

Nordic Climate Change Forum for Fisheries and Aquaculture III Workshop

Consumers and Climate Change in Fisheries and Aquaculture

16 January 2025, Hotel Marine Plaza, Helsingborg, Sweden

Background Note

Introduction

The Nordic Marine Think Tank (NMTT) recently launched the Nordic Climate Change Forum for Fisheries and Aquaculture in December 2021. In the Nordic context, where most of the marine resources constitute a cross-national challenge and with a high degree of market interaction, it would be beneficial for public authorities and private business interests to have on an on-going basis, a Forum for the exchange of views, ideas and practical measures to address climate change in the fisheries and aquaculture sectors.

The December 2021 Launch event, which was hosted in close cooperation with ICES, took a broad focus identifying the climate change issues throughout the fisheries and aquaculture value chains, the impacts of climate change and addressed the sectors own impacts specifically through CO₂ emissions. The Launch event attracted about 100 participants from a broad Nordic background and from businesses, NGOs as well as public authorities. The 2021 Launch event was followed up by a second Forum (Bergen, November 2023, and also co-hosted with ICES) focussing on the challenges and issues at the nexus of using ocean space for respectively energy production (e.g., windmills) and other ocean user groups i.e. fisheries and aquaculture.

The Forum III (Consumers and Climate Change in Fisheries and Aquaculture, Hotel Marine Plaza, Helsingborg, Sweden, 16 January 2025) deals with consumption related greenhouse gas emissions. At a general level, and taking Sweden as an example, households are responsible for around 60 per cent of total GHG emissions¹. This means that if we are to reach our climate objectives, household consumption needs to change considerably, including the food consumption. Due to the relatively low CO₂ emissions of fish and seafood the fisheries sector can contribute significantly to the required switch towards a low carbon food consumption. We also propose that the Forum III is done in partnership with ICES, as was the case with the first two Forums. This will help ensure that the latest knowledge on climate change and fisheries, and ocean issues are available to workshop participants.

Food consumption and climate

Food systems are responsible for a third of greenhouse gas emission according to Crippa et al. (2021).² It is therefore important to find ways and means to reduce the GHG emissions throughout food value chains. In this respect consumers have a crucial role to play in shifting their food demand towards foodstuffs with low GHG emissions, and more generally, to reduce food waste. Due to the relatively low GHG emissions from seafood products compared to other foods³, the fisheries and aquaculture sectors have an important role to play. In fact, Robinson⁴ notes that “Globally, most seafood products are more

¹ See <https://www.naturvardsverket.se/data-och-statistik/konsumtion/vaxthusgaser-konsumtionsbaserade-utslapp-per-person/> and <https://www.un.org/en/climatechange/science/climate-issues/food>

² See <https://www.nature.com/articles/s43016-021-00225-9>

³ See <https://ourworldindata.org/food-choice-vs-eating-local>

⁴ See <https://iopscience.iop.org/article/10.1088/1748-9326/aca490/meta>

nutritious and emit lower greenhouse gases than terrestrial animal-source foods, particularly small pelagic fishes and bivalves that contributed to recommended intakes for 3–4 essential dietary nutrients at the lowest Emissions.”

It is notable that several initiatives are underway in the Nordic countries to address consumers CO2 emissions. Different countries have taken different routes, but the shared aim is to nudge consumers towards a more sustainable consumption pattern, including for food, with lower footprint. The following is a brief overview of these initiatives; the Forum III will be used, inter alia, to synthesise these efforts and share their experiences.

The Nordic Council of Ministers, in 2023, published the “Nordic Nutrition Recommendation”⁵ noting that “Beyond affecting our personal health, our food choices also have long lasting impact on our climate and environment” (Secretary General’s Preface). The Report not only lays out suggested recommendation for a healthy diet but also brings to bear the environmental impacts of food consumption. Insofar as fish and seafood is concerned the Report recommends to “consume 300-450 g/week (ready-to-eat weight), of which at least 200 g/week should be fatty fish. It is recommended to consume fish from sustainably managed fish stocks.” It also highlights that “(GHG) emissions per kg edible seafood varies; emissions associated with commonly consumed species such as wild cod and pollock are considerably lower than any meat alternative. GHG emissions of seafood are highest for shrimp, flounder and lobster and four-fold as high as emissions from wild cod and haddock but farmed bivalves and small pelagic fish have the lowest impact. GHG emissions by farmed salmon varies from being as low as cod to being as high as pork, wild salmon generally has lower impact. If allowed to be uncontrolled, capture fisheries involve environmental risks such as overfishing, and aquaculture may involve risks on, e.g., land use.”

