



# **EU survey on Earth observation in a global context: A public consultation on possible EU actions in relation to global coordination of Earth observations via the Group on Earth Observations (GEO)**

Fields marked with \* are mandatory.

## **Why this survey?**

This survey builds on consultations conducted by the European Commission in 2013 and 2014 with the aim to provide the state of play regarding the implementation of the Global Earth Observation System of Systems (GEOSS) by the Group on Earth Observations (GEO) during the last ten years. As an outcome of these previous consultations (see reference documents accessible from this survey), several preliminary issues and possible actions at EU level have been identified in view of accelerating the evolution of the GEOSS into a system that could effectively contribute to EU policies, generate business opportunities for the EU industry and bring benefits to European society as a whole.

Through this EU public consultation, the European Commission is actively seeking contributions by all those in Europe interested in the global context of Earth observation in order to help:

- estimate general awareness of and stance on Earth observations (EO), GEO and GEOSS;
- appreciate how to maximize EU benefits from an increased Earth observation coordination through GEO;
- collect views on a set of possible actions at EU level in the field of global Earth observation and GEO.

Contributions are expected until **20/04/2015**.

## Background and reference documents

The Earth's atmosphere, oceans and landscapes are changing rapidly, with human activities being a major driver. Monitoring and modeling these changes are critical because they allow governments, society and the private sector to make informed decisions about climate, energy, food security, natural hazards, health and other societal challenges.

Earth Observations (EO) are remote sensing or in situ measurements collected by a wide diversity of sensors on-board various monitoring platforms such as ships, buoys, aircrafts, balloons, drones, or satellites. They can also be ground-based or acquired by citizens using for instance their smart phones or other mobile devices. Such monitoring sensors and the related Earth observation information systems are managed by a high diversity of public and private entities around the world. For decades, this situation has led to a fragmented global landscape for Earth system monitoring.

Aiming at improving Earth observations, the intergovernmental Group on Earth Observations (GEO) provides a framework where governments and international organisations can develop new projects and coordinate their strategies and investments. GEO's main role is to develop and implement a Global Earth Observation System of Systems (GEOSS) which aims to facilitate discovery, access and integration of global Earth observations in order to improve environmental decision-making. In January 2014, the Ministers and other heads of delegations from the GEO Member governments have resolved to continue the GEO voluntary partnership. They have decided to renew the GEO mandate for another period of 10 years. The next GEO decade (period 2016-2025) will be crucial in order to intensify use and exploitation of a more robust GEOSS and bring more benefits to the users of global Earth observations also to the European society.

### Reference documents:

- [The Commission Staff Working Document entitled "Global Earth Observation System of Systems \(GEOSS\): Achievements to date and challenges to 2025" \(SWD\(2014\) 292 final of 25 September 2014\);](#)
- [The Conclusion report of the Workshop "Engaging the Private Sector in GEOSS – A European Perspective" organised in Brussels in September 2014;](#)
- [Brochure on EU Research on Earth Observations \(2013\)](#)

**DATA PROTECTION:** Personal data protection will be ensured - [please click here for further information.](#)

**SPECIFIC PRIVACY STATEMENT:** [please click here for further information.](#)

## A. Awareness of and stance on Earth observations, GEO and GEOSS.

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\*As regards Earth observations, are you primarily on the **supply** side (interested in providing EO data, information and/or products to meet other users' needs) or the **demand** side (with an interest in identifying EO-based solutions to your own questions or issues)?

- EO supply side
- EO demand side
- Both supply and demand sides
- I don't know

\*What kind of role do Earth observations play in your current activities?

- Central
- Occasional
- Peripheral
- No specific role, but I have a general interest in Earth Observations

How would you rate your interest in the following sources of EO data?

	High interest	Moderate interest	Low interest	No interest
* Airborne Earth observations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Ground-based Earth observations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Seaborne Earth observations	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Space-borne Earth observations	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you see these emerging Earth observation data flows as future strategic assets for environmental monitoring?

	Yes, I entirely agree	Yes, I agree to some extent	No, I disagree to some extent	No, I entirely disagree	I don't know
* Observation data from personal mobile devices	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data from drones	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data extracted from social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Data output from models or simulators	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Data from objects linked to the internet (e.g. sensor and actuators)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other significant emerging EO data streams (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

\* Is global cooperation essential for easy access to Earth observation systems and open data?

