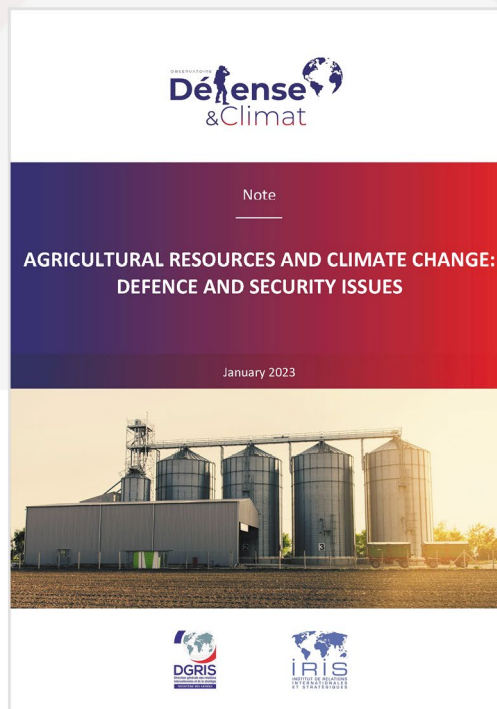


## SUMMARY

# AGRICULTURAL RESOURCES AND CLIMATE CHANGE: DEFENCE AND SECURITY ISSUES

January 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 researcherfellowsspecialised 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](http://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.**

## ABOUT THE AUTHORS OF THE NOTE

### Lead author



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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.



**Mathilde Joly / Sciences Po Paris**

Master student in Environmental Policy at Sciences Po Paris. She is a research assistant in the Climate, Energy and Security programme at IRIS.

### Coordinator and Scientific Officer



**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.

This brief addresses the security issues related to the impact of climate change on agricultural resources. It is divided into three parts: an analysis of the vulnerability of agricultural resources to climate change; an examination of the strategic and defence issues related to securing them; and an identification of geopolitical and security breakpoints.

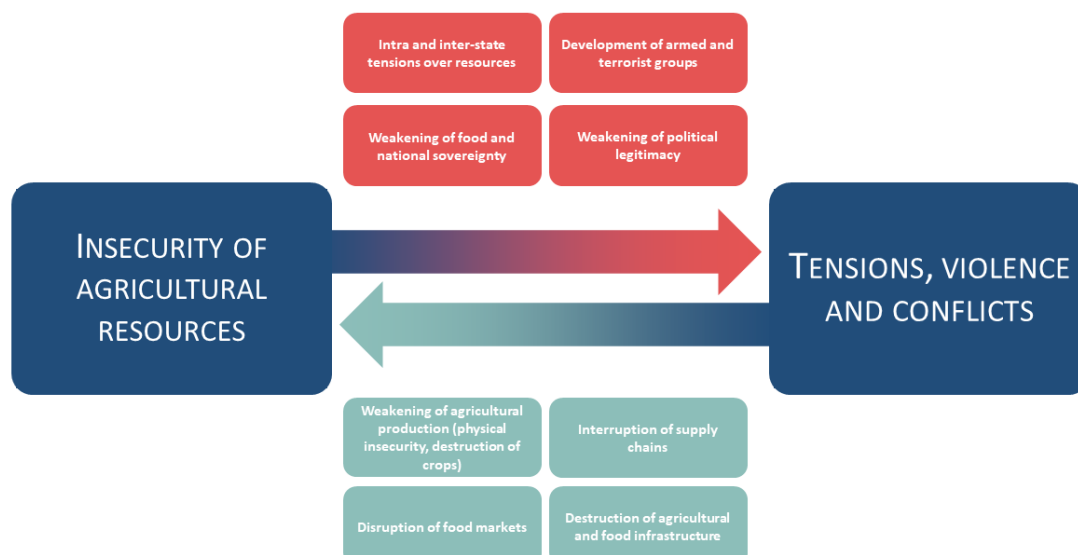
## A - CLIMATE VULNERABILITY OF AGRICULTURAL RESOURCES

As a result of climate change, agricultural resources are subject to reduced availability, accessibility and use.

