo is clearly more worrisome given their quasi-absence of land deeds.

Table 19: Land ownership status (by displacement profile)

Do you have a written agreement for the land you live in?	
Host community members	57%
Other IDPs (conflict)	11%
Climate-induced IDPs	39%

Housing agreement: In terms of legal protection and housing rights, the situation can vary considerably from place to place, and the situation of conflict-induced IDPs in Kismayo is clearly more precarious. Only 5% of the displaced persons (due to the conflict) in Kismayo had formal housing agreements compared to 65% of the host community. The situation is similar in Calanley, where migrants are better integrated, as only 7% reported having a housing agreement. Here again, the few climate-induced IDPs in Kismayo show a higher level of vulnerability related to housing as the proportion of participants who had housing agreements was lower than other migrants (none in Calanley and only 3.8% in Dalxiiska). By contrast, in Towfiiq (Baidoa), 95% of (climate-induced) IDPs reported having a housing agreement, due to the fact that they pay a rent. Overall, as shown in the table below, 49% of the surveyed climate-induced IDPs reported owning.

Table 20: Rental status in Kismayo and Baidoa (by displacement profile)

	1. Own	*2. Rent*	*3. Squatting*	*Frequency*
Host community members	68%	25%	7%	n = 116
Other IDPs (conflict)	19%	15%	66%	n = 167
Climate-induced IDPs	49%	33%	18%	n = 342

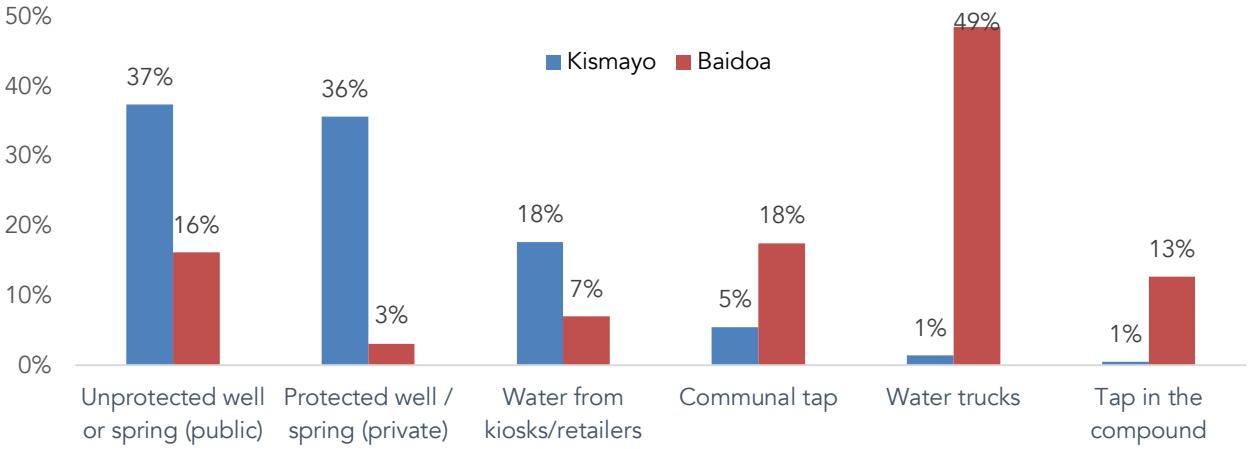
Eviction: Finally, when asked whether their household has been affected by either the loss of their land or an eviction, respondents confirmed that land tenure remains extremely uncertain, even for host community members. The informal nature of today's urbanisation and the absence of land administration are compounding factors for everyone, even if host community members remain slightly better off (9% victims of eviction) compared to climate-induced IDPs (11%) and conflict-induced IDPs (22%). In this particular case, location matters because the higher proportion of climate-displaced people in the Barwaaqo (Baidoa) relocation site creates a bias (they are not immediately threatened with eviction). The vulnerability of IDPs in Kismayo (mainly conflict-induced and a few climate-induced), already highlighted in this section, is confirmed by higher percentages of 'loss of land' (13%) and 'eviction' (22%). In practice, displaced households live under constant threat of eviction and are not even allowed to improve their living conditions and be hopeful about the future: "*Why would landowners let them raise their living standards? IDPs cannot even build pit latrines or waste collection points, as it is not in the interest of landowners to make their property inhabitable. They are waiting for an opportunity to sell the land at a good price and want to make sure that squatters or tenants can be evicted easily.*" (NGO, November 2020).

Table 21: Loss of land and eviction during the last 12 months (by displacement profile)

	Host Communities	*Other IDPs (conflict)*	*Climate-induced IDPs*
Loss of land	4%	13%	9%
Eviction	9%	22%	11%

Access to water: A sustainable source of water is an essential component of a durable solution to displacement. The different sources of water in Baidoa and Kismayo are: taps (inside the house, inside the compound or communal taps), water trucking, water from retailers (kiosks), private (protected) wells or springs, and public (unprotected) wells or springs. The situations of Baidoa and Kismayo present similarities, but the geographic specificities of each city also impact the challenges they face. The community consultations undertaken by ReDSS and Samuel Hall in 2019 in Kismayo and Baidoa reveal that wells and water points are not close to IDP sites as presented in Figure 24. Specific analyses for Baidoa and Kismayo can be found in the annex.

Figure 22: Water source during dry season, migrants in Kismayo vs. Baidoa (for IDPs only)



Intersectionality: gender inequality and displacement

This last subsection focuses on intersectional discrimination, which describes the situation of most women in Baidoa and Kismayo IDP camps and settlements.[69] In particular, the situation of single female heads of households presents the interrelation of several grounds of discrimination that translated into an increased socioeconomic vulnerability.

Gender inequality, internal displacement, marital status

The literature shows that slow-onset disasters that affect local ecosystems and agricultural livelihoods force people to undergo routine economic migration initially, followed later by permanent migration. There is also agreement that unprepared displacement to urban areas without appropriate urban planning has long-term negative consequences for the livelihoods of displaced people – and particularly women.[70] These conclusions are confirmed by the findings of the present study. Women are more vulnerable in both locations, at an even higher level in Baidoa. Female respondents displayed significantly higher unemployment rates and were more likely to live in makeshift shelters.

Similarly, the low level and difficult access to health services in the IDP camps in Baidoa and Kismayo tends to particularly disadvantage women, according to a local NGO representative working in Kismayo: 'the low quality and expensive healthcare service in Kismayo demands attention, in particular the resulting gap in maternal healthcare. Efforts to address health-related issues are continuing and a new health centre is being built. Other (mobile) healthcare facilities are needed, however, alongside training on hygiene promotion and the provision of sanitary towels for women

69 As defined by Crenshaw, K. (1989). 'Demarginalizing the intersection of race and sex: a black feminist critique of anti-discrimination doctrine, feminist theory, and anti-racist policies', University of Chicago Legal Forum, Vol. 4, 1989.
70 Islam and M. Shamsuddoha, 2017

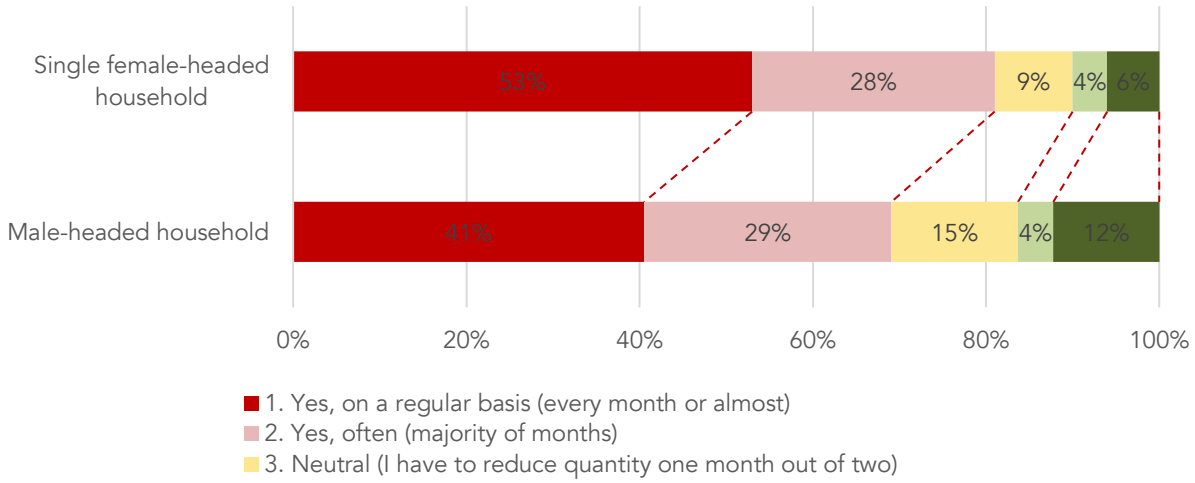
and girls. Overall, minimum standards for water and sanitation need to be significantly raised, in cooperation with the Ministry of Planning and International Cooperation.'[71]

The intersectionality of gender inequality and other social stigma – in particular migration profile, marital status, and sometimes clan affiliation – relates to vulnerability issues in both surveyed areas. As highlighted by a key informant: 'Displaced women are often left in a humanitarian vacuum in IDP camps. More than men. They suffer from their gender, their migration status, their marital status. Many of them are widowed, divorced, abandoned or single heads of household. They generally have no access to health care, mental health or even safe delivery. They live in constant fear of rape and sexual violence, which are very common in IDP camps. And the absence of formal judicial structures - and the gradual disappearance of traditional clan structures - makes recourse virtually impossible in the urban centres of Mogadishu, Baidoa or Kismayo.'[72] This situation of increased vulnerability was often highlighted spontaneously by female focus group participants: 'Some of us especially women went out in the forest to collect firewood in which later they sale in Baidoa market to make daily living. This is very risk because women were raped on their way to the forest.' (FGD, Barwaaqo, Female participant)

Vulnerability patterns of single female-headed households

The quantitative findings of the survey show how gendered norms intersect with marital statuses and displacement profiles to structure the level of integration within the community. Single female-headed households suffer from additional forms of social stigmatisation and were for instance more dependent on assistance to access water, according to anecdotal evidence shared by focus group discussion participants. There were no significant differences between climate-induced and conflict-induced single female-headed households – although the sample size of conflict-induced widows, divorced or single women was too small to draw an indicative conclusion. The first figure below shows that, on average, among climate-induced IDPs, female-headed single-parent households are significantly more likely to resort to harmful coping strategies such as 'reducing the quantity or quality of food' when faced with economic shocks or stressors: 81% reported reducing the ration or dietary diversity 'regularly' or 'often', when this figure drops to 70% (minus 11 percentage points) for male-headed households.

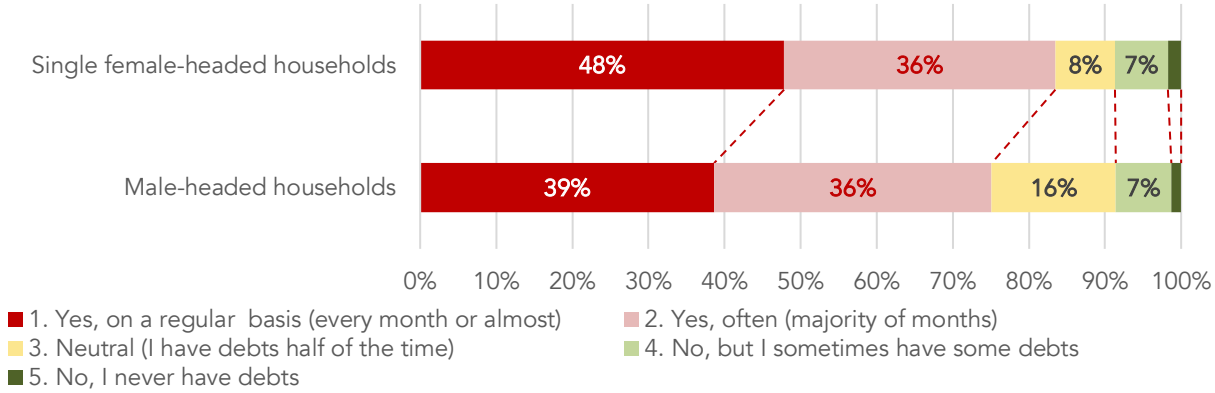
Figure 23: Climate-induced IDPs' harmful coping strategies (reduction of food quantity or quality, by gender)



71 KII, local NGO, Kismayo, April 2020.
72 KII, international NGO, Nairobi, January 2021.

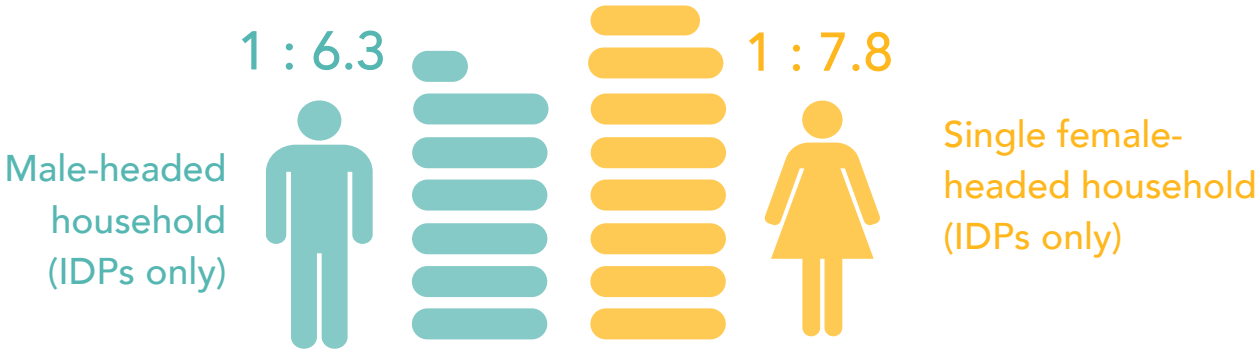
A similar gap is observed when considering indebtedness and access to loans. On the former, among climate-induced IDPs, 84% of female-headed households reported having more debts than their income 'on a regular basis' or 'often', compared to 75% for male-headed households.

Figure 24: Climate-induced IDPs' indebtedness (frequency, by gender)



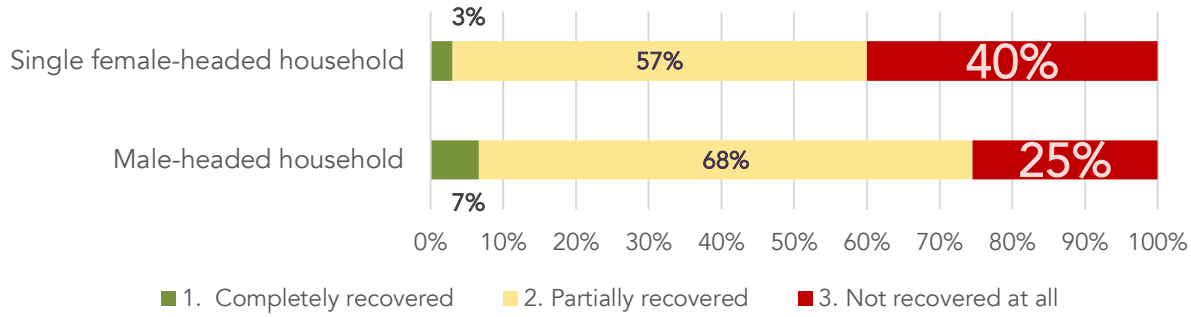
The ratio of income earners to total household members is significantly higher for IDP single female headed households (1:7.8, both climate- and conflict-induced), compared to IDP male-headed households (1:6.3). The data confirm the lack of economic agency and financial inclusion of most single female-headed households. These can be considered the most vulnerable households within the pockets of extreme poverty and vulnerability represented by the IDP settlements and camps in Baidoa and Kismayo. Single-female heads of households have fewer economic opportunities and sources of income, lower wages and face greater economic pressure, in situations where they are often stigmatised by displaced persons (as single women) and hosts (as displaced persons).

Figure 25: Infographic representation of the income earner vs. total household members ratio (both climate- and conflict-induced IDP, disaggregated by gender)



The increased socio-economic vulnerability profile of single female-headed households makes them less resilient to climatic or economic shocks. Their absorptive and adaptive capacities are diminished by their lack of agency and capacity. This precarious reality is reflected in the study's responses to the question of how households had reacted to the last climate or security shock: while 25% of male-headed IDP households respond that they did not recover from the shock, this figure rises to 40% for female-headed IDP households, who are clearly victims of their lack of options and alternatives for dealing with the unpredictable. The risk of moving from a position of discrimination and vulnerability to one of precariousness and marginalisation is therefore increased for this segment of the IDP population, which suffers not only from its migratory status but also from the intersectionality between gender and marital/social status.

Figure 26: Capacity to recover from climate-induced disasters and climate-related shocks (by gender)



Picture 2: Women using a well in the Towfiq IDP camp (April 2020)

From vulnerability to precariousness and marginalisation

As often noted in the academic literature on Sub-Saharan Africa, the more a country's economy is based on agricultural (or livestock, in the case of Somalia) activity, the more climatic anomalies have a significant impact on its economy, development, and migration patterns, and displacement dynamics.[73] The exposure to sudden and slow onset events is often described as one of the dimensions of household vulnerability that intersects with the other layers of vulnerability experienced by the household – which vary based on spatial (urban/rural), social (displaced/host community), and gender criteria – it is important to highlight its determining nature in the context of Somalia. By applying Moser's asset-based vulnerability and adaptation framework to the situation of different communities it is now possible to better understand what vulnerability means in urban settings in Kismayo and Baidoa: **in both locations, climate-induced IDPs display a higher level of vulnerability relating to all the assets identified: physical, financial, human, social and natural.**

However, the analytical framework used does not aim to classify or prioritise levels of deprivation or vulnerability. Certainly, the data collected could suggest, for example, that conflict-induced are globally better off than climate-induced, if one takes into account Moser's five capital assets. Such a conclusion would be erroneous and dangerous. It would be erroneous because a large majority of the climate-induced resided in Baidoa (281/342, or 82%), whereas the surveyed conflict-induced were almost all from Kismayo (156/167, or 93.5%). **It would be unwise to establish hierarchies using only the variable of the type of forced displacement (climate or conflict). Contextual determinants play an equally, if not more, important role.** The geographical location, the economic dynamism of the local market, sociocultural and ethno-linguistic variables, and many other factors may explain the greater or lesser integration or vulnerability of IDPs – regardless of displacement drivers. Climate-induced IDPs' initial place of settlement contributes to shaping their adaptation capacity, as it can be included in the rest of the urban and peri-urban network, as evidenced in Dalxiiska and Towfiiq (IDP camps poorly integrated with the rest of the urban network): IDPs surveyed in Dalxiiska (Kismayo) displayed a higher level of vulnerability, while in Baidoa, Towfiiq IDPs appear more vulnerable. In both cases, the type of displacement (climate vs. conflict) or the city (Baidoa vs. Kismayo) are explanatory determinants among others, whereas the exclusion dynamics specific to the political, social and economic in Dalxiiska and Towfiq probably have more to tell. Finally, **establishing hierarchies and potentially priorities in terms of assistance on the sole basis of a comparative exercise between vulnerable and acutely vulnerable groups is ethically questionable and is not the study's objective.**

What can be learned, therefore, from the comparative analysis between the different groups of host community members, conflict-induced and climate-induced IDPs?

1. Establishing differences and comparisons between host community members and IDPs is useful in order to understand the difficulties of integrating the latter into the urban fabric as well as identifying possible durable solutions;
2. Comparing climate- and conflict-induced IDPs allows to identify specific vulnerabilities of each group. For example, on the labour market, the specific socio-economic profile of surveyed climate-induced IDPs was a particularly increased vulnerability factor: coming from rural areas, they have often had to abandon their pre-displacement sources of income in agriculture or animal husbandry and find themselves without any useful qualifications for the urban labour market.

73 Luca Marchiori, Jean-François Maystadt, and Ingmar Schumacher, 'The Impact of Weather Anomalies on Migration in Sub-Saharan Africa', Journal of Environmental Economics and Management 63, no. 3 (May 2012): 355–74.

3. Inter-group comparisons provide useful information on urban areas themselves, pointing to specific problems of eviction, hygiene, access to transport, etc., which can not only guide future assistance but, more importantly, can inform urban policies.

To conclude, what experience does each of the three groups have of the urban ecosystem? By asking host community members, as well as climate- and conflict-induced IDPs, how they evaluate (on a 5-point scale) the access to key services in their respective communities, the figures below capture subjective experiences of inclusion and exclusion.

Figure 27: Access to services (subjective assessment - Host community members)

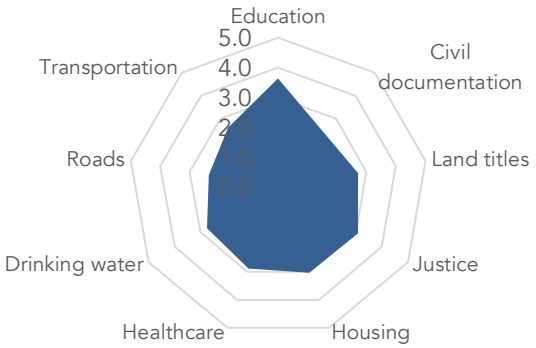


Figure 28: Access to services (subjective assessment - Conflict-induced IDPs)

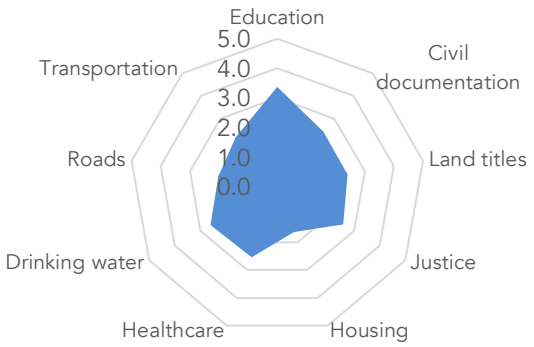
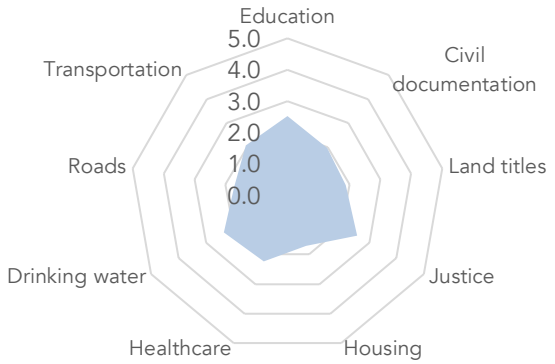


Figure 29: Access to services (subjective assessment - climate-induced IDPs)



Several elements of analysis should be highlighted, which validate and deepen the analysis of vulnerabilities by the asset-based vulnerability framework carried out previously:

- Some dimensions are structurally weak and refer to general problems of administration or urban services independently of the groups considered (land titles, civil documentation, and to a lesser extent transportation);

- By contrast, there are challenges specific to the situation of displacement, which underline the precarious situation or 'permanent transition' of displaced populations in Baidoa and Kismayo. This is particularly the case for housing, access to justice, healthcare, drinking water, and roads; and

- Surveyed climate-induced IDPs have a vulnerability profile that brings them closer to precariousness. Three dimensions are of particular concern: housing, healthcare, and education.

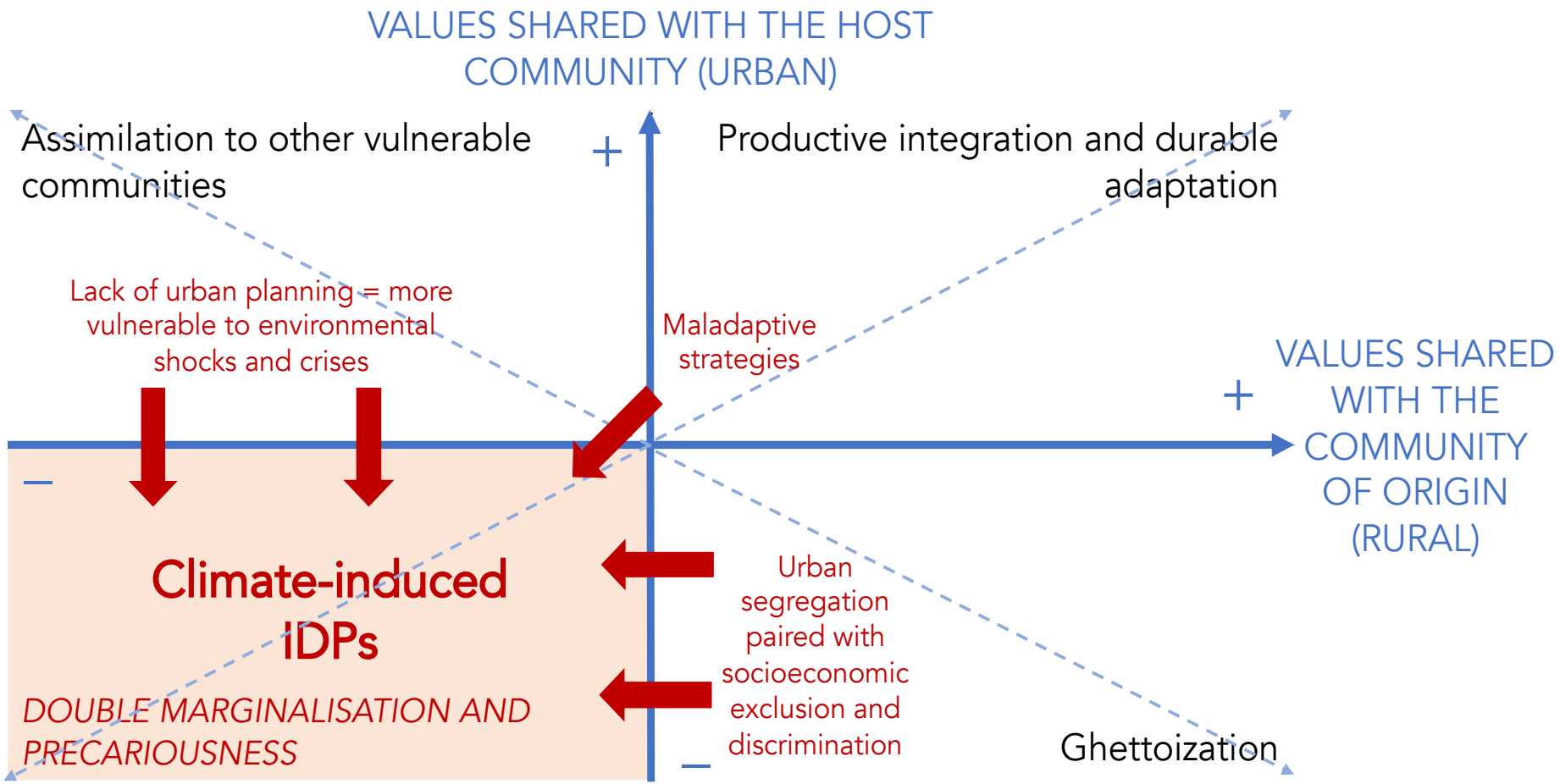
These indicators synthesise the situation of climate-induced in Baidoa and Kismayo: poor housing (fear of eviction) is indicative of their structural instability; low healthcare scores confirm that they living conditions are particularly poor (sanitation and hygiene); and finally the very low scores in education not only highlight the absence of primary or secondary schools in informal settlements but also the lack of long-term prospects for families: in a situation of extreme deprivation and survival, the education and development of the next generation is often perceived as secondary.

