Seafood as a Strategic Source of Food in the Context of Climate Change

13 December 2021, 15:00 – 17:00 CET

Online Event

MEP Gabriel Mato (EPP, ES)

Moderator:

- **Ernesto Penas Lado, Member, IUCN/CEM/FEG**

Speakers:

- **MEP Gabriel Mato (EPP, ES)**
- **MEP Francisco José Millán Mon (EPP, ES)**
- **Rosa Quintana Carballo, Conselleria do Mar, Xunta de Galicia**
- **Dr Manuel Barange, Food and Agriculture Organization**
- **Mark Dickey Collas, International Council for the Exploration of the Sea**
- **Ray Hilborn, University of Washington**
- **Anna Rindorf, National Institute of Aquatic Resources**
- **Gumersindo Feijoo, University of Santiago de Compostela**
- **Willow Battista, Senior Manager on Climate Resilient Food Systems, Environmental Defense Fund**
- **Lorella de la Cruz Iglesias, Deputy Head of Unit A2 on Blue Economy Sectors, Aquaculture and Maritime Spatial Planning, DG MARE, European Commission**

Opening Remarks

MEP Gabriel Mato

As an opening note, **MEP Gabriel Mato** highlighted the importance to **find a balance** between **meeting the goals of the Paris Agreement** against climate change and **generating employment and sustainable growth** in a way that it does not threaten food production. He emphasized the need to shift the current narrative and to recognize that aquaculture and fisheries are not the perpetrators of climate change. On the contrary, they are **significantly impacted by its effects**. Hence, on the one hand he stressed the importance to protect fisheries industries from the adverse impacts of strict climate regulation; on the other he recognized that innovation and investments in climate resilient techniques and practices are needed. Practically, he emphasized that small and medium size vessels should receive EU funding to replace their engines **only if the new engine consumes less CO2**. He recognized the importance of protecting those fisheries most exposed to climate change while also enhancing the resilience of the fisheries and aquaculture sectors. MEP Mato concluded by stating that since climate is changing rapidly, legislation should be **flexible and dynamic** in order to respond and adjust to these changes and to protect fisheries and aquaculture producers.

MEP Francisco José Millán Mon

In his remarks, **MEP Francisco José Millán Mon** stressed that the fisheries sector needs to be protected as it has the potential to be an **ally in the fight against climate change**. He also emphasized that fish is a great source of protein with little environmental impacts, hence it plays a key role also in the fight against climate change. Because of the extreme importance of aquatic food, both in terms of high nutritional value and low climate impact, he suggested to **highly reduce VAT for seafood products**. Furthermore, he believes that restrictive legislative measures penalize exporters; rather, he suggested that the EU should promote

equal opportunities between third parties' fleets and the EU fisheries sector, which is extremely efficient and highly regulated.

Rosa Quintana Carballo, Conselleria do Mar, Xunta de Galicia

Ms Rosa Quintana Carballo commenced her intervention by recognizing that climate change has brought both producers and consumers to find more sustainable diets. From this point of view, seafood is a source of animal protein low in carbon and more climate friendly than most land-based sources. In this regard, she presented Galicia (where people consume a high amount of seafood) as an example of how fish products can be at the basis of a healthy lifestyle and sustainable food practices. It is a priority for her to ensure sustainability in food production consistently, both for healthy and environmental reasons.
She further recognized that "**we are what we eat**" and that food production and consumption have to be carried out responsibly. Hence, she concluded by reminding those consumers have an active role in respecting the marine environment.

Panel Intervention

Dr Manuel Barange, Food and Agriculture Organization

The intervention of **Dr Manuel Barange** focused on the impacts of climate change on aquatic food security. He underscored that aquatic food production can play a significant role in fighting **undernourishment, malnutrition and hunger**. In fact, aquatic food is one of the most energy-efficient source of protein because of the **lower intensity of CO2 emission** it generates compared to other animal proteins. Moreover, seafood provides **key micronutrients**. For these reasons, FAO considers it an extremely important protein-source to include in diets. In this regard, Dr Barange presented FAO's priority program **Blue Tranformation**, which relies on three objectives: feeding the world through aquaculture intensification and expansion, with a target of **35-40% growth of global aquaculture by 2030**, produced sustainably; ensuring that **100% of aquatic systems are under equitable and effective management**; and improving fish

value chain efficiency, viability and inclusiveness, with a view on **increasing access to resources and reduce waste** in order to increase fish consumption.

