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Feedback on the Proposed Focus Area for Regional Assessment on Offshore Wind in Newfoundland and Labrador

Atlantic Fixed-Gear Council

Introduction

In response to the request for feedback from the Regional Assessment (RA) Committee of Offshore Wind (OSW) Development in Newfoundland and Labrador (NL) on the proposed Focus Area (Figure 1), please accept the following input on behalf of the Atlantic Fixed-Gear Council.

As outlined in the Committee's request, the most recent proposed Focus Area has been defined based on physical constraints and parameters such as, the absence of icebergs, depths <300m, and limited wave height. The request notes that 'other factors' important for informing future planning, licencing, and impact assessment processes will be considered during the remainder of the RA, within the set-out Focus Area, where 'other factors' would include user conflicts with commercial fisheries.

Activities associated with OSW energy production require large ocean areas that will have varying degrees of impact on the marine environment and other ocean users, including the fishing industry, throughout all phases of its lifetime. These impacts must be considered throughout the entire OSW development process, including informing the rationale for narrowing the scope of the Focus Area. The following outlines a subset of the many areas where interactions with OSW and the fishing industry are likely to occur that must be closely examined in the context of defining a Focus Area.

While the RA Committee has outlined that there will be future opportunities for stakeholders to provide further input throughout the remainder of the RA, we highlight that the prospect of OSW has been rapidly expanding and expected turnaround times for stakeholder feedback into various phases of OSW development are often insufficient for the completion of in-depth reviews of RA documents, independent research, and consultation with our membership. Therefore, although the current request for feedback is intended to focus on the physical parameters used to narrow the Focus Area to its current iteration, our response includes details on key considerations relating to potential overlap of OSW and fisheries that should be considered in narrowing the Focus Area as well as informing future planning, licensing, and impact assessment processes.

Groundfish Fishing Activity in the Focus Area

The current proposed Focus Area for the RA on OSW in NL, as shown in Figure 1 below, directly overlaps with Northwest Atlantic Fisheries Organization (NAFO) Subdivisions 3Ps, 3Pn, and Division 4R. These areas have high commercial fishing activity. There are a number of directed and bycatch groundfish fisheries in these areas including, American plaice, Atlantic cod, Witch flounder, Atlantic halibut, Greenland halibut, haddock, pollock, redfish, and yellowtail flounder.

