



**TO ALL COMMISSION MEMBERS, COOPERATING NON-MEMBERS AND
PARTICIPATING TERRITORIES**

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**Tender to Review the Impacts of Recent High Catches of Skipjack on Fisheries on the
Margins of the WCPFC Convention Area**

Dear All,

Please find attached tender document to review the impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area for the WCPFC.

The deadline for applications is Wednesday, 7 December 2016. We would request that you please circulate as you deem appropriate to interested parties. You may also reference this information under Opportunities section at WCPFC website www.wcpfc.int.

Yours sincerely,

Feleti Penitala Teo, **OBE**
EXECUTIVE DIRECTOR



Tender

To review the impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area

INTRODUCTION

The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (Convention) entered into force in June 2004 creating one of the first regional fisheries management organizations to be established since the 1995 adoption of the United Nations Fish Stocks Agreement.

The objective of the Convention is to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean (WCPO) in accordance with the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and the Agreement. For this purpose, the Convention establishes a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC). The Commission Secretariat is based at Kolonia, Pohnpei, Federated States of Micronesia.

The Convention applies to all species of highly migratory fish stocks (defined as all fish stocks of the species listed in Annex I of UNCLOS occurring in the Convention Area and such other species of fish as the Commission may determine) within the Convention Area, except sauries. Conservation and management measures under the Convention are to be applied throughout the range of the stocks, or to specific areas within the Convention Area, as determined by the Commission. The Commission currently has 26 Members, eight Cooperating Non-Members, and seven Participating Territories. Additional information concerning the Commission, including meeting documents, is available from www.wcpfc.int.

The Commission in December 2015 endorsed a budget of USD 40,000 to review the impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area as one of SC work programme for 2016. The Terms of Reference below have been prepared to solicit expressions of interest from suitably qualified and experienced individuals, institutions or firms to undertake each study. Proposals will be reviewed by the Research Sub-Committee, with a view to agreeing a contract with the preferred consultant in December 2016.

OBJECTIVE

To identify the intensive fishing impacts of tropical tunas in the equatorial area on their spatial distribution and expansion to tropical and sub-tropical regions, recognizing concerns that have been raised by non-tropical coastal states about declines in the abundance of tropical tuna species in their waters.

SCOPE AND TASKS

Using up to date geo-referenced Pacific skipjack fishing data, a spatial fish population dynamics model integrating the relationships between environment and key mechanisms of tuna species ecology will be applied to Pacific skipjack fisheries. Optimal parameterization of the model will be achieved from catch, length frequency of catch and conventional tagging, and will be evaluated through statistical metrics. The analysis will be conducted with the recently released GLORYS2V4 ocean reanalysis (<https://www.mercator-ocean.fr/en/science-publications/glorys/>) assimilating satellite and in situ data at a spatial resolution allowing ocean mesoscale features to be represented. If needed, parameterization obtained at coarser resolution will have to be appropriately downscaled to the higher resolution to provide the same solution independently of the resolution used. Based on these simulations the connectivity of the skipjack population between the equatorial purse seiners fishing ground and the adjacent tropical then subtropical regions will be investigated. The interaction between fisheries in these distant regions will be explored as well as the impact of environmental variability.

- 1) Task 1: prepare and update the geo-referenced fishing datasets at highest possible spatial and temporal resolutions
- 2) Task 2: Prepare and update the ocean reanalysis GLORYS2v4 and associated satellite-derived primary production forcing fields to cover the period 1998-2016.
- 3) Task 3: Downscale model skipjack parameterization on the new GLORY2v4 $\frac{1}{4}^{\circ}$ x week configuration.
- 4) Task 4: Evaluate simulations results with appropriate metrics and data. Compare with other stock assessment studies.
- 5) Task 5: Analyze the impact of environmental variability and fishing
- 6) Task 6: Run additional simulations to quantify the connectivity between different fishing grounds, especially between the equatorial purse seine fishing ground and the Japanese domestic sub-tropical fisheries.
- 7) Task 7: Explore otolith data available to analyse growth differences in tropical, subtropical and Japanese waters.
- 8) Detail the results in a report.

OUTPUTS AND SCHEDULES

The outputs of the project will be:

- Submission of a draft report to the Secretariat by 30 April 2017 for review by the Research Sub-committee (RSC).
 - RSC comments will be forwarded to the author by 31 May 2017.
- The author will address RSC comments and provide the final report to the Secretariat by 03 July 2017.
- The author will present the final report at the Thirteenth WCPFC Scientific Committee meeting (SC13) (an estimate of the costs involved in undertaking the consultancy should include the travel cost required for the contractor's presentation at SC13 in the Cook Islands, August 2017)

EXPRESSIONS OF INTEREST

The consultancy will commence as soon as possible after the selection of the winning bid. Bids should include:

- a. a capability statement detailing qualifications and relevant experience for individual team members and/or the agency bidding for the consultancy;
- b. a work plan with milestones, a timetable for delivery of the consultancy outcomes and an estimate of the costs involved in undertaking the consultancy;
- c. contact details for individuals who can comment on previous work by the bidder that is relevant to this consultancy.

Bids should be no more than 8 single spaced pages. In assessing the merits of bids received, cost efficiency and cost effectiveness will be important considerations. If needed, additional information can be obtained from the Finance and Administration Manager (Aaron Nighswander) at Aaron.Nighswander@wcpfc.int.

All tenders, including fees and travel costs, shall be submitted by Wednesday, 7 December 2016 to Aaron.Nighswander@wcpfc.int.