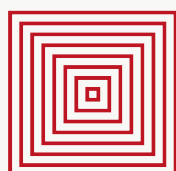# Somalia

Climate-related security risk assessment

December 2018

A Report from the Expert Working Group on Climate-related Security Risks

Contents

Executive Summary

Objective: **to provide a climate-related security risk assessment and options for climate risk management strategies in Somalia.**

Somalia is making significant progress towards a durable peace after decades of conflict. However, progress is extremely fragile; formal governance structures are contested and community capability and resilience to deal with shocks and disputes is low. As Somalia decides the shape of its future developmental and political model, climate-related security risks add a further dimension to the country's fragility. A high carbon development path presents a range of cascading risks, from affecting livelihoods to compromising national stability. Climate-positive development, by contrast, could offer opportunities to further stabilize the country, and strengthen community and state resilience.

For a population heavily dependent on pastoralism and agriculture, climate change is a serious threat to the lives and livelihoods of millions of people, moreover it is likely to aggravate existing drivers of conflict. Somalia grapples with a multi-layered conflict system, with the conflict against al Shabaab being the highest-profile element, while historic inequalities and grievances contribute to violent conflict at the local level and political instability nationally. In a context where the ability to avoid violent conflict has been compromised by decades of clan, political, and religiously motivated violence significant changes in Somalia's climate could further weaken mechanisms for avoiding or managing violent conflict.

This report identifies four priority climate-related security risks in Somalia[1]:

1. **Breakdown of Somali power-sharing practice and governance:** Somalia's political system is designed to manage the country's complex conflict and power dynamics involving actors at local and national levels. Power-sharing mechanisms seek to take on the challenge of accommodating clan identity and power within a formal state structure. The potentially dramatic changes to local natural resources linked to climate change—be they for example loss of grazing lands or more frequent flooding in agricultural areas—would exacerbate the risk of breakdown in these fragile governance systems. In turn, risking increased and violent rivalry among clan members at the local level, fuelling an antagonistic and zero-sum approach to national politics. As a result, the ability of formal governance structures to manage and resolve disputes would be reduced and the chances that those who control formal institutions might seek to use them to secure resources for their kin—possibly violently—are high. Thus, climate change presents a serious risk not just of localized conflicts over resources but to a range of interrelated governance structures.

2. **Oil and gas revenues exacerbate tensions between Central Government and Federal Member States:** Somali leaders (and geologists) have high expectations that commercially viable oil and gas deposits exist on Somali territory. Beyond the environmental damage that oil and gas exploration will cause locally and globally there are several interlinked risks to Somalia's conflict and political systems. While governance

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[1] In this report Somalia refers to the internationally recognized territory of the Federal Republic of Somalia, this report mainly focuses on those parts of Somalia that accept the 2012 provisional constitution. While Somaliland faces similar ecological challenges, the political situation is sufficiently different to require separate analysis.

structures are weak and authority is contested Somalia is likely to struggle to manage the pressures brought about by this new sector. Competition between political entities for control of territory and thus of revenues from oil and gas could become violent. Without careful planning even relatively modest injections of money from oil and gas could become a resource curse for Somalia—diverting attention from more productive and employment-generating sectors of the economy, fuelling corruption, and weakening governance institutions. Furthermore, given the international commitment to decarbonize the global economy enshrined in the Paris Agreement, oil and gas markets might become even more volatile in the medium-term with potentially destabilizing consequences for Somalia.

3. **Climate induced displacement increases urban violence and group vulnerability:** Climate change increases the risk of displacement by reducing the viability of livelihoods that support rural (and urban) populations in Somalia. Those facing displacement—often recurrent displacement—risk experiencing a decrease in human security as they move to cities or camps for internally displaced persons (IDPs), including insecure living conditions especially for differently abled people, as well as food and water scarcity, diseases and violence with particular risks for women and youth. The expansion of large displaced and marginalized communities could compound disillusionment with the state building project and threaten the fragile legitimacy on which Somalia's currently increasing stability is built. Significant changes in urban clan compositions also raise the threat of localised violence to gain or maintain control of the urban environment.

4. **The fallout from the unregulated charcoal trade creates competition for grazing land and weakens confidence in the state:** The import of charcoal from Somalia has been placed under UN Security Council sanctions since 2012.[2] Charcoal is currently a major source of income for al Shabaab and given the sustained control of most rural areas (south of Puntland) by the group, this seems likely to continue. While charcoal is being exported and while al Shabaab controls the areas where it is produced, they will continue to benefit from the trade. Charcoal also presents a long-term risk to Somalia's environment and conflict system. Communities that rely on charcoal producing areas for livestock rearing could be driven into conflict with neighbouring communities—particularly those farming on land close to rivers—as grazing resources are depleted by charcoal production. An escalation in conflict between politically powerful pastoralist clans and politically weaker riverine clans could see localized violence and a diminution of state authority.

In responding to Somalia's climate change and conflict context an imaginative and inclusive approach that accommodates wider societal and security risks, as well as livelihood protection, is vital. This report provides four recommendations that urge ambitious action to address these compound risks.

- **Prioritise investment in decentralized renewables and mitigate the risks of rapid growth in oil and gas revenues:** A significant investment in Somalia's renewable energy generation potential should be considered a matter of conflict prevention. An ambitious plan to build decentralized solar and wind generation capacity in towns newly recovered from al Shabaab could help to legitimize political structures while also promoting employment and economic opportunities. USAID reports that Somalia has the greatest potential of any African nation for onshore wind power and could generate 30 000–45 000 MW.

[2] United Nations Security Council Resolution 2036 of 22 Feb. 2012

- Solar power has the potential to generate in excess of 2000 kWh/m² (USAID 2018). Efforts by stabilization programmes to install solar street lights in newly recovered areas have been popular with local populations (USAID 2016) and contribute to an expanded night time economy (Harding 2013). Conversely, oil and gas revenues could compound security risks by exacerbating corruption and deepening existing political fault lines. International entities that are supporting Somali oil and gas investments such as the World Bank, should prioritise safer investments.

