KENYA

Impact of drought on the arid and semi-arid regions

acaps
Thematic report
29 March 2022

CRISIS OVERVIEW

The Kenya Government declared drought affecting parts of the country a national disaster in September 2021 (Kenya Presidency 08/09/2021). These drought conditions resulted from three consecutive below-average rainy seasons beginning with the October–December 2020 rainy season. Consequently, 3.5 million people are estimated to face acute food insecurity and need humanitarian assistance in March–May 2022 (KFSSG 08/03/2022). Drought has affected 23 counties in Kenya's arid and semi-arid lands (ASALs). Some communities living in these counties are marginalised, have inadequate access to basic services, and have lost ownership over most of their ancestral land. The most affected counties are Kitui, Makueni, Mandera, Turkana, and Wajir, where around 50% of the people in need of food assistance in ASALs live (KFSSG 12/2021). Drought-affected populations have experienced consecutive shocks since 2016, including natural hazards, such as drought and floods, COVID-19, and a desert locust invasion in 2020 (OCHA 30/09/2021). Poor pasture and browse conditions and below-average crop production have disrupted pastoralism, agropastoralism, and farming, the main livelihood activities in the affected areas (KFSSG 31/08/2021). In 2021, northwestern Kenya experienced the driest conditions and highest temperatures since 1981. The combined effect of high temperatures and below-average rainfall worsened the impact on vegetation, pasture, and water resources (WFP 20/01/2022).

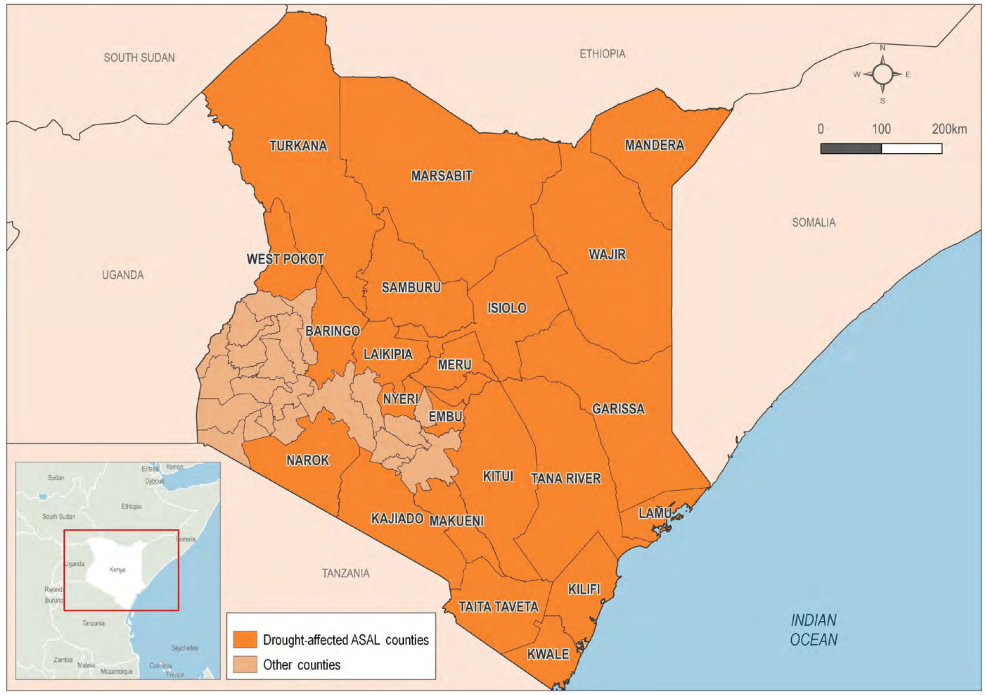
About this report

Aim: this report highlights the impact of the current drought on marginalised communities in ASAL areas in Kenya. It examines their pre-existing socioeconomic vulnerabilities and humanitarian needs. It also analyses the possible progression of drought based on climate outlooks.

Method: this report is based on the secondary data review of publicly available sources.

Scope: drought may affect other counties in Kenya, but this report focuses on the ASAL region.

Drought-affected ASAL counties



Source: ACAPS using data from KFSSG 08/03/2022. See full map on page 8.