- Yes, I entirely agree
- Yes, I agree to some extent
- No, I disagree to some extent
- No, I entirely disagree
- I don't know

\* Are you aware of the Group on Earth Observations (GEO)?

- Yes
- No

\*If so, have you visited [its website](#) before this consultation?

- Yes
- No

\*If you belong to an organisation, is it directly involved in GEO activities?

- Yes
- No
- I don't know
- I don't belong to an organisation

\*Are you aware of the Global Earth Observation System of Systems (GEOSS)?

- Yes
- No

\*If so, have you ever used the [GEOSS portal](#) to search for, access to or contribute Earth observation data, information or services?

- Yes
- No

\*Are you aware of the collection of datasets shared by the GEO Community on a full, open and unrestricted basis (the "GEOSS Data Collection of Open Resources for Everyone" or GEOSS Data CORE)?

- Yes
- No

\*Are you aware of the EU's Copernicus programme and the Earth observation data and thematic services which it is increasingly providing?

- Yes
- No

## B. Assessing benefits from and barriers to a stronger EU coordination of Earth observation through the Group on Earth Observations (GEO)

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Which of the following **GEO-related** features are most relevant to your situation?

	High interest	Moderate interest	Low interest	I don't know

<p><b>*</b> International cooperation on Earth observations to tackle global challenges</p>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b> Achieving international, national &amp;/or local policy goals using Earth observations shared by the GEO community</p>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b> Developing Earth observation products &amp; services exploiting the full &amp; open Earth observation data shared via the GEOSS information system</p>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b> Better coordination of public-sector initiatives concerning Earth observation in Europe, to make Europe's contribution to GEO more coherent</p>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b> GEOSS as a tool for marketing &amp; advertising EO assets &amp; services internationally &amp; expanding networks, to open up global markets</p>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b> Achieving a robust monitoring capacity &amp; sound knowledge base on the Earth system, to help meet the Sustainable Development Goals</p>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b>GEO as a tool for sharing responsibility for EO capacity building (e.g. training, education &amp; equipment for EO monitoring &amp; processing) &amp; the costs it entails</p>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><b>*</b>Identifying monitoring gaps &amp; research questions relating to the Earth system</p>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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What are the key **reasons** justifying a stronger EU approach to GEO and global Earth observations, and what **opportunities** would such an approach offer? Please specify.

	Yes, I entirely agree	Yes, I agree to some extent	No, I disagree to some extent	No, I entirely disagree	I don't know
* Many of the environmental issues facing Europe are global in nature, calling for EO-based EU action in cooperation with other regions.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* GEO helps promote research & innovation. It is a unique forum for coordinating the whole observation community.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* GEO is a way of leveraging existing EO-related infrastructure, programmes, projects & activities; it boosts its major contributors' international standing.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The EU's Copernicus programme for Earth observation can be promoted worldwide as a key EU contribution to GEOSS.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The EU could benefit from the current data revolution & the Internet of Things, which have huge potential for innovative uses of EO data & products.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* The full and open data access to remote sensing & in-situ observations advocated by GEO offers opportunities for innovation & growth.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



What are the main **barriers** to a stronger EU approach to GEO and global Earth observations?

	Yes, I entirely agree	Yes, I agree to some extent	No, I disagree to some extent	No, I entirely disagree	I don't know
* Future commitment of resources to GEO in a context of high pressure on public budgets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* GEOSS's added value & impact not demonstrated enough	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* General GEOSS usability & data quality documentation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Perception that GEO might be in competition with existing & new EO-related initiatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Lack of an overall framework for engaging the private sector in supporting &/or exploiting the GEOSS information system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* GEO synergies with some UN programmes & initiatives not sufficiently well developed	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Uncertainty about the extent to which GEOSS will be implemented between 2016 & 2025	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## C. Possible EU-level action in the field of global Earth observation and GEO

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For what specific issues relating to global Earth observations and GEO is there a need for a **stronger EU approach**?

Please rate the following measures according to whether you expect them to have high, medium or low priority for the EU.

