EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES
INTERNATIONAL AFFAIRS AND MARKETS

Contract-of the European Union with an international Organisation

IOTC-Population structure of IOTC species in the Indian Ocean: estimation with next generation sequencing technologies & Otlolith micro chemistry

AGREEMENT NUMBER SI2.697993

ANNEX I: DESCRIPTION OF THE ACTION

Update: May 2011

STANDARD GRANT APPLICATION FORM FOR "*GRANTS FOR AN ACTION*"

PROGRAMME CONCERNED

[REFERENCE NUMBER OF THE CALL FOR PROPOSALS]

SUMMARY OF THE APPLICATION
Title: POPULATION STRUCTURE OF IOTC SPECIES IN THE INDIAN OCEAN: ESTIMATION WITH NEXT GENERATION SEQUENCING TECHNOLOGIES AND OTOLITH MICRO-CHEMISTRY
Identity of the applicant: Indian Ocean Tuna Commission (IOTC) – Fisheries Department of the Food and Agriculture Organization of the United Nations
Summary of the action: The project will describe the population structure and connectivity of a range of tuna and tuna-like species within the Indian Ocean (and adjacent Pacific and Atlantic waters as appropriate), as well as some of the key shark species that interact with IOTC fisheries. It will also result in key stock assessment and management implications being defined and provided to the Commission, via the relevant subsidiary bodies. Collaboration with regional partners will be sought to increase the overall budget and enhance capacity for future monitoring and analysis within IOTC CPCs.
Duration (in months): 42
Requested amount (in €): 1,300,000

I. INFORMATION ON THE APPLICANT

1 REFERENCES OF THE APPLICANT

1.1 IDENTITY OF THE APPLICANT

Official name in full: Indian Ocean Tuna Commission, Department of Fisheries, Food and Agriculture Organization of the United Nations
Acronym: IOTC/FAO (if applicable)
Official legal form: Food and Agriculture Organization of the United Nations (Not applicable if the applicant is a natural person)
Legal capacity: Yes (Applicant's capacity to take part - to constitute a party in court proceedings - under the applicable national legislation: reply by yes or no) (For entities with no legal status under national law please indicate the representative empowered to take part in court proceedings on their behalf)
Company registration number: N/A (Not applicable if the applicant is a public-sector body. For natural persons, the applicant should indicate the number of his/her identity card or, failing that, of his passport or equivalent)
VAT number: N/A (If the applicant is not subject to VAT, this must be justified in the light of the applicable national legislation)

1.2 CONTACT DETAILS

Street address: P.O. Box 1011	
Postcode:	
City: Victoria	
Region (if applicable):	
Country: Seychelles	
Telephone: +248-4225494	Mobile:
Fax:+248-4224364	
E-mail address: Secretariat@iotc.org	
Website: www.iotc.org	

1.3 CONTACT PERSON RESPONSIBLE FOR THE PROPOSAL

Family name: Payet	First Name: Rondolph
Position/Function: Executive Secretary	
Telephone: +248-4225494	Mobile:
Fax: +248-4224364	
E-mail address: Rondolph.Payet@iotc.org	

1.4 LEGAL REPRESENTATIVE (AUTHORISED TO SIGN THE AGREEMENT)	
Family name: Thomas	First Name: Laurent
Position/Function: Assistant Director-General, Technical Cooperation	
Mandate: N/A (May be different from the position –useful for entities with no legal status)	
Telephone: +39-06-57055042	Mobile:
Fax:	
E-mail address: Laurent.Thomas@fao.org	

2 BANK DETAILS

The account to be used for the action or work programme for which a grant is being requested [Option1 – must allow payments made by the Union to be identified] [Option 2 – must be reserved exclusively for EU funds paid for implementing the operation/work programme being funded].

EURO
Account Name: FAO Trust Fund (EUR)
Bank Name: HSBC Bank Plc, London, U.K.
IBAN: GB04MIDL40051567115083
Swift/BIC: MIDLGB22

3 PROFILE OF THE APPLICANT: FAO

PROFILE OF THE APPLICANT – GENERAL AIMS AND ACTIVITIES

1945

Applicant's category:
The applicant may tick several options

- ☐ Public Authority
- ☒ International Organisation
- ☐ Non-profit making organisation
- ☐ Social Partner
- ☐ Educational Establishment
- ☐ Research Centre/Institute
- ☐ Others
- ☐ SME
- ☐ Natural Persons

The applicant should provide a short description of the organisation/group, where appropriate including, information on membership, with respect to the eligibility criteria indicated in the specific call.

APPLICANT'S STRUCTURE AND COMPOSITION

Mr Thomas, Laurent
Assistant Director-General
Technical Cooperation
Food and Agriculture Organization of the United Nations

Mandate:

The TC Department is responsible for three interrelated functions to support the achievement of results under the Strategic Framework:

• assisting in mobilizing resources and South-South Cooperation; it serves as the entry point and operational coordinator for mobilization of voluntary contributions and quality control for reporting to resource partners on the results achieved. TC also manages a South-South Cooperation function to support and complement the resource mobilization work. More specifically, it assists governments, partners, Decentralized Offices, Headquarters Departments and Strategic Objective Programmes in the development, expansion and effective use of South-South Cooperation

• preparing for, and responding to, food and agriculture threats and crisis; it supports food and nutrition security assessment and early warning activities related to emergency and humanitarian analysis and responses. The Department ensures humanitarian policy coordination and knowledge, liaison with the Inter-Agency Standing Committee and with humanitarian resource partners, co-leadership with WFP of the global Food Security Cluster and organizational preparedness, surge capacity and response to large-scale emergencies

• programming of investments for agriculture, rural development, food security, nutrition and resilience. Its role is to ensure a stronger food and nutrition security focus in investment planning, expanded capacity development initiatives, sourcing and integration of FAO country knowledge and normative products in investment preparation and to expand opportunities for partnerships beyond those with IFIs/donors towards new regional priority areas, South-South Cooperation and arrangements with civil society and the private sector.

FAO's work is funded by assessed and voluntary contributions. The total FAO budget planned for 2014-2015 is USD 2.4 billion. Of this amount 41 percent comes from assessed contributions paid by member countries, while 59 percent will be mobilized through voluntary support. The voluntary contributions provided by Members and other partners support the Strategic Objectives of FAO and are thus focused on achieving Members' goals and delivering on agreed results. At country level, FAO ensures that all projects and programmes are aligned with the Country Programming Framework, which represents agreed priorities for action between FAO and governments.

4 INFORMATION ON THE GOVERNANCE OF THE APPLICANT

4.1 APPLICANT'S STRUCTURE

List the organisations and/or natural persons holding capital or shares in the applicant, where appropriate specifying the proportion held (insert rows if necessary)

Organisation/Natural person	Proportion held
N/A	

4.1.1 APPLICANT'S COMPOSITION

List the members of the applicant's administrative board or equivalent body, specifying their profession and position (insert rows if necessary)

Member	Profession/Position

4.1.2 SHARES

List the shares held in other organisations – if any – (insert rows if necessary)

Organisation	Share held
N/A	

II. OPERATIONAL AND FINANCIAL CAPACITY

1 OPERATIONAL CAPACITY

1.1 APPLICANT'S OPERATIONAL CAPACITY TO COMPLETE THE PROPOSED ACTION/WORK PROGRAMME

The applicant should provide a description of its relevant competences and previous experiences as well as those of the key staff who will be involved in the project (according to their profiles or CVs) as a proof of its capacity to implement the [action]/ [work programme] effectively.

