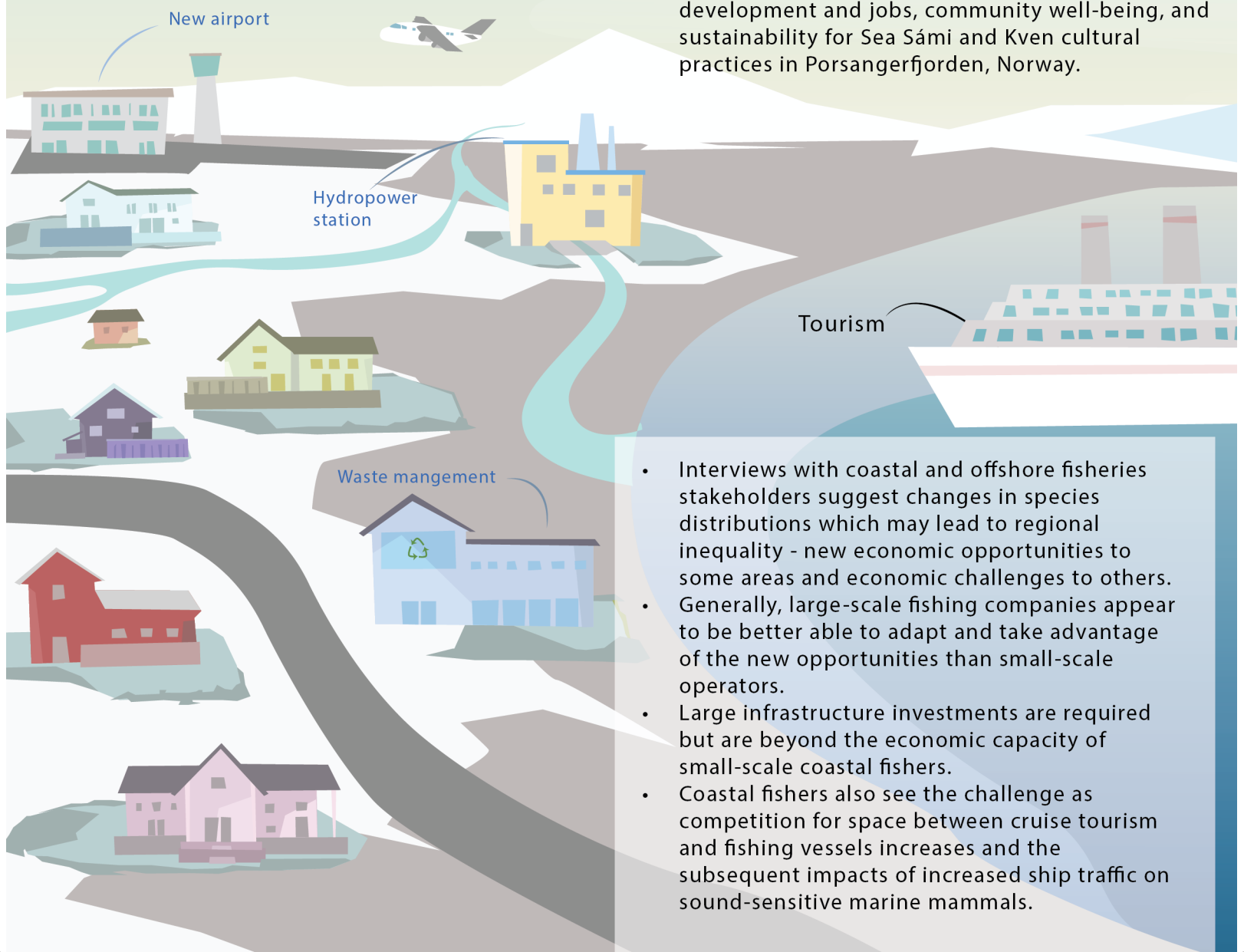


LAND-USE CHANGE AND SOCIO-ECOLOGICAL SYSTEMS

The following factsheet presents the joint results, research gaps and priorities identified by the H2020-funded ECOTIP, FACE-IT, and CHARTER projects on Arctic biodiversity changes on land, coasts and in the ocean.

Opening shipping routes, increased need for raw materials, and efforts to connect communities to the green transition is making the Arctic a new hotbed of economic activity. The environment is expected to accommodate multiple uses, including energy production, mining, tourism, biodiversity protection, nature-based solutions for climate mitigation, and livelihood adaptation measures. This puts even more pressure on Indigenous Peoples and local communities, partly by altering traditional socio-ecological systems and regional biodiversity, bringing both challenges or opportunities.

- Governance “nexus” approaches are needed to account for complex interactions between climate change, biodiversity loss, increasing land-use pressures, and local livelihoods.
- Although nexus approaches are widely adopted in Arctic policy reporting, emphasis varies between governance levels and tends to underestimate certain interactions.
- Local communities and traditional livelihoods are seldom seen as actors with agency and impact.
- For nature-based livelihoods to continue and develop towards locally desired futures, land-use and spatial planning is critical.
- Workshop participants in Greenland/Kalaallit Nunaat expressed growing concerns as leisure practices expand and intensify, and concerns over conflicts as both tourism and communities grow (opening a new airport in 2025).
- Community members in Avannaata and Kommuni identified waste management as an emerging issue.
- Green transition projects in the region, such as hydropower projects, and rare earth element mining, with more extensive use of Greenland/Kalaallit Nunaat hydropower potential in the private sector, could improve outcomes.
- Continued opportunities for traditional use and harvesting of wild species will be key to economic development and jobs, community well-being, and sustainability for Sea Sámi and Kven cultural practices in Porsangerfjorden, Norway.



