



**EUROPEAN COMMISSION**  
JOINT RESEARCH CENTRE  
[Dir/Institute IES]  
[H06] Unit [*Ispra*]

## ANNEX 2 - TERMS OF REFERENCE

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## 1. Context and background information

The *Digital Earth and Reference Data* Unit (JRC H.6) of the European Commission Joint Research Centre ensures the overall technical coordination of the INSPIRE Directive aiming to develop the European Spatial Data Infrastructure (SDI), leads the development of the next- generation of SDI (Digital Earth) and plays a pivotal role in the development of the Global Earth Observation System of Systems (GEOSS).

GEOSS is an international voluntary effort coordinated by the Group on Earth Observation (GEO) comprising 97 governments and 87 participating organisations. The GEO Vision is to realize a future wherein decisions and actions, for the benefit of humankind, are informed by coordinated, comprehensive and sustained Earth observations and information. All governments and organisations that have joint GEO have committed to promoting the implementation of the GEOSS Data Sharing Principles:

- There will be full and open exchange of data, metadata and products shared within GEOSS, recognizing relevant international instruments and national policies and legislation;
- All shared data, metadata and products will be made available with minimum time delay and at minimum cost;
- All shared data, metadata and products being free of charge or no more than cost of reproduction will be encouraged for research and education.

*“The GEOSS Data Collection of Open Resources for Everyone (GEOSS Data-CORE) is a distributed pool of documented datasets with full and open unrestricted access at no more than the cost of reproduction and distribution”* where:

- “full access” means that all the data in the GEOSS Data-CORE can be accessed, used and redistributed;
- “open access” means that data providers may charge at most the cost of reproduction and distribution of the data, although it is expected that in most cases the data in the GEOSS Data-CORE will be made available at no cost;
- “unrestricted access” means that no restrictions are placed on the access to, or use and redistribution of the data in the GEOSS Data-CORE. It should be noted that the following two conditions may be placed on data registered in the GEOSS Data-CORE by data providers (i) attribution and (ii) user registration. These are not considered to represent restrictions on the access to, or use and redistribution of the data.

There are more than 5 million data resources in the GEOSS Data-CORE. They are accessible from the GeoWebPortal: <http://www.geoportal.org>

Two surveys carried out by the JRC in the framework of the FP7 GEOWOW project ([www.geowow.eu](http://www.geowow.eu)) indicate that the awareness of European geo-SMEs about GEOSS in general, and the GEOSS Data-CORE in particular is extremely limited partly because GEOSS has so far mainly addressed government organisations, and only recently (GEO Plenary 2014) there has been a clear indication of the need to reach out also to the private sector. With this in mind, the European Commission has launched

the MYGEOSS project<sup>1</sup> to involve European SMEs more in GEOSS and harness the opportunities of using full and open access data contained in the GEOSS Data-CORE. Moreover, there are opportunities to stimulate demand by involving citizen science projects, citizen observatories, and the public at large via mobile applications based on EO products and services.

MYGEOSS launched an open completion for innovative ideas on 18<sup>th</sup> March 2015. The competition ended on 30<sup>th</sup> April and the proposal **Caliope** was selected by an international panel for further development.

## 2. Purpose, objectives and scope

The scope of this contract is to assist with *implementing the EU research and innovation programme in relation to "developing GEOSS-based (Global Earth Observation System of Systems) smart internet applications to inform European citizens on the changes affecting their local environment"*, as provided for in the HORIZON 2020 work programme 2014-2015, part 12, other actions, item 7, (European Commission Decision C (2013)8631 of 10 December 2013). Specifically the contract is for the development of a first public release of the Caliope app for Europe so that it can be demonstrated at the GEOSS Plenary meeting in November 2015.

The app must be accessible and usable by the general public and be based on data that is open (i.e. reusable without restrictions, see also Section 6). If need be the JRC can provide an environment to download the app. The lessons learned in developing the app (including organisational, legal, and data-related issues) and ensuing recommendations will help JRC and RTD to design future programmes aiming at the exploitation of GEOSS and other environmental open data.

## 3. Working approach and methodology

It is envisaged the contractor will work at its own premises.

## 4. Meetings, reporting and deadlines

**Meetings:** A project closure meeting will take place upon completion of the technical activities and presentation of the apps, and will take the form of a side event organised by the European Commission during the GEO Plenary and Ministerial meeting in Mexico City. Aside from the face-to-face project closure meeting, it is foreseen that all other meeting will take place through virtual tools provided by the JRC.H.06 unit.