- **Enhance the capacity for local and national conflict resolution to cope with conflict-and climate-related shocks:** Investment in conflict resolution mechanisms (formal and informal) to help Somali's manage and resolve political disputes are essential for the long-term peace of the country. These mechanisms need to be flexible, ad hoc and capable of managing escalating political rivalries, including those which could be worsened by changes in climate conditions. In the longer-term support for the establishment of a constitutional court and a truth and reconciliation commission (Federal Republic of Somalia 2012) would help Somali leaders resolve disputes through trusted formal mechanisms. The United Nations and international partners in Somalia can help by investing in conflict resolution at all levels of Somali society, prioritizing the community level to help ease inter-community tensions. This should include efforts to strengthen alternative dispute resolution mechanisms, promote trauma healing for communities and leaders, encourage clan to clan reconciliation and support for agreed peace deals.

- **Build institutional preparedness for more complex climate-induced humanitarian demands:** Given the likely impacts of climate change the response capacity of federal member state level disaster management agencies should be strengthened, putting in place formal and person-to-person relationships between disaster management agencies across Somalia. The initial task for UN humanitarian agencies, international NGOs and local NGOs in Somalia is to assess the climate-related risks of achieving their goals, considering not just the first order impacts of climate—more heat, more rain—but also the related systemic and political risks, especially those that will feed into the conflict system. A humanitarian system that is properly prepared and resourced to respond to the likely effects of climate change reduces the risk that these shocks will exacerbate conflict dynamics or disrupt political and security progress.

- **Support the sustainable management of climate-stressed natural resources to deliver decentralized economic growth:** Investment in varied and decentralized livelihood opportunities can help reduce economic and political inequalities in Somalia and support stabilization. Sustainable approaches will serve to underscore stability in the coming decades. For example, sustainable agriculture and commercial fishing offer potentially important sources of employment and income for Somalia. However, at present there is insufficient analysis to guide programming and investment which addresses the climate-related threats and opportunities to natural resources. An interim step could see UN Environment, UNSOM and the Federal Government of Somalia undertake a full climate risk assessment to identify entry points which jointly support stabilisation and sustainable development.

Climate-related security risk assessment

Into an already challenging environmental and political context climate change will bring greater uncertainty and more extreme weather. For a population heavily dependent on pastoralism and agriculture climate change presents a highly significant threat to the livelihoods of millions of people. In addition, because Somalia is a context in which the ability to avoid violent conflict has been compromised by decades of clan and political violence, significant changes in Somalia's climate could further weaken mechanisms for avoiding or managing violent conflict.

Climate context in Somalia

Somalia is predominantly—up to 80 per cent of the country's landmass— arid and semi-arid and prone to extreme weather conditions, such as periods of extended drought, erratic rainfall, disruption to the monsoon season, strong winds, cyclones, sand and dust storms (Ministry of National Resources 2013:14). Such a climate provides poor conditions for significant agricultural efforts and the low average rainfall makes it more suitable for pastoralist livelihoods. In some areas—primarily along the Jubba and Shebelle rivers in the south of the country - the only permanent rivers—rain fed, flood fed and irrigated agriculture are possible and this supports significant population groups as well as some cash crop farming (FSNAU 2018).

Over the coming decades Somalia will face increased threats of climate extremes (Ogallo et al. 2018: 153). According to the World Bank and FAO 'The climate in the Horn of Africa is projected to become even drier, warmer, more erratic, and more extreme than in recent decades and thus less favourable to crop, livestock, fisheries, and forestry based livelihood systems' (World Bank and FAO 2018). These new extremes will be felt in a country that is already grappling with catastrophic drought (Conway and Watson 2018) and devastating flooding (WHO 2018). Disastrous droughts have struck the country multiple times in recent decades—in 2000, 2004, 2008 and 2010-2011—and this has had a devastating impact on the population in terms of famine, food insecurity, water scarcity, and loss of livelihoods. The most recent drought in 2016–17 caused spikes in food scarcity, malnutrition and cholera (UNEP, 2018b).

Climate change is projected to hit Somalia harder than countries in other regions of the world. Temperatures are projected to increase by between 3.2°C and 4.3°C by the end of the century (Ministry of National Resources 2013: 28). Furthermore, climate change is expected to cause increased variability in precipitation patterns leading to more frequent flooding, storms and cyclones. It will also increase the frequency and intensity of droughts causing desertification, failed crops and livestock deaths. (SFG, 2015) Rising sea temperatures could reduce the commercial viability of Somalia's fish stocks (Finaz 2015: 2). If not addressed, these climatic events will disrupt livelihoods, and exacerbate water and food scarcity for a majority of Somalia's population. Rising sea levels could further damage or destroy major coastal cities (Ministry of National Resources 2013: 32).

In this fragile context, this report seeks to understand how a more volatile climate will affect the likelihood of violent conflict and to suggest ways in which preparations for climate change can help Somalia strengthen its resilience to conflict.

Climate-related security risks

This section sets out five climate-related security risks derived from the currently available evidence. It is important to note that these risks are derived from the limited research and analysis produced so far. Further research is required to gain a deeper understanding that can fully inform decision making, programming and policymaking.

1. Breakdown of Somali power sharing practice and governance

Although the fight against al Shabab—which involves several Somali forces (formal and informal), the African Union Mission to Somalia (AMISOM), as well as US special forces—has received most attention the type of conflict that has the greatest potential for large-scale destabilization in Somalia is tensions between and among clans and sub-clans. First and foremost clan conflicts affect local communities but they can also drive national politics into antagonistic attitudes that weaken state cohesion. Unaddressed grievances among clans create opportunities for groups such as al -Shabaab who claim to offer a 'post clan' approach for Somalia's future. Conflict between clans is not a new phenomenon but because such conflicts often centre around competition over natural resources such as grazing or water (Kapteijns 2013) climate change and population growth will create further stress and increase social tensions.

Climate change is likely to reduce the land available for grazing. Increased rainfall could wash away soil, reducing the already limited supply of agricultural land and lead to an increase in certain types of disease such as malaria. Into a context with a growing population (United Nations, 2017) [3] such outcomes will further strain Somalia's overstretched government institutions and conflict prevention capacities (Ogallo et al. 2018). The differential impacts of climate change, which will differ from district to district (Ogallo et al. 2018), mean that not all Somali people or clans will be equally affected. Some could benefit from increased rainfall and improved grazing while neighbouring areas lose top soil and the ability to grow crops. This can increase the risk of land disputes, if for example, pastoralists clans – traditionally politically and military dominant in Somalia (Clapham, 2017) – seek access to agricultural areas occupied by less powerful groups if those offer better grazing prospects. Without careful management of changing environmental conditions and access to resources these types of change could easily lead to an increase in inter-clan conflict (Kuele and Miola 2018).

