CLIMATE SECURITY
EXPERT NETWORK

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CLIMATE-FRAGILITY RISK FACTSHEET

THE ARCTIC

In the Arctic, climate change is happening three times faster than the global rate. These changes present considerable risks: the region faces several climate change-related "tipping points" as well as geopolitical and militarization threats, all of which have major ramifications both for Indigenous communities and the international community at large. The Arctic has historically been a region of peace and cooperation, even during times of tensions, and climate change could provide new opportunities for economic development. However, without proper risk mitigation and climate adaptation efforts, the opportunities will likely be overshadowed by the destabilizing, compounding effects of climate change.

7 CLIMATE FRAGILITY RISKS

Seven critical pathways that link climate change to fragility in the Arctic and beyond:

1 Risk 1: The global threat environment will be increasingly shaped by "actorless threats".

Climate change, along with pandemics and biodiversity loss, constitutes an emerging "actorless threat" that poses major security risks. In the Arctic, these threats are significant, especially in Russia, in the form of wildfires, floods, and heatwaves.

2 Risk 2: Increased military activity in the Arctic may have unintended consequences.

Military expansion and weapons testing in the Arctic could make security dynamics more challenging. Formal military dialogues to discuss military security matters among Arctic nations have been largely discontinued, but remain critical to reduce these risks.

3 Risk 3: Climate change provides an avenue for China to strengthen its Arctic presence.

Through soft-power diplomacy, financial investments, and scientific research, China has expanded efforts to gain access, presence, and influence in the Arctic region. China's growing interest in extending its military operations in the Arctic is of particular concern.

4 Risk 4: Indigenous cultures and communities are disproportionately at risk.

Indigenous communities in the Arctic face existential threats from climate change impacts, which threaten coastal communities with relocation, and challenge their ways of life, food security, and access to essential services.

5 Risk 5: Shifting migration patterns are seen as a threat rather than opportunity.

Arctic countries will see shifting demographics. Rather than being seen as a threat, safe and sanctioned migration to the Arctic could help support the region's economic growth and realize the opportunities climate change will bring.

6 Risk 6: Inadequate international risk mitigation efforts may increase likelihood of geoengineering technology deployment on a unilateral basis.

The Arctic region is of particular interest for geoengineering interventions to combat climate change. This increases the risk of a state or non-state actor testing or deploying geoengineering technology, with negative environmental and societal consequences.

7 Risk 7: Increasing economic activity in the Arctic may fuel criminal opportunism.

Opportunistic criminal networks will likely seek to leverage the physical and socio-economic changes in the Arctic to expand their activities, such as exploiting lower levels of oversight in free-trade zones and ports.

CLIMATE CONTEXT

Climate change in the Arctic has immense global consequences – and in some cases, it's happening faster than projected.

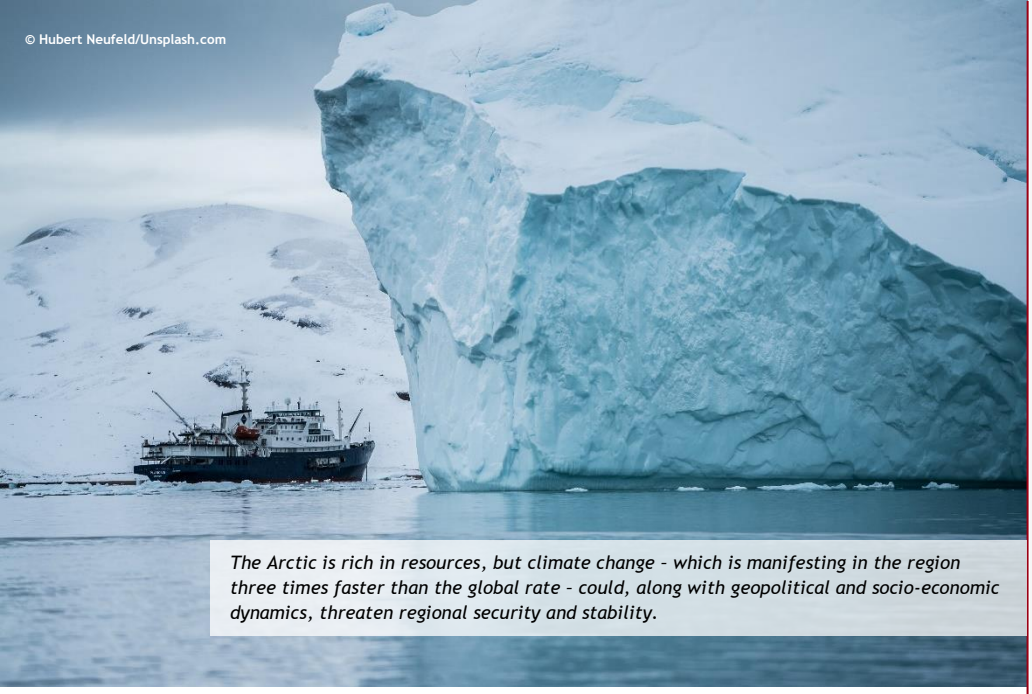
Warmer oceans are restricting the habitat range of polar marine species, while causing harmful algal blooms and the migration of fish stocks from elsewhere, thereby creating new ecosystem dynamics.

