EuroGEOSS Request 2018

Fields marked with * are mandatory.

Request for Expressions of Intent to scale-up and showcase EuroGEOSS Pilot Applications

EuroGEOSS is a regional initiative launched in October 2017 by the European countries, the European Commission and organizations participating to the Group on Earth Observations (GEO). From 2018 onwards, the EuroGEOSS initiative plans to launch periodic Requests for Expressions of Intent. All organizations located in European GEO member countries which are involved in developing, promoting or deploying innovative EO derived solutions are invited to come forward with voluntary Expressions of Intents for networking with other stakeholders along the value chain and scaling-up their activities within a timeframe of maximum three years.

This EuroGEOSS Request provides the online form to submit your Expression of Intent to the EuroGEOSS initiative. Submissions are accepted until 30 June 2018.

Why to submit an Expression of Intent?

- To share good practice, benchmark experiences and scale them up across different local contexts and across the EU;
- To network including with users and other stakeholders not yet involved in European Research and innovation EO activities;
- To get high visibility and recognition - including in GEO and Copernicus events - and take part in a more strategic dissemination at European and international level under the EuroGEOSS flag;
- To benefit from EuroGEOSS as a regional gateway to GEO;
- To link with important EO projects and programmes in Europe including Copernicus, Horizon 2020 and its follow-up programme after 2020;
- To benefit from and contribute to a reinforced European EO marketplace;
- To get regularly informed on funding opportunities;

- To participate in a European-wide, lasting partnership where shared competences, resources and skills are combined.

The Expressions of Intent should build upon the combination of existing funded developments. They must address the EuroGEOSS scoping priorities and selection criteria annexed to the text of the EuroGEOSS Request 2018.

All Expressions of Intent submitted online to the EuroGEOSS Request 2018 will be analyzed by the EuroGEOSS Coordination Group.

Action Groups will be established for each of those application areas where critical mass and market potential is identified from the submitted Expressions of Intents. Being selected for an Action Group is the prime mechanism to get your activity labelled as a EuroGEOSS activity. Each Action Groups shall facilitate upscaling of a specific EO applications characterized by a Technology Readiness Levels (TRLs) equal or above 5.

The Action Groups are not subject to a contractual basis. They represent ad hoc voluntary partnerships aiming at advancing the EuroGEOSS innovation agenda on a best effort basis and for a period of maximum three years.

For more information on this survey - including the EuroGEOSS selection criteria - see the *"Request 2018 for Expressions of Intent"* and the related *Frequently Asked Questions (FAQ)* available from the EuroGEOSS web site. You can also send your eventual questions to RTD-EUROGEOSS@ec.europa.eu.

Disclaimer
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Data protection related to this survey*: personal data protection will be ensured (please click here for further information).*
Specific Privacy Statement*: is available here.*

DEADLINE FOR SUBMISSIONS: 3**0 June 2018**
FEEDBACK BY EMAIL TO CONTRIBUTORS: **end August 2018**
LAUNCH OF SELECTED ACTION GROUPS: **mid September 2018**

1 PARTNERSHIP SUPPORTING THE EXPRESSION OF INTENT

1.1 LEAD ORGANISATION

* Lead organisation name

100 character(s) maximum

Institute of Astronomy,Astrophysics,Space Applications&Remote Sensing/National Observatory of Athens

* Lead organisation address (Address, city, country)

100 character(s) maximum

Lofos Nymphon - Thissio, 11810, Athens, Greece

* Lead organisation URL/website

100 character(s) maximum

https://www.astro.noa.gr/en/main/

Lead organisation profile in relation to GEO and/or Copernicus

If applicable, please describe briefly the links between your organisation and the GEO initiative and/or the Copernicus programme.

1000 character(s) maximum

IAASARS/NOA supports the EMS and EFFIS of Copernicus CS. It hosts the Greek GEO Office, the focal point in GEO. IAASARS coordinates GEO-CRADLE, upgraded to GEO Work Programme Community Activity. It coordinates and integrates state-of-the-art EO capacities in North Africa, Middle East, and Balkans in support to the implementation of GEOSS and Copernicus. GEO-CRADLE addresses priorities in relation to Climate, Food Security and Water Extremes, Raw Materials & Geo-Hazards, and Energy, sustains a Networking Platform with >300 EO stakeholders and operates a Regional Data Hub fully interoperable with the GEOSS portal. IAASARS is involved in the ESA EO4SD on climate change resilience, addressing IFIs needs. It leads the disaster activity in NextGEOSS & ERAPLANET, and is linked to GEO-GSNL. It operates DataHubs, federated with the Integrated Ground Segment of Copernicus, e.g. Hellenic Mirror Site, IntHub, CollHub, DIASHub & TmpHub, providing Sentinel data to the global stakeholder community.

* Contact person (Name and firstname)

50 character(s) maximum

KONTOES Haris

* Contact person e-mail

kontoes@noa.gr

1.2 OTHER ORGANISATIONS

Name of other organisations (Please include the name and country of the other organisations separated by comma.)

1000 character(s) maximum

1. ICCS, Greece (https://i-sense.iccs.gr/)
2. Hellenic Rescue Team