Dr Barange also addressed the challenges that climate change poses to fisheries and aquatic ecosystems throughout the whole value chain: it affects their **productivity**, **distribution** and **seasonality.** Finally, the FAO provides some solutions: firstly, to **align** the Blue Transformation Agenda with the Climate Agenda; secondly, to **recognize win and losses** as a result of climate change and act accordingly; and thirdly to focus on **adaptation** for success.

He concluded by providing some takeaways: first, he stated that all food production systems have impacts that require tradeoffs; secondly, he underscored that when produced sustainably, fish products are the **ultimate nature-based solution**; thirdly, aquaculture must grow in the future with the **support of the policy sector**. Finally, he reminded the importance to act to reduce hunger and promote peace.

Mark Dickey Collas, International Council for the Exploration of the Sea

Mr Mark Dickey Collas, on behalf of International Council for the Exploration of the Sea, presented the management of fisheries in the context of climate change, with an European and North-East Atlantic focus. He underscored that climate change creates risks for European fisheries and ocean-dependent coastal communities. One of the consequence is fish species' migration from the South to the Nort-East Atlantic. He continued stressing that these challenges require **adaptative measures and an improvement of the governance and management systems in place.** In adaptation, he believes Europe needs to start by thinking of working on developing mixed fisheries advice which is so far severely underused.

He provided the example of Iceland as a successful story in the field of carbon mitigation: Iceland has worked to **reduce CO2 emissions in their fisheries processes,** partially by moving away from oil as a source of energy. This has led to improvement of Capelin catches by fishing season - which have the potential to add 0.8% to Iceland GDP.

As takeaways, he highlighted that change in Europe is much more gradual than in the North-East Atlantic, hence evidence is largely absent in the former. Then, he restated that climate change **risks vary by region**. Finally, he called for **cross-jurisdictional** management that can account for impacts across a wider system.

Anna Rindorf, National Institute of Aquatic Resources

Ms Anna Rindorf, from the National Institute of Aquatic Resources, highlighted the importance of **multi-species management**, as opposed to single-stock. Firstly, she stressed that the amount of a species in the sea varies from year to year, depending on natural conditions and on the intensity of fishing activities.

Secondly, she emphasized that fish are not caught in isolation: she stressed that optimizing catch for one species generally yields negative consequences on other ones, hence most fisheries depend on the overall fishing activity. In addition to that, fishing only one species leads to a predominance of other ones, resulting in undermining the balance within the ecosystem as a whole. Finally, she recognized in underreporting of catches within a single-stock management system an unintended consequence of the current system.

Ray Hilborn, University of Washington

Mr Ray Hilborn gave an overview of where greenhouse gases come from in the global food system, with a focus on fisheries. Primarily, one of the sources is linked to energy and fuel use (from both direct consumption and from other inputs such as packaging) and land conversion for agriculture. In his presentation, he stressed that production consumes the **largest amount of carbon,** but significant shares also come from the processing, transport (especially air transport), retail and consumption phases. Hence, the **entire food system has to be taken into consideration** when addressing the environmental impact of seafood.

Secondly, Mr Hilborn highlighted that in fisheries, **energy intensity is highly variable**: while some species are caught at an incredibly low carbon footprint (comparable in many cases to crops), some others require a much higher amount (similar to the volume used in the poultry and pork sectors).

Thirdly, he underlined the **great difference across capture fisheries and aquaculture**. Some very low-carbon production systems for aquatic food are seaweed and farmed shellfish, while among capture fisheries he highlighted small pelagic fishes and both salmon and pollock from Alaska.

Mr Hilborn concluded by presenting the key factors for reducing GHG in seafood systems: unfed aquaculture, feed conversion efficiency, no land transformation, renewable energy in processing, efficient fishing fleets (undertaken by few modern fishing vessels) and no air transport.

