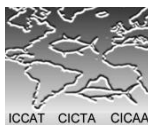


INTERNATIONAL COMMISSION FOR THE
CONSERVATION OF ATLANTIC TUNAS



COMMISSION INTERNATIONALE POUR LA
CONSERVATION DES THONIDES DE L'ATLANTIQUE

COMISIÓN INTERNACIONAL PARA LA
CONSERVACIÓN DEL ATÚN ATLÁNTICO

Madrid, 16 June 2021

ICCAT GBYP CIRCULAR # 0512/2021

**SUBJECT: CALL FOR TENDERS ICCAT GBYP 05/2021- BIOLOGICAL STUDIES
ATLANTIC-WIDE RESEARCH PROGRAMME FOR BLUEFIN TUNA (ICCAT GBYP - PHASE 11)**

I should like to transmit the Call for Tenders ICCAT 05/2021 - Biological Studies - Atlantic-Wide Research Programme for Bluefin Tuna.

I would be grateful if you could distribute this Call for Tenders to qualified people and institutions that might be interested.

Please accept the assurances of my highest consideration

Executive Secretary



Camille Jean Pierre Manel

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– Commission Officers:

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Attachment: Call for Tenders 05/2021.

**CALL FOR TENDERS ICCAT GBYP 05/2021
BIOLOGICAL STUDIES**

**ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA
(ICCAT GBYP – PHASE 11)**

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 to achieve these objectives are biological sampling and analyses, which provide indispensable data for conducting the bluefin stock assessment and MSE process, in line with the aforementioned objectives.

Consequently, one of the core activities of GBYP are the so-called Biological Studies, under which GBYP started in 2011 a biological sampling programme covering the main bluefin fisheries (i.e. baitboat, purse seine, longline, handline, traps and recreational fisheries). Most of the sampling activities have been carried out under ad hoc Calls for Tenders for sampling and samples analysis, however in the more recent phases additional samples have been collected separately in farms (adult fish) and, opportunistically, by the ICCAT ROPs and GBYP tagging teams.

The resulting biological samples, including otoliths, spines, gonads and muscle for genetic studies are stored in the GBYP tissue bank. In parallel to sampling activities, microchemical, genetic, histological and morphological analyses have been carried out based on the samples from this tissue bank, according to the recommendations provided by the SCRS and the GBYP Steering Committee.

Within this framework, the priority specific objectives of the Biological Studies in GBYP Phase 11 that are addressed through this Call for Tenders are:

- Maintain an GBYP tissue bank capable of providing the samples required to carry out the studies necessary for improving the understanding of key biological and ecological processes affecting BFT, particularly stock piling samples that can be used for eventual close-kin mark recapture or other population-level genomics studies.
- Update the estimation of key biological parameters and population age structure required for BFT stocks evaluation and management.
- A better understanding of the BFT population genetic structure particularly in light of recent advances in genomic techniques and insights.
- Provide accurate and reliable estimates of mixing rates between Atlantic BFT populations (western and eastern stocks in the different statistical areas throughout along the year cycle).
- Develop and/or refine methodologies based on microchemical analyses allowing to determine the timing of relevant biological traits throughout the whole life cycle, such as migrations to spawning areas.
- Design and implement an Information System allowing a proper management of the samples and data generated by the biological studies, integrating not only metadata on sampling and analytical tasks, but whenever possible, the results from such analyses.

In order to fulfil these objectives, the tasks to be carried out are detailed in the following section.

As part of this programme, scientific institutes and/or public or private entities are asked to submit tenders to carry out the entire project or its single components.

Contractor tasks

The tenderer will work in close consultation with the GBYP coordination team. Samplings will follow the [Sampling protocol](#) taking into account the strata reported in the attached table. Also, duplication (i.e. of existing national or other sampling programs) must be carefully avoided. Specifically, it must be taken into account that bluefin tuna adults in the Mediterranean Sea from purse seine fisheries will be sampled in the GBYP Phase 11 within the framework of other GBYP contracts.

The analyses will mostly follow the [methodologies](#) already established in previous Phases.

Although ICCAT Recommendation 11-06 provides the means to ensure better conditions while carrying out biological and genetic sampling activities in international waters and those under jurisdiction of coastal States, most of which are ICCAT CPCs, the Tenderer will be responsible for all necessary agreements with local authorities, local fishermen and industries when carrying out sampling within national jurisdictions. The biological samples collected and/or analyzed will be property of the ICCAT at the end of the contract. The Tenderer(s) will provide proposal(s) for the provision of the following services:

Maintenance and management of the GBYP tissue bank:

- a) Provide appropriate storage for any biological samples and hard parts collected so far, following the system already adopted. The Tenderer will also ensure correct storage of all samples that will be collected under this Call for Tenders and those additional samples that will be collected in farms (around 1200 pairs of otoliths and 1200 tissue samples) and, opportunistically, by the ICCAT ROPs and tagging teams (estimated at several hundred tissue samples). Management will also include delivery of the necessary samples to the entities in charge of the analyses. If one of the tenderers was engaged in previous Phases, it will provide at the beginning of the contract a full detailed catalogue of all samples available in the GBYP tissue bank, including all residuals from previous Phases; the catalogue will be detailed by stratum and size classes and will be updated at the end of the contract.