The Indian Ocean Tuna Commission (IOTC) is an intergovernmental organisation responsible for the management of tuna and tuna-like species in the Indian Ocean.

It works to achieve this by promoting cooperation among its Contracting Parties (Members) and Cooperating Non-Contracting Parties in order to ensure the conservation and appropriate utilisation of fish stocks and encouraging the sustainable development of fisheries.

The Commission

Objectives

To promote cooperation among the Contracting Parties (Members) and non-Contracting Cooperating Parties of the IOTC with a view to ensuring, through appropriate management, the conservation and optimum utilisation of stocks covered by the organisation's establishing Agreement and encouraging sustainable development of fisheries based on such stocks.

Function and responsibilities

The Commission has four key functions and responsibilities which enable it to achieve its objectives. They are drawn from the United Nations Convention on the Law of the Sea (UNCLOS), and are:

- to keep under review the conditions and trends of the stocks and to gather, analyse and disseminate scientific information, catch and effort statistics and other data relevant to the conservation and management of the stocks and to fisheries based on the stocks;
- to encourage, recommend, and coordinate research and development activities in respect of the stocks and fisheries covered by the IOTC, and such other activities as the Commission may decide appropriate, such as transfer of technology, training and enhancement, having due regard to the need to ensure the equitable participation of Members of the Commission in the fisheries and the special interests and needs of Members in the region that are developing countries; to view the current capacity building activities of the Commission please visit the Capacity Building page;
- to adopt – on the basis of scientific evidence – Conservation and Management Measures (CMM) to ensure the conservation of the stocks covered by the

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Agreement and to promote the objective of their optimum utilisation throughout the Area;

- to keep under review the economic and social aspects of the fisheries based on the stocks covered by the Agreement bearing in mind, in particular, the interests of developing coastal States.

The project will involve the Executive Secretary and Deputy Secretary of the IOTC, as well as the staff of the Science Section, all have extensive experience in implementation of the IOTC scientific and statistical mandate.

2 FINANCIAL CAPACITY

LEGAL NOTICE
Where the application concerns grants for an action for which the amount exceeds EUR 500 000, or operating grants which exceed EUR 100 000, an audit report produced by an approved external auditor must be submitted, *[except for secondary and higher education establishments]*. This report should certify the accounts for the last financial year available. This does not apply to natural persons in receipt of scholarships nor to public bodies or international organisations.

2.1. PROOF OF FINANCIAL CAPACITY

The applicant should provide the following document[s] as evidence of financial capacity:

- *[Appropriate statement from banks or tax declaration or evidence of professional risk indemnity insurance;*
- *[Balance sheets or extracts from balance sheets for the last financial year for which the accounts have been closed.]*
- *Profit and loss account for the last financial year for which the accounts have been closed]. [For newly created entities, the business plan will replace closed accounts].*

2.1.1 FINANCIAL CAPACITY OF THE APPLICANT –

The applicant must show that it has sufficient and stable sources of funding to carry out the project throughout the entire period for which the action is planned, or the year for which the operating grant is awarded and to participate in its funding. The indicators refer to the last *[two]* financial years*[s]* for which accounts have been closed.

	Year N	***[Year N-1]***
Turnover or equivalent		
Gross operating profit		
Total liabilities		
Equity or equivalent		

Current asset		
Short-term debt (< 1 year)		
Total payroll		

2.2 GUARANTEES GRANTED BY THIRD PARTIES
(if any – the applicants should state the presence of any guarantees which is provided by one or more third party, for example a State guarantee)

III. INFORMATION ON THE [ACTION]/ [WORK PROGRAMME] FOR WHICH THE GRANT IS REQUESTED

1 DESCRIPTION OF THE [ACTION]/ [WORK PROGRAMME]

Title: Population structure of IOTC species in the Indian Ocean: Estimation with next generation sequencing technologies and otolith micro-chemistry

The project seeks to describe the population structure and connectivity of a range of tuna and tuna-like species within the Indian Ocean (and adjacent Pacific and Atlantic waters as appropriate), as well as some of the key shark species that interact with Indian Ocean Tuna Commission (IOTC) fisheries. It will also result in key stock assessment and management implications being defined and provided to the Commission, via the relevant subsidiary bodies. Collaboration with regional partners will be sought to increase the overall budget and enhance capacity for future monitoring and analysis within IOTC Contracting and Cooperating Non-Contracting Parties (CPCs). The core deliverables will include:

- A population structure atlas for a range of IOTC species and sharks based on the combined genetic and hard structure (otolith, shark vertebrate) micro-chemical analysis.
- Capacity building among developing IOTC CPCs on sampling protocols, stock structure determination and connectivity (population genetics and hard structure micro-chemical analysis) and understanding the role of stock structure in the management of IOTC species and associate sharks.
- Working documents describing key results and implications for assessment and management of each species, to be submitted to relevant IOTC Working Parties and the Scientific Committee.

In addition, it is envisioned that the core impact of the Project will include:

- The genetic tools developed will provide the basis for ongoing monitoring of population structure, and will support emerging population estimation methods (e.g. genetics-based mark-recapture techniques based on the identification and re-identification of individuals or the observed frequencies of closely-related pairs).
- The revised insight into population structure will permit more effective assessment and management options and tools to be applied to the Indian Ocean populations (including the parameterisation of operating models for management strategy evaluation, and catch decomposition sampling requirements for mixed-stock fisheries).
- Improved understanding of the population structure and connectivity will assist the Commission, and in particular developing coastal state CPCs to more effectively manage IOTC species.

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a) Describe the general and specific objectives that the [action]/ [work programme] aims to achieve:

The applicant should explain how the general and specific objectives of the [action]/ [work programme] will contribute to the objectives of the Union grant programme concerned. Where possible, specify related indicators to assess the project's achievements and expected impacts.

BACKGROUND AND NEED

The IOTC has a mandate to directly manage 16 species of tuna and tuna-like species in the Indian Ocean, although southern bluefin tuna has been passed to Commission for the Conservation of Southern Bluefin Tuna (CCSBT). A number of these species are considered to be of substantial commercial and food security value to Indian Ocean coastal states, as well as the Distant Water Fishing Nations operating in the IOTC area of competence. All of these species are assumed to be highly migratory, and straddle multiple coastal Exclusive Economic Zones (EEZs) and international waters, necessitating a multi-national effort for effective fisheries management. Some of these species have been assessed with modern, data-intensive, integrated population modelling techniques in recent years (yellowfin tuna, skipjack tuna, bigeye tuna, albacore and swordfish), while many of the neritic tuna and billfish species have recently been formally assessed using data poor approaches (kawakawa, longtail tuna, narrow-barred Spanish mackerel, black marlin, blue marlin,striped marlin and Indo-Pacific sailfish).

Attempts have been made to quantify movement within the Indian Ocean for yellowfin tuna and skipjack tuna and to a lesser extent bigeye tuna, primarily on the basis of tag displacements observed in the Regional Tuna Tagging Programme (RTTP-IO). Unfortunately, constraints to the RTTP-IO release design and low tag reporting rates for many important fleets (i.e. longline) has meant that movements to/from areas outside of the western equatorial region are difficult to quantify, even for these tagged species. All assessments to date have assumed a single panmictic spawning population within the Indian Ocean with the exception of swordfish, which the Commission has acknowledged the possibility of an independent south-west Indian Ocean population. However, there have been studies suggesting that there may be distinct population structure at a much finer scale than the Indian Ocean (e.g. for yellowfin tuna: Dammannagoda et al. 2008, Swaraj et al. 2013; skipjack tuna: Dammannagoda et al. 2011, Menezes et al. 2012; and bigeye tuna: Nugraha et al. 2011). Similarly, analyses of tagging data in the Indian Ocean and elsewhere (e.g. western Pacific) have suggested that movement/mixing rates may not be consistent with the large spatial regions that are typically assumed in stock assessments for tuna and tuna-like species. If the scientific stock assessment advice is based on invalid assumptions, management may fail to achieve stated objectives related to the conservation and optimal economic use (utilization) of the resources. Specifically, if populations are distinct (or mixing rates are very slow within a panmictic population), some populations (or sub-regions) could be locally over-exploited and management measures might be directed towards the wrong populations.

There is a clear need to underpin stock assessment and management advice with a basic understanding of population structure and connectivity among populations within the Indian Ocean (and potentially with adjacent populations in the Atlantic and Pacific Oceans). This is of particular importance for developing coastal States with short range fishing fleets. Responsible management is of course, in the long-term interest of the distant

water fishing nations as well, and addressing these fundamental concerns will assist with the attainment of sustainable product endorsements for all fisheries, regardless of whether the populations are revealed to be well-mixed or fragmented.

This project was conceptualised following the recommendation in 2013 by the Working Party on Neritic Tunas (WPNT) which recommended that research on stock structure of neritic tunas under the IOTC mandate should take two separate approaches (i) genetic research to determine the connectivity of neritic tunas throughout their distributions: such studies should be developed at the sub-regional level and (ii) tagging research to better understand and estimate exploitation rates, the movement dynamics, possible spawning locations, natural mortality, fishing mortality and post-release mortality of neritic tunas from various fisheries in the Indian Ocean. The Scientific Committee subsequently endorsed the Recommendation of the WPNT at its 2013 meeting and this was also endorsed by the Commission at its annual Session in 2014.

Focus species: The species listed below includes all of the 16 species under the IOTC mandate (with the exception of southern bluefin tuna) and seven shark species that are frequently caught in association with fisheries targeting IOTC species. The table is split into three, with the intention that those listed as '1st Stage species' will be the first to be examined followed by the 2nd Stage species. These listed in the 3rd Stage shall be examined only if additional funds become available. If possible, all species shown below could be examined over the course of the project if funds permit. The prioritisation is based on the Recommendation of the IOTC Scientific Committee in 2013, originating from the Working Party on Neritic Tunas in 2013 and other core priorities inferred from recent Commission decisions (i.e. on shark, skipjack tuna and albacore). The first meeting of the steering Committee may review these priorities based on the latest advice from the Scientific Committee.

1st Stage species

1) Neritic species
   - Longtail tuna (*Thunnus tongol*)
   - Kawakawa (*Euthynnus affinis*)
   - Narrow-barred Spanish mackerel (*Scomberomorus commerson*)
2) Tropical species
   - Skipjack tuna (*Katsuwonus pelamis*)
3) Temperate species
   - Albacore (*Thunnus alalunga*)
4) Billfish species
   - Swordfish (*Xiphias gladius*)
5) Shark species
   - Blue shark (*Prionace glauca*)
   - Scalloped hammerhead shark (*Sphyrna lewini*)

2nd Stage species

1) Other tropical species
   - Yellowfin tuna (*Thunnus albacares*)
   - Bigeye tuna (*Thunnus obesus*)
2) Other Billfish species
   - Striped marlin (*Tetrapturus audax*)
   - Indo-Pacific sailfish (*Istiophorus platypterus*)

3rd Stage species (additional funding will be required)

1) Other neritic species
   - Bullet tuna (*Auxis rochei*)
   - Frigate tuna (*Auxis thazard*)
   - Indo-Pacific king mackerel (*Scomberomorus guttatus*)
2) Other billfish species
   - Black marlin (*Makaira indica*)
   - Blue marlin (*Makaira nigricans*)

3) Other shark species
   - Bigeye thresher shark (*Alopias superciliosus*)
   - Oceanic whitetip shark (Carcharhinus longimanus)
   - Pelagic thresher shark (*Alopias pelagicus*)
   - Shortfin mako shark (*Isurus oxyrinchus*)
   - Silky shark (*Carcharhinus falciformis*)

b) Describe the [action]/ [work programme] (on the basis of the main activities planned) and where it will be implemented

PROGRAM OF WORK

Project phases

The project will be completed over a maximum of 3.5 years, with the option to extend should additional funds become available. The majority of the project work shall be completed within the first 2.5 years, with the third year devoted to project finalisation and the commencement of tagging work if the Steering Committee agrees on the need.

Phase 1: **Literature search** to identify prior (and current) population structure work for the target tuna and tuna-like species within the Indian Ocean and other oceans, as well as the main shark species listed in the species above. The Principle Investigator, in collaboration with the IOTC Secretariat shall draft the scope of this project element, which will focus on the priority species groups.

Performance Indicators:

1) Contractor: Draft paper due to the IOTC Secretariat 12 days from Phase commencement.
2) Contractor: Final paper due to the IOTC Secretariat 15 days from Phase commencement.

Timeframe: to be completed within one (1) month from commencement of the project.

Phase 2 (within methodology)

Phase 3: **Sample collection** will be employed using an adaptive sampling scheme, depending on i) existing sample collections held by collaborators, ii) availability of local sampling staff that can insure species identification reliability and low tissue contamination probability, iii) species priorities, iv) likelihood of obtaining a high proportion of multiple target species whenever possible.

Standard Operating Procedure (SOP) for tissue sample collection, handling and processing: The Principle Investigator shall develop a standardised sampling procedure to ensure all tissue collections throughout the study area provide sufficiently high quality specimens for genetic or other analysis. The SOP will be used as a guideline and reference by all collaborators (researchers and enumerators) in the field for tissue sample collection and preservation for laboratory analysis. The SOP will be submitted to first meeting of the Project Technical Committee for its comment and suggested modification within 3 months of the project commencement. At a minimum, the SOP shall include the following:

1) Objectives: To standardise the tissue sample collection of focus species in the Indian Ocean and out-groups for genetic study. This is necessary to obtain reliable data and comparable data for stock/population clarification.
2) Target species identification: High and Medium Priority species identification.
3) Sampling numbers and areas: Species specific sampling locations, based on the Project document and the numbers and types of samples to be taken.
4) Sampling materials and methods:
   a. Tissue sample collection and preservation procedure
   b. Hard structure collection and storage procedure
   c. Data collection forms
5) Transportation of samples
6) Key references

***Sampling locations*:**

Priority locations: Will include approximate extremes of the known species specific population range in the Indian Ocean, plus out-group populations in the Pacific and/or Atlantic oceans for species that appear to form a continuum across oceans (e.g. albacore and swordfish).

Intermediate locations: Depending on the initial evidence for species specific population structure, additional intermediate populations will need to be added at the appropriate scale (i.e. midpoint within the Indian Ocean). The sample locations would probably be selected from the following, depending on logistics and known species range (with subsequent sample locations to be repeated, with up to two additional locations selected depending on the initial observed structure, the spatial gaps and the possible connectivity with out-group populations):

Western Indian Ocean

i. **North-West** – e.g. waters in and/or near Oman or U.A.E.
ii. **South-West** – e.g. waters in and/or near South Africa, Tanzania, La Reunion, Mauritius or Seychelles

Eastern Indian Ocean

iii. **North-East** – e.g. waters in and/or near Indonesia or Thailand
iv. **South-East** – e.g. waters in and/or near south-western Australia, western Australia

Out-group

v. **Out-group** – Eastern Atlantic and/or western Pacific (species specific)

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Intermediate locations

vi. **Central** – e.g. waters in and/or near Maldives, India or Sri Lanka

***Sampling design*:**

- Target of 50–100 samples per species and location and time period (methodology dependent, including time period: annually or by quarter etc.).
    - Year 1: Initial broad-scale sampling at the extremes of the population range in the Indian Ocean, plus out-groups if applicable.
        - E.g. Longtail tuna: 50-100 Oman, 50-100 Tanzania, 50-100 Indonesia, 50-100 western Australia (total of 200-400 to be initially sampled)
        - E.g. Longtail tuna: 50-100 western Pacific (does not occur in the Atlantic).
        - **TOTAL year 1 = 250-500 (5 locations)**
    - Year 2: Replication over two years is recommended as an assessment of marker stability, however the Principle Investigator should also consider inter-annual sampling on a species by species basis.
        - E.g. Longtail tuna: 50-100 Oman, 50-100 Tanzania, 50-100 Indonesia, 50-100 western Australia (total of 200-400 to be initially sampled)
        - E.g. Longtail tuna: 50-100 western Pacific (does not occur in the Atlantic).
        - **Sub-TOTAL year 2 = 250-500 (5 locations)**
- Finer scale sampling if stock structure detected at broad-scale.
    - E.g. 2 additional site (Central and/or other) 50-100 per site in Year 2 = 100-200
        - **Sub-TOTAL year 2 = 100-200 (2 locations) Additional funds may be needed if other sites are to be sampled.**
- Total number of samples: 600-1200 per species x 8 = 4,800-9,600 High priority species; 2,400-4,800 Medium priority species. Total = 7,200-14,400 fish.
- Muscle tissue should be extracted from reasonably fresh or frozen fish, otoliths extracted for microchemistry analysis and lengths taken to infer age (and likely proximity to natal spawning ground).
- The main sampling target for stock discrimination should be on juveniles, as they are less likely to have moved far from their natal spawning grounds.
- Samples of larger specimens from key fisheries should also be sought to understand the mixed-stock nature of the fisheries, i.e. for effective management you should know not only where the populations spawn, but also where they are captured. The two distributions could be very different if there is spawning ground site fidelity, but mixing on foraging grounds.

Performance Indicators:

1) Principle Investigator: To provide a draft manual '*Standard Operating Procedure (SOP) for tissue sample collection, handling and processing*' to the IOTC Secretariat within 6 weeks of Project commencement.
2) Principle Investigator: Following feedback from the Steering Committee, the final manual for a SOP to be provided to all collaborators and the IOTC Secretariat within 2 months of the Projects commencement.
3) Principle Investigator: To confirm that the first round of sampling above, has been completed within 6 months of the Projects commencement.

4) Principle Investigator: To confirm that the second round of sampling detailed above, has been completed within 18 months of the Projects commencement.
5) Principle Investigator: To confirm that any final sampling at a higher resolution and out-groups, detailed above, has been completed within 24 months of the Projects commencement.

Timeframe: To be completed within two (2) years from commencement of the Project.

Phase 4: **Genetic analyses**. The most reliable and cost effective method identified in the methodological comparison (Phase 2) will be applied to the samples obtained in Phase 3. Samples should be analysed sequentially and adaptively – if there is no evidence of differentiation for the most distant samples, intermediate samples shall not be analysed. Conversely, genetic differences at the finest sampling scale would encourage higher resolution sampling in the next iteration. Next Generation Sequencing (NGS) sample processing estimate US$ 50/fish.

Performance Indicators:

1) Principle Investigator: To confirm that the first round of genetic analysis (50 per species & 5 sites per species), has been completed within 12 months of the Projects commencement.
2) Principle Investigator: To confirm that the second round of genetic analysis (50 per species & 5 sites per species)), has been completed within 24 months of the Projects commencement.
3) Principle Investigator: To confirm that any final genetic analysis at a higher resolution and out-groups, (50 per species & 2 sites per species), has been completed within 30 months of the Projects commencement.

Timeframe: to be completed within two and a half (2.5) years from commencement of the project.

Phase 5: **Otolith and shark vertebrae microchemistry analysis**. Laser ablation mass spectrometry and solution-based inductively coupled mass spectrometry should be used as an independent assessment of early juvenile residence locations as an independent corroboration of genetic population differentiation. Otolith ICP-MS analysis with laser ablation (primordium and edge) for elements and solution-based ICP-MS for oxygen and carbon stable isotopes are currently estimates at a processing estimate of US$ 6,500 per 20 fish sample.

To reduce the potential costs associated with ICP-MS analysis, a phased approach to the analysis based on the outcome of the genetics work is envisioned. Specifically, if clear evidence for genetic distinction is found using the genetic analysis, then ICP-MS analysis of the otoliths will not be necessary. However, if there is only weak or no evidence for genetic structure when it might be expected, then it is proposed that ICP-MS analysis be undertaken.

Shark vertebrae microchemistry analysis shall also be investigated to determine if stock structure differentiation is also possible. This sub-phase will need to be kept adaptive as the methods to undertake this type of analysis are still in the developmental stage.

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Performance Indicators:

1) Principle Investigator: To confirm that the first round of otolith and shark vertebrae analysis detailed above, has been completed within 18 months of the Projects commencement.
2) Principle Investigator: To confirm that the second round of otolith and shark vertebrae analysis detailed above, has been completed within 24 months of the Projects commencement.
3) Principle Investigator: To confirm that any final otolith and shark vertebrae analysis at a higher resolution and out-groups, detailed above, has been completed within 30 months of the Projects commencement.

Timeframe: to be completed within three (3) years from commencement of the project.

Phase 6: **Statistical analyses and population structure synthesis**. Appropriate analyses should be undertaken to identify discrete spawning populations. For key species, population structure results shall be synthesised in relation to other evidence of population structure and movement (e.g. from tagging data, fisheries catch, size composition and catch rates). Implications (for current) and recommendations (for future) IOTC stock assessments and management options will need to be described, and the need for mixed-stock fishery analyses, evaluated.

Performance Indicators:

1) Principle Investigator: To confirm that the first round of statistical analysis (High priority species) detailed above, has been completed within 12 months of the Projects commencement.
2) Principle Investigator: To confirm that the second round of statistical analysis (Medium priority species) detailed above, has been completed within 18 months of the Projects commencement.
3) Principle Investigator: To confirm that any final statistical analysis at a higher resolution and out-groups, detailed above, has been completed within 30 months of the Projects commencement.

Timeframe: to be completed within two and a half (2.5) years from commencement of the project.

Phase 7 within Monitoring and Supervision

Phase 8: Tagging studies: Details of tagging studies may be considered once the first 7 phases are completed and will focus solely on neritic tunas as agreed by the IOTC Scientific Committee. Specifically, the IOTC Working Party on Neritic Tunas agreed that research on stock structure should include tagging research to better understand and estimate exploitation rates, movement dynamics, spawning locations, natural mortality, fishing mortality and post-release mortality of neritic tunas from various fisheries in the Indian Ocean. This phase will be developed in detail once the stock structure for neritic tunas has been determined. US$69,900 will be allocated initially to support current tagging programs on neritic tunas, as a stimulus for future pilot programs.

The funds will be used to support existing tagging programs for longtail tuna by Indonesia, Malaysia and Thailand, with options for India and Sri Lanka to be considered as seed

funding.

c) Methodology to be followed:

The applicant should explain the methodology, both theoretical and practical, that will be followed in order to meet the general and specific objectives of the action described above. This might include support to third parties.

Phase 1: **Literature search**: Desktop component.

Literature cited in project concept note:

Dammannagoda ST, Hurwood DA & Mather PB. 2011. Genetic analysis reveals two stocks of skipjack tuna (*Katsuwonas pelamis*) in the northwestern Indian Ocean. Can. J. Fish. Aquat. Sci. 68: 210-223.

Dammannagoda ST, Hurwood DA & Mather PB. 2008. Evidence for fine geographical scale heterogeneity in gene frequencies in yellowfin tuna (*Thunnus albacares*) from the north Indian Ocean around Sri Lanka. Fish. Res. 90: 147-157.

Menezes MR, Kumar G & Kanal SP. 2012. Population genetic structure of skipjack tuna *Katsuwonas pelamis* from the Indian coast using sequence analysis of the mitochondrial DNA D-loop region. J. Fish. Biol. 80: 2198-2212.

Muths D, Le Couls S, Evano H, Grewe P & Bourjea J. 2013. Multi-genetic marker approach and spatio-temporal analysis suggest there is a single panmictic population of swordfish *Xiphias gladius* in the Indian Ocean. IOTC-2013-WPB11-10, IOTC Working Party on Billfish paper.

Nugraha B, Novianto D & Barata A. 2011. Keragaman genetik ikan tuna matabesar (*Thunnus obesus)* di Samudera Hindia. [Genetic diversity of bigeye tuna (*Thunnus obesus*) in Indian Ocean]. Ind. Fish. Res. J. Vol.17 (4), 285 - 292 (In Bahasa Indonesian, with English abstract).

Swaraj PK, Kumar G, Menezes MR & Meena RM. 2013. Mitochondrial DNA analysis reveals three stocks of yellowfin tuna *Thunnus albacares* (Bonnaterre, 1788) in Indian waters. Conserv. Genet 14: 205-213.

Phase 2: **Methodological comparison** to identify the most effective genetic tools for discriminating population structure and species identification.

Recent developments in Next Generation Sequencing (NGS) approaches have demonstrated crucial new advantages for examining population differentiation of highly migratory pelagic species. In particular, advancements and cost reduction of high throughput NGS technologies now represents cost effective options for revealing population structure through examination of Single Nucleotide Polymorphisms (SNPs). There are various techniques to exploit this new sequencing technology (e.g. Restriction site Associated DNA markers or RADtags and Genotyping by Sequencing) all of which have certain advantages depending on the question being asked. However, the common component of these approaches is that they all seek to uncover single nucleotide polymorphisms (SNPs), which are linked to genes under selection, that ultimately deliver a suite of markers permitting discrimination between genetically isolated populations or stocks. SNP polymorphisms offer advantages over classical techniques used in past genetic studies such as allozymes, mitochondrial DNA (mtDNA), and DNA microsatellites, which have failed to reveal much in the way of population differentiation.

There are at least two critical NGS advantages. First, little development time is required to

screen tens of thousands of loci at once, thereby permitting efficient discovery of population-discriminating loci. NGS approaches are far less labour intensive than classical markers and have proven very effective at revealing subtle variation necessary to discriminate structure present in marine fish populations. The use of small numbers of loci in classical approaches means that a high rate of false negatives can be expected (i.e. if stock structure exists there is a high probability that it will not be recognised). The second key NGS advantage is reproducibility between labs and machines. Machine calibration limits mean that microsatellite markers will often score differently on different machines (even though the scoring is internally consistent on each individual machine). Thus, NGS approaches are much better for combining data among labs and over time. For a broad scale Indian Ocean study, these latest NGS techniques should be applied for questions of stock structure in such a way as they can also be tied into other studies in the Atlantic and Pacific Oceans to permit a more global stock analysis of the various pelagic species of interest. However, as the NGS technologies are evolving extremely rapidly under intense competition among manufacturers, it is not entirely clear which of the NGS approaches can be employed most cost-effectively at any given time. The newest and cheapest advertised rates may not deliver the expected performance for unanticipated reasons. So it is worth conducting initial and periodic methodological comparisons to ensure that good value is achieved for the life of the project.

Whichever method is chosen, the Principle Investigator shall ensure that at least one dual trial is carried out among two labs using the same methodology to confirm.

The methodological comparison shall include the following two stages:

i) Comparing previously used methodologies (Muths et al. 2013) and NGS methodologies for swordfish in the Indian Ocean. Tissue samples are currently available at IFremer and have been offered for comparative analysis at no additional expense.

ii) Comparing 2dRAD and DArT NGS technologies for ease and effectiveness. This would involve doubling the sample analysis cost for one or two species (where stock structure has already been identified. Out-group samples from the Atlantic and Pacific Oceans should be included to ensure differences are present.

Performance Indicators:

1) Principle Investigator: To provide a detailed plan for the methodological comparison within 2 months of project commencement, to the IOTC Secretariat.
2) Principle Investigator: To provide the results of the initial methodological comparison for Swordfish (Stage one above), within 4 months of the Project commencement as a written report to the IOTC Secretariat.
3) Principle Investigator: To provide ongoing updates of the methodological comparison (Stage two above), to the IOTC Secretariat.

Timeframe: To be completed within four (4) months from commencement of the project, and ongoing verification as detailed above.

Phase 3: **Sample collection** will be employed using an adaptive sampling scheme, depending on i) existing sample collections held by collaborators, ii) availability of local sampling staff that can insure species identification reliability and low tissue contamination probability, iii) species priorities, iv) likelihood of obtaining a high proportion of multiple target species whenever possible, and v) budget. **See Phase 3 under PROGRAM OF**

WORK for additional details.

Phase 4: **Genetic analyses**. The most reliable and cost effective method identified in the methodological comparison (Phase 2) will be applied to the samples obtained in Phase 3. Samples should be analysed sequentially and adaptively – if there is no evidence of differentiation for the most distant samples, intermediate samples shall not be analysed. Conversely, genetic differences at the finest sampling scale would encourage higher resolution sampling in the next iteration. **See Phase 4 under PROGRAM OF WORK for additional details.**

Phase 5: **Otolith and shark vertebrae microchemistry analysis**. Laser ablation mass spectrometry and solution-based inductively coupled mass spectrometry should be used as an independent assessment of early juvenile residence locations as an independent corroboration of genetic population differentiation. Otolith ICP-MS analysis with laser ablation (primordium and edge) for elements and solution-based ICP-MS for oxygen and carbon stable isotopes will be used. Shark vertebrae microchemistry analysis shall also be investigated to determine if stock structure differentiation is also possible. This sub-phase will need to be kept adaptive as the methods to undertake this type of analysis are still in the developmental stage. **See Phase 5 under PROGRAM OF WORK for additional details.**

Phase 6: **Statistical analyses and population structure synthesis**. Desktop component. **See Phase 6 under PROGRAM OF WORK for additional details.**

Phase 7: **Reporting**. Desktop component.

d) Expected results and their use:

The applicant should specify the benchmarks or deliverables which the applicant intends to employ to achieve the expected results and targets and how they will be used and disseminated.

Deliverables

Outputs

1) Genetic markers for population (stock) discrimination.
2) Evaluation of usefulness of combining data from genetic markers and otolith microchemistry across multiple sampling years (i.e. uncertainty, sensitivity, spatial and temporal stability).
3) Population structure atlas based on combined genetics and otolith microchemistry results.
4) Capacity building on sampling protocols and stock structure determination (population genetics and otolithe microchemistry analysis).
5) Working papers describing key results and implications for assessment and management, to be submitted to relevant IOTC Working Parties.

Outcomes/impact

1) The genetic tools developed will provide the basis for ongoing monitoring of population structure, and will support emerging population estimation methods (e.g. genetics-based mark-recapture techniques based on the identification and re-identification of individuals or the observed frequencies of closely-related pairs).
2) The revised insight into population structure will permit more effective assessment and management options and tools to be applied to the Indian Ocean populations

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(including the parameterisation of operating models for management strategy evaluation, and catch decomposition sampling requirements for mixed-stock fisheries).

3) Improved understanding of the population structure and connectivity will help developing coastal States to more effectively understand regional fisheries productivity to effectively manage IOTC species.

e) Project management:

The applicant should provide a detailed description of the organization of the [action]/ [work programme] and of the implementation phase, specifying arrangements for monitoring, supervision and risk management. The applicant should also explain which part of the action might be subcontracted (list of main activities, or works to be carried out).

Project management

IOTC Secretariat (Project supervisor): The IOTC Secretariat will act as the overall project supervisor and will be responsible for ensuring the projects' implementation according to the Project proposal. The IOTC Secretariat will also be responsible for budget administration, as per FAO requirements.

Principle Investigator (Contractor): A Principle Investigator will be contracted to oversee the projects technical implementation. The selected person will be required to have the necessary capability and experience to assist the IOTC Secretariat in the coordination and technical implementation of the project. The Principle Investigator may be drawn from a lead provider. If a lead provider is selected, the team would need to provide the technical and analytical skills to develop pioneering genetic techniques for population analyses, have otolith microchemistry experience, in-depth knowledge of tuna and tuna-like species stock assessment methods and management options, have established ongoing engagement with tuna RFMOs (IOTC in particular), and the management skills to coordinate large international collaborations and capacity building.

Project Administrative Steering Committee

The role of the *Project Administrative Steering Committee* will be to ensure the effective administrative implementation of the Project. The *Project Administrative Steering Committee* shall meet electronically at all stages of the project, but may meet immediately prior to the first *Project Technical Committee* (detailed below). The Project Steering Committee will meet at least once during the project life and where possible back to back with the Project Technical Committee.

Project Administrative Steering Committee composition:

- IOTC Secretariat
- DG-MARE representative
- Principle Investigator
- One co-investigator from a lead EU institution
- One co-investigator from a non-EU lead institution
- One co-investigator from a lead developing CPC institution

Project Technical Committee

The role of the *Project Technical Committee* will be to ensure that all collaborators and other technical participants in the project are aware of the specific technical requirements (i.e. methodologies, sampling and processing protocols) and to ensure the smooth technical implementation of the Project.

A face-to-face meeting of the *Project Technical Committee* will be held in the first quarter of 2015 followed by a second face-to-face *Project Technical Committee* meeting in 2017 at a location to be decided. The first meeting will review and approve the sampling methodology and review the activities for technical implementation of the Project. . The Project Technical Committee will meet prior to the Project Steering Committee as much as possible. They will have objective to review all the technical work and work plan for approval by the Project Steering Committee.

The IOTC Secretariat will also facilitate additional *Project Technical Committee* meetings via electronic means on an as needed basis.

Project Technical Committee composition:

- IOTC Secretariat
- Principle Investigator
- Chair or Vice-Chair (or nominated alternate) of the Working Party on Neritic Tunas*
- Chair or Vice-Chair (or nominated alternate) from the Working Party on Ecosystems and Bycatch*
- Project contributors/collaborators (One person from each collaborating research organization, if available)
- Project assistants (At least one from developing CPCs assisting in sample collection: e.g. North-West: Oman, South-West: South Africa or Tanzania; North-East: Thailand or Indonesia, South-east: Australia)

*Note: these shall not be from one of the provider institutions to avoid potential conflicts of interest, although in during the implementation they will participate in the technical discussions and act as observers.

Project Procurement

In the case of project procurement, DG-MARE will be consulted.
As per FAO administrative procedures, Letters of Agreement (LoA) will be the preferred contractual instrument. LoAs shall be advertised for a call of interest on the IOTC website and a selection committee will be established within the Secretariat. Direct selection is allowed by FAO rules and regulations if the LoA amount is below USD 20,000 and justification is provided.

f) Arrangements for monitoring/supervision of the operation and risks involved in its implementation:

The applicant should explain how the [action]/ [work programme] will be supervised. The applicant should refer to any risks involved in its implementation, how they might affect the objectives and outcomes of the [action]/ [work programme] and how they could be mitigated.

Phase 7: **Reporting**. A progress report shall be provided by the Principle Investigator every four (4) months. In addition, a detailed annual report shall be provided by the Principle Investigator, no later than 30 days before the commencement of the IOTC Scientific Committee meeting in 2015, 2016 and 2017.

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In addition, regular updates will be provided by the IOTC Secretariat at each of the relevant IOTC working party meetings in 2015, 2016 and 2017, with a final report by species group (i.e. neritic tunas, billfish, tropical tunas, temperate tunas and sharks) to be submitted to each relevant working party meeting as the reports are finalised but no later than at the 2017 Sessions.

