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, 26 May 2022

ICCAT GBYP CIRCULAR # G-0521/2022

SUBJECT: CALL FOR TENDERS ICCAT GBYP 07/2022 – AERIAL SURVEY FOR THE MONITORING OF BLUEFIN TUNA SPAWNING AGGREGATIONS IN THE MEDITERRANEAN SEA (ICCAT GBYP – PHASE 11)

I should like to transmit the Call for Tenders ICCAT GBYP 07/2022 - Aerial survey for the monitoring of bluefin tuna spawning aggregations in the Mediterranean Sea, under the Atlantic-Wide Research Programme for Bluefin Tuna (GBYP).

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

DISTRIBUTION:

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- **Cooperating Parties, Entities or Fishing Entities**

Attachment: Call for Tenders 07/2022, including area survey sampling design and budget.

CALL FOR TENDERS ICCAT GBYP 07/2022

AERIAL SURVEY FOR THE MONITORING OF BLUEFIN TUNA SPAWNING AGGREGATIONS IN THE MEDITERRANEAN SEA (ICCAT GBYP – PHASE 11) (THIRD CALL)

GBYP aerial surveys objectives and background

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. Currently almost all the data used in stock assessments are obtained from fisheries-dependent data, which can be affected by changes in exploitation patterns and TACs. It is therefore important to obtain data from alternative sources, such as fishery independent indices, in order to verify the assumptions made when conducting the assessments or to improve the current data sets used in OM or MSE.

Therefore, one of the major research tasks under the ICCAT Atlantic-Wide Research Programme for Bluefin Tuna (GBYP) has been the aerial survey for spawning aggregations (AS), which has already been carried since 2010 (all documents are available here), aiming to provide a fishery-independent index of relative abundance of spawning stock biomass.

The GBYP AS has faced numerous logistical challenges, which have resulted in changes in survey design and data processing to standardize methodologies and improve the accuracy of the index. Consequently, a new in-depth revision of the whole GBYP AS program was carried out in 2020 by two external experts (Vølstad 2020 and Buckland 2020) who detected some inconsistencies in the currently available AS index time series and presented several recommendations for its improvement, which were considered by the SCRS Species Group. One of these recommendations was to start moving to digital observing and counting systems to substitute human observers-based system, and another was to extend, if possible, the surveyed areas. In addition, in 2021 a global reanalysis of the whole time series was carried out to further refine the database and generate an improved index time series based on fully standardized analytical procedures.

In 2021, a pilot aerial survey was carried out in the Balearic Sea area, aiming at evaluating the feasibility of using digital systems for the monitoring of BFT spawning aggregations and its accuracy and precision, as compared to the classic human observers-based system. Considering the preliminary results from this survey, the GBYP Steering Committee recommended to carry out the aerial survey in the core areas of the Western and Central Mediterranean Sea in 2022, incorporating again digital systems for recording and characterizing BFT spawning aggregations, in addition to classic human observers-based system. Accordingly, albeit the Calls for Tenders ICCAT GBYP 05/22 (Circular ICCAT GBYP # G-0434/22) and ICCAT GBYP 06/22 (Circular ICCAT GBYP # G-0496/2022), a new Call for Tenders, ICCAT GBYP 07/2022, for carrying out the aerial survey for bluefin tuna aggregations in the Balearic Sea (Area A), following only the standard human observers-based system, is issued.

Funds have been made available under GBYP Phase 11, for covering the related costs.

Consequently, this Call for Tenders is launched, for public or private entities, be they scientific institutions or interested companies, for the submission of proposals to carry out the full project, detailed in the following paragraph.

Contractor tasks

The Contractor will work in close consultation with the ICCAT GBYP Coordinator and the GBYP Steering Committee. The Contractor will conduct aerial surveys in the Balearic Sea (Area A), identified in the attached maps, according to the sampling design attached (**Attachment 1**).

The Contractor will develop an aerial survey targeting BFT spawning aggregations, following the standard line transect methodology, based on data provided by human observers. The survey will be conducted following the sampling strategy defined in the attached files, where the coordinates of several series of replicas of transects are defined.

The survey will be conducted in the period from the end of May to the beginning of July 2022. The spotting and digital image recording altitude will be 300 m. The distance covered in a one-hour flight should be about 100 nm, with about 6 on-duty flight hours per day. It is reasonable to take into account adverse weather forecasts for 20% of the days (bad weather conditions mean winds over 3 on the Beaufort scale, or low clouds at less than 300 m altitude, or heavy rain, which prevent reliable observation of tuna schools close to the sea surface). For the visual observations it is mandatory to apply the aerial survey protocol. The visual observations should be carried out by the professional and scientific spotters on board.

