



CLIMATE-FRAGILITY RISK FACTSHEET

NORTH AFRICA & THE SAHEL

North Africa and the Sahel is a diverse region whose 17 countries vary hugely in terms of levels of development and vulnerability to climate change. The Sahel has been identified as one of the regions where climate change is most likely to undermine security and trigger violent conflict. This is a function of the region's history of recent political instability and its vulnerability to climate change, itself a result of poverty, low levels of development and climate-dependent livelihoods, such as rainfed agriculture and livestock herding. The challenges in North Africa may be less acute, but are still significant, particularly in relation to the management of fresh water resources within and across international boundaries.

4 CLIMATE FRAGILITY RISKS IN NORTH AFRICA AND THE SAHEL

The links between climate change and violent conflict are not automatic. However, there are at least four pathways through which climate change could increase fragility in North Africa and the Sahel:

1 Risk 1: Farmer-herder conflicts

Historically the population of the Sahel was made up of semi-nomadic pastoralists, with some farmers practising agriculture where the soil and rain conditions permitted. However, over the past few decades, rapid population growth has expanded the amount of land under agriculture, while climatic variability has shifted the routes herders use to take their livestock to find new pastures. Blocked access to pastures for herders and damage from livestock for farmers have become the norm in many places, and tensions have risen, particularly where local institutions and jurisdictions are unable or unwilling to resolve the issues.

2 Risk 2: Tensions related to climate-induced migration

A number of factors - including population growth, poverty, poor governance and the proliferation of the means to travel - are already increasing the rates of irregular and forced migration, both within countries and across borders. Climate change could exacerbate this trend by placing new stresses on populations and landscapes. There is a strong link between the rapid, unmanaged movements of people into new areas and the emergence of violent conflict. One study of civil wars found that of 103 ethnic conflicts, 32 included violence between members of an ethnic minority resident in a particular region and recent migrants from other areas.

3 Risk 3: Tensions and disputes over water allocation

In many areas, climate change will likely cause drops in rainfall. Even if the effect is moderate, the change in precipitation could have an outsized impact on water availability, with potentially serious implications for the management and allocation of that water as well as the economies and the livelihoods of the people who rely upon it. Water scarcity and competition in river basins is strongly associated with low-level conflict at a community level. In the case of Darfur, there is a robust correlation between the probability and intensity of violence and long-term changes in the availability of water and fertile land. There is considerable debate over the extent to which shrinking water resources can trigger international disputes, though the Nile has been the most significant cause of tension among Egypt and its upstream neighbours in the past and may be again in future.

4 Risk 4: Impacts on state capacity and the growth of armed opposition groups

The impacts of a warming climate on water security, food production and the intensity of natural disasters could undermine rural livelihoods, worsen poverty and force a larger number of rural residents to move to cities. This in turn could make the provision of basic services more challenging, potentially increasing frustration with governments and encouraging disenfranchised members of society, especially young men, to join the armed opposition groups that are already a cause of significant instability across the region.

CLIMATE CONTEXT

Over the last 50 years average temperatures in Africa increased by 0.5 degrees centigrade (IPCC, 2014). The climate that the region can expect in future depends, in large part, on the level of continuing emissions of greenhouse gases (GHG) and their complex interactions with the interlinked factors (land cover, pollution levels, tipping points etc) that combine to determine average temperatures and precipitation levels.



Increasing average mean temperatures



Sea level rise



Increases in evapotranspiration and reductions in rainfall in some areas (annual average precipitation is expected to remain largely stable)

Under a high-emissions scenario the mean average temperature across Africa may rise by more than 2°C by the end of the 21st century, increasing heat stress on people, plants and livestock. Some currently inhabited areas may become unable to support populations. Meanwhile, sea level rise and possible reductions in the flow of the Nile could have significant impacts on Egypt, in particular the area around the Nile.



Political instability is widespread across the region. In 2018 every country with the exception of Eritrea was experiencing a violent crisis of one sort or another.

4 ENTRY POINTS TO ADDRESS CLIMATE FRAGILITY RISKS

North Africa and the Sahel is a region of great diversity, with significant challenges. Climate change may not be the single biggest factor affecting the evolving prospects of the region. However it does, and will continue to, shape the entire region in profound and challenging ways. As such, climate change should be seen as a risk multiplier that runs the risk of worsening existing conflicts and compounding situations of fragility. Conflict and fragility in the region weakens countries' ability to adapt to the impacts of climate change, potentially setting in motion a self-reinforcing conflict trap.

There are four main entry points for addressing climate-fragility risks in North Africa and the Sahel:

- 1 Regional and nationally relevant **climate-fragility risk assessments** need to be carried out to support and inform early warning systems. Given the non-linear and complex relations between climate change and conflict, there is clearly a need for climate security assessments that are nationally and regionally specific. This can help to provide an extended knowledge base that could be linked to early warning systems and provide an invaluable starting point for action on the ground.
- 2 National, regional and international actors should be **mandated and encouraged to address climate security threats** in their own work. Greater coherence of action across the various governments and international organisations operating in the region would help to address the complex interactions between climate change and fragility.
- 3 National, regional and international actors need to deliver **integrated programmes** that bring together security, climate action, sustainable development and peacebuilding. These responses on the ground need to connect the different elements affecting climate-fragility challenges in a way that is flexible and appropriate to local needs.
- 4 National, regional and international actors must recognise that building resilience in the region requires **greater investment in capacity-building**. Local and national action needs support from the international community. Greater emphasis should be placed on development and livelihood resilience.

SOCIO-ECONOMIC FACTS

- North Africa and the Sahel is made up of three distinct biomes - the Mediterranean, the Saharan and the Sudano-Sahelian, with correspondingly diverse climates.
- The region is incredibly diverse in terms of culture, politics, ethnicity, economics and climates. North African countries generally have higher levels of development than Sahelian countries.
- The countries have dramatically different water “budgets” in terms of the quantity of annual renewable freshwater resources found within their borders, from just 20m³ per capita in Egypt to 12,000m³ in Cameroon.

POLITICS & SECURITY

- The region, and in particular the Sahel, is seen as **highly vulnerable to the impacts of climate change**. This results from its reliance on rainfed agriculture, decreasing land productivity, low levels of development, and high exposure to natural disasters and economic shocks.
- But the Sahel hasn't always been a byword for poverty, conflict and famine: until the twentieth century, the Sahel was **largely self-sufficient in terms of food security**.

FURTHER READING

- Brown, Oli (2019). Climate-Fragility Risk Brief: North Africa & the Sahel (full version).
- Scheffran, J., Link, M. P. and Schilling, K. (2019) 'Climate and Conflict in Africa', in Oxford Research Encyclopaedia of Climate Science

LEGAL NOTICE

Authored by: Oli Brown, Chatham House, Climate Security Expert Network

Editorial responsibility: adelphi
www.adelphi.de

PROVIDED BY

The **Climate Security Expert Network**, which comprises some 30 international experts, supports the **Group of Friends on Climate and Security** and the **Climate Security Mechanism of the UN** system by synthesising scientific knowledge and expertise, advising on entry points for building resilience to climate-security risks, and helping to strengthen a shared understanding of the challenges and opportunities of addressing climate-related security risks.

www.climate-security-expert-network.org

The **climate diplomacy initiative** is a collaborative effort of the German Federal Foreign Office in partnership with adelphi. The initiative and this factsheet are supported by a grant from the German Federal Foreign Office.

www.climate-diplomacy.org