

Policy Sciences Thursday Evening Workshop

- I. Arctic Context: Trends and Conditions (Charles)
- II. Kirkenes, Norway as Arctic Microcosm (Amanda)
- III. The Facilitated Exercise (Evan)

Using the attached materials, apply the Policy Sciences intellectual tasks to the case of Kirkenes, Norway.

1. Goal Clarification
 - Clarify a policy goal. Choose your standpoint-- e.g. the community, the Norwegian government, municipal government, indigenous person, etc.
2. Trend Analysis
 - Describe key Kirkenes trends. Do current trends correspond to preferred goals?
3. Factor Analysis
 - What factors, conditions and events, are affecting and shaping the trends described?
4. Projections
 - Assuming consistency of trends and factors, describe a likely future.
5. Alternative Futures
 - How might your projection change? What factors might be adjusted to achieve a preferred future?

The Arctic is changing. Arctic communities are facing converging pressures, unforeseen opportunities, and urgent choices. But this is not a one-size-fits-all challenge. How a community will navigate this rapidly evolving and highly uncertain context requires that we descend to the specific. Kirkenes in northern Norway is one such community, a community that is trying to understand their options as “a laboratory for a new time.”

Geophysical and biological impacts of global climate change affecting the whole Arctic have been well documented for decades. They include reduced sea ice, permafrost degradation, slumping landscapes, shrinking glaciers, altered river flows, shifting wildfire regimes, and species range. Arctic amplification (the earlier, larger, faster response of the Arctic system to increasing atmospheric greenhouse gas concentrations) has long made the Arctic a focus for understanding complex natural systems change.

Social and economic factors are also in flux. Trade and supply chain logistical disruption, changing geopolitical competition over resources and sea lane control, concerns about safety and environmental hazards, demands for explicit sovereignty by Arctic Indigenous peoples, and evolving military tensions have all made their presence felt in recent years. The recent global scale shocks associated with the novel coronavirus pandemic and the ongoing disarray in energy commodities markets are revealing further complexities.

Kirkenes as Microcosm

Global and Arctic-wide changes converge in local places. The significance of any particular geophysical, biological or socio-economic change is contingent upon both the history and current context of that locality. Furthermore, local and regional decision-makers are not passive stakeholders in decisions made nationally and agreements pursued internationally. Reducing losses from Arctic change requires active participation by and engagement with people on the ground. Arctic changes are manifest in unique ways in Kirkenes recently merged states of Trmsos and Finnmark. This region has been central to Northern and Coastal Sámi, Kven, and Nordic communities for thousands of years. Known as Kirkenes (Norwegian), Girkonjárga (Sámi), Kirkkoniemi (Finnish and Kven), and Киркенес (Russian), this multi-cultural community is just 16 km from the border with Russia, with routine visa-free border crossings by local residents and workers. Kirkenes has a deep-water port that services the oil and gas industry, shipping, and fisheries, and is the furthest north ice-free European port. Over the border in Murmansk, Russia’s Northern Fleet Joint Strategic command was established in 2014. NATO conducted a military exercise in the border region called Trident Juncture in late 2018, and – perhaps in response – the Murmansk naval base was elevated to an independent administrative unit in 2019.

The economy of Kirkenes has typically relied on a variety of primary industries, and uncertainty and change have always been commonplace. There were high hopes for oil and gas reserves in the southeastern Barents Sea, but yields have been disappointing and state-owned Equinor Energy AS is presently focusing on the Hammerfest region further west. The Shtokmanovskoye field located in the Russian Barents Sea is estimated to hold 3.9 trillion cubic meters of gas, but negotiations between Gazprom and European energy companies have stalled in the face of volatile oil and gas prices and the technical difficulties the Arctic site presents. This uncertainty buys time for international climate change agreements to become perhaps more firmly entrenched. On land, the Sydvaranger iron mine and processing plant in Sør-Varanger were set to re-open after a 2015 bankruptcy, but plans have been delayed to at least 2021. In Tommerneset, tensions have continued due to Norterminal’s planned construction of an oil terminal where rock carvings estimated at 7,500 years old were

discovered in 2015. Construction has been postponed but local speculation targets economic viability rather than the safeguarding of cultural heritage as