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BACKGROUND

Droughts in the last ten years: food security outcomes

Since 2010, the Kenya Government has declared drought a national disaster thrice: the drought in 2010–2011, the drought in 2016–2017, and the current drought officially declared in September 2021. These droughts have mostly affected ASAL areas (KRC 12/08/2020; Kenya Presidency 08/09/2021). The current drought has not been as severe as the 2010–2011 drought, during which 1.4 million people experienced Emergency (IPC Phase 4) food insecurity, but it has had a similar level of severity and geographical coverage as the 2016–2017 drought. That said, the extended duration of the current drought has brought levels of food insecurity higher than during the previous drought (FSNWG 10/02/2022; KFSSG 22/02/2022 and 30/08/2017).

YEAR	POPULATION IN AFFECTED AREAS	POPULATION FACING CRISIS (IPC 3) OR HIGHER FOOD INSECURITY LEVELS	% OF AFFECTED POPULATION FACING CRISIS (IPC 3) OR HIGHER FOOD INSECURITY LEVELS	POPULATION EXPERIENCING EMERGENCY (IPC 4) FOOD INSECURITY	SOURCES
2010–2011	12.2M	3.75M	31%	1.M	OCHA 12/11/2011; KFSSG 08/09/2011
2016–2017	13.6M	2.6M	19%	0.5M	KFSSG 30/08/2017; OCHA 07/09/2017
2020 to date	14.9M	3.M	21%	0.75M	KFSSG 22/02/2022 and 31/08/2021; OCHA 22/03/2022

Note: IPC classifies populations into five categories of increasing food insecurity levels, based on consensus between the Government and humanitarian agencies. People facing Crisis (IPC Phase 3) and higher food insecurity levels need humanitarian assistance (IPC 08/2021).

Pre-existing vulnerabilities of drought-affected communities

Marginalisation

The high level of socioeconomic vulnerability in communities living in Kenya's ASAL areas is linked to decades of marginalisation (USAID 08/01/2018). This marginalisation manifests as political underrepresentation and exclusion from socioeconomic activities. Several minority ethnic groups live in ASALs, and they have always had minimal representation in decision-making and at the administrative level. Many marginalised communities in northern Kenya engage in nomadic pastoralism as a livelihood and crucial aspect of their culture, but successive governments have undervalued the practice and its contribution to the national economy. As a consequence, they have underprioritised the development of ASALs in terms of infrastructure, services, and economic opportunities. Socioeconomic vulnerabilities and marginalisation are evident, especially in northern Kenya. These marginalised areas have poor infrastructure and inadequate access to sanitation and health services. Their communities face high poverty and low literacy levels. The 2010 Constitution and subsequent devolution of government functions from the national to county level sought to address the decades of marginalisation, but impacts have been mixed (CRA Kenya 2012; NGEC 01/01/2018). There have been notable improvements in infrastructure and basic service delivery in areas close to county headquarters, while those further away have seen limited improvements (Nation 08/12/2021 and 18/05/2021; Saferworld 30/08/2018).

Past shocks (2016–2021)

ASAL counties have historically been prone to droughts, but in the last 20 years, the period between droughts has decreased from 5–10 years to 2–3 years. From 2016–2021, 75% of the 12 rainy seasons in Kenya had below-average rainfall, crucially reducing the recovery time for communities living in ASALs (WFP 20/01/2022; ICPAC 01/2022; ECHO et al. 02/12/2021; WB 20/01/2021).

Kenya experienced flooding for three consecutive years (in 2018, 2019, and 2020). The 2018 March–May rainy season resulted in flooding in Garissa, Kilifi, Lamu, Mandera, Tana River, and Turkana counties, compounding the impact of the 2016–2017 drought. The current drought has also been affecting these counties. Consecutive natural hazards affecting communities decrease their capacity to recover and further deplete their coping mechanisms (WFP 20/01/2022; IDMC 22/05/2018).

For one and a half years starting December 2019, a desert locust outbreak affected northern Kenya, mostly Marsabit, Samburu, Tana River, Turkana, and West Pokot counties. The outbreak affected up to one million hectares of crop and pastureland, disrupting livelihoods for farmers and pastoralists (IPC 09/11/2020; AA 26/04/2021; FAO 13/10/2021).