Structural challenges can arise when the cumulative impact of increased local tensions threatens efforts to build a stable and robust political system nationally. Clan power-sharing is embedded in Somali political structures at the national level through the '4.5 formula' and similar arrangements at the state level reflect local clan dynamics.[4] Somalia's federal system outlined in the 2012 provisional constitution is an attempt (alongside 4.5) to share power widely enough that most powerful groups have control or influence through some formal arrangements such as the national parliament, national cabinet, or at the Federal Member State level. The power sharing arrangements are fragile and prone to dispute, for example, the 2018 collapse in relations between the Federal Government and the Federal Member States led the states to withdraw all cooperation with the Federal Government (Garowe Online 2018b).

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[3] "*projected to be at least five times as large in 2100 as [it is] today*" in UN World Population Prospects 2017 page 5

[4] Under the 4.5 formula used for the Federal institutions, for each four representatives that the large clan families receive (Darood, Hawiye, Dir, Digil & Mirifle) minority groups receive half a representative.

As such when a clan experiences particular hardship locally it has the potential to disrupt not just local dynamics, but also national politics – climate change is likely to exacerbate this feature of Somali politics.

2. Oil and gas revenues exacerbate tensions between Central Government and Federal Member States

Three decades of violent conflict has contributed to a serious deficiency in Somalia's energy infrastructure development (UNEP, 2017) leading to a high dependency on non-renewable resources. With the adoption of the Paris Agreement in 2015 marking a turning point in the international commitment to decarbonise the global economy, renewable energy could address Somalia's energy access challenges (Roble, 2018). However, there are strong expectations among Somali leaders that oil or gas discoveries will become viable imminently (CNBC Africa 2018). Beyond the environmental damage that oil and gas exploration will cause, locally and globally, several interlinked risks to Somalia's governance structures and conflict systems require attention.

The risk of local environmental damage in Somalia should be addressed given the extremely weak regulatory structures and high dependency on environment-dependent incomes (United Nations Security Council, 2011). Somalia would certainly benefit from well managed and substantial investment, and increased revenue for government, to help transform an economy dependent on agricultural activity. But the nature of oil and gas revenues, and the still challenging governance environment in Somalia, means that the fair distribution of revenues in a manner that leads to improved livelihoods is not a given, and indeed may be unlikely. In addition, Somalia does not have robust legal infrastructure in place to account for its own natural resources or climate and environmental risks, creating fertile ground for corruption and exploitation by the multiple firms hold competing claims on Somalia's resources.

Furthermore, the damaging impact of the resource curse, when large sums of money enter fragile economic and political systems, has been demonstrated in many developing nations (Cai and Newth 2013). In recent years, just the promise of petrodollars has negatively affected the calculations and rivalries of the Federal Government and the Federal Member States (World Bank Group 2018b). For example, Puntland and Jubbaland which have relatively stronger finances and a strong political footing, have held out for a better distributive settlement while states in weaker positions have been quicker to agree deals based on the promise of imminent funds. Initial steps have been taken to mitigate these risks when for instance the National Security Council agreed a broad outline of an oil and gas revenue sharing arrangement (United Nations Security Council 2018:1). However, while this offers a possible way for agreeing revenue shares between the federal and state level it does not tackle the risks and inequalities that could emerge at the community level, including through further diminishing trust in the state.

If expectations are not carefully managed and the complexity of the industry not clearly understood, oil and gas production and price fluctuations could introduce a dangerous volatility into Somali political systems. Anything that weakens state legitimacy, by for example exacerbating an already very poor record on corruption (Corruption Perceptions Index, 2017) or creating expectations that cannot be met, represents a significant security risk to Somalia,

given that armed non-state actors such as al Shabaab offer an alternative narrative of claimed probity and nationalism.

Disputes over energy resources and oil could further increase the risk of heightened territorial conflicts between Somali entities, especially between Somaliland and Puntland. The regions of Sool and Sanaag, for example, are claimed by both Somaliland and Puntland and are also the location of a promising oil deposits (Gilblom 2012). Violent clashes between Somaliland and Puntland forces have been ongoing intermittently since May 2018, and the situation continues to be extremely precarious (UNSC S/2018/800).

Somalia's fragile political system is further vulnerable to external pressure. The country has long been a site where other nations' disputes play out, more recently the sponsoring of different political units in Somalia by states involved in the Gulf dispute. **Disputes across international borders are also at least conceivable**, Somalia and Kenya are currently engaged at the Hague over their maritime boundary, and the border between Ethiopia and Somalia is largely un-demarcated (United Nations, Security Council 2015; Reuters 2014). A mishandling of the energy sector could create further incentives for a securitized response to disputes within and between the Federal Member States and neighbouring countries.

Furthermore, investing in oil and gas diverts attention from other sectors of the economy. Somalia has vast untapped renewable energy potential. In a country with some of the most expensive electricity in the world (USAID 2018) an over-focus on oil and gas may miss the bigger prize of providing affordable, available and clean electricity to the Somali people. As unemployment in Somalia is a major economic—and security —risk it is reasonable to invest in activities that diversify the domestic economy and drive job creation The Somali Minister of Energy and Water Resources has recognised the need for the country to move in the direction of renewable energy sources (UNSOM, 2017).

3. Climate induced displacement increases urban violence and group vulnerability

Patterns of human mobility in Somalia are heavily affected by climatic change. Increasingly erratic rainfall as well as more frequent and longer droughts are already causing crop failures and livestock losses, which are in turn pushing rural groups to leave their homes. In May 2018 there were over 2.6 million IDPs in Somalia situated in urban centres or IDP camps (UNOCHA 2018).

