



United Nations  
Educational, Scientific and  
Cultural Organization

Organisation  
des Nations Unies  
pour l'éducation,  
la science et la culture

## **Contract for Individual Consultant (other Specialists)**

### **Request for written proposal**

**Reference: OIH-ARCH-AUG2020-PP**

**Date: 31 August 2020**

### **Request to submit a written proposal for a work assignment with UNESCO**

UNESCO is inviting written proposals from Individual Consultants for the work assignment described in attachment A.

To enable you to prepare a proposal for this assignment, please find attached the following documents:

- (a) Terms of Reference (see attachment A);
- (b) UNESCO's contract for Individual Consultants, the contracting modality used for these assignments (attachment B);
- (c) Background material concerning the work assignment (attachment C – will be send on request only)

Your written should comprise:

(a) A technical Proposal consisting of

- an up to date personal curriculum vitae
- a UNESCO template CV,
- a motivation letter indicating how your qualifications and experience make you suitable for the assignment and
- an approach and methodology for the assignment, a workplan and comments on the Terms of Reference if any (in brief).

(b) The amount to be charged for the assignment, which should be quoted in US dollars or in Euros only. Please show any travel costs separately

**Your proposal and any supporting documents must be either in English or French.**

UNESCO places great emphasis on ensuring that the objectives of the work assignment, as described in the Terms of Reference, are met. Accordingly, in evaluating the proposals for the assignment, attention will focus first and foremost on the technical elements. From those proposals deemed suitable in terms of the criteria in the Terms of Reference, UNESCO shall select the proposal that offers the Organisation best value for money.

Your proposal should be submitted by e-mail no later than close of business (23:59-Paris time) on Sunday 13 September 2020. E-mail proposals should not exceed 5MB.

The e-mail address is:

[p.pissierssens@unesco.org](mailto:p.pissierssens@unesco.org)

It is the individual's responsibility to ensure that his/her proposal is received by the deadline.

Thank you for your interest in this UNESCO assignment; and we look forward to receiving your proposal.

## **ANNEX A**

### **PROPOSED TERMS OF REFERENCE OCEAN INFOHUB PROJECT: ODIS-ARCHITECTURE DEVELOPMENT**

**Start of Contract: 1 October 2020**

**End of Contract: 31 March 2021**

**(6 months)**

#### **1. Background**

The IOC Ocean InfoHub (OIH) Project is a new initiative to streamline access to ocean science data and information for management and sustainable development. Funded by the Government of Flanders (Kingdom of Belgium), the project started in April 2020 and will run for three years. The OIH is coordinated by the IOC Project Office for [IODE](#) (Oostende, Belgium).

The OIH will establish and anchor a network of regional and thematic nodes that will improve online access to and synthesis of existing global, regional and national data, information and knowledge resources. The project will center on an openly accessible web platform designed to support interlinkages and interoperability between distributed resources including existing clearinghouse mechanisms (CHM). The OIH will first consolidate IOC-associated online resources - including [OceanExpert](#), [OceanDocs](#), the Ocean Best Practices System ([OBPS](#)), the Ocean Biodiversity Information System ([OBIS](#)), the World Ocean Database ([WOD](#)) and Ocean Data Portal ([ODP](#)) – extended by partnerships with EurOcean, Marinetraining.eu, EMODNET, and other sources in the IOC ODIS Catalogue of Sources ([ODIScat](#)). The initial focus of OIH will thus be on (i) experts, (ii) institutions/organizations, (iii) research data and information infrastructures and their capabilities and services offered, (iv) projects, (v) research vessels, (vi) education and training opportunities, (vii) funding programs and other opportunities, (viii) documents and publications, (ix) manuals, guidelines, standards and best practices, (xi) metadata catalogues for specific variables and (xii) access to data sets and/or data products relevant to particular program priorities (e.g. the SDGs and Essential Ocean Variables).