The government-mandated lockdown measures during the COVID-19 pandemic caused significant loss of income for many Kenyans and reversed previous progress made in poverty reduction. The national poverty rate increased from 28.9% in 2019 to 41.9% in 2020 (KIPPRA 2021). Travel restrictions and livestock market closures in ASAL counties affected livelihoods for pastoralist communities. Revenue from pastoralism declined by 50% in May 2020 from the same period in 2019 (IPC 09/11/2020; WB 01/2021).

Dispossession of land rights

During the colonial era, particularly in 1904–1913, pastoralist communities lost the rights to most of their land before being restricted to reserves. The Maasai community lost 50–70% of their land during this period. The land currently belongs to a few individuals, who have turned it into ranches or conservancies (The Elephant 18/05/2017; ISS 03/11/2021).

The current model of wildlife conservation in Kenya, which gained momentum in 2004, claimed to protect wildlife while simultaneously empowering local communities, but local communities have been dispossessed of large portions of their ancestral land. Conservancies take up to 8% of Kenya's land area. Large ranches occupy 40% of land in Laikipia county. Game reserves and conservancies occupy more than a million acres of land in Isiolo county. Some rangers who protect wildlife conservancies carry out human rights abuses to keep pastoralists from accessing the areas. Conservancies typically take the best pastureland, but owners bar pastoralists from accessing the land for livestock grazing during droughts (The Elephant 14/01/2022; Oakland Institute 16/11/2021; Matende-Omwoma 26/01/2021). The situation has led to seasonal cycles of conflict in some areas, like Laikipia county. During droughts and dry seasons, grievances over land rights drive armed herders to attack ranches and conservancies (ISS 03/11/2021; The Standard 17/09/2021).

