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 – September 6, 2012

ICCAT CIRCULAR # 4172 / 2012

SUBJECT: TERMS OF REFERENCE – CALL FOR TENDERS – GBYP 03/2012 MODELLING APPROACHES: SUPPORT TO BFT STOCK ASSESSMENT (ICCAT/GBYP Phase 3 – 2012)

I have the honor to transmit to you the attached the Terms of Reference - Call for Tenders GBYP 03/2012 for "**Modelling Approaches: Support to BFT Stock Assessment**" of the ICCAT Atlantic-Wide Research Programme on Bluefin Tuna (GBYP).

This information has been translated to French and Spanish by the ICCAT Secretariat.

Please accept the assurances of my highest consideration.

Driss Meski
ICCAT Executive Secretary

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Attachment: Call for Tenders GBYP 03/2012

TERMS OF REFERENCE - CALL FOR TENDERS – GBYP 03/2012

Modelling Approaches: Support to BFT Stock Assessment

ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA (ICCAT/GBYP Phase 3 – 2012)

Background and objectives

The objectives of the comprehensive ICCAT Atlantic-Wide Research Programme on Bluefin Tuna (GBYP) are to improve data collection, knowledge of key biological and ecological processes, assessment models and management.

An important element of the programme is to develop a robust advice framework consistent with the Precautionary Approach. This requires the development of new stock assessment methods that take into account the main sources of uncertainty and utilise the new data sets and knowledge provided by the GBYP. New data sets include for example historic catch and effort data, aerial surveys of spawning aggregations and tagging of juveniles. In order to evaluate novel approaches the SCRS is developing a Management Strategy Evaluation (MSE) framework that includes a simulation or Operating Model. This will allow current and alternative assessment and advice frameworks to be evaluated with respect to their ability to meet multiple management objectives. To support the SCRS work, the GBYP Steering Committee decided to include among the objectives of Phase 3 of the project the analysis and preparation of new data sets and the development of new approaches to stock assessment taking into account the different sources of uncertainties.

The main research activities identified by the Steering Committee, in addition to the Risk Assessment, were the following:

a) Statistical conversion of catch-at-size to catch-at-age

The current stock assessment method used for bluefin is based on virtual population analysis of catch-at-age data derived by age slicing catch-at-size data. Under the GBYP, age length keys (ALK) are being developed. This call is to develop documented code in the form of an R package that can be added to the ICCAT software catalogue to apply multiple age length keys to the catch-at-size data, where such data could have been sampled from strata different (e.g., different area/time) from those used to create the ALK.

b) Data imputation

Data for stock assessment by ICCAT is in the form of Task I and Task II. Task I are nominal annual catch by species, region, gear, flag. Task II are catch and fishing effort statistics for each species by small area (1x1 degree squares for most gears, 5x5 degree squares for longline), gear, flag, and month. In the bluefin tuna assessment these data are often combined by extrapolation across strata. However many strata are missing and improper handling of missing values may distort the results. This call is to develop statistically rigorous methods for imputation of missing values.

Contractor tasks

The Contractor will work in close consultation with ICCAT-GBYP and the ICCAT Population Dynamics Expert.

a) Statistical conversion of catch-at-size to catch-at-age

The Contractor shall create software to be used with the ICCAT catch-at-size databases and the ALKs collected under the GBYP. The utility of the software should be demonstrated and compared to current methods. The contractor will provide source code, preferably as an R package that will be submitted to the ICCAT software catalogue.

b) Data imputation

The Contractor should develop a data imputation algorithm to combine Task I and Task II data and provide estimates of uncertainty. The software must be documented and evaluated using a test data set that will be provided by ICCAT.

Contractor minimum qualifications

- A minimum of 5 years of experience in stock assessment and management advice.
- University degree in any of the following: Mathematics, Statistics, Engineering, Fisheries Science, Marine Biology Natural Sciences, Biological Sciences, Environmental Sciences or closely related fields.
- Excellent working knowledge of one of the three official languages of ICCAT (English, French and Spanish). A high level of knowledge of English is highly desirable.

Request for bids

Scientists and public or private Scientific Institutes or entities interested should submit an offer to the attention of Mr. Driss Meski, the Executive Secretary of ICCAT, at the following address: driss.meski@iccat.int by **September 30, 2012,** including:

a) A detailed offer, which shall include a description of methodology to be used.
b) A short Curriculum *vitae* of the tender (in case of individual scientists) and of any collaborators, i.e., the 5 most relevant papers and involvement in research projects or management bodies.
c) An estimated budget which shall not exceed €10K for each item.
d) The name, address, and telephone number of the tendering body.
e) The institutional and administrative background of the tendering body (e.g., statutes, type of institution, annual budget, budget control procedures, etc.), if applicable.
f) A detailed list of any subcontracts.
g) Acknowledgment of this Call for Tenders.
h) A statement specifying the extent of agreement with all terms, conditions, and provisions herein included.

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.

The Contractor should be available to report to the Working Group on Stock Assessment Methods (WGSAM), the Bluefin Tuna Species Group (BFTSG) and the SCRS; if so required, reasonable expenses will be paid.

The ICCAT Secretariat will make a selection of the offers, in consultation with the ICCAT GBYP Steering Committee. Following the selection process, the ICCAT Executive Secretary will notify the entity selected for the contract by **October 10, 2012**, at the latest.

Deliverables

a) Statistical conversion of catch-at-size to catch-at-age

1) An SCRS paper that evaluates the performance of the method with respect to current methods.
2) Software available as R routines if it is the case, methods or classes with full documentation for submission to the ICCAT software catalogue.

A final report is to be submitted by **January 4, 2013**, at the latest, to the GBYP Coordinator (gbyp@iccat.int) and to the Population Dynamics Expert (laurie.kell@iccat.int).

b) Data imputation

1) An SCRS paper that evaluates the performance of the method with respect to current methods using a test data set that will be provided by ICCAT.
2) Software available as R routines if it is the case, methods or classes with full documentation for submission to the ICCAT software catalogue.

A final report shall be submitted by **January 4, 2013**, at the latest, to the GBYP Coordinator (gbyp@iccat.int) and to the Population Dynamics Expert (laurie.kell@iccat.int).

Evaluation

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, (iv) flexibility, and (v) contribution to the overall objectives of the GBYP.

The ICCAT Secretariat, in coordination with the GBYP Steering Committee, 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.

Payment details

Disbursements will be made according to the following schedule:

- 50% of the total amount of the contract upon signing of the contract;
- 50% after the approval of the final report by the ICCAT SCRS upon incorporation of comments by the ICCAT GBYP Steering Committee.

Logistics

All documents provided by the Contractor must be in Open Office, Latex or compatible software, all documents submitted must be in English, French or Spanish.

Copyright

All software written by the Contractor will be licensed under GLP or similar open source licence.

For information concerning this call for tenders, please contact the Program Coordinator at the following address: antonio.dinatale@iccat.int