

INTERNATIONAL COMMISSION FOR THE
CONSERVATION OF ATLANTIC TUNAS



COMMISSION INTERNATIONALE POUR LA
CONSERVATION DES THONIDES DE L'ATLANTIQUE

COMISION INTERNACIONAL PARA LA
CONSERVACION DEL ATUN ATLANTICO

Madrid, 12 April 2024

ICCAT CIRCULAR # 03239 / 2024

SUBJECT: CALL FOR TENDERS – TERMS OF REFERENCE – ICCAT WORKSHOP ON THE USE OF THE BYCATCH ESTIMATION TOOL

Over the past few years, the ICCAT SCRS Working Group on Stock Assessment Methods (WGSAM) has developed a Bycatch Estimation Tool (BYET) that uses model-based and design-based procedures in a semi-automated process of estimating total annual bycatch by expanding the data from an observer programme to the total effort from logbooks or landings records. In addition to bycatch estimation, this toolkit can also be used to estimate an annual index of abundance, calculated only from the observer data. This toolkit has previously been subject to simulation testing and application to actual data to examine its efficacy and its utility for use for bycatch estimation in ICCAT CPC fisheries.

As part of on-going efforts to improve the functionality and user-experience of this toolkit, an expert-driven hybrid workshop was conducted from 25 to 27 July 2023 in Miami, Florida, USA. The goal of this workshop was to allow experts familiar with bycatch data and statistical aspects of fisheries bycatch estimation to engage in 'beta-testing' of the BYET R package.

The SCRS acknowledges that the general and proper use of the BYET will be greatly increased by providing a user-oriented workshop on the R package. Accordingly, a new workshop on the use of the Bycatch Estimation Tool has been scheduled for 15-17 July 2024 in Madrid (Spain) for selected experts.

Therefore, ICCAT is kindly requesting proposals for such work, which shall be developed according to the Terms of Reference attached herewith. The detailed offer shall be submitted **only to the attention of Mr Camille Jean Pierre Manel**, the Executive Secretary of ICCAT, and Cc'ing in Ms. Stasa Tensek, at the following addresses: camille.manel@iccat.int and stasa.tensek@iccat.int, by **25 April 2024 (18:00h Madrid time) at the latest**.

I would be grateful if you could distribute this Call for Tenders to qualified individuals who might be interested.

Please accept the assurances of my highest consideration.

Executive Secretary



Camille Jean Pierre Manel

DISTRIBUTION:

– **Commission Officers:**

Commission Chair:	E. Penas Lado	COC Chair:	D. Campbell
First Vice Chair:	Z. Driouich	PWG Chair:	N. Ansell
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Chairs Panels 1-4			
SCRS Chair:	C. Brown		

– **Head Delegates / Head Scientists**

– **Cooperating Parties, Entities or Fishing Entities**

Attachment: Call for Tenders - Terms of Reference (only provided in English).



Terms of reference

ICCAT Workshop on the Use of the Bycatch Estimation Tool

1. Background and objectives

The complete and total accounting of the bycatch of non-targeted species within the ICCAT arena is becoming an increasingly important source of concern for the ICCAT Commission. The bycatch of species such as billfish (blue marlin, white marlin and round-scale spearfish) and several species of Sharks are not always well documented, yet account for a non-negligible percentage of the total fish kill associated with the fishing operations. Not properly accounting for this bycatch, either kept or discarded, in the assessment process can lead to errors and/or biases in the management advice provided to the Commission. Recognizing the importance of an accurate accounting of bycatch, the Commission established [Rec. 19-05](#), which states in the following paragraphs:

1. *CPCs shall provide their estimates of total live and dead discards of blue marlin, white marlin/roundscale spearfish, based on fishing logbooks, landing declarations, or equivalent document for the sport/recreational fisheries, as well as scientific observer reports, as part of their Task I and II data submission to support the stock assessment process.*
2. *No later than 2020, CPCs shall present to the SCRS the statistical methodology used to estimate dead and live discards. CPCs with artisanal and small-scale fisheries shall also provide information about their data collection programs.*
3. *The SCRS shall review these methodologies and if it determines that a methodology is not scientifically sound, the SCRS shall provide relevant feedback to the CPCs in question to improve the methodologies.*
4. *The SCRS shall evaluate the completeness of Task 1 and 2 data submissions, including estimates of total dead and live discards, and determine the feasibility of estimating fishing mortalities by industrial fisheries (including longline and purse seine), artisanal fisheries and recreational fisheries. If after conducting such evaluation, the SCRS determines that significant gaps in data reporting exist, the SCRS should explore approaches to estimate the level of unreported catches to include in future stock assessments in order to enhance the basis on which to provide management advice to the Commission.*

