



# EU perspective on Open Access to research data (Horizon 2020) and links to the GEOSS Data Sharing Principles

2<sup>nd</sup> workshop of the FP7 RECODE project  
during the GEO Summit Week  
ICCG, Geneva (CH), 14 January 2014

Michel SCHOUPPE  
EUROPEAN COMMISSION  
DG RTD - Directorate General Research & Innovation  
Directorate Environment  
Earth Observation Sector  
[Michel.Schouppe@ec.europa.eu](mailto:Michel.Schouppe@ec.europa.eu)



European  
Commission

- **One of the biggest research and innovation programme publicly funded worldwide:  
nearly €80 billion of funding available over 7 years: 2014-2020**
- **Horizon 2020 launched on 13 December 2013:  
Ongoing Call 2014 (€7.8 billion). More information from:  
<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>**
- **Emphasis on three pillars: (i) excellent science, (ii) industrial leadership and (iii) tackling societal challenges**
- **The public research and innovation programme that is most open to international collaboration**
- **Streamlined research and innovation activities:  
taking great ideas from the lab to the market to produce world-class science and remove barriers to innovation**
- **Provides research continuity in Europe notably to support GEOSS activities**
- **Promotes **Open Access** to scientific publications and research data**



# Open Access in Horizon 2020

## Why Open Access?

**Increased impact of publicly-funded research and innovation**

- **Better science (build on previous results)**
- **More efficient science (avoid duplication & promote re-use)**
- **Economic growth (accelerated and open innovation)**
- **Improved transparency (involving citizens & society)**

## What meaning?

**Open access (OA) = online access at no charge to any user**

- **To peer-reviewed scientific publications (new requirement !)**
  - **OA obligation (article 29.2 of the Model Grant Agreement)**
  - **Following a pilot experiment in the period 2006-2013 (FP7)**
- **To research data (new experiment !)**
  - **Open Research Data Pilot (*optional* article 29.3 of the Model Grant Agreement), monitored throughout Horizon 2020 in view of an EU policy on open research.**



## Pilot on Open Research Data in H2020

### Types of data concerned:

- Data (including associated metadata) needed to validate the results presented in scientific publications ("underlying data").
- Other curated and/or raw data (including associated metadata) generated by the project.

### Data Management Plans (new !):

As specified in the Data Management Plan(DMP), a mandatory 'living' deliverable by all projects participating in the Pilot:

- What data will be collected / generated in the course of the project?
- What data will be exploited? What data will be shared/made open?
- What standards will be used / how will metadata be generated?
- How will data be curated / preserved including after project completion

## Pilot on Open Research Data in H2020

### Beneficiaries participating in the Pilot will:

- Deposit their data in a research data repository of their choice
- Take measures to make it possible to access, mine, exploit, reproduce and disseminate free of charge
- Provide information about tools and instruments at the disposal of the beneficiaries and necessary for validating the results.

### Cases exist for opting out of the Pilot

- Conflict with obligations mainly related to the protection of results, confidentiality or security issues, the protection of personal data, the achievement of the action's main objective.



European  
Commission



# Open Access in Horizon 2020

## Pilot on Open Research Data in H2020

### Horizon 2020 areas participating in the Pilot in 2014-2015:

- Future and Emerging Technologies
- Research infrastructures (eInfrastructures part)
- Leadership in enabling and industrial technologies – Information and Communication Technologies
- Societal Challenges: Secure, Clean and Efficient Energy – part Smart cities and communities
- Societal Challenge: Climate Action, Environment, Resource Efficiency and Raw Materials (except Raw Materials)
- Societal Challenge: Europe in a changing world – inclusive, innovative and reflective Societies
- Science with and for Society

**Together these areas corresponds to 20 % of the overall Horizon 2020 budget in the period 2014-2015** (about €3 billion)

Projects in other areas can participate on a voluntary basis.



