



Madrid, 3 August 2015

ICCAT CIRCULAR # 05328/2015

**SUBJECT: TERMS OF REFERENCE – CALL FOR TENDERS – ICCAT GBYP (07b/2015)
ADVICE ON CLOSE-KIN GENETIC TAGGING STUDY (ICCAT GBYP
Phase 5)**

I have the honour to transmit to you the attached Call for Tenders ICCAT GBYP 07b/2015 for “Advice on Close-Kin Genetic Tagging Study” of the ICCAT Atlantic-Wide Research Programme on Bluefin Tuna (ICCAT GBYP).

Please accept the assurances of my highest consideration.



Driss Meski
Executive Secretary

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Attachment: Call for Tenders ICCAT-GBYP 07b/2015.

CALL FOR TENDERS ICCAT GBYP 07b/2015

TAGGING PROGRAMME – ADVICE ON CLOSE-KIN GENETIC TAGGING STUDY ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA (ICCAT GBYP – PHASE 5)

ICCAT-GBYP Background and objectives

The main objectives of the ICCAT Atlantic-Wide Bluefin Tuna Research Programme (GBYP) are to improve: (a) the understanding of key biological and ecological processes, (b) current assessment methodology, (c) the management procedures, and (d) advice.

Key tasks are to reduce uncertainty in stock assessment and to provide robust management advice. This requires improved knowledge of key biological processes and parameters. However, currently almost all the data used in stock assessments are obtained from the fisheries-dependent data. It is therefore important to obtain data from alternative sources, such as tagging studies, in order to verify the assumptions made when conducting the assessments.

One of the major research tasks under the ICCAT Atlantic-wide Bluefin Tuna Research Programme (GBYP) is a large, wide and intensive scientific tagging program to address several important biological and ecological topics regarding Atlantic bluefin tuna as well as to possibly provide independent estimates of abundance and/or fishing mortality rates.

Many assumptions used in the previous assessments, such as stock structure and natural mortality, have been called into question by recent studies, e.g. Carlsson *et al.* (2003) who suggests that bluefin have a complex population structure with genetic differences within the Mediterranean and central North Atlantic. A well-designed tagging programme, developed over a schedule of several years and with a progressive methodological approach, will therefore be important in improving the understanding of bluefin tuna ecology and ethology and for developing better stock assessment methods.

Several tagging options mostly based on conventional tagging have been considered by the tagging design. The Report of the First GBYP Operational Meeting on Tagging, held in February 2011, provides additional background elements (http://www.iccat.int/Documents/Meetings/Docs/2011_GBYP_WORKSHOPS_ENG.pdf). The ICCAT/GBYP Tagging Design, product of an earlier call for tenders, providing the optimal distribution of tagging activities among the various fisheries as well as the ICCAT/GBYP *Tagging Manual* are available at: <http://www.iccat.int/GBYP/en/Products.htm>. Both documents are provided in the original language only, as delivered to ICCAT. The GBYP has implemented a conventional tagging programme in Phases 2 to 4, but problems in a cost-effective approach for tagging and difficulties of an implementable approach for obtaining data for estimating reporting rates have led to the suspension of this program in Phase 5. As such, the GBYP is seeking advice on alternative tagging approaches for obtaining estimates of abundance.

The above two documents did not include the recent scientific development of the close-kin genetic tagging approach. The close-kin approach is a method that uses the frequency of closely related individuals (e.g. parent-offspring, siblings) in a sample to estimate abundance and other vital rates of populations. The close-kin method provides an estimate of the absolute biomass and/or the trend in biomass, which can be directly used in a stock assessment or harvest control rule. As with other genetic methods the cost-effectiveness depends on the availability of suitable samples, the costs of developing appropriate markers and sufficient understanding of the life-history of the species. The method was tested and used in southern bluefin tuna and performed very well and is now being considered as a method for routine long-term monitoring of the spawning stock.

The ICCAT GBYP Steering Committee is now requesting a report for providing a detailed overview of the close-kin genetic tagging carried out so far on tuna species and an evaluation of possible costs for properly implementing a close-kin genetic tagging program for the Atlantic bluefin tuna (*Thunnus thynnus* L.) in its distribution range; this report will be the expert advice for GBYP on this subject.

Scientific institutes, individual experts and public or private entities are asked to submit tenders for carrying out this short-term study.

Contractor tasks (TORs)

The Contractor shall provide a comprehensive report, including the following points:

- a) Describe in a clear and synthetic way the close-kin genetic tagging and its uses for assessment purposes, including the MSE;
- b) Overview of the close-kin genetic tagging activities carried out on tuna species in various areas;
- c) An evaluation of the potential to apply a close-kin genetic tagging method for obtaining estimates of the size of the spawning population for eastern Atlantic bluefin including sample size for various level of precision ranging from CV's of 10-30%;
- d) A detailed experimental design including the steps and timeframe for the implementation of such a program including realistic sampling options and strategies;
- e) A comprehensive consideration of the assumption involved and how it might be tested and dealt with to ensure that robust estimates are obtained (e.g. stock structure; skipped spawning and relative spawning potential);
- f) The feasibility and benefits of combining a close-kin genetic tagging for eastern and western Atlantic bluefin;
- g) Potential risk and strategies for minimizing them;
- h) Estimate a possible budget including a breakdown for the various components (e.g. sampling; genetic analyses, statistical analyses) for carrying out a reasonable close-kin genetic tagging for the Atlantic bluefin tuna in its distribution range within the ICCAT Convention area;
- i) An evaluation of the potential to combine a close-kin genetic tagging program with a mark-recapture genetic program for juveniles including sample sizes, sampling strategies and additional cost.