Figure 32 below[74] illustrates the precariousness of climate-induced IDPs as evidenced by the field research conducted in Baidoa and Kismayo. The two axes represent the relationship patterns between migrants, on the one hand, and the community of origin and host community, on the other. What is called integration will depend on how not to lose the link with the past (emotionally but also through skills, network, culture, etc.) while at the same time forging new links with the present (economically, culturally, and socially). The ability to integrate and develop one's agency in the future will depend on the position on the two axes: 1) reproduction of the past and segregation in ghettoisation[75]; 2) repetition of the present and assimilation into the poorest communities of the host community in assimilation; 3) creation of a future irreducible to the past and present in creative integration; 4) impossibility of being able to represent oneself and build a future in double marginalisation.

The absence of urban planning, but also of institutions and socialisation processes, means that climate-induced IDPs are torn between contradictory dynamics: between a world they no longer know (rural) and a world they do not know (urban), between past and present, between impossible resilience and the absence of adaptive strategies. This process can be described as 'precariousness' or double marginalisation: climate-induced IDPs in Dalxiiska and Towfiiq run the risk of falling in the precariousness trap because of multiple compounding factors, such as 1) the lack of urban planning and governance (policy level), 2) the absence of socioeconomic integration mechanisms (community level), and additional 3) short-term maladaptive strategies (household level).

74 Adapted from Metraux, J-C. (2013) La migration comme métaphore, La Dispute editions, Switzerland.
75 This process consists in keeping everything from its culture of origin without taking anything from the host culture. As Jean-Claude Métraux explains about the impact of ghettoisation " (...) migrant communities therefore try to cower to protect their gem, withdraw into barbed-wire enclaves where they reproduce their world at the very heart of our world. Seclusion in hermetically sealed spaces creates ghettos where belonging, which is infinite but now finished, is frozen and impoverished" (Métraux, 2011, p. 83).

Figure 30: Climate-induced IDPs' double marginalisation (precariousness) – adapted from Metraux



Credit: Samuel Hall, Barwaqo, Baidoa, May 2020

CIMILADA (climate)

CIMILADA (climate)

A community lens on climate change

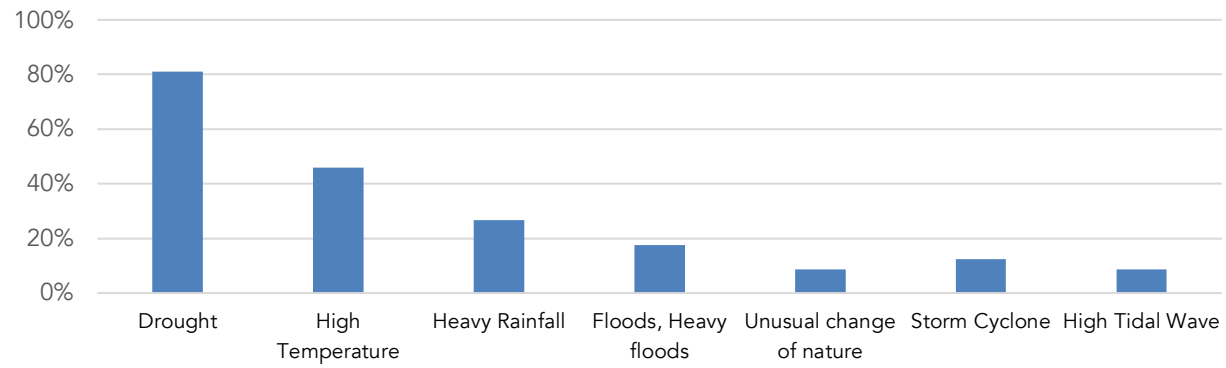
Perceptions of climate change, disasters and slow-onset events triggered or intensified by climate change interact with the different layers of vulnerability of rural and urban populations and "*produce impacts on the human capital (health) and physical capital (housing and capital goods) of the urban poor and on their ability to generate financial and productive assets*".[76] This section focuses on the following questions: How do they understand the phenomenon? What specific events do they associate it with? How do communities and households adapt to climate change and its consequences?

Perception of climate change and its consequences

Surveyed displaced populations – both climate- and conflict-induced – generally perceived climate change through its local symptoms and empirical consequences. They do not necessarily tie it to a more global phenomenon caused by human activities and generally discussed how the phenomenon translates into concrete, tangible, experienced changes in their life. For the IDP population, for instance, when asked to define and describe climate change, 81% will answer "drought" and 46% "high temperature", hence identifying the consequences of a more global phenomenon.

On the other hand, older people[77] who participated in focus group discussions generally agreed that the climate used to be less predictable and rainfall more regular, which does point to a climatic evolution. As one community leader in Jubaland described it: 'We used to know the rainy and dry seasons. But in recent years we have seen that the rains do not come in the season we expect. It rains irregularly. The population has increased, and I think the reason why the rains are irregular is smoke and air pollution. Today, the land is less productive. In the past, crops grew with only one heavy rainfall, but today it's different. Even if it rains several times, the yield is always lower.' This type of testimony confirms the conclusions of more scientific longitudinal analyses or recurring empirical observations.

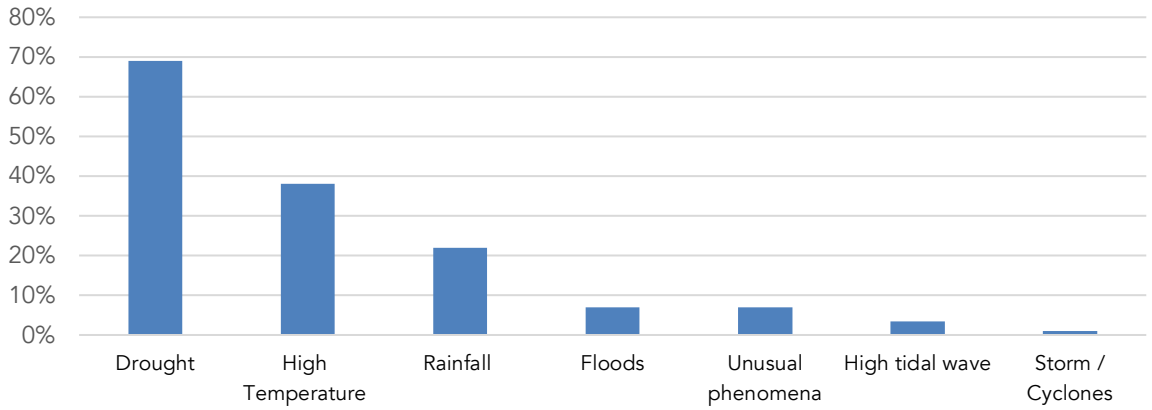
Figure 31: Identification of climate change by surveyed IDPs



76 Moser.
77 People aged 60 and older (according to UNFPA - https://www.unfpa.org/ageing).

Local differences related the understanding of climate change and its consequences were evident, given the prevalence of subjective experiences in the perception and description of the phenomenon. In rural and peri-urban areas in Jubaland, for instance, 69% of respondents[78] associated climate change with drought, and 38% with high temperatures. Surprisingly, flood appeared only in fifth position (7%) in individuals' perception of climate change. According to subsequent focus group discussions, the reason of such a modest percentage is simply due to the recurring nature of floods, especially in Jubaland. Indeed, flooding is not perceived as exceptional in Jubaland, as the Jubba River is often flooded during the heavy rains of the Gu season, resulting in frequent and predictable flooding.[79] On the other hand, heavy rains are not perceived as predictable and are mentioned by 22% of respondents as being synonymous with climate change (just after drought and high temperatures).

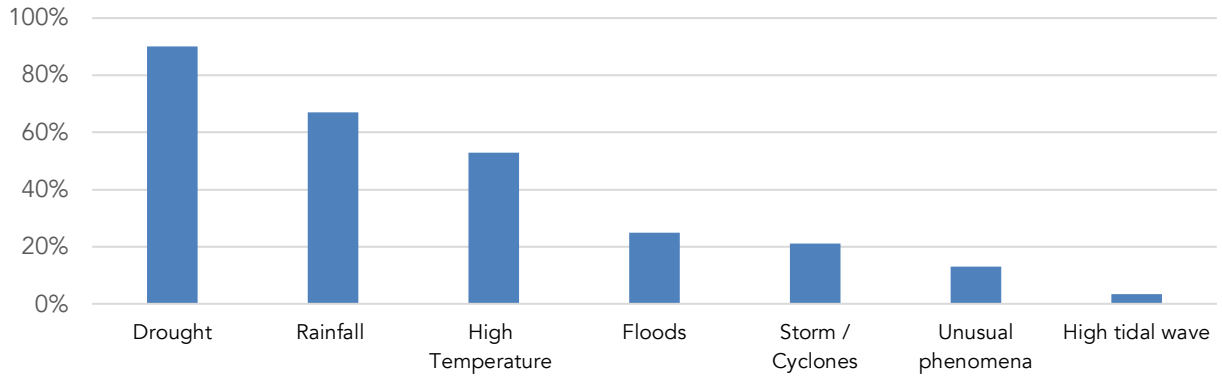
Figure 33: Identification of climate change, rural and preriurban areas in Jubaland



By contrast, in rural and peri-urban areas of South West State, where the majority of respondents are climate-induced IDPs, 90% of survey respondents associate climate change with drought, a significantly higher figure than in Jubaland. Given the semi-arid and arid climate of the region, this is not surprising as the intensity of droughts has been historically more prevalent in South West State. On the other hand, "change in rain and rainfall patterns" and "floods" were mentioned by respectively 67% and 25% of the survey respondents, suggesting that rainfall irregularities also have a greater perceived impact in South West State. A recent climatic episode supports this view: in November 2020, the Deyr seasonal floods (October – December) affected nearly 63,200 people in South West State. Flash floods and river flooding led to large-scale displacement in Baidoa, Wanla Weyn, Qoryooley, Kurtunwaarey and Afgooye districts. These exceptional rains also damaged road infrastructure and disrupted local food supply chains, which has had disastrous side effects on local markets (prices) and food security, according to OCHA. Finally, the continuous rise in the River Shabelle also resulted in overflow and 'river breakages, inundating 5,000 hectares of farmland in six villages'. [80]

78 Surveyed migrants in Kismayo and Baidoa were asked their perception of climate change, the impacts of climate change and their adaptation strategies relative to their place of origin (before migrating), which is rural in most of the cases.
79 Concern Worldwide, 'Special Issue: Durable Solutions in Somalia', Knowledge Matters on Durable Solutions, May 2020.
80 OCHA, 'Somalia Deyr Season Floods Update 3 as of 22 November 2020', 23 November 2020.

Figure 34: Perception of climate change, rural and peri-urban areas in SWS (N=283 – multiple answers possible)



Debates in four thematic focus groups yielded informed and in-depth responses on the key determinants of climate change and the causal relationship between human activity and global warming. In terms of the perceived causes of climate change, two major causes have been identified by most participants:

1) **Tree cutting:** According to the perception of the IDPs interviewed, deforestation has led to a reduction in rainfall, which in turn has led to an increase in flooding due to accelerated soil erosion.
2) **Smoke and pollution:** Pollution is perceived as the cause of increased temperatures and prolonged droughts.

The first determinant was highlighted several times and its causal chain detailed by many participants. A focus group participant from Bulabartire described the fundamental tension caused by the impact of human activity on environmental risks and the vicious circle that forces the most deprived people to keep cutting trees: "*When you cut trees, it causes soil erosion and there will be less rain in the area. There is enough rain in areas where the trees have not been cut. Because of deforestation, the yield of the land will also be lower. I know that all these problems will result from the activities we are carrying out, but we have no other means of livelihood since our farms were destroyed by the floods*".

These individual accounts validate scientific studies. According to the World Bank and the FAO, by 2014, forests covered only 10 percent of the Somalia's land area, down from 62 percent before 1980: "*The move toward more private enclosures for livestock grazing and semi-permanent family shelters has exacerbated deforestation, and the phenomenon is still gathering speed. (…) The main cause of large-scale deforestation of rangelands has been the massive and unsustainable cutting of acacia trees to produce charcoal, exports of which reached $56 million at their peak in 2011, up from zero before the civil war and as late as the mid-1990s. This trade became increasingly controlled by and a major source of revenues for Al-Shabaab.*"[81] Since 2012, however, a significant effort has been made by federal and regional governments to enforce a charcoal export ban, in collaboration with importing countries from the Gulf. This pivotal political change may have a positive impact, even if deforestation is an almost irreversible phenomenon when it is accompanied by erosion and progressive desertification of the soil.

81 FAO and World Bank, 'Rebuilding Resilient and Sustainable Agriculture in Somalia – Country Economic Memorandum Volume I' (International Bank for Reconstruction and Development, 2018).

History of climate change in communities of origin

When asked whether they had observed any significant climatic change over the past 10-30 years in their community of origin, before they left, displaced households did mention clear trends characterised by:

- **Higher frequency of combined climate-induced disasters** (more frequent droughts, floods, erosion, etc.) While they may have had the capacity to cope with one or the other disaster alone, the combinations of different climate-related hazards are far more challenging to address. "*The major negative challenges faced in the last 3 years was the drought which occurred in November 2019 and failed the production of all of my crops I planted during spring last year. It was followed by a heavy rainfall in December 2019 for 3 consecutive days and destroyed everything in the farm.*" described one female IDP in Reebay, echoing a common observation.
- **Unpredictability of most climatic patterns** (irregular rainfall, seasonal change, etc.) As highlighted by a resilience consortium member in 2018, "*with the changing weather conditions, people can't predict anything, especially in the South West State of Somalia. And we know that local farming systems are essentially based on predictability - with limited flexibility. Anomalies in the rainy seasons – Gu or Deyr – are threatening and have disastrous effects on livelihoods in particular. This puts rural communities at immediate risk, it creates a danger for agricultural and livestock supply chains to urban areas, and it ends up leading directly or indirectly to massive internal displacement.*"
- **Direct impact on livelihoods and well-being** (crop failure, sickness, etc.) Respondents in Kismayo identified pollution from the ocean as a disaster affecting their health: "*There are diseases that affect people sometimes when the temperatures rise. We suspect that there is poison in the ocean. Our ocean is a dump site to the world where industrialised countries pour poisonous chemicals. The poison will come in the air during high temperatures*" described one community leader in Dalxiiska.

Both conflict- and climate-induced IDPs reported being equally affected by worsening climatic trends, which confirms that internal displacement is a complex and non-linear phenomenon. There is no doubt that conflict and climate are essential drivers in people's decision to leave their community. Based on people's answers when asked to indicate the main reason that led them to leave their place of their origin, however, an important distinction should be highlighted:

1) **Climate-related displacement is conceived as irreversible**, as the consequences of years of regular droughts and floods have progressively made a community uninhabitable – "*there is no possible coming back for environmental migrants*" (NGO, Baidoa, November 2020);
2) **Conflict-related displacement is generally perceived as more cyclical and situational** – "*people may go back to their place of origin, assuming they still have some land, network and inhabitable communities*" (NGO, Kismayo, December 2019).

The consequences of climate change contribute to making the place so uninhabitable that it is unlikely, if not impossible, for people to consider returning to their community of origin. And given that most conflict-related IDPs also mention climate shocks and stressors as reasons for leaving their community of origin, one can assume that one of the indirect consequences of climate change is to dismiss "return" as a possible durable solution. Table 22 confirms that all of the communities in this research – whether displaced by conflict or climate – have been affected by climate-induced disasters. Such a universal and inter-community experience can either act as an aggravating factor or trigger the decision to migrate. The higher frequency, lower predictability and stronger consequences (on livelihoods and well-being) of climate-related shocks contribute to the irreversible displacement to urban areas.

Table 22: Experience of climate-induced disasters in the community of origin (IDPs only - past 10-30 years)

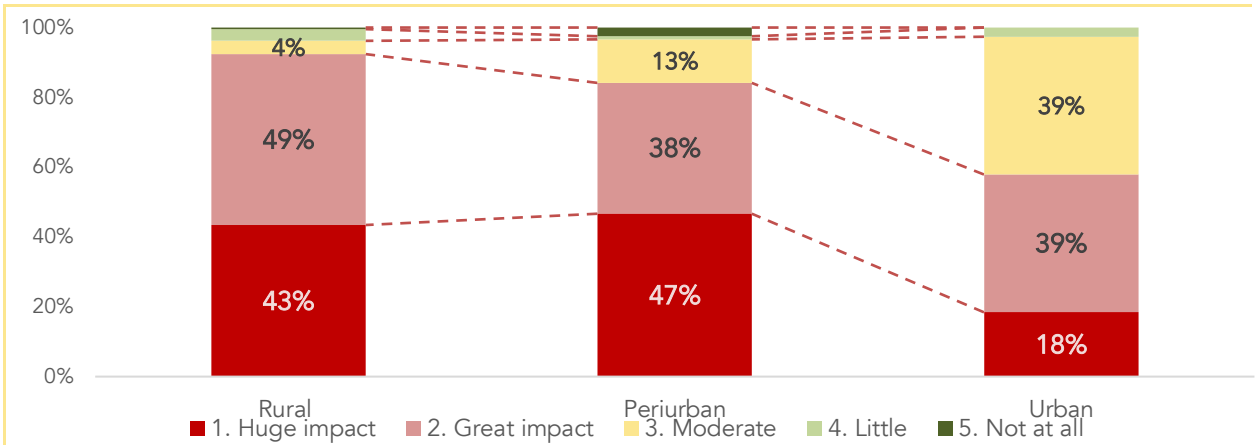
	More frequent droughts	Temperatures increased	Irregular or Heavy rainfall	More crop failure	Faster river erosion	Seasonal change	Increase number of sickness	Bigger and more frequent floods	Other (Sea level raised, more landslide, frequent cyclones)
Other IDPs (conflict)	76%	66%	11%	21%	37%	10%	5%	3%	6%
Climate-induced IDPs	91%	57%	46%	24%	1%	13%	15%	4%	5%

Experience of climate change in rural, peri-urban and urban communities of origin

Most respondents (over 80%) in both Jubaland and SWS perceive the impact of climate change as huge or great on their household. As seen in Figure 36 (focusing on climate-induced IDPs), livelihoods in both rural and urban areas were severely impacted by disasters and slow onset events. In rural areas, however, the impact is more prominent, as households are mainly involved in agriculture and pastoralism, which are acutely sensitive to weather fluctuations. Unsurprisingly, climate-induced IDPs reported an even more significant impact, with nuances between rural, peri-urban and urban communities of origin: 92% of climate-induced displaced persons from rural communities reported a huge or great impact of climate change on their household pre-displacement (vs. 85% for peri-urban and 57% for urban respondents).

According to the complementary FGDs in both Jubaland and South West State, this significant difference stems from the nature of livelihoods and activities in rural areas: people who had agropastoral activities as their only activities were more likely to perceive the impact of climate change on their household as huge or significant. Indeed, surveyed climate-induced IDPs in Kismayo and Baidoa, when referring to losses in their place of origin, reported the loss of domestic animals, the loss of crops and the loss of their income source as the three important impacts triggered by climate-induced disasters and slow onset events. Climate-induced IDPs from Jubaland and South West State are overrepresented in agriculture (72% and 95%), livestock (42% and 47.2%), and fishing (6.6% and 0.4%). Respondents who engage in another activity in addition to or outside agriculture, pastoralism or fisheries are less likely to report that the impact of climate change on their household is huge or important. This indicates greater resilience to climate change for households with diversified livelihoods.

Figure 35: Perceived impact of climate change at the household level (climate-induced IDPs only, rural vs. urban)



While households in livestock raising and agriculture (as sole activities) displayed the highest likelihood of a great impact of climate change on their household, there are nuances between the groups.

- **Agriculture:** Observations in rural and peri-urban communities of origin give a relatively consistent image of local rainfed farming systems in the periphery of Kismayo and Baidoa. The main constraints faced by rainfed farmers include (a) lower and more erratic rainfall than in the past, resulting in more frequent and intense cycles of droughts and floods; (b) poor soil management, resulting in very low moisture retention and inadequate internal drainage; (c) very low-input farming techniques; and (d) consequently, very low yields for rainfed (and even irrigated) crops.[82] Households involved exclusively in pastoralism can move further with their animals to find grazing lands, whereas farmers usually migrate to the city after one or two failed harvests.
    - **Less diversification:** The example of SWS is insightful. According to FGDs, the major crops grown at the household or community level remain sorghum (especially in Baidoa), maize, cowpea, and, to a lesser extent sesame, along with fruits (bananas, watermelon, grapefruits) and vegetables (tomatoes). However, many participants who had left the community told the research team variable rainfall on already barren soils had resulted in more run-off, less water for plant growth and less crop diversification, with immediate impacts on agricultural livelihoods.
    - **Vicious climatic circle:** Two IDPs described the double punch of drought and floods on capacities to leverage natural resources: "*The soil was affected by extreme hot temperatures, which caused cracking of the top layer of the soil. It became difficult to plant because the area was not at the same level everywhere and it made it hard to cultivate*" noted one woman, describing the effects of drought. While a man in Bakool noted the flipside effects of flooding: "*The strong rains have resulted in soil erosion. They have washed away all mineral, soil fertility, and farm plantation such as small seedlings. Because the strong rains have washed away all nutrients in the soil resulting soil erosion, all farm products such as green vegetables in the farm this has resulted low crop yield and finally resulted in poverty.*"
- **Livestock:** As highlighted by Majid and Maxwell (2016), households in both activities stay longer to save their cattle, feed them with leftover food, and are less mobile due to their farming activities.[83] In our study, they displayed a higher perceived vulnerability to climate change as they invest food and money to save their livestock in time of environmental shock, a strategy which can make them more vulnerable, as explored below. This risky dependence on livestock and agriculture was highlighted by many of the people interviewed during this study: "*Income has decreased because there is no sale of meat, milk and the livestock itself, so no income is generated, and credit is increasing*". Floods impact rural livelihoods by flooding farms, injuring or killing livestock and taking away tools. Beyond the reduction in grazing areas due to the environmental disaster, the animals are also vulnerable to injury and damage from the floods, further endangering livelihoods: "*The animals fall into the trenches dug by the flood water or slip on the wetlands*", described one person in Calanley.

Ultimately, impacts and losses on rural and urban areas are linked to each other, due to livelihood interlinkages and social networks. A significant part of migrants and the host community in urban areas have mixed livelihoods: they are involved in pastoralism and agriculture[84] and rely on the support of social networks located in rural areas. On the other hand, when rural livelihoods (cattle and farming products) are affected by a drought or a flood, the prices of food items increase in urban

82 FAO and World Bank.

83 Daniel Maxwell and Nisar Majid, eds., Famine in Somalia: Competing Imperatives, Collective Failures, 2011–12 (Oxford University Press, 2016).

84 A lot of respondents referred to their rural livelihood (taken care by relatives in rural areas) when referring to their current income generating activities, rather than their daily labour job conducted in the urban area where they live.

areas. Therefore, the impact of drought and floods on the livelihood of rural households indirectly impacts urban households.

Symptoms of climate change at the household level

Qualitative findings show that climate-affected households (from host communities, as well as climate- and conflict-induced IDPs) have a nuanced understanding of the multiple symptoms of climate change:

- **Consequences on health (pre-displacement):** Amongst the impact of drought on health in communities of origin, multiple cases of diarrhoea (related to high temperatures) and eye-sight problems (related to heat and drought) were reported by respondents, with a significantly higher frequency among climate-induced IDPs. Other direct impacts of drought episodes mentioned by focus group participants included: 1) malnutrition resulting from the effect of the drought on livestock and farming products (reduction of food quantity, and especially milk for children); 2) lack of sleep resulting from the heat (especially in houses made of CGI), and 3) symptoms of cholera stemming from the lack of water to wash the latrines.

- **Consequences on health (post-displacement):** Diarrhoea or typhoid were often mentioned as direct impacts of flood on health in urban areas, especially in urban IDP settlements. These diseases are caused by the contamination of water sources, as the flood carries away liquid and solid waste. Likewise, flooded areas attract mosquitoes and increase the chances of catching malaria. Food stocks are affected because floods often destroy fields, farms and injure or cause the death of livestock. Other focus group participants stated specific occurrences of food stored in the houses and carried away or washed by the water.

- **Consequences on mental health (post-displacement):** Another recurring indirect risk was often mentioned by female focus group participants: families not having the possibility to boil water to mitigate the impact of contaminated water as firewood was wet or carried away by the flood. These spontaneous accounts of individual tragedies confirm the anxiety and fear generated unpredictable climatic events: people have no control over these shocks and know that they will be neither prepared nor supported in case of disaster. Respondents also mentioned tensions within the household, arising from the disagreement between the wife and the husband over the adaptation strategy to adopt to mitigate the natural hazard: migration, family split, redistribution of role within the household, etc. For instance, "*my wife wanted us to migrate with the neighbours, but I did not want to because the water will leave soon. My wife was very upset with me and she demanded divorce. She was claiming that I am making suicidal decisions, but the elders solved the case.*" As natural hazards impact communities in a homogeneous way and all households have to mitigate the consequences simultaneously, cohesion within the community and even family weakens – which has an ultimate impact on decisions and adaptation strategies.

- **Consequences on societal and social cohesion:** Social networks, which might be a source of support and form a type of coping mechanism, can likewise be eroded by climate-induced disasters. Drought in rural and urban areas increases the tensions over access to natural resources (water, grazing land, land for settlement), wearing away the relationships within the community. "*As the droughts intensifies community conflict related to pastureland increases and hence more clashes*," highlighted one female IDP, and other IDPs noted the "competition" that emerges between host community members and IDPs when scarce resources are made scarcer. In cases of floods, tensions occur over manual drainage of the water, construction of trenches to channel the water and over land during housing reconstruction, exacerbated by ambiguities and lack of formal agreements concerning land ownership or residence. As noted by one female IDP in Bulabartire: "*The village households do not have measured [land] plots. When rebuilding their collapsed houses or fences, fights might occur on who is the owner of the disputed places.*"

The synthetic table below shows the impact of extreme weather events on surveyed vulnerable households' assets, using the asset-based vulnerability and adaptation framework and according to focus group participants.

Table 23: Impact of extreme weather events on household assets (Moser's asset-based vulnerability and adaptation framework)

Asset	Extreme Weather Event 1: Drought (including high temperatures and wind)	Extreme Weather Event 2: Increased precipitation often leading to flood
Physical capital	Crop loss or do not mature Donkeys too thirsty to carry items Erosion of plastic roof (heat and wind) Destruction of home (wind)	Destruction of crops Disappearance of farming tools Livestock injury or death Daily labour in cities impeded due to lack of movement (flooded roads) Partial or total destruction of home
Financial capital	Livestock weakening (reduced value on the market and reduced milk production) or death Scarcity of food products / volatility and increase of food prices	Development of lower wages, underemployment, informality in urban areas Scarcity of food products / volatility and increase of food prices
Social capital	Tensions over access to natural resources Tensions over adaptation strategy to adopt	Tensions over water drainage Tensions over trenches construction Tensions over land during house reconstruction Tensions over adaptation strategy to adopt
Human capital	Migration of family or teacher School dropout for water search Health (skin rashes, diarrhoea, eye-sight problems, malnutrition, lack of sleep, cholera) Psychosocial (trauma, anxiety, and stress)	School damage or destruction Migration of family or teacher Diarrhoea or typhoid (contaminated water), malaria, malnutrition, death) Psychosocial (trauma, anxiety, and stress)
Natural capital	Reduced grazing land Reduced underground and river water availability Reduced soil fertility and crop yield Soil erosion (wind) Destruction of surrounding trees (wind)	Drinking water contamination Soil erosion Destruction of surrounding trees

Coping with and adapting to the consequences of climate change

In the context of Baidoa and Kismayo, the previous sections shed light on displaced people's capacity to identify, beyond sudden-onset climate-induced disasters, a general change that progressively made their communities of origin uninhabitable and led them to migrate to urban settlements and camps.