**Reporting:** Upon completion of the work the Contractor will issue one final report (FR). The final report together with foreseen deliverables will serve to decide whether the objectives foreseen have been achieved in line with the contract.

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<sup>1</sup> Administrative Arrangement 33807 between DG RTD and JRC.

## **5. Tasks and Deliverables**

### **D1 . Data Management Plan (to be delivered before 30/8/2015)**

The plan needs to indicate:

List of external data source used in the app to ensure they are open and accessible (see also Section 6)

If data is collected by users of the app:

- ensure informed consent of user to reuse of data

The default position is app is configurable for data transfer to JRC that will look after the data. If data not transferred to JRC then the DMP needs to explain measures that will be taken to ensure data follows the GEOSS Data Management Principles (see Annex C) and is:

- Discoverable
- Accessible
- Usable
- Documented
- Preserved
- Curated (as far as possible)

### **D2 Caliope app first public release and technical documentation (to be delivered before 30/9/2015)**

The app must be accessible and usable by the general public and remain open in the version delivered to JRC.

Technical documentation describing the app shall include:

- Installation manual, of the app and other software needed to operate the app as appropriate;
- Operations manual: instructions to operate the app and use its functionalities

Documentation and source code delivered to the EC at the end of the contract shall be made available as open source software using EU Public License (EUPL). The contractor shall ensure that the developed software and source code are cleared of any IPR belonging to third parties (see also Section 6). All the data used in the software shall be provided under the conditions of full and open access with no restrictions for reuse.

### **FR Final Report (to be delivered by 30/11/2015)**

Final report covering the tasks performed and objectives achieved. The report must reflect on the lessons learned in developing the app (including organisational, legal, and data-related issues) and make recommendations that will help JRC and RTD design future programmes aiming at the exploitation of GEOSS and other environmental open data.

## **6. Detailing of IPR clauses**

### **6.1 IPR ownership and permitted uses**

Article 10 of the General Conditions in Annex 1 is further detailed (where applicable) as follows:

The EU must acquire ownership of each of the results produced as an outcome of this Contract, which may be used for the following:

a) for its own purposes

- storage of the original and copies made in accordance with the Contract;
- archiving in line with the document management rules applicable to the contracting party.
- - making available to the staff of the contracting authority
- - making available to the persons and entities working for the contracting authority or cooperating with it, including contractors, subcontractors whether legal or natural persons, Union institutions, agencies and bodies, Member States' institutions
- - installing, uploading, processing
- - arranging, compiling, combining, retrieving
- - copying, reproducing in whole or in part and in unlimited number of copies

(b) distribution to the public:

- - publishing in hard copies
- - publishing in electronic or digital format
- - publishing on the internet as a downloadable/non-downloadable file;
- - uploaded on the Europa website, mobile phones and other devices
- - making available for third parties' commercial or non-commercial reuse and further development.
- - broadcasting by any kind of technique of transmission
- - public presentation or display
- - communication through press information services
- - inclusion in widely accessible databases or indexes
- - otherwise in any form and by any method

(c) modifications by the contracting authority or by a third party in the name of the contracting authority:

- - shortening
- - summarizing
- - modifying of the content
- - making technical changes to the content:
  - necessary correction of technical errors
  - adding new parts or functionalities
  - changing functionalities
  - providing third parties with additional information concerning the result (e.g. source code) with a view of making modifications
- - addition of new elements, paragraphs titles, leads, bolds, legend, table of content, summary, graphics, subtitles, sound, etc.

- - preparation in audio form, preparation as a presentation, animation, pictograms story, slide-show, public presentation etc.
- - extracting a part or dividing into parts
- - use of a concept or preparation of a derivative work
- - digitisation or converting the format for storage or usage purposes
- - modifying dimensions
- - translating, inserting subtitles, dubbing in different language versions:
  - English, French, German
  - all official languages of EU
  - languages used within EU
  - languages of candidate countries
- - rights to authorise, license, or sub-license in case of licensed pre-existing rights, the modes of exploitation set out in any of the points (a) to (c) to third parties.

Where the contracting authority becomes aware that the scope of modifications exceeds that envisaged in the contract the contracting authority shall consult the contractor. Where necessary, the contractor shall in turn seek the agreement of any creator or other right holder. The contractor shall reply to the contracting authority within one month and shall provide its agreement, including any suggestions of modifications, free of charge. The creator may refuse the intended modification only when it may harm his honour, reputation or distort integrity of the work.