Under contract via the ICCAT Working Group on Stock Assessment Methods (WGSAM) Babcock *et al.* (2023) has developed a Bycatch Estimation Tool (BYET) that uses model-based and design-based procedures in a semi-automated process of estimating total annual bycatch by expanding the data from an observer programme to the total effort from logbooks or landings records. In addition to bycatch estimation, this toolkit can also be used to estimate an annual index of abundance, calculated only from the observer data. This toolkit has previously been subject to simulation testing and application to actual data to examine its efficacy and its utility for use for bycatch estimation in ICCAT CPC fisheries (Babcock and Goodyear, 2021; Babcock *et al.*, 2022; Babcock *et al.*, 2023).

As part of on-going efforts to improve the functionality and user-experience of this toolkit, an expert-driven hybrid workshop was conducted from 25 to 27 July 2023 in Miami, Florida, USA. The goal of this workshop was to allow experts familiar with bycatch data and statistical aspects of fisheries bycatch estimation to engage in 'beta-testing' of the BYET R package (Babcock *et al.*, 2024). This report summarizes the set of recommendations provided by participants as it relates to training and user guide materials, technical improvements to the toolkit, and future directions for training and capacity building.



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The WGSAM acknowledges that the general and proper use of the BYET will be greatly increased by providing a user-oriented workshop on the R package. Important to note is that the intent of such a workshop will not be to produce and report bycatch estimates of any CPC. Rather, the intent is to teach the proper use of the BYET so that the individual CPCs have a tool in which they can produce their own estimates of bycatch in the future in adherence to Recommendation 19-05. Furthermore, data brought to the workshop will not be shared, retained or otherwise disclosed. However, results of using the BYET may be shared within the workshop setting but strictly for educational and instructional purposes. At no time will any bycatch estimations be considered an official submission of the CPC.

2. Contractor tasks

- Conduct a 3 day in-person capacity-building workshop **15-17 July 2024**, with a select group of ICCAT CPC scientists with the objective of obtaining hands-on training the BYET. The Chair of the WGSAM, the SCRS Chair and the ICCAT Secretariat will select this group of scientists based on their expertise and the fisheries and data they represent (**Appendix 1**). The contractor will instruct the scientists on the use of the BYET using actual observer and logbook data provided, but not shared, by the scientist. This will include a systematic procedure covering topics from downloading and installing the BYET R package, its proper use, and interpretation/evaluation of results. This workshop will include primarily one-on-one assistance to those physically present at the workshop and best efforts made to help those in attendance virtually (if any).
- The bidder will provide guidance on the interpretation of BYET results including model selection, diagnostics and uncertainties associated with the results.

3. Deliverables

- The successful bidder shall provide a **detailed agenda** for the workshop not later than **15 June 2024**. This agenda will include the time and location of the workshop as well as the stated objectives. The agenda should note that interpreting services will not be available for the meeting workshop.
- The successful bidder shall provide a **draft final report** formatted as an SCRS document by **16 September 2024**. This document will not contain any confidential data or any bycatch estimates resulting from the workshop. The successful bidder shall present this document (virtually if necessary) during the WGSAM meeting in 2025 too. Such document shall make clear any strengths and/or weaknesses of the workshop with suggestion on how they might be addressed in future workshops. If appropriate, the bidder's report shall include suggestions on the next stage of development of the package and any suggestions for furthering the use of the tool via a subsequent workshop held in 2025. This document shall also include:
 - a) Executive summary (limited to 180 words);
 - b) Full description of the work carried out;
 - c) Detailed description of final results achieved;
 - d) List of recommendations;
 - e) List of references and literature cited.
- The **final report** (formatted as an SCRS document) shall be updated taking into account the comments provided by the rapporteur of the WGSAM, the SCRS Chair and the ICCAT Secretariat, and be submitted by **31 October 2024** at the latest.