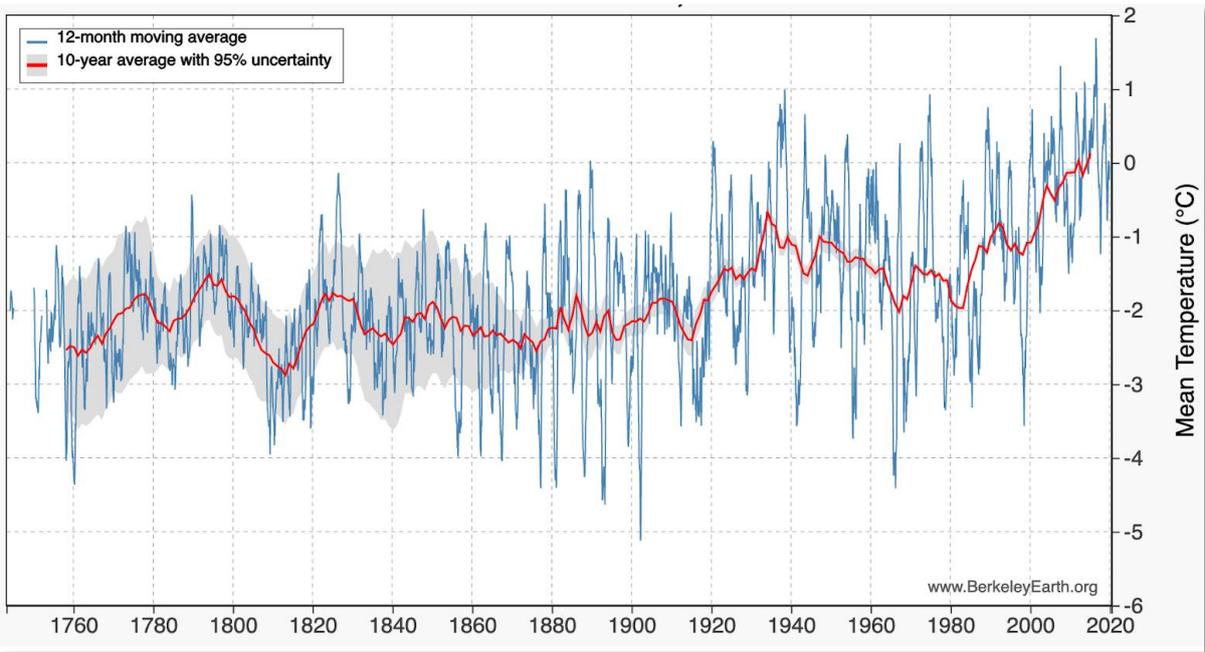
NATO and the Russian Northern Fleet the primary reason. Finally, there have been ongoing protests in Kirkenes against the air quality impacts of nickel mining and smelting over the border in Russia. In all of these projects, there remain concerns in every sector of the community about the effects of decisions on employment.

The potential for transformation from these mainstay industries to a new vision is expressed in the hope for the development of Kirkenes as a multi-modal transportation hub linking the Arctic to Asia and the European continent. An abiding challenge for the region has been the lack of transportation connections in northern Norway. For example, in July 2019, the Norwegian Railway Directorate estimated that extending the railway from its northernmost terminus just one quarter of the distance to Kirkenes was NOK 113 billion – not economically viable. But a direct Kirkenes-Rovaniemi (Finland) railway link has attracted more interest, including potential partnerships among Norwegian, Finnish and Chinese investors. This “Arctic Railway” would complete the inland railway system from the Mediterranean to the Barents Sea and create a hub to connect to the Northern Sea Route. Such a hub could include maritime services for destination shipping, but also enhanced support of the fisheries industry and local freight (often called cabotage.) The Northern Sea Route has attracted considerable interest in recent years as the sea ice retreats, since it is around 40% shorter than the Suez Canal route and hence presents the potential to lower emissions from international shipping. But typical of the Arctic, every apparent opportunity presents unforeseen, and often unforeseeable, consequences.