The operational budget for this campaign is sufficient for several replicates according to the survey design. The objective is to get four replicates, and unless "force majeure" reasons concur, the minimum number of complete replicates will be three.

The offer is to specify the following: (a) type of aircraft (adequate for aerial spotting, possibly with upper wings, two propellers and good forward visibility, mandatorily equipped with bubble windows, one on each side); (b) availability of a pilot and a professional tuna spotter; (c) availability of two scientific spotters, belonging to scientific institutions that are independent from the fishing industries; (d) survey time provided for each replica in areas "in" and "out". The total number of days envisaged for field operations is 30, plus a maximum of 20% additional days as stand-by time for adverse weather conditions.

The Contractor will provide a full GPS recording of all flights and sighting positions, together with the necessary way points when relevant All sightings will be also documented with photos, preferably using a high-resolution GPS tagging electronic camera. All photos will be delivered along with the final report.

The Contractor will provide the sightings forms from visual observations to ICCAT GBYP, duly filled, at the end of each week (24 hours maximum after the last flight), in order to allow for real-time checks and corrections.

The awarded Contractor will ensure the participation of one official representative, the pilot(s), the professional spotter(s) and the scientific spotters in an online training course (1 day) to be held prior to the starting of field operations, possibly at short notice. Participation in the course is mandatory. The Contractor will provide photos and the personal details of all the staff working on the survey before the training course.

Contractor minimum qualifications

- Documented multi-year experience in bluefin tuna studies and/or aerial surveys or censuses of marine populations; previous experience in tuna aerial survey is preferred.
- Availability of an adequate aircraft for aerial spotting, including a technical description of the aircraft equipped with two bubble windows (one on each side), piloted by a licensed pilot having documented experience in this field.
- Availability of at least one professional tuna spotter, who has documented multiyear experience in this field.
- Availability of at least two scientific observers, preferably with previous experience in tuna fisheries or biology, aerial surveys and/or census of marine populations, and who pertain to scientific institutions or entities independent of the fishing industries and who hold a University degree in one of the following: Fisheries Science, or Marine Biology or Natural Sciences or Biological Sciences or Environmental Sciences or closely related fields.

- Excellent working knowledge of one of the three official languages of ICCAT (English, French and Spanish). A good command of English is highly desirable.

- Bank or Insurance guarantee for the amount of the contract, to be provided before signature of the contract.

Request for bids

Interested entities **should submit an offer only** to the ICCAT Executive Secretary (camille.manel@iccat.int), with copy to Ms. Ana Martinez (ana.martinez@iccat.int) by **31 May 2022**, including:

a) A detailed offer, describing in detail the type of spotting aircraft to be used for the survey, the minimum number of flight hours to be guaranteed in total, the maximum number of stand-by days, the date for the interim report and the date for the final report;

b) The curricula of the pilot, the professional spotter and the scientific observers;

c) The curriculum of the institution or company applying for the GBYP Aerial Survey 2022, with any documented experience in aerial survey or marine population survey, 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);

d) A detailed estimated budget for the aerial survey, specifying the cost, including number of working days, to cover four replicates, according to the attached table (**Attachment 2**). 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.

e) The name, address, VAT/tax number and telephone number of the tendering body, along with the contact number of the person responsible for field activity;

f) The institutional and administrative background of the tendering body (e.g. statutes, type of institution, annual budget, budget control procedures, etc.);

g) If the aircraft proposed for the survey does not belong to the tendering body, then a declaration from its owner should be included, to define the availability of the aircraft for this duty and to ensure that the aircraft is properly insured for all risks by a primary insurance company; a copy of the subcontract or MOU should be also provided;

h) A detailed list of any subcontracting activities;

i) The declaration that the offering institution will strictly follow the aerial survey design and the protocol provided by ICCAT GBYP prior to the beginning of the surveys, along with the forms to be used for the survey, and the administrative rules specified in the contract;

j) A declaration that all the comments eventually made on the draft final report will be incorporated in the final report;

k) A completed copy of the operating license and authorization (if applicable) and any administrative document, released by the competent public authority, demonstrating that the offering institution is authorized to operate the aerial survey;

l) A declaration that the offering institution will provide an insurance guarantee for the full amount of the contract, before its signature;

m) A declaration that the offering institution will be covered by full insurance for the aerial survey to be carried out according to the Call for tenders, excluding ICCAT from all liability concerning the work to be carried out by each offering institution;

n) Acknowledgment of this Call for tenders;

o) A statement specifying the extent of agreement with all terms, conditions, and provisions herein included.

