



NORDIC MARINE THINK TANK

Nordic Climate Change Forum

for

Fisheries and Aquaculture

Founding event, January 2021

The purpose of this note is to seek support from a broad range of fisheries and aquaculture organisations and stakeholders to launch a Nordic Climate Change Forum for Fisheries and Aquaculture. The Nordic Marine Think Tank (NMTT) having recently adopted its climate change vision, opines that in the Nordic context, where the majority of the marine resources constitute a shared challenge, it would be advantageous/useful/beneficial for public authorities and private business interests to have a Forum for the exchange of views, ideas and practical measures taken to address the impact of climate change on the aquatic environment on which the sectors depends.

Background

The ocean in the Nordic region is home to a wide range of economic activities. These include, but are not limited to extraction of minerals, fisheries, aquaculture and tourism. The marine environment is also highly valued as a place to live attracting major cities and a significant proportion of the Nordic population lives in the coastal areas.

Meanwhile, climate change is creating challenges in that our marine environment is evolving. Increasing sea temperatures, changing salinity, acidification, pH and oxygenation are some of the impacts that increasingly will be felt by the fisheries and aquaculture sectors. While some changes have already taken place (e.g. migration of fish stocks in the North Atlantic, changing geographical placement of aquaculture installations) it remains that little has been done in terms of augmenting the preparedness of the sector to confront and adapt to the changing conditions over the coming decades.

For *marine fisheries* the major changes lie in the migration of fish stocks between different fishing zones, and the productivity of fish stocks themselves considering changing sea temperatures, salinity and oxygenation. Research attest to the fact that such changes will constitute a major challenge for adaptation of the industry to changing fish stock productivity, new fish species and changing fishing patterns. Likewise, fisheries activities impact the environment in particular through the use of energy. A central issue in this regard is whether

fisheries resources are managed in a sustainable manner and concurrently with mechanisms for industry adaptation to minimise its environmental impacts.

For *aquaculture* major climate change challenges are related to changing water (sea and inland) temperatures, pressure on the use of water resources, and the use of energy to grow fish. Meanwhile, aquaculture also impacts the environment through the release of organic matter, nitrogen and phosphorous into the water environment which may have negative effects on the state of the marine. At the same time the culture of certain species (e.g. mussels and seaweed) may have a positive environmental impact through the uptake of nitrogen and phosphorous showing the diversity of situations.

A novel initiative

Against this background the NMTT promotes the establishment of a Nordic Climate Change Forum for Fisheries and Aquaculture. Such a Forum would gather a range of stakeholders including science, industry, administration and policy makers and serve as a sounding board for the exchange of ideas and advance concrete actions that might be envisaged to help prepare businesses confront the climate change challenge. Such a Forum can provide important knowledge, expertise and experience to underpin further cooperation and coordination of policy initiatives on climate change adaptation for the Nordic countries. Learning from others' experiences and exchange on the "how to do it" could be a central way of climate change adaptation by the industry.

This note seeks backing from a wider range of stakeholders to support the establishment of a Nordic Climate Change Forum for Fisheries and Aquaculture.

To launch the Forum, the NMTT together with interested parties from the Nordic sectors (fishing and aquaculture operators, organisations involved in the sectors, science, fisheries policy makers and civil service), will host a launch event/founding Symposium with a view to:

- Present up to date knowledge on the effects of climate change on marine and freshwater ecosystems;
- Identify the needs for additional knowledge and research on the effects of climate change on freshwater, coastal and marine ecosystems and associated economic activities along the value chain i.e. from capture/production to consumer;
- Identify the consequences of climate change on the fisheries and aquaculture value chains which may, in the longer run, include:
 - risk assessments and understanding the vulnerability of the fisheries and aquaculture value chains to anticipate measures to adapt to climate change;
 - identify the economic consequences on flows of goods and fisheries and aquaculture businesses along the value chain;
- Identify measures to support the adaptation of fishing and aquaculture practices to climate change, i.a. through regulatory changes and new technologies;
- Assess and take stock of the impact of fish stock migration in the distribution of fishing opportunities and quotas to allow a reorientation towards novel species;

- Initiate a reflection on a review of the fisheries policy tool kit;
- Encourage comprehensive and integrated ecosystem approaches for sustainable management;
- Support the adaptation of aquaculture to the consequences of climate change on ecosystems.

Launch event

The NMTT, with supporting partners, will host the launching event in Copenhagen in January 2021 at a one-day Symposium which will initiate a longer-term annual Forum process of dialogue among Nordic fisheries and aquaculture stakeholders. Such an annual gathering of Nordic fisheries and aquaculture industry, science and policy makers is an opportunity to ensure that climate change is well understood in fisheries and aquaculture circles and that appropriate action is taken at all levels. The ambition is to make such an annual Forum a “must be” event for fisheries and aquaculture stakeholders. In addition to launching the Nordic Climate Change Forum for Fisheries and Aquaculture, the one day event will be an opportunity to be familiarised with the latest knowledge of the impacts of climate change on the ocean, and in particular the fisheries and aquaculture sectors in the Nordic region.

A preliminary agenda for the event looks like:

- 1) Welcome by a Nordic minister, the NMTT and partners
- 2) Presentation of the latest information on climate change and ocean
- 3) Climate change, ocean, fisheries and aquaculture in a Nordic context
- 4) Round table with fisheries and aquaculture stakeholders on the need for a continued exchange of data and information on climate change
- 5) A public sector perspective on the future of managing fisheries and aquaculture considering climate change
- 6) Identifying the needs of the fisheries value chain to adapt to climate change
- 7) Launching the Nordic Climate Change Forum for Fisheries and Aquaculture

The event will be open to stakeholders across the fisheries value chain, academics, public authorities and NGOs with an interest in fisheries and aquaculture.

Budget

To be developed pending the level of ambition.