The project will benefit marine and coastal stakeholders across the globe, but its initial focus will be on responding to requests for data products and services from three regions: IOCAFRICA, Latin America and the Caribbean (LAC) and the Pacific Small Island Developing states (SIDS) to meet their unique user community (thematic and language) requirements. The initial priorities for the Project will be to develop communities of practice for the three pilot regions, as well as to formalize partnerships with other UN agencies and key international partners. A global ODIS (Ocean Data and Information System) Architecture (ODIS-Arch) will be developed to enable scalable development and interoperability with local, regional and thematic infrastructures. Through these actions, the OIH will enable a digital ecosystem where users, from any entry point, can discover content and services that they require, while also having opportunities to become content creators themselves.

#### **2. Contractor Brief**

To link the distributed resources that the OIH will depend on, a lightweight and easily implementable interoperability solution - as part of the ODIS-Arch - is needed. The aim of the contract is to work with selected partners to implement a lightweight, schema.org-

based approach to begin the interlinkage of digital resources corresponding to the focal areas noted above. Based on this work, OIH will then be able to discover, harvest, broker, and enhance transfer of resources and capacities from interoperating partners.

### **3. Overarching Responsibilities/Requirements**

- The developer must be able to critically examine existing software projects and components available in the open source marketplace for applicable capabilities already in existence before developing custom implementations
- The developer must be familiar with distributed data processing frameworks and be able to design a system that will operate efficiently over time with a reasonable cost model (through discussions with project manager on operational budget projections)
- All software must be developed as open source (GNU Affero General Public License v3.0) on GitHub repositories and configured/documented for open contributions from the community

### **4. Specific tasks and expected outputs**

Under the supervision of Lucy Scott (OIH Project Manager), the OIH secretariat and the co-chairs of the OIH Working Group 2, the Individual Specialist shall:

- I. Adapt and/or develop software code that generates JSON-LD (or comparable) encoding of metadata from various original source schemas to a community standard (defined in the ODIS-Arch) in schema.org. This will serve as proof of concept and prototype of a metadata projection functionality in source systems
  - a. Embedding of resolvable and dereferenceable persistent identifiers (URIs/IRIs) (linked to community standards) in schema.org is a requirement to promote alignment with community terminology resources to interoperably describe digital resources.
- II. Adapt and/or develop an open-source technology stack for interfacing with, aggregating, indexing, and graphing schema.org-based meta-information from landing pages or other information sources
  - a. Key technologies include: RDF, SQL-based RDBMS, AWS stacks, Graph Database solutions.
  - b. Partners may have local constraints on their technologies - preparedness to work within these (or to robustly bridge them) is required
- III. Adapt and/or develop a reference implementation of an API to both disseminate and access digital resources described by the schema.org records described above
  - a. The API should be written to the REST OpenAPI specification
  - b. At least one higher-level API built within particular coding environments in use by the community (e.g., Python, R, PHP, etc.) that expresses information for particular applications should be contributed or developed as part of the project
- IV. Full documentation of the contract's outputs is expected. This will include:
  - Installation instructions noting:
    - Required hardware
    - Software dependencies and how to install them

- Complete step-by-step instructions to enable anyone to install the software from scratch on a new machine without having any prior knowledge
      - Comprehensive description of any stylesheets/templates used
      - Complete list and description of scripts and how they should be run
      - Complete description of any cronjobs that would be needed
      - Description of the setup and diagrams of any databases used
      - Update/upgrade instructions
    - In-code documentation
      - Complete description of all classes and methods used
      - Comprehensive description of arguments given to methods and variables used
      - Comprehensive description of the return values from methods and functions
      - Description of the exceptions and how they should be handled
    - Extensive documentation on how the software works
      - Description with diagrams of the complete workflow/dataflow
      - Coding examples
      - If there is a user interface, complete description of the elements, with according images/screenshots
      - If there is a machine interface, complete list of all methods/functions that are exposed with required arguments and expected return. Completed with examples.
    - Disaster recovery
      - How and what should be in backups
      - How to recover from a disaster (server(s) completely lost)
- V. Undertake unit testing in a continuous integration mode
- What version numbering will be used, what goes to dev/staging/production
  - Co-development of tests with OIH technical teams
  - Every function, method, class will have and pass all required unit tests
  - Integration tests for all exposed methods of the API