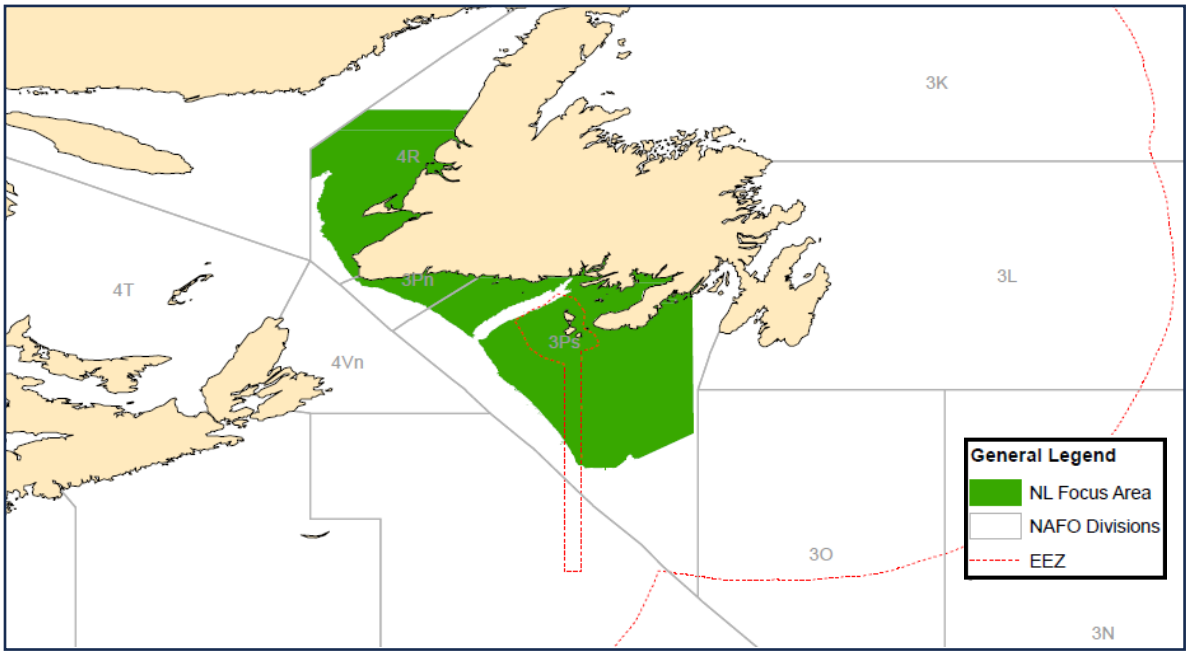

Figure 1: Overlap of the Proposed Focus Area (in dark green) with NAFO Divisions.

Atlantic Cod (*Gadus morhua*) in NAFO Subdivision 3Ps spans southern Newfoundland, from Cape St. Mary's to west of Burgeo Bank, and over St. Pierre Bank and most of Green Bank**.** The 3Ps cod fishery is managed jointly by Canada and France (in respect of St. Pierre et Miquelon). There are long standing catch histories for the 3Ps Atlantic cod fishery within the Focus Area. Along the Halibut Channel (east of the French waters) is an important area for the Mobile Gear (MG) fleet. The St. Pierre Bank and Placentia Bay are key fishing areas for the gillnet fishery, and there is a high level of fishing activity from the longline fishery on the southwestern edge of the St. Pierre Bank, the Haddock Channel, and Placentia Bay.

There is a directed fishery for Witch flounder (*Glyptocephalus cynoglossus*) in the proposed Focus Area, with significant fishing effort occurring east of the French Exclusive Economic Zone (EEZ), on the edge of the slopes of the Grand Banks, south of St. Pierre Bank, as well as the Halibut Channel and Green Bank.

The Atlantic halibut (*Hippoglossus hippoglossus*) habitat range is widely distributed across Canada's east coast and directly overlaps with the Focus Area. The Atlantic halibut fishery is one of the most lucrative groundfish fisheries in Atlantic Canada. The Atlantic halibut stock in NAFO Divisions 3NOPs4VWX5Zc is currently well within the Healthy Zone of the Department of Fisheries and Ocean's (DFO) Precautionary Approach (PA) Framework and has the potential to be a long-lasting, sustainable fishery resource.

Development of OSW infrastructure in this proposed Focus Area will directly and indirectly impact the fishing industry, as well as coastal communities for which these fisheries are providing significant economic contributions. There will be direct displacement of fishing activity,

population level influences on fish stocks, and effects to scientific stock assessment surveys, assessment results, and subsequent fisheries management decisions. Further, most repercussions of OSW on the marine ecosystem and fisheries are still poorly understood, and in many cases, they have simply not yet been identified.

Displacement of Fishing Activity

One of the more obvious and direct impacts of OSW development to our industry is displacement of fishing vessels and activity from critically important commercial fishing grounds. As previously mentioned, activities associated with OSW energy production require large ocean areas. For example, OSW farms in the United Kingdom's EEZ are already occupying considerable ocean areas at approximately 6,500 km^2 and the United States has designated more than 90,000 km^2 of ocean for OSW energy development. It is crucial to understand that displacement of fishing activity from OSW areas will be far greater than just an inability to fish in the physical location of wind turbine structures themselves, but that exclusion from fishing grounds can be much wider spread.

While there may not be regulatory restrictions put in place to prevent fishing in and around the turbines, maneuvering vessels within OSW developed areas will be challenging depending on vessel size, gear type and sea state, further reducing the amount of fishable ground for harvesters. Additionally, the impermeability of the OSW structures themselves will force fishing vessels to circumnavigate, resulting in lost fishing time and increased operational costs in an economy where fishing and seafood processing businesses are already experiencing the financial challenges of rapid inflation costs.

Implications for Fish Stocks

Impacts to commercial fishery resources from OSW energy development are expected to be both direct (e.g., physical avoidance of wind energy structures by fish) and indirect (e.g., changes in recruitment potential of fish from ecosystem perturbations).

Mobile marine organisms experiencing negative impacts from OSW development have the potential to relocate in search of more suitable habitat if more suitable habitat is available. Avoidance of OSW farms by fishes may result in short or long-term distributional changes of socially and commercially important groundfish stocks, which can lead to difficulties for harvesters in catching their quotas as well as challenges for scientific surveys. More passive marine organisms, such as phytoplankton and zooplankton (including various larval stages of fish), are less capable to relocate away from disturbances. Population effects from OSW farms for species with planktonic larvae (e.g., cod, halibut, flounder, etc.) are still very poorly understood, though it is expected that these effects will have implications for the recruitment potential of fish species in the area.

OSW energy operations can also disrupt physical oceanographic elements in surrounding areas, such as temperature, current, and ocean stratification. These changes can be acute and severe during the construction phase, or more chronic and long-lasting during the operational phase. All of which can affect lower trophic level community structures and ecosystem productivity. A better understanding of the potential OSW impacts to lower trophic level marine species is needed in order to effectively evaluate implications to ecologically and commercially important fish stocks.

Impacts to Fisheries Stock Assessments and Management Advice

OSW developments will create challenges for fisheries science through disruptions in stock assessment survey completion and changes to assessment methodology. These interferences will have implications for fisheries management decisions such as Total Allowable Catch (TAC) and quota setting. There are a number of fisheries-independent and fisheries-dependent scientific surveys occurring in the proposed Focus Area annually. These surveys provide critical scientific information on species distribution and abundance of various groundfish and shellfish species, as well as other biological and oceanographic information used to inform fisheries stock assessments and resource management decisions.

Some of these surveys have been providing scientific data since the 1980s and have well-established, long-term (30-40 year) time-series'. For examples, the DFO annual research vessel (RV) bottom trawl survey has been conducted in NAFO Subdivision 3Ps (directly within the Focus Area) since the early 1980s. This survey informs fisheries management decisions for Atlantic cod, Witch flounder, Atlantic halibut, and many other important fish and shellfish species in the area. There is also a DFO RV bottom trawl survey in 4RS (partially overlaps with the Focus Area) that has occurred since 1990 and provides critical scientific information used in the assessment of 4RS3Pn cod, Gulf of St. Lawrence Atlantic halibut, Greenland halibut, and Unit 1 and Unit 2 Redfish stocks. A mobile gear sentinel fishery program (bottom trawl) in 4RS3Pn has occurred since 1995, which provides data needed to calculate abundance index estimates for 4RS3Pn cod. There is also a fixed-gear (longline and gillnet) sentinel fishery program in place since 1998. The DFO-Industry Halibut Longline Survey is conducted throughout the Scotian Shelf and Southern Grand Banks (overlapping with the southern portion of the Focus Area) since 1998, providing data necessary to generate an index of abundance for the exploitable population of Atlantic halibut in the area. Through the RA process for OSW in NL, every effort should be made to clearly identify when and where annual RV surveys and fisheries-dependent data collection is occurring to ensure that impacts to these critically important surveys are avoided and mitigated wherever possible. Scientific survey work should be a key consideration when narrowing a Focus Area for OSW development.

Exclusion of these scientific survey vessels from areas of OSW farms may results in the inability for surveys to sample stock biomasses within the OSW area and therefore, risks underestimation of total and Spawning Stock Biomass used to assess the health of fish stocks. An underestimation

of biomass is likely to result in unjustified reductions in permittable harvest rates for fishers. Additionally, if exclusion of scientific survey vessels prevents adequate sampling coverage, resulting in large gaps in data needed for robust stock assessments, it is highly likely that fisheries management decisions will be overly precautious as a result of limited scientific information for which to base decisions upon.

The fishing industry is already experiencing the effects of overly cautious TAC and quota setting decisions by fisheries management as a response to lack of core fisheries data being collected on socio-economically important fish stocks in Atlantic Canada. Implementation of wind energy structures in areas where historical fisheries stock assessment surveys are conducted can displace the surveys, depending on the location of wind turbine placement and maneuverability of survey vessels around the turbines and subsurface cables. This can result in modifications to methodologies used to complete the survey work, which will in turn affect the information yielded by the surveys and subsequently, fisheries management decision-making. When methodologies and assessment frameworks require modification to adjust for such things as smaller survey footprints and gaps in data collection, there is significant time, effort, and other resources spent by DFO and stakeholders in developing and adopting modified or new stock assessment methods and frameworks. These processes can sometimes be several years in the making, while in the interim, overly precautionary quota and other management decisions continue to be made.

