

survey_quotes

question	response
Opportunities	sea urchins can be of interest for fishery as well
Challenges	increasing populations / grazing of sea urchins - what will the future bring in Arctic kelp forest ecosystems (e.g. appearance of sea urchin barrens as in Norway)
Expectations	Despite rapid changes and uncertainties in the Arctic, I expect tourism volume to keep increasing in the next decades.
Opportunities	There are many opportunities for the tourism sector and host communities: longer seasons, greater access to areas previously inaccessible.
Challenges	Increased risks, especially in terms of natural hazards but also balancing environmental degradation with increased tourism volume and the pressure that creates on the environment, on infrastructure and on community well-being.
Expectations	New environmental conditions and growing tourism are expected. Geopolitical situation in the Arctic might remain tense, possible increase in tensions if greater/easier access to some areas and nature resources. Growing conflicting interests between different areas and resources usages (commercial fisheries, leisure fisheries, tourism, research, nature protection, resources extraction, military activities...). Traditional governance schemes might struggle to address these issues due to diverging interests between governments, between local stakeholders...
Opportunities	Growing fisheries and tourism activities as sea ice is retreating, expansion to new and larger areas
Challenges	Distribution of (fish) species is evolving, which is impacting the whole ecosystem and will affect livelihoods; evolving climate conditions that might affect both positively and negatively some human activities (ship traffic, activities dependent on snow/ice...)
Expectations	with temp increase and retreating ice our Arctic sites will become more and more similar to North Atlantic sites i.e. Faroer, Iceland, with all implications to livelihoods and biodiv. key word: "Ecol. Blender"
Opportunities	Economic opportunities: Northern Shipping routes, Nordic aquaculture at the expense of ecological losses
Challenges	everlasting conflict of economy vs. conservation
Expectations	I expect that better observation systems, satellite sensors, autonomous systems and data base development along with more common agreement on FAIR data will give in future more and better possibilities to detect and interpret changes in the physical, chemical and biological system components of fjords and coasts.
Opportunities	Use of new technological/data developments for monitoring, analyses and research.
Challenges	Future funding for research and monitoring, especially for longterm monitoring can be a challenge, as well as limitations for collaboration and access due to the geopolitical development.
Expectations	Further sea ice decrease and glacier retreats affecting ice associated species
Opportunities	More access to navigation and possibilities for more sea-based production activities
Challenges	Mitigation and adaptation to ongoing changes, namely those resulting from higher accessibility that may lead to increased environmental impacts in otherwise pristine environments.
Expectations	With ongoing climate warming macroalgal communities exposed to glacial melt will intermediately decrease before increasing again after glacial melt has terminated. Seaweed communities in Kongsfjorden will transform into communities with species diversity and biomass similar to North Norwegian fjord systems over time. At sites with no glacial melt seaweed biomass and habitats will increase in future.
Opportunities	Ice-free coasts with low human impact may provide an opportunity for seaweed aquaculture and production of healthy food alternatives. This may become more important the more polluted southern sites become.
Challenges	Management of sustainable aquaculture; Documentation of complete species diversity, geographical distribution changes and Arctic species conservation; Too few data points to fill existing knowledge gaps on seaweed communities and future predictions; Even if the Arctic becomes warmer it is still remote and logistically difficult to get continuous monitoring data specifically over wider areas
Expectations	major ecosystem changes due to climate change
Opportunities	some areas become more accessible, some ecosystems will expand

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Challenges	increased accessibility increases the risk of human disturbance and poses a need for new management strategies/environmental protection. Of course there are also many other challenges connected with the melting cryosphere, such as global sea level rise.
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