Availability	Accessibility	Use
<p><b>Decline in nutritional quality of food</b></p> <ul style="list-style-type: none"> <li>Decrease in water resources</li> <li>Disruption of the renewal cycle of plants and pest species</li> </ul> <p><b>Decrease in production quantities</b></p> <ul style="list-style-type: none"> <li>Water and biological disturbances mentioned above</li> <li><b>Mitigation and decarbonisation policies</b> that can lead to a decrease in the amount produced in the short term</li> </ul>	<p><b>Declining affordability</b></p> <ul style="list-style-type: none"> <li>Decreased supply, leading to <b>higher food prices</b></li> <li>Global vulnerability through dependencies linked to the globalisation of the food system<sup>13</sup></li> </ul> <p><b>Decline in physical accessibility</b></p> <ul style="list-style-type: none"> <li>Extreme weather events that can cut off supply flows</li> <li>Emergence of <b>restrictive policies</b> to respond to climatic hazards or propose sobriety measures</li> <li><b>Trade wars and climate protectionism</b></li> </ul>	<p><b>Destruction of stocks and storage systems</b></p> <ul style="list-style-type: none"> <li>Extreme weather events can lead to the <b>destruction of agricultural stocks</b>, e.g. by damaging silos, or by causing power outages (breaking the cold chain).</li> </ul> <p><b>Food contamination</b></p> <ul style="list-style-type: none"> <li>Increased temperatures leading to <b>food spoilage and loss of nutritional properties</b></li> <li>Increased humidity leading to <b>increased risk of disease</b></li> <li><b>Extreme weather events that increase the risk of contamination</b></li> </ul>

## B - AGRICULTURAL RESOURCES: A STRATEGIC AND DEFENCE ISSUE

Diagram: Agricultural resources insecurity and conflict



## C – AGRICULTURE, CLIMATE AND DEFENCE: WHAT ARE THE BREAKING POINTS?

In recent years, **states have become increasingly aware of the strategic nature of agricultural resources**. This has led to the implementation of strategies to secure these resources and preserve food sovereignty:

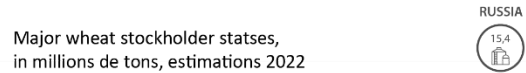
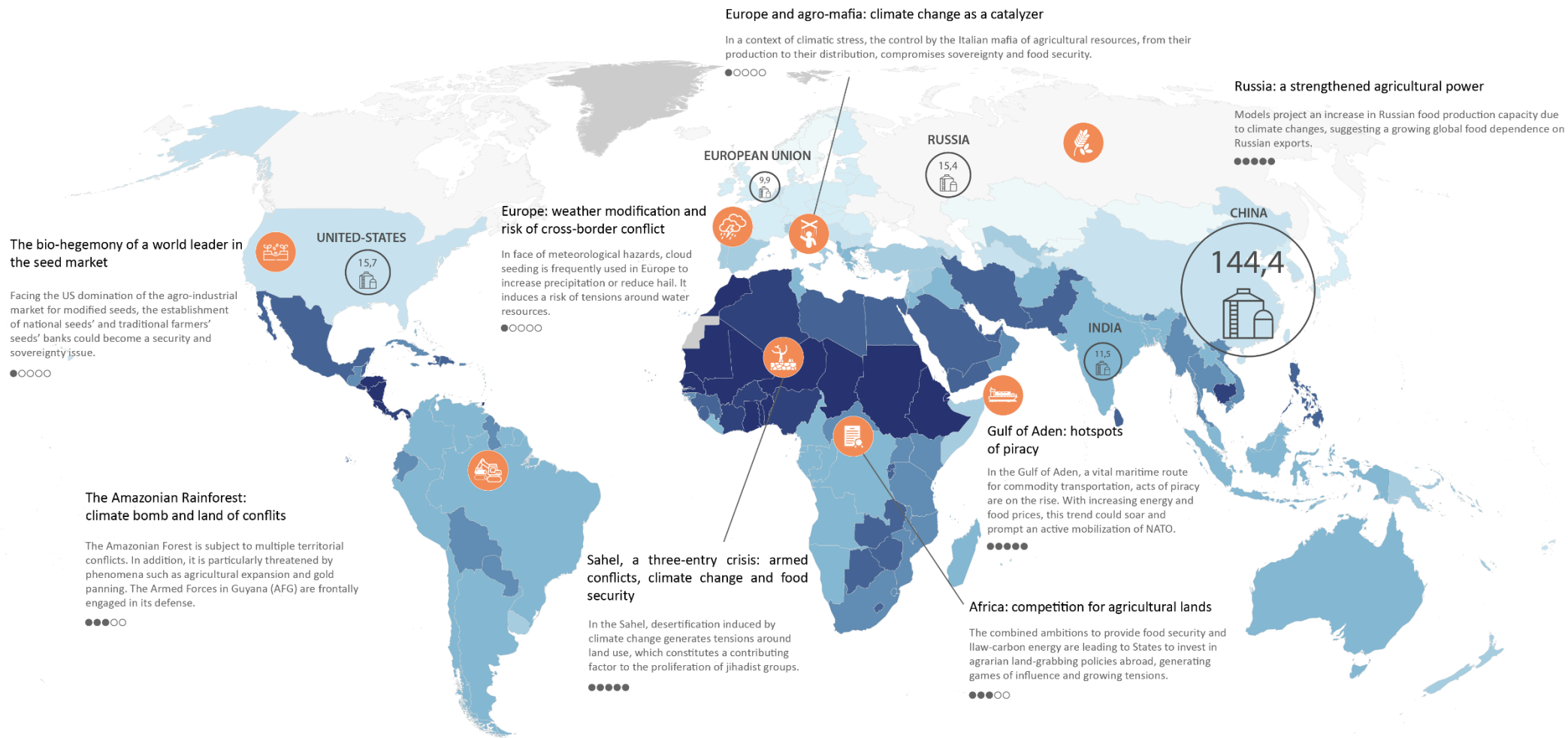
- policies of **public storage of food in the form of strategic reserves** (e.g. China's monopolisation of global grain stocks)
- **foreign land grabbing** policies (e.g. China's substantial financial investments in European and African farmland)
- policies of **food weaponisation** in the form of **blackmail on agricultural resources**, destruction of **food stocks and infrastructure in targeted states**, or **embargoes on the imports and exports** of these states.

**The French armed forces are already carrying out missions that contribute to national and international food security**, particularly to respond to supply crises and weather crises. However, **the increasing militarisation of food issues on the international scene calls for the development of a transverse and strategic vision of the systemic threats to French food sovereignty**. The development of such a vision is all the more essential as some French territories are showing increased climatic vulnerability and are already affected by food insecurity, such as the overseas territories.

**These reflections should be put into perspective with the decrease in military logistical capacities on the national territory, as well as with the increase in the demands on the armies**. The capacity to respond, at any time, to a food crisis on national territory by re-establishing a supply route for agricultural resources must be ensured. Furthermore, this capacity must be maintained in a context of simultaneous mobilisation of the armed forces in a theatre of operation abroad, and/or in a HADR (*Humanitarian Assistance and Disaster Relief*) operation, as this type of operation is likely to multiply in the face of increasing climatic hazards.

Avenues for developing a strategic and advocacy vision for agricultural resource security
<ul style="list-style-type: none"> <li>• <i>Set up focus groups on the role of the armed forces in food security and sovereignty</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>Conduct an interministerial reflection in order to initiate real coordination between the Ministries of the Armed Forces, Agriculture and Food Sovereignty, the Interior, Europe and Foreign Affairs</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>Strengthen the means of anticipation, monitoring and intelligence on the agricultural sector in relation to national security and the challenges encountered in theatres of operation</i></li> </ul>
<ul style="list-style-type: none"> <li>• <i>Create partnerships with prospective services and organisations, with private actors in the agricultural and agri-food sector</i></li> </ul>

# Map: The impact of climate change on agricultural resource security: eight geostrategic breakpoints



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