European  
Commission



# Open Access in Horizon 2020

## Horizon 2020 Work Programme 2014-2015

### Section on 'Climate action, environment, resource efficiency and raw materials'

#### Open Access and GEOSS

- Many actions funded under this Societal Challenge ***will participate in the Pilot on Open Research Data in Horizon 2020.***
- Moreover, "Beneficiaries in projects participating in the Pilot on Open Research Data shall ***adhere to the GEOSS Data Sharing Principles*** and undertake to ***register in GEOSS all geospatial data, metadata and information generated as foreground of the project.***"
- "All activities (...) should as far as possible use data resulting from or made available through different initiatives of the European Commission. In particular, the ***utilisation of GEOSS*** (Global Earth Observation System of Systems) ***and Copernicus*** data, products and information should be ***privileged.*** (...)"

## 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.**



**“GEO welcomes all data contributions into the GEOSS.**

**When registering data in GEOSS, the contributor should present any restrictions arising from relevant international instruments and national policies and legislation, and the duration of each restriction, that is applicable to the exchange of the data, metadata, and products submitted”.**



## GEOSS Data Sharing – Examples of milestones

- 2003-2005 Development of a vision*
- 2005 Establishment of the Group of Earth Observation GEO  
Adoption of GEOSS Data Sharing Principles (DSPs)*
- 2008 Data Sharing Task Force is established*
- 2009-2010 Approval of Implementation Guidelines and DSP Action Plan*
- 2011 Creation of the GEOSS Data-Core  
(Master list of data sets pledged by GEO Members and  
Participating Organisations)*
- 2012-2013 Registration/tagging of GEOSS resources  
Improved GEOSS Common Infrastructure (GCI)  
Testing through Architecture Implementation Pilots 5 & 6  
Continued growth in the number of data sets  
(from thousands to millions of discoverable resources)  
Survey of data sharing policies and practices  
Guidelines/papers on legal interoperability, data quality*

## The GEOSS Data Sharing Working Group

The DSWG supports GEO in its goals to put into practice the GEOSS Data Sharing Principles, the Implementation Guidelines for the GEOSS Data Sharing Principles and the GEOSS Data Sharing Action Plan.

The DSWG has established 4 formal Subgroups:

- 1. GEOSS Data-CORE and GCI Subgroup;**
- 2. Legal Interoperability Subgroup;**
- 3. Documentation and Data Quality Subgroup;**
- 4. Capacity Building Subgroup**

Plus one *ad hoc* Subgroup on:

- GEOSS Data Sharing Principles Subgroup**

## Strategic issues for the future

### *Restatement of GEOSS Data Sharing Principles*

- To reflect recent policy trends related to open data

### *Strengthened evaluation of GEOSS data sharing progress*

- Through regular monitoring of new data sets contributed to the GCI and monitoring of use by what type of user (appropriate metrics)

### *More emphasis on reference data sets and interoperability*

- New sub-category within GEOSS Data-Core data sets
- To support traceability and data consistency

### *Data sharing implications from new observing systems*

- Including from crowdsourcing, citizens' observatories or observing systems owned by the private sector

### *Data sharing in education programmes related to Earth observation*

- **Open access:** Open access is not a goal in itself, but a key element in promoting better research and innovation through open digital science practices. It improves efficiency, quality and impact of publicly-funded research for society and innovation.
- **Open access to research data: a Pilot in Horizon 2020** will test and analyse experiences. Monitoring from 2014 till 2020.
- **Projects participating in this Pilot** and addressing topics related to Climate Action, Environment, or Resource Efficiency under Horizon 2020 will be:
  - asked to **register their open research data as GEOSS Data-Core**
  - encouraged to **make use of e.g. GEOSS and Copernicus data**
- **GEOSS Data Sharing Principles** are being **revisited** by the Data Sharing Working Group to take on board latest policy trends towards **Open Data** observed at international, regional and national levels.



# Thank you for your attention

**Michel SCHOUPPE**  
**EUROPEAN COMMISSION**  
**DG RTD - Directorate General Research & Innovation**  
**Directorate Environment**  
**Earth Observation Sector**  
**[Michel.Schouppe@ec.europa.eu](mailto:Michel.Schouppe@ec.europa.eu)**