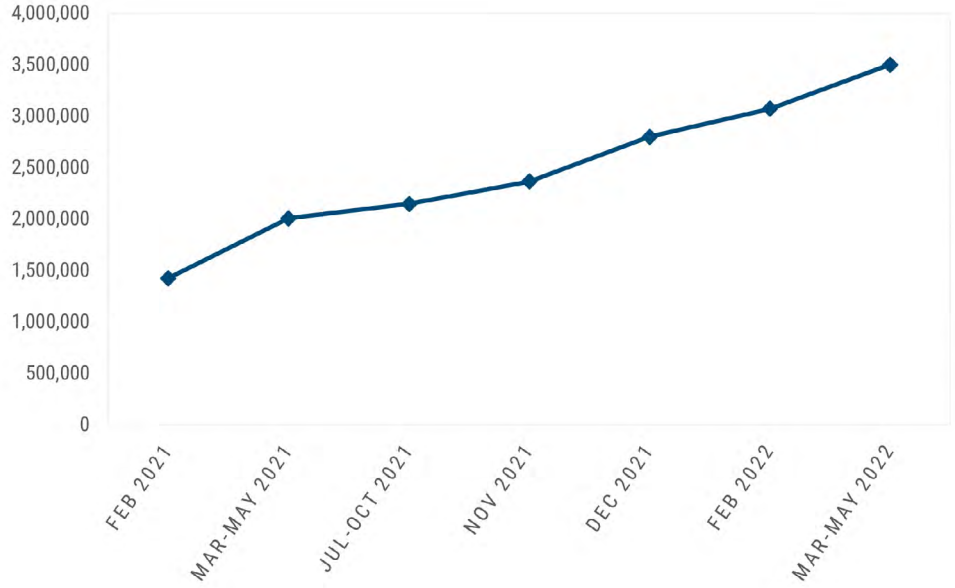
IMPACT OF CURRENT DROUGHT

Humanitarian needs

Food

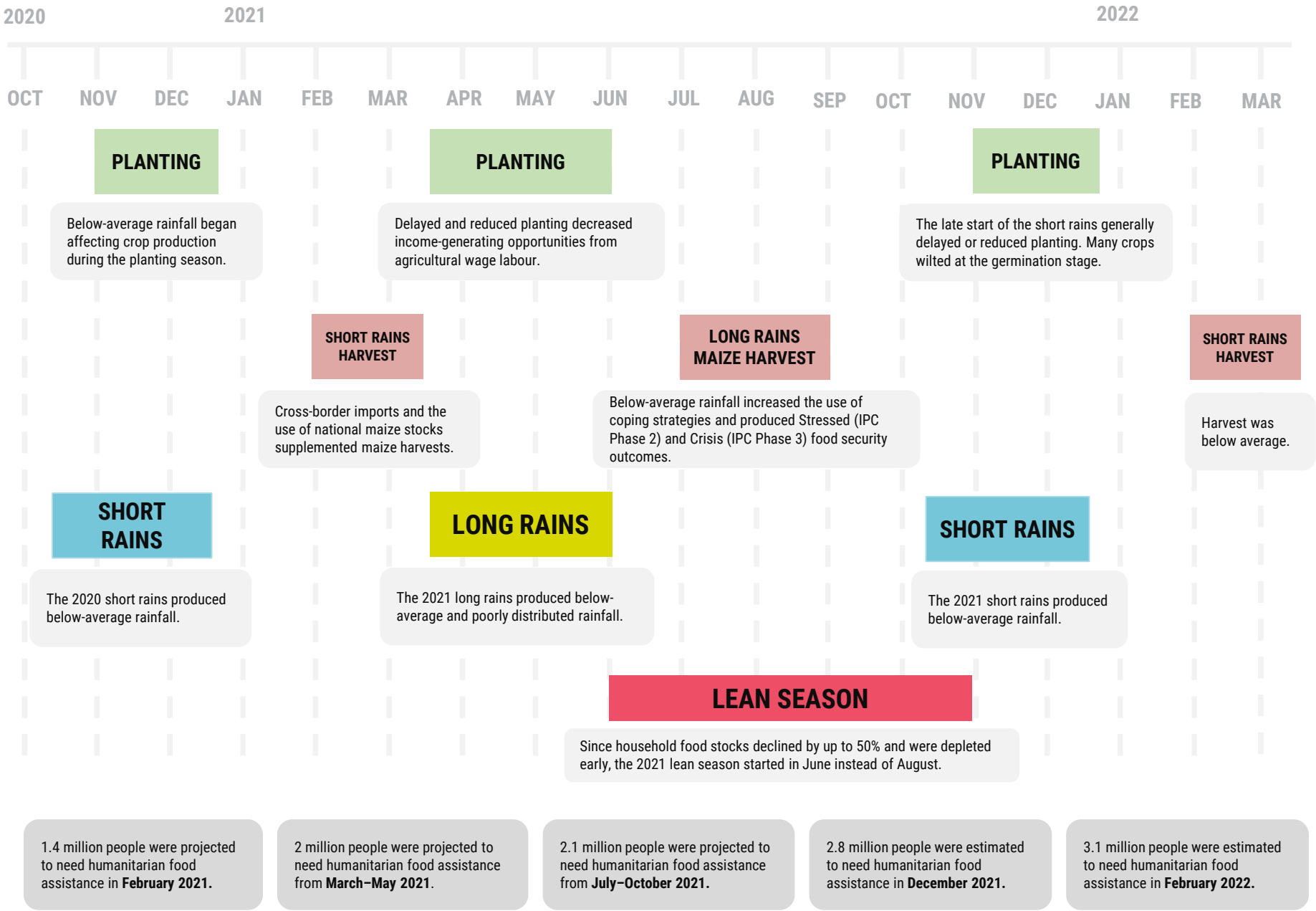
Food security levels in Kenya have been deteriorating since early 2021. 3.5 million people are estimated to face Crisis (IPC Phase 3) or higher food insecurity levels in March–May 2022, a 75% increase from two million in March–May 2021 resulting from consecutive poor rainy seasons, high food prices, resource-based conflicts, and crop and livestock diseases (KFSSG 08/03/2022; IPC 04/2021). The delayed start of the October–November 2021 rainy season disrupted the typical planting season. Maize-planting throughout the country was 50–65% below normal. In agricultural ASAL areas in southeastern and coastal regions of Kenya, cereal production had been below average for three consecutive seasons. As a result, maize prices in ASAL counties increased by 5–35% throughout 2021 (FEWS NET et al. 23/12/2021; FSNWG 10/02/2022).

