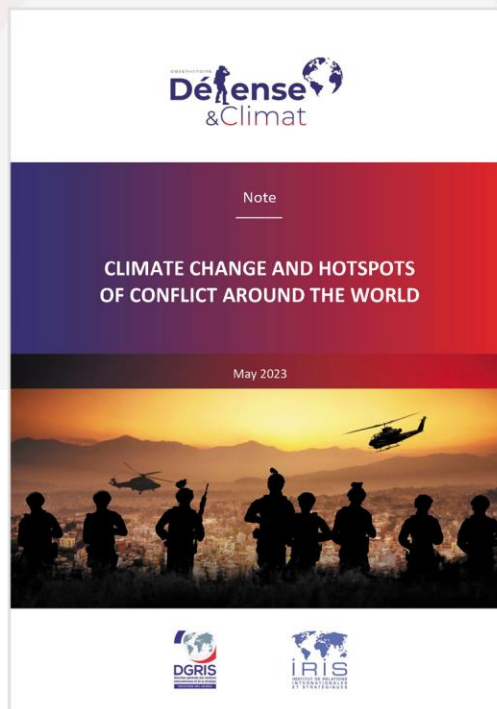


EXECUTIVE SUMMARY

STRATEGIC AND FORESIGHT REFLECTION BRIEF: CLIMATE CHANGE AND HOTSPOTS OF CONFLICT AROUND THE WORLD

May 2023





The Defence and Climate Observatory, launched in December 2016, is tasked with studying climate-related security and defence issues.

The Observatory is coordinated by IRIS under the contract carried out on behalf of the Ministry for the Armed Forces' Directorate General for International Relations and Strategy (DGRIS). The Observatory's multidisciplinary and crossdisciplinary team gathers researcher fellows specialised in international relations, security, defence, migrations, energy, the economy, climatology and health. It is led by two scientific coordinators: Julia Tasse and François Gemenne.

The Observatory is strong of multiple partnerships with European partners (Netherlands, Luxembourg), international partners (Australia, United States, India), international NGOs, and national and international public bodies. Such initiatives enabled strengthening cooperation on climate issues and their security implications.

The Defence and Climate Observatory produces reports and notes, organises restricted seminars as well as public conferences, and hosts the podcast « Sur le front climatique »

www.defenseclimat.fr/en

The French Ministry for the Armed Forces regularly calls upon outsourced studies from private research institutes, according to a geographical or sectoral approach that complements its expertise. These contracts are part of the development of a defence foresighting approach, which, as the last White Paper on Defence and National Security underlines, enable armed forces to rely on independent, multidisciplinary and original strategic thinking, integrating university research as well as specialised institutes. Most of these studies are made public and available on the website of the Ministry for Armed Forces and the Observatory's website.

DISCLAIMER: The Directorate General of International Relations and Strategy or the organisation leading the study cannot be held responsible for the statements made in the studies and observatories, nor do they reflect an official position of the French Ministry for Armed Forces.

This note on the **consequences of climate change on conflict hotspots** analyses four regions: Latin America ; Central, West and East Africa ; the Middle East and North Africa, and Southeast Asia and the Western Pacific. These hotspots were determined on the basis of a **climate-conflict indicator created by the Defence and Climate Observatory** (see map), which highlighted their particular vulnerability to an exacerbation of conflict due to climate change. Each of the regions is studied through a **general analysis of climate-conflict issues on a regional scale; a focus point on a state or sub-region¹ and a foresight scenario on a state or sub-region.**

A - Risks of exacerbating conflicts due to climate change, by region

West, Central and East Africa	MENA	South and West Asia	Latin America
<ul style="list-style-type: none"> • Agro-pastoral and fishermen's conflicts over grazing and fishing • Internal and cross-border population shifts increasing pressure on resources in urban and populated areas • Adverse effect of adaptation and mitigation policies • Facilitated recruitment for terrorist organisations • Arsenalisation of natural resources • Inter-state tensions over transboundary resources such as the Nile 	<ul style="list-style-type: none"> • Population displacements increasing pressure on resources in urban areas • Exacerbation of socio-political tensions and internal destabilisation due to food insecurity • Competition for water leading to clashes between communities • Increasing legitimacy of non-state armed groups through the provision of services and by fuelling resentment towards the authorities • Inter-state tensions over transboundary resources (Nile, Euphrates, Jordan) 	<ul style="list-style-type: none"> • Internal and cross-border population displacements increasing pressure on resources in urban areas • Precarity of ethnic minorities • strengthening non-state armed groups in the event of food insecurity • Security risk to infrastructure, including nuclear power plants • Inter-state tensions at sea over territorial claims in the China Sea • Inter-state tensions over transboundary resources and increased dependence of states without water resources 	<ul style="list-style-type: none"> • Competition for agricultural land, for example between farmers and businesses • Political crises around land tenure • Land grabbing by armed groups and increased crime and trafficking • Competition for water in water stressed areas such as the Dry Corridor • Inter-state tensions over transboundary resources such as the Amazon
Focus point : Senegal	Focus point : Morocco	Focus point : Philippines	Focus point : French Guiana

B – Foresighting scenarii

Scenarii	Crisogenic climatic factors	Geopolitical situation in the region	Impact on French forces
Sudan-Ethiopia-Egypt	Internal displacement, rural exodus, food insecurity, riots	Ethiopia plans to build a dam on the Nile, Egypt and Sudan oppose it and threaten to destroy the Great Dam, Sudan invades Ethiopia	Three French journalists kidnapped, leading France to intervene, climatic vulnerability of soldiers, supply difficulties
Jordan River Basin	Population growth, food insecurity, water stress	Intra-state clashes, especially between Israeli and Palestinian communities, resumption of terrorism and development of non-state armed groups, struggle for control of supply networks and infrastructures	French forces attacked by populations for their resources and rejected, difficulty to maintain supply, extreme heat, regional agreement to set France aside
French Polynesia	Cyclones, floods, and landslides	Insufficient French resources, HADR Chinese intervention in Polynesia	French forces placed on secondary missions, France's image degraded, independence demonstrations

¹ In this respect, these focus points have been selected on the basis of their decisive character for French interests.

<p>Amazon Forest</p>	<p>Water crisis affecting agricultural production and aggravating food insecurity</p>	<p>International disagreement on the fight against deforestation, discontent of local populations demanding the overthrow of their governments because of climate inaction</p>	<p>French forces set upon and singled out, as well as over-solicited, deterioration of relations between French Guiana and Paris, demands for independence</p>
-----------------------------	---	--	--

C - Conclusion and lessons learned

Within each of these areas, **a strong exacerbation of conflict is foreseeable due to the precariousness of livelihoods**. These developments need to be monitored by the Ministry of the Armed Forces, especially in regions where French strategic interests are at stake.

Region	Lessons for the French armed forces
<p>West Africa</p>	<p>The impoverishment of the population and the increase in inter-community conflicts in the Sahel favour criminal and terrorist networks. The same phenomenon threatens the security context of French-speaking states bordering the Atlantic coast, such as Senegal, Guinea, and Côte d'Ivoire, which are exposed to desertification and rising water levels. Climatic hazards can affect the operational capacities of French forces prepositioned in Senegal, Côte d'Ivoire, and Gabon, as well as partnership elements in Niger and Chad. The increasing insecurity in the Gulf of Guinea could affect the missions of French vessels deployed there as part of Operation CORYMBE.</p>
<p>East Africa</p>	<p>The potential exacerbation of water-related conflicts between Ethiopia, Sudan and Egypt needs to be monitored. The risks of a deterioration of the security context due to climate change must be analysed, taking into account the reduction in French operational capacities, notably due to rising temperatures. The vulnerability of the Djibouti camp should be monitored.</p>
<p>MENA</p>	<p>The climate vulnerability of partner countries such as Morocco, Tunisia, Algeria and Lebanon constitutes a challenge for France. The exacerbation of tensions over water resources in the Jordan basin could affect the French armed forces deployed in Lebanon as part of Operation DAMAN. The evolution of climate and maritime security in the Persian Gulf could, in the same way as in the Gulf of Guinea, affect maritime surveillance in the area, whereas the French Forces stationed in the United Arab Emirates (FFEAU) pilot the EMASOH mission in the Strait of Hormuz.</p>
<p>South Asia and the Pacific</p>	<p>Climate change is likely to exacerbate territorial conflicts and amplify clashes over resources, especially in transboundary watersheds. Moreover, the climate vulnerability of territories in the zone, which are in addition densely populated, creates a favourable context for Chinese influence strategy through HADR. This strategy may result in a loss of influence for France in New Caledonia as well as in French Polynesia where French forces are stationed.</p>
<p>Latin America</p>	<p>The Armed Forces in French Guiana (FAG) are concerned with the evolving tensions and conflicts around the Amazon, as well as the social unrest that could emerge due to the increasing climate vulnerability of the population. What's more, the climate vulnerability of French Overseas Territories in the insular Caribbean, could trigger their mobilisation to reinforce the Armed Forces in the Caribbean (FAA).</p>

ABOUT THE AUTHORS



Lead author - Marine by Guglielmo Weber / IRIS

Researcher in the Climate, Energy, Security programme at IRIS. She works on cross-cutting strategic and security issues related to climate changes, and specialises in the study of weather and climate modification practices.



Secondary author - Yente Thienpont / IRIS

Student in International Relations at Sciences Po Saint-Germain-en-Laye. She worked as a research assistant in the IRIS Climate, Energy, Security programme as part of an internship in spring 2023.

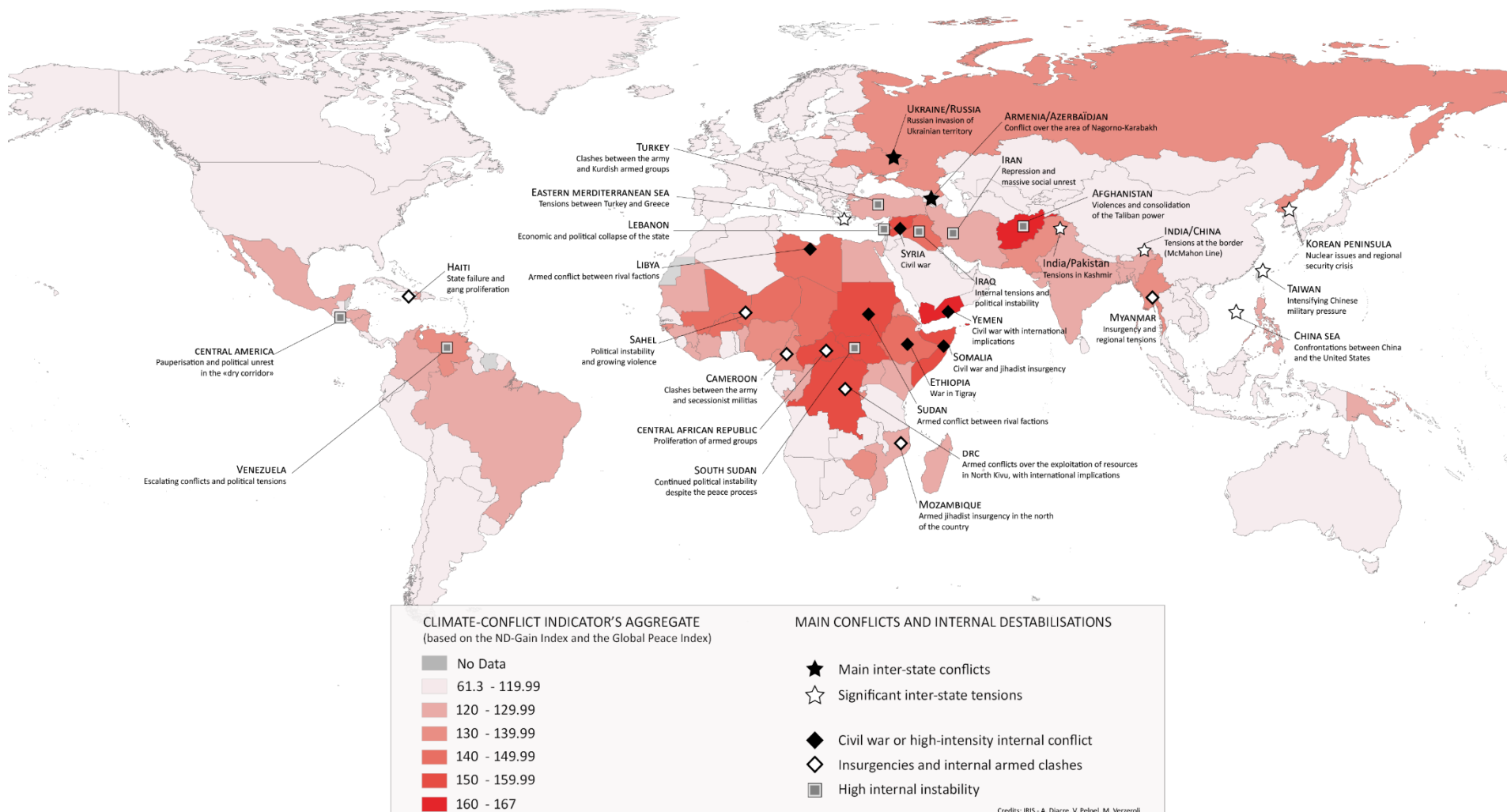


Secondary author and scientific coordinator – Julia Tasse / IRIS

Researcher and head of the Climate, Energy and Security Programme at IRIS. She focuses on maritime issues after few years of experience on ocean affairs for various organisations.

Map: Global conflict hotspots vulnerable to climate change

To develop this climate-conflict indicator, we combined the ND-Gain Index and the Global Peace Index. In order to keep the relevance of these indicators, we decided to work on a scale / 100. Concerning the ND-Gain index, which was already established on a scale / 100, we took the inverse indicator, so that the highest score corresponds to the highest level of climate vulnerability. For the Global Peace Index, we prorated it to a /100 scale. For each country, the two /100 scores were added together to arrive at a /200 score. This method enabled to highlight major risks, areas where high climate vulnerability and conflict intersect, in order to anticipate a possible exacerbation of conflict under the effect of climate change: West, Central and East Africa; the Middle East and North Africa; Southeast Asia and the Pacific and finally Latin America. The disadvantage of this summation method, which does not include a weighting on the climate indicator (ND-Gain), is that it also highlights areas encompassing open wars, but whose climate vulnerability is not significant, such as Russia and Ukraine.



ANALYSIS OF SECURITY AND DEFENCE ISSUES RELATED TO CLIMATE CHANGE

PUBLICATIONS | « SUR LE FRONT CLIMATIQUE » PODCAST | EVENTS



www.defenseclimat.fr/en