## 5. Timetable and deliverables

	Description deliverable	Deadline
1	Signature of the contract	28 September 2020
2	Monthly progress report	31 October 2020
3	Monthly progress report and first example proof of concept	30 November 2020
4	Monthly progress report	31 December 2020
5	Monthly progress report	31 January 2021
6	Monthly progress report	28 February 2021
7	Final report and full contract documentation complete with at least six proof-of concept examples.	31 March 2021

## 6. Qualifications and demonstrable experience

- Demonstrable knowledge of concepts, and experience working with databases, JSON-LD, RDF, SPARQL/GraphQL, semantic web, linked open data, and existing data networks.
- Experience implementing schema.org on diverse web platforms

- Experience using (and ideally developing) community data standards
- Ability to seek functional compromises to support multi-system interoperability through (meta)data exchange
- the application should include references to web sites and other deliverables previously developed
- Fluent in spoken and written English
- Self-motivated and resourceful, with the proven ability to multi-task and prioritize multiple assignments
- Ability to work individually and as part of a team
- Very good working knowledge of English
- Willingness to travel as needed

**Desirable**

- Experience working on open source projects as part of an international team
- Programming experience
- Cloud computing experience

**7. Duration of the contract**

Six months, commencing 1 October 2020. The appointment is non-career and does not carry any expectancy of renewal or conversion to another contract. Medical health care is not provided.

## CONTRACT FOR INDIVIDUAL CONSULTANTS

THE UNITED NATIONS EDUCATIONAL, and  
SCIENTIFIC AND CULTURAL  
ORGANIZATION

(hereinafter called 'UNESCO')

7, place de Fontenoy, 75352 Paris 07 SP  
France

(hereinafter called 'The Individual  
Specialist')

Vendor Number:

Hereby agree as follows:

### **TERMS OF REFERENCE**

1. Under the supervision of \_\_\_\_\_ the Individual Specialist shall:

### **DURATION OF CONTRACT**

2. If the contract is not signed by the Individual Specialist and returned to UNESCO by [dd/mm/yyyy] at the latest, it will be considered null and void. This date is subject to modification upon agreement of both parties.
3. This contract shall come into effect on [dd/mm/yyyy], and shall expire on satisfactory completion and delivery of the services described above, but no later than [dd/mm/yyyy], unless terminated earlier under the terms of this contract.
4. If, by the expiry date of the contract as defined in Article 3 above, the Individual Specialist has performed no part of the work assignment, and no advances have been paid by UNESCO, the contract shall be considered null and void.
5. After the expiration of the contract, the Individual Specialist cannot claim payment for any work not delivered on time, as stipulated in article 6.3 below.

### **CONDITIONS OF PAYMENTS**

#### **6. Payments and Currency**

- 6.1. UNESCO shall make payments to the Individual Specialist on a lump sum basis.
- 6.2. The contract shall be drawn up and all payments made in United States Dollars, Euros or currencies in which UNESCO holds a bank account. Only one currency can be used in any one contract. Where necessary, the United Nations' operational rate of exchange on the date a contract is signed should be used to convert amounts into another currency, but no adjustments will be made for exchange rate variations during the contract period, either to the overall amount or a staggered payment.

6.3. UNESCO shall make the following payments to the Individual Specialist for the services to be provided under the terms of this contract:

Payment	Upon submission and approval by UNESCO of the following:	Reference Article 1	Latest date for submission	Amount	Currency

6.4. The final payment, or each payment in the case of staggered payments, shall be made only after receipt and approval as satisfactory by UNESCO of any deliverable that the Individual Specialist is required to submit for payment under the terms of this contract.

6.5. All payments (see article 6.3 below) shall be effected by bank transfer. UNESCO shall be responsible for its own banking fees but any possible intermediary banking fees, as well as the beneficiary's own banking fees, shall be the responsibility of the Individual Specialist.

6.6. No payments shall be made to a third party.

**7. Advance Payments**

Except for expenses necessarily incurred by an Individual Specialist in order to prepare for an assignment (e.g. travel or equipment), no advance payment shall be made.