	High priority	Medium priority	Low priority	I don't know
*Stronger model of European coordination (more formal & structured) vis-à-vis GEO & GEOSS, to maximise GEOSS benefits to the European society	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Benchmarking & promoting successful GEO-related coordination mechanisms, currently implemented at national & regional levels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Stronger European Research Area in the field of Earth Observation, with more international EO research & innovation activities targeting GEOSS & the EU Copernicus programme	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Stronger operational synergies between GEOSS & the EU's Copernicus programme	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*EU action to encourage the private sector in Europe to seize future GEOSS business opportunities	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*EU action to improve coordination of the various public bodies & systems in Europe that collect in-situ & socioeconomic data, to provide more structured access to such data	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*EU action to accelerate the trend towards open data, with a focus on Earth observations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Reinforced Community research, benchmarking & pilot deployment activities in the field of EO data management, to support data reuse	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*EU action to empower citizens through EO-related citizens' science & citizens' engagement in the collection of environmental data	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

*EU action to help develop a regional European GEOSS information system that is interoperable with the Copernicus dissemination infrastructure	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other measures expected to have high EU priority (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

How important are the following issues to improving the position of the **European EO service industry** on the world stage?

Please rate the following measures as high, medium or low priority.

	High priority	Medium priority	Low priority	I don't know
*Setting up a European GEOSS forum for ongoing dialogue with European businesses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Demonstrating / promoting new businesses opportunities based on mobile GEO-based applications for local needs by non-expert users	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Setting up public-private partnerships (PPPs) for Earth observation to facilitate GEO engagement & GEOSS take-up by the European EO service industry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Action to address the full value chain from EO research to innovation & market deployment, including more intensive use of public procurement for innovative solutions & pre-commercial public procurement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Increasing awareness of GEO & GEOSS in 'local' European companies, especially small & medium-sized firms & start-ups involving young entrepreneurs that could potentially benefit from GEOSS	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Commission support to new business opportunities in the field of Earth observation through financial rewards (prizes) for meeting a specific technological challenge in the GEO area	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Any other high-priority issue (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

## D. Respondent's profile

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\*Are you completing this questionnaire on behalf of an organisation, or as an individual?

- Individual
- Organisation

\*If you are completing the questionnaire on behalf of an organisation, is it listed in the [EU's Transparency Register](#)?

- Yes
- No
- I don't know

\*The content of your response to this EU survey will be made public by the Commission; how would you like your contribution to appear?

- Under the name supplied in response to the next question
- Anonymously

\*Please enter the name of your company / organisation. This information will not be published in case of anonymous contribution.

*Text of 1 to 200 characters will be accepted*

Netherlands Space Office

Would you like to receive a summary of the main outcomes of this survey? Please indicate an email address (full address: xxxx@xxx.xx). This information will remain confidential.

r.grim@spaceoffice.nl

\*Where are you based?

Netherlands

\*If you are replying on behalf of an organisation, please specify what type.

- International organisation
- Public authority
- Research
- Business
- Non-governmental organisation
- Interest group
- Other (please specify)

\*What type of public authority?

- National government
- Regional government
- International / national / regional agency
- Other (please specify)

## E. Overall comments

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Do you have any comments or further issues that you would like to mention here?

*2,500 character(s) maximum*

1. The aim of GEO is to develop information services for societal benefits. The big challenge is to achieve financial sustainability of these services. If they are developed, demonstrated and validated who is responsible for operations and what is the associated financing model? So far in the GEO framework, and in supporting project of EC, little attention has been given towards the operations model(s) and associated financing. European Commission could develop a strategy taking into account long term financial solutions for sustainable service provision.

2. Merging satellite earth observation with crowd sourcing data and drone data into an information product is very interesting. However, quality control of monitor data and processing steps (traceability) will become more and more difficult. This is especially of importance in case the information product will be used for legal activities. European Commission could address this issue in its H2020 programme.

You can also submit your contribution in free format. Please upload your file (max. 1MB).

*Do not forget to insert the captcha code in order to submit your contribution!*

### Background Documents

Commission Staff Working Document "GEOSS: Achievements to date and challenges to 2025" - 25 September 2014 (/eusurvey/files/a6aa8df6-ebdb-41f5-aad4-a9e755f50338)

Conclusion report of the Workshop "Engaging the Private Sector in GEOSS – A European Perspective" September 2014 (/eusurvey/files/e5b8be6b-cc10-4f1a-9eec-43b950184f18)

Leaflet EU Research on Earth Observations (/eusurvey/files/f6bd2d98-5a70-462e-acd6-df41be3c8f53)

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### Contact