In Denmark, the National Food Agency⁶ has been working on developing “climate food labels” and the intention is that these will be marketed from 2025 at the earliest. A Working Group consisting of members from the food value chain reported in Spring 2023 on how such a label system could look like, including supporting material and an information campaign to bolster the uptake of the label. The label is to be controlled by the public authorities but be used on a voluntary basis. Presently work is being carried out on scoping a LCA model that can be used across the different food stuffs, including for fish and fish products.

In Iceland MATIS, the University of Iceland and Efla Engineering is in the process of developing a database on the carbon footprint of Icelandic food. Calculations will be based on international recognised methodologies developed by ISO.⁷ The project was started in late 2023 and is expected to produce first results in 2024 for a limited number of products.

In Sweden, a report entitled “Policy Options for Sustainable Food Consumption” (Mistra Sustainable Consumption report 1:10, 2021⁸) proposes several policy options, including climate labelling, to ensure consumers are informed about their climate impacts of their food consumption. The Swedish KRAV certification system for fisheries includes requirements for how much fuel can be used (i.e. litres of fuel per kilo landed fish⁹) if the fishery is to be certified. One private company Klimato¹⁰ has developed and

⁵ See <https://pub.norden.org/nord2023-003/nord2023-003.pdf>

⁶ See « Udvikling af et klimamærke for fødevarer; Anbefalinger fra Arbejdsgruppen”, April 2023

⁷ See https://matis.is/en/matis_projects/kolefnisspor-islenskra-matvaela/

⁸ See also <https://www.sustainableconsumption.se/en/about-the-programme/sustainable-consumption/food/>

⁹ See chapter 17 in <https://www.kravse.cdn.triggerfish.cloud/uploads/sites/2/2022/12/krav-standards-2023-1670933646.pdf>

¹⁰ <https://www.klimato.co/>

markets a methodology for calculating food's climate impact and is especially geared towards the restaurant market.

The Norwegian climate change action plan¹¹ calls for changing food consumption but also notes that *“It is a challenging task to change people’s dietary habits, but nevertheless essential to persuade the Norwegian population to follow dietary advice from the Directorate of Health. All research and experience show that changing people’s dietary habits requires a number of measures that interact across sectors, and depends on close cooperation between public, private and voluntary stakeholders. It is difficult to measure the effect of individual measures and to assess each measure separately from all the other actions taking place at the same time.”* The same Action Plan also notes that *“It must become easier for people to choose healthy, sustainable, climate-friendly food. Action to reduce food waste and to encourage people to follow the dietary recommendations from the Directorate of Health helps to reduce emissions. Following these recommendations means that people need to eat more fish, whole-grain foods, fruit and vegetables, and limit the amount of red meat and processed meat in their diet.”*

The Norwegian Consumer Council (Forbrukerrådet) has called for a system of mandatory labelling for food and food products so that consumers can be informed about the total environmental impact of their food purchases.¹² Also, at least two projects in Norway are looking into the feasibility of developing scores for the environmental (and social) impacts of foods.^{13 14}

Finland has developed a “Commitment 2050” online system through which an individual’s lifestyle carbon footprint can be measured. The application then calculates total CO2 emissions for that lifestyle and suggests actions that can be taken¹⁵. For consumers it covers living conditions, transport, food consumption and general purchase decisions. While individual consumers can take a test and get suggestions for how to lower their CO2 emissions it also provides businesses with a possibility for committing to various actions to reduce their carbon footprint. It is run by the Finnish Innovation Fund Sitra. While initially covering only Finland this application has been extended (called PSLifestyle¹⁶) to cover several EU countries.

Several companies along the fisheries value chain are also taking initiatives to deal with the climate change challenge. A recent guide “Setting Science-Based Targets in the Seafood Sector: Best Practices to Date”¹⁷ provides evidence of an interest along the fisheries value chain to address the climate challenge. The study is built on a collection of case studies in the fisheries and aquaculture sectors of best practices in several companies that has measured their climate impact and taken action to reduce their CO2 emissions.