Number of people in ASAL counties facing Crisis (IPC Phase 3) or higher food insecurity levels from February 2021 to May 2022



Sources: ACAPS using data from IPC 08/04/2021 and 24/09/2021; FEWS NET et al. 23/12/2021; KFSSG 08/03/2022

ASAL SEASONAL CALENDAR



Sources: ACAPS using data from FEWS NET accessed 07/03/2022; FEWS NET 31/03/2021, 28/05/2021, 30/04/2021, 30/11/2021, and 08/03/2022; IPC 08/04/2021 and 24/09/2021; FEWS NET et al. 23/12/2021; KFSSG 08/03/2022

Livelihoods

The drought has resulted in below-average harvests, diminished pasture, livestock deaths, and lower milk production, affecting livelihoods in pastoral and farming communities (FEWS NET et al. 23/12/2021; OCHA 30/09/2021; IPC 24/09/2021). At least 1.4 million livestock in 15 counties has died because of drought. The loss of livestock has a social and economic impact on pastoralist communities (ICPAC 01/2022; TNH 16/11/2021). A higher market supply and the poor body condition of goats have been decreasing retail prices since July 2021. In agropastoral regions, reduced farming activities have decreased the opportunities available for casual labourers. Decreased income levels in pastoral and agropastoral regions have depleted household purchasing power and worsened food insecurity (WFP 20/01/2022).

WASH

At least 2.8 million people in ASAL counties are experiencing water shortages after three consecutive failed rainy seasons. Water pans, dams, wells, and boreholes have dried up, particularly in Turkana and Marsabit counties. High rainfall in southeastern Kenya in

mid-December 2021 replenished water sources by 30–50%, but they are expected to dry up again by February 2022 (FSNWG 10/02/2022). For pastoralist communities, the average trekking distance to functional water sources has increased (KFSSG 08/03/2022). Because of limited access to safe water and unhygienic practices like open defecation, waterborne diseases, such as cholera and acute watery diarrhoea, are at a higher risk of spreading (KFSSG 08/03/2022; OCHA 30/09/2021; FEWS NET et al. 23/12/2021; IFRC 09/09/2021).

Nutrition

Malnutrition is worsening as drought drives food insecurity, water shortages, and diseases. Over 658,000 children and women in ASAL counties need treatment for acute malnutrition, accounting for 76% of acute malnutrition cases countrywide. Around 558,500 under-five children in ASAL counties were experiencing global acute malnutrition in February 2022, a 20% increase from August 2021 (KFSSG 08/03/2022; KFSSG 31/08/2021; FEWS NET et al. 23/12/2021; OCHA 30/09/2021; FSNWG 10/02/2022).

Education

School attendance in Kilifi, Kitui, Kwale, Lamu, Marsabit, Narok, Samburu, and Turkana counties decreased in the school term that began in January 2022, partly caused by inconsistencies in school meal provision. The disruption of livelihoods for many drought-affected households have made some parents unable to afford school fees. The incidence of child labour has also been rising, further contributing to school dropouts. There are more cases of dropouts resulting from early marriage, particularly in Kilifi, Kwale, and Tana River counties. Participation is low for children who continue attending school because of insufficient food intake. There are also cases of skin infections in some schools in Taita Taveta and Kilifi counties attributed to a lack of clean water (KFSSG 08/03/2022; FEWS NET et al. 23/12/2021; OCHA 14/12/2021 and 30/09/2021).

Coping strategies of drought-affected communities

Some of the drought-affected population take on a community approach to survive, relying on support from relatives and sharing food within their communities (Concern Worldwide 14/08/2019). The Borana community in Isiolo county practices the Dedha system of land management, where certain areas are set apart as drought reserves (i.e. only used for pasture in case of drought). While this system has helped their community cope better during droughts, it has also resulted in resource-based conflicts with pastoralists from other communities who try to access the reserves. Consecutive poor rainy seasons also exhaust pasture in these reserves (TNH 16/11/2021).

People implement other coping mechanisms at the household level. Some change their source of livelihood through either more diverse livelihood activities or drought-resistant alternatives. Some farmers have gone into beekeeping, poultry-keeping, fish-farming, and agroforestry (Thiongo and Ngaira 06/2019; Quandt 15/04/2021). Others have adopted irrigation measures instead of relying completely on rainfall. For instance, the irrigated area in Tana River county increased twentyfold from 48 before the 2021 drought to 832 hectares by December 2021 (ICPAC 01/2022). Short-term strategies include migrating with livestock in search of water and pasture and working as casual labourers. Some pastoralists have taken their livestock to graze inside national parks, which leads to conflict with the Kenya Wildlife Service (IFRC 09/09/2021; ICPAC 01/2022). Several households also modify their consumption of meals. They reduce the number of times they eat daily, eat less preferred food like wild foods, or limit adults' intake for the sake of children (FEWS NET et al. 23/12/2021; IFRC 09/09/2021).