- Interviews with coastal and offshore fisheries stakeholders suggest changes in species distributions which may lead to regional inequality - new economic opportunities to some areas and economic challenges to others.
- Generally, large-scale fishing companies appear to be better able to adapt and take advantage of the new opportunities than small-scale operators.
- Large infrastructure investments are required but are beyond the economic capacity of small-scale coastal fishers.
- Coastal fishers also see the challenge as competition for space between cruise tourism and fishing vessels increases and the subsequent impacts of increased ship traffic on sound-sensitive marine mammals.

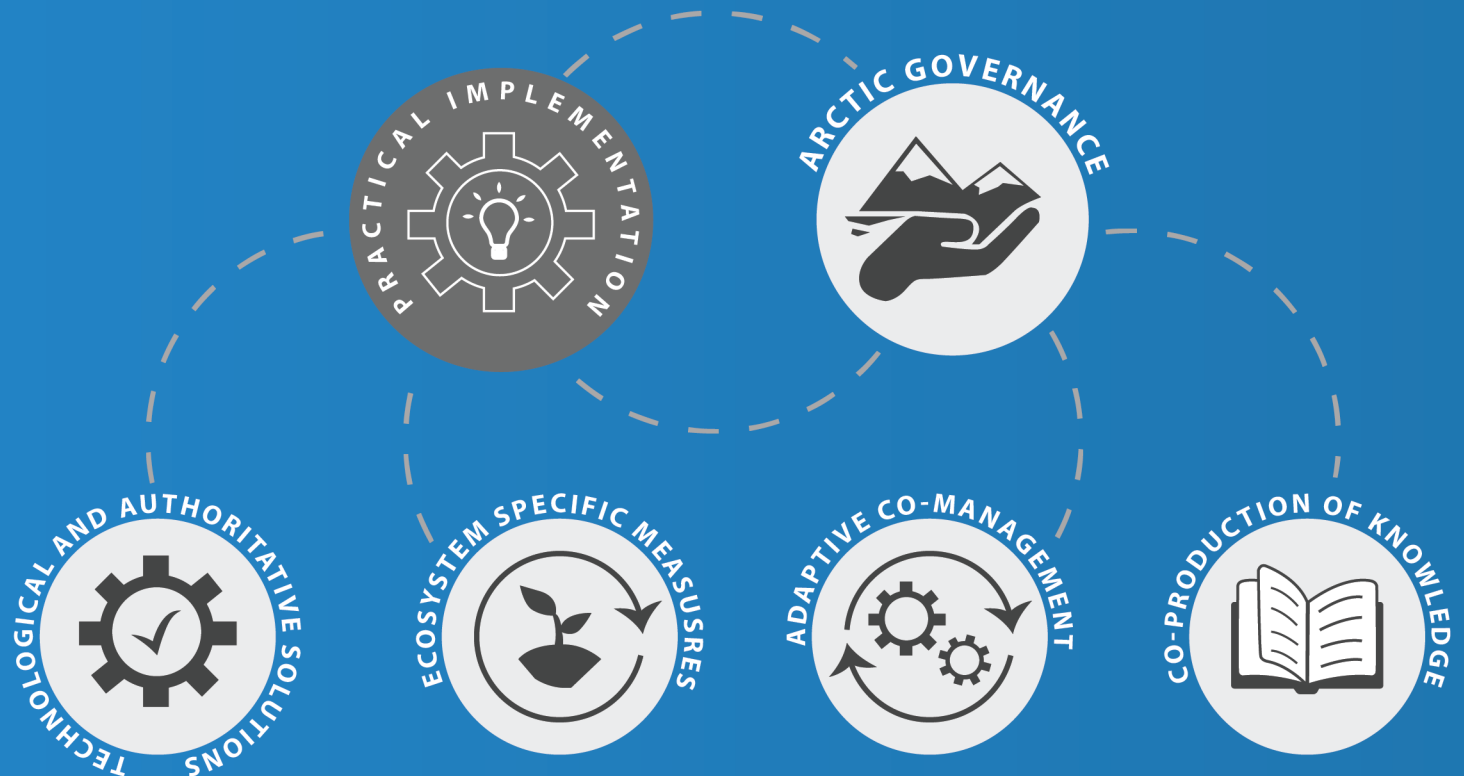
RESEARCH GAPS

How can nexus governance approaches be implemented to promote more holistic environmental governance and guide cross-sectoral policies, including ecosystem-specific measures and policies, as a combination of technological, and authoritative solutions; co-production of knowledge, and adaptive co-management?



How can mapping the needs and tools for zoning, regulations, and the role of concessions help develop tourism and business activities (e.g., commercial/trophy hunting) in Greenland/Kalaallit Nunaat?

How can marine spatial planning and land-use planning incorporate nexus governance approaches and Indigenous local peoples as rights holders, not just stakeholders?



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