Access to resources such as water and land is not just a basic need in Somalia, it defines identity, livelihood and power relations (Kuele and Miola 2018). Historically, displaced people in Somalia come predominantly from weaker clan groups and displacement has often become permanent as the vacated land is occupied by more powerful clans. This has fed resentment and is identified by some as a contributory factor to al Shabaab's relative success in recruiting from among these clans (United Nations Assistance Mission in Somalia, 2017)

IDP camps report increased human trafficking, child exploitation and recruitment to al Shabaab and other militias (UNICEF 2016). A recent UNDP report finds that unemployment and a loss of identity are contributing factors for exploitation of IDPs and their recruitment by militant groups such as al Shabaab (UNDP 2017). Many women displaced by conflict or disaster are subjected to gender-based violence or abuse both within and outside of IDP camps

(IDMC 2017). Repeated displacement is also very common when faced with recurrent disasters such as droughts and floods (Hajzmanove 2018).

As individuals move to urban centres, they can face challenges assimilating into the urban environment. For example, people from agricultural clans or from the northeast of Somalia have few or no kinship ties in Mogadishu. They struggle to find accommodation and employment, lack security, decent water and sanitation, food security, and struggle to secure other basic needs in the city (Norwegian Refugee Council 2018; Hajzmanove and Anzellini 2017). Many reside in informal settlements in the outer districts but face being re-displaced at short notice, due either to fighting or government evictions from 'illegal' IDP settlements (NRC 2018; IDMC 2017). Within Mogadishu, over 300 000 new displacements have been recorded since the beginning of 2017 (IDMC 2017).

IDP's who settle in urban environments face high levels of human insecurity, where particularly youth and differently abled people are vulnerable to humanitarian challenges. Large changes in the clan make-up of cities (which are in themselves economic and political resources) risk threatening the control exerted by the dominant clan groups, leading to violent reaction to maintain and protect the status quo (IDMC 2017). Fighting for control of strategic neighbourhoods divided Mogadishu for much of the civil war period, today, similar conflicts continue to lead to repeated further displacements of many IDPs.

4. The fallout from unregulated charcoal trade creates competition for grazing land and weakens confidence in state

The environmental impact of the charcoal trade is increasing Somali exposure to conflict and climate risks, demonstrating Somalia's multi-layered security risks. The charcoal trade is known to provide important revenues to al Shabaab, and allegedly even members of the Kenyan Defence Forces (Gridneff 2018). Charcoal production also poses a risk to grazing areas, reducing soil fertility and increasing deforestation. As livelihoods reliant on grazing are threatened by climate change, the risk of clashes will intensify among pastoralist communities and between pastoralist and agricultural communities in search for new grazing grounds.

Several conflict risks are linked to the trade in Charcoal. While charcoal is being exported and al Shabaab controls the areas where it is produced, it will benefit from the trade. Even though the import of charcoal from Somalia has been placed under UN Security Council sanctions since 2012,[5] this has done little to stem the production or export of charcoal (UNEP 2018a).

Charcoal also presents long-term risks to Somalia's environment and conflict system. Desertification occurs rapidly as a result of the demand for charcoal: 8.2 million acacia trees were cut down between 2011 and 2017 (UNEP 2018a). Forest degradation in Jubbaland reduces soil fertility which is a key requirement of the primarily pastoralist-based economy. For example, acacia trees are a crucial viand for camel herders, so their loss through charcoal production increasingly threatens livestock (Little 2003). If this trend continues, communities relying on these areas for livestock rearing could be driven into conflict with neighbouring communities—in particular those living close to rivers who practice agriculture. These riverine areas are already highly contested (Menkhaus 2017) and minority clans have suffered at the hands of more powerful groups with connections to leaders in Kismayo. An escalation in the

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[5] United Nations Security Council Resolution 2036 of 22 Feb. 2012.

conflict between politically powerful pastoralist clans and politically weaker riverine clans could see localized violence and diminution of state authority. This would confirm the message that groups such as al Shabaab seek to promote— that the state building project in Somalia is only for the powerful.

Forest degradation further increases drought, more vigorous rainfalls exacerbated by climate change, and deforestation is further contributing to greenhouse gas emissions, biodiversity loss and ecosystem disruption (Malhi 2014), while also reducing the country's natural resilience to extreme weather and climate variabilities. All this is leading to a depletion of human security and puts additional pressure on the Somali Federal Government's ability to devise climate resilient strategies for its population.

Figure 1: **Map of Somalia**

Country Overview

This section provides a contextual analysis of Somalia, outlining the key economic, political, conflict and security dynamics. This overview aims to put the risks identified above into context and provide a framework for considering the interconnected nature of climate-related security risks.

Governance and resilience

Somalia is often described as being in a state of recovery, but perhaps the image of construction better captures the efforts of Somali citizens and leaders to craft a governance solution that matches their history and beliefs. State institutions are being built at the Federal and Member State level and leaders and citizens debate the shape of Somalia's federal structure. Progress however is fragile. Somalia has a complex governance and political system where any political or security setback can undermine the capacity to tackle current and future security risks.

For example, a deterioration in relations between Somalia's Federal Government and the Federal Member States reached a new low in October 2018 when state leaders announced the formation of their own security structures and political party (Garowe Online 2018b). Somalia is also ranked as the most corrupt nation in the world—placed 180 of 180 according to Transparency International (Corruption Perceptions Index, 2017). Mistrust of the authorities is a defining feature of Somali political society, which is still primarily organized around clan structures (partly a legacy from the civil war). This encourages an approach to politics that seeks short-term gains for a particular group or clan (Waal, 2015).

Stabilization efforts become harder to synchronize and coordinate as the territory of Somalia is governed under three broad political systems. (1) The internationally recognized authority in Somalia, based on the 2012 Provisional Constitution, is the Somali Federal Government based in Mogadishu, and its five Federal Member States that form the next level of government in Jubbaland, South West State, Hir-Shabelle, Galmudug and Puntland. The level of actual control over territory varies from state to state, Puntland exercises effective control over the majority of its claimed territory. Other states and the Federal Government have more limited territorial control. (2) In many areas of the countryside the Islamist group al Shabaab remains in control (Felbab-Brown, 2018), collecting taxes even in areas that it no longer controls directly (United Nations Security Council 2018). (3) In the north west in the Republic of Somaliland has since 1991 claimed independence from Somalia. Despite successive elections, a high degree of stability and economic development Somaliland is unrecognised internationally. In almost all practical ways Somaliland operates independently. So, the fact that the de facto authorities are scattered at best—and illegal at worst—further complicates international efforts to assist in implementing actions that could strengthen the nation's resilience to current and future risks.