**8. Travel**

If deemed necessary by UNESCO, the Individual Specialist who is required to travel in order to perform the work described in article 1, shall be paid a lump sum of [ ] (state currency, which must be the same as the currency in article 6.3) to cover all travel related expenses, including daily subsistence allowance, tickets for the authorized travel and other related expenses (e.g. visas, vaccinations and terminal expenses), in accordance with UNESCO's usual travel provisions.

**9. Reimbursement**

9.1. If any of the work corresponding to the instalments in article 6.3 is not completed to UNESCO's full satisfaction, and/or prior to the expiration of the contract, UNESCO shall have the right to the reimbursement of full or partial payments made, including any advanced payment, to the extent that the services already rendered are either unusable or inadequate in relation to the expenses incurred by UNESCO.

9.2. Any reimbursement shall be returned in the same currency as the payment was made.

**10. Banking Instructions**

10.1. The Individual Specialist should confirm below mentioned banking instructions for any payments arising from the present contract:

Name of the Bank:

Address of Bank:

Name of the Account Holder:

Number of Account:

IBAN Number:

SWIFT Address:

10.2. Only one banking instruction is allowed in any one contract.

**UNESCO TERMS AND CONDITIONS**

11. This contract is subject to General Terms and Conditions as attached. Each page of these Terms and Conditions should be initialled by the Individual Specialist and UNESCO.

12. The Individual Specialist and UNESCO also agree to be bound by the provisions contained in the following documents, which form the only legally valid contractual arrangement between the parties and which shall take precedence in case of conflict in the following order: (i) the present contract and (ii) the General Terms and Conditions attached hereto.

**Signed on behalf of the Director-General of UNESCO:**

---

Name:	Date :
Title :	Signature :

---

**Individual Specialist:**

***"I acknowledge that I have read and accept the terms and conditions on the following page".***

---

Name :	Date :
Title :	Signature :

---

---

## GENERAL TERMS AND CONDITIONS

---

### **Article I. Legal Status**

1. Individual Specialist is neither a staff member under the UNESCO Staff Regulations and Staff Rules nor an official under the Convention on the Privileges and Immunities of the Specialized Agencies (21 November 1947). He/she may, however, be given the status of 'expert on mission' within the meaning of Annex IV of the said Convention.
2. Any immunities and privileges that may be accorded the Individual Specialist by a government are conferred in the interests of UNESCO. Any such immunities and privileges shall not be invoked to excuse the Individual Specialist from discharging any private obligations or from observing laws and police regulations. Should a question of immunities and privileges arise, the Individual Specialist shall immediately report to the Director-General of UNESCO, who shall decide whether they shall be waived.

### **Article II. Obligations**

1. The Individual Specialist is subject to the authority of the Director-General of UNESCO and is responsible to the Director-General in the performance of his/her work.
2. The Individual Specialist's responsibilities are exclusively international. By accepting a contract with UNESCO, the Individual Specialist undertakes to carry out the work given to him/her and to regulate his/her conduct with the interest of the Organization only in view.
3. In providing his/her service, the Individual Specialist shall neither seek, nor accept, any instructions from any government or any authority external to the Organization, except as may be authorized by the Director-General of UNESCO.
4. The Individual Specialist shall conduct him/herself at all times in a manner befitting his international status. He/she shall not engage in any activity that is incompatible with the performance of his/her work for UNESCO. He/she shall avoid any action and in particular any kind of public pronouncement that may adversely reflect on his/her status, or on the integrity, independence and impartiality that is required by that status. While he/she is not expected to give up his/her national sentiments, or his/her political and religious convictions, he/she shall at all times bear in mind the reserve and tact incumbent upon him/her by reason of his/her international status.
5. The Individual Specialist shall exercise the utmost discretion in regard to all matters of official business. He/she shall not communicate to any person unpublished information known to him/her by reason of his/her assignment, except by authorization of the Director-General of UNESCO. These obligations remain binding even after the expiry of the contract.
6. If the Individual Specialist, by malice, culpable negligence or failure to observe any applicable rule, involves UNESCO in unnecessary loss, expense or liability, he/she shall be held responsible and may be required to pay compensation.