## **6.2 Pre-existing rights and transmission of rights**

- If data used are not part of the GEOSS Data CORE, data from EU-funded projects data, or other openly available or crowd-generated data that comply with the sharing and use conditions of the GEOSS Data-CORE, it is the responsibility of the contractor to ensure that such data are in fact provided under the conditions of full and open access. The necessary steps taken should be included in the Deliverable D1.

In cases where crowd-generated data are used, it is equally the responsibility of the contractor to ensure that informed consent for their reuse is obtained, and the data are suitably anonymised to avoid breaches of privacy or confidentiality. The necessary steps taken should be included in the Deliverable D1.

- All pre-existing rights shall be licensed to the Union: The contractor shall provide to the contracting authority a list of pre-existing rights and third parties' rights including its personnel, creators or other right holders.

- The contractor shall present relevant and exhaustive evidence about the acquisition of all the necessary pre-existing rights and third parties' rights together with the delivery of relevant result. This obligation should be fulfilled by presentation of the contractor's statement prepared in accordance with Annex A of this Annex 2 and third parties' statements prepared in accordance with Annex B and the relevant evidence.

## 7. Annexes

### **Annex A: Statement of the contractor concerning rights to delivered results**

I, [insert name of the authorised representative of the contractor] representing [insert name of the contractor], party to the contract [insert title and/or number of the contract] warrants that the contractor holds all transferred rights to the delivered [insert title and/or description of result] which is/are free of any claims of third parties.

The above mentioned results were prepared by [insert names of creators]. The creators transferred all their relevant rights to the results to [insert name of the entity that received rights from the creators] [through a contract of [insert date] [a relevant extract of which is] herewith attached.

The creators [received all their remuneration on [insert date]] [will receive all their remuneration as agreed within [complete] weeks from [delivery of this statement] [receipt of confirmation of acceptance of the work]. [The statement of the creators confirming payment is attached].

Date, place, signatureRelease

### **Annex B: Statement of creator / intermediary in delivery**

of the [title of the result] within the Specific Contract No [complete]

concluded between the contracting authority and [name of the contractor(s)]

I, [insert name of the authorised representative of the intermediary] representing [insert name of the intermediary] state that I am the right holder of: [identify the relevant parts of the result] [which I created] [for which I received rights from [insert name]].

I am aware of the above contract, especially Articles I.8 and II.10 and I confirm that I transferred all the relevant rights to [insert name].

I declare that [I received full remuneration.] [I agreed to receive remuneration by [insert date]].

[I also confirm that I do not oppose my name being recalled when the results are presented to the public and confirm that the results can be divulged.]<sup>2</sup>

Date, place, signature

## **Annex C: GEOSS Data Management Principles**

To further maximize the value and benefit from data sharing, GEO will continue to work with partners to promote the use of key Data Management Principles, including the need for common standards and interoperability arrangements. This will ensure that data and information of different origin and type are comparable and compatible, facilitating their integration into models and the development of applications to derive decision support tools. GEO therefore strives to promote and encourage the implementation of Data Management Principles laid out below under five headings: discoverability, accessibility, usability, preservation, and curation.

### **Discoverability**

DMP-1. Data and all associated metadata will be discoverable through catalogues and search engines, and data access and use conditions, including licenses, will be clearly indicated.

### **Accessibility**

DMP-2. Data will be accessible via online services, including, at minimum, direct download but preferably user-customizable services for visualization and computation.

### **Usability**

DMP-3. Data should be structured using encodings that are widely accepted in the target user community and aligned with organizational needs and observing methods, with preference given to non-proprietary international standards.

DMP-4. Data will be comprehensively documented, including all elements necessary to access, use, understand, and process, preferably via formal structured metadata based on international or community-approved standards. To the extent possible, data will also be described in peer-reviewed publications referenced in the metadata record.

DMP-5. Data will include provenance metadata indicating the origin and processing history of raw observations and derived products, to ensure full traceability of the product chain.

DMP-6. Data will be quality-controlled and the results of quality control shall be indicated in metadata; data made available in advance of quality control will be flagged in metadata as unchecked.

### **Preservation**

DMP-7. Data will be protected from loss and preserved for future use; preservation planning will be for the long term and include guidelines for loss prevention, retention schedules, and disposal or transfer procedures.



DMP-8. Data and associated metadata held in data management systems will be periodically verified to ensure integrity, authenticity and readability.

### **Curation**

DMP-9. Data will be managed to perform corrections and updates in accordance with reviews, and to enable reprocessing as appropriate; where applicable this shall follow established and agreed procedures.

DMP-10. Data will be assigned appropriate persistent, resolvable identifiers to enable documents to cite the data on which they are based and to enable data providers to receive acknowledgement of use of their data.