Gumersindo Feijoo, University of Santiago de Compostela

Mr Gumersindo Feijoo gave a presentation about the **carbon footprint of fisheries** and the Atlantic diet. He started by highlighting the two indicators that help to assess the environmental dimension of sustainability: **the carbon and the water footprint**.

While the processing, transportation and packaging phases can be highly variable, overall fish is considered a food with a **high level of protein** content and a usually very **low carbon footprint**. By presenting the **Atlantic and the Mediterranean diets,** he showed how, in matters of nutritional factors and carbon footprint, these two do not consistently differ from the vegetarian and the vegan diets.

To conclude, Mr Feijoo **emphasized four rules** to take into consideration in order to improve sustainability in diet that can be implemented by consumers. First, he considers it important to always acknowledge the **origin** of food, how and where fish is caught and processed. Second, **minimal packaging** is to be preferred when purchasing. Third, by reading the **labels**, it is possible to check whether the product fulfils certain social or environmental requirements. Lastly, he underlined the importance of considering the **seasonality** of products when accounting for their level of sustainability.

Willow Battista, Senior Manager on Climate Resilient Food Systems, Environmental Defense Fund

Ms Willow Battista, from the Environmental Defense Fund, presented **seafood for nutrition** under the **conditions of climate change** and gave some policy recommendations on how to better value seafood.

She initiated by stating that managing fisheries more sustainably and in a **climate adaptive** way could bring many benefits, both in terms of yields and climate resilience. She stated that

globally, **billions** of people depend on aquatic food for their animal source of protein: it is especially important for coastal communities in the Global South and the developing tropics, where vulnerability across nutritional and food insecurity are especially high. As a matter of fact, many countries in the Global South obtain more than **50% of animal protein from fish**, which is also an important source of various micronutrients. Recognizing and utilizing seafood for its micronutrient content can be a powerful tool to address nutrition insecurity around the world. Furthermore, she stated that fish can be a critical food source for **landless people** who cannot grow crops; and an important safety net during economic and climate driven shocks and geopolitical conflicts that might disrupt land-based food production. In addition to that, fish is often a more **affordable** source of protein and micronutrients than other foods. Improving the **sustainability, resilience and equity of seafood** production, processing, distribution and use can help us make progress towards the SDGs. In this regard, some improvements have taken place, such as the inclusion of aquatic food in the agenda of the UN Food System Summit of 2021, supported by some EU member states and the EU Commission. However, Ms Battista stressed that more work is required. Finally, she provided **five policy recommendations** for making use of seafood **as a climate smart source** of nutrition in a climate changed future: **integrate aquatic foods** into an holistic food system decision-making; **implement nutrition-sensitive management** of aquatic foods and supporting ecosystems; **support and elevate small scale fisheries** and mariculturists; **fund** aquatic food research, collaboration and innovation at scale; and **govern for equitable** distribution and access, by recognizing that availability, access and stability of food are all influenced by policy. Governing for equity, she emphasized, means **securing fishing and access rights,** especially for small scale fisheries and other marginalized groups, **building capacity** and **supporting small scale fisheries** in implementing climate resilient strategies and addressing inequitable nutrition flows.

Lorella de la Cruz Iglesias, Deputy Head of Unit A2, on Blue Economy Sectors, Aquaculture and Maritime Spatial Planning, DG MARE, EU Commission

Ms Lorella de la Cruz Iglesias confirmed that in the EU Green Deal, as well as in the Farm to Fork Strategy, the strategic role of aquatic food is recognized. Many are the acknowledged **benefits** coming from seafood consumption in terms of the relatively low carbon intensity and

high nutritional value. Moreover, the **Common Fisheries Policy (CFP)** is highly relevant for the fisheries sector. In this framework, the reason why there is no new action foreseen is because the **appropriate tools** are already present at EU level. Hence, the focus is on **implementation** of these policies. In this regard, she anticipated a report on the implementation of the CFP which is due by the end of next year and will consider how the CFP can address the challenges that climate change will raise for fisheries.