Security context

The security context in Somalia is complex and evolving. Somali's have proven dispute-resolving approaches, which have helped to manage and resolve elements of Somalia's multidimensional conflicts. Nevertheless, decades of political conflict have taken their toll on these mechanisms and have eroded the country's security institutions and trust between different groups, leaving the drivers of chronic vulnerability such as emerging climate risks under addressed.

Since the collapse of the Siad Barre regime in 1991 Somalia has seen violent competition between clans for control over key resources such as land and cities. This legacy is still very much present today, where intercommunity mistrust is fuelled by decades of conflict and an uneven distribution of resources, leading clans towards zero sum calculations (Kapteijns 2013; Felbab-Brown 2018). For example, inter-clan fighting in Sool region in October 2018, due to longstanding disagreements over land ownership and pasture, cost the lives of at least 50 people (Garowe Online 2018a). Events like these could be intensified by decreased food and livelihood security induced by climate change.

The most immediate security risk in Somalia today is the conflict with al Shabaab. When AMISOM forces gained the upper hand in Mogadishu al Shabaab altered its approach to the conflict by adopting 'asymmetric warfare' tactics, conducting a campaign of bombing, assassination and fast strike attacks on vulnerable positions (Belliveau 2015). AMISOM and the SNA have been unable to successfully adapt to al Shabaab's new tactics (Felbab-Brown 2018). Today a state of stand-off exists, where the major cities and towns in southern Somalia are largely controlled by AMISOM in support of national and state forces, while al Shabaab has control of large areas of the countryside (Felbab-Brown, 2018), and exerts significant influence over government controlled territories regardless of formal control (UN SEMG, 2018). Due to lack of state control over many areas, environmental and climate assessments have not been able to be undertaken in al Shabaab held areas.

The country faces further security risks from illegal activities such as human trafficking, piracy and illegal fishing, as well as increased activity by more than 60 armed militia groups, an influx of small arms and light weapons, and human security issues such as IDP security and gender-based violence (Felbab-Brown, 2018). Despite these extraordinary challenges, some progress at the Federal and State level in building governance structures points to a possible path towards increasing stability. However, the uncertainty and risk stemming from an even less predictable climate could contribute to destabilizing Somalia's fragile state-building process and in turn decrease its capacity to mitigate these risks.

Socio-economic context

Somali people face life-threatening challenges daily: 4.6 million people in Somalia are classed as food insecure, 1.5 million are in crisis or emergency and of a population of around 12.4 million[6], 2.6 million people are currently IDPs (UNOCHA 2018). The proximate causes of this hardship include successive failed rains and flooding. Underpinning the longevity and severity of this crisis however, are Somalia's unresolved conflicts and unreconciled peoples.

In the context of a changing climate Somalia's economy offers both cause for great concern and signs of cautious optimism. An economy and population so heavily reliant on pastoralist

[6] Depending on method, estimates vary. In comparison, UN World Population Prospects (2017) approximate 14 million.

and agricultural activity will be highly vulnerable to changes in the climate. Droughts in 2011 and again since 2015 demonstrate how quickly communities can be reduced to destitution. The welfare of the non-rural population critically depends on the consumption of and trade in Somalia's livestock and related products, its crops and its fisheries (World Bank and FAO 2018). With such high dependency on these trades, climate change poses a risk to the country's economic sector. Every increase in mean temperature promises more frequent droughts and floods, as well as rising sea temperatures. This will negatively affect incomes from agriculture and pastoralism, as well as fishing, trade and related livelihoods.

Other sectors of Somalia's economy have shown impressive sophistication. The Somali telecoms sector provides reliable and cheap connections across Somali territory. This trend is driven by the requirements of Somali diaspora communities around the world. A highly effective and affordable money transfer sector has also emerged. In cities such as Mogadishu and Hargeisa increasing stability has seen mini economic booms.

Development of port facilities along the Somali coast could serve the growing Ethiopian market and economy. It remains to be seen whether the recent thaw in relations between Ethiopia and Eritrea will diminish Ethiopian enthusiasm for developing port facilities in Somalia (Abdi Sheikh 2018). The speed at which Somalia has adopted innovative economic opportunities demonstrates a community well equipped to adapt. Somalia's current GDP per capita is estimated at just US$ 472.3 per annum (World Bank and FAO 2018). This means that there is huge potential for even modest climate-smart economic investment to raise living standards. Climate-smart investment was called for by the UN Secretary-General in his report to the Security Council in August 2018 (United Nations Security Council 2018).

Key projections for Somalia
Estimated population and average mean temperature annually, years 2018 – 2100.

	2018	**2050**	**2100**
Population [7]	14 million	36 million	79 million
Average temperature [8]	26 °C	28-29 °C	29-30 °C

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[7] The UN World Population Prospects (2017)

[8] IPCC (2014) in Ogallo et al (2018), Somalia NAPA (2013)

International Interventions and Support

This section provides an overview of the regional and international processes that are currently addressing peace and security in Somalia and the wider region.

Regional processes, policies and projects

Regional support through AMISOM, the largest peacekeeping deployment by the African Union, is mainly supporting Somalia in its conflict with al Shabaab. Troops have been contributed by Somalia's neighbours: Ethiopia, Kenya and Djibouti, as well as since the start of the mission by Uganda and Burundi. Without the AMISOM presence it is very unlikely that the government and its allied forces would have been able to maintain control of its territory.

International processes, policies and projects

International efforts to stabilize Somalia involve over 40 states and multilateral organizations supporting peacebuilding, humanitarian and development projects. The major declared aims of these international efforts are to re-establish functioning governance, management of the direct humanitarian situation and sustainable development.

Since 2013, the UN has been organised under UNSOM as an integrated mission that combines political, development, and humanitarian assistance under the leadership of the Special Representative of the UN Secretary-General for Somalia, Nicholas Haysom.