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 required qualifications.

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

The ICCAT Secretariat will make a selection of the offers and will decide the contract to be awarded. The awarded entity will be notified shortly afterwards.

Deliverables

1. The sighting forms concerning the first week of activities to be submitted by e-mail the day after the first week of operations, at the latest, with the GPS tracks (electronic) and brief notes on specific problems.

2. The sighting forms concerning the second week of activities to be submitted by e-mail the day after the second week of operations, at the latest, with the GPS tracks (electronic) and brief notes on specific problems.

3. The sighting forms concerning the third week of activities to be submitted by e-mail the day after the third week of operations, at the latest, with the GPS tracks (electronic) and brief notes on specific problems.

4. The sighting forms concerning the fourth week of activities to be submitted by e-mail the day after the fourth week of operations, at the latest, with the GPS tracks (electronic) and brief notes on specific problems.

5. The sighting forms concerning the fifth week of activities to be submitted by e-mail the day after the fifth week of operations, at the latest, with the GPS tracks (electronic) and brief notes on specific problems.

6. The draft final report on field operations to be submitted at the latest by **10 July 2022**, including:

    a) Full description of the work carried out during the aerial survey;

    b) Detailed description of the methodology;

    c) Detailed maps of the areas in which the aerial survey was carried out, according to the aerial survey design;

    d) Maps with the GPS tracks of the survey, by date;

    e) Detailed maps of the sightings, with GPS positions;

    f) Full copy of the official sighting forms, complete with full details;

    g) Complete copy of the photos and videos of visual observations taken during the survey (on appropriate digital storage medium), including their reference;

    h) Scientific report, including the global summary of main results, conclusions, problems encountered and recommendations for improvement of future surveys.

i) A PowerPoint presentation of such Summary for the ICCAT SCRS Bluefin Species Group Session or any other ICCAT SCRS meeting.

7. The definitive final report, to be prepared taking into account the eventual comments provided by ICCAT, and the full administrative report including copies of all administrative documents, to be submitted by **18 July 2022**, at the latest.

Payment details

Disbursements will be made according to the following schedule:

1. 40% of the total amount of the contract upon signing of the contract;
2. 40% upon providing Deliverable No. 5;
3. 20% after approval of the final report upon incorporation of comments made by ICCAT and approval of the administrative documents.

Logistics

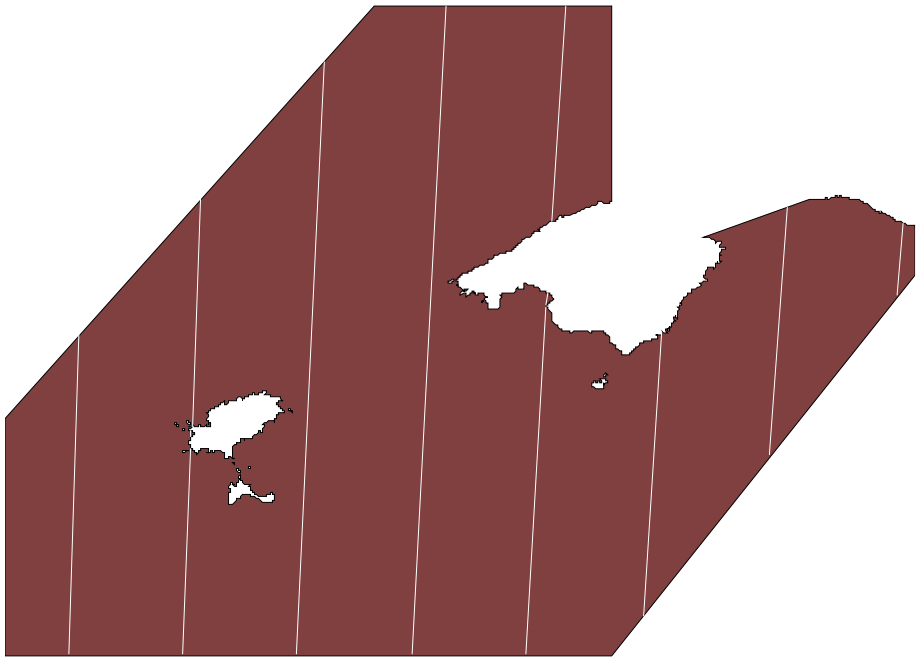
All documents provided by the Contractor must be in MS Word or compatible software, tables must be in Excel format or compatible, figures and pictures must be in JPEG or TIFF format or compatible. All documents submitted must be in English, French or Spanish.

Copyright

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

Area A – Balearic Sea

Replica 1



Sample layer name: Replica 1
Type of sampler: Line
Number of samplers: 8

List of samplers:
x-coord y-coord

Sampler 1
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Sampler 2
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1.223444 38.8756
--
1.225183 38.9196
1.226264 38.94691
--
1.226866 38.96213
1.266103 39.93437
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Sampler 3

1.672063 38.00697
1.789901 40.51007
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Sampler 4
2.154405 38.00617
2.302854 40.73841
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Sampler 5
2.636629 38.0034
2.724313 39.47151
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2.724796 39.47936
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2.746509 39.82922
2.804463 40.73818
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Sampler 6
3.129596 38.16723
3.208869 39.35724
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3.209051 39.35991
3.209705 39.36948
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Sampler 7
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Sampler 8
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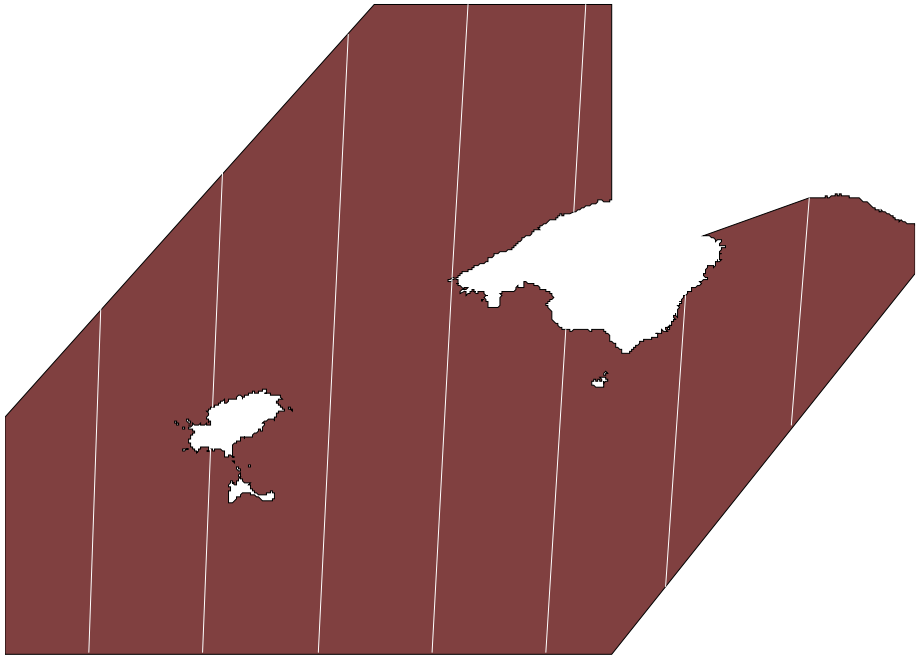
Replica 2



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Sample layer name:  Replica 2
Type of sampler:    Line
Number of samplers: 7

List of samplers:
    x-coord  y-coord

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  Sampler 2
    1.274717 38.00613
    1.309005 38.8628
    --
    1.316279 39.04103
    1.357818 40.03607
    --
  Sampler 3
    1.757122 38.00697
    1.883199 40.61131
    --
  Sampler 4
    2.239446 38.00583
    2.324733 39.57843
    --
    2.325262 39.58787
    2.391311 40.73853
    --
  Sampler 5
    2.721644 38.0027
```

