

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