Under the coordination of UN OCHA, several UN humanitarian agencies are operating in Somalia. A Common Humanitarian fund provides resources for emergency humanitarian responses. Lessons from, for example, the 2011 famine have resulted in a much better prepared and coordinated humanitarian system in Somalia. UNDP supports parliaments across Somalia, the constitutional review process and other key developmental projects. Assistance is also provided to strengthen the country's national capacity to address environmental stress, such as support programmes to protect its fragile and degraded environmental resources. There is still room for systematic improvement, however, as most projects treat the symptoms rather than the root causes of conflict- and climate-related security challenges.

The work of the US funded Transitional Initiative for Stability (TIS+) programme and the multi-donor Somalia Stability Fund are ongoing in areas newly brought under government control. The aim is to put in place infrastructure that can capitalize on political and military gains. In September 2018 the European Union announced an agreement to provide €100,000,000, in direct budget support to the Somali Government (Delegation of the European Union to Somalia 2018). This is a significant development as all previous support has been channelled through UN and development agencies.

During the autumn of 2018 the World Bank and the IMF noted that Somalia's key fragility is compounded by its vulnerability to natural disasters. The World Bank is increasingly engaged in providing support to Somalia, in particular focused on supporting the government at the federal and the state levels to develop better public finance management, and providing advice and assistance in the establishment of legal and regulatory frameworks for key sectors such as oil and gas, and fisheries (IMF 2018). However, these approaches are not currently guided by an integrated climate risk assessment of the short- to long-term stabilization benefits.

Turkey has provided significant—and highly visible—financial support for projects such as solar powered street lighting across the country (Osman 2017), as have projects from the UK, Norway and other donors. This appears to be very popular with the local population and demonstrates the value of clean energy solutions in helping to improve the economy and demonstrate the benefits of a stable government (USAID 2016).

In summary, international organizations are evolving their approaches to adjust to Somalia's new phase of recovery. However, they are pursuing strategies that do not systematically factor in the climate-related security risks that risk sustained peace.

Status of discussions in the United Nations Security Council

On 27 March 2018 the UN Security Council adopted resolution 2408, renewing the mandate of UNSOM for an additional year until 31 March 2019. The mission is authorized to contribute to strengthening the capacity of Somalia's Federal Government, promoting respect for human rights and justice institutions, and preventing violence. During the previous mandate, the Security Council recognized the effects of natural disasters and ecological and climatic changes as destabilizing factors in Somalia. The need for adequate climate risk assessment and management strategies has therefore been included in the mandate for the first time.

Recognizing climate change as a driving factor of conflict in Somalia, the subsequent Secretary General's report, published in August 2018, contained brief analyses of climate risks in Somalia. The report recognized how climate change is exacerbating drought and flood conditions and acknowledged their interaction with displacement. The report further highlighted the role of the new recovery and resilience framework. In conclusion, it called for long-term interventions to sustainably address the drivers of chronic vulnerability in Somalia.

Recommendations

In responding to Somalia's climate change and conflict context, approaches that accommodate wider societal and security risks, as well as livelihood protection will be vital. This report makes four recommendations that urge ambitious action to address these compound risks including directions for programming and institutional responses.

1. **Prioritise investment in decentralized renewables and mitigate the risks of rapid growth in oil and gas revenues**

A significant investment in Somalia's renewable energy generation potential should be considered a matter of conflict prevention. An ambitious plan to build decentralized solar and wind generation capacity for newly recovered towns would send a strong message about the benefits of life outside of al Shabaab control, helping to legitimize political structures while also promoting employment and economic opportunities. Efforts by stabilisation programs in Somalia funded by among others Norway, Turkey, the USA, and the UK to install solar street lights in newly recovered areas have been hugely popular with local populations (USAID, 2016) and have contributed to an expanded night time economy (Harding, 2013). They point to the huge potential for an even more ambitious approach.

Oil and gas offer significant potential to bring much needed financial resources into Somalia but mishandled, these injections of cash could drive conflict, economic instability and environmental damage. Several international organizations and corporations are currently prioritizing oil and gas investment while neglecting the benefits of renewable energy for stabilization. Favouring renewable alternatives could do more to support peace in Somalia than the cash injection from oil and gas. These benefits include providing decentralized employment across Somalia, limiting tensions between Federal Member States.

A conflict-analysis of investments in renewable energy, oil and gas should be undertaken to provide further evidence of the situation in Somalia. UNEP could be a useful independent player to undertake this exercise given the vested interests of many groups. This analysis would better support the risk-informed investment decisions that harness stabilization benefits.

2. Enhance the capacity for local and national conflict resolution to cope with conflict- and climate-related shocks

Investment in mechanisms to help Somali's manage and resolve political level disputes will be essential to the long-term peace of the country. These mechanisms need to be flexible, ad hoc and be capable of managing escalating political rivalries, including those which might be worsened by dramatic changes in climate conditions. In the longer term, supporting the establishment of the constitutional court and of the truth and reconciliation commission (Federal Republic of Somalia 2012) would help Somali leaders resolve disputes through trusted and rules based mechanisms. A focus on reconciliation and building trust is essential for Somalia to be able to build a political system that supports a cohesive nation. Somali institutions and Somalia's international partners should remain committed to bringing together the institutions of government across both national and state levels to seek resolution of disagreements through dialogue.

Coupled with conflict resolution mechanisms at the national level, UNSOM and other international partners should elevate the importance of robust resolution mechanisms at the community level. This should include efforts to strengthen alternative dispute resolution mechanisms, promote trauma healing for communities and leaders, and encourage clan-to-clan reconciliation and support for agreed peace deals.

Furthermore, UNSOM, the Intergovernmental Authority on Development (IGAD) and others supporting the political process in Somalia should be culturally sensitive to the time and broad participation required to achieve lasting consensus reached. An open approach, that is not driven by deadlines and which includes a full range of political representation, is more likely to result in lasting and genuine agreements.

3. Build institutional preparedness for more complex climate-induced humanitarian demands

The initial task for the UN humanitarian agencies, international NGOs and local NGOs in Somalia is to assess the climate-related risks to achieving their goals, considering not just the first order impacts of climate—more heat, more rain—but also the related systemic and political risks, especially those that might feed into the conflict system. A humanitarian system that is prepared and resourced to respond to the likely effects of climate change reduces the risk that these shocks will exacerbate conflict dynamics or disrupt political and security

progress. Already, Somalia is seeing growing risks relating to food security and escalating numbers of internally displaced persons. Given the likely impacts of climate change, the response capacity of state level disaster management agencies should be strengthened. UN OCHA has already led efforts to improve preparedness in Somalia. Areas of future focus could include establishing a formal person-to-person relationship between the disaster management agencies across Somalia.

