

Somalia Country Risk Brief

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Looking at diverse set of indicators, Somalia is the country most at risk from combined high levels of fragility, disaster risk, poverty and climate-change vulnerability (Harris et al. 2013). It faces protracted conflict and humanitarian crises, and has had no centralized and functional governance structures for the past 30 years. The interlinkages between climate and environmental change, drought, poverty, fragility and protracted conflict are more pronounced than in any other country. This conflict-climate interface was illustrated by a severe humanitarian crisis in 2011-12, when an exceptional drought affected the Horn of Africa. Combined with internal socio-political factors, including the conflict with al-Shabaab, who actively interfered with humanitarian aid delivery, this drought led to acute famine and the displacement of hundreds of thousands of people. Although the current Somali government is aware of climate-related risks, institutional capacity is deficient; no national environmental agency has ever existed in Somalia (SCWE 2015) and there is no institutional framework or policy for environmental protection and water resources management (ADB 2013).

Climate data and projection in Somalia

Seasonal rainfall failures combined with high temperatures have occurred more frequently in Somalia in recent years, compared to the 1980s and 1990s (FSNAU 2011). This has reduced crop yields and livestock production. Due to the prolonged civil war, there are gaps in baseline climate data between 1990 and 2002, which may affect the reliability of the climate models covering the Horn. The most recent global projections show that Somalia is likely to experience a steady increase in mean temperature, rising to 3.2°C by 2080 (World Climate Research Programme, cited in Somalia's NAPA 2013). A gradual increase in total rainfall is expected, although seasonal variability will also increase. Extreme rainfall events are expected to increase (ICPAC 2013), potentially contributing to flash floods. Ocean acidification and temperature increase may affect fish stock numbers and distribution.

Compound risks: Links between climate change, fragility and security**1. Climate change, environmental degradation, and natural resource conflict**

Climate impacts are exacerbating pressures on already scarce arable land (which accounts for only 1.6 per cent of total land area; ADB 2013), fresh water and fisheries resources in the country. Unregulated and unsustainable water and land use practices, such as overgrazing and deforestation for charcoal extraction, are intensifying land degradation and desertification. **Stable availability and access to grassland and water are therefore a constant challenge for the majority of the Somali people, who rely exclusively on livestock production for their livelihoods.** Somalia has the highest concentration of clan-based pastoral communities in Africa, with 60 per cent of its population being nomadic or semi-nomadic pastoralists (Somalia's NAPA 2013). The reduction of grazing areas and water points constrain the traditional high mobility and migration patterns of these pastoralists, leading to increased competition over access to resources. This has provoked violent clashes between pastoralists in southern Somalia and the border region with Kenya.

Degradation of rangelands has also contributed to increased cross-border pastoralist displacements in search of water and pasture. The dominance of a single ethnic group, the Somali, on both sides of the border in that region (due to both refugee influx and migration), has come at the expense of other ethnic groups. This has contributed to periodic ethnic-based clashes over land (Menkhous 2005), which have turned more violent in recent history. Long-standing inter-clan rivalries have been fuelled as a result of a breakdown in traditional conflict mediation systems, lack of state order, increased availability of small weapons, population influx into productive lands, and increasing scarcity of natural resources. This is especially the case "*when specific clans have had access to government resources and posts, while others have been marginalized and not represented in the country's political landscape*" (Dehérez 2009).

2. Climate change, disasters, and protracted conflict increasing fragility

Somalia is frequently hit by recurrent droughts and flash floods that contribute to loss of lives and livelihoods, mainly through their impact on agriculture. Agriculture is the backbone of Somalia's economy, with livestock accounting for about 40 per cent of GDP and more than 50 per cent of export earnings (Index Mundi 2014). The sector is crucial not only in terms of meeting the food needs of the population but also in providing jobs and income to more than 65 per cent of the population.

Agriculture is highly vulnerable to natural disasters, such as flash floods or livestock and plant diseases. The 2011 drought caused a massive loss of livestock, higher food prices and a decline in demand for casual labour. The knock-on effects have included many poor people being unable to afford enough food. The ongoing conflict with al-Shabaab also contributed to food price spikes because of trade restrictions and localized blockages, leaving people with proportionally less money for food (Maxwell and Majid 2014). As most of these vulnerable groups could not access humanitarian aid or were unable to move due to armed conflict (Harris et al. 2013), the decline in trade was a significant factor in the 2011 famine (Maxwell and Majid 2014). The 2011 humanitarian crisis cost an estimated 260,000 lives. It showed that some populations are particularly vulnerable to food insecurity, among them many historically and politically marginalised clans and IDPs that constitute approximately 76 per cent of the population (Maxwell and Majid 2014).

In turn, the loss of livelihoods as a result of both drought and conflict may lower the opportunity cost to participate in violence in Somalia (Maystadt and Ecker 2014, cited in Breisinger et al. 2014), fuelling the vicious cycle of instability and insecurity. The unemployment rate for youth aged 14 to 29 is 67 per cent—one of the highest rates in the world. Under poor economic and unemployment conditions, climate-related shocks further disrupt economic activity and leave marginalised young people vulnerable to recruitment into extremists groups like al-Shabaab (Botha and Abdile 2014). In this way, food and livelihood insecurities both result from and contribute to repeated rounds of armed conflict (Simmons 2013).

3. Climate change impact on fisheries, coastal degradation and piracy in Somalia's water

Somali waters contain abundant fish stocks, which attract artisanal fisheries and offshore foreign fishing vessels. Eastern Africa's fish stocks are declining due to overfishing and unsustainable fishing practices compounded by climate change. Ocean acidification will redistribute global marine species and reduce marine biodiversity, particularly in tropical areas, where yields are projected to decrease by up to 40 per cent by the 2050s (IPCC 2014). Competition between local artisanal fishing and illegal industrial trawlers has undermined local livelihoods and is one of the root causes of piracy in the region. The government's inability to protect the shoreline, enforce fishing regulations, and exert sovereignty over its Exclusive Economic Zone has driven fishermen to raid foreign fishing trawlers. This phenomenon has made the Gulf of Aden one of the least secure maritime zones, impacting regional and international trade with cascading effects on Somalia's economy. For example, the piracy activity in the Gulf of Aden has affected aid delivery in the country that majorly arrives by sea. In 2007-2008, the World Food Programme was forced to intermittently suspend shipments to Somalia due to security concerns in the waters, jeopardizing Somalia's food stock at a time when it was highly reliant on food aid (WFP 2007).

Conclusion

By further increasing the risks of fragility, **climate change can place conflict resolution further out of reach in Somalia.** With extreme heat waves and more variable rainfalls occurring with increasing frequency and severity, traditional livelihoods are likely to become untenable. These climate-related stressors will complicate the Somali government's efforts to re-establish legitimacy, assert territorial control and mount an effective response against al-Shabaab. Without functioning institutions, Somalia will be far less able to implement climate adaptation measures. These factors will significantly increase its exposure to both climate risks and fragility.

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