This contract completion date is **19 February 2016**.

Contractor minimum qualifications

- Documented experience in bluefin tuna or tuna-species studies or close-kin genetic tagging activities; previous experience close-kin genetic tagging will be preferred.
- Knowledge of the Atlantic bluefin stock, its biology and fisheries;
- PhD degree in biological, natural, environmental or fishery sciences;
- Excellent working knowledge of one of the three official languages of ICCAT (English, French, Spanish). A high level of knowledge of English is highly desirable.

Request for bids

Interested entities 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 **31 August 2015**, including:

- a) Acknowledgment of this Call for Tenders (**ICCAT GBYP 07b/2015**)
- b) A detailed offer, based on the objective of this Call for tenders (TORs), for the purpose of the draft final report (**Deliverable #1**) and the final report (**Deliverable #2**). Departures from the TORs may be made with justification.
- c) The curriculum vitae in case of individual expert, including personal address and contact and the tax ID code;
- d) The curriculum of the institution(s) or entity(ies) applying for this specific GBYP task, with any documented experience in this field, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information), in case of institutional bids, including the official address and contact and the tax ID code;
- e) A preliminary estimated budget for carrying out the work (overhead to cover administrative and general costs could be admitted within a maximum limit of 10% of the personnel costs).
- f) The name, address, and telephone number of the tendering body;
- g) The bank account of the tendering body, (bank name, account number, IBAN and SWIFT codes), and the IVA=VAT identification code;

- h) The institutional and administrative background of the tendering body (e.g., statutes, type of institution, annual budget, budget control procedures, etc.).
- i) A detailed list of any subcontracting activities;
- j) A declaration that the offering institution will follow the present Call for Tenders, and/or approved modifications agreed upon, and the administrative rules specified in the contract;
- k) A declaration that all the comments eventually made on the draft final report (**Deliverable #1**) will be incorporated in the final report (**Deliverable #2**) prior for submission to the ICCAT SCRS.
- l) A declaration that the expert or the staff and all the subcontracted staff will be covered by full insurance for the work to be carried out according to the Call for Tenders, excluding ICCAT from all responsibility concerning the job to be done by each offering institution;
- m) A statement specifying the extent of agreement with all terms, conditions, and provisions herein included, particularly specifying the date for the draft final report (**Deliverable #1**) and the date for the final report (**Deliverable #2**).

The ICCAT Secretariat will make a selection of the offers and will immediately notify the result of the selection process.

Offers that fail to furnish the required documentation or information, or that reject the terms and conditions of the Call for Tenders will not be considered.

Contractors can be either research institutions, such as government or private laboratories, universities, or private consultancy firms, or individual scientists or experts or other entities having the qualifications required.

The Contractor should be available to report to any meeting requested by ICCAT.

Deliverables

#1 The draft final report to be submitted at the latest by **8 February 2016**, including comments on:

- I. The scientific report, taking into account the relevant scientific literature, containing the following elements:
 - a) Brief overview of close-kin genetic tagging studies conducted on other species, including relevant technical specifications and sampling protocols, the main results and the problems encountered when carrying out the activities;
 - b) Review of the genetic sequencing work conducted on Atlantic bluefin tuna to date;
 - c) Review of tissue sampling programs conducted through the GBYP and other programs, including fishery sampling and larval surveys;
 - d) Experimental design for a pilot study to establish the feasibility of close-kin genetic tagging for estimating the abundance of spawning bluefin tuna within the ICCAT Convention area, taking into account the information obtained pertaining to bullets (a) to (c) (including the possibility that there may be more than one subpopulation utilizing the area). The design should include a preliminary appraisal of the cost and sample sources.
 - e) An Executive Summary, including recommendations.
- II. A Power Point presentation of the main conclusions.

#2 The final report, to be prepared taking into account any comments provided by ICCAT, and the full administrative report including copies of all the administrative documents, to be submitted by **19 February 2016**, at the latest.

Payment details

Taking into account the strict schedule for carrying out the work, disbursements will be made according to the following schedule:

- 1. 40% of the total amount of the contract upon **signing of the contract**;
- 2. 60% after the approval of **Deliverable #2** upon incorporation of comments by the ICCAT and the approval of the administrative documents.

Logistics

All documents provided by the Contractor must be in MS Word or compatible software; tables must be in Excel format or compatible; figures and pictures must be in JPEG or TIFF format or compatible. All documents submitted must be in English, French or Spanish.

Copyright

All the material produced by the Contractor will remain the property of the ICCAT GBYP and cannot, in any case, be circulated by the Contractor selected. The scientific use of the data by the Contractor shall always be notified to ICCAT in advance for clearance.

For further information concerning this Call for Tenders, please contact the ICCAT GBYP Coordinator at the following address: antonio.dinatale@iccat.int.