The Third Forum Workshop: “Consumers and Climate Change in Fisheries and Aquaculture” will be hosted at Hotel Marine Plaza, Helsingborg, Sweden, 16 January 2025.

The overall objective of the Third Forum Workshop is to understand the role of fisheries stakeholders and how policies and private initiatives can leverage consumer influence and their buying power. The

¹¹ See <https://www.regjeringen.no/contentassets/a78ecf5ad2344fa5ae4a394412ef8975/en-gb/pdfs/stm202020210013000engpdfs.pdf>

¹² See <https://storage02.forbrukerradet.no/media/2024/02/posisjon-mat-og-helse.pdf>

¹³ See Norway’s NewTools project at <https://www.fhi.no/kl/studier/newtools/om-newtools/forskning-pa-hvordan-skaringsystemer-kan-brukes-i-matsystemet/>

¹⁴ See NOFIMAs VeriFish project at <https://nofima.com/projects/towards-responsible-seafood-consumption/>

¹⁵ See <https://sitoumus2050.fi/en/web/sitoumus2050/home#/>

¹⁶ See <https://pslifestyle.eu/>

¹⁷ See <https://climatechampions.unfccc.int/how-the-worlds-largest-seafood-companies-can-help-tackle-climate-change/>

focus is on understanding the role of policies and practices (e.g. labelling, information campaigns, etc.) that can harness the power of consumers to make informed buying decisions.

During the first two Nordic Climate Change Forum Workshops the focus has been on the **production side** of how to reduce GHG emissions in fisheries and aquaculture, and how to address competing uses of ocean space. In this Third Forum we propose to move the focus to the **demand side** i.e., to consumers and supermarkets as proxy for consumer behaviour with a view to harness the power that the market have for directing the demand towards climate friendlier food consumption. Likewise, the Forum will also seek to better understand how private companies in the value chain can be used to better inform, engage and educate consumers towards more environmentally friendly food stuff. Finally, the Forum will also address the policy actions that public authorities may consider taking with a view to help steering consumers on the right path. Combined, such efforts will increase food literacy.

The Workshop will start with an update on the latest climate change science as it relates to fisheries and ocean issues. National public and private initiatives and activities with respect to consumer information on climate friendly food across the Nordic countries will be reviewed thus ensuring that all participants are up to date on latest developments.

The Workshop will then seek to understand the state of the art with respect to life cycle analysis across the Nordic fisheries and aquaculture sectors. Life cycle analysis (LCA), a sine quo non method for food climate labelling, captures the greenhouse gas emissions through the value chain and is thus the crux of the matter in identifying which fish product has what level of greenhouse gas emission, measuring from “capture to table”. Identifying where the data are, the methodological challenges involved in establishing a comparative set of GHG measures for food products, with a focus on fish and fish products. This has implications for fisheries policy makers, fisher organisations, fish processors and supermarkets alike and covering fish products from both capture fisheries and aquaculture. A key issue is how proposed LCA methods are compatible across markets or whether they might constitute a trade impediment. In this regard, it is important to ensure Nordic coherence, and perhaps interoperability/equivalence of such systems across the Nordics, due to the close links between the fisheries markets.

Companies along the value chain (fisher organisations, processors, supermarkets) can play a key role in engaging and educating consumers about their products they put to the market. This will be the principal focus of the third part of the Workshop. This may involve information campaigns, consumer guides, educational tools, nudging in shops and restaurants all the way through to establishing the groundwork for certification systems that can alert consumers to GHG contents of the food stuff they consider buying. Likewise, the public policy toolbox includes information campaigns and labelling, but also taxes and subsidies as economic market instruments may be considered. Which of such policies and private initiatives are most effective in improving food literacy and moving consumers towards climate friendly food products is a central question to answer.

The Workshop will finish with a Roundtable where fisheries policy makers and stakeholders will provide ideas for how to bring forward the need for better consumer information for fish and fish products. This will also be an opportunity to set out pathways for future work on life cycle assessments and consumer information more generally. A proposed set of recommendations will be circulated before the workshop for consideration and stimulate the discussion at the Roundtable. These recommendations will be the key deliverable of the Forum.