



Madrid, 10 June 2016

ICCAT GBYP CIRCULAR # 0741 / 16

**SUBJECT: CALL FOR TENDERS - ICCAT GBYP 09/2016
BIOLOGICAL STUDIES - ATLANTIC-WIDE RESEARCH PROGRAMME ON
BLUEFIN TUNA (ICCAT GBYP - PHASE 6)**

I have the honour to transmit to you the attached Call for Tenders - ICCAT GBYP 09/2016 - Biological Studies - Atlantic-wide Research Programme on Bluefin Tuna (ICCAT GBYP - Phase 6).

Please accept the assurances of my highest consideration.



Driss Meski
Executive Secretary

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Attachment: Call for Tenders GBYP 09/2016.

CALL FOR TENDERS ICCAT GBYP 09/2016

BIOLOGICAL STUDIES

ATLANTIC-WIDE RESEARCH PROGRAMME ON BLUEFIN TUNA (ICCAT GBYP – PHASE 6)

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.

This Call for Tenders concerns one of the main activities to be carried out in Phase 6 (2016-February 2017): the Biological Studies.

BIOLOGICAL STUDIES (ICCAT GBYP 09/2016)
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Background and objectives

One of the main objectives of the ICCAT GBYP is to improve the understanding of key biological and ecological processes for Atlantic bluefin tuna. As part of this Programme, biological sampling of the main bluefin fisheries (i.e., baitboat, purse seine, longline, handline, traps and recreational fisheries) already started in 2011. This concerned the collection of data on age, length, weight, sex, maturity, fecundity, otoliths shape and tissue samples for genetic and micro-chemical analyses for identification of sub-populations. The work to be carried out in Phase 6 will be basically the same (excluding maturity and fecundity studies), extending sampling also to areas and fisheries not covered or poorly covered in previous Phases, according to the ICCAT GBYP sampling design. Sampling for adult spawners from the main four spawning areas in the Mediterranean Sea is also excluded, because the Steering Committee recommended to carry out the sampling directly at the farms, and a specific invitation (ICCAT GBYP 07/2016) have been sent to several companies. Particular attention will be devoted to the collection of otoliths and to ageing studies with the objective of developing an updated ALK for 2016. A specific activity, in Phase 6, will be devoted to comparing for the first time: single nucleotide polymorphisms (SNPs) and microsatellites, using the same samples. At the same time, funds will be devoted for carrying out a larger number of analyses and use most of the samples already collected in previous Phases.

The report of the ICCAT GBYP Operational Meeting on Biological Sampling (17 February 2011) (https://www.iccat.int/Documents/Meetings/Docs/2011_GBYP_WORKSHOPS_ENG.pdf) provides an outline of the objectives and the work to be carried out, while the initial Sampling Design was carried out under an earlier call.

As part of this Programme, scientific institutes and public or private entities are asked to submit tenders to carry out the project.

Contractor tasks

The tenderer will work in close consultation with the ICCAT GBYP and will conduct biological studies from various fisheries and areas according to the ICCAT GBYP Sampling Design which is available at: <http://www.iccat.int/GBYP/Documents/BIOLOGICAL%20STUDIES/PHASE%202/Rapport%20final%20design%20echantillonnage%20biologique%20ICCAT-GBYP.pdf>

The document is provided in the original language only, as delivered to ICCAT. This involves sampling by strata and bluefin size classes, according to the Sampling Design and the improved tables which are attached to this Call for Tenders. A preliminary catalogue of available samples already collected under ICCAT GBYP in previous Phases for the various strata is available at ICCAT GBYP (see attached tables). However, any proposed change or adjustment to the attached tables, to the Sampling Design and/or the recommendations made by the

ICCAT GBYP Steering Committee, must be fully justified (for example, the proposed sampling levels are based on size information, which are not necessarily appropriate for sampling across all the different biological material). Also, duplication (i.e., of existing sampling programmes) must be carefully avoided.

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 Tenderer shall also be responsible for defining the necessary agreement with the team(s) in charge of the ICCAT GBYP tagging activity, which shall also collect biological samples and with those providing biological samples from bluefin tuna spawners according to the ICCAT GBYP Invitation 07/2016. The biological samples collected and analyzed will be property of the ICCAT GBYP at the end of the contract. In the meantime, the Tenderer shall provide appropriate storage for any biological samples and hard parts collected, following the system already adopted.

The Contractor(s) shall be responsible for data management and for establishing a database in agreement with the ICCAT Secretariat. A specific work for providing an updated and detailed catalogue of all available ICCAT GBYP samples stocked at the date shall be included in the biological studies under Phase 6.