How, then, is adaptation to be understood? What are its characteristics and possible dangers? Is it a question of adjusting the household's living conditions to respond to the dramatic consequences of a flood or drought? Or is it about modifying the environmental ecosystem in which the household survives or struggles to avoid future shocks and mitigate the dangers of climate change? Adaptation, according to the Intergovernmental Panel on Climate Change (IPCC), can be defined as "*the process of adjustment to actual or expected climate change and its effects, which seeks to moderate harm or exploit beneficial opportunities.*"[85] Adaptation to climate change therefore encapsulates initiatives that enhance the ability of socio-ecological systems to adjust and thrive despite changes induced by environmental degradation.[86]

At the household level, in particular, adaptation strategies can be multifaceted: aimed to either cope with unusual and abnormal climatic event or process by optimising existing resources (e.g. shifting livelihoods or selling livestock) or mitigate the impact of natural hazards on the household (e.g. planting trees or creating drainage systems).[87] The graph below sheds light on what each concept may encompass, while bearing in mind that coping strategies are only a component of adaptive strategies:

- **Coping strategies** are often emergency or immediate measures adopted to deal with a shock or stressor (e.g. drought, floods, etc.). Their primary focus is on the household/individual level and its survival. In the longer-run, some of them may be harmful by generating an unintended social or economic cost (negative externality) that puts the resilience of the household at risk.

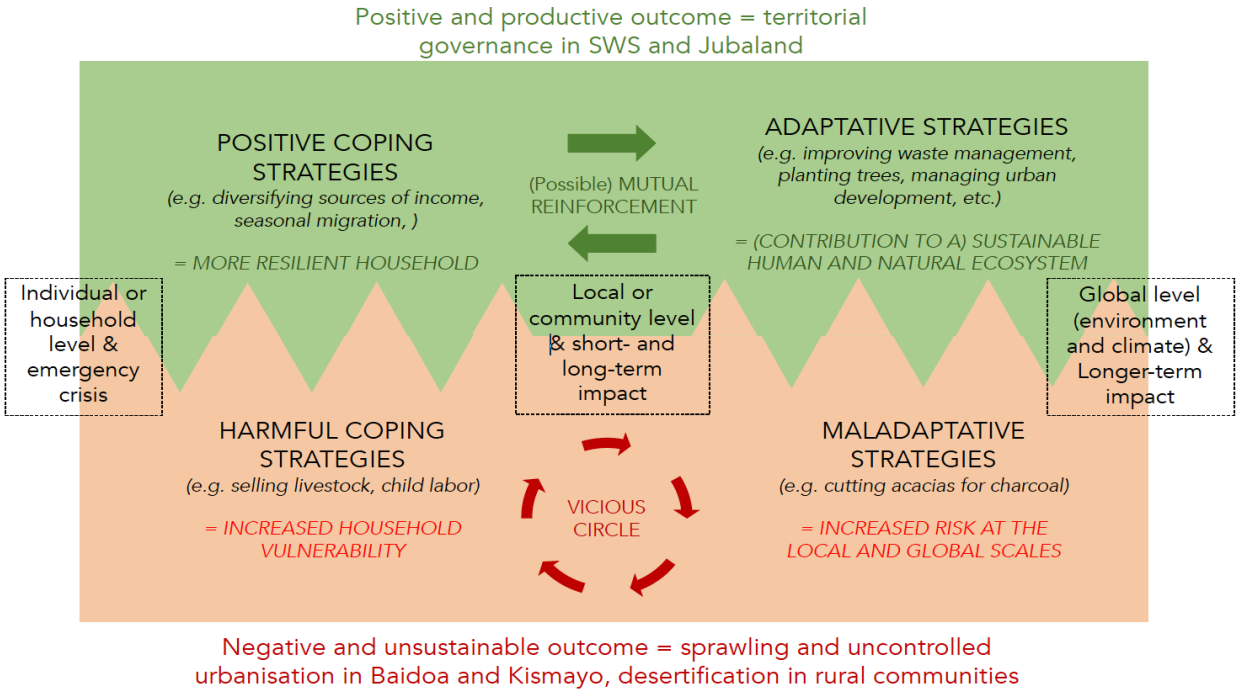
- **Adaptive strategies** not only include coping strategies (according to Kälin, 2010), given their possible environmental cost, but also refer to specific decisions and actions that have a direct impact on local environmental ecosystems and global climate change. Their impact is generally systemic and longer-term, compared to coping strategies (individual and short-term).

- **The horizontal axis** presents the different levels of intervention and outcome (individual, local, global). At the intersection of both axes, the local or community level represents a pertinent lens to consider the interaction between coping and adaptive strategies, between household and global priorities. It naturally has some consequences in terms of programming and policy.

- **The vertical axis** presents the spectrum of possible consequences of each adaptation strategy, whether at the individual (harmful to positive) or global (maladaptive to adaptive) level.

85 Vicente R. Barros et al.
86 A. K. Magnan et al.
87 See the Glossary (Annex 1)

Figure 36: Climate adaptation (based on qualitative findings in Baidoa and Kismayo)



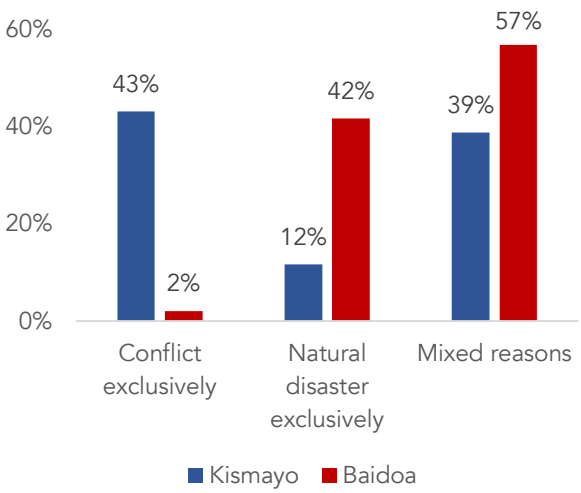
This section offers an overview of specific adaptation and coping strategies adopted by households and communities in Baidoa and Kismayo, in both communities of origin and IDP settlements, through a focus on 1) displacement and return; 2) change in livelihoods; 3) surveyed IDP households' recommended adaptive solutions at the household, local, and global levels; and 4) maladaptive strategies.

Displacement as a coping and adaptive strategy

Migration is a core coping and adaptation strategy for households facing one or multiple hazards in Somalia. While the exact characteristics remain somewhat unclear – and will need to be further detailed in the next subsection – internal displacement is an essential coping strategy.

The decision to move, is often influenced by a multiplicity of drivers: climate-induced disasters, conflict, insecurity, absence of economic perspectives, lack of education facilities, family reunification, etc. (see Table 7). FGDs with IDPs in Kismayo confirmed that the fear of recruitment by Al-Shabaab and inordinate taxes levied by the armed group, had been a tipping point for many households; however, there are negative drivers (recurring floods and droughts) as well as positive ones (access to better living circumstances, especially access to education for children). In many cases, the last incident of environmental disaster or insecurity was merely a tipping point within a pre-existing global horizon characterised by a degradation of the environment, living conditions and livelihoods.

Figure 37: Mixed versus single reasons for displacement in Jubaland and South West State (N=505)

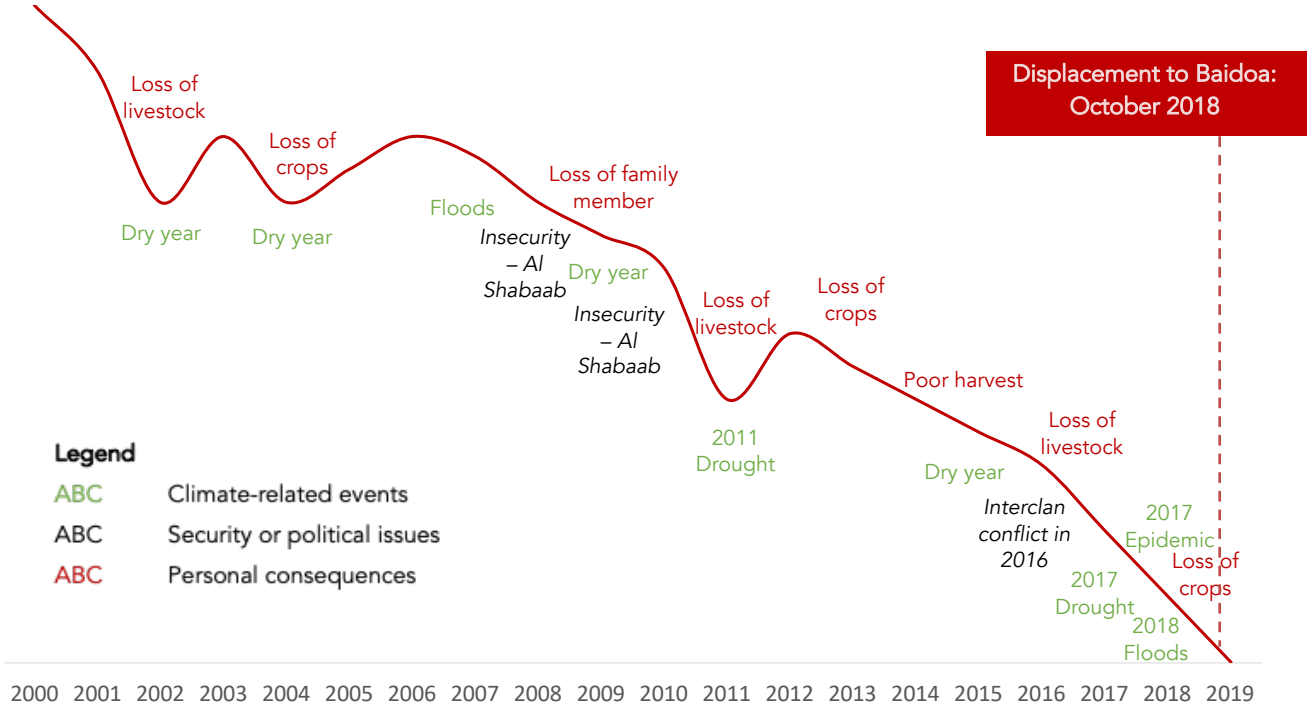


Decision or tipping point

As one male IDP from Baidoa recalled: "*I decided to leave my place of origin in October 2018 because of the drought and epidemic diseases that happened in October 2017, the floods which happened early 2018, and the interclan conflict which happened late 2016. I needed to look for better living standards in the urban centres, for peaceful co-existence, quality education for my children, access to health centres, and to avoid paying the tax imposed by Al-Shabaab militants.*" The lifeline in Figure 39 shows an irreversible process leading to displacement. Disastrous events, individual tragedies, climatic shocks or conflicts are not to be understood in silos: they all contribute to the deterioration of people's living conditions to the point where they simply cannot survive in their home communities. Surveyed climate-induced IDPs in Baidoa and Kismayo describe food reserves being "exhausted", the death of livestock, and disease amongst children, as pressure points making it no longer possible to "stay and wait" to see if things get better. This all takes place in a global context of climate change with local consequences.[88]

In this regard, the "decision" to leave the host community should not be seen as a rational choice. Rather, it should be seen as an accumulation of negative parameters, which make life and survival in the communities of origin difficult and then impossible. The "decision" to leave is more akin to a lack of alternatives; and an incremental process that forces households to leave. The likelihood of return, as outlined in the next sub-section, is unlikely and the only durable solution is integration. Surveyed rural populations in SWS and Jubaland face long term environmental degradation (desertification and less fertile soil), in conjunction with an acceleration of the frequency of climate-induced disasters (droughts and floods) which reduces the recovery periods and leads to constant crisis. This accumulation – and the impact on household assets – very often leads to displacement, rather than a single weather event.

Figure 38: Twenty years between conflict and climate shocks (lifeline based on 2 case studies in Baidoa)



88 See the previous section – 'History of climate change in communities of origin'.

Complementary mitigating variables also play a role in the so-called decision process. In particular, social networks determine not only whether to move, but also where to move as pre-existing social ties in a given city increase the likelihood of migrating to that city. At the same time, levels of vulnerability also influence decisions to migrate. According to the qualitative data, the most socially vulnerable people, i.e. those who have no available social support system, are usually the first to leave after a shock (widows, children, the disabled and the elderly). The alternative then becomes simple: either stay in the hope of unlikely social support or leave without any certainty or support network.

One IDP woman in Barwaaqo highlighted eroded support networks which led to the "decision" to move: "*Some of us even died because of starvation. I remember there was only a sack of maize in my store left after I exhausted the rest, so I called my cousin and my uncles for help but unfortunately no one helped me because we were all experiencing the drought.*" In her case, the alternative was even more drastic: either stay in the community of origin and risk death or migrate to the city without any social or economic capital.

Following this logic, it is necessary to rethink the notion of decision as it applies to climate-induced displaced people, by borrowing the model developed by Carling (2002) and completed by Carling and Schewel (2017). Is it meaningful to say that individuals possess the ability to migrate if they are forced to do so and if their preference is to stay? The decision making-process is then understood as a two-step approach (aspiration-ability), where migration aspiration may not result in "actual mobility", assuming that people do not have the ability to migrate (economic capital, social networks, political context, etc.). This model remains valid in the cases of Baidoa and Kismayo. However, both the quantitative and qualitative data collected for this study show that climate-induced IDPs had no choice but to migrate if they wanted to survive. Concepts such as "decision" or "voluntary/involuntary" should therefore be considered with caution, as external determinants leave little room for communities, families, and individuals to make choices.

Returning to the community of origin?

The previous sections have emphasised that displacement to Baidoa and Kismayo is not a matter of choice or decision but rather a reality that people have to accept, once their livelihoods and well-being are threatened and their community has gradually become uninhabitable. This is particularly true for most climate-displaced people who are heavily dependent on agro-pastoral activities and who are extremely vulnerable to the direct and indirect consequences of climate change. When asked if they wished to stay in their current residence or if they planned to leave in the future, 85% of surveyed climate-induced IDPs answered that they would stay "for sure" or "very likely" – in contrast to 71% of surveyed host community members and 74% of conflict-induced IDPs. These figures require more nuanced analysis – by location, settlement and length of stay – but they confirm that climate-induced IDPs are more likely to consider their displacement irreversible: "*What should they go back to? They have lost or sold their property, their land is eroded, droughts are increasingly severe, and some of them have even lost their know-how, their skills. So, it's a one-way trip.*"[89]

Table 24: Intentions to stay in current location (by displacement profile)[90]

	Yes, for sure	*Very likely*	*Considering staying*	*Not sure*	*Not likely at all*	*Respondents (n=626)*
Host communities	48%	23%	18%	9%	1%	117
Other IDPs (conflict)	36%	38%	15%	9%	2%	167
Climate-induced IDPs	59%	26%	10%	4%	0%	342

89 KII with an academic researcher, June 2020.
90 Table 9 only considers Climate-induced IDPs.

Moreover when asked to specify the reasons why they wanted to stay and not go back to their community of origin, climate-induced IDPs gave specific reasons that reinforce the view that they are highly depended on assistance and third parties:

- 60% mention food aid as a key determinant (vs. 13% for conflict-induced IDPs).
- A significantly higher proportion of respondents (+11 and +8 percentage points compared to conflict-induced IDPs) replied that they could "not afford to move" or did "not know where to go", which also highlights a higher dependency level.
- Relatively lower percentages highlight access to services (education 17%, or health care 24%) as drivers (vs. 42% and 35% respectively for conflict-induced IDPs.
- Security is also emphasised (37%), which confirms the multilinear and complex nature of climate-induced displacement.

Table 25: Reasons to stay in current location (by displacement profile)

If you plan to stay, why?	*Other IDPs (conflict)*	*Climate-induced IDP*
Access to employment	22%	22%
Access to education	42%	17%
Access to food aid	13%	60%
Presence of my family	20%	40%
Access to health care	35%	24%
I have a good life here	13%	7%
Better security situation	34%	37%
I cannot afford to move	7%	18%
I do not have any skills or education	5%	4%
I do not know where to go	2%	10%

It is worth mentioning that among the few respondents who plan to leave the area of displacement in Baidoa (4%), the reasons are lack of employment and financial prospects. In Kismayo, the few respondents who reported planning to leave (11%) generally gave positive reasons – such as access to land and housing, education or family reasons. In both cases, these responses clearly suggest that people do not intend to return to their communities of origin, given the lack of economic opportunities and services that most rural and peri-urban communities of origin suffer from.

Other coping strategies: change in livelihoods

The data collected for this study highlights that livelihood changes are a more common coping strategy adopted by people displaced by climate change (50% compared to 30% for conflict-induced IDPs), suggesting that their livelihoods are the hardest hit. However, this strategy depends on the availability of livelihoods in a given area. Figures 40 and 41 reflect the lack of options available for diversification in the SWS region, and the tendency to adapt one's main livelihood rather than change it completely.

Figure 40: Shift of livelihood as a result of an environmental event in Jubaland (N=222)

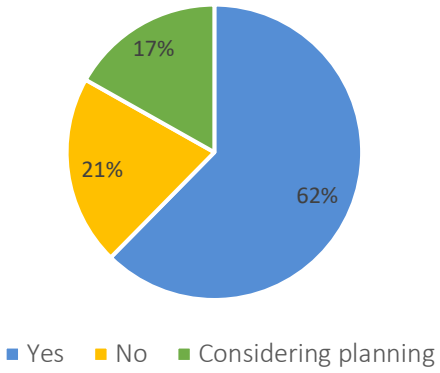
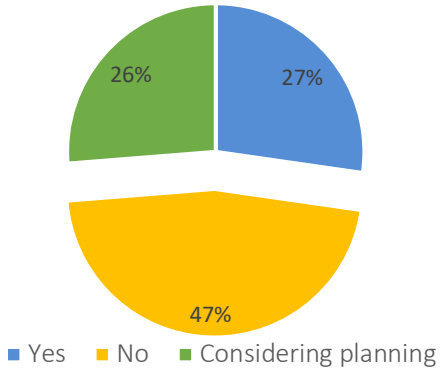
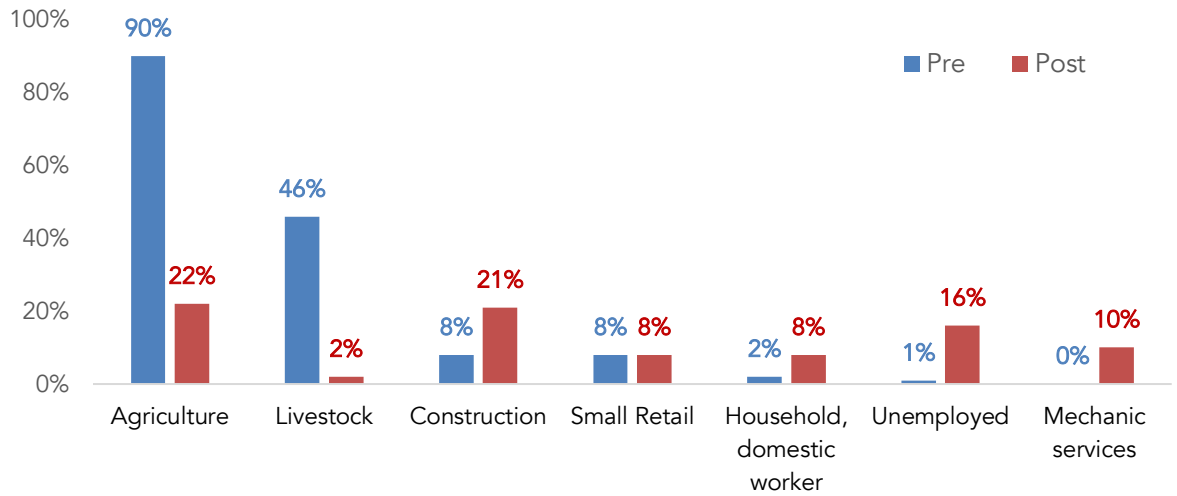


Figure 39: Shift of livelihood as a result of an environmental event in South West State (N=283)



Overall, if we focus on climate-induced IDPs' pre- and post-displacement activities (based on the study of the "Financial Capital" under the "People" section), the most impressive trend is the shift from individual and household agro-pastoral occupations to non-agricultural activities. Such an "exit from agriculture and animal husbandry" is illustrated in the graph below: -68 percentage points for agriculture, -44 for livestock. In contrast, other sectors experienced significant increases and most alternative livelihood diversification strategies in the new urban environment include daily work in various sectors: construction, mechanics, clothing maker, garment launderers, domestic workers, plasterers, petty trade, loading and unloading vehicles, as well as pushing wheelbarrows and breaking stones.

Figure 41: Pre- and post-displacement activities (as reported by climate-induced IDPs)



A specific focus on the "exit from agropastoralism" phenomenon is needed, given its importance and complexity. A general pathway can for instance be described from the individual testimonies of climate-displaced people who used to generate income from livestock:

1. **Livestock as a burden:** Rural households tend to invest their savings in livestock, and as a consequence livestock becomes a burden in times of drought. The reduction in grazing land requires livestock owners to rely on crop residue (such as sorghum) to feed the animals.[91] Owning cattle delays the decision to migrate, as the animals cannot be taken to urban areas. Cows, camels, and goats cannot easily be sold on the market either, as they lose their market value in times of drought. Vulnerable households (no alternative livelihood and no social network) have no choice but to stay in rural areas to take care of the cattle, hoping they will survive the drought.

2. **Selling the strong to save the weak**: Coping strategies to mitigate the impact of harsh weather conditions on livestock included selling reproductive livestock (12.4% of migrants in South West State and 9% in Jubaland). Respondents mentioned selling their stronger animals to buy fodder and pasture for the weaker animals: "*We use to sell the strong animals so the money we get we buy fodder crops and pastures for the weaker animals because the weak animals can't face the drought due to lack of food to eat*" shared a man in Towfiiq. Naturally, such a desperate coping strategy can turn into a vicious circle and a harmful spiral in case of prolonged drought.

3. **Migrating to greener pastures:** Other coping strategies include migrating to further locations to find pasture and water for animals, buying water for the animals, feeding them with the food produced in the farm, giving them the grass taken from the roofs of houses to eat or giving away cattle to relatives in safe areas. "*Migration from one region to another with my animals was the only option that I had in order to get a good area that my animals and children can survive*," stated a male IDP. Another confirmed the desperate nature of maintaining livestock in the face of drought: "*Sometimes, we stop milking the weak animals and even their young ones for sucking their milk because it is becoming thin and thinner till it dies, the young calf was given tea and ripe food like the children.*"

4. **Increasingly reduced autonomy and forced displacement as a last resort strategy:** Overall, agro-pastoralists were found to be the most vulnerable population when it comes to access to adaptation strategies: farm activities impede their ability to travel long distances to find grazing land, as a result they remain in the rural area to cater to their livestock. Farmers who do not own any livestock abandon the farm in case of repeated natural hazards and decide to migrate to the city or to look for better land. For them, migrating is definitely a last resort and involuntary decision, as illustrated in the above individual testimonies.

Recommended adaptative measures to the consequences of climate change

As highlighted in the previous subsection, migration and internal displacement are essential – and often a last resort – adaptation strategies to environmental degradation and ensuing livelihoods destruction. What other absorptive (emergency) and adaptive (longer-term) strategies have climate-induced IDP households developed to mitigate the impacts of climate change on their family and community? This subsection focuses on three interlinked level: household, community, and other stakeholders (government, NGOs, international organisations).

– **Household level:** According to survey respondents (both host community and climate-induced IDPs), adaptation strategies to climate-induced disasters and climate change remain uneven. The level of awareness and concrete actions are much higher among the host communities – 52% reported taking measures to adapt. Host communities seem to have: 1) more means to cope with the consequences of climate change; and 2) a better historical perception of the degradation of the local environment. On the other hand, just 23% of those displaced by climate change reported

91 This result was also highlighted by Nisar Majid and Daniel Maxwell, 2016.

taking measures to mitigate and adapt to the impact of climate-induced disasters or climate change. There were only minor quantitative differences between female and male climate-induced IDPs (3 percentage point), even if qualitative discussions suggest a significantly higher level of awareness among women.

Table 26: Presence of adaptation measures to climate-induced disasters or climate change (by displacement profile)

Are you taking measures to adapt to climate-induced disasters or climate change?	*Host community members*	*Climate-induced IDPs*	*Female IDPs*	*Male IDPs*
I take adaptation measures	52%	23%	24%	21%
I do not take any adaptation measure	48%	77%	76%	79%

When asked what adaptive accommodations had been made, men and women's answers varied: female climate-induced IDP respondents favour longer-term strategies (planting trees, 43%, + 16%) over shorter term measures (raising the level of the house, 13%, - 20%; migration to another part of the city, 8%, - 4%). Both men and women consider complementary sources of income (19%) and trenches (13%) as valid options. If we now consider respondents who had not made accommodations, there are no significant differences by gender. Both groups stress an inability to modify their environment due to lack of knowledge (75%), technical skills (14%) or financial resources (13%).[92]

Table 27: Climate-induced IDPs' adaptation strategies to the effect of climate change (household level by gender)

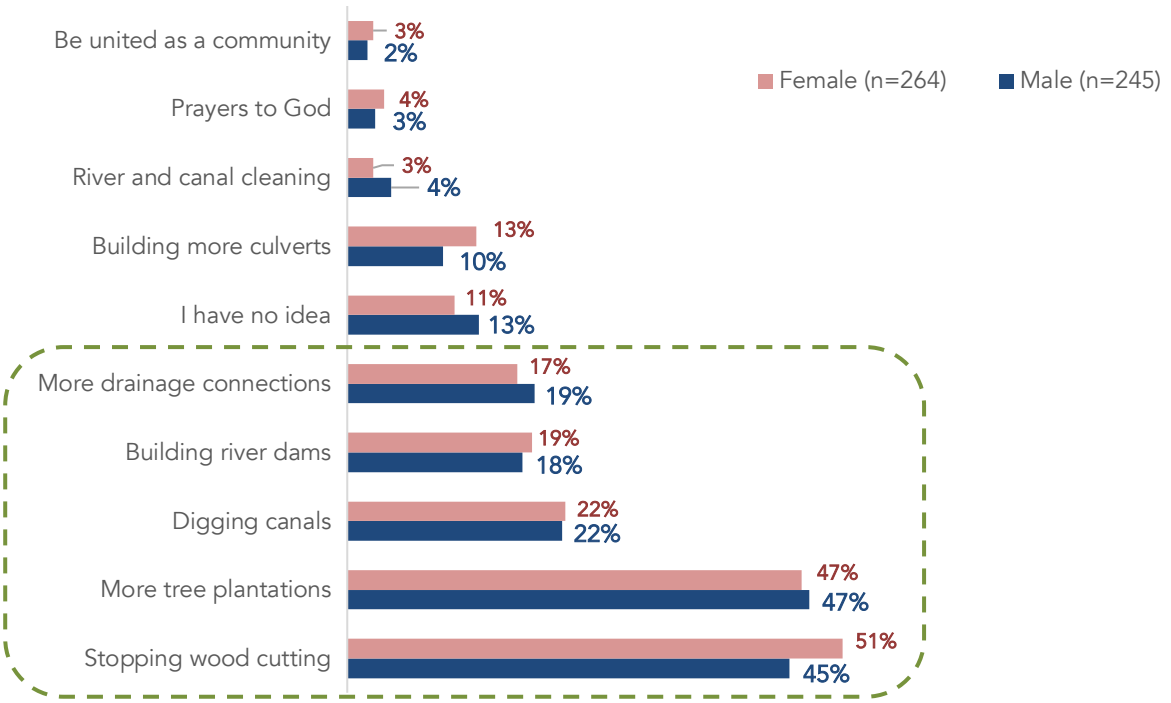
	Male (n=245)	*Female (n=264)*	*Total*
Are you taking measures to adapt to climate-induced disasters or climate change? Positive answer	21%	24%	23%
Planting trees	27%	43%	36%
Raise the level of the house	33%	13%	22%
Looking for another job, source of income	19%	19%	19%
Constructing stronger roofs	6%	22%	15%
Digging trenches around the house	13%	13%	13%
Migration to another part of the city	12%	8%	10%
Support to the community (preparedness)	6%	8%	7%
Clear Drainage	4%	8%	6%
Water the dry land more	2%	8%	5%
If not, why you did not take any adaptation measure?	79%	76%	77%
I did not know what to	73%	77%	75%
It was not needed	19%	15%	17%
It was too difficult	14%	14%	14%
I could not afford it but knew what to do	13%	13%	13%
I did not have the skills but knew what to do	9%	7%	8%

– **Community level:** When asked what could be done at the community level – both in communities of origin and host communities (before and after displacement) – there are no significant differences between men and women. This confirms that there is a relatively clear and shared understanding of possible solutions for the community.

