INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS
COMMISSION INTERNATIONALE POUR LA CONSERVATION DES THONIDES DE L'ATLANTIQUE
ICCAT CICTA CICAA
COMISIÓN INTERNACIONAL PARA LA CONSERVACIÓN DEL ATÚN ATLÁNTICO

Madrid, 13 May 2019

ICCAT CIRCULAR # 2907 / 2019

SUBJECT: CALL FOR TENDERS – TERMS OF REFERENCE – ADDITION OF SWO DISTRIBUTION MODEL TO THE LONGLINE SIMULATOR STUDY

I should like to transmit to you the attached Terms of Reference for a Call for Tenders for an addition of swordfish distribution model to the longline simulator study.

I would be grateful if you could distribute this call for tenders to qualified individuals and companies that might be interested.

Please accept the assurances of my highest consideration.

Executive Secretary

Camille Jean Pierre Manel

COMISION INTERNACIONAL - ICCAT - Conservación AT. ATL.

DISTRIBUTION:

- **Commission Officers:**

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- **Cooperating Parties, Entities, or Fishing Entities**

Attachment: Call for tenders.

CALL FOR TENDERS

TERMS OF REFERENCE

ADDITION OF SWORDFISH DISTRIBUTION MODEL TO THE LONGLINE SIMULATOR STUDY

1. Background and Objectives

Knowledge of habitat use, and seasonal migrations of pelagic fish stocks are necessary for the proper management of these species, but this information is often lacking. Quantitative species distribution models (SDM) can provide this information by pairing detailed environmental data with satellite tag information using a habitat suitability framework. A species distribution model has been successfully developed for blue marlin and has been used to examine different methods of CPUE standardization when paired with a longline simulator. Recently, the ICCAT Working Group on Stock Assessment Methods (WGSAM) recognized that a swordfish species distribution model would provide a useful tool for gaining information on stock structure and movement in the Atlantic. In addition, these species distribution models provide the necessary base model for ongoing work with the longline simulator tool (LLSIM). Both WGSAM as well as the Swordfish Working Group has recommended that a swordfish SDM help support this work with LLSIM and will significantly increase the utility of the simulator. WGSAM also recognized that including more species in the LLSIM could be used to address challenges in CPUE standardization, including the characterization of targeting as well as how to handle conflicts between longline indices that cover different parts of the stock distribution.

It is now a generally accepted fact that variation in the planet's climate and its effects on the world's oceans is increasing. For marine fish, specifically those of the highly migratory nature, this increased climate variation has led to changes in distribution, migratory patterns, and susceptibility to various fishing gears. These changes become especially problematic when they manifest themselves through the fishery dependent indices of abundance (such as catch-per-unit-effort, or CPUE) used to assess the status of the stocks, such as is done routinely by the International Commission for the Conservation of Atlantic Tuna (ICCAT).

There is no clear, superior, objective method for standardizing indices of abundance, such as CPUE, and no accepted best practice. This information is a fundamental requirement of stock assessment and the outcome can still be swayed as much by the bias of the participants as by the data. One reason for this is that controlled experimentation is impossible. The problem is also growing in complexity because changes in the climate are shifting the distributions of species' habitats which can violate stationarity assumptions of common statistical methods.

Recent published efforts in the form of a blind study could not prescribe advice regarding "best practices" for the task of standardization. A rigorous factorially designed study can provide more effective advice, by examining how the level of catch and effort data aggregation effects the accuracy and bias of the resulting index of abundance.

2. Contractor Tasks

- Work with CPC's (e.g. USA, Canada, EU-Spain, EU-Portugal, etc.) to obtain available pop-up satellite data from swordfish within the Atlantic and develop habitat preference curves from the data to develop swordfish species distribution model;

- Include the results of the swordfish SDM with those of the blue marlin SDM within the longline simulator, enabling studies on by-catch CPUE, by-catch avoidance, swordfish migration patterns and stock boundaries;

- Conduct factorial design study to develop best-practices for CPUE standardization.

3. Deliverables

- The successful bidder shall provide a **SCRS document** to be presented during the 2020 Working Group on Stock Assessment Methods meeting and possibly the Swordfish Working Group meeting. Such document shall describe, in detail, the methodology and preliminary results obtained during the study.