Concerning aquaculture, she underlined that, while there is legislation addressing sustainability, more can still be achieved: this is why Commission has adopted the **new strategic guidelines for a more sustainable and competitive EU aquaculture sector** that take into consideration the required actions to maximize the potential of aquaculture as well.

Overall, the Commission is asking for **more efforts** from the fishery and aquaculture sectors in order to achieve sustainability. Moreover, she focused on the importance of promoting an adaptive approach and of always recognizing a balance between social, economic and environmental benefits when evaluating practices for fisheries and aquaculture.

She concluded by stressing the importance of **consumer information**, which is undertaken, among others, within the Farm to Fork Strategy. To conclude, she put an emphasis on sustainability to be promoted throughout the **whole value chain,** which she believes is already somewhat addressed in the Farm to Fork Strategy as well.

Q&As session with the audience

At this point of the discussion, panelists were asked to answer some questions from the audience. The **main points** touched upon where the following.

Ms Willow Battista explained what can be done to try to address the problem of fish abandoning tropical areas, and how to compensate the countries who suffer from this loss. First of all, it is critical to pursue sustainable management of tropical fisheries in the near and medium term, and poleward nations have a responsibility and an interest in supporting local fishery managers in doing so. Then, it is necessary for these tropical nations to think about **a transition towards a different future**, considering new fisheries, new sectors, and even holistic transformation of their food systems and economies. When asked what are the

possibilities of developing an EU database system to inform consumers about the carbon footprint of aquatic food, **Ms Lorella de la Cruz Iglesias** signaled that the Farm to Fork Strategy's aim is to provide information on sustainability of food, which it aims to achieve also through a **labelling scheme**, foreseen for 2023. She stressed that the Strategy tries to establish a **horizontal framework on sustainability of** food, considered the key role of **consumer information**. She also emphasized that the nutritional quality of food is another important aspect of the Farm to Fork Strategy: the nutritional value is kept at maximum with the help of innovative practices throughout the whole value chain. **Mr Penas Lado** finally asked the panelists whether the Convention on Biological Diversity (CBD) will contribute to fish conservation. **Mr Ray Hilborn** seemed skeptical: while agreeing to the potential of the CBD he still said he found it unlikely that it could contribute to fish conservation. On the same question, **Mr Dickey Collas** stated that while the evidence is too weak to provide a certain answer, he looks forward for EU position on the matter. Finally, **Mr Manuel Barange** recalled the FAO Blue Transformation's aim to have 100% of oceans, seas and rivers under effective management, as opposed to the "30 by 30" CBD goal. This approach would include sustainable management and conservation measures with a percentage that can vary depending on the necessity of countries and regions, by always considering to have 100% of these areas under management. Ms Lorella de la Cruz Iglesias agreed with Mr Barange and she reminded the potential of fisheries policies in promoting effective management.

Closing Remarks

Ernesto Penas Lado, Member IUCN/CEM/FEG

To conclude, **Mr Ernesto Penas Lado** summarized the **key takeaways**. He emphasized that there is evidence that seafood is not only healthy food, but that it also has a comparative advantage in terms of impact on climate change. Secondly, he continued, this already low climate impact of seafood can be further decreased through policies addressing its carbon footprint. Mr Penas Lado then talked about **climate change as a disruptor that requires adaptation**, and not just mitigation measures: adaptation is necessary to change the

paradigm, from a market-based approach focused on single-species to a more **flexible, multi-species fisheries management**. He also stressed the importance of aquaculture, in particular of mollusks aquaculture, and the fact that fish food sources are not only **healthy**, but **affordable** and for this reason they give an essential contribution to global equity. He specified that in some cases seafood proteins require even lower carbon emissions that other vegan alternatives. Furthermore, production of seafood can and should increase in the future, with the help of adequate management. He also explained that modern techniques permit industrial fisheries to be sustainable as well. However**,** he concluded**, seafood tends unfortunately to be forgotten** in many ongoing debates on how to supply the world with healthy protein. Mr Penas Lado concluded by reminding to consider seafood as a fundamental contributor to food supply in the context of climate change.