The Arctic is critical for several global climate tipping points, including:

Destabilization of the Greenland ice sheet, which could lead to significant global sea-level rise and decrease West African monsoon precipitation, among other impacts.

Permafrost thaw, which releases greenhouse gases, microorganisms and chemicals, all of which threaten public health.

Collapse of the Atlantic Meridional Overturning Circulation (AMOC), which is being weakened by increased rainfall and land-based ice melt, and could lead to mega-droughts in Central Europe.



The Arctic is rich in resources, but climate change - which is manifesting in the region three times faster than the global rate - could, along with geopolitical and socio-economic dynamics, threaten regional security and stability.

10 ENTRY POINTS TO ADDRESS CLIMATE FRAGILITY RISKS

The compound climate and fragility risks in the Arctic would be best addressed by governments and policy makers prioritizing the following:

1. **Cut emissions:** The most important task the international community faces in the near term is to catalyze emissions reduction efforts and increase carbon sequestration, primarily through nature-based solutions and in line with the precautionary principle.
2. **Strengthen the circular economy:** Keeping materials in the value chain creates more value and reduces impacts of virgin production, in particular from mining.
3. **Deepen dialogues:** Encourage the development of a mechanism for increased mil-to-mil communication among Arctic states and other significant security actors through dialogue.
4. **Fill governance gaps:** Explore gaps in governance structures resulting from regional change, such as the opening of the Central Arctic Ocean, and the entry into force of international agreements such as those on fisheries and biodiversity.
5. **Increase emergency response capabilities:** Arctic nations should deepen cooperation between the Arctic Coast Guard Forum and entities such as the Emergency Prevention, Preparedness and Response Working Group of the Arctic Council to more rigorously develop coordinated response capabilities.
6. **Cooperate in science:** Greater international cooperation is needed around scientific research, including on atmospheric monitoring, data sharing, data collection, and ocean forecasting - similar to what currently exists for weather.
7. **Ensure Indigenous involvement:** Traditional knowledge holders should be consensually integrated into research and policy development as a complement to science-based decision-making.
8. **Uphold integrity:** Incorporate expert advice on anti-corruption and transparency for policies relating to sustainable development, so as to preserve development benefits for the legitimate economy.
9. **Support localized solutions:** Identify climate risk reduction potential in partnership with Arctic communities, recognizing that the Arctic is not homogenous and that solutions will likely differ across the region. Community voices should be amplified and empowered.
10. **Allow for flexible policies:** Because of the higher levels of unpredictability associated with climate change manifestation, policies should be developed to reinforce adaptability wherever possible, rather than fixed and hence at risk of being ineffective or even counterproductive.

SOCIO-ECONOMIC FACTS

- As Arctic ice caps shrink, maritime shipping routes are gaining attention from commercial actors, but their commercial viability is challenged by environmental, logistical, and infrastructural constraints.
- The Arctic contains significant deposits of rare earth minerals - crucial to the green energy transition and technological developments.
- Oil and gas deposits are abundant in the Arctic and important for several Arctic economies, which face challenges associated with the global renewable energy transition.

POLITICS & SECURITY

The Arctic Council is an important inter-governmental forum for Arctic co-operation, consisting of the eight Arctic nations, Permanent Participants, and Observers. Five legally binding international agreements have been negotiated for the Arctic, centering on search and rescue, marine oil pollution, scientific cooperation, Arctic shipping, and fisheries. These agreements cover various aspects of Arctic governance to help promote stability and assurance in the region. However, potential gaps need to be recognized as the region becomes more accessible and the geopolitics shift.

FURTHER READING

- Maddox, Marisol (2021). Climate-Fragility Risk Brief: the Arctic (full version).

LEGAL NOTICE

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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 synthesizing 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.
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