```
  2.804898 39.37204
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  2.835907 39.86251
  2.892899 40.73792
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Sampler 6
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Sampler 7
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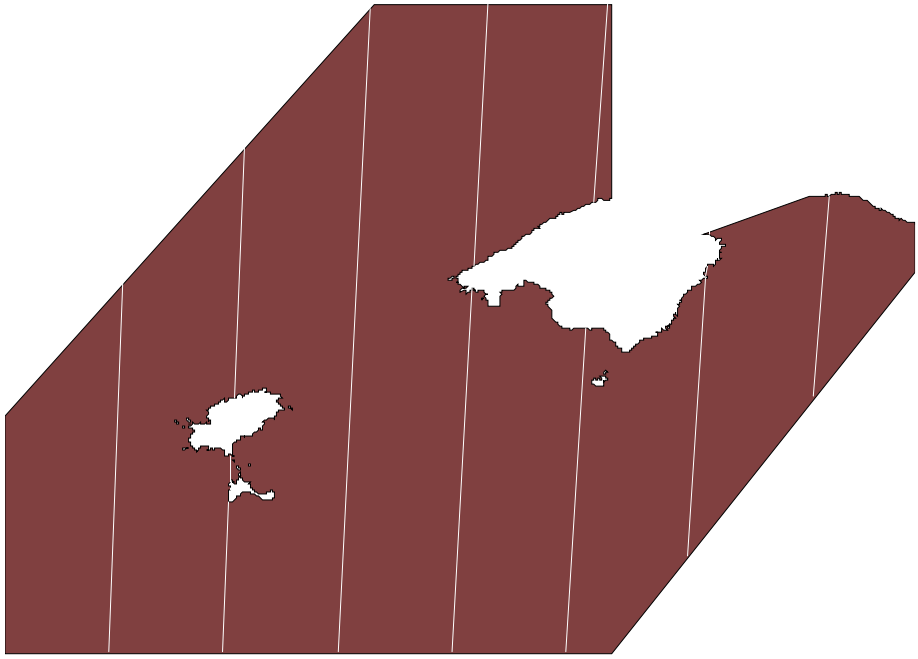
Replica 3



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Sample layer name:  Replica 3
Type of sampler:    Line
Number of samplers: 7

List of samplers:
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  Sampler 1
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    1.385616 38.63603
    --
    1.387722 38.68669
    1.388023 38.69394
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    1.389094 38.71967
    1.393867 38.83401
    --
    1.403894 39.07259
    1.449807 40.13769
    --
  Sampler 3
    1.842178 38.00691
    1.976782 40.71246
    --
  Sampler 4
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Sampler 5
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  2.925738 39.9011
  2.98133 40.73758
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  3.397959 39.57832
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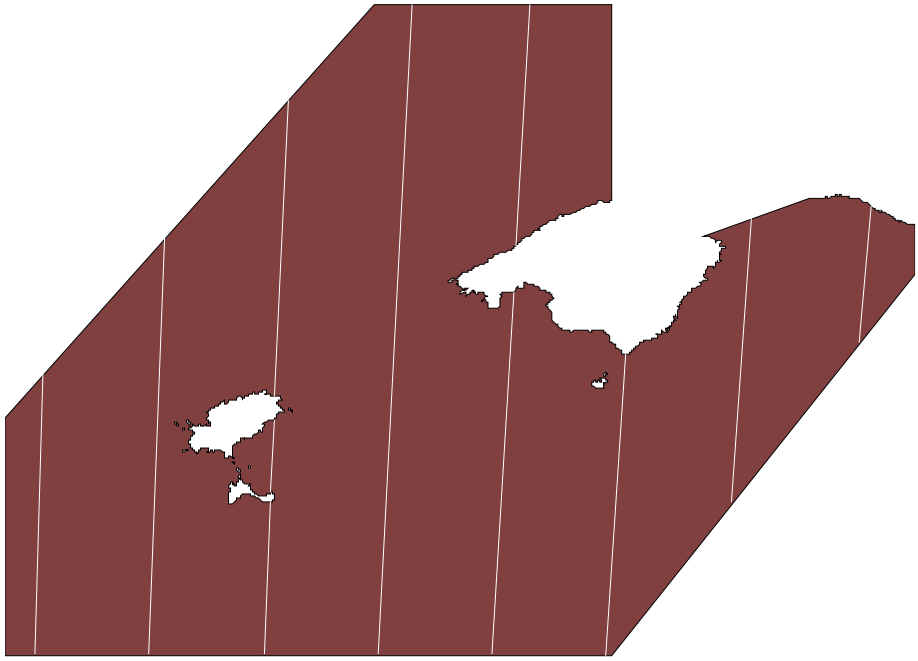
Replica 4



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Type of sampler:    Line
Number of samplers: 8

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  Sampler 2
    1.047488 38.00505
    1.113444 39.76424
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  Sampler 3
    1.529913 38.00682
    1.557605 38.64508
    --
    1.559325 38.6842
    1.57278 38.98827
    --
    1.577543 39.09503
    1.634618 40.34069
    --
  Sampler 4
    2.012281 38.00661
    2.155023 40.73807
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  Sampler 5
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  2.582864 39.53265
  --
  2.594508 39.72706
  2.656663 40.73848
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Sampler 6
  2.976656 38.00025
  3.058035 39.26683
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Sampler 7
  3.504205 38.64526
  3.59145 39.84137
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Sampler 8
  4.044209 39.32044
  4.090824 39.89424
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