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The Rapporteur of the Working Group on Stock Assessment Methods and the SCRS Chair, in consultation with the ICCAT Secretariat, will review all submissions of the contract deliverables and communicate any necessary revisions (if applicable) to the Contractor and/or inform of approval within 5 days of the submission(s). The Contractor shall submit the revised final documents (if changes are requested) together with the regular invoice, within 15 days after the aforementioned 5 days period.

4. Contractor minimum qualifications

- Documented multi-year experience in bycatch estimation models (e.g. Goodyear *et al.*, 2017) and commercial logbook and/or observer data analysis, and R-programming.
- 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 proposals

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, Executive Secretary of ICCAT, at the following address: camille.manel@iccat.int and Cc'ing in Mrs. Stasa Tensek (stasa.tensek@iccat.int) by **25 April 2024 (18:00 Madrid time) at the latest**, including:

- a) A description of methodology to be used;
- b) The budget proposal (including travel to attend the workshop in Madrid, Spain);
- c) A short Curriculum vitae of the tenderer (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;
- 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) Acknowledgement of this Call for Tenders;
- g) A statement specifying the extent of agreement with all terms, conditions, and provisions included herein.

If the tender is submitted by an institute/University, it must indicate the expert(s) who will be dedicated to the design and programming tasks and that he/she will be available to attend the 2025 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 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; travel and subsistence).

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



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6. Selection of proposals

The ICCAT Secretariat will review the offers. Following the review process, the ICCAT Executive Secretary will notify the entity selected for the contract as soon as the selection process is completed. The contract 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. Proposal(s) will be evaluated against a pre-determined set of criteria, which include: i) cost (30%); ii) proven track record (20%); iii) technical merit based on work plan (40%); and iv) flexibility as regards future changes in requirements (10%).

7. Duration of the contract

The work under this contract shall be concluded by **31 October 2024**. If required and strictly necessary, the contract may be open for extension, depending on funding availability and on the priorities of the ICCAT Working Group on Stock Assessment Methods in 2025.

8. Payment details

Disbursements will be made according to the following schedule:

- 40% of the total amount of the contract upon signing of the contract and after receiving a regular invoice which may be submitted **at the latest 30 days after signature** of the contract.
- 40% of the total amount of the contract upon submission of the **Draft final report** (Deliverable #2) and after receiving a regular invoice.
- 20% after the approval of the **Final Report** (Deliverable #3), and after receiving a regular invoice and a complete set of the documents concerning the expenses incurred under the contract.

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.

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 GPL or similar open-source license.

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



Cited bibliography

- Babcock E.A., Goodyear C.P. 2021. Testing a bycatch estimation tool using simulated blue marlin longline data. *ICCAT Col. Vol. Sci. Pap*, vol. 78 (5): 179-189.
- Babcock E.A., Harford W.J., Gedamke T., Soto D., Goodyear C.P. 2022. Efficacy of a bycatch estimation tool. *ICCAT Col. Vol. Sci. Pap*, vol. 79 (5): 304-339.
- Babcock E.A., Harford W.J., Gedamke T., Anderson S., Goodyear C.P. 2023. Simulation-testing model-based and design-based bycatch estimators. *ICCAT Col. Vol. Sci. Pap*, vol. 80 (6): 51-79.
- Babcock E.A., Harford W.J., Adão A., Gedamke T. 2024. Expert-driven testing and proposed improvements to a bycatch estimator toolkit. *ICCAT Col. Vol. Sci. Pap*, vol. 81 (in press).
- Goodyear C.P., Schirripa M., Forrestal F. 2017. Longline data simulation: a paradigm for improving CPUE standardization. *ICCAT Col. Vol. Sci. Pap*, vol. 74 (2): 379-390.



Appendix 1

Criteria for Selection of Workshop Participants

1. The qualifying participant shall be from a CPC that has a significant amount of bycatch but has not reported its methodology to report this bycatch according to ICCAT [Rec. 19-05](#).
2. The qualifying participant shall be the scientist responsible for estimation of bycatch and discards from the CPC they represent.
3. The qualifying participant shall have working knowledge of the R programming language and general linear models.
4. The qualifying participant shall have access to and be able to bring with them the data necessary to conduct estimates of bycatch (e.g. observer data, logbook data, etc.). Note: these data will not be shared with other workshop participants, the instructors, or otherwise retained upon completion of the workshop.