### **Article III. Declaration of Compatibility of the Professional Status**

#### **1. Family Ties**

- (i) The Individual Specialist certifies that he/she is not the father, mother, son, daughter, brother or sister of a staff member of UNESCO, of an employee of the ancillary services

or of someone who, at the same time, holds a supernumerary contract or contract for individual consultants or other specialists or has a fellowship with UNESCO.

- (ii) The Individual Specialist also certifies that, if he/she has a spouse working as a UNESCO staff member, or as an ancillary services employee, the spouse does not work in the same Sector, Bureau or field office in which the Individual Specialist will be working.

## **2. Multiple Contracts**

- (i) The Individual Specialist certifies and declares that he/she only holds one contract of any type with UNESCO at any one time. Any failure to respect this condition renders this present contract liable for immediate termination, without notice or indemnity.
- (ii) The Individual Specialist certifies and declares that he/she is not a beneficiary of any type of UNESCO Fellowship. Any failure to respect this condition renders this present contract liable for immediate termination, without notice or indemnity.
3. The Individual Specialist certifies and declares that he/she does not have incompatible professional status under UNESCO's provisions governing the contracts for individual consultants and other specialists.\*

## **Article IV. Officials not to Benefit**

The Individual Specialist confirms that no official of UNESCO has received from or will be offered by the Individual Specialist any direct or indirect benefit arising from this contract or the award thereof. The Individual Specialist accepts that breach of this provision is a breach of an essential term of this contract which renders this present contract liable for immediate termination, without notice or indemnity.

## **Article V. Taxes**

UNESCO will not reimburse any taxes, duties or other contributions for which the Individual Specialist may be liable in respect of any payments made to him/her under the terms of this contract.

## **Article VI. Use of Name, Emblem or Official Seal of UNESCO**

The Individual Specialist shall not in any manner whatsoever advertise, display, appropriate for personal use the name, emblem or official seal of UNESCO, or any abbreviation of the name of UNESCO in connection with his/her business or otherwise.

---

\* In order to avoid the perception of lack of independence or conflict of interest, the individual selected for an assignment must not be:

- a fellow or a holder of another contract of any type with UNESCO at the same time as the proposed contract;
- a member of the Executive Board or an Alternate during his/her term of office until at least 18 months have elapsed from the date of cessation of their representational functions;
- a member of any UNESCO Committee, International Programme Governing Body or National Commission;
- the External Auditor and members of his or her staff who have participated in the audit of the Organization during the two financial periods (e.g. two biennia) following completion of their mandate;
- a member of the Oversight Advisory Committee for 5 years following the expiry of his/her term;
- other officials with oversight responsibilities, including members of the Advisory Committee on Administrative and Budgetary Questions (ACABQ), International Civil Service Commission (ICSC), Joint Inspection Unit (JIU) or other similar bodies in the United Nations system, who have had oversight responsibilities over UNESCO, during their service and within 4 years of ceasing that service.

## **Article VII. Confidential Nature of Documents and Information**

Drawings, photographs, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Individual Specialist under this contract shall be the property of UNESCO, shall be treated as confidential and shall be delivered only to UNESCO authorized officials on completion of work under this contract.

## **Article VIII. Title Rights**

UNESCO shall be entitled to all property rights, including but not limited to patents, copyrights and trademarks with regard to all material which bears a direct relation, to, or is made in consequence of, the services provided to the Organization by the Individual Specialist.

## **Article IX. Medical Clearance**

The Individual Specialist certifies and declares that he/she: a) is in good health b) has no condition that would prevent him/her from carrying out the work as foreseen by this contract and c) has obtained any necessary inoculations or other medical treatment which may be necessary for him/her to travel to and work in the area(s) foreseen under this contract. The Individual Specialist will be held fully responsible for this certification and declaration. If requested, Individual Specialists may be required to undergo a full medical examination, and be medically cleared by UNESCO's Chief Medical Officer, prior to taking up their duties.