Performance Indicators:

1) Principle Investigator (PI): To provide a Project progress report every four (4) months to the IOTC Secretariat. No funds are provided for attendance to the Working Party meetings, but rather, will be considered on a species by species basis as necessary pending Progress reports.
2) Principle Investigator (PI): To provide a comprehensive Project progress report no later than 30 days before the commencement of the 18th Session of the Scientific Committee in 2015, to the IOTC Secretariat for review and comment. The IOTC Secretariat will present this first annual report to the SC to the IOTC Scientific Community (SC18: 2015).Principle Investigator (PI): To provide a comprehensive Project progress report no later than 30 days before the commencement of the 19th Session of the Scientific Committee in 2016, to the IOTC Secretariat for review and comment. PI to attend the 19th Session of the SC to present the second annual report for the consideration of the wider IOTC Scientific Community (SC19: 2016).
3) Principle Investigator (PI): To provide a comprehensive Project progress report no later than 30 days before the commencement of the 20th Session of the Scientific Committee. PI to attend the 20th Session of the SC to present the third annual report for the consideration of the wider IOTC Scientific Community (SC20: 2017).
4) Principle Investigator (PI): To provide the FINAL draft Project report no later than one month prior to Project completion (41 months from Project commencement), to the Project Steering Committee for its consideration.

Timeframe: Annual reporting in 2015, 2016 and 2017. Progress reports to be provided to the Working Parties via the IOTC Secretariat, in 2015, 2016 and 2017.

g) Sustainability of the project's achievements:

The applicant should explain how sustainability will be secured once the action has been completed. This can include considerations about different dimensions of sustainability: financial, economic, institutional (structures which would allow the results of the action to continue), environmental, policy, etc. (where applicable, depending on the provisions of the basic act).

Capacity building

At all stages of the project, national scientists from developing coastal IOTC CPCs will need to be engaged by Institutions carrying out sampling and analysis. The aim is to provide training in sampling protocols and modern genetic and microchemistry techniques so that national scientists may be engaged throughout the Project.

Key scientists from developing coastal CPCs where sampling is being undertaken should be kept informed of the Projects implementation and significance. Capacity building activities will need to be closely coordinated with the IOTC Secretariat to ensure efforts are consistent with IOTC aims and objectives, as well as established programs.

The funds allocated for budget under 'indirect costs' shall be used to cover unexpected budget variation during implementation and capacity building purposes if this amount remains unspent at the end of each calendar year (starting in 2015), to be determined by the Technical Committee. In the case of funds unspent on project activities proper, one third should be allocated to Project capacity building activities each year until the funds are spent. The capacity building activities to be undertaken shall be determined by the Technical Committee and approved by the Steering Committee.

The following must be incorporated into any Expression of Interest by collaborating Institutions:

1) At least one local fisheries representative (i.e. fisheries officer/scientist/observer/student) shall be involved/present during all sampling events. Where possible, this person shall be trained in sampling methodology.
2) If necessary, the Provider will undertake initial training sessions for the local fisheries representative and others who may be interested in the Project.
3) Any Provider shall provide 'briefing' and 'debriefing' sessions for local fisheries representatives to ensure all local stakeholders are well informed of the Projects goals and objectives, outcomes and significance.
4) If possible, Providers should consider the engagement of 'Student placements' for developing coastal states, within their Institutions.

Performance Indicators:

1) At least one local fisheries representative is actively participating in all field sampling events.
2) Developing coastal state fisheries representatives are surveyed and indicate that they are aware and supportive of the Projects aims and objectives, as well as the significance of the Project.

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2 PLANNED DURATION OF THE [ACTION] / [WORK PROGRAMME] (in months): 42
Planned starting date: 01/03/2015

2.(a) TIMETABLE FOR EACH STAGE OF THE [ACTION]/ [WORK PROGRAMME] SHOWING MAIN DATES AND EXPECTED RESULTS FOR EACH STAGE (table to be repeated as many times as necessary)

2015	Semester 1						Semester 2					
Phase 1	Month 1	2	3	4	5	6	7	8	9	10	11	12
1: Literature search			X									
2: Methodological comparison				X	X	X	X					
3: Sample collection					X	X	X	X	X	X	X	X
4: Genetic analyses							X	X	X	X	X	X
5: Otolith microchem. analysis										X	X	X
6: Statistical analyses &population structure synthesis							X	X	X	X	X	X
7: Reporting							X					X
2016												
1: Literature search												
2: Methodological comparison												
3: Sample collection	X	X	X	X	X	X	X	X	X	X	X	X
4: Genetic analyses	X	X	X	X	X	X	X	X	X	X	X	X
5:Otolith microchem. analysis	X	X	X	X	X	X	X	X	X	X	X	X
6: Statistical analyses &population structure synthesis	X	X	X	X	X	X	X	X	X	X	X	X
7: Reporting						X						X
2017												
1: Literature search												
2: Methodological comparison												
3: Sample collection	X	X	X	X	X	X						
4: Genetic analyses	X	X	X	X	X	X	X	X	X	X	X	X
5:Otolith microchem. analysis	X	X	X	X	X	X	X	X	X	X	X	X
6: Statistical analyses &population structure synthesis	X	X	X	X	X	X	X	X	X	X	X	X
7: Reporting						X		X		X		X
Closing (finalisation of Reporting to the EU)	X	X	X	X	X	X						

LEGAL NOTICE

Applicants are informed that, under the Financial Regulation applicable to the general budget of the European Union, no grants may be awarded retrospectively for actions already completed. In those exceptional cases accepted by the [Commission] / [agency] where applicants demonstrate the need to start the action or work programme before the agreement is signed or the decision notified, expenditure eligible for financing may not have been incurred before the grant application was lodged or in the case of an operating grant, before the start of the beneficiary's budgetary year.

3 BUDGET

3.1 Estimated Budget - Annex 1

Applications must include a detailed estimated budget in balance in which all costs are given in euros. Applicants from countries outside the euro zone may use either the conversion rates published in the Official Journal of the European Union, series C, during the month in which they are submitting the application, or the monthly rate published on the Commission's website at www.ec.europa.eu/budget/inforeuro/.

Summary (in €)

a) Eligible costs: 1,719,117
b) Total costs: 1,719,117
c) Requested Union Funding: 1,300,000
d) Rate of funding requested: 75.62%

IV. ADDITIONAL FUNDING

1 UNION FUNDING

1.1 IN PREVIOUS YEARS

Has the applicant already obtained any Union grants, contracts or loans from a Union Institution or body/agency of the Union, directly or indirectly for similar/complementary action(s) during the last [...] years?