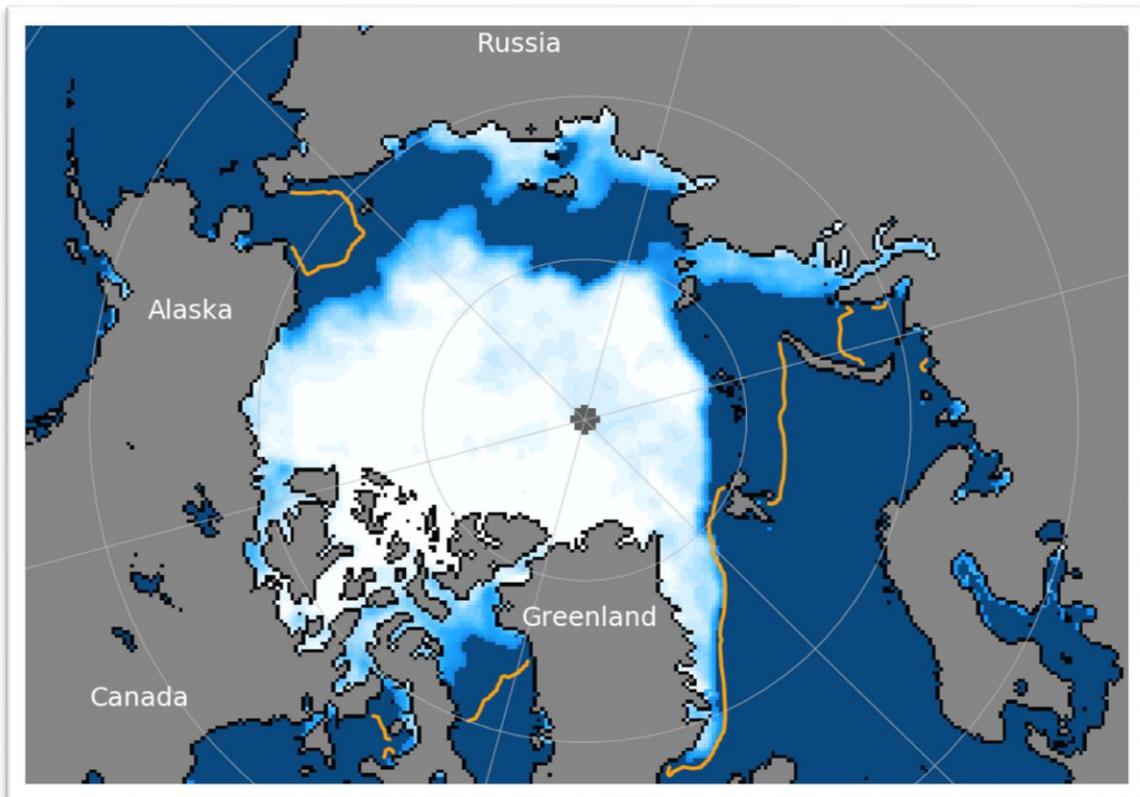
This nascent vision of Kirkenes as a sustainable, adaptive, multi-modal hub remains highly controversial. Land use and specifically land encroachment is emerging a major area of conflict between the Sámi community and other actors in the region, although there has been less documented about this issue in Kirkenes or Murmansk than elsewhere in the north. There have been some protests against railway development organized by Sámi community members, joined by NGOs such as Greenpeace. The immediate concern is that the railway would cut through reindeer winter pastures, and influence snow distribution and state. But there are wider ramifications. These include the potential for increase in the rate of Arctic development more broadly and the exclusion of Indigenous voices in decision-making processes.

In addition to the impacts on Indigenous concerns, hopes for the transformation of Kirkenes are complicated by the multi-faceted nature of governance in the region. The Norwegian Ministry of Local Government and Regional Development, the Sámi Parliament, the Sámi Council, the County Council of Troms og Finnmark, and the Municipal Council of Sør-Varanger must engage with the Barents Euro-Arctic Council, the Kolarctic Cross-Border Cooperation and a myriad of other Barents focused international bodies. All of these interactions take place in the context of Norway’s binding commitment under the Paris Agreement of the UN Framework Convention on Climate Change to reach 40% below 1990 emissions by 2030. Under current policy projections, it seems unlikely that Norway will achieve this target, which relies strongly on the purchase abroad of offsets.

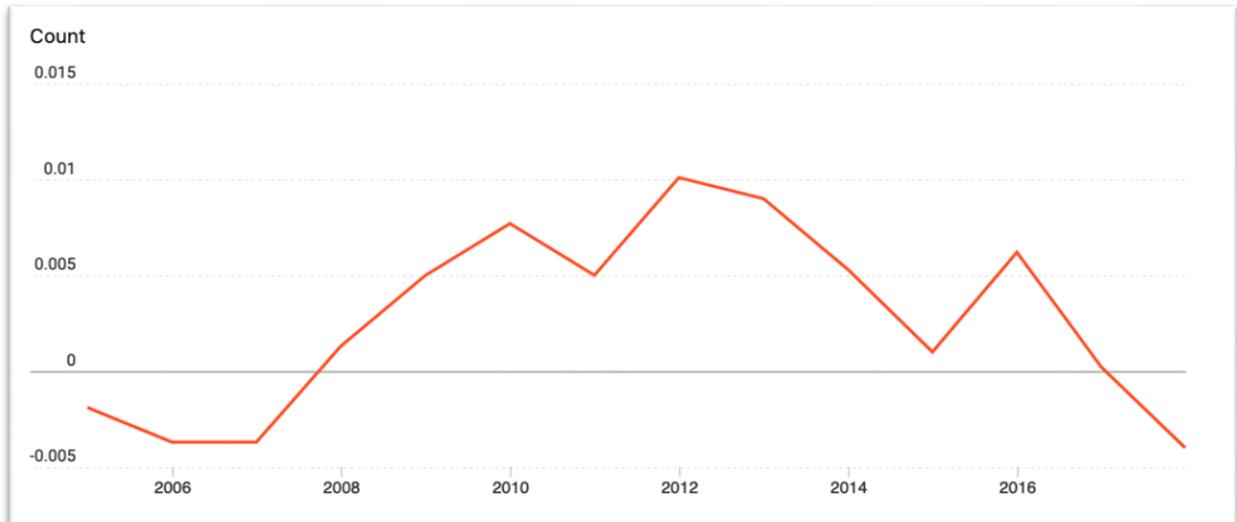
On the following pages, find some additional trends that might be of use.