The budget for the biological studies in Phase 6 is considered sufficient to collect and analyze the samples specified in the Sampling Design (including the strata provided in the improved tables) and in recommendations provided by the ICCAT GBYP Steering Committee in its meetings (<http://www.iccat.int/GBYP/en/scommittee.htm>). However, if costs estimated in the original design are deemed insufficient, then this should be indicated by the Tenderer. Approximately one third of the budget should be devoted to improving samplings and about two thirds to carrying out biological studies, using also the samples collected in previous Phases, but these proportions may be adjusted according to the research plan in Phase 6.

This contract is for the period up to January 2017. However, it is likely that in following phases of the ICCAT GBYP other calls for biological studies will be announced with a level of funding to be defined based upon the results of Phase 6. The objectives of this sixth call will be similar to those of the previous calls and the sampling design and analyses will be improved based on the current call and the recommendations of both the ICCAT GBYP Steering Committee and the SCRS.

The Tenderer(s) shall provide a proposal including the following:

- a) Number of samples by stratum and bluefin size group.
- b) Specification of the biological data and samples to be collected; i.e., otoliths, other hard parts, tissue samples, sex ID, etc., by 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 a goal of collecting at least 10 samples for each 10 cm length class and stratum. Special focus should be placed on collecting biological samples and otoliths from fish of age 0 in Phase 6, with a target of 200/250 samples for each of the main spawning areas in the Mediterranean Sea (Balearic area, southern Tyrrhenian Sea, southern central Mediterranean Sea and Levantine Sea).
- c) 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). These protocols shall provide the opportunity for carrying out several analyses on the same otolith (e.g. shape analyses, age and elemental composition), optimizing the collection efforts.
- d) Type and number of analyses (ageing, micro-constituents, genetic, otoliths shape, etc.) that will be conducted on the samples collected or already stored and available and their respective cost per analysis; otoliths, ageing and analyses are the first general priority in Phase 6. Ageing shall be carried out on the available hard parts already collected and those that will be collected in 2016, across the full range of size that are available for each year. The ALK analyses need to address the assignment of individuals to cohorts – e.g. they need to consider the time of year when bands are formed and whether there is a dark or light edge.

- e) If one of the Tenderers already participated in a previous Phase, then it shall provide a full detailed catalogue of all samples available in the GBYP biological bank, including all residuals from previous Phases (see attachment) and those of Phase 6 which were not used for analyses; the catalogue shall be detailed by stratum and size classes and shall be updated at the end of the contract.
- f) A comprehensive study of the genetic and micro-chemical analyses conducted in all GBYP Phases, to provide a complete set of plausible hypotheses about stock structure consistent with the data for the MSE operational model. The study shall also harmonize the reference areas as much as possible, strictly following the scheme of the attached tables. This study shall be made in strict cooperation with the GBYP coordination.

In addition to the above points, Phase 6 will pay specific attention to bluefin tuna population studies. A major aim is to achieve a robust spatio-temporal pattern of population differentiation of bluefin tuna based on integrated, multi-disciplinary and multi-marker approaches, including micro-chemical, genetic and biological ones. Recent genetic and genomic studies carried out within the Biological Studies of the ICCAT GBYP have been focused on the use of genomic markers and approaches based on panels of Single Nucleotide Polymorphism (SNP). Parallel studies (i.e. carried out using the same samples and individuals as used in the previous studies) based on polymorphic and standardized genetic markers as microsatellites (i.e. SSRs or VNTRs) can strengthen and confirm the patterns obtained. Novel experimental design will have to verify patterns of spatial differentiation and inter-annual stability using reference strata/samples (i.e. young-of-the-year YOY < 30 cm FL; larvae) collected in a timespan of at least five years and from the four main reproductive areas of the Mediterranean (i.e. Balearic Islands, South Tyrrhenian Sea, southern central Mediterranean Sea, and Levantine Sea), plus the Gulf of Mexico. Reference strata and samples of priority are those already characterized by previous approaches and markers. New samples can be collected from the same reference areas and analysed with previously developed SNP panels. Therefore, tenderers shall provide additional proposals for:

- g) Sampling design: Number of spatial and temporal samples YOY < 30 cm FL and larvae) by stratum that will be analysed together with details on biological, chemical and genetic features previously characterized, taking into account the samples already available from previous years, by stratum and size class. New samples (collected in 2016) must be specified and collected according to protocols set for previous GBYP Phases. Genetic markers: Number and types of microsatellite markers (minimum requested 24 *loci*). Experimental analyses: Protocols of genetic analyses; number and type of analyses; detailed costs per analysis. Analysis for SNPs shall be conducted following the same methodology used in GBYP Phase 5 (see: <http://www.iccat.int/GBYP/Documents/BIOLOGICAL%20STUDIES/PHASE%205/BIOLOGICAL%20STUDIES%20PHASE5%20FINAL%20REPORT%20AZTL.pdf>).

