



**TECHNICAL AND COMPLIANCE COMMITTEE**

**Fifteenth Regular Session**

25 September – 1 October 2019

Pohnpei, Federated States of Micronesia

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**A PROPOSED RESEARCH PROJECT TO COMPARE WCPFC VMS DATA  
AND AIS DATA IN THE WCPFC HIGH SEAS**

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**WCPFC-TCC15-2019-DP03**

**13 September 2019**

**Proposal from Japan**

## **A proposed research project to compare WCPFC VMS data and AIS data in the WCPFC high seas**

Japan Fisheries Research and Education Agency (FRA) has been in a collaborative partnership agreement with the global non-profit organization, Global Fishing Watch (GFW), and the Australian National Center of Ocean Resources and Security (ANCORS) at the University of Wollongong to investigate illegal, unreported and unregulated (IUU) fishing, and strengthen transparency and governance of fisheries.

Among such collaborative work, we would like to draw the attention of CCMs to an interesting research project proposed by GFW and ANCORS, which intends to compare Automatic Identification System (AIS) data and aggregated WCPFC high seas VMS data. The attached describes objects, methodology, specifications of VMS data to be used for the proposed research project. Expected outcomes from the research project include;

- Estimate AIS data coverage
- Identify data gaps in WCPFC VMS data
- Estimate total fishing effort in the WCPFC high seas area

We believe this proposed project will increase transparency of high seas fishing activities and enable the further development of methodologies for estimating and verifying fishing effort estimates. This will bring significant benefits to our understanding of high seas fishing operations and improve the accuracy of AIS data for the purposes of scientific studies.

Japan proposes that this project be conducted as a WCPFC project because the results will be beneficial to all CCMs while the project needs to have access to VMS data. The proposed timeline is as follows:

- Jan-Feb 2020: Research team review data, design and methodology planning workshop
- Mar-July 2020: Analysis
- Aug 2020: Preliminary report presented to WCPFC Scientific Committee 2019
- Dec 2020: Final report submitted to WCPFC

Consistent with the rules and procedures for access to high seas VMS data for scientific purposes<sup>1</sup>, Japan shall include in our Part 2 Annual Report to the Commission information on the domestic measures that we have taken to ensure the confidentiality of the data and information received pursuant to these Rules and Procedures, and a statement affirming how we have complied with the data retention and destruction requirements of Section V of these Rules and Procedures.

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<sup>1</sup> Full title: Rules and Procedures for the Protection, Access to, and Dissemination of High Seas Non-Public Domain Data and Information Compiled by the Commission for the Purpose of Monitoring, Control or Surveillance (MCS) Activities and the Access to and Dissemination of High Seas VMS Data for Scientific Purposes, 2009.



## **Research project to compare WCPFC aggregated historical VMS data with AIS data on the WCPFC high seas**

**Japan Fisheries Research and Education Agency (FRA)  
Global Fishing Watch  
Australian National Centre for Ocean Resources & Security (ANCORS)  
University of Wollongong**

Japan's Fisheries Research and Education Agency, Global Fishing Watch (GFW) and the Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong are research partners in an innovative project to develop new open-source technologies and platforms to study fisheries and support ocean sustainability.

Our project aims to estimate Automatic Identification System (AIS) high seas vessel coverage. The study outcomes and AIS coverage estimates will be presented to the WCPFC Scientific Committee in 2020. These estimates will then enable WCPFC members and science providers to independently undertake their own subsequent studies of open-source AIS data and inform the subsequent design and implementation of WCPFC conservation and management measures. This will provide a form of technology transfer at no-cost to WCPFC members and thereby support implementation of Article 30 of the WCPFC Convention, and United Nations Sustainable Development Goal 14 which, among other things, commits to increase scientific knowledge, develop research capacity and transfer marine technology ... so as to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing States and least developed countries.

AIS is a maritime broadcast technology designed to support collision avoidance and safety at sea. Consequently, AIS is publicly accessible and can provide basic vessel information (identity, position, course, speed and heading) at a high frequency. This high frequency can provide sufficient data to enable research and policy development applications relevant to the conservation and sustainable use of marine biodiversity. However, in order to accurately measure fishing effort, it is important to understand the level of coverage of AIS in fishing fleets. While AIS coverage is increasing, it is not compulsory for the high seas in the WCPO Convention Area and is likely to be variable between fleets.

Our study proposes to compare aggregated AIS data from the Global Fishing Watch database with aggregated historical WCPFC high seas VMS so as to estimate fleet coverage. In order to avoid any breach of confidentiality provisions, the project will handle aggregated historical WCPFC high seas strictly in accordance with the Rules and Procedures for access to High Seas



VMS Data for Scientific Purposes<sup>1</sup>, as well as in close communications with the WCPFC Secretariat and the SPC-OFP.

We understand that the proposed request is consistent with the functions of the Commission, as articulated in Article 10(e); *'compile and disseminate accurate and complete statistical data to ensure that the best scientific information is available, while maintaining confidentiality, where appropriate'*. In this context, we request your approval to study aggregated historical WCPFC high seas VMS data within the following specifications:

- Aggregated to 1x1 degree at monthly intervals
- Aggregated to flag and vessel type
- Limited to 2015, 2016, 2017 and 2018 (older than 2 years as per data rules)
- Limited to the high seas

All data will be held within FRA in a secure facility at FRA HQ in Yokohama, and access will be limited to one FRA/GFW/ANCORS analyst. As per the 2009 Rules, the authorized management personnel will submit a data request form as per annex 1 of appendix 3, and sign the confidentiality agreement as per annex 2 of appendix 3 of the 2007 Rules and Procedures. We will then destroy all aggregated data as soon as the study is completed, within 12 months of receipt

The proposed timeline for our study is:

- Jan-Feb 2020: Research team review data, design and methodology planning workshop
- Mar-July 2020: Analysis
- Aug 2020: Preliminary report presented to WCPFC Scientific Committee 2019
- Dec 2020: Final report submitted to WCPFC

If you have any questions regarding our research project, please contact Dr Yoshioki Oozeki at [oozeki@affrc.go.jp](mailto:oozeki@affrc.go.jp). Project partner, Associate Professor Quentin Hanich at [hanich@uow.edu.au](mailto:hanich@uow.edu.au), will also be present at the Commission in December, and able to address any questions and provide further information if required.

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### **Japan Fisheries Research and Education Agency (FRA)**

**FRA** is a public organization, established on April 1, 2016 through a merger of the Fisheries Research Agency (originated from 9 institutes of Fisheries Agency of Japan, Ministries of Agriculture, Forestry and Fisheries) and the National Fisheries University. The FRA aims to maximize research and development (R&D) outcomes as the only comprehensive fisheries R&D organization in Japan. The FRA is contributing to the revival of Japan as a nation of fisheries by maximizing R&D outcomes.

**The Australian National Centre for Ocean Resources and Security (ANCORS) at the University of Wollongong** is a globally recognized academic center of excellence for ocean governance and marine resource security. We bring together teams of specialist lawyers, political scientists and international relations experts, geographers, marine biologists and social scientists to design, innovate and integrate ocean law, maritime management and marine policy. We provide real-world research outcomes that assist decision makers and enhance the quality of policy-making.

**Global Fishing Watch (GFW)** is an international non-profit organization committed to advancing the sustainability of our oceans through increased transparency. By harnessing cutting edge technology, our mapping platform allows anyone to view or download data and investigate global fishing activity in near real-time, for free. GFW was founded in 2015 thanks to the support of our [funding partners and technology and data providers](#).