

“Oceans and the law of the sea”

North Pacific Anadromous Fish Commission (NPAFC)
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NPAFC contribution to the UN Secretary-General report on
“Oceans and law of the sea”

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Executive Summary:

The North Pacific Anadromous Fish Commission (NPAFC) has promoted conservation and sustainability of anadromous stocks (Pacific salmon and steelhead trout) in the North Pacific Ocean through fisheries enforcement and scientific research since 1993. Since 2018, NPAFC implements five-year program entitled The International Year of the Salmon (IYS, see at <https://yearofthesalmon.org/>). In 2022, the IYS entered its final stage with the IYS Synthesis Symposium in Vancouver, B.C., Canada on October 4-6. The 2022 IYS Pan-Pacific Winter High Seas Expedition (hereafter 2022 IYS Expedition) have begun to address gaps in knowledge regarding the ocean phase of the salmon life cycle and have offered excellent opportunities for collaborating multilaterally with salmon-producing countries across the North Pacific to build knowledge that can improve our ability to manage and sustain salmon into the future.

The 2022 IYS Expedition is an international collaborative effort and the largest ever multinational survey to study salmon in the North Pacific Ocean during the winter and builds on previous IYS cruises into the Gulf of Alaska in 2019 and 2020. Five vessels from Canada, Russia, and the United States participated in the 2022 IYS Expedition between February and April of 2022. Their combined effort sampled 131 stations over approximately 2.5 million square kilometers in the Central and Eastern North Pacific Ocean, and they caught 2,321 salmon and steelhead. All the vessels conducted ecosystem surveys which included measuring water column properties, primary productivity measurements, zooplankton, micronekton, squid and fish sampling. An autonomous underwater glider with hydroacoustic capabilities was deployed in the northern Gulf of Alaska during the 2022 IYS Expedition to provide additional data on physical and biological conditions salmon face during the winter months. A total of 942 environmental DNA (eDNA) samples were collected during the survey representing an eDNA data set unprecedented in spatial coverage for the North Pacific Ocean. Two salmon sharks were successfully tagged and released, which will allow to gain some insight into the migratory patterns of these salmon predators.

Large array of collected samples for salmon genetic, physiological, and health research, hydroacoustic records, microplastic pollution net samples, and video recordings for floating macroplastic survey are delivered and processed in corresponding laboratories. All data collected as part of the 2022 IYS Expedition will be made publicly available via the IYS data catalogue: <https://iys.hakai.org/dataset>

As for the law enforcement activities, the NPAFC completed annual e-mail conference for the patrol season in November 2021. Four NPAFC member countries delivered 20 e-mail reports prepared in accordance with the established template. The combined monitoring activities in 2021 by NPAFC-related enforcement agencies included over 140 ship patrol days and 489 aerial patrol

hours. Canada provided with radar satellite imagery and analytic support to help identify dark fishing vessels and support surface patrols. The Global Fishing Watch contributed with intelligence support, including targeting and patrol planning analysis. Summary patrol reports show that Pacific salmon bycatch exists at the massive pelagic fisheries in the northwestern North Pacific Ocean, and this bycatch is significant. Reports also highlight a high incidence of vessels not transmitting an AIS signature or vessels transmitting incorrect AIS information as well as a noticeable trend where fishing vessels do not appear to be flying a flag to indicate the member state they are registered under. These disturbing findings will be further discussed by the Commission at the Annual Meeting as with our partners in the North Pacific Fisheries Commission (NPFC).

In July 2021, NPAFC Committee on Enforcement members attended at the 1st Virtual Global Fisheries Enforcement Training Workshop held by FAO and the International Monitoring Control and Surveillance (IMCS) Network. New development was performed by the Study Group on IUU Vessel Listing Process. Draft Terms of Reference for NPAFC IUU Vessel List was considered together with SPRFMO and NPFC experts and endorsed to present to the Commission at the 2022 Annual Meeting.