When they exhaust these coping mechanisms, affected communities begin erosive practices to survive, such as cutting trees to sell as firewood or charcoal. This practice leads to a vicious cycle as it contributes to environmental degradation, which further worsens dry climatic conditions. The sale of productive assets, such as livestock in the case of pastoralists, offers short-term relief but inevitably lowers their resilience to future natural hazards. Some households resort to early marriage and child labour. Others resort to theft and violence (WB 09/05/2016; Concern Worldwide 14/08/2019; Quandt 15/04/2021; The Star 13/02/2022; OCHA 14/12/2021).

Impact on different population groups

Female-headed households: as men and boys migrate with their livestock to seek water and pasture, women are increasingly left in charge of households. The situation places excessive pressure on women to provide for their households while facing the scarcity of resources resulting from drought (IFRC 09/09/2021). Women have to walk longer distances than usual to access essential supplies, such as food and water, exposing them to the risk of trafficking. In some instances, hunger causes them to resort to negative coping mechanisms, such as transactional sex (FEWS NET et al. 23/12/2021; OCHA 30/09/2021).

Children: the livelihood disruptions caused by drought have increased instances of child labour. Some boys drop out of school to engage in income-generating activities, like bodaboda-riding. Some children also engage in criminal activities, such as drug-peddling, to earn an income. There is a higher incidence of early marriages for girls as a negative coping strategy. Girls are also exposed to the risk of trafficking when they travel longer than usual distances in search of food and water (KFSSG 08/03/2022; OCHA 14/12/2021).

Refugees: ASAL counties in Kenya host nearly 459,000 refugees, with around 234,000 in Dadaab refugee camp (Garissa county) and 225,000 in Kakuma refugee camp (Turkana county) (UNHCR 28/02/2022). Rising levels of food insecurity in these counties also affect refugees (ECHO 22/02/2022). A REACH survey on 3% of households in Dadaab refugee camp revealed that the proportion of households with sufficient food consumption decreased in November 2021 compared to October 2020. There was increased reliance on coping strategies, which indicated Stressed (IPC Phase 2), Crisis (IPC Phase 3), and Emergency (IPC Phase 4) food insecurity levels (REACH 07/03/2022).

Drought aggravating factors

Intercommunal conflict

Intercommunal conflict is recurrent in Baringo, Isiolo, Laikipia, Lamu, Marsabit, Samburu, Tana River, Turkana, and Wajir counties. These conflicts intensify during drought, as communities fight over scarce water and pasture resources. Some neighbouring communities attack areas that seem less affected by drought for their resources. Resource-based conflicts have resulted in the loss of human lives, the raiding of livestock, and displacements. They have also disrupted livelihoods, access to markets, and education (KFSSG 08/03/2022; FSNWG 10/02/2022; Quandt 15/04/2021). Some conflicts happen across national borders with South Sudan and Uganda. From September–December 2021, there were nine to 12 cross-border raids in Turkana county each month, three times the normal monthly average (Al Jazeera 22/12/2021).

Crop diseases and pests

A fall armyworm infestation and maize lethal necrosis disease are currently affecting maize production in Kenya (FEWS NET et al. 23/12/2021). Fall armyworms thrive in drought conditions (ACES 24/06/2019). The infestation began affecting maize-farming in Kenya in 2017 and has been particularly destructive in coastal and ASAL regions. In 2017–2018, Kenya lost a third of its annual maize production from the infestation (De Groote et al. 15/04/2020).

December 2021 flash floods

Increased soil dryness from droughts highly increases the likelihood of flash and river floods occurring (Mongabay 30/12/2021). In mid-December 2021, there was heavy rainfall throughout Kenya, particularly in the eastern and coastal regions. The rainfall partially renewed water sources and improved vegetation conditions in eastern Kenya but also caused flooding. Flash floods occurred in some drought-affected counties, such as Kitui, Makueni, Taita Taveta, and Tana River, leading to human and livestock deaths. Roads in Taita Taveta and Tana River counties became impassable, delaying and raising the cost of transportation. The situation ultimately increased the prices of food and other basic goods in these areas (KFSSG 08/03/2022; ICPAC 01/2022; FloodList 06/12/2021).