92 According to a complementary qualitative assessment, the threat of eviction and pressure from landowners, which is probably the main obstacle, fall within the "lack of knowledge" responses, as people feel helpless and unable to do anything positive.

Moreover, the five priority measures show that climate-induced IDPs see the community as the relevant perimeter for developing adaptation strategies: stopping logging, tree plantations, canals, river dams and drainage are long-term adaptation measures that reduce soil erosion and contribute to improved waste management (area included in the green dotted line). Again, as focus group participants pointed out, these conclusions apply to both home and host communities, as "*the problem is the same regardless of the location*" (IDP, Human, Baidoa).

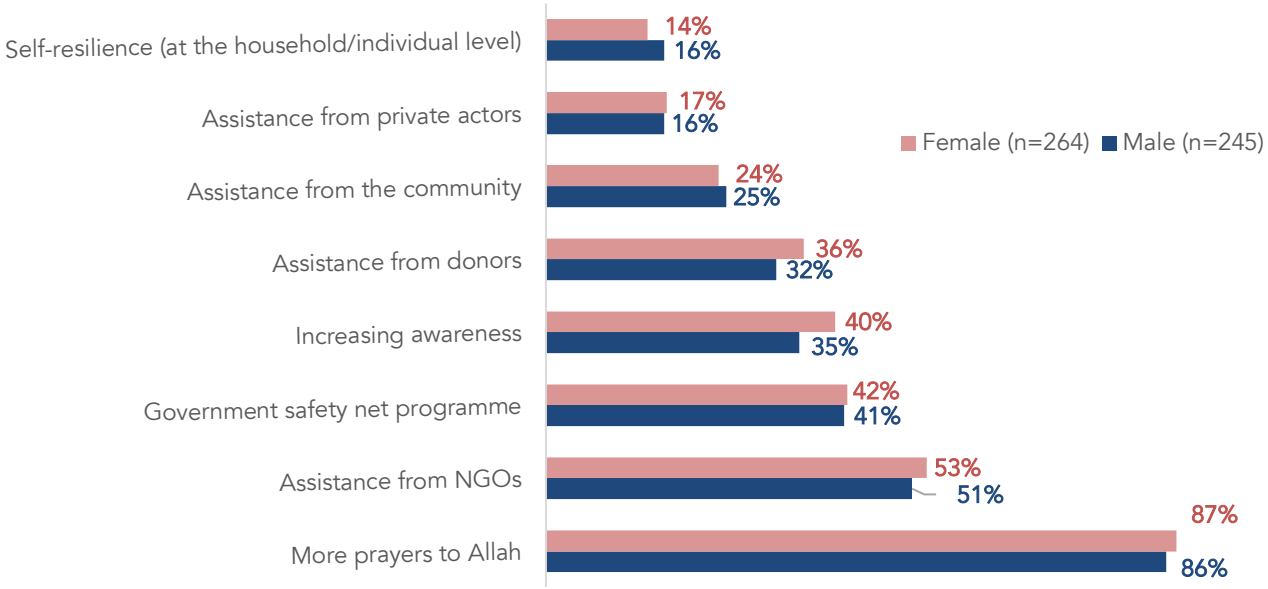
Figure 42: Adaptation strategies to the effect of climate change (community level by gender



– **Institutional level (government, NGOs, international organisations):** When asked what role institutional actors could play – both in communities of origin and host communities – female and male respondents' first choice is clearly religious. Almost 9 out of 10 people answered that "more prayers to Allah", globally, are needed to reverse the trend and adapt to the consequences of climate change. This figure is not surprising in a highly religious Somali society, especially in rural areas; however, such a unanimous response may also suggest that people consider climate change and natural events to be particularly out of reach for policymakers. It seems possible – if not desirable – to better link the fight against climate change to the spiritual and religious dimension which is very present in Somalia. Can international actors, governments and religious authorities work together to better combat the disastrous effects of climate change? This is a question that arises in communities of origin as well as in camps and urban settlements.

The second type of actors is institutional (NGOs, 52%, and governmental safety net programmes, 42% on average) and clearly benefit from people's prior knowledge of their interventions at the local level. Donors (34%) are often mixed with and mistaken for NGOs by many respondents and some focus group respondents also alluded to the risk of intrusion by foreign countries. The possible contribution of private sector actors is not highly appreciated (17%), as respondents seem to be hesitant about private companies' ability to go beyond their own interests. Lastly, it is also worth mentioning another type of global changemaker: the community itself (24%) and awareness raising (38%), which show that many respondents consider that education is an important means of changing attitudes, and work at the community level is an important means of changing practices.

Figure 43: Adaptation strategies to the effect of climate change at the international level (by gender)



Maladaptive measures to the consequences of climate change

Depending on the mode of implementation, adaptive strategies can yield negative effects if they put more pressure on natural resources, exacerbate effects of climate change, and thereby increase existing vulnerabilities of local populations. These undesired effects are referred to in the literature as stemming from 'maladaptation' to climate change.[93] The Working Group II's contribution to the IPCC's Fifth Assessment Report[94] defines maladaptation as "*actions that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future.*" Maladaptation is further defined by the Working Group as "an action that results in an undesirable and unintended outcome(s). This leads to increased vulnerability, which the action was meant to reduce."[95] In the case of Somalia, maladaptation can take several forms:

- In rural areas, environmental resources, particularly those from woodlands (e.g. acacias in Somalia), are often cited as important for coping with exposure to hazards, which can lead to accelerated deforestation and soil erosion;[96]
- In urban settings, the (mis)use of certain resources and construction of inadequate settlement facilities can also be considered practices of maladaptation, whereby migrants' attempts for survival lead to deterioration of the environment and subsequent exacerbation of climate change-related instability.
- More broadly, and in the context of internal displacement to Baidoa and Kismayo, unmanaged migration in the face of climate change can be considered a maladaptation when it places new or additional pressure on places of destination already experiencing stresses.

This subsection will focus on the rationale and impact of: 1) intensive charcoal production (mainly in rural communities of origin); 2) water management and boreholes; and 3) waste management (mainly in urban IDP settlements and camps). Other crucial aspects of maladaptation (such as mismanaged urban planning or unmanaged migration) will be discussed in the next section ("Places").

93 Ibid.
94 Vicente R. Barros et al.
95 Magnan, A. K., Schipper, E. L. F., Burkett, M., Bharwani, S., Burton, I., Eriksen, S., ... & Ziervogel, G.
96 Monica Fisher, Moushumi Chaudhury, and Brent McCusker, 'Do Forests Help Rural Households Adapt to Climate Variability? Evidence from Southern Malawi', World Development 38, no. 9 (September 2010): 1241–50.

Box 3: Analysis framework – the maladaptation assessment grid

Assessing the nexus between the consequences of climate change (in particular droughts and floods), displacement, and urbanisation requires a specific emphasis on the conceptual pair adaptation vs. maladaptation. In particular, it helps understand the tactics and strategies developed by households and communities when dealing with climatic shocks or stressors. How do individuals and (rural and urban) communities cope with climate-induced disasters or cyclical droughts? What choices do they have? What is the tipping point of the decision to migrate to urban areas? How can people make decisions that may be immediately necessary for their survival but potentially detrimental on the longer run? In this regard, the concept of maladaptation offers a fascinating lens: short-term maladaptive solutions (at the local level) result in *'increased vulnerability to climate variability and change, directly or indirectly, and/or significantly undermines capacities or opportunities for present and future adaptation.*' (Magnan, 2014). For the present research, based on the results from quantitative and qualitative tools, pathways that link causes and impacts of maladaptation on existing vulnerabilities were mapped for each urban and rural cluster and community assessed. Then, an ex-ante maladaptation assessment grid was established assessing the risk of further maladaptation in the study areas. The grid traced the source of maladaptation in each cluster and communities assessed – in both rural and urban areas. Based on this identification, the grid evaluated the risk of further maladaptation in the study areas and formed the basis of the analysis and study report. This maladaptation grid was based on the three assessment frameworks outlined in Magnan (2016) and integrated additional criteria to make it suitable for local contexts.

Deforestation and erosion (firewood and charcoal) in communities of origin in Baidoa

Livelihood diversification strategies include the extraction of resources (mainly wood, water, and grass that grows along the river in Jubbaland but also wildlife hunting) for selling and charcoal production water, etc. A number of the aforementioned diversification strategies increase the vulnerability of households to weather events and to other socioeconomic shocks. Wood cutting is naturally one of them. The Acacia bussei, a slow-growing hardwood, has been an essential driver of Somalia's charcoal exports – in spite of the 1969 ban on charcoal and firewood exports. According to Ogallo (2018), Somalia has experienced a 50% reduction in forest cover between the years of 1993-2014.

In Baidoa, agro-pastoralist households who have lost everything, seek to diversify their sources of income or simply want to collect some wood for cooking. Households might cut acacias for their personal use or turn acacias into charcoal and sell it in the city. This has dramatic consequences: rapid land degradation and erosion, soil destabilisation (water and nutrients), flood risks, and acceleration of droughts. Entire regions have become desert-like and uncultivable in neighbouring districts of Baidoa and Kismayo.
Logging is a typical example of a maladaptation strategy: climate-displaced people are aware of the negative consequences of logging on soil erosion and reduced crop diversity but consider not having a choice but to cut acacia trees to cope with increased socio-economic vulnerabilities and to adapt to the consequences of droughts and floods. According to the survey, most IDPs surveyed use firewood for cooking (80% in Kismayo and 98% in Baidoa; 81% of the conflict-related IDPs and 95% of the climate-related IDPs). In addition, host communities use firewood (47%) and charcoal (48%) equally, putting disastrous pressure on local forests. Finally, the maladaptive practice of cutting down of the acacias and its catastrophic impact on the Somali soil and subsoil calls for an effort by the policymakers: a progressive reforestation of areas not yet desertic, a major awareness-raising campaign and the provision of alternative and sustainable livelihood opportunities and fuels to reverse a highly compromised trend.

Figure 44: Type of fuel used for cooking (by displacement history)

What type(s) of fuel(s) are used or likely to be used for cooking?	*Host Communities*	*Other IDPs (Conflict)*	*Climate-induced IDPs*
Firewood	47%	81%	95%
Charcoal	48%	16%	4%
Gas	5%	1%	0%
Electricity meter (shared)	0%	2%	0%
Electricity meter (private)	0%	1%	0%
Solar	0%	0%	1%

Managing the aquifer in Kismayo

While boreholes can play an important role in ensuring water security – especially for drinking water – they are associated with environmental degradation. The yield of groundwater-fed boreholes is less vulnerable to short-term fluctuation in rainfall than other sources: such as berkads, open dams, shallow hand dug-wells and springs. This makes boreholes an important source of water in times of severe drought especially for humanitarian response – and particularly in non-riverine regions of Somalia. However, heightened pressures on pasture around these boreholes during drought events can cause long-term damage to surrounding rangeland, creating so-called "sacrifice zones". Deep boreholes are also not a good solution for increasing agricultural productivity as their operation and maintenance costs are much higher than for shallow water sources.

Accessing groundwater remains a challenge due to the lack of infrastructure and equipment which would be needed to ensure access, and adaptive implementation in the face of growing populations has been lacking.[97] The recent drought has made the water supply even more precarious, and with increasing numbers of people moving into town the situation is worsening. Drilling initiatives themselves are not always properly managed and sustainable, given the lack of recharge initiatives. "*Drilling is the problem. They don't go in depth and they don't have the machine. The wells built are not deep. Yes, because the machines are not available, one study found that the drilling is not suitable for this kind of land, so that is also the problem*," noted one community actor. Uncontrolled and informal exploitation of the aquifer threatens sustainability, safety and access to water supplies in the city.

With the rising population and the consequent proliferation of wells and boreholes the situation in Kismayo is likely to deteriorate, with the risk of compromising irreversibly the water table. As in all the coastal areas, the fresh groundwater floats on salty water, which is denser. The movement of the saline/freshwater wedge of the underground aquifer of the town has been considerable, progressing inland in years with less rains.[98] While some water pipelines within the city do exist, these serve mostly higher income groups and only run along the two main axes of the city.[99]

Overexploitation of groundwater, water shortages, and pollution of the soil are some of the key consequences of maladaptation and poor planning. "*When it comes to water, if you continue in just building wells and boreholes, sooner or later the groundwater will just disappear sooner rather than later because we are talking about a hundred thousand people*," a UN Habitat representative warned. Expert stakeholders working on water management have expressed similar concerns,

97 In 2014, the FAO mapped approximately 3,500-4,000 water points across the country: 1) only 2,200 were functional and perennial under normal non-drought conditions; 2) and of these 2,200 water points, around 500 deep borehole groundwater sources could provide people with sufficient protection from environmental contamination and waterborne diseases.
98 UN Habitat, 'Kismayo Urban Profile'.
99 UN Habitat, 'Baidoa Urban Profile'.

highlighting the lack of expertise around wells that turns them from a means of providing water to one that actively damages the environment in which they are built: "*If they don't manage the salt in the well in a proper way, it will harm the environment.*" While plans for processing saline water have been made with private sector actors – including AFI Water Supply Company – government actors note concerning gaps within these plans: "*Technically, they are ready to process the saline water but what will they do with the salt waste? They do not have any plan.*"[100]

Box 4: Managing water effectively – two examples of AfDB and WB initiatives in Somalia

The Kismayo-Baidoa urban water supply and sanitation project is an IOM-implemented and AFDB-funded initiative with the objective to "contribute to improved quality of life, inclusiveness and resilience" through the provision of sustainable and safe water supply, improved sanitation services, and strengthened capacity, in both cities between 2019 and 2023. In particular, the project aims to improve access to affordable water supply and sanitation services for the IDPs: *"Water and Sanitation tariffs will be reviewed to incorporate lifeline tariffs, which often ensure that those in greatest hardship can afford water and sanitation services. Selected education, health and market facilities will also benefit from improved water and sanitation facilities and hygiene training and promotion."*[101]

The World Bank has supported two pilot projects in Puntland and Somaliland – Water for Agro-pastoralist Livelihoods Project (WALP) – which have demonstrated that water catchment and storage in drylands could be increased through investment in small dams: sand dams, sub-surface dams, infiltration galleries, etc. These innovative and cost-efficient technologies *"protect water from high evapotranspiration rates by holding the water in shallow sand aquifers and can be used to supply limited amounts of water for domestic, livestock, and agricultural uses."*[102]

Waste management in urban IDP settlements in Baidoa and Kismayo

As highlighted in the "Natural Capital" subsection, the question of land ownership is at the heart of the urbanisation issue in both Kismayo and Baidoa. IDPs - climate- or conflict-induced - are often victims of competition for land and can find themselves evicted overnight, with no other solution than a new random displacement to another area of the city. In informal settlements (registered by UNHCR-CCCM[103]), private landowners often have an interest in ensuring that temporary or semi-permanent structures do not become permanent, in order to facilitate evictions. This is largely the reason why waste collection and treatment are literally made impossible in informal IDP settlements. As shown in the table below, the data from this study confirm this and also highlight the maladaptation strategies developed by communities to deal with this acute health and hygiene problem for both the IDPs and the host community.

100 KII with MoET, April 2020. A benchmark and technical cooperation with international initiatives may be considered to learn from other countries: 1) desalination strategies; 2) salt waste management systems. Israel's first desalination plant was built in Ashkelon in 2005. About 35% of irrigation water in Israel now originates from wastewater treated at more than 150 plants and up to 80% of water for domestic use flows from large coastal desalination plants the process of removing salt from seawater. By 2025, Israel aims to be producing 1.1 billion m^3 of desalinated water annually.

101 African Development Bank Group (AfDB), 'Kismayo Baidoa Urban Water Supply and Sanitation Project', 2019.

102 World Bank, 'The World Bank In Somalia - Overview', 2020, https://www.worldbank.org/en/country/somalia/overview#2.

103 See UNHCR Data, 'Horn of Africa Somalia Situation'

Table 28: Waste management (by displacement profile)

	1. Burning	2. Communal trash collection	3. Dug-out	4. Throw away	5. Sent to the bush (donkey for 2$)	Respondents
Host community	21%	41%	16%	19%	3%	117
Other IDPs (conflict)	37%	3%	31%	20%	10%	167
Climate-induced IDPs	64%	1%	9%	6%	20%	342

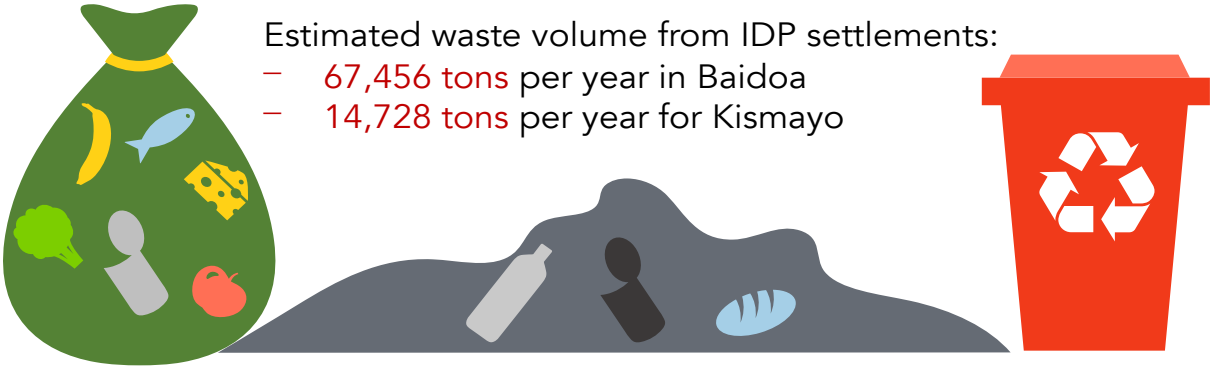
Qualitative results confirm the urgency. In Kismayo, a significant part of respondents in Dalxiiska and Calanley (23%) declared throwing away their waste. As one community leader in the Hilac Camp in Calanley described the rubbish collection process: "*In this camp, we did not see any companies or voluntary associations collecting waste. When waste accumulates, it is the responsibility of each house to burn it or throw it in the rubbish. The bin is outside the community. They collect the waste in bags and throw it in the bin. Bags of rubbish are thrown in the bin. The absence of these services differentiates us in terms of cleanliness from host communities who have direct access to waste collection.*"

Respondents in Barwaaqo highlighted the lack of waste disposal systems, and the dirt accumulation it entails: "There is dirt everywhere because there is no association group or government which collect rubbish and other dirt in the camp, and this may lead to the outbreak of diseases. There is no single dust pin in their entire Barwaaqo and no garbage collector," noted a respondent in Barwaaqo. From a societal and social point of view, the impact is also negative, as confirmed by respondents in Calanley, who stressed that littering causes tensions with host communities and neighbours: "*Garbage is thrown to the ground. The camp does not have a structure to store rubbish. When a certain family throws a bin outside their house, the rubbish goes to another house, which then causes conflict between neighbours.*"

If we disaggregate data by displacement profile, only 1% of climate-induced and 3% of conflict-induced IDPs have access to communal trash collection, which suggests they are not part of the community. For climate-induced IDPs, there is only one adaptive strategy: 64% burn their trash in the camp or settlement; and 20% send it to the bush to be burnt. In other words, 84% of surveyed climate-induced IDPs burn their trash directly or indirectly. By replicating the analytical framework and calculation model of a recent study conducted by ILO, UNHCR and Samuel Hall in Kenya's Dadaab refugee camp,[104] the waste volume of the 483 IDP camps in Baidoa could be estimated at about 67,456 tons per year (and 14,728 tons per year for Kismayo). Given these figures, even indicative, the impact of inappropriate strategies on the environment (soil, hygiene, sanitation) and the climate (CO2, toxins) would of course be disastrous.

104 Samuel Hall and ILO, 'Doing Business in Dadaab. Market Systems Analysis for Local Economic Development in Dadaab, Kenya' (Geneva: ILO; UNHCR, 2019). The estimate is based on the average individual waste production in Dadaab (0,63kg/capita/day) and the official number of IDPs (UNHCR-CCCM data) in Baidoa and Kismayo. These figures are indicative.

Figure 45: Estimated annual volume of solid waste from IDP camps in Baidoa and Kismayo (author's calculations)



80 to 85% of the waste is burned, contaminating the soil and releasing carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) into the air

On a more positive note, in Towfiiq, a committee has been formed by camp members to collect rubbish every week without pay, as one respondent described: 'There is a committee working in the camp to improve hygiene and environmental sanitation. They collect rubbish. The committee is composed of women, men and youth, 5 to 10 members. They work voluntarily in the camp, they are not paid, they are only willing to improve hygiene and environmental sanitation in the camp. But sometimes they are paid by agencies for cash-for-work activities such as collecting and incinerating rubbish, digging rubbish bins - in this case they receive $10 per day'. This type of adaptive strategies is the only possible way to manage waste in the context of the rapid urbanisation Somalia is facing. Other climate maladaptive and adaptive strategies are highlighted in the table below, based on focus group participants' and key informants' answers.

Table 29: Adaptation strategies (and maladaptive consequences) in the face of climate shocks and stressors

ASSET	IDENTIFIED ADAPTATION STRATEGY	PRE-EXISTING VULNERABILITY	MALADAPTATION PATHWAY
LIVELIHOOD	Livestock: – Sell healthy reproductive livestock to buy fodder and water to feed the weak livestock – Migrate further to find pasture and water – Feed the livestock with the farm products – Give the livestock grass from the roof to eat – Give away cattle to relatives Farm: – Store harvest after rainy season – Sell part or entire farm Shifting livelihood: – Extraction of resources (wood, water, grass, wildlife) – Construction – Washing clothes – House plastering – Petty trade – Farm labourer – Loading and offloading of vehicles – Wheelbarrow pusher – Stone breaker – Child labour (mentioned in Kismayo in particular among climate-induced IDPs)	– Livestock ownership – Type of livestock (camels are more resilient to drought) – Livelihood mix (agro pastoralists are the most vulnerable) – Lack of livelihood diversification – Resistance of crops to drought – Lack of city connections	– Feeding the livestock with farm products delays migration to the urban centre (risk that the household will become too vulnerable to leave) – Selling the farm could mean that households cannot rely on subsistence farming anymore – Extraction of resources increases the future probability of drought – Search of new grazing and farming land can lead to conflict – Urban livelihoods imply new set of risks
HOUSING AND INFRASTRUCTURE	House: – Build a stronger roof – Use stronger building materials – Raise the level of the house – Fill up the holes in the roof with plastic – Rebuild makeshift shelters in another location – Tie blankets under the roof or place grass on the roof to prevent excessive heat – Sleep outside – Tie poles together with rope	– Housing type (makeshift, CGI, concrete) – Land rights (ownership) – Lack of space	– Resource extraction to rebuild houses leads to increased future probability of drought – Embankments create subsequent pollution due to plastic bags left on site – Poorly dug trenches increase the future probability of floods – Waste mismanagement has an impact on the environment (locally) and climate change (globally), it also has a negative impact on health, hygiene, and sanitation.

	Environment: – Manual drainage – Build physical barriers (embankment or stone walls) – Dig trenches		
NATURAL RESOURCES	Land: – Use eco-fertiliser (manure) – Use chemical fertilisers – Plant trees Trees: – Place hay on top of trees Water: – Store rainwater during rainy season – Boil water – Borrow water from neighbours	– Access to water storage facility – Access to clean energy sources and fuel (cooking) – Access to social networks	– Resource extraction increases the probability of drought, erosion, floods, etc. – Nutrient depletion of soils is a widespread soil degradation phenomenon that occurs as a consequence of soil erosion – Use of chemical fertilisers leads to water pollution, crop burn, increased air pollution, acidification of the soil and mineral depletion of the soil
SOCIAL NETWORKS	Use of social networks for: – In kind assistance from neighbours and community members – Loans from friends and family – Information on sudden onset events (early warning) Split family Migration to urban centres	– Weak social networks – Similar degree of vulnerability related to similar assets within the community – Discrimination	– Indebtedness – Erosion and atomisation of family ties
MOBILITY	– Seasonal mobility – Short distance mobility (relocate house on higher ground) – Semi-permanent mobility (relocate to relatives in the city for some months – Permanent migration to the city	– Weak social networks – Lack of financial means – Lack of information – Sickness	– Increased congestion in urban centres leads to increased spread of diseases, increased temperatures, decreased resilience to floods etc. – New set of risks related to urban area

Credit: Samuel Hall, Dalxiiska, Kismayo, May 2020

MEELAHA (places)

MEELAHA (places)

Climate change and environmental degradation in Somalia are still not considered crucial political and societal issues by most stakeholders, unlike security and land availability.[105] It is time to "*rethink the narrative around climate change in Somalia: it is not a side issue, it is at the origin of all the other social, economic, and security problems.*"[106]

In 2018, the UNHCR High Commissioner's Dialogue on Protection Challenges focused on forced displacement in cities in recognition of the need to unlock solutions. Whether on the outskirts of cities or in urban informal settlements, globally, IDPs live in unplanned and underserved urban areas with a lack of land tenure security. In Baidoa and Kismayo, this is not only a challenge for them – but also for municipal officials who have to compensate for the lack of past planning while trying to plan for the future. In response to this, the World Bank refers to the people in places[107] approach: it focuses on improving the urban space for all residents, inclusive displaced people, through local governance. It is with this in mind that this section on urban places is presented – a step towards moving from cities of refuge to cities as spaces of inclusion and resilience.

The lack of urban planning places pressures on urban hosting environments, making cities – and their inhabitants – more vulnerable to slow and sudden climatic shocks. Uncontrolled urbanisation leads to problems of congestion, land consumption, inequitable service delivery, lack of public space and environmental degradation. This third section of the report examines how the urban ecosystem in Kismayo and Baidoa determines the environmental sustainability of a given urban area. It reflects on how components – such as land governance, urban planning, housing and natural resource management – can contribute to building or reducing the resilience of people affected by displacement. For instance, climate-related hazards such as floods are also negatively affecting urban areas and often have a more detrimental impact in unplanned urbanisation contexts. At a more systemic level, when rural and urban livelihoods are strongly connected (because of food chains or other material needs), the impact of climate change becomes *territorial*, reaching the urban area through the network of the rural. The focus of this section is therefore on macro structures and their use in building durable solutions.