☐ NO

☒ YES – Continue to the following table

GRANT, CONTRACT OR LOAN DETAILS – To be specified for each of them (previous years - add columns if necessary)

	Programme 1	**Programme 2**
Title of the operation	Capacity Building for Developing Countries S12.661874	Technical Assistance to Developing Countries Implementation period SI2.627519
Union Programme concerned	European Commission – DG for Maritime Affairs & Fisheries	European Commission – DG for Maritime Affairs & Fisheries
Union Institution or Body/Agency which took the award decision	DG-MARE	DG-MARE
Year of award and duration of the operation	2014 – 12 months	2012/13 – 12 months
Value of the grant, contract or loan	Euro 120,000	Euro 100,000

1.2 CURRENT YEAR

Has the applicant submitted grant/loan applications for similar/complementary action(s) or offers of service or an operating grant to the Union Institutions/bodies/agencies in the current year? No

GRANT, CONTRACT OR LOAN DETAILS – To be specified for each of them (current year - add columns if necessary)

	Programme 1	**Programme 2**
Title of the operation		
Union Programme concerned		
Union Institution or		

Body/Agency which will take the award decision		
Planned duration of the operation		
Estimated value of the grant, contract or loan		

LEGAL NOTICE
The applicant must inform the [Commission] / [agency] department to which this application is submitted if any of the above-mentioned applications for funding made to other European Commission departments or Union Institutions or bodies/agencies has been approved by them after the submission of this grant application.

2 OTHER SOURCES OF EXTERNAL FUNDING – NON UNION

2.1 SUPPORT AWARDED

Has the applicant already received confirmation relating to any external funding for the [action] /[work programme]?

☒ NO

☐ YES – Continue to the [table in the Annexes (Budget)] [following table]

[The applicant must submit a letter confirming the financial contribution awarded or any other proof thereof, signed by each third party].

CONTRIBUTIONS BY THIRD PARTIES
The applicant should indicate the details of the third party following the model below – Third parties must be the same as those listed in the budget (add rows if necessary)

Third Party 1	
Official name in full	
Official legal form	
Official address	
E-mail address	
Person responsible who has signed the commitment letter (name/first name, title or position)	
Estimated amount of funding to be provided for the operation	
Pre-allocation of funding (if any)	

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Conditions or reservations (if any)	

2.2 REQUESTED SUPPORT
Has the applicant requested, applied or are awaiting confirmation relating to any external funding for the action/working programme? ☒ NO ☐ YES – Continue to the table in the Annexes (Budget)

DETAILS OF FUNDS REQUESTED - The applicant should indicate the details of the sponsors following the model below (add rows if necessary)	
Organisation/Entity Concerned 1	
Name of the organisation	
Official address	
E-mail address	
Requested amount	

V. DECLARATION BY THE APPLICANT

I, the undersigned, Laurent Thomas, authorised to represent the applicant, hereby request from the [Commission] / [agency] a grant of EUR 1.300.000 with a view to implementing the [action] / [work programme] on the terms laid down in this application.

I certify that the information contained in this application is correct and complete and that the applicant has not received any other Union funding to carry out the action/work programme which is the subject of this grant application.

I certify on my honour that the applicant is not in one of the situations which would exclude it from receiving Union grants and accordingly declare that the applicant:

- is not bankrupt or being wound up, is not having its affairs administered by the courts, has not entered into an arrangement with creditors or suspended business activities, is not the subject of proceedings concerning those matters, and is not in any analogous situation arising from a similar procedure provided for in national legislation or regulations;
- has not been convicted of an offence concerning its professional conduct by a judgment which has the force of res judicata;
- is not guilty of grave professional misconduct proven by any means which the [Commission] / [agency] can justify;
- has fulfilled all its obligations relating to the payment of social security contributions and taxes in accordance with the legal provisions of the country in which it is established and with those of [the country of the authorising officer responsible], as well as those of the country where the [action]/ [work programme] is to be implemented;
- has not been the subject of a judgment which has the force of res judicata for fraud, corruption, involvement in a criminal organisation or any other illegal activity detrimental to the Union's financial interests;
- is not currently subject to an administrative penalty for being found guilty of serious misrepresentation in supplying the information required by the [Commission] / [agency], or for failing to supply such information, or for being declared to be in serious breach of contract for failure to comply with its contractual obligations subsequent to a procurement procedure or another grant award procedure financed by the Union budget;
- is not subject to a conflict of interest;
- is not guilty of misrepresentation in supplying the information required by the [Commission] / [agency] or of failing to supply this information.

I have been informed that, under the Financial Regulation of 25 June 2002 applicable to the general budget of the European Communities[1], applicants found guilty of misrepresentation may be subject to administrative and financial penalties in accordance with the conditions laid down in that Regulation.

The administrative penalties consist of being excluded from all contracts or grants financed from the Union budget for a maximum of five years from the date on which the infringement is established, as confirmed after an adversarial procedure with the applicant.

This period may be extended to ten years in the event of a repeat offence within five years of the first infringement. Applicants who are guilty of making false declarations may also

[1] Official Journal of European Union L 248 of 16.9.2002, as amended.

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receive financial penalties representing 2% to 10% of the value of the grant being awarded. This rate may be increased to between 4% and 20% in the event of a repeat offence within five years of the first infringement.

I declare that the applicant is fully eligible in accordance with the criteria set out in the specific call for proposals.

I certify that the applicant has the financial and operational capacity to carry out the proposed action/work programme.

If selected to to be awarded a grant, the applicant accepts the standard conditions as laid down in the grant agreement/decision publicly available.

Name / first name: THOMAS, Laurent

Title or position in the applicant organisation: Assistant Director-General, Technical Cooperation, FAO

Signature [and official stamp] of the applicant:

Laurent Thomas
Assistant Director-General
Technical Cooperation Department

Date: 28/11/2014

Your reply to the grant application will involves the recording and processing of personal data (such as your name, address and CV), which will be processed pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Unless indicated otherwise, your replies to the questions in this form and any personal data requested are required to assess your grant application in accordance with the specifications of the call for proposals and will be processed solely for that purpose by [*entity acting as data controller*]. Details concerning the processing of your personal data are available on the privacy statement at the page: http://ec.europa.eu/dataprotectionofficer/privacystatement_publicprocurement_en.pdf.

Your personal data may be registered in the Early Warning System (EWS) only or both in the EWS and Central Exclusion Database (CED) by the Accounting Officer of the Commission, should you be in one of the situations mentioned in:

- the Commission Decision 2008/969 of 16.12.2008 on the Early Warning System (for more information see the Privacy Statement on http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm), or

- the Commission Regulation 2008/1302 of 17.12.2008 on the Central Exclusion Database (for more information see the Privacy Statement on http://ec.europa.eu/budget/explained/management/protecting/protect_en.cfm#BDCE)

CHECK-LIST FOR APPLICANTS

All sections of the application form have been filled in, where appropriate, in accordance with the guide for applicant or any other document provided as guidance related to the programme concerned.	X
[The budget annex has been duly filled in and is attached.]	X
[Letters of commitment by co-financiers have been included with the application form.]	☐
[Legal details have been included in the Legal Entity Form annexed.]	X
[Bank details have been included in the Bank Account Form].	X
[Appropriate statement from banks or tax declaration or evidence of professional risk indemnity insurance has been included.]	☐
[Balance sheets or extracts from balance sheets for the last year for which accounts have been closed have been included with the application form.]	☐
[Profit and loss account for the last financial year for which the accounts have been closed has been included with the application form.]	☐
[Audit report by an approved external auditor on the accounts of the last financial year available has been included with the application form]	☐