- Comments on the above mentioned SCRS document that might be provided by the Working Group on Stock Assessment Methods, the SCRS and/or the Secretariat, shall be taken into consideration by the contractor, and included in a **draft final report**, to be submitted to the Secretariat no later than **15 November 2019**. The draft report shall include a:

  a) Executive summary;

  b) Full description of the work carried out;

  c) Detailed description of final results achieved.

- List of references and literature cited. The **final report** shall be updated taking into account the comments provided by the ICCAT Secretariat and the rapporteur of the WGSAM and be submitted by **15 December 2019** at the latest.

4. Contractor Minimum Qualifications

- Documented multi-year experience in species distribution models (e.g. Goodyear 2017) and the longline simulator, Arc Info, commercial logbook and observer data analysis, and PSAT tag data.

- University degree in one of the following: fisheries science, marine biology, statistics, natural sciences, biological sciences, environmental sciences or closely related fields (in case of individual scientists).

- Excellent working knowledge of at least one of the three official languages of ICCAT (English, French or Spanish). A high level of knowledge of English is desirable.

5. Submission of bids

Scientists and public or private Scientific Institutes or entities interested shall submit detailed offer(s) only to the attention of Mr. Camille Jean Pierre Manel, the Executive Secretary of ICCAT, at the following address: camille.manel@iccat.int and Ms. Ana Martinez (ana.martinez@iccat.int) by **1 June 2019 at the latest**, including:

a) A description of methodology to be used;

b) Declaration of commitment of the provision of access to pop-up satellite data;

c) The budget proposal;

d) A short *Curriculum vitae* of the tender (in case of individual scientists, i.e. the 5 most relevant papers and involvement in recent CPUE standardization, fishing gear simulation, or stock assessment projects;

e) The name, address, and telephone number of the tendering body;

f) The institutional and administrative background of the tendering body (e.g., statutes, type of institution, annual budget, budget control procedures, etc.), if applicable;

g) Acknowledgement of this Call for Tenders; and

h) A statement specifying the extent of agreement with all terms, conditions, and provisions herein included.

If the tender is submitted by an institute, it must indicate the expert(s) who will be dedicated to the design and programming tasks and that he/she be available to attend the 2020 Working Group on Stock Assessment Methods meeting. Offers sent after the deadline or that fail to furnish the required documentation or information, or reject the terms and conditions of the Call for Tenders will not be considered.

Interested scientists and public or private Scientific Institutes or entities interested to apply shall provide a detailed budget and clearly identify costs related to main activities of the work (e.g. labour, including estimated number of days of work; travelling and subsistence).

For additional information or clarifications please contact the Secretariat at: miguel.santos@iccat.int.

6. Selection of bids

The ICCAT Secretariat will make a selection of the offers. Following the selection process, the ICCAT Executive Secretary will notify the entity selected for the contract as soon as the selection process is completed.

Contracts will be awarded on the basis of competitive tendering and the evaluation of proposals will be undertaken objectively, consistently and without bias towards particular suppliers. Tenders will be evaluated against a pre-determined set of criteria, which include: (i) cost; (ii) proven track record; (iii) technical merit based on work plan; and, (iv) flexibility to future changes to requirements.

The ICCAT Secretariat will examine each tender received and make recommendations as to which tender is the most economically advantageous. Once the decision to award the contract has been made, both the successful and unsuccessful tenders will be notified. Unsuccessful tenders may request a detailed letter explaining the reasons for the decision and the relative characteristics of their bid compared to the winning bid.

7. Duration of the contract

The work under this contract shall be concluded by **31 December 2019**. If required and strictly necessary, the contract may be is opened for extension, depending on funding availability and on the priorities of the ICCAT Working Group on Stock Assessment Methods.

8. Payment details

Disbursements will be made according to the following schedule:

1. 40% of the total amount of the contract upon signing of the contract;

2. 40% of the total amount of the contract upon submission of the SCRS document and its approval by the WGSAM;

3. 20% after the approval of the final report by ICCAT upon incorporation of comments made by ICCAT.

9. Logistics

The text report shall be in MS Word or compatible software. All other documents provided by the Contractor must be in Open Office, Latex or compatible software. All documents submitted must be in English, French or Spanish.

10. Copyright

All the material produced by the Contractor will remain the property of ICCAT. All software written by the Contractor will be licensed under GLP or similar open source licence.

For additional information concerning this Call for Tenders, please contact ICCAT Secretariat at the following address: info@iccat.int.