Response capacity

The Kenya Government coordinates the drought response through the National Drought Management Authority. Government and humanitarian organisations constitute the Kenya Food Security Steering Group, which identifies needs and mobilises resources for the response. The Kenya Humanitarian Partnership Team oversees 42 humanitarian organisations involved in the drought response, including the Kenya Red Cross Society, 24 INGOs, eight UN agencies, and nine national NGOs. The ASAL Humanitarian Network, comprising mostly local and national NGOs operational in ASAL counties, holds advocacy and awareness campaigns and assists in the drought response (OCHA 18/02/2022 and 30/09/2021; ASAL Humanitarian Network 17/08/2021 and 12/11/2021).

Government and humanitarian responders continue to implement long-term solutions to build resilience against future droughts (Kenya Presidency 21/02/2022; Mercy Corps 21/01/2022; FAO 23/12/2021). As a result of funding constraints, the level of humanitarian needs currently exceeds the response. Only 28% of people in need in ASAL counties received humanitarian assistance in 2021 (OCHA 18/02/2022).

CLIMATE OUTLOOK AND HUMANITARIAN IMPACT

This section briefly examines the climate outlook and possible humanitarian impact based on the uncertain outcome of the 2022 March–May rainy season, which could either be below average or normal to above average.

Rainfall and temperature

The difficulty in forecasting the March–May rainy season has resulted in mixed predictions from global forecast models, indicating the possibility of either below-average or normal to above-average rainfall (FEWS NET 08/03/2022; Kenya Met Dept 22/02/2022; ICPAC 17/02/2022). Either way, most of the country will experience above-average temperatures. Higher-than-average temperatures coinciding with the rainy season could cause a rise in pests and diseases, with many livestock deaths expected. This outcome would further compound losses for pastoralist households (KMD 22/02/2022; ICPAC 17/02/2022).