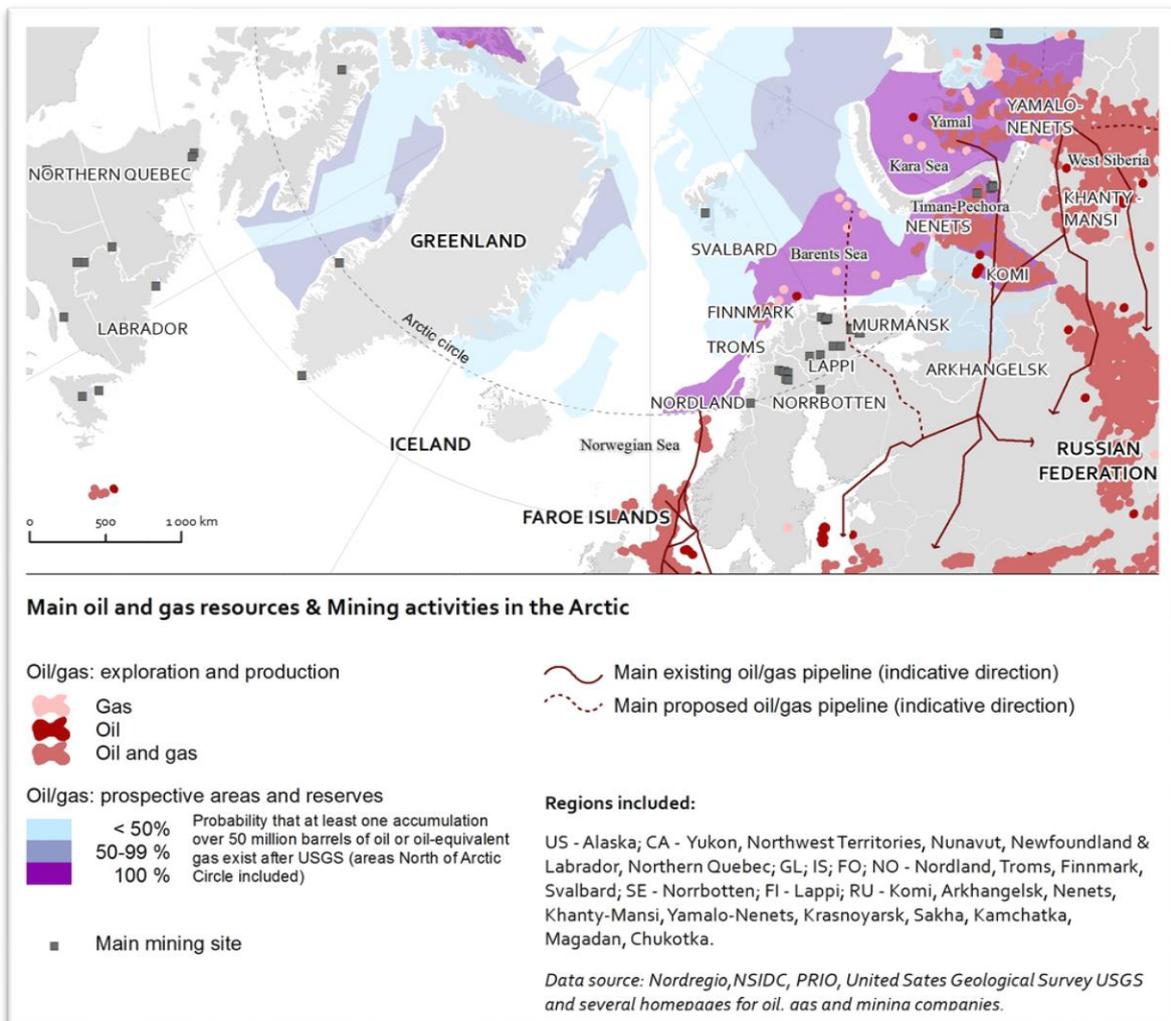
Finnmark area temperature record



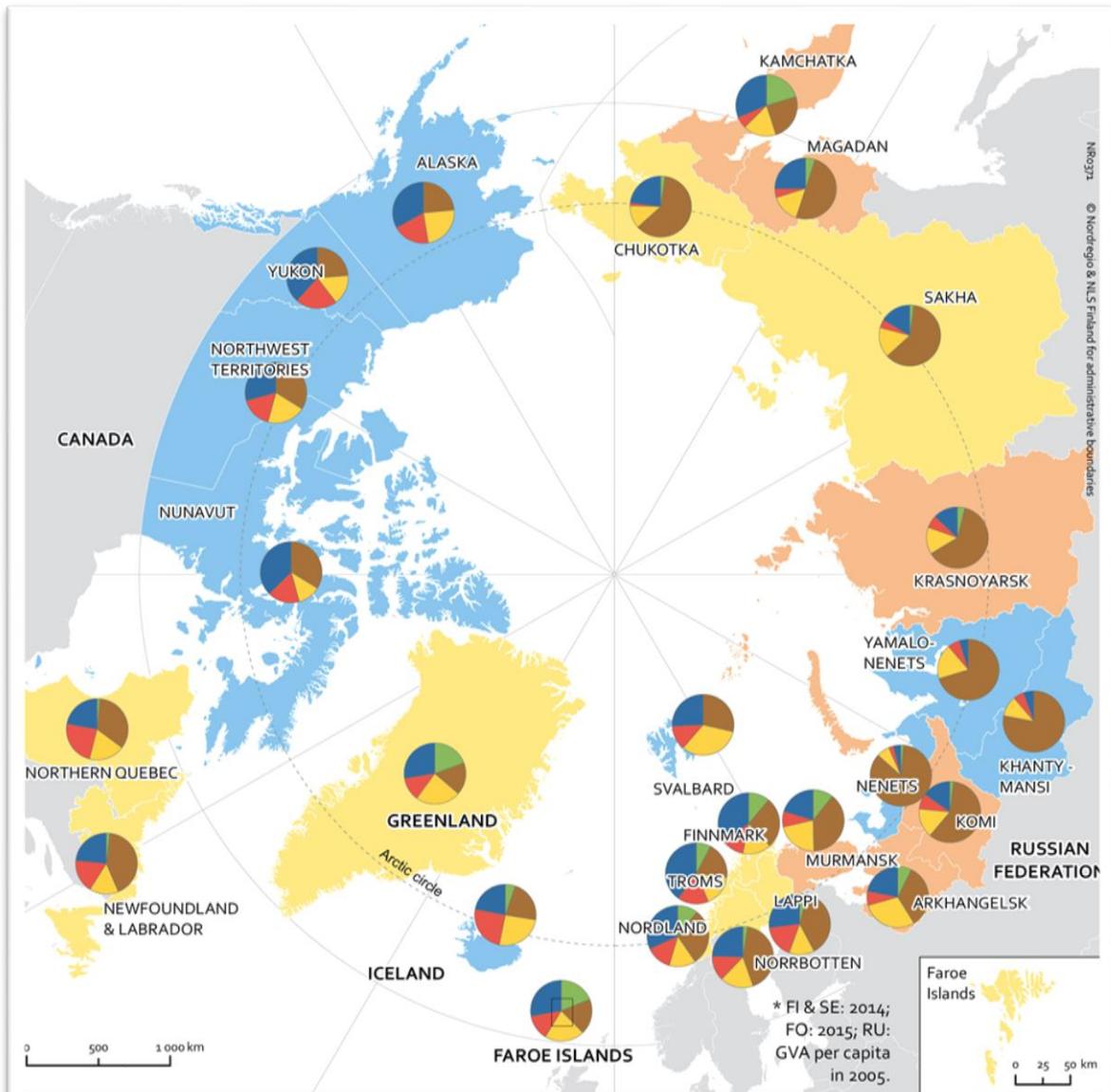
Sea ice extent on November 2, 2020. The orange line is the median ice edge on this date for the period 1981-2010.



Finnmark Population Growth Rate



Oil, gas and mining resources in the European Arctic



Gross Value Added per Capita in 2016