Places of origin

To guide urban planning dynamics, it is important to know where IDPs come from. What was their reality before displacement? How far away are the communities of origin from the urban communities that now host the displaced? Is the social, ethno-linguistic and economic context of the communities of origin radically different or are there similarities to build on? Finally, are climate-induced IDPs different from other IDPs on these different points? The map and tables below present the climate- and conflict-induced displacements from Somali districts to the cities of Baidoa and Kismayo between 2016 and 2020, according to UNHCR-PRMN[108] data. To place this study in a broader perspective, the pie chart presents the districts of origin of the IDPs interviewed (as an indication).

105 KII with UN Agency staff, June 2020
106 KII with EU Delegation.
107 Anna Wellenstein, Mariko Yamamoto, and Soraya Goga, 'Managing Urban Forced Displacement to Build Resilient Communities', World Bank Blogs, 18 December 2020.
108 UNHCR Data, 'Horn of Africa Somalia Situation'

Figure 46 Baidoa and Kismayo IDPs' districts of origin (UNHCR-PRMN 2016-2020)

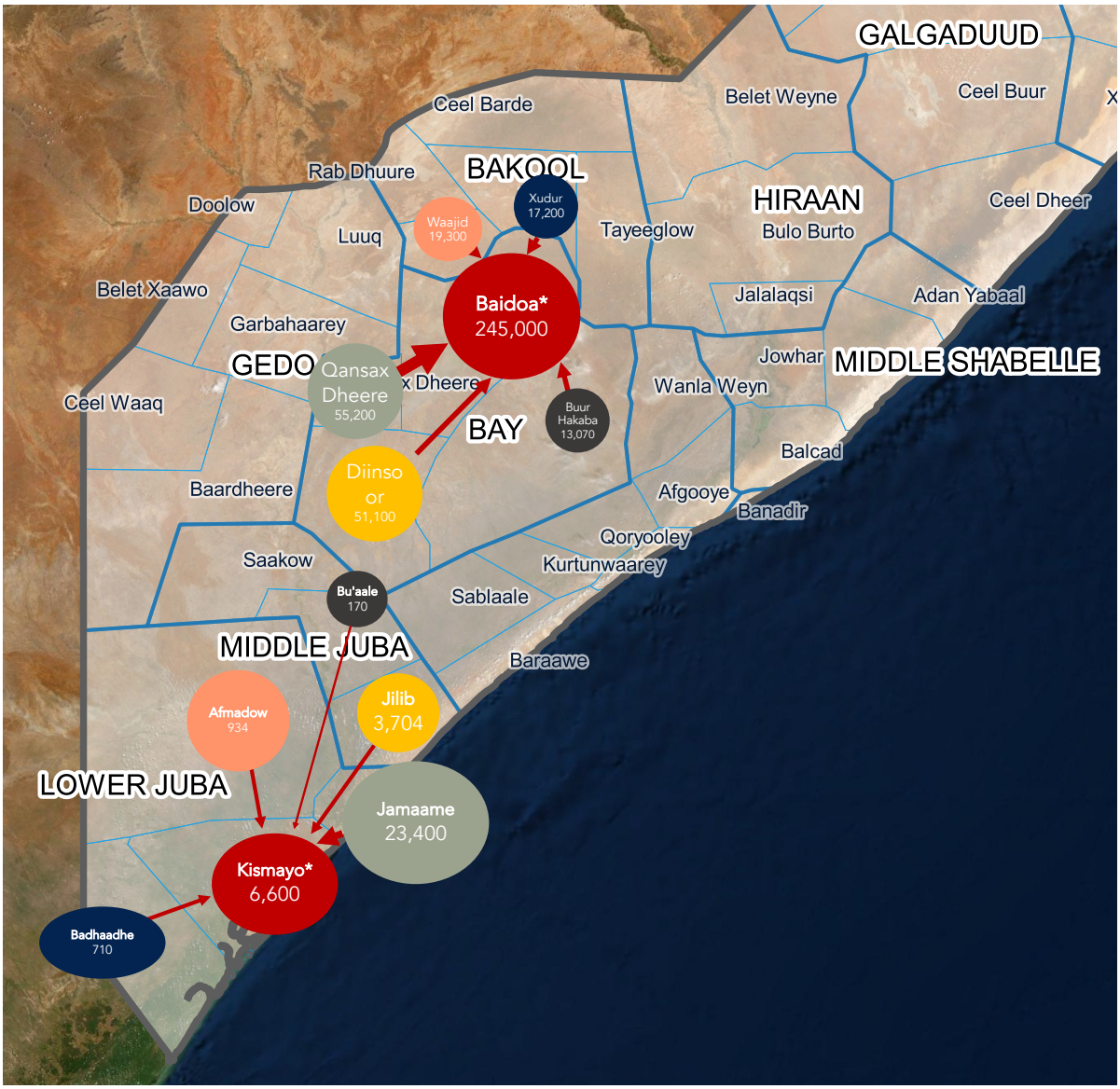


Table 30: Baidoa IDPs' districts of origin (UNHCR-PRMN 2016-2020)

Districts**	2016	2017	2018	2019	2020	TOTAL	%
Baidoa*	2,000	146,000	36,000	21,000	40,000	245,000	58%
Qansax Dheere	200	35,000	14,000	5,000	1,000	55,200	13%
Diinsoor	400	31,000	13,000	5,000	2,000	51,400	12%
Waajid	200	11,000	7,000	1,000	100	19,300	5%
Xudur	300	10,000	6,000	700	200	17,200	4%
Buur Hakaba	70	6,000	4,000	2,000	1,000	13,070	3%
Rab Dhuure	20	8,000	2,000	600	80	10,700	3%
Tayeeglow	50	7,000	2,000	200	200	9,450	2%

**Refers to internal displacement within the district of Baidoa*
*** Other districts of origin: Ceel Barde (2,030 in total), Saakow (1,090), Bu'aale (480), Baardhere (210), Qoryooley (140)*

Table 31: Kismayo IDPs' districts of origin (UNHCR-PRMN 2016-2020)

Districts**	2016	2017	2018	2019	2020	TOTAL	%
Jamaame	400	5,000	11,000	5,000	2,000	23,400	65%
Kismayo*	600	4,000	1,000	400	600	6,600	18%
Jilib	4	2,000	800	700	200	3,704	10%
Afmadow	4	90	300	500	40	934	3%
Badhaadhe	0	50	200	400	60	710	2%

**Refers to internal displacement within the district of Baidoa*
*** Other districts of origin: Bu'aale (170 in total), Saakow (150), Xudur (100), Garowe (10).*

Figure 48: Baidoa IDPs' districts of origin (N=119)

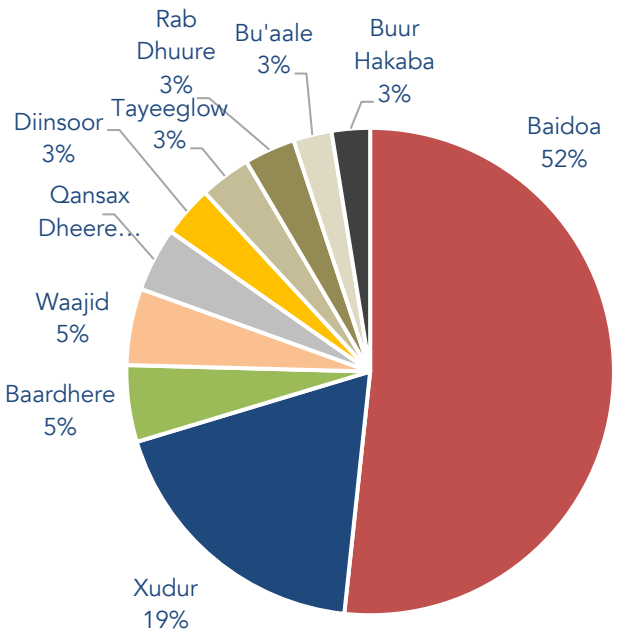
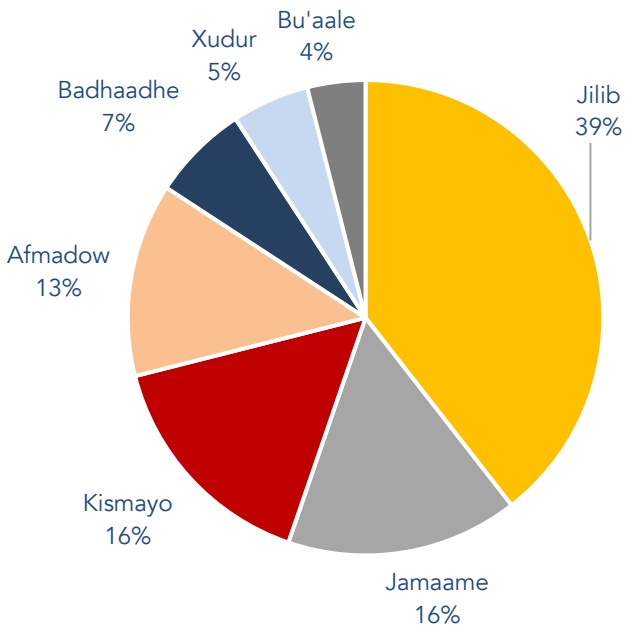


Figure 47: Kismayo IDPs' districts of origin (N=79)



The differences (particularly in Kismayo) between the official UNHCR-PRMN figures and this study's data are not surprising, given that the study focused on particular camps among the hundreds of settlements in the two cities. It is therefore likely that some of the communities surveyed in Baidoa,

for example, are massively from Xudur, due to groupings by networks of friends, family, clans, etc. Similarly, it can be hypothesised that the communities of Dalxiiska and Calanley are abnormally from Afmadow and Jilib, compared to the average of the IDP camps in Kismayo. These discrepancies are not at all problematic, given the objectives of this study and its methodological framework. Moreover, if we consider the lessons learned from both the UNHCR data and this study, the following points should be noted:

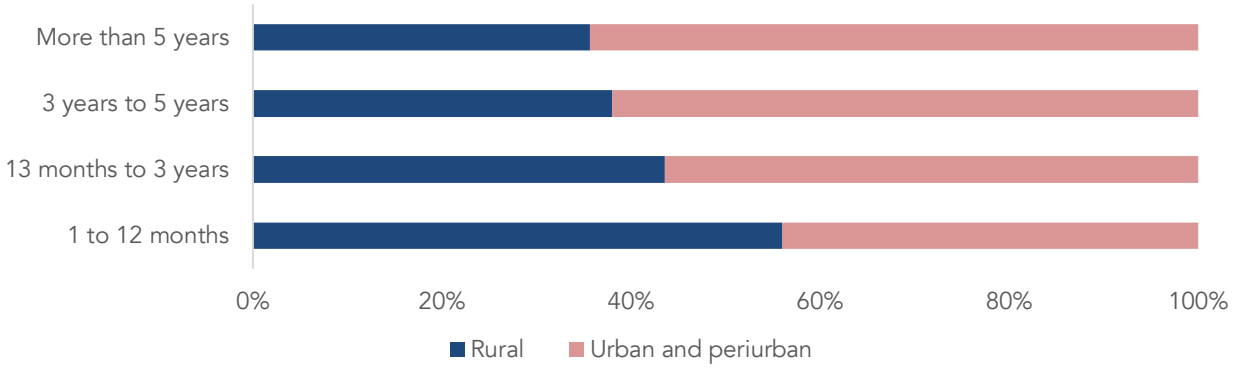
- **Geographic proximity:** Displacements generally remain within a maximum radius of 200km in both cases (with the notable exception of around ten individuals registered in Kismayo and coming from Garowe). This proximity confirms what the focus group discussions suggested: members of rural communities generally leave for the nearest urban centres.

- **Possible ethnic-linguistic dialogue:** Beyond the major socio-economic differences noted in the first part of this study (using the asset-based vulnerability and adaptation framework), certain ethnic-linguistic, cultural or clan coherences, may favour the integration of displaced communities (or some of them) within the host community. The example of the Rahanweyn clan in Baidoa, historically prominent in the city, is a good example. By contrast, clan clashes remain frequent, especially in Kismayo, which has been at the centre of various Darod sub-clan power struggles since the 1990s.

- **Improved territorial management:** The maintenance of exchanges and interactions between communities of origin and host communities could be improved. Better management of neighbouring districts and peri-urban areas in Baidoa or Kismayo could, for example, help to avoid massive and unplanned displacement during a climate shock. The aim would be to develop better territorial management based on: 1) the proximity between rural or peri-urban communities of origin and host areas; and 2) the migration networks and routes historically established between the districts surrounding Baidoa and Kismayo.

The type of communities of origin also matters. When asked to specify whether their community of origin is "rural", "peri-urban" or "urban", there is a clear linear trend among climate-displaced people: from 36% of climate-displaced people in a protracted situation who said they were from rural areas to 56% of recent arrivals. If this trend were to be confirmed at the national level and in the long term, it would naturally have an impact on: 1) the socio-economic profile of IDPs; and 2) the type of programmes and interventions required to promote their integration.

Figure 50: Climate-induced IDPs' community of origin (by duration of stay and rural/urban)



(Mis)managed urban spaces

Poor urban planning and overexploitation of natural resources can exacerbate the effect of environmental shocks. By contrast, adequate urban planning can be a major factor of sustainability when it encourages people to develop in suitable areas and guarantees equal and quality growth. The collaborative vision embodied in the sustainable solutions initiatives across Somalia is an attempt to link national, state and local development plans or community plans. It is at this local, municipal level that some of the most adaptive, creative and participatory solutions for more inclusive cities and stronger integrated programming can be generated. In this regards, institutional stakeholders (including government policy, political institutions and non-governmental organisations) can "*either block or enable access, or indeed positively facilitate asset adaptation, in a variety of ways*".[109]

Urban (mis)planning

The lack of urban planning over the past 15 years has resulted in a scattered, sparse and underdeveloped road network in Kismayo, with many disconnections, open loops and poor connections to the region.[110] The road network consists of one main road and a multiplicity of paths that close during heavy rains. The town of Kismayo has a large number of lowlands unsuitable for settlement due to the risk of flooding. After the civil war, IDP groups and host communities began to settle in these flood-risk areas. Vulnerable households living near the ocean also experience frequent flooding, as no buffer zone has been established between the coastal area and the first constructions.

In Baidoa, the second largest urban area in Somalia, formal urban planning is also lacking. As a result, the built environment has been shaped by "*vernacular and informal forces*".[111] The growth of the city has been a source of tension in some neighbourhoods, characterised by illegal land occupation, land conflicts and a lack of infrastructure and basic services. There has been a significant impact on the degree of environmental risk incurred by urban populations. Vulnerable households settle on land prone to flooding and landslides, particularly in southern neighbourhoods. A number of households are located in a flood plain that runs through the city, while others are located along the riverside, exposed to flooding in the event of heavy rains.

As the land registration process has only just begun, land tenure is an obstacle in both Kismayo and Baidoa, both in the city and on the outskirts, resulting in a lack of security of tenure for people and for public investment in land. The structures that people rely on, whether it be road networks or services, are spatially anchored and shaped by this ecosystem. Governance of land and housing, or access to public goods such as water and electricity, is not yet developed with a view to sustainable and climate-friendly solutions.

Weak land tenure and overlapping levels of ownership make investments in environmental sustainability more uncertain for local authorities and humanitarian and development organisations. Investments in water infrastructure, for example, can be cancelled at any time in the event of land disputes between different owners claiming ownership. This makes investments very risky, given the lack of a system for obtaining a share of the increase in land value resulting from infrastructure investments on land for humanitarian organisations and local authorities.

Urban planning needs to consider sustainability and participation: including affected communities, but also the private sector at the very beginning of the process. With this in mind, the stakeholders

109 Moser.
110 UN Habitat, 'Kismayo Urban Profile'.
111 UN Habitat, 'Baidoa Urban Profile'.

interviewed highlighted four key "parameters" needed to ensure the sustainability of programming, both from an environmental and a human perspective:

- First, urban planning and land management approaches should factor future expansion and possible influx of additional displaced populations, to set aside contingency land and ensure not only access to services but also maintenance of existing support systems. Starting with community based strategic and participatory planning can contribute to better anticipating congestions and access to services.

- Second, more thorough and detailed data and evidence should be considered when establishing how and where to direct support – especially infrastructural support. As one INGO representative put it: "*We often operate in the dark. This borehole or infrastructure should be built because the population needs them. Fine. But is it the right place? What are the risks in case of floods? What about sustainability?*" Overall studies on displacement have not engaged with city development issues, pointing to a data gap to be addressed; while urban or city profiles are not yet being conducted by the government – the capacity can be built to reach such an objective. Governments will require, for urban planning, to collect and analyse reliable data and city profiles.

- Third, technical expertise to find an effective balance of priorities between needs identified by the community and realities of geographic, environmental, and material conditions in order to establish best possible, feasible compromises, and to explain clearly why some needs cannot be fulfilled in full – e.g. using surplus of public land to finance affordable housing for people who move to cities.

- Fourth, social accountability and management of stakeholder biases at wider levels, including the points of view of private sector actors, municipal and local governance, and other non-community actors who may be invested or impacted by an initiative. Negotiations with landowners, innovative tools to acquire land for the government[112], or to distribute land to the private sector for further investment, need to be part of sustainable and participative urban planning.

Box 5: Owner Driven Housing Approach by the Danish Refugee Council (DRC)

Owner driven housing approaches was born out of the fact that DRC has been working with Village Savings and Loans Associations (VSLAs) that were created in 2012 through the Somalia Resilience Programme (SomReP). Targeting the least vulnerable IDPs who had, over time, saved money to create a business thanks to the VSLAs, and had acquired their own land or began a system of land leasing from the local community. This is called shared cropping, whereby IDPs plant on a piece of land owned by the host community, against a percentage (usually 20%) of the proceeds. Over time, household income had improved among IDPs in Dollow. This higher economic and social status then led them to be able to buy land from the local community within the town and put up their houses. These are the targets of DRC's programme. It provides an ecosystem that generates livelihoods for others in the community, such as masons, and other members of the construction value chain, including traders. Participants of this approach have been building their own houses, hiring their own labourers, bringing in their own materials, and being overall, as a result, very conscious and efficient with the amount of money they spent.

112 For further details on the different tools used to capture land value and acquire public land for local government refer to the Dyfed Aubrey and Luciana Cardoso, 'Towards Sustainable Urban Development in Somalia and IDP Durable Solutions at Scale' (United Nations Somalia, 2019).

The actual role and limitations of governmental, non-governmental and private sector actors: the example of the water sector

While government actors highlight concerns about the management of natural resources, and water in particular, they have only a nominal function. This mismatch between regulation and management of resources (on the government side) and service provision (on the private sector or non-governmental actors' side) is a major gap in the fight against harmful and maladaptive stakeholder practices.

For example, in describing the need to strengthen (and enforce) government drilling regulations (including maximum volume regulations), one non-governmental actor described the following: "We are developing large structures in Somalia without doing what we call geotechnical surveys. So, in the end, we do not always have the technical knowledge to avoid a negative impact on the environment. It's a question of resources, time, skills... Very often, we work with short deadlines and tight budgets". Technical expertise as well as an active enforcement capacity is required at the governmental level to ensure that a compromise between the necessary exploitation of resources and their preservation can be found: "*In short, I can say that the state controls water resources, but it does not have the power [in reality] to control and manage these resources. Because of the problems of insecurity in the country, the management of water resources is not easy for them. They lack qualified and experienced water resource management personnel. They also lack funds; without funds it is not easy to manage water resources in the region.*" said a key private actor involved in water management.

This lack of enforceable government regulation – and government oversight power – has meant an oversized role for the private sector in water supply. Key stakeholders, both private and non-governmental, emphasised this central role of private actors in the absence of government support and action. The private sector is largely represented at the individual level: while some companies are involved in water management, most of the supply is managed by individuals with shallow wells, and these are difficult to coordinate and almost impossible to regulate formally. Despite the lack of regulation, some actors noted the positive benefits that a private approach to water management has brought: "*Only private boreholes are really sustainable, year after year, because these people know how to manage, they have invested money, they have invested*", noted one INGO actor.

However, overall investment in water resources and infrastructure (construction of shallow wells, boreholes, etc.) is uncoordinated and unsupervised, both in Kismayo and Baidoa. The uncoordinated and inefficient construction of boreholes in Baidoa, for example, reflects the lack of technical expertise and prior assessment for the proper construction of boreholes. "*Anyone can build a well or dam anywhere without considering environmental factors. For example, company A is now going to come and dig a borehole 3 km from Baidoa town and, within the next year, another company B has come to Baidoa and built a borehole right next to where company A had previously built, which will create water drained from the soil, resulting in water scarcity*," noted one water management stakeholder, also highlighting the impact of competition between private sectors, and describing more than 200 "uncoordinated" wells littered in Baidoa and the surrounding area alone.

Other interviews with non-governmental actors highlighted this key tension between service provision and environmental conservation: "*We need to do this kind of impact assessment, we need to make sure that it does not have an impact on the water level in Kismayo, for example, which would again have a bigger and wider environmental impact much later, even if our action was positive from a humanitarian point of view*". However, short-term support that damages the environment in the long term is not an effective and sustainable way to support the protection of people.

Government and non-government actors have begun to recognise this problem and, in tandem with private sector actors, have been exploring mechanisms for more effective public-private partnerships (PPPs) that would allow for tangible government input and regulation while allowing the private sector to leverage its resources and community actors to identify needs. This approach is still in its infancy and, in a context where the 'public' in PPPs is relatively powerless, humanitarian and development actors have also sought to assume a partnership and coordination role with private water management actors. Finally, the interviewed government counterparts, humanitarian and development agencies and private actors operating in the field of water management agreed on the following set of issues:

1. **Investment in water management that translates into profits for an individual or a company, but does not translate into community investment.** One water company noted the lack of transparency and the resulting inability to regulate prices: "*NGOs invest in partnership with a private company and then do not control the deliverables and results, so the company is the only beneficiary because they can set the price they want after that and get all the benefits*".

2. **Concerns about meeting the expectations of governments and donors in areas where geography limits this possibility.** While Environmental Impact Assessments (EIA) are widely regarded as best practice and essential to establishing environmentally sound resource management practices, in reality they are not often included or applied. Compliance with EIA and other global standards depends largely on the personalities within an organisation and funding concerns.

3. **Lack of common standards, methodologies, regulations of Environmental Impact Assessments (EIAs),** making it difficult to design and implement effective climate-responsive programming. A representative of UNEP further stressed the fact that "*environmental assessments are not yet carried out in a comprehensive manner*".

4. **Lack of technical expertise of humanitarian and development actors in climatology, physical geography and environmental engineering.** One stakeholder highlighted the example of a development actor who had dug boreholes in Kismayo that turned out to be filled with salt water - the inclusion of expert knowledge of water systems and the geography of climate-related STEM areas could have better supported the identification of freshwater sources.

5. **Uneven coordination efforts remain and ad hoc nature of water management efforts.** Although formal coordination bodies exist in Baidoa and Kismayo, in practice responsibility for coordination efforts is distributed among various actors and often does not include the private sector, which nevertheless remains a key focus when implementing resource management. In Kismayo, however, stakeholders point to a tighter coordination structure, thanks to the streamlining of NGO coordination by the district commissioner under the Kismayo municipality. The District Commissioner also ensures that there is alignment between NGO programming and strategic plans for the city and community action plans. Interviews with representatives of the District Commissioner's office revealed positive improvements and highlighted the importance of linking coordination to a single management actor and to urban and community planning actors.

Participatory design, a work-in-progress

Despite vulnerabilities, people have resources that they adapt and that should form the basis of a supportive response.[113] Assets are viewed here as the basis for agents' 'power to act to reproduce, challenge or change the rules that govern the control, use and transformation of resources.'[114] This section focuses on survey participants' feedback on existing participatory approaches in terms of programme design, land management and urban planning. While some of these subjective views may be biased, they not only express IDPs' concerns but also their interest in being the actors and agents of their future integration in the Kismayo and Baidoa socioeconomic life.

Needs as Expressed By Study Participants: There remains limited knowledge of needs and perceptions, especially at the community level. There is limited engagement with communities in terms of what works best for them (in other words, which assets to support) and the integration of coping strategies into the planning framework. External actors need to engage more with community members in order to understand their specific vulnerabilities and determine what adaptation can be deployed based on available resources at the individual, household and community levels.

On urban communities:

- Community involvement in decision making processes, in the development of community action plans (CAPs).
- Permanent housing can withstand climate shocks and land agreements to avoid evictions.
- Inclusive city planning, with displaced groups in the development of planning, urban infrastructure and housing.
- Decelerating deforestation and increasing tree plantation were the two most popular adaptation needs express by host and IDP communities in Kismayo and Baidoa, as respondents highlighted the need to increase the accessibility of wood resources or alternative resources for cooking, as well as developing alternative livelihoods, especially in marginalised areas of the town.
- Improving the connection with the areas where livelihoods are more developed is another mitigating measure, supported by discussions with government officials: 'If [the displaced] get work, they will have food and work, and they won't cut trees to sell them or hunt wildlife species,' noted a representative from the SWS Ministry of the Environment and Wildlife.

On rural and peri-urban communities:

- Digging canals and building dams as efficient strategies to increase their resilience to natural hazards. Interestingly, rural households emphasised that INGOs focus too much on digging wells, which has proved to be inefficient. As one participant noted: "*Digging a shallow well is expensive, and if floods come the well will be destroyed. And during the dry season it doesn't have enough water for farming.*"
- Providing material support in the form of tools and building material to strengthen existing adaptation strategies: sacks, soil, and stones to support existing embanking techniques, and tools such as axes and hammers for supporting shelter reinforcement efforts.
- Focusing on livestock through vaccination and promoting environmentally sound approaches (green fertilisers, manure, etc.)

113 Moser.
114 Amartya Sen, 'Editorial: Human Capital and Human Capability', *World Development* 25, no. 12 (1997): 1959–61.

Case Study 1: Building community-led ways to address environmental shocks – an IRC example

The Neighbourhood Resilience Plans designed by the International Rescue Committee (IRC) are both holistic and community led; moreover, they serve as an example of a programmatic tool that can be used to improve the CAPs. *"The neighbourhood resilience plan values displaced community voices as much as analytical data, technical expertise, and local capacities, is both city led and community owned, and results in inclusive resilience plans and projects,"* described an IRC representative.

The initiative combines the mapping of existing services and capacity of service providers in a certain area with data to identify risks and assets in the community. Once those are established, a knowledge sharing session with communities is organised with workshops to identify their needs and preferences. This is complemented by the involvement of technical experts who can advise on what is possible given the existing assets in the community, what not, and why.

The neighbourhood resilience plans are based on an iterative and educative process supported by technical experts which enables the construction of a vision for the neighbourhood rather than a list of short-term needs. A voting process enables to holds the community accountable of their decisions. *"The planning committee is going to meet regularly like every week for six months, so it is super time intensive in order for the community to get this knowledge. (…) The face of those meetings are the communities themselves and there are benefits of social collision there."*

Addressing Needs: Inclusive City Planning is an intervention that ensures that a city's plans, policies, and projects are designed with the inclusion of displaced and marginalised communities.[115] Community action plans (CAPs) aim at integrating the decision making of communities into broader urban and durable solution planning. They allow community representatives "*to identify priority needs, provide district authorities with a tool to coordinate development interventions in their area and enable other stakeholders to identify opportunities to contribute to community priorities.*"[116] One of the successes of the initiative is that the World Bank uses the consolidated plans to inform road construction investments in Baidoa.[117] However, several challenges have been identified in CAPs:

- Feedback and transparency are uneven: the exchanges with the community are often limited after priority needs from the community are collected.[118] The follow-up remains superficial.
- The involvement of governmental actors is uneven and still limited (in particular in Kismayo).[119] By contrast, the situation is better and more consultative in Baidoa as all CAPs by different consortia or agencies are consolidated to one by the durable solutions director under the Ministry of Planning.[120]
- (In)adequate funding to implement the priorities identified by communities. CAPs do not involve an assessment of resources available in the community and do not build on these existing assets as a first step towards local planning.
- Communities perceive CAPs as needs assessments, even as CAPs have the ambition to be participatory urban planning initiatives. The community in the CAPs process is limited and not well understood. One of the consequences of this lack of involvement is that the community needs expressed are very different between and within areas, making it difficult to synthetise needs in a consolidated district level action plan.[121]

115 KII with International Rescue Committee, June 2020.
116 ReDSS and Samuel Hall, 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo' (ReDSS, 2019).
117 KII with ReDSS, June 2020.
118 ReDSS.
119 Ibid
120 Comment from IOM (September 2020)
121 KII with ReDSS, June 2020.

Key stakeholders also highlighted difficulties in getting climate specific feedback on needs, and generational differences in perceptions of the scale and impact of environmental change: "*The CAPs show to a certain extent that it is difficult to talk something beyond the general needs. If we talk about the climate and environment, it would require education on these topics. I mean the population is very young and maybe does not have the idea that Kismayo 30 years ago was a green place instead of what it is now. And they just think it is a desert.*" noted one UN stakeholder.

A recent evaluation of the overall durable solutions context in Somalia further highlights the need for a stronger focus on early solutions from the onset of an emergency response.[122] The timeframe for early solutions planning covers actions that can be taken pre-displacement and up to the first three years of an influx of IDPs. As such, early planning encompasses initiatives to strengthen the capacity of rural populations to withstand natural hazards and must include longer term climate sensitive development programming as well as short term emergency support.

Case Study 2: Implementing early solutions at an ecosystem level – An example from UNEP

A paradigmatic example of an early solution aiming at strengthening populations' asset portfolio is the ecosystem-based adaptation (EbA) model developed by the UNEP. The model uses ecosystem services as part of a holistic adaptation strategy. EbA helps vulnerable communities to adapt to climate change through the use of their own ecosystems. *"EbA are programmes aimed at making sure the ecosystem is functional, so that in turn the ecosystem provides the communities around them with the means to adapt to any kind of risks. We try to look at 'no regret' measures to implement. (…) In Sudan, we started an EbA project in Upper Nile. We are mainstreaming adaptation in development frameworks at the community level, looking at reducing vulnerability in development sectors, and diversifying and strengthening sources of livelihood and income for vulnerable people. We also increase community knowledge and understanding of vulnerability to reduce risk."* described a UNEP representative.

No regret measures refer to adaptation strategies which will not have a long-term harmful effect on the environment. In other words, EbA work towards capitalising on existing resources and practices in the community while avoiding maladaptation pathways. Moreover, as the EbA taps into the local ecosystem (without bringing a new and costly infrastructure or try to create a new system) it requires comparatively small investments relative to long term benefits. It provides opportunities for natural solutions based on local knowledge to manage the impact of climate change and to increase the accountability of communities in environmental protection.

Territorial opportunities

The case of resettlement to a different geographic space is discussed in this section as a mechanism where urban planning and institutional frameworks may reinforce, or weaken, vulnerable populations' resilience to weather events and overall well-being. The periphery of the city can be used as a space to create new structures to respond to both the challenges of displacement and climate resilience. For that to be done successfully, a placemaking process – whereby planning, design and management of public spaces are thought from the start from a local community perspective, in a way that promotes people's wellbeing and climate adaptive design – is required. The ripple effect of place making efforts can include greater social cohesion, and integration, which the previous section has shown are endangered especially in displacement affected communities.

This subsection looks at two existing prototypes of periphery planning to respond to displacement challenges: the Barwaaqo settlement in South West State and the future Luglow settlement in

122 ReDSS and Samuel Hall.

Jubaland. This initial review of liminal opportunities is then followed by a rapid analysis of what could be a model of territorial governance between urban and rural areas in the Baidoa and Kismayo areas. Both approaches (peripheral resettlement and urban/rural interactions) are an invitation to rethink and reshape the way policies, strategies and programmes consider long-term territorial planning.

Box 6: Land management in Somalia: Limited capacities of the government

There are three systems governing land in Somalia: 1) customary rules (Xeer); 2) religious law (Shari 'a); and 3) secular law. Traditional mechanisms coexist along declared government ownership. Combined with complex clan dynamics, it undermines government's influence regarding land management. Without formal registration of land processes, private landowners may obtain the land through dubious processes, and private ownership might overlap with customary ownership.

Returnees also pose another challenge as they claim back their land occupied by others. Within Baidoa, most of the land is also privately owned, with government limited in its capacity to access and manage this as two IDPs in Baidoa noted: *"The land ownership within the municipality is mainly in the hands of the private people, and the government seems to be having very limited land within that setting, and that is the reason why we are having constant challenges within the urban and peri-urban areas."; "(…) in most cases those pieces of land were owned by private people, and now the urban settlements are growing into those areas where the government has made its own land, and this depends on location, it is based on location."*

However, the municipality in Baidoa started digitalising the land record, a first step towards formalising land ownership processes. South West State and Jubaland states are also about to enact the Urban Land Management Law which established roles and responsibilities. This legal framework at the Ministry level will enable the enforcement of land law at the local level and will pave the way for city planning. Jubaland has a land administration unit supported by a private company, and in charge of registering digitally the land and gives access to permanent land title deed. However, an act of Parliament is still required to transition from a land authority to a land commission and be anchored into the Jubaland constitution, and this remains pending.

Housing strategy and planning: minimising exposure to disasters

Housing is one of the main channels of exposure to climate-induced disasters and slow-onset events. The materials used to build housing can also be a source of environmental damage. It is precisely because of this dual characteristic – exposure and damage – that housing offers an opportunity to rethink spaces and sustainable solutions for climate adaptation. From a programmatic point of view, the environmental aspect has been absent from the housing debate. From a structural point of view, at the macro level, the housing strategy to address the challenges of displacement in Somalia is not climate friendly: neither in terms of immediate protection against or mitigation of climate-induced disasters, nor in terms of adaptation and transformation to the consequences of climate change. While at the micro level, the underdevelopment of the construction industry in South West State and Jubaland, the lack of expertise and the difficulty in obtaining the materials needed for more climate-friendly housing structures are major obstacles.

Current housing is inadequate:

Current housing for IDPs in Baidoa and Kismayo is, for the most part, inadequate in terms of protection against climate-induced disasters and environmental impact. IDPs complain about the inability of makeshift shelter materials to protect them from climatic events: "*Our houses are made of fragile structures such as branches and rags with fragile roofs. I go to the dump to collect the threads, carpets and clothes I use to cover my hut.*" explained one focus group participant. Wooden roofs are

often torn off by use, houses are extremely hot during the day and very cold at night, and the overall structures of the dwellings are not standardised, let alone meet minimum environmental standards. In addition, the predominance of sheet metal and reinforced concrete roofs does not take into account ventilation needs, which are more important in this current period of a global pandemic.

Overall, stakeholders interviewed for this study agree that the environmental aspect has been missing from the shelter debate and should be included as an absolute prerequisite: "*We build camps and settlements with plans and materials that are neither adapted nor sustainable. We know that these people will stay and that the only durable solution for them should be the progressive integration within the urban community. And we also know that others will come. So, let's plan accordingly: no more temporary agendas, no more quick-and-dirty job. We must plan better, coordinate, and respect the dignity of IDP communities.*"[123]

Lack of guidelines on housing:

None of the key stakeholders – whether donors funding these initiatives, NGOs implementing them, or the government regulating them, have indicated guidelines on housing. Only Jubaland has released recent regulation on shelter design, in 2017, introducing a two-room structure minimum in its shelter policy but without environmental considerations. However, as highlighted by donors, governmental counterparts and development NGOs, there is a real balance to find between providing sustainable housing and brining housing options to scale. Given the cost of two-room structures (3,000$), the question is valid and requires an agreement between all stakeholders on: 1) realistic objectives; 2) pragmatic standards; 3) technical modalities; and 4) adequate financial resources.

Going beyond the humanitarian response:

While intermediary solutions – such as building foundations for larger houses and owner-drive responses – are still being debated, there is a consensus that the current housing approach needs to go beyond the humanitarian shelter approach: "*Why so? Simply because most IDPs have nowhere to go and are in a protracted situation. And newcomers are even less likely to leave. So we should shift from survival plans and shelter tactics to socially and environmentally acceptable housing strategy. On the long-run, it saves lives, money and generates political and social dividends.*"[124] The shift from shelter to socially and environmentally sound housing is still in discussion, rather than a reality in practice, with the exception of a UNHABITAT/NRC housing model (also called an incremental housing approach), which was a pilot project for IDPs in Mogadishu.

Strengthening constructive technology:

Somalia's weak construction industry, lack of access to materials and lack of expertise of local architects and masons are also major limitations to improving climate-friendly housing. Business representatives interviewed explain that most equipment has to be imported due to a lack of raw materials or machinery. Cement is also not easily accessible and expensive - it has to come from the Kenyan border, Ethiopia or Mogadishu, all distant options. Beyond equipment, there is also a lack of knowledge: initiatives to include ventilation systems using traditional Somali construction techniques were approved by the municipality, but there was a lack of workers to implement them. The focus then of humanitarian actors is being re-directed to improving construction technology through various modalities, such as:

- **Investments in improvements and re-engineering local construction** by improving the foundations of the structure, raising the level of the structure off the ground, and upgrading

123 KII with an academic researcher, June 2020.
124 KII with consortium member, November 2020.

roofing. This is the main response to date to makeshift shelters, for instance in Dalxiiska, and adapted to Baidoa.

– **Transitional shelters:** engaging in a step-by-step approach that will aim to first build the floor, the ground, and once that is done, extend the foundation, construct outside, then after some time, demolish the iron sheet and remain with a permanent house. This transition from a weak to a proper permanent structure requires funding – that is currently going to shelter approaches.

Box 7: Urban management around the world: An untapped inspiration?

Key informants highlighted the importance of looking to other cities – and not only in contexts of low capacity – in order to identify best practices: "This is a New York experience talking," described one stakeholder, "I have never heard this talked about in the humanitarian context, but if you build a flood wall, how do you make it more than just a flood wall? How do you turn it into a public space? This demands more advanced architectural interventions, but it pays these communities the respect to actually think beyond just further arbitrating from their neighbourhoods the way they are in their daily lives. The tools available in European and Western cities can be used in the 'global South' context. Yes, the resources are less, and the challenges are greater, but the willingness is the same and the need for them is actually greater." (Interview with Samer Saliba, IRC)

Adaptation through resettlement: the importance of planning

Of the three durable solutions (return, local integration, and resettlement), resettlement has traditionally been deprioritised, especially in relation to internal displacement.[125] As with thinking around returns and local integration, principles of resettlement must respect key material, social, and physical indicators in order to ensure safety and dignity of displaced populations in whichever spaces they find themselves moving to. One stakeholder described this dynamic in detail: "*Resettlement offers an opportunity to change the way in which displacement affected communities have been dealt with, as it presents an opportunity to redevelop an area in a way that is inclusive, that is mixed in terms of populations, that has a productive potential.*"[126]

Resettlement of urban IDPs to peripheral areas – i.e. the extension of the urban space towards a new space explicitly designed for IDPs in ways that are environmentally friendly – is one compromise put forth to address the environmental impacts of displacement on both people and places. However, this can only be an actual solution providing that proper due diligence, security of tenure, and integrated settlement planning approaches are enforced – which calls for adequate planning and timely coordination between municipal, national, and international stakeholders and implementers.

In this sense, if IDPs were to voluntarily agree to resettlement plans, and if resettlement were to be implemented in line with the key principles of voluntariness, safety and dignity, government actors are hopeful that resettlement plans could offer a means towards compromise in the face of a seemingly intractable environmental and protection problem. In this sense, the development of protection mechanisms for both IDPs and the spaces they inhabit are linked to urban planning overall, and the displacement context itself frames the wider development of spaces and places.

125 IASC.
126 KII with UNHCR, May 2020.

One government representative in Baidoa noted that "*There is a new sense of urban planning that has actually an impact on the real actual extension of the city. And this has occurred as a result of the [search for] durable solutions.*" An INGO representative further highlighted this dynamic: "*What we are hoping to see happening there is that this area will be planned not as a IDP camp or a little township for IDPs, but as an extension of the city with commercial uses, with mixed kind of housing uses, public spaces, and stuff like that.*"

To ensure that extensions of urban spaces are conducive to effective resettlement and the assumption of a normal, dignified life, it is crucial to ensure that social dimensions of planning are considered alongside spatial and physical dimensions, including addressing how newly developed areas can be integrated and forge connections with existing areas, how these last benefit from new developments, and how facilities and services can be planned so that they address the needs of and attract both new and existing residents.[127]

A core element of establishing both these physical and social dimensions of planning is identifying where and how planning can remain adapted to the potential consequences of climate change, and mitigating the harm to the environment caused by population influxes (which subsequently harms these populations themselves). It is this deliberate planning of peripheral spaces, rather than the ad hoc nature of climate mobility as it exists today in Somalia, which differentiates peripheral resettlement from post facto local integration, and may provide a path forward for mitigating the consequences of inevitable and continued environmental disaster.

Box 8: IOM's relocation of IDPs to a newly developed public site in Baidoa

IOM has initiated the relocation of 1,000 IDPs from 15 IDP sites to a new public site in Baidoa in June 2019. According to IOM, this intervention focuses on addressing the immediate needs of the vulnerable IDPs at risk of eviction through solutions that are integrated in the long-term urban expansion plan of Baidoa City. It was led in coordination by the South West State authorities, the Baidoa municipality and the IDP community, and aims to support internally displaced persons with better living conditions and sustainable land tenure: "*We recognise the rights of IDPs and Displacement Affected Communities (DACs) to own land and solve recurring problems such as evictions (…) Our vision is to make sure that all our community members, regardless of their status, live on a decent protected land, without discrimination or fear of eviction.*" said Abdullahi Ali Watiin, the Mayor of Baidoa.

The relocation project is a multi-sectoral integrated response implemented by IOM, coordinated with UN-Habitat and in partnership with DFID/FCDO, ECHO, JSB, and OFDA, with a sustainable approach: 1) roads were incorporated in the urban network to ensure an easy access and linkage with host communities; 2) land was allocated to IDPs according to clear and long-term standards; 3) latrines and a sustainable water system were developed to comply with adequate sanitation and hygiene standards and provide clean and safe water; and 4) two police stations were built along with solar streetlights to enhance safety and security.

Promoting mobility and diversification of livelihoods

Resettlement may serve as one climate mitigation strategy, but for this to be effective, relationships to urban spaces are crucial to creating a cohesive spatial and defined whole between new peripheral planned environments and existing urban areas which maintains environmental integrity. This last

127 KII with an academic researcher, August 2020.

subsection recommends a territorial approach to durable solutions. It looks at the opportunities of increasing rural urban linkages and diversification of livelihoods through facilitated mobility, investment in selected rural settlements and skills building; moving towards a more territorial governance of resources; and promoting green value chains. Given the geographic dimension of environmental degradation, the territorial approach looks at bridging the rural, the urban, and the periphery to enable the governance of the three areas in a holistic and conjunct way.

In identifying this mobility between places, and the lack of core planning addressing this to date, there remains a need for decentralisation to focus on territorial spaces, as opposed to national or state spaces – ultimately, this translates to an enhanced focus on the municipal. Bringing efforts to achieve durable solutions from the national to the municipal level also means intervening beyond areas such as Baidoa, Kismayo and Mogadishu, where the international presence is strong, to secondary cities and rural areas, and forging connections between municipal actors in these areas.

As it stands, there exists a lack of coordination between municipality and state level on investment priorities, symptomatic of lack of territorial planning. This is not due to a lack of political will on the part of municipal actors, but rather on a lack of focus and support towards these actors: "*Here, the municipality wants investment for the city, but the Ministry and the AFB are focusing on the larger part of the state.*" described one municipal actor in Baidoa.

This lack of focus has reinforced weakened links between urban and rural planning: "*Through decentralisation process, we need to improve the rural and urban planning so that there is a linkage between that, because if these people are agriculturalists, we make sure that they should be facilitated to bring over easily and freely their agricultural products to the urban area, maybe for value addition or even for market purposes and making sure that there are markets.*"[128] Durable Solutions planning can actively seek to bridge this gap, bringing the focus to municipal actors in order to strengthen these weaknesses and subsequent territorial planning between urban, peripheral, and rural spaces, resulting in a fully holistic level of territorial governance, which can manage climate adaptive tactics while taking into account impacts on both ends of the territory.

Practically, an optimised and decentralised territorial management in Baidoa and Kismayo would also help to develop more ambitious livelihoods strategies – at the community and household levels. People have mixed livelihoods and are willing to entertain the possibility of return without necessarily abandoning access to the city – it is not an either/or dynamic, but one of compromise. People move to rural areas, for instance, when crop harvests are possible, and return to cities in times of drought. Overall, connecting the dots between rural and urban areas will also enable a more territorial governance of resources and the promotion of green value chains across locations.

Leveraging these mixed livelihoods, and people's willingness to move in order to maintain them, can be an opportunity towards the development of an overall territory of climate adaptability which, encompasses both rural, peripheral, and urban environments and the linkages between them. In order to develop this, establishing exactly who is willing to move back and forth, and who can, is key.

Beyond willingness to move, barriers to circular and territorial mobility must also be taken into account when identifying best ways to leverage mixed livelihoods opportunities. Roads, for instance, can form a key obstacle, as roads become blocked during spring rains, and the distance between the city and the rural space becomes impassable, essentially fracturing the adaptability territory in two. Beyond environmental obstacles, corruption, especially in the form of road tolls and blockages, are an additional source of fracture; those closest to main roads will be those most likely to move.

128 KII with Kismayo municipality, July 2020.

Territorial mobility frameworks need to be designed for climate adaptability. Tangibly, this means that urban planning needs to acknowledge frequent movement between urban and rural spaces and build infrastructure and community planning that embrace this. There are four ways to do this:

1. Through effective land management, including negotiations with landlords to mitigate the impact of rental spikes in order to ensure that mobility between the territory can be maintained.
2. Developing adequate infrastructure, with a focus on ensuring road access can overcome geographical (floods) and human (tolls) barriers in order to ensure smooth, safe, and frequent access between the three spaces remains possible (which can only be assured when the area is secured).
3. Building on or establishing market systems which correspond to the realities of livelihood diversification and movement between the hybrid rural-peripheral-urban territory.
4. Leveraging diverse livelihoods and sources of income as people move between the different spaces of the territory.

On market systems, key informants interviewed for this study highlighted the importance of ensuring that market systems work for displaced populations, and practically support their livelihood. Identifying and developing stronger – and greener – value chains may be one way to strive towards more relevant and climate adaptive forms of economic inclusion. They highlighted the importance of identifying how well local markets function, and where displaced people can position themselves within these existing markets, and especially how rural markets link to urban markets within the territory.

For instance, if traders are not prepared to purchase farm outputs in rural areas this will have an impact on food security in urban areas. But assets to be leveraged in such a case may 'include IDP networks and their understanding of farm produce. They can play a role in supporting the sourcing for urban food markets. Linking their involvement to the vegetable markets in Kismayo, for instance, can improve economic well-being and planning on all other dimensions.'[129] The role of markets in livelihoods needs to be enhanced in future programming design in the durable solutions consortia.

Leveraging rural skills in urban areas may also be a means towards linking the spaces within the territory. This is apparent when examining possibilities, for instance, for urban farming. Urban farming programmes in Towfiiq have, at a small scale, supported the provision of livelihoods while simultaneously avoiding inordinate extraction of natural resources. Surveyed FGD participants themselves highlighted the improvement in their lives since their investment in the urban farm programme: 'Households are now sharing vast land for farming activities, as initially the people of Towfiq had vast land but the issue of farming and provision of farm tools and seed for germination and cash for work activities has helped us by World vision. The farm is located in the outskirts of Baidoa, in a place called Maanyafuulka, and we have enough space for farming activities, and the land is fertile, and the soil rich in nutrient. This has really helped me, I bought solar panel to charge phones and I get money out of it. I also opened a place where I sell drinking water near the IDP settlement.'

This approach is a good example of an adaptive strategy that combines positive social and economic outcomes without negative environmental externalities. More specifically, it is worth noting that the focus on livelihood diversification is based on: i) the optimisation of pre-displacement skills of IDPs (agriculture); ii) a complementary source of income linked to identified needs in the urban market

129 KII with International NGO (Baidoa, May 2020).

(telephone charger, place of consumption); and finally iii) unlimited and unconstrained mobility between urban, peri-urban areas and rural communities.

Box 9: Green value chains to promote green growth (DCED, 2012)

Green value chains are not only focusing on the promotion of the waste management or recycling industry but also on a "*green approach to value chains i) to ensure the sustainable use of natural resources and to increase the share of renewable and recycled resources at the input side of the value chain, ii) to maximise material- and energy efficiency at each stage of the process, and iii) to reduce negative environmental impacts as outputs at all points of the chain.*" (DCED, 2012). Examples highlighted in the African context are the flower sector in Ethiopia (pro-poor approach, organic fertiliser production, clean energy, increased soil productivity, water shed management, 'green code of practice'…) and the global cocoa value chain in Ghana (organic farming, inter-generational contracts, rural-urban migration, productivity increase, prohibition of slash and burn methods, diversification into cocoa honey, eco-cocoa tourism, carbon credits, food and cash crops, etc…). In the contexts of Baidoa and Kismayo, examples of green value chains include waste management, recycling (plastic, glass, metal), fisheries in Kismayo, acacias, sorghum, maize, sesame, bananas, as well as construction and many other potential sectors.

Source: https://www.enterprise-development.org/wp-content/uploads/Green_Value_Chains_to_Promote_Green_Growth.pdf

Recommendations

'As a first step, it is important to reach a global consensus that displacement is an important aspect of adaptation, and that affected states need to be supported in their efforts to prevent climate change-induced displacement, address the protection and assistance needs of the displaced and find durable solutions for them.'

(Walter Kälin, 2010)

The 'climate double-bind' identified in the introduction poses a difficult equation to solve: climatic shocks cause displacement from rural to urban areas and maladaptive coping strategies contribute to worsening the consequences of climatic shocks in urban environments. The climate emergency in Somalia has exacerbated an already environmentally fragile context, informing an internal displacement context that has put severe pressure on urban places and the people who inhabit them. At the same time, the Habitat III New Urban Agenda focuses on the need for "*safe, inclusive, accessible, green and quality public spaces*" while also calling for the socioeconomic wellbeing of "*refugees, internally displaced persons, and migrants, particularly the poorest and those in vulnerable situations.*"[130] From a dual humanitarian and development perspective, creating safe, inclusive, and accessible cities for the urban displaced therefore means focusing on the importance of place and public space.

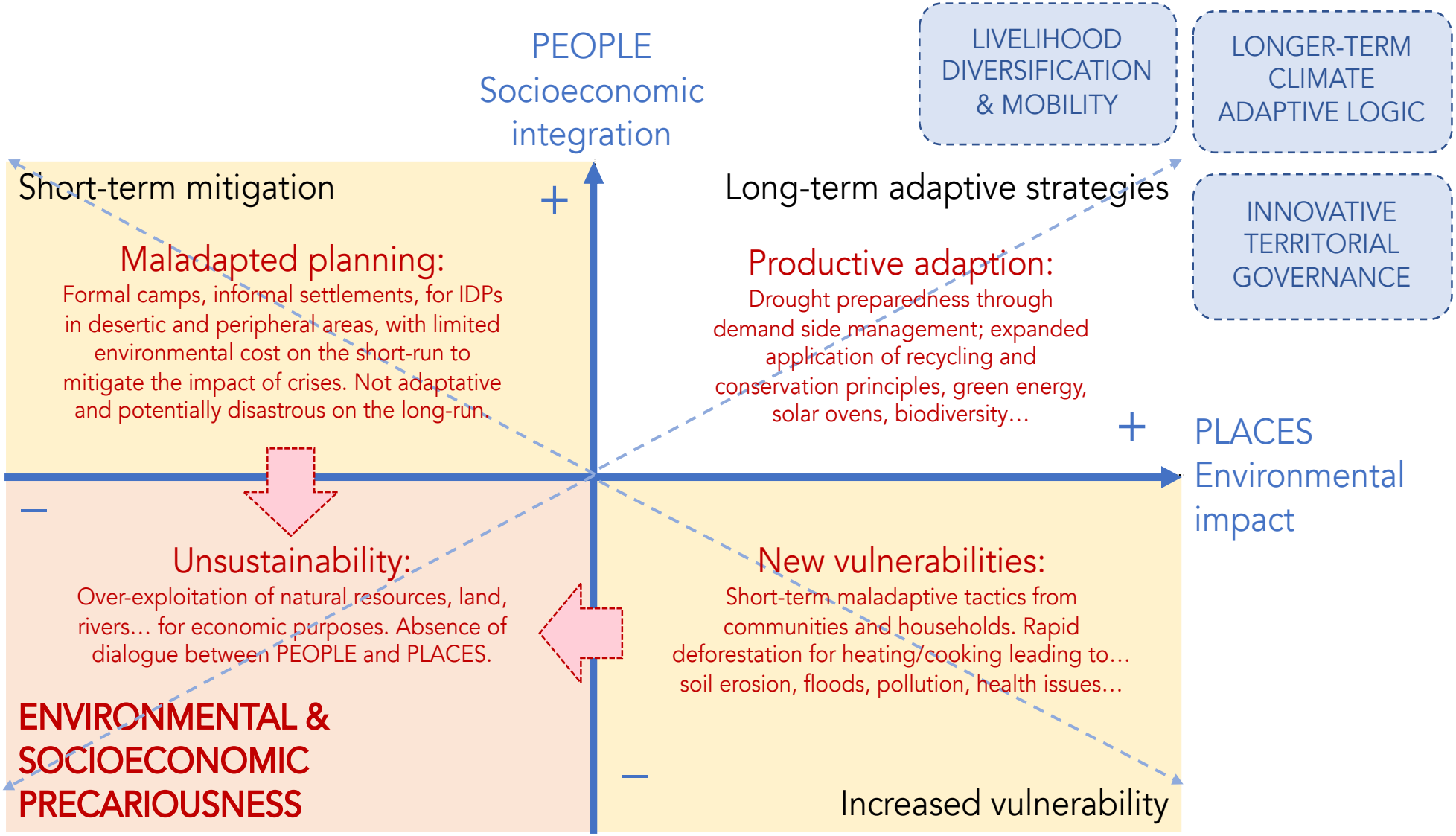
As presented in the diagram below, the situation of environmental and socioeconomic precariousness of most surveyed IDPs in both Baidoa and Kismayo areas is caused by a poor integration and an extreme vulnerability to environmental shocks. The absence of urban planning paired with short-term maladaptive tactics trap climate-induced IDPs in a precarious situation, characterised by their limited decision making power and a de facto segregation from the rest of the community. It is also worth noting that the two orange boxes are driven by short-term views, either emergency shelter and settlements (maladapted planning) or counter-productive exploitation (new vulnerabilities). This suggests that adjusting policies and individual practices requires a drastic change, so that policies and programmes progressively:

I. Favour participatory and longer-term climate adaptive logics over immediate gains and maladaptive options;
II. Develop innovative territorial governance models that overcome the traditional urban / rural divide;
III. Consider livelihood diversification and mobility as positive coping strategies – economically, socially and environmentally; and
IV. Streamline education and learning on climate change into decision-making processes and durable solutions programming.

These four overarching recommendations are broken down further to provide a 'how to' guide for policymakers and programmatic actors in the support of durable solutions for climate-induced IDPs. Together, they constitute a blueprint for action to encourage long term adaptive strategies (Figure 51).

130The United Nations General Assembly, 'The New Urban Agenda, as Adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador in October 2016', 2016.

Figure 51: Adjusting policies and practices towards productive adaptation



I. Favour participatory and longer-term climate adaptive logics over immediate gains

1. Engage all stakeholders in a participatory manner. In order to ensure all key actors are engaged in the process, having participatory exercises with key governmental counterparts, humanitarian and development partners and community representatives may help to integrate local perspectives. The proclamations regarding durable solutions should be reviewed and a plan for each municipality (Baidoa and Kismayo) and their respective peripheries or territories (see recommendations 4, 6 and 8) revised at regular 3-to-5 year intervals. Given the urgency of the humanitarian situation in many camps, as soon as an economic, political or environmental shock occurs, the challenge is to move beyond traditional models of participation. For example, notions of conditionality, sustainability or reciprocity could be discussed: under what conditions is private sector involvement in services acceptable? how to ensure that a camp on the margins of cities does not present a risk of marginalisation (through lack of access to services) or environmental risk (in case of flooding, for example)? how to maximise the contribution of the Somali diaspora from abroad?

2. Include IDPs and host communities in environmentally friendly and environmental protection activities. While raising the awareness and the environment-related knowledge of communities, it may also have other positive externalities such as improving the inclusion of IDPs in the community and enhance social cohesion.[131] Supporting both host and climate-induced IDP communities equitably while acknowledging their respective needs and specific vulnerability is essential to identify adaptive strategies and implement them on the long-run. Moreover, avoiding 'othering' and 'scapegoating' phenomena, at a time of durable local recession, will be essential to enhance the existing positive social dialogue between host and IDP communities. There are two key opportunities that exist for acting on this, allowing for 'best possible' compromises when managing environmental consequences for places and the impacts on people:

   - **Community Based Disaster Management:** communities can take ownership of protection measures against climate-induced disasters through disaster management committees. This kind of committee already exists in certain communities, such as in Towfiiq, and offer an opportunity to test the approach by providing them with capacity building and funds to extend their role.
   - **Cash for Work Activities:** Including IDPs in cash for work schemes such as clean-up campaigns, recycling efforts, construction and maintenance of new infrastructures would have a direct impact on their environmental protection and an indirect impact on other layers of vulnerability: it may improve their image, provide an income, and improve their health and psychological status.

3. Protect the nature and dynamics of the ecosystems in place and avoiding maladaptive strategies. To take into account the potential threats of climate change on the evolution of environmental conditions (direct and indirect impacts on resources in rural and urban areas), it is essential to develop an active and coordinated agenda in Baidoa and Kismayo, by:
   - Supporting biodiversity and green belts in the immediate surroundings of IDP camps (in peripheral areas and urban settlements, as much as possible);
   - Promoting green financing and diversifying local energy mix – with an emphasis on solar energy, wind power generation and supporting low-carbon growth;
   - Supporting sustainable housing financing and improving housing conditions (with significant incentives and low interest rates for the acquisition of passive solar houses or solar panels, etc.); and
   - Diffusing improved low-carbon cookers.

131 ReDSS and Samuel Hall.

II. Develop innovative territorial governance models that overcome the traditional urban / rural divide

4. Rethink the connection and relationship between urban centres and their respective hinterlands by supporting a clear demarcation and collaboration between national, state, district, municipal and community-level authorities. At a time of massive displacements and generalised mobility, building administrative walls and containment strategies between rural and urban areas is not only politically and ethically questionable, but also counterproductive from a social and economic standpoint. Here, the notion of territory – which refers to a continuum between naturally interlinked urban and rural areas – seems more adequate for both Baidoa and Kismayo, as it translates an understanding of urban and rural economic markets and social communities as a territorial continuum of urban hubs, secondary cities, small towns and rural communities or clusters. To do so, both a better demarcation and collaboration between all stakeholders (starting with national, state, district, Baidoa, Kismayo, and rural/periurban community-level authorities) should be implemented to include displacement and mobility as a structural characteristic of Somali cities. This requires a rethink of the borders and limitations of what is called a rural community or urban area.

5. Enhance land management by initiating a dialogue with landowners and improving land services. Unclear land management in both Baidoa and Kismayo paved the way to land grabbing, urban land speculation, under-served peripheral areas, and evictions of IDP households. However, legislation on urban planning and land governance takes time and should be supported by other smaller scale initiatives enabling urban planning activities and acquisition of land from the government. In this regard, multi-governance at scales beyond the national level was highlighted as a key gap by stakeholders: up to now, the focus has been on participatory decision-making processes and collaborative visions of legislation and governance, next steps need to be taken towards tangible planning mechanisms and implementation in order to ensure that participatory processes are implemented and maintained throughout. The following action points may be considered in both Baidoa and Kismayo areas:
   - Strengthening existing land registration processes;
   - Continuing to build the legislation around urban planning and land governance;
   - Monitoring transhumance to prevent conflicts and improve adaptation to climatic hazards, through the creation of water points and transhumance corridors;
   - Rehabilitating irrigation infrastructures to cope with climatic hazards; and
   - Developing innovative approaches towards formalising and securing IDP informal settlements (land swaps, rental assistance, home improvement grants, communal leases and social housing development.)

6. Support sustainable spatial integration through a better governance of integrated service facilities for IDPs and host communities. It is essential to focus investment and development initiatives on the maintenance, renewal and upgrade of the existing infrastructure (roads and water) to mitigate the impact of future shocks (floods and drought) while contributing to the socioeconomic development of the two areas. The improvement of road and water infrastructure should be considered a priority intervention, in line with future planning decisions. Other instruments of sustainable spatial integration may also be considered:
   - Improving land usage, through the identification of strategic areas for density increase and land readjustment (rezoning) – paired with the improvement of roads, water infrastructure, commercial functions, sociocultural centres. Both the host and climate-induced IDP communities should benefit from any upgraded infrastructure;

- Favouring green belts (zones of environmental protection) to avoid soil erosion, and its disastrous consequences, and progressively restore the resilience of local environmental ecosystems;
- Building water supply master plans to guide all future investments, based on detailed assessment of available resources and infrastructures (e.g. the UNICEF water supply master plan model in Baidoa); and
- Investing in more innovative water resource techniques: water storage and water recycling.

Taken altogether, these measures may contribute to supporting the process of emplacement, which is enacted through the 'innumerable processes that make up everyday life', and which shift 'place' from the unknown to known, through activities such as housebuilding, farming, trading and religion' as well as 'clan, appearance, dialect and culture' (Hammond, 2004). All the recommendations listed under this subsection (4 to 8) are geared towards strengthening the progressive emplacement of climate-induced IDPs as well as other minority groups.

7. Adapt the placemaking model and framework to new peripheral areas and IDP historical settlements. While the placemaking approach is generally applied to high or middle-income countries, there is no reason why its key attributes and measurements should not be considered in more socially challenging and economically deprived areas like Towfiiq, Dalxiiska or Barwaaqo. By creating places where people can participate in the ways they prefer, by giving people an active stake in the design and activities of public spaces, they are more likely to become active socioeconomic agents. A great public space creates a feeling of belonging, which can only happen with a careful planning, based on four key dimensions:[132]
   - Sociability (diversity, cooperation, pride, friendliness, interactions, etc.)
   - Uses and activities (usefulness, celebratory, sustainability, sports, etc.)
   - Comfort and image (safety, cleanliness, green, spirituality, history, attractiveness, etc.)
   - Access and linkages (continuity, proximity, connectedness, walkability, convenience, accessibility, etc.)

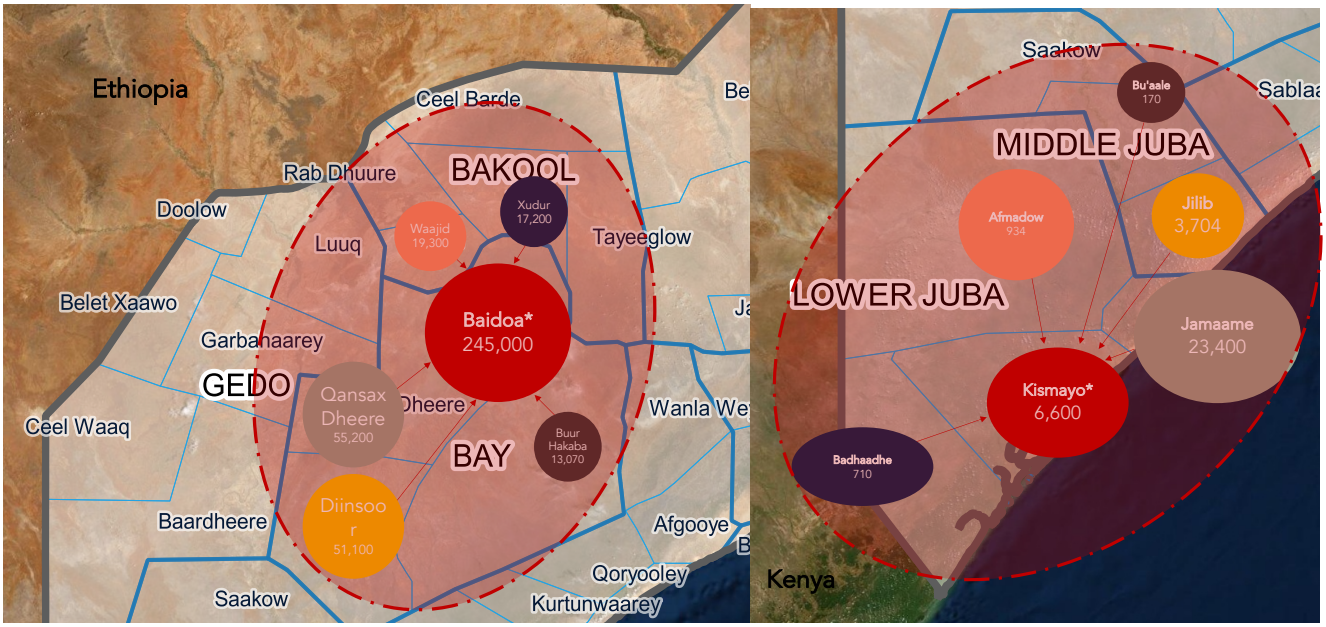
III. Consider livelihood diversification and mobility as positive coping strategies – economically, socially, and environmentally

8. Promote mobility zones around Baidoa and Kismayo as dynamic mobility territories, where the exchange of goods and the movement of people contribute to a better control of the irreversible consequences of climate change on rural communities (desertification) as well as on urban areas (precariousness). This suggested model of territorial governance (points 5 and 7), in the cases of Baidoa and Kismayo, enables the socio-economic drivers and opportunities of displacement and mobility to be better taken into account. It can help to reconcile people and places. In this regard, programmes focusing on diversifying livelihoods strategies, improving community resilience or promoting disaster risk reduction strategies should probably consider mobility between rural and urban areas as a positive adaptive strategy, that requires pre-displacement training modules (focusing on urban sources of income and skills needed by urban markets). Such an approach, as pragmatic as it is counter-intuitive, would make it possible to give or give back to rural households greater agency by promoting territorial mobility: instead of being condemned to stigmatised displacement after having lost everything, households and communities exposed to the consequences of climate change could thus anticipate future shocks by diversifying their livelihood options and remaining the actors of their mobility. In addition, by strengthening essential links between urban centres and peripheral rural

132 Among other websites presenting placemaking: https://www.playcore.com/successful-placemaking and https://www.pps.org/article/8-reasons-place-should-matter-to-humanitarians

areas, it would help to mitigate the risk of disruption of food supply chains between rural/peri-urban agropastoral areas and urban centres in the event of a crisis (natural hazards, pandemic, economic crisis, etc). The two figures below suggest possible relevant territorial perimeters for Baidoa and Kismayo based on the following variables: 1) mobility dynamics; 2) food supply chains and economic exchanges; and 3) existing roads, infrastructure and services. By contrast sociocultural or linguistic homogeneity should not necessarily be considered as priorities to avoid possible tensions or fragmentations between territorial platforms. Ultimately, defining the relevant perimeter of a territory requires answering the following questions: how can climate-induced forced displacement be transformed into a positive adaptation strategy? And correlatively, how to ensure resilience to climate crises in urban and rural areas (as opposed to unplanned urbanisation and desertification)?

Figure 52: Relevant territories to enable positive mobility dynamics and climate-adaptive strategies



9. Target marginalised groups (through the lens of intersectionality in particular) to reduce vulnerability and build resilience. The 'Leave no one behind' principle is the cornerstone of the 2030 Agenda for Sustainable Development. Special attention should be paid to the inclusion of the most vulnerable groups in both the climate-induced IDP and host communities (women, youth, elderly, people with disabilities, linguistic or ethnical minorities) in the dialogues on land management, land use, placemaking, as well as urban planning exercises. IOM (and other stakeholders) could build on the methodology and analyses of the LORA (Local Reintegration Assessment) that monitors progress towards integration to adapt programming and prioritise resources.[133] Implemented in Baidoa and Kismayo through the IOM-led and FCDO-SHARP funded Danwadaag Consortium, the LORA would provide a better understanding of the gaps and needs of the most marginalised groups and their perception in terms of inclusion or exclusion within their communities (IDPs and host).

10. Consider not just the economic (job creation) but also the social, societal, psychosocial, and environmental aspects of integration. IDP youth (in particular) do not pursue employment in a vacuum; rather several levels, including their immediate social networks, their own community (host, displaced, other) as well as the broader community, and the regulations created by regional or national policies, influence their individual aspirations and motivations. Likewise, integration is a multidimensional process that has some economic (jobs, livelihoods) but also social (networks),

133 ReDSS (2020), Measuring the end of Displacement: Emerging Learning from Somalia, Danwadaag (FCDO-SHARP)

societal (inclusion, non-discrimination), psychosocial (mental health) as well as environmental (sustainable) dimensions. Here, the risk of socio-cultural maladjustment (Magnan, 2012) means that local social characteristics, ecosystem, and cultural values in order should all be taken into account to support the involvement of members of society around a programme or intervention.

11. Encourage green jobs and economies, which are relevant to the Baidoa or Kismayo and integration of climate-induced IDP communities but also to the global challenges of environmental protection, economic development and social inclusion. Several approaches can be developed in parallel or conjunction, given that they apply to the respective environmental needs of both areas by:
    - Catalysing investments and financing private clean energy projects, at a time when Somalia starts attracting international and local investors interested in the huge potential in renewables;
    - Financing more environmentally friendly agricultural investment projects;
    - Developing targeted vocational training and creating "green" jobs;
    - Promoting the greening of enterprises, workplace practices and the labour market as a whole;
    - Generating decent employment opportunities, enhance resource efficiency and build low-carbon sustainable societies, through a focus on renewable energies, waste management, and recycling value chains; and/or
    - Promoting green value chains linking rural and urban activities to avoid extraction of resources (waste and recycling; urban farming).

12. Streamline diaspora investments into eco-responsible productive sectors. Diaspora investment and increased presence of international business in Baidoa and Kismayo areas may create more job opportunities for youth in the construction and agribusiness sectors in particular. In both areas, the private sector has increased and may play a significant role in youth employment. Likewise, the Somali diaspora could favour a transformative socioeconomic agenda by investing in local clusters of companies (productive sectors). National and local governmental counterparts, private sector intermediation agents, banks and microfinance institutions, as well as international agencies (ILO, the World Bank) may play a key facilitating role in this regard while including conditionality measures (e.g. grants tied to the compliance with environmental and social standards).

IV. Streamline education and learning on climate change into decision-making processes and durable solutions programming

13. Support a long-term durable solutions approach to the reintegration of climate-induced IDP communities (while addressing the immediate needs). Given that a large proportion of IDPs will ultimately remain in Baidoa and Kismayo rather than return to their rural community of origin, enabling them to locally (re)integrate in an urban setting is key. Integrated and harmonised policies, strategies, and programmes for recovery, resilience and disaster risk management – such as the Drought Impact Needs Assessment (DINA) and the Resilience and Recovery Framework (RRF) – are fundamental milestones towards sustainability. Commitments have been made at policy and planning levels and already integrate durable solutions under the SDRF Resilience Pillar, and resilience in the regional durable solution strategies. It is now time for implementation and piloting of programmatic interventions tailored to the needs of climate-induced IDPs. The Joint Durable Solutions Programmes (REINTEG, Midnimo, Danwadaag etc), under government leadership, can build on evidence from this report to draw a blueprint to effectively include climate-induced IDPs into programmatic responses.

14. Develop awareness raising, education, and training on climate change and environment. There is a clear need for education on climate change and modules, messages, media should be tailored to specific audiences – from IDP communities, who fight for their survival and are less likely to focus on

long-term priorities, to civil society organisations and governmental counterparts. It is recommended, in particular, to focus on these audiences:

- Awareness raising with climate-induced IDP and host communities: 'Educating people on why you need these projects in some cases is just as valuable as the project themselves. Helping people understand why flooding happens and where it comes from will prevent them from opening a business in a flood plain, and the process is a resilience project' described one NGO worker.
- Developing the awareness of religious and cultural leaders, as they benefit from a unique audience among rural populations and can play a bridging role in raising the awareness of communities on the spiritual dimension of the fight against the consequences of climate change.
- Training and capacity strengthening with Governmental counterparts – and in particular the urban planning unit in Jubaland and South West State.

15. Map the urban and rural critical perimeter (routes, flows, hubs). To better anticipate, mitigate and adapt to potential climatic shocks, it is crucial to consider the essential supply chains, as well as the most relevant networks (hubs, secondary cities, supply chains, alternative routes, marketplace(s), labour, information flows, but also internal displacement corridors). To do so, it is important to:
    - Share a common understanding of the urban/rural critical perimeter (or territory), defined as the actual space of mobility for livestock owners transitioning from rural agriculture-based livelihoods to informal urban ones, or youth migrating to urban hubs in search of better-quality livelihoods in situations of extreme climate events;
    - Assess the risk of massive displacement consecutive to years of droughts and ongoing climate-induced disasters (floods, locusts), should the agrarian economy deteriorate sharply in the future;
    - Overcome barriers to mobility between rural and urban areas (infrastructures; land value in cities; taxation on the road; development market systems);
    - Promote greater cooperation between state level and municipal level to develop the territorial governance of resources framework; and
    - Consider migration and urbanisation as possible adaptive strategies (in programmes focusing on diversifying livelihoods strategies or disaster risk reduction strategies).[134]

16. Build on harmonised data joint analysis and shared evidence. All surveyed stakeholders insisted on the need for data on environment (temperature, soil, land, hydrology, etc.) This could help develop common standards, build on the SDGs and update the ReDSS Durable Solution framework. In practice the following steps are recommended:
    - Focus on SDG compliant standards: Climate change and environment are cross cutting issues reflected in different SDGs: Goal 3 on health, Goal 6 on water management, Goal 10 on reduction of inequalities, and Goal 11 on sustainable cities and communities. Building on existing guidelines and frameworks from a dual lens of protection for people and impact on places is crucial for sustainable long-term protection;
    - Develop data-based urban planning by multiplying the disaster assessments conducted by the government and reviewing existing research along the model of the urban profiles currently implemented by UN Habitat in Somalia (Kismayo in 2018 and Baidoa in 2020): demarcation (road and infrastructure corridors, facilities, child friendly spaces, durable structures, etc.); drone mapping of IDP settlement and peripheral area for up to date imagery; vacant land,

134 See Margherita Calderone and John Twigg, 'Building Livelihood and Community Resilience. Lessons from Somalia and Zimbabwe', Working Paper 545 (ODI, CESVI, 2019).: 'For example, in Somalia the BRCiS programme included activities to prepare youth to migrate through skills training and reception packages for new migrants, and IDP interventions focused on capacity-building to help them reintegrate in their local economies.'

existing land use, infrastructure (water and power lines), public infrastructure, detailed ecological area mapping; and

- Design urban planning based on climate projections, geospatial information, alternative scenarios, and resource management across the state to predict the number of future IDPs and city economic and demographic growth.

17. Monitor and evaluate climate adaptive initiatives at two levels: 1) In terms of protection needs of climate affected populations and how effective programming is at mitigating these; 2) To include an examination of progress made in terms of environmental protection itself. Once community assets and decision making are included into urban planning, dual methods to monitor the progress have to be found. One established framework exists to measure the progress made in providing displacement affected populations with durable solutions in Somalia: the ReDSS durable solutions framework is a rapid analytical tool to assess to what extent durable solutions have been achieved in a particular context. The Framework contains 28 Inter Agency Standing Committee indicators relating to i) physical safety ii) material safety—access to basic services, access to livelihoods, restoration of housing, land and property; and iii) legal safety.[135] Building on the ReDSS framework would enable the integration of dimensions of vulnerability linked to natural hazards, but also the interlinkages between other layers of vulnerability and the capacity to cope with natural hazards. It would in particular help 1) measure and support operational partners to incorporate environment sustainability in their Durable Solutions Programming and 2) evaluate environmental sustainability in durable solution processes.

135 Ibid

Bibliography

ACAPS. (2017). 'Briefing Note: Somalia Food Security and Nutrition Crisis', 24 February 2017. https://reliefweb.int/sites/reliefweb.int/files/resources/20170224_acaps_briefing_note_somalia_food_security_and_nutrition_crisis.pdf.

African Development Bank Group (AfDB). 'Kismayo Baidoa Urban Water Supply and Sanitation Project', 2019. https://www.afdb.org/en/initiatives-partnerships/multi-partner-somalia-infrastructure-fund-sif/portfolio-overview/kismayo-baidoa-urban-water-supply-and-sanitation-project.

Agrawal, A. (2008). The Role of Local Institutions in Adaptation to Climate Change, Paper prepared for the Social Dimensions of Climate Change, Social Development Department, The World Bank, Washington DC, March 5-6, 2008.

Agrawal, A., & Gibson, C. C. (1999). Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation. World Development, 27(4), 629–649.

Agrawal, A. and Perrin, N. (2009). Climate adaptation, local institutions and rural livelihoods. In Adapting to Climate Change: Thresholds, Values, Governance

Alland, A. (1970). Adaptation in cultural evolution: An approach to medical anthropology. Columbia University Press.

Appadurai, Arjun. Modernity at Large: Cultural Dimensions of Globalization. Public Worlds, v. 1. Minneapolis, Minn: University of Minnesota Press, 1996.

Ashley, C., & Carney, D. (1999). Sustainable Livelihoods: Lessons from Early Experience. DFID.

Aubrey, Dyfed, and Luciana Cardoso. (2019) 'Towards Sustainable Urban Development in Somalia and IDP Durable Solutions at Scale'. United Nations Somalia, 2019.

Barros, Vicente R., Christopher B. Field, David Jon Dokken, Michael D. Mastrandrea, and Katharine J. Mach, eds. Climate Change 2014: Impacts, Adaptation and Vulnerability: Working Group II Contribution to the IPCC Fifth Assessment Report of the Integovernmental Panel on Climate Change. Cambridge: Cambridge University Press, 2014. https://doi.org/10.1017/CBO9781107415386.

Bennett, N.J., Blythe, J., Tyler, S., Ban, N.C. (2016). Communities and change in the anthropocene: Understanding social-ecological vulnerability and planning adaptations to multiple interacting exposures, Regional Environmental Change, Issue 16, pp. 907-926.

Calderone, M. and Twigg, J. 'Building Livelihood and Community Resilience. Lessons from Somalia and Zimbabwe'. Working Paper 545. ODI, CESVI, 2019.

Carling, J. 'Migration in the Age of Involuntary Immobility: Theoretical Reflections and Cape Verdean Experiences'. Journal of Ethnic and Migration Studies 28, no. 1 (January 2002): 5–42. https://doi.org/10.1080/13691830120103912.

Carling, J., and Schewel, K. 'Revisiting Aspiration and Ability in International Migration'. Journal of Ethnic and Migration Studies 44, no. 6 (26 April 2018): 945–63. https://doi.org/10.1080/1369183X.2017.1384146.

Carney, D. (1998). The White Paper's treatment of agriculture, natural resources and rural livelihoods. Journal of International Development, 10(2), 269–276.

Chambers, R., & Conway, G. (1992). Sustainable rural livelihoods: Practical concepts for the 21st century. Institute of Development Studies.

Concern Worldwide. (2020). 'Special Issue: Durable Solutions in Somalia'. Knowledge Matters on Durable Solutions, May 2020.

Crenshaw, K. (1989). *'Demarginalizing the intersection of race and sex: a black feminist critique of anti-discrimination doctrine, feminist theory, and anti-racist policies'*, University of Chicago Legal Forum, Vol. 4, 1989.

de Janvry, A., & Sadoulet, E. (2006). Making Conditional Cash Transfer Programmes More Efficient: Designing for Maximum Effect of the Conditionality. The World Bank Economic Review, 20(1), 1–29.
Demographia. (2020). 'World Urban Areas', 2020.
Eklöw, K., and Krampe, F. (2019) 'Climate-Related Security Risks and Peacebuilding in Somalia'. SIPRI Policy Paper No. 53. SIPRI, 2019.
Dercon, S. (2002). *Income Risk, Coping Strategies, and Safety Nets*. World Bank.
FAO, and World Bank. (2018). 'Rebuilding Resilient and Sustainable Agriculture in Somalia – Country Economic Memorandum Volume I'. International Bank for Reconstruction and Development.
Fisher, Monica, Moushumi Chaudhury, and Brent McCusker. 'Do Forests Help Rural Households Adapt to Climate Variability? Evidence from Southern Malawi'. World Development 38, no. 9 (September 2010): 1241–50.
Federal Republic of Somalia. (2013) 'National Adaptation Programme of Action on Climate Change', 2013.
Gemenne, F., Zaccai, E. and Decroly, J-M. (2017) 'Controverses climatiques, science et politiques', Presses de Sciences Po.
Gemenne, F. and Blocher, J. (2017) 'How Can Migration Serve Adaptation to Climate Change? Challenges to Fleshing out a Policy Ideal'. *The Geographical Journal* 183, no. 4): 336–47.
Global Protection Cluster. (2020) 'Protection & Prioritising the Most Vulnerable Persons in the Gaza Humanitarian Response', 2020.
Hammond, L. (2004). This Place Will Become Home: Refugee Repatriation to Ethiopia. Cornell University Press.
Hammond, L. (2014). History, overview, trends and issues in major Somali refugee displacements in the near region (Research Paper No. 268). UN High Commissioner for Refugees (UNHCR).
IASC. (2010) *IASC Framework on Durable Solutions for Internally Displaced Persons* – The Brookings Institution – University of Bern Project on Internal Displacement.
IDMC. (2020) "No Land, No Water, No Pasture" The Urbanisation of Drought Displacement in Somalia'. No Matter of Choice: Displacement in a Changing Climate. GIZ; IDMC; Forcier Consulting, 2020.
IFRC. (2020) 'What Is Vulnerability?', 2020. https://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/what-is-vulnerability/.
IGAD. (2019) 'Background Paper on Experiences in Supporting Resilience and Durable Solutions to Internal Displacement in the IGAD Region'. Addis Ababa, Ethiopia, 2019.
IOM. (2020) *Glossary on Migration - International Migration Law*, 2019. International Organisation for Migration
IOM and Samuel Hall. (2017) 'Setting Standards for an Integrated Approach to Reintegration'. IOM. https://www.iom.int/sites/default/files/our_work/DMM/AVRR/IOM_SAMUEL_HALL_MEASURE_REPORT%202017.pdf.
Islam, M. R. and Shamsuddoha, M. (2017). 'Socioeconomic consequences of climate induced human displacement and migration in Bangladesh.' International Sociology 32(3).
Kälin, W. (2010). 'Conceptualising Climate-Induced Displacement'. In *Climate Change and Displacement : Multidisciplinary Perspectives*, edited by Jane McAdam, 1st ed., 81–104. London: Hart Publishing, 2010. http://www.bloomsburycollections.com/book/climate-change-and-displacement-multidisciplinary-perspectives/ch5-conceptualising-climate-induced-displacement/.
Kilcullen, D (2019). 'Hargeisa, Somaliland – Invisible City'. DISCUSSION PAPER. Johannesburg, South Africa: Brenthurst Foundation, 2019.
Magnan, A. K., E.L.F. Schipper, M. Burkett, S. Bharwani, I. Burton, S. Eriksen, F. Gemenne, J. Schaar, and G. Ziervogel. 'Addressing the Risk of Maladaptation to Climate Change: Addressing the Risk of Maladaptation to Climate Change'. Wiley Interdisciplinary Reviews: Climate Change 7, no. 5 (September 2016): 646–65.