Sampling:

- b) Specification of the biological data and samples to be collected; i.e. otoliths, other hard parts, tissue samples, sex ID, etc., by strata and size class including a clear prioritization under the budget. Special emphasis should be placed on collecting otoliths and spines for size classes and strata that had been under-represented in the samples from previous years, with the aim of collecting at least 10 samples for each 10 cm length class and stratum. These samples should be complementary to those collected within the frameworks of CPCs sampling programs. The sampling should follow the specific design, aimed primarily at contributing to knowledge on population structure and mixing. The sampling strata are defined in the attached table.

If necessary, the tenderer(s) could update the Protocols for the biological and genetic sampling and the analyses to be conducted (e.g. individual weight and length should always be recorded for all samples); the current protocol is available [here](#). These protocols will provide the opportunity for carrying out several analyses on the same otolith (e.g. ageing and elemental composition), optimizing the collection efforts.

Analyses:

- c) Improve the baselines for microchemistry analyses on otoliths for stable isotopes and trace elements in such a way that these techniques allow for the discrimination of the stock of origin at individual fish level.
- d) Microchemistry analyses on otoliths for stable isotopes, following internationally agreed techniques, for measuring carbon and oxygen stable isotopic ratios and defining the nursery origin of each fish.
- e) Analyze otoliths of fish in which the environmental conditions they have experienced are known for a certain period to parameterize the relationships between environmental conditions (temperature, water chemistry) and otolith chemistry.

- f) Perform genetic analyses of bluefin tuna samples, focusing on:
- Further clarify BFT genetic population structure and improve the traceability panel.
 - Continue monitoring mixing throughout main mixing areas using multiple approaches.
 - Developing a reliable tool, in combination with microchemical analyses, for tracing movements and estimating rates of exchange/mixing between management areas throughout the life cycle.
 - Develop new methods or apply the method of Chiba *et al.* 2021 to discriminate the sex in BFT to known sex samples for operational determination of sex, linked to aging hard parts and genetic samples.

For the provision of the analysis of items c), d), e) and f) the tender must include a summary table with the type and number of analyses that will be conducted on the samples collected or already stored and their respective cost per analysis.

- g) A comprehensive study of the genetic and micro-chemical analyses already conducted within GBYP (including Phase 11), to provide a complete set of plausible hypotheses about stock structure consistent with the data for the MSE operational model. Particular attention will be devoted to evaluating the consequences of possible interbreeding among the individuals from both stocks. The study will strictly follow the reference areas in agreement with the scheme of the attached table. This study will be carried out in strict coordination with the GBYP coordination team.
- h) Develop a feasibility study on the potential implementation of epigenetic ageing for BFT.
- i) Determine, through Marginal Increment Analyses, the timing of formation of the opaque and hyaline annual bands in BFT otoliths, aiming at improving the accuracy of BFT ageing studies based on otoliths interpretation.

Information System:

- j) Revise and complete, following ICCAT GBYP guidelines, the currently available database on the samples included in the GBYP Tissue Bank.

The Tenderer(s) should endeavor to ensure full coverage of priority sampling strata (considering what is specified above) and analyses of the maximum possible number of samples. Proposals covering one or more points from a) to e) can be submitted; therefore, the Tenderer(s) can optionally apply for all or several tasks or for a specific task or sub-set of sampling areas. The Tenderer(s) will also clearly identify availability for the scientific staff to participate to any GBYP Operational Meeting at short notice. In the case of a consortium or group of entities, an administrative and a scientific responsible entity should be identified, along with a Scientific Committee on which each entity carrying out a scientific duty will be represented by a scientist.

Contractor minimum qualifications

- Documented multi-year experience in tuna biological studies (preferably bluefin tuna); previous experience in large-scale biological sampling.
- For the micro-chemical analysis specialist(s): documented multi-year experience of micro-chemical analysis; previous studies on tuna species will be preferred.
- For the genetic specialist(s): documented multi-year experience of genetic analysis; previous studies on tuna species will be preferred.
- Availability of sufficient qualified scientific staff to carry out the duties.
- Availability of at least one specialist in managing biological databases.
- Excellent working knowledge of one of the three official languages of ICCAT (English, French, Spanish). Sound knowledge of English is highly desirable.