Lessons learned from the 2011–12 famine helped to ensure that the drought in 2016–17 was less severe than it might have been. Ensuring that funds and structures are on standby for the unexpected reduces the risk that Somali people will look to other sources such as al Shabaab for protection. These processes should be stress-tested against future climate scenarios to ensure that they continue to be effective as climate change escalates. In addition, the UN and international donors should ensure that the Common Humanitarian Fund is properly resourced and secure alternative funding streams for disaster response to avoid cascade conflict risks.

4. Support the sustainable management of climate-stressed natural resources to deliver decentralized economic growth

Investment in varied and decentralized livelihood opportunities can help reduce the economic and political inequalities driving conflict in Somalia and support stabilization. Unlike oil and gas, which tends to concentrate wealth in specific geographies and communities (or individuals), Somalia is rich in natural resources that although exposed to climate stresses, can be sustainably managed to create significant sources of employment and income.

However, at present there is insufficient analysis to fully guide programming and investment to address the climate-related threats and opportunities associated with Somalia's natural resources. An interim step could see UN Environment, UNSOM and the Federal Government of Somalia undertake a full climate risk assessment to identify entry points which jointly support stabilisation and sustainable development. Further, holistic cost benefit analysis should be conducted to assess the comparative social, economic and political benefits of sustainable natural resource exploitation compared to oil and gas production. The process of developing this analysis should also serve to strengthen government capacity for risk assessment and data collection.

One possible area for investment is the under-resourced fishing industry. At present, the economic benefits of Somali fish stocks are primarily felt abroad, and resentment towards this was a driver of the surge in piracy in Somalia (Sow 2017). However, there are considerable opportunities for Somali's, especially if port infrastructure is developed in tandem, to create infrastructure, smart grids and renewable energy which allowed trawlers to extend the value of catches through processing and export. As global fish stocks are depleted, sustainable management of Somalia's relatively underexploited fisheries could provide sustained revenues and employment. However, tight regulation will be necessary, and ongoing efforts by the World Bank to regulate the sale of licences, to ensure sustainable long-term exploitation of these resources. In addition, to ensure Somali's benefit it may be wise to make any licences granted conditional on a requirement that a significant proportion of each catch must be landed in Somalia.

In addition, charcoal is a key source of energy for many Somali households. In the short-medium-term it will continue to be so and as such, efforts should be focused on sustainable production and replanting for the internal market (Njenga, 2018) – perhaps drawing on the

Sudanese model (Gridneff, 2018). Combined with ambitious efforts to develop clean energy in Somalia, this offers a chance to support economic development while limiting environmental damage.

Bibliography

Abdi Sheikh, 'Somalia, Ethiopia to jointly invest in four seaports on the Red Sea', Reuters, 16 June 2018, <https://www.reuters.com/article/us-somalia-ethiopia/somalia-ethiopia-to-jointly-invest-in-four-seaports-on-the-red-sea-idUSKBN1JC0IF>.

Bruton, B. (2010). *Somalia - A new approach*. New York : Council on Foreign Relations.

Bryden, M. (2014). *The reinvention of al-Shabaab - a strategy of choice or necessity?* . Washington, DC : CSIS.

Cai, Y., & Newth, D. (2013, June 27). Oil, Gas and Conflict: A Mathematical Model for the Resource Curse. *PLOS ONE, 8(6): e66706*. Retrieved from https://doi.org/10.1371/journal.pone.0066706

Conway, G., & Watson, P. (2018, January 29). *In Somalia, seeking to ensure drought never again turns into famine*. Retrieved from UNDP: http://www.undp.org/content/undp/en/home/blog/2018/in-somalia--humanitarian-and-development-solutions-seek-to-ensur.htm

Corruption Perceptions Index. (2017, Feb 21). Retrieved from Transparency International: https://www.transparency.org/news/feature/corruption_perceptions_index_2017

De Waal, A. (2015). *The Real Politics of the Horn of Africa, Money, War and the business of power*. Cambridge: Polity Press.

Federal Republic of Somalia . (2012, August 1). Provisional Constitution . Mogadishu, Somalia.

Felbab-Brown, V. (2018, Nov 14). Developments in Somalia. *Brookings Institute*.

Finaz, C. (2015). *A New Climate for Peace*. London: International Alert and others .

FSNAU. (2018). *FSNAU - Climate update - October 2018*. Nairobi : FSNAU.

Garowe Online. (2018, October 24). *Somalia - Calls grow for end to inter-clan fighting Sool region*. Retrieved from Garowe Online: https://www.garoweonline.com/en/news/somalia/somalia-calls-grow-for-end-to-inter-clan-fighting-sool-region

Garowe Online. (2018, October 25). *Somalia: CIC Summit in Garowe wraps up with big decisions*. Retrieved from Garowe Online: https://www.garoweonline.com/en/news/somalia/somalia-cic-summit-in-garowe-wraps-up-with-big-decisions

Gilblom, K. (2012, May 11). *Row between Somali regions slows oil exploration*. Retrieved from Reuters: https://uk.reuters.com/article/somalia-oil/refile-row-between-somali-regions-slows-oil-exploration-idUKL5E8GB3LG20120511

Goobjoog. (2014, December 17). *The administration of South West Somalia, six regions joins the newly formed administration led by Sharif Hassan*. Retrieved from Goobjoog: http://goobjoog.com/english/the-administration-of-south-west-somalia-six-regions-joins-the-newly-formed-administration-led-by-sharif-hassan/

Gridneff, I. (2018). Burning Somalia's Future - The illegal charcoal trade between the Horn of Africa and the Gulf. In H. Verhoeven, *Environmental Politics in the Middle East* (pp. 121-147). Oxford: Oxford University Press.

Hansen, S. J. (2013). *Al-Shabaab in Somalia: The History and Ideology of a Militant Islamist Group 2005-2012*. London: Hurst & Co.

Harding, A. (2013, May 11). *Streetlights bring normality to Mogadishu*. Retrieved from BBC: https://www.bbc.com/news/world-africa-22492135

Houreld, K., & Fick, M. (2017, December 15). *Somalia's budget meets IMF terms, official says*. Retrieved from Reuters: https://www.reuters.com/article/somalia-budget-idAFL8N1OF1O9

ICG. (2018). *Averting War in Northern Somalia* . Nairobi / Brussels : International Crisis Group.

IRIN. (2014, August 7). *Somaliland, oil and security*. Retrieved from IRIN: http://www.irinnews.org/analysis/2014/08/07/somaliland-oil-and-security

Jazeera, A. (2018, July 7). *Attack on Somalia's interior ministry kills at least nine*. Retrieved from Al Jazeera: https://www.aljazeera.com/news/africa/2018/07/attack-somalia-interior-ministry-kills-9-180707095206246.html

Kapteijns, L. (2013). *Clan cleansing in Somalia - the ruinous legacy of 1991*. Philadelphia: University of Pennsylvania Press.

Little, P. (2003). *Somalia: Economy without State*. Oxford: James Currey.

Menkhaus, K. (2017). *Land and Conflict in Somalia's Lower and Middle Jubba Valley*. Nairobi: USAID - OTI.

Ministry of National Resources. (2013). *National Adaptation Programme of Action on Cimate Change (NAPA)*. Mogadishu: Federal Republic of Somalia.

Mosley, J. (2015). *Somalia's Federal Future: Layered Agendas, Risks and Opportunities*. London: Chatham House.

Njenga, M. (2018, May 17). *Banning charcoal isn't the way to go. Kenya should make it sustainable.* Retrieved from AgroForestry World: http://blog.worldagroforestry.org/index.php/2018/05/17/banning-charcoal-isnt-way-go-kenya-make-sustainable/

Ogallo, L. A., Omondi, P., Ouma, G., & Wayumba , G. (2018). Climate Change Projections and the Associated Potential Impacts for Somalia. *American Journal of Climate Change, 7*, 153-170.

Radio Dalsan. (2016, April 3). *Federal Government Donates USD 1M To Somaliland Drought Victims.* Retrieved from Radio Dalsan: https://www.radiodalsan.com/federal-government-donates-usd-1m-to-somaliland-drought-victims/

Roble, T. (2018, Nov 19). Somalia lacks legal framework and capacity to license oil drilling-Petroleum PS. *Goobjog News.*

SDN. (n.d.). *Key issues facing the Niger Delta today.* Retrieved October 29, 2018, from Stakeholder Democracy Network: http://www.stakeholderdemocracy.org/about-the-niger-delta/the-issues/

SFG. (2015). *Somalia's Intented Nationally Determined Contributions.* Retrieved from https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Somalia%20First/Somalia's%20INDCs.pdf

Soma Oil and Gas. (2015, April 27). *Completion of the Processing of the 2D Seismic Data.* Retrieved from Soma Oil and Gas: http://www.somaoilandgas.com/completion-of-the-processing-of-the-2d-seismic-data/

Transparency International. (2018, Febuary 21). *Corruption Perceptions Index 2017.* Retrieved from Transparency International : https://www.transparency.org/news/feature/corruption_perceptions_index_2017

UN OCHA. (2018). *Somalia: Humanitarian Dashboard - September 2018.* Mogadishu : UN OCHA .

UN SEMG. (2018). *Report on Somalia of the Monitoring Group on Somalia and Eritrea - S/2018/1002.* New york : United Nations .

UNEP. (2017). *Somalia Energy Profile.* Retrieved from https://wedocs.unep.org/bitstream/handle/20.500.11822/20514/Energy_profile_Somalia.pdf?sequence=1&isAllowed=y

UNEP. (2018, March 21). *How Somalia's charcoal trade is fuelling the Acacia's demise.* Retrieved from UN Environment: https://www.unenvironment.org/news-and-stories/story/how-somalias-charcoal-trade-fuelling-acacias-demise

UNEP. (2018, Jan 30). Mapping the devastation of Somalia's drought. Retrieved from https://www.unenvironment.org/news-and-stories/story/mapping-devastation-somalias-drought

United Nations. (2017). *World Population Prospects.* New York.

United Nations Assistance Mission in Somalia. (2017). *Countering Al-Shabaab Propaganda and Recruitment Mechanisms in in South Central Somalia.* Mogadishu: UNSOM.

United Nations Population Fund. (2014). *Population Estimation Survey - for the 18 Pre war regions of Somalia.* Nairobi: United Nations Population Fund.

United Nations Security Council. (2011, October). *Report of the Secretary General.*

United Nations Security Council. (2018, August). *Report of the Secretary-General on Somalia.* New York: United Nations.

UNSOM. (2017, Nov 7). *United Nations Assistance Mission in Somalia.* Retrieved from Somalia hosts forum on Sustainable Energy: https://unsom.unmissions.org/somalia-hosts-forum-sustainable-energy

USAID. (2016, March 30). *Solar street lights brings safety and business back to Somalia.* Retrieved from USAID: https://www.usaid.gov/results-data/success-stories/solar-power-brings-light-streets

USAID. (2018). *Somalia: Energy Sector Overview.* USAID. Retrieved from https://www.usaid.gov/sites/default/files/documents/1860/Somalia_Fact_Sheet.pdf

Waal, A. d. (2015). The Real Politics of the Horn of Africa: Money, War and the Business of Power. *Cambridge Polity Press.*

WHO. (2018, May 8). *More than half a million Somalis affected by floods and heavy rain.* Retrieved from ReliefWeb: https://reliefweb.int/report/somalia/more-half-million-somalis-affected-floods-and-heavy-rain

World Bank and FAO. (2018). *Rebuilding Resilient and Sustainable Agriculture in Somalia.* Nairobi: World Bank Group and Food and Agriculture Organisation.

About this report

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The Expert Working Group

The Expert Working Group on Climate-related Security Risks aims to produce high-quality and policy-relevant assessments of climate-related security risks, which can strengthen decision-making and programming on those risks within the United Nations. In 2018, the Expert Working Group – together with external researchers and the working group secretariat produced research on four geographies: Iraq, Lake Chad, Somalia and Central Asia. The reports build on research and insights from the field to provide integrated risk assessments of climate-related change and security – as well as other social, political and economic aspects.

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