Marchiori, L, Maystadt, J.-F., and Schumacher, I. (2012) 'The Impact of Weather Anomalies on Migration in Sub-Saharan Africa'. *Journal of Environmental Economics and Management* 63, no. 3 (May 2012): 355–74.

Maystadt, J.-F., and Ecker O. (2014) 'Extreme Weather and Civil War: Does Drought Fuel Conflict in Somalia through Livestock Price Shocks?' *American Journal of Agricultural Economics* 96, no. 4 (1 July 2014): 1157–82. https://doi.org/10.1093/ajae/aau010.

Maxwell, Daniel, and Nisar Majid, eds. Famine in Somalia: Competing Imperatives, Collective Failures, 2011–12. Oxford University Press, 2016.

Mixed Migration Centre. (2020) 'Weak Links: Challenging the Climate & Mixed Migration Paradigm in the Horn of Africa & Yemen'. MMC Briefing Paper, 2020.

Moser, C. (2011) 'A Conceptual and Operational Framework for Pro-Poor Asset Adaptation to Urban Climate Change'. In *Cities and Climate Change*, by Daniel Hoornweg, Mila Freire, Marcus J. Lee, Perinaz Bhada-Tata, and Belinda Yuen, 225–53. The World Bank, 2011. https://doi.org/10.1596/9780821384930_CH09.

Moser, C. and Stein, A. (2011) 'Implementing Urban Participatory Climate Change Adaptation Appraisals: A Methodological Guideline'. *Environment and Urbanisation* 23, no. 2 (October 2011): 463–85.

Mugido, W. and Shackleton, C.M. (2017). The safety net function of NTFPs in different agro-ecological zones of South Africa, Population and Environment, 39 (2017), pp. 107-125.

Nelson, D. R., Adger, W. N., & Brown, K. (2007). Adaptation to Environmental Change: Contributions of a Resilience Framework. Annual Review of Environment and Resources, 32(1), 395–419. https://doi.org/10.1146/annurev.energy.32.051807.090348

Norton, A., & Foster, M. (2001). The Potential of Using Sustainable Livelihoods Approaches in Poverty Reduction Strategy Papers. ODI/Centre for Aid and Public Expenditure.

OCHA. 'Somalia: Hagaa Season Floods Update 1', 19 July 2020.

OCHA. 'Somalia Deyr Season Floods Update 3', 22 November 2020.

Ogallo, L.-A., Mwangi, K., Omondi, P., Ouma, G. and Wayumba G. (2018) 'Land Cover Changes in Lower Jubba Somalia'. *American Journal of Climate Change* 7, no. 3: 367–87.

Ogallo, L.-A., Omondi, P., Ouma, G. and Wayumba G.. (2018) 'Climate Change Projections and the Associated Potential Impacts for Somalia'. *American Journal of Climate Change* 7, no. 2: 153–70.

Ramlal, P. S., T. A. Stenström, T. A., Munien, S., Amoah, I. D. and Buckley, C.A. (2019) 'Relationships between Shared Sanitation Facilities and Diarrhoeal and Soil-Transmitted Helminth Infections: An Analytical Review'. *Journal of Water, Sanitation and Hygiene for Development* 9, no. 2 (1 June 2019): 198–209.

ReDSS, and Samuel Hall. (2019) 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo'. ReDSS.

ReDSS (2020), *Measuring the end of Displacement: Emerging Learning from Somalia*, Danwadaag (FCDO-SHARP).

Research and Evidence Facility (REF). (2020) 'Baidoa Municipality Initiatives on Population Displacement and Urbanisation: Key Lessons Learned and the Way Forward'. London: EU Trust Fund for Africa (Horn of Africa Window) Research and Evidence Facility, 2020.

———. 'Return and (Re)Integration After Displacement: Belonging, Labelling and Livelihoods in Three Urban Cities'. London and Nairobi: EU Trust Fund for Africa (Horn of Africa Window) Research and Evidence Facility, n.d.

Samuel Hall, and ILO. (2019). 'Doing Business in Dadaab. Market Systems Analysis for Local Economic Development in Dadaab, Kenya'. Geneva: ILO; UNHCR.

Samuel Hall (2016). Adkaysi! Joint analysis of donor engagements related to Resilience in Somalia, commissioned by IHDG with contracting and funding by SDC.

Scoones, I. (1998). Sustainable rural livelihoods: Practical concepts for the 21st century. Institute of Development Studies.
Sen, Amartya. 'Editorial: Human Capital and Human Capability'. World Development 25, no. 12 (December 1997): 1959–61.
Simatele, R. (2009) 'Urban Climate Change Adaptation and Assets: A Background Review of Current Community-Focused Conceptual and Methodological Approaches'. GURC Working Paper No. 3. University of Manchester, Global Urban Research Centre.
Smit, B., & Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. Global Environmental Change, 16(3), 282–292.
The Nansen Initiative. 'Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change, Volume 1', 2015.
The United Nations General Assembly. 'The New Urban Agenda, as Adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador in October 2016', 2016.
Tierney, J. E., Ummenhofer, C. and deMenocal, P. (2015). 'Past and Future Rainfall in the Horn of Africa'. *Science Advances* 1, no. 9. https://doi.org/10.1126/sciadv.1500682.
Todaro, M. (1980). 'Internal Migration in Developing Countries: A Survey'. In *Population and Economic Change in Developing Countries*, 361–402. National Bureau of Economic Research, Inc, 1980. https://EconPapers.repec.org/RePEc:nbr:nberch:9668.
UNFCCC. (2011) 'Report of the Conference of the Parties on Its Sixteenth Session, Held in Cancun from 29 November to 10 December 2010', 15 March 2011.
———. (2012) 'Slow Onset Events. Technical Paper'. Framework Convention on Climate Change. United Nations, 26 November 2012.
UN Habitat. (2017) 'Baidoa Urban Profile, Working Paper and Spatial Analyses for Urban Planning Consultations and Durable Solutions for Displacement Crises'.
———. (2017) 'Kismayo Urban Profile, Working Paper and Spatial Analyses for Urban Planning Consultations and Durable Solutions for Displacement Crises'.
———. (2020) *World Cities Report 2020: The Value of Sustainable Urbanisation*.
UNHCR Data. (2020) 'Horn of Africa Somalia Situation'. https://data2.unhcr.org/en/situations/horn.
UNICEF. (2017) Education Strategy Note 2018-2020 – UNICEF-Somalia http://files.unicef.org/transparency/documents/Somalia%204.%20Education.pdf
United Nations Population Division. (2018) 'World Urbanisation Prospects: 2018 Revision'. United Nations.
Wellenstein, Anna, Mariko Yamamoto, and Soraya Goga. 'Managing Urban Forced Displacement to Build Resilient Communities'. World Bank Blogs, 18 December 2020. https://blogs.worldbank.org/sustainablecities/managing-urban-forced-displacement-build-resilient-communities.
World Bank. (2020) 'The World Bank In Somalia - Overview', 2020. https://www.worldbank.org/en/country/somalia/overview#2.
World Bank. (2014) 'Analysis of Displacement in Somalia, Social Development - Global Programme on Forced Displacement'. Washington, D.C.: World Bank.
———. (2018) 'Somalia Drought Impact and Needs Assessment: Synthesis Report'. Washington, D.C.: World Bank.
———. (2020) 'Somalia Urbanisation Review: Somali Cities as Anchors of Development'. World Bank.

Annex 1 – Glossary

Most definitions and notes are extracted from the IOM's Glossary on Migration[136] and Agrawal[137] (2008).

Term used	Definition
Adaptation	Actions and adjustments undertaken to maintain the capacity to deal with stresses induced as a result of current and future external changes (Nelson et al. 2007:396, Alland 1975).
Adaptive capacity	Preconditions that enable actions and adjustments in response to current and future external changes; dependent both on social and biophysical elements (Nelson et al. 2007: 397).
Access	Degree to which households and different social groups in a given location are connected to institutions and services to gain benefits as a result of such connections. necessary for a means of living; access also includes the idea of coping with and recovery from external stresses (Carney 1998, Chambers and Conway 1992, Scoones 1998), and the sustainability of the resource base on which livelihoods depend (Ashley and Carney 1999, Norton and Foster 2001).
Climate change	According to the IPCC: "A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing, or to persistent anthropogenic changes in the composition of the atmosphere or in land use." Note: This definition differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), where climate change is defined as: "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes. (IPCC, 275-557)
Climate migration	The movement of a person or groups of persons who, predominantly for reasons of sudden or progressive change in the environment due to climate change, are obliged to leave their habitual place of residence, or choose to do so, either temporarily or permanently, within a State or across an international border. *Note: This is a working definition of the International Organisation for Migration with an analytic and advocacy purpose which does not have any specific legal value. Migration in this context can be associated with greater vulnerability of affected people, particularly if it is forced. Yet, migration can also be a form of adaptation to environmental stressors, helping to build resilience of affected individuals and communities.*
Community	Group of individuals united by commonality of purpose, characteristics, beliefs, and/or actions. Most communities are also internally differentiated (Agrawal and Gibson 1999).
Community of origin	In the migration context, a national or local community of a person or group of persons who have migrated internally or internationally.
Coping	Use of existing resources to achieve various desired goals during and immediately after unusual, abnormal, and adverse conditions of a hazardous event or process. The

136 International Organisation for Migration (IOM), *Glossary on Migration - International Migration Law*, 2019.
137 Agrawal, A., 'The Role of Local Institutions in Adaptation to Climate Change, Paper prepared for the Social Dimensions of Climate Change' (Social Development Department, The World Bank, March 5-6, 2008).

	strengthening of coping capacities, together with preventive measures, is an important aspect of adaptation and usually builds resilience to withstand the effects of natural and other hazards. Bennett et al. (2016) define coping strategies as 'short-term reactive or unplanned responses to moderate the impact of, or sensitivity to exposures.' Coping strategies will vary with the characteristics of the hazard exposure, for example the severity and duration of the exposure, and also whether the exposure is covariate (impacting all households within a designated region) or idiosyncratic (impacting only single individuals or households).
Disaster displacement	The movement of persons who have been forced or obliged to leave their homes or places of habitual residence as a result of a disaster or in order to avoid the impact of an immediate and foreseeable natural hazard. *Note: Such displacement results from the fact that affected persons are (i) exposed to (ii) a natural hazard in a situation where (iii) they are too vulnerable and lack the resilience to withstand the impacts of that hazard. It is the effects of natural hazards, including the adverse impacts of climate change, that may overwhelm the resilience or adaptive capacity of an affected community or society, thus leading to a disaster that potentially results in displacement.*
Displaced persons	Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, either across an international border or within a State, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters.
Displacement	The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters.
Durable solution (internally displaced persons)	For internally displaced persons, a durable solution is achieved when internally displaced persons no longer have any specific assistance and protection needs that are linked to their displacement and can enjoy their human rights without discrimination on account of their displacement.
Environmental migrant	A person or group(s) of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence. *Note: This definition is a working definition aimed at describing all the various situations in which people move in the context of environmental factors.*
Environmental migration	The movement of persons or groups of persons who, predominantly for reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are forced to leave their places of habitual residence, or choose to do so, either temporarily or permanently, and who move within or outside their country of origin or habitual residence. *Note: Migration in this context can be associated with greater vulnerability of affected people, particularly if it is forced. Yet, migration can also be a positive response to environmental stressors, helping to adapt to changes in the environment and to build resilience of affected individuals and communities.*
Internally displaced persons	Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalised violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognised State border. *Note: Whilst the Guiding Principles on Internal Displacement are not binding, they have become an authoritative reference on how States should respond to internal displacement (Guiding Principles on Internal Displacement)*

Mitigation	Actions and policies that reduce exposure to climate change, for example, through regulation and institutional changes, technological shifts, alterations in behaviors, or change in location (Nelson et al. 2007).
Planned relocation	In the context of disasters or environmental degradation, including when due to the effects of climate change, a planned process in which persons or groups of persons move or are assisted to move away from their homes or place of temporary residence, are settled in a new location, and provided with the conditions for rebuilding their lives. *Note: The term is generally used to identify relocations that are carried out within national borders under the authority of the State and denotes a long process that lasts until relocated persons are incorporated into all aspects of life in the new setting.*
Protracted displacement	A situation in which refugees, internally displaced persons (IDPs) and/or other displaced persons have been unable to return to their habitual residence for 3 years or more, and where the process for finding durable solutions, such as repatriation, integration in host communities, settlement in third locations or other mobility opportunities, has stalled. *Note: There seems to be no consensus as to when displacement becomes protracted, and so no standard definition of "protracted displacement" exists. According to UNHCR a major protracted refugee situation is one where more than 25,000 refugees have been in exile for more than 5 years. OCHA defines protracted internal displacement by reference to "IDPs who are prevented from taking or are unable to take steps for significant periods of time to progressively reduce their vulnerability, impoverishment and marginalisation and find a durable solution."*
Resilience	UNDP defines resilience as a "transformative process of strengthening the capacity of people, communities and countries to anticipate, manage, recover and transform from shocks" *Note: The UN International Strategy for Disaster Reduction defines the term as "the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner." The Intergovernmental Panel on Climate Change, meanwhile, describes resilience as "the amount of change a system can undergo without changing state". The UK Department for International Development defines it as "the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses… without compromising their long-term prospects." But according to UNDP, these definitions focus too narrowly on responding to shocks rather than preventing or preparing for them, and their stated goal is only to return beleaguered communities to their original state.*
Territorial development	An approach to development focusing on productive transformation of agricultural and non-agricultural activities in a well-defined distinct territory through institutional development that links people, local governments, economic and civil society organisations, and higher level government institutions (de Janvry and Sadoulet 2004). The heterogeneity of territories necessitates careful modulation of public policies to meet the needs of affected parties in a given territory.
Urbanisation	The occurrence of increasing proportion of a population that is living in urban areas. *Note: Urbanisation in general is attributed to three factors: natural population growth, net rural-to-urban migration, and also the progressive extensions of urban boundaries and creating of new urban centres. The term often refers to a broad rural-to-urban transition involving changes in population, land use, economic activity and culture.*
Urban–rural migration	The movement of people from an urban to a rural area for the purpose of establishing a new residence.
Vulnerability	The susceptibility of a system to disturbances and loss, determined by exposure to perturbations, sensitivity to perturbations, and the capacity to adapt (Smit and Wandel 2006). The nature of perturbations (slow onset or sudden and episodic) and the location of the system in the risk cycle are crucial in shaping vulnerability.

Annex 2 – Key Informant Interviews (KIIs)

The research team interviewed the following list of government officials, community leaders, humanitarian and development organisations, and scholars to get insight into the sustainability of policies, programmes and projects aiming at providing durable solutions for IDPs in Somalia.

1. Minister of Environment and Tourism (MoET) of Jubaland
2. Minister of Environment and Wildlife of South West State
3. Ministry of Planning and International Cooperation (MoPIC) of Jubaland
4. Delegation of the European Union to the Federal Republic of Somalia
5. Jubba Land Refugee and Internally Displaced person's agency (JRIA)
6. Baidoa Municipality (various levels)
7. Kismayo Municipality (various levels)
8. IOM Camp Coordination and Camp Management (CCCM)
9. UN-Habitat (various levels)
10. United Nations Environment Programme (UNEP)
11. The UN Resident Coordinator Office for Somalia
12. Regional Durable Solutions Secretariat (ReDSS)
13. Concern Worldwide
14. Danish Refugee Council (DRC)
15. Norwegian Refugee Council (NRC)
16. International Rescue Committee (IRC)
17. Bay Electric Company
18. Warjinay Water Supply Company
19. Juba foundation
20. Humboldt University
21. Laura Hammond, PhD, SOAS University of London
22. François Gemenne, Université de Liège, The Hugo Observatory
23. Somali Disaster Resilience Institute (SDRI)
24. Nassim Majidi, PhD, Samuel Hall
25. Julia Blocher, United Nations University

Annex 3 – Access to water in Baidoa and Kismayo

Access to water in Baidoa

In Baidoa, while some key informants mentioned a successful rehabilitation initiative from UNICEF in 2005-2010,[138] the 2017 severe drought episode and subsequent dry years have made the water supply historically low and precarious: "*Today's trends are extremely concerning. There is no control of the exploitation of the aquifer or groundwater regulation, which puts its sustainability into question, in terms of available quantity and quality*" (NGO, Baidoa, September 2020). More recently, INTERSOS, in Baidoa, worked on access to safe water through the rehabilitation of shallow wells and water kiosks. The intervention successfully targeted more than 30,000 people. In other areas of the city, water trucking and rehabilitation of water supplies has facilitated clean water access for 15 IDP sites.

Infrastructure investment and construction of sanitation facilities have had a positive impact on access to drinking water, sanitation and hygiene and many surveyed IDP households in 2018 and 2019 (ReDSS, 2019) indicate having effective access to clean water, with very few reporting difficulties in access: more than half of the households surveyed (54%) indicate receiving water from pipe systems, with only 6% indicate that they encounter problems relating to water quality and quantity.[139] In some of these sites however, the continuous influx of IDPs has contributed to worsening the situation in the absence of long-term planning.

Almost half of the migrant community in Baidoa accesses water through water trucking, indicating the lack of sustainability of water access for IDPs. This figure is slightly higher for Towfiiq (54,8%), as 34.1% of migrants also access water through public wells in the same area. Migrants living in Towfiiq access water through 10 wells spread across the 55 sub camps composing the neighbourhood. There are no taps in the community as it is the case in Calanley. In Irriroog, a sub camp of Towfiiq, the Ministry of Water funded a traditional water storage, to provide water during the dry season. Before the establishment of this water storage, IDPs used to fetch water from private wells at the outskirt of the town. An IDP in Irriroog (Towfiiq), described the water storage: "*We have constructed the storage (ourselves): we have collected sacks with sand soil where we dig a big hole, we covered it with plastic so that water will not contaminate the soil. Then water is poured into the big plastic as a water container which we use as water storage for 5-7 days for domestic purposes. The water storage, which is a hole, is a traditional way to store water because they don't have a container. The well where water is available during rainy season but not during drought, therefore, they use water storage as source of water point during drought (and rainy season).*"

However, respondents have highlighted the high competition for water during the dry season, as the wells dry up and the water tanks empty. This forces IDP to get water in faraway places, as highlighted by an IDP in Towfiiq: 'The hot season causes lack of water in our camp. Our tanks get empty and we

138 Between 2005 and 2010, UNICEF worked on the rehabilitation of the sanitation network in Baidoa, 'including drilling and equipping of 5 boreholes, building of water tanks, installation of a 24 km long pipeline network', as well as the rehabilitation of more than 100 shallow wells (out of 500-600 in Baidoa city), and the application of a chlorination system. Source: UN Habitat, 'Baidoa Urban Profile, Working Paper and Spatial Analyses for Urban Planning Consultations and Durable Solutions for Displacement Crises'.

139 ReDSS, 'Solutions Analysis Update 2019: Case Study on Lessons Learnt and Practices to Support (Re)Integration Programming – Mogadishu, Baidoa and Kismayo'.

are forced to fetch water from faraway places. This leads to people competing for the little water that is available in the area.

In Barwaaqo, 43% of IDPs access water through water trucking and 30% from communal taps. The access to water is free of charges. This is due to the fact that only half of the camp has access to water during the dry season, as highlighted by a female IDP in the camp: "*the water we have is not enough for the community as round 60% of the community lacks water.*" Water comes from a well built by the IOM between Baidoa and Barwaaqo. The well is approximatively 6 km away from Barwaaqo. Due to the inadequate pressure of the pump half of the camp does not get direct access to water but has to share with neighbouring blocks in the camp, approximatively 2 km away. Some of the migrants who can afford it decide to buy water from the private well 4 km away from the camp (costing 0.5 USD per 20 liters). This situation leads to occasional tensions between IDPs in the camp as noted by one respondents: "*there are potential tensions in our community as we are sharing the resources in the camp, like water during dry season*".

Protracted IDPs in Baidoa display a higher likelihood of obtaining water from a public well (24,7% instead of 16,2% for the overall group) and a slightly lower chance to access water through water trucking. As in Kismayo, it suggests better access to information and resources in general. Climate-induced IDPs in Baidoa depend slightly more on water trucking. This result suggests – as in Kismayo – a higher vulnerability of climate-induced IDPs in Baidoa when it comes to water access. Women, in Kismayo, display a higher dependence on assistance to access water: they display a lower likelihood of getting water from a communal tap and a higher chance to access water from a public well.

Access to water in Kismayo

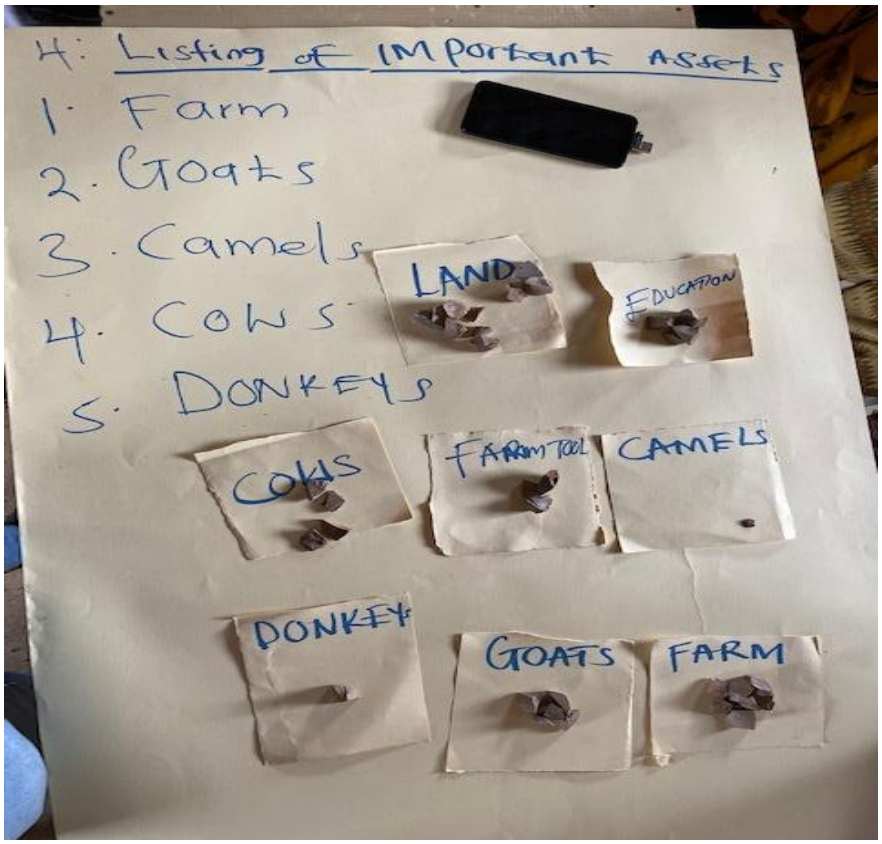
The majority of IDPs surveyed in Kismayo access water either from private wells or springs (35.6%) or public wells or springs (37.4%). A significant portion (17,6%) buy water from kiosks/retailers. In Dalxiiska, 45,5% of migrants get water from private wells while 39,7% from public wells. During the qualitative interviews, IDPs in Dalxiiska mentioned the existence of shallow wells exclusively used by the host community: "*There are shallow wells but is only for the host community. Everybody buys less saline water from them. Donkey carts and mini lorry called (Afjiir) carry the water from these points and sell to the Kismayo residents. One Jerri can cost seven thousand Somali shillings*". In some parts of Dalxiiska, such as Wardher or Towfiq 2 camp, IDPs mentioned buying water from wells drilled by humanitarian organisations at a subsidised price (0.04 USD a jerry can).

In another location of Dalxiiska, such as Cidaadgeri, migrants have to buy their water from the host community (0.28 USD a jerry can). 'There are boreholes that we normally fetch clean water from. You pay one thousand Somali shilling for one jerrican. This is very cheap compared to other rates in town where they pay seven thousand shillings for one jerrican' mentioned a host community member in Dalxiiska. Some respondents also highlighted the uncleanness of accessible water, as highlighted by an IDP from Kamtireey in Wamo 3 in Dalxiiska: "*There is shortage of water here and the little water available to us is not clean, but we adapted boiling the water to kill the germs so that the water becomes fit for human consumption.*". Respondents also highlighted the shortage of water mostly from the drying up of wells during the dry season and during periods of high temperatures.

In Calanley, 27,9% of the migrant community access water from public wells but a significant part also obtain water from communal taps (23%) and from water kiosks and retailers (23%). The public wells were established by INGOs and offer free water access, whereas the taps are privately owned by the CAAFI water company. The respondents highlighted two challenges associated with water access in Calanley: the long queues to access the water from the public wells and the salinity of the water. An IDP in Dowdhanaan in Calanley noted: "*Also the only well we have is saline; therefore, we are lacking*

a well that produces fresh water with less saline, we only use the saline water to wash clothes and utensils but for cooking and drinking we buy from the CAAFI water company where a jerrican costs 2 thousand shilling Somali which is equivalent 0.04 US dollars".

In Kismayo, protracted IDPs are more likely to get water from a public well, which suggests better access to information and resources. Climate-induced IDPs in Kismayo show a very high likelihood of obtaining water from private wells compared to the other IDPs (70% as compared to 35.6%). This suggests a greater vulnerability as they need to pay to access water if they can no longer access the well at a subsidised price. Women in Kismayo displayed a higher likelihood of obtaining water from a public well than men (40% against 34%) and, in parallel, a lower likelihood of buying water from a kiosk (14,5% against 21%) – suggesting that they are more dependent on water assistance provided by INGOs (public wells).



Picture 3: Focus Group Discussion in Towfiiq (Baidoa) - April 21, 2020

Arrin xumo abaar ka daran

A wrong decision is worse than a drought.

IOM UN MIGRATION

UN environment programme

SAMUEL HALL.