Request for bids

Interested entities should submit an offer to the ICCAT Executive Secretary (camille.manel@iccat.int), with copy to Ms. Ana Martinez (ana.martinez@iccat.int) by **5 July 2021**, including:

- a) The detailed offer covering one or more points from a) to j) as detailed above.
- b) The curricula of the scientific staff.
- c) The curriculum of the institution(s) or entity(ies) applying for the GBYP Biological Studies for Phase 11, with any documented experience in these fields, including 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).
- d) The preliminary estimated budget for collection and analysis of samples, tissue bank maintenance, drafting of a comprehensive report on the genetic and micro-chemical analyses already conducted within GBYP and management, to be detailed by individual task and subtask. The costs of coordination should be included in the cost of each individual task/subtask. Additionally, the budget will be broken down by these components: personnel costs, overhead, travel, consumables, equipment and subcontracts. An overhead to cover administrative and general costs could be accepted up to a maximum limit of 10% of personnel costs, while subcontracts can be allowed up to a maximum of 40% of the budget. Any discount terms will be clearly mentioned.
- 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.).
- g) A detailed list of any subcontracting activities.
- h) A declaration that the offering institution will follow the [Sampling protocol](#) and the definition of sampling strata as provided in the attached table, as well as this Call for Tenders and the administrative rules specified in the contract.
- i) A declaration that all the comments eventually made on the draft final report (**Deliverable #4**) will be incorporated into the final report (**Deliverable #5**) prior to submission to the ICCAT SCRS.
- j) A declaration that the staff and all the subcontracted staff will be covered by full insurance for the sampling activities and the laboratory work to be carried out according to the Call for Tenders, excluding ICCAT from all the responsibility concerning the work to be carried out by each offering institution.
- k) Acknowledgment of this Call for Tenders (if applicable) (**ICCAT GBYP 05/2021**).
- l) A statement specifying the extent of agreement with all the terms, conditions, and provisions included herein.

Offers that fail to furnish the required documentation or information, or reject the terms and conditions of the Call for Tenders may be excluded from consideration.

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

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

The Contractor will be available for any GBYP inspector at any time, at short notice.

The ICCAT Secretariat will make a selection of the offers and will decide the contract(s) to be awarded.

Deliverables

#1 A short report on sampling or research activities, including all protocols for samplings and the analyses (for those tasks only), including the description of the work carried out up to that date, to be submitted at the latest 30 days after signature of the contract.

#2 An update of the short report on the sampling and analyses activities (for those tasks only) or on the activity to be submitted at the latest by **20 September 2021**, including the description of the work carried out up to that date and a short PowerPoint presentation, to be used also for informing the SCRS.

#3 Another short report for further updating the previous reports, with information on the sampling and analyses (for those tasks only) carried out until late October 2020, as well as a report showing the preliminary results and conclusions from comprehensive study of the genetic and micro-chemical analyses already conducted within GBYP, to be provided by **7 November 2021**, to be used for informing the ICCAT Commission.

#4 A draft final report to be submitted at the latest by **10 December 2021**, including:

I. The scientific report, taking into account relevant scientific literature, containing:

- a) A full description of the work carried out during the biological studies;
- b) A detailed description of the methodology and protocols (only for sampling and analyses activities);
- c) Maps of the areas in which the sampling or the research was carried out, in accordance with the biological sampling strata or the proposal;
- d) Detailed tables with the definitive number of samples by stratum, fishery, size class and type, with the related statistical analysis (for those activities) or tables showing the results of the field research activities;
- e) A detailed description of the analyses carried out and of the results achieved (for these tasks only);
- f) The detailed and updated catalogue of samples stored in the GBYP Tissue Bank; link(s) with the ICCAT Secretariat database (if available) (for this task only);
- g) The final results and conclusions from the comprehensive study of the genetic and micro-chemical analyses already conducted within GBYP;
- h) An Executive Summary of the final report.

II. An updated PowerPoint presentation of the main results.

#5 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, and to be submitted by **20 December 2021**, at the latest.

Payment details

Disbursements will be made according to the following schedule:

1. 30% of the total amount of the contract upon **signature of the contract**;
2. 25% upon completion and acceptance of **Deliverable #1**;
3. 25% upon completion and acceptance of **Deliverable #2**;
4. 20% after the approval of the final report (**Deliverable #5**) upon incorporation of comments by the GBYP and 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. The format of the data bank will be agreed with the ICCAT Secretariat. All documents submitted must be in English, French or Spanish.

Copyright

All of the material produced by the Contractor will remain the property of GBYP and it must be kept confidential.

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