The Tenderer(s) should endeavor to ensure the full coverage of all strata and analyses of all samples, also taking into account the limited number of samples to be collected during the tagging activities and those from adults, which should be collected under ICCAT GBYP Invitation 07/2016. Therefore, proposals including entities across all geographic areas are incentivised. Partial offers for covering the points from a) to g) can be submitted; therefore, the Tenderer(s) can optionally apply for a specific task or sub-set of sampling areas. The Tenderer(s) shall also clearly identify the availability for the scientific staff to participate to any ICCAT GBYP Operational Meeting on 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.

The Tenderer(s) can utilize the ICCAT Regional Observers Programme (ROP) (particularly for supporting the sampling to be done in tuna farms) and the team(s) in charge of the ICCAT GBYP tagging activities to coordinate sampling and data collection in constant, close contact with the GBYP coordination.

Contractor minimum qualifications

- Documented multi-year experience in bluefin tuna biological studies; previous experience in large-scale biological sampling.
- For the micro-constituent specialist(s): documented multi-year experience of micro-constituent analysis; previous studies on tuna species will be preferential.
- For the genetic specialist(s): documented multi-year experience of genetic analysis; previous studies on tuna species will be preferential.

- 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). A high level of knowledge of English is highly desirable.

Request for bids

Interested entities should submit an offer to the ICCAT Executive Secretary (driss.meski@iccat.int) by **30 June 2016**, including:

- a) The detailed offer shall take into account the Sampling Design, the strata included in the attached tables and the recommendations of the GBYP Steering Committee. It shall also provide details regarding the sampling procedures and the minimum number of samples to be collected (see the attached table for the desiderata). The proposal shall consider the expected variance associated to the strata and, if applicable, the number and type of analyses to be conducted, the protocols to be adopted, the structure of the data bank, and the sub-areas for the purpose of the draft final report (**Deliverable #4**) and the final report (**Deliverable #5**). Departures from the Sampling Design including the strata considered in the attached tables and any ICCAT GBYP Steering Committee recommendations may be made with justification.
- b) The curricula of the scientific staff.
- c) The curriculum of the institution(s) or entity(ies) applying for the ICCAT GBYP Biological Studies for Phase 6, 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 the collection of the samples, the following analyses and the data bank, to be detailed by individual components (e.g., biological sampling of hard parts, tissue sampling, age determination, age calibration, micro-constituent analysis, genetic analysis by type, and otoliths shape analysis (if any) shall be provided **for each of the 12 areas detailed in the attached tables**, including information on data bank, personnel cost, travel, consumables, etc., and any discount terms; overhead to cover administrative and general costs could be admitted within a maximum limit of 10% of the personnel costs, while subcontracts can be allowed up to a maximum of 40% of the budget and must be fully detailed in the proposal.
- 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 Scheme for the Biological Sampling design provided by ICCAT GBYP (<http://www.iccat.int/GBYP/Documents/BIOLOGICAL%20STUDIES/PHASE%202/Rapport%20final%20design%20echantillonnage%20biologique%20ICCAT-GBYP.pdf>) as improved by the attached tables, along with the present Call for Tenders, the GBYP Steering Committee Recommendations (<http://www.iccat.int/GBYP/en/scommittee.htm>), and/or approved modifications agreed upon, 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 in the final report (**Deliverable #5**) prior to submission to the ICCAT SCRS.
- j) A declaration that the staff and all the subcontract staff will be covered by a 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 responsibilities concerning the job to be done by each offering institution.
- k) Acknowledgment of this Call for Tenders (if applicable) (**ICCAT GBYP 09/2016**).
- l) A statement specifying the extent of agreement with all 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 shall be available for any ICCAT GBYP inspector at any time, on 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 activities, including all protocols for samplings and the analyses, and the agreement with team(s) engaged in the ICCAT GBYP tagging activity and/or the ICCAT ROP observers, the agreement with the tuna farm owners for the collection of samples at the harvesting, including the description of the work carried out up to that date, to be submitted at the latest 30 days after the signature of the contract.

#2 An update of the short report on the sampling and analyses activities to be submitted at the latest by **20 September 2016**, 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 carried out until late October 2016, to be provided by **7 November 2016**, to be used for informing the ICCAT Commission.

#4 A draft final report to be submitted at the latest by **15 January 2017**, including comments on:

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.
- c) Maps of the areas in which the sampling was carried out, in accordance with the biological sampling design.
- d) Detailed tables with the definitive number of samples by stratum, fishery, size class and type, with the related statistical analysis.
- e) A detailed description of the analysis carried out and of the results achieved.
- f) A detailed description of the data bank and its structure; link(s) with the ICCAT Secretariat database if it will be developed in Phase 6.
- g) 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 **31 January 2017**, at the latest.

To facilitate the reporting requirements, the ICCAT GBYP could possibly provide a template for the reports.

Payment details

Disbursements will be made according to the following schedule:

1. 30% of the total amount of the contract upon **signing 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 ICCAT GBYP 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. The format of the data bank shall 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 ICCAT GBYP and it must be kept confidential.

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