In addition to the potential exclusion of scientific survey vessels from sampling in OSW areas, it is possible that if fish physically relocate to avoid OSW areas, they may not be captured by the survey, which can distort estimates of biomass. Further, if fish congregate near OSW structures, this could exacerbate the inability for survey vessels to capture representative samples of fish, also leading to inaccurate estimates of stock abundance. The movement of fish resulting from OSW development and operation and disruptions in planned survey coverage will create challenges for stock assessment scientists to determine if changes in stock biomass and abundance estimates are real or perceived.

It is critical that the assessment process for OSW development engage with the appropriate experts in fisheries science and management throughout the RA process to support planning, development, regulatory review, and the impact analysis of OSW on fisheries and fisheries management in Canada. It is expected that impacts to fishery resources from OSW development, implementation, and operation will vary across species/stock and therefore, may require stock or species-specific mitigation and adaptation strategies.

Impacts to Fisheries Rebuilding Plans & Sustainability Certifications

OSW development and implementation also has the potential to unintentionally influence the perceived or actual success of fish stock rebuilding plans that are in place for stocks in or near the Focus Area (e.g., 3Ps Cod Rebuilding Plan). Rebuilding plans developed by DFO in

consultation with stakeholders use scientific information collected from RV and industry-led surveys to determine the health of the stock, develop projections of stock growth, and create stock-specific rebuilding plan objectives and targets under specific timelines. The risk of underestimates of stock abundance and biomass resulting from disruptions in scientific survey completion would also have similar implications for fisheries management decisions that are guided by rebuilding plans.

If survey coverage is disrupted and biomass indices are underestimated as a result, this may create a perception that we are not meeting rebuilding plan objectives and targets within the timelines set out by the plan, subsequently leading to continued low permitted catch levels for harvesters, and continued inability to achieve sustainability certifications (e.g., Marine Stewardship Council).

Increased uncertainty in stock abundance and biomass estimates can lead to either underharvest or overharvest of a fishery resource. This can have severe consequences for fisheries with sustainability certifications. Atlantic halibut in NAFO Divisions 3NOPS4VWX5Zc overlaps with current proposed Focus Area. This stock is currently well within the Healthy Zone of DFO's PA framework and has had an MSC certified fishery in place since 2013. OSW effects can hamper the potential for stocks like these to continue providing sustainable product to fish harvesters and processors in Atlantic Canada and to consumers worldwide.

Economic Impact

Economic consequences to the fishing industry will not only materialize as direct economic challenges faced by harvesters on the water from such things as reduced catches and increased operational costs but are expected to flow to thousands of people in the coastal communities relying on fisheries in the area.

A compilation of comprehensive economic data must be a key component of assessing the economic impact of offshore wind on the fishing industry. The potential economic repercussions from interactions between OSW and the fishing industry are vast and must be considered paramount throughout the planning, licensing, and impact assessment processes.

Concluding Notes

The prospect of offshore wind farms is rapidly developing, despite the long list of uncertainties that remain around the impact to the marine environment and fishing industries that rely on it. As is evident here, many of the potential impacts threatening the fishing industry are far less obvious than just the exclusion of fishing activity from wind energy turbine areas.

Overlapping interactions of OSW with fishery resources and the fishing industry can have very serious, long-lasting implications. It is imperative that in depth discussions with the fishing industry and engagement with experts in fisheries science and management occurs throughout the entire process of OSW planning, development, operation, and monitoring, including informing the rationale for narrowing the scope of a Focus Area.

As competition for ocean space continues to increase, with the prospect of offshore wind energy being only one of the latest considerations, coexistence of OSW with sustainable fisheries requires a strong understanding of OSW impacts to fisheries and the marine ecosystem to avoid, minimize, and mitigate impacts.

Thank you for the opportunity to provide input.

Sincerely,

Vanessa Byrne

Vanessa Byrne, on behalf of the Atlantic-Fixed Gear Council