Drought

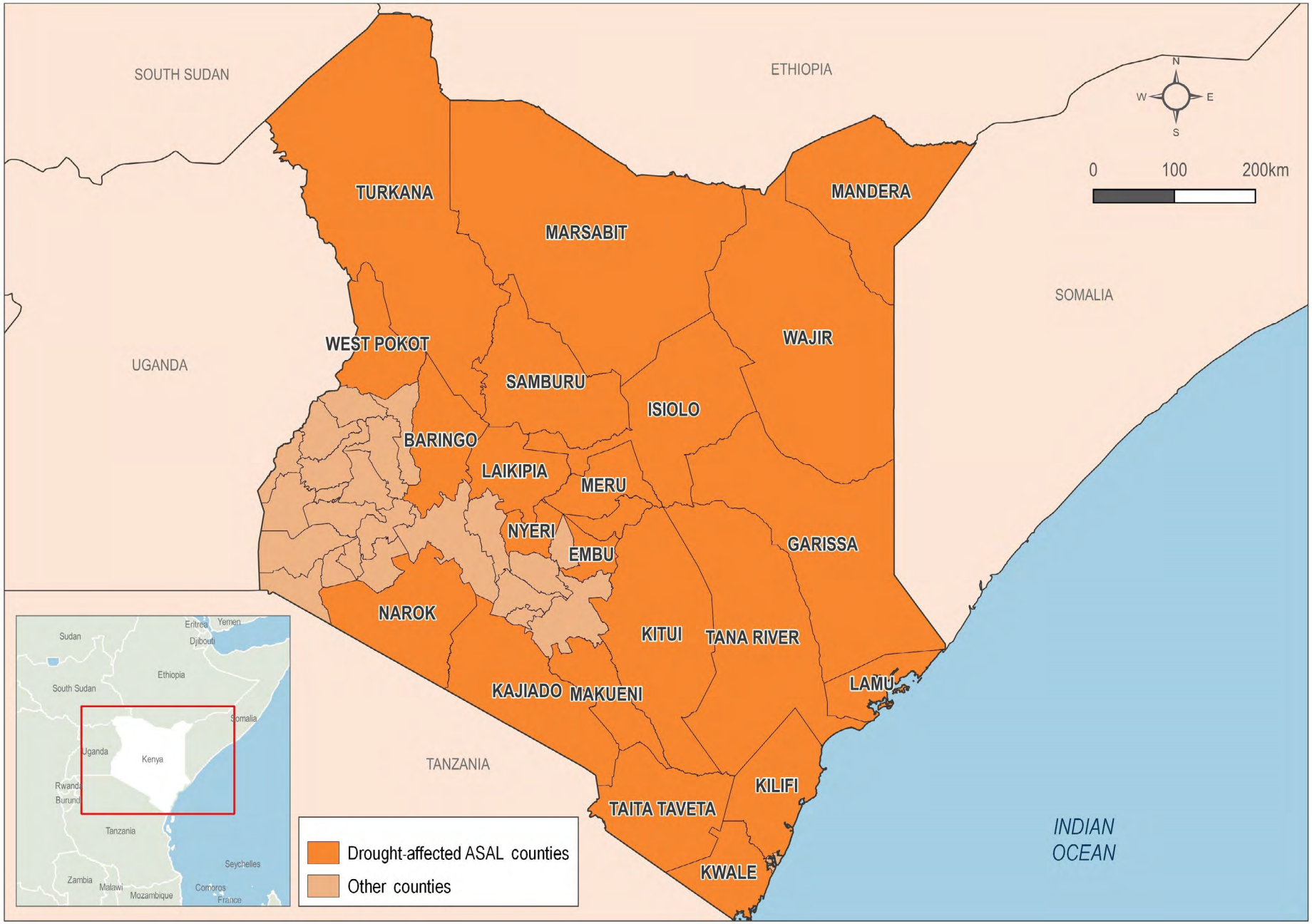
Below-average rainfall: drought conditions will likely persist if the outcome of the March–May 2022 rainy season in ASAL counties is below average. Cereal and legume harvests in agropastoral ASAL counties will be below average, increasing staple food prices. Affected communities will likely need seeds for drought-tolerant crops, such as sorghum and green grams, for the planting season from March–June 2022. Pasture and water resources in pastoral ASAL counties will also likely remain below average until the next rainy season begins in October 2022. Pastoralist households will have to trek longer distances to water sources. Outcomes would include worse livestock body conditions and reduced milk production, further reducing incomes from livestock-keeping. Resource-based conflicts could increase from June–September 2022 as livestock migration increases. After the rainy season ends in May, the scarcity of resources could lead pastoralist households to resort again to erosive coping strategies. The population facing Emergency (IPC Phase 4) food insecurity outcomes could increase, particularly if people in need do not receive timely humanitarian assistance. Reduced food intake and milk consumption will likely cause high levels of acute malnutrition to persist, particularly in Baringo, Garissa, Mandera, Marsabit, Samburu, Turkana, and Wajir counties (FEWS NET 08/03/2022; FSNWG 10/02/2022).

Normal to above-average rainfall: despite expected improvements in pasture conditions during the rainy season, recovery from two consecutive years of drought will happen slowly. Food, water, and pasture shortages in drought-affected counties are expected to persist until September 2022. While an increased water supply will improve households' access to water after the rainy season ends in May, water sources will unlikely be fully replenished throughout 2022. Food security outcomes are not expected to significantly improve until August 2022. Since the scarcity of water and pasture resources will continue at the beginning of the rainy season, resource-based conflicts will likely continue (KMD 22/02/2022; WFP 20/01/2022; FSNWG 10/02/2022).

Floods

Climate change has made a pattern of severe drought followed by heavy flooding increasingly common, even with below-average rainfall (IDMC 22/05/2018). During the upcoming rainy season, some areas are expected to experience flooding, such as the drought-affected Tana River and Garissa counties. The flooding will compound the humanitarian impact of drought, causing displacement, property destruction, deaths, and further disruption of agriculture and livelihoods. Contamination of water related to flooding will also likely increase cases of waterborne diseases, such as cholera and acute water diarrhoea. Malaria cases could also rise as stagnant pools of water appear during the rainy season. The outbreak of water- and vector-borne diseases during periods of flooding is an established public health concern in Kenya (KMD 22/02/2022; Okaka and Odhiambo 17/10/2018). In previous years, such as 2020, flash floods disrupted humanitarian access to people in need. Flash floods in the upcoming March–May rainy season could also damage roads and bridges and cause transport challenges, further disrupting humanitarian access (KMD 22/02/2022; OCHA 07/05/2020).

DROUGHT AFFECTED ASAL COUNTIES IN KENYA



Source: ACAPS using data from KFSSG 08/03/2022.