## **Article X. Insurance**

1. (i) The Individual Specialist shall be insured by UNESCO for work-related accidents, injuries, illnesses or death while performing duties on behalf of the Organization.  
  
(ii) The insurance provides for compensation in the case of: (a) death or permanent total disablement; (b) permanent partial disablement; (c) temporary total disablement. Coverage for temporary, partial disablement is not included. The capital sum insured shall be up to a maximum of 85 000 USD. The scale of compensation payable will be in accordance with the terms and conditions of UNESCO's policy with its insurer. Medical expenses attributable to work-incurred accidents or illnesses are paid up to a maximum annual amount of 10 000 USD.  
  
(iii) If any injury, illness or death for which compensation is payable under the above provisions is caused in circumstances which, in the Director-General's opinion, create a legal liability on the part of a third party to pay damages, the UNESCO Director-General may, as a condition of granting compensation, require the Individual Specialist to whom it is granted to assign to the Organization any rights of action which he/she may have against such a third party. The Individual Specialist shall thereupon furnish to UNESCO any data or evidence which may be available to him/her, and shall render all other assistance which may be required in prosecuting any claim or action against such a third party. He/she shall not settle any such claim or action without the consent of the Organization; UNESCO shall be entitled itself to do so or to require him/her to do so upon such terms as seem reasonable to it.
2. Other than the provisions set out in Article X, paragraph 1(ii), UNESCO does not provide medical insurance to the Individual Specialist.

### **Article XI. Title to Equipment**

Title to any equipment and supplies that may be furnished by UNESCO shall rest with UNESCO and any such equipment shall be returned to UNESCO at the conclusion of this contract or when no longer needed by the Individual Specialist. Such equipment, when returned to UNESCO, shall be in the same condition as when delivered to the Individual Specialist, subject to normal wear and tear. The Individual Specialist shall be liable to compensate UNESCO for equipment determined to be damaged or degraded beyond normal wear and tear.

### **Article XII. Termination**

1. UNESCO or the Individual Specialist may cancel the contract before it has come into effect by giving written notice to the other party. For contracts of less than 2 months the period of notice is 5 days, for longer contracts – 14 days. No compensation shall be payable in such cases. Should UNESCO cancel the contract with shorter notice, the Individual Specialist is entitled to 5% of payment for each month of service provided by the contract, subject to a maximum of 30% of the total amount.
2. Once the contract has come into effect, it may be terminated by either party at any time before the expiry date with 2 weeks written notice for contracts of 6 months or less, or 1 month's written notice if the contract is for more than 6 months. If UNESCO terminates the contract, the Individual Specialist is entitled to an indemnity of 5% of payment for each remaining aggregated period of service equivalent to one month, subject to a maximum payment of 30% of the total amount. In the event of termination by the Individual Specialist, or of the inability of the Individual Specialist to carry out fully its terms, UNESCO may deduct from any payments due an amount equivalent to any losses caused to the Organization, taking into consideration the extent to which the assignment has been completed.
3. Notwithstanding the provisions of Article XII, paragraphs 1 and 2, in the event of breach of contract, including false declarations, on the part of the Individual Specialist, the contract may be immediately terminated by UNESCO without notice or indemnity.

### **Article XIII. Arbitration**

1. Any controversy or dispute concerning the execution or interpretation of this contract shall be settled by negotiation between the parties. If it is not amicably settled, it shall be submitted, at the initiative of either party, either to the Chairperson of the UNESCO Appeals Board or be the subject of an arbitration under the United Nations Commission on International Trade Law (UNCITRAL) Arbitration Rules in force. The arbitrator shall rule upon the costs of arbitration, which shall be either apportioned between the two parties or paid by one of them only. The arbitral award shall be final and irrevocable.
2. The party initiating the procedure shall decide which of the two procedures shall apply.

### **Article XIV. Amendments**

This contract may be amended specifying all modifications and signed by both UNESCO and the Individual Specialist prior to the expiry date of the present contract. If the Individual Specialist wishes to propose amendments, these proposals should be communicated to UNESCO which, if deemed necessary, will prepare the amendment to present contract for mutual agreement and signature.

Initials: