

POLICY BRIEF

Nordic Perspectives on Transboundary Climate Risk



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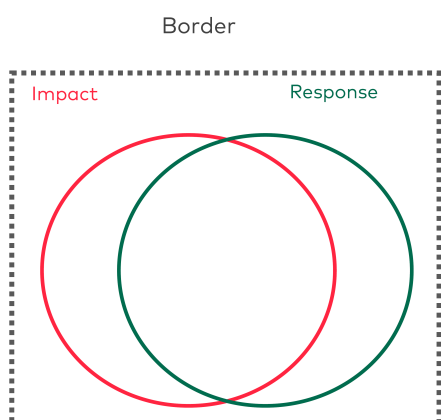


Transboundary climate risks need more attention

The Nordic countries are widely considered front-runners in climate action. Given their location and socio-economic and political profiles, they also have relatively limited vulnerability to direct climate change impacts.

Yet there is an important aspect of climate risk that the Nordic countries have yet to fully grapple with: transboundary risks. In a highly interconnected world, climate impacts – from extreme events such as storms or floods, to gradual changes such as sea-level rise and shifting ecological zones – can cascade from country to country, transmitted through supply chains, financial systems, shared natural resources, and other international linkages.

Conventional assessment



Cross-border assessment

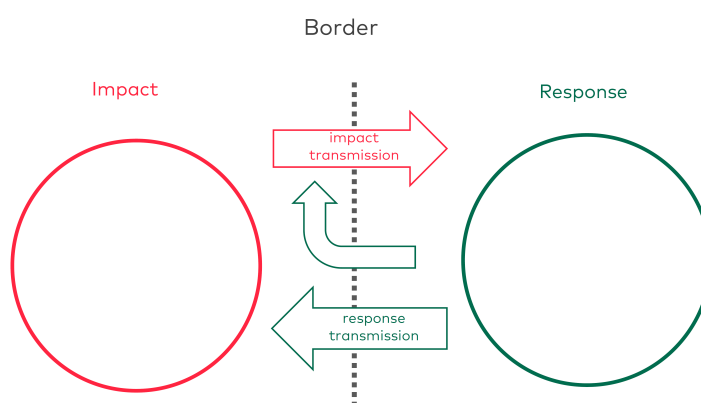


Figure 1. Conceptual framing of climate risk assessments, including impacts and responses, for conventional and transboundary risks. Source: Adapted from Carter et al. (2021)¹.

1. Carter, T. R., Benzie, M., Campiglio, E., Carlsen, H., Fronzek, S., Hild, M., Reyer, C. P. O. and West, C. (2021). A conceptual framework for cross-border impacts of climate change. *Global Environmental Change*, 69. 102307. DOI <https://doi.org/10.1016/j.gloenvcha.2021.102307>.

As noted in the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the impacts of transboundary climate risks are already being felt around the world, but they are not yet well understood, much less integrated into adaptation strategies and policies.

This study, commissioned by the Nordic Council of Ministers, examines the cross-border risks faced by Nordic countries, to what extent they are already recognised, and possible ways to respond to them. The analysis draws on a literature review, an analysis of trade data, and interviews with stakeholders from national authorities, industry and research institutions.

Seven pathways for the transmission of transboundary climate risks are identified in the literature: trade, finance (e.g. foreign investments, remittances), people (travel and migration), psychological (e.g. inaction if risks are perceived as affecting only other countries), geopolitical, biophysical (through shared ecosystems and other natural resources) and infrastructure.

Table 1. Transboundary climate risk pathways addressed in Nordic policy studies and documents

	Denmark	Iceland	Finland	Norway	Sweden
Trade	X	X	X	X	X
Finance	X	X	X	X	X
People	X	X	X	X	X
Psychological			X		
Geopolitical	X		X	X	X
Biophysical	X		X	X	X
Infrastructure	X		X	X	X



More dialogue and information on transboundary climate risks in Nordic countries

The Nordic countries are ahead of many others in analysing transboundary climate risks, but for the most part, they have not determined how best to tackle those risks. Stakeholders agreed that there is a need for more dialogue between governments, companies and civil society, as well as more information on the risks and their potential impacts on different sectors. It is also important to better address supply chain-related risks. Some large companies are already addressing transboundary risks, but more systematic work is needed.

International trade in goods and services is crucial to Nordic societies, affecting everything from industry, to food supplies, to healthcare systems. An in-depth analysis of the Nordic countries' trade relationships and the climate risks embedded in them identified five sectors of special interest: agriculture and food production; transport; petroleum and other energy imports; finance and investment; and machinery. Agriculture and food poses the most critical risks.



Supply chain-related risks need to be addressed

Even though the Nordics mostly trade with other relatively climate-resilient countries, several key commodities, such as soy, coffee, cocoa and fruit, come mostly from developing countries that are highly exposed and vulnerable to climate impacts. Soy imports from Brazil are of particular concern. Transboundary risks affect inputs to Nordic agricultural systems (maize and soy for animal feed) as well as food industries and consumption (rice, sugarcane, coffee). If not addressed, these risks could result in some food products being costlier or less available. The COVID-19 pandemic has highlighted the risks of heavy import dependence for all five countries.

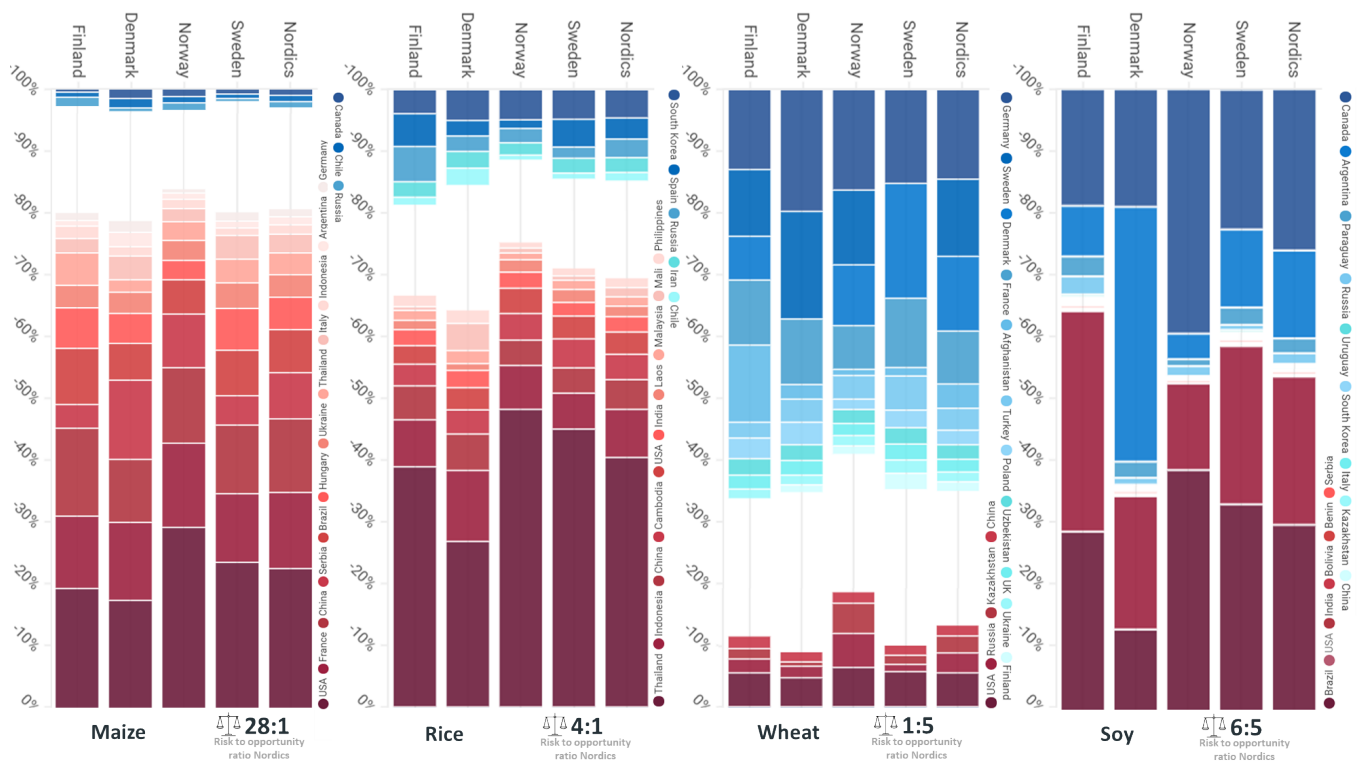


Figure 2. Risk and opportunity values for maize, rice, wheat and soy in the top 15 trading partners based on risk-opportunity ratings. Red bars show risk relations, and the blue bars depict opportunity markets. Note that the bars do not represent physical flows – but risk to opportunity shares, based on current market shares, predicted changes in yields and the concentration of supply.

In the near term, the Nordic countries could continue to rely on traditional approaches to managing trade risk, such as substitution and diversification – but those may not work in a world that faces multiple, accelerating climate impacts. An alternative is to cooperate on a strategy that combines an increased domestic supply of inputs; sustainability and diversification of Nordic agricultural production; and support for trade partners to help them strengthen their production systems, and thus increase climate resilience across future global food markets.

The Nordic countries differ in important ways, including in their relationship to the EU, their approaches to contingency planning, and even in how far along they are on their adaptation journey. However, Nordic action on addressing transboundary climate risks can build on their commonalities, focusing on areas where cooperation would provide the greatest added value. This includes joint research projects and shared risk analysis, for example, as well as awareness-raising and sharing tools to help public- and private-sector actors address transboundary risks.

The Nordics can also work together to raise awareness and promote collaboration in the global arena, including through alliances with strategic partners in the global South, while also integrating transboundary climate risks into their development cooperation and research efforts. Given the significant role of business in identifying and addressing these risks, another promising area is to foster public-private partnerships, actively engaging with trade associations, companies and business-affiliated research institutions.



The report recommends joint Nordic action and topics for further research

Based on this analysis, the report highlights 10 priorities for Nordic cooperation on transboundary climate risks:

- Establish a **joint Nordic research programme** to provide a shared knowledge base;
- **Foster mutual learning** and sharing of adaptation best practices in policy and business;
- **Raise awareness** about transboundary risks among decision-makers in the region;
- **Share existing practical tools** created in the Nordics to address transboundary risks;
- Deepen Nordic **cooperation in contingency planning** around transboundary risks;
- **Coordinate Nordic initiatives** on transboundary risks in the EU and in various international forums;
- **Build alliances with partners in the global South** to facilitate mutual learning and potentially identify international measures to pursue together;
- **Engage with the private sector**, including businesses and trade associations, in discussing and planning on transboundary climate risks;
- **Integrate transboundary climate risks into development cooperation**, including research and finance;
- Develop a **joint approach to food** in the Nordics, building on the experience of the Nordic Food Policy Lab and centred on shared values and practices.

The report also identifies several additional research needs, including analysis of transboundary climate risks in priority sectors other than agriculture and food, such as energy and transport; of the roles of local, national and regional authorities in addressing transboundary climate risks; and of risk ownership – how best to divide responsibilities and coordinate efforts.

About this publication

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Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

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