North Pacific Fisheries Commission

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Implementation of an ecosystem approach to fisheries management

Submitted by NPFC Secretariat

The North Pacific Fisheries Commission (NPFC) came into force as an Inter-Governmental Organization (IGO) on 19 July 2015 and has been working since that date to manage all fisheries in the North Pacific not already addressed by other fisheries commissions with overlapping jurisdictions and to protect the ecosystems in which these fisheries occur. The Convention applies to the waters of the high seas area of the North Pacific Ocean excluding the Bering Sea and other high seas areas that are surrounded by the exclusive economic zone of a single state. Current Members are Canada, China, Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America, and the Republic of Vanuatu. The Republic of Panama is a Cooperating Non-Contracting Party.

For implementing an ecosystem approach to fisheries, the NPFC Convention makes reference to; 1) adopting measures based on the best scientific information available, 2) adopting and implementing measures in accordance with the precautionary approach and an ecosystem approach to fisheries, 3) assessing the impacts of fishing activities on fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks, 4) conducting prior assessments of the impacts of fishing activities to determine that those activities would not have significant adverse impact on vulnerable marine ecosystems, and 5) minimizing pollution and waste originating from fishing vessels, discards, catch by lost or abandoned gear, and impacts on other species and marine ecosystems.

The Scientific Committee (SC) has developed a 5-year Research Plan for 2017-2021 to provide scientific advice and recommendations to the Commission, which outlines priority research themes, including the rationale and specific areas of work, stock assessment for target species and bycatch species, ecosystem approach to fisheries, vulnerable marine ecosystems (VMEs), and data collection, management and security. Stock assessments for target species and bycatch species have the highest priority among the research areas since accurate stock assessments are critical to ensure the long-term conservation and sustainable use of fisheries resources in the Convention Area. Fisheries resources covered by the Convention include all fish, mollusks, crustaceans and other marine species with some exceptions. Eight of them are recognized as priority species: North Pacific armorhead Splendid alfonsino, Pacific saury, Neon flying squid, Japanese flying squid, Chub mackerel, Spotted mackerel, and Japanese sardine. The highest priority belongs now to the

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species with decreasing catches (i.e., Pacific saury and North Pacific armorhead) and increasing catches (i.e., Chub mackerel and Japanese sardine). Up to the present, stock assessment has only been made for some target species, including Pacific saury. Chub mackerel stock assessment activities have started. The SC Research Plan includes expanding stock assessments for all priority species and bycatch species. Given that many of the priority species are short-lived and their abundance fluctuates significantly year to year, the recruitment rate may not be determined by the number of spawners in any deterministic one-way interaction. Rather, oceanography and climate are suggested to be the main drivers not only for distribution patterns at different spatial scales but also for survival success. The effects of climate changes on fish stocks and ocean environments such as ocean acidification are being pursued in cooperation with PICES in accordance with NPFC–PICES Framework for Enhanced Scientific Collaboration in the North Pacific established in 2019.

Protection of VMEs is among the objectives of the Convention and internationally, steps have been taken to protect marine biodiversity of VMEs according to the FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas. The SC has developed its research plan to address this VME issue, which includes the review of the encounter protocol and the exploratory fishery protocol, development of ID guides for VME indicators and bycatch list, development of an NPFC VME map, definition of the footprint of fishing activities by gear type, SAI assessment on VMEs and marine species, and review of data availability. NPFC and FAO ABNJ Project hosted a joint workshop on VME held in Yokohama, Japan during 12-15 March 2018 to update NPFC's understanding of how fishing activities over seamounts impact VMEs in the Convention Area. The workshop brought together NPFC and global experts to review their assessment experiences from the World's Oceans and made recommendations to the NPFC Scientific Committee via the Small Scientific Committee on VMEs.

During the initial four-year period, NPFC has made significant progress in the management of fisheries resources and protection of marine ecosystems by adopting thirteen Conservation and Management Measures (CMMs), key in the ecosystem management and protection are the following:

- CMM 2019-01 on Information Requirements for Vessel Registration
- CMM 2019-02 to Establish a List of Vessels Presumed to have carried out Illegal, Unreported and Unregulated Fishing Activities in the Convention Area
- CMM 2016-03 on the Interim Transshipment Procedure
- CMM 2016-04 on Vessels without Nationality
- CMM 2019-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean
- CMM 2019-06 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northeastern Pacific Ocean

- CMM 2019-07 for Chub Mackerel
- CMM 2019-08 for Pacific Saury
- CMM 2017-09 for High Seas Boarding and Inspection Procedures
- CMM 2019-10 for Sablefish
- CMM 2019-11 for Japanese Sardine and Japanese Flying Squid
- CMM 2019-12 on the Vessel Monitoring System (VMS)
- CMM 2019-13 for the Compliance Monitoring Scheme

However, there are still a few more CMMs to be developed to strengthen compliance, such as a port inspection scheme to monitor and restrict landings and transshipment of IUU catches.

International Cooperation as a governance component of the ecosystem approach to fisheries is part of the NPFC mandate according to the Convention. For the conservation and management of fisheries resources and protection of marine biodiversity, NPFC has actively cooperated with other regional fisheries management organizations and relevant international organizations with similar mandates, including FAO ABNJ Deep-Sea Project, COFI, RSN, UN BBNJ, UNFSA, NPAFC, PICES, and WCPFC.

The level of the ecosystem approach to fisheries implementation by the NPFC is not comparable to that in other RFMOs, reflecting the fact that NPFC has been operational for only a few years. Although most target species and bycatch species and protection of VMEs have been addressed in the research plan, there are still gaps remaining for the assessment and monitoring of discards from fisheries, bycatch management, management of waste originating from fishing vessels, reducing catch by lost or abandoned gear, addressing social or economic component, risk assessments completed at either the vessel or industry level. Therefore, NPFC shall remain committed to implementing the ecosystem approach to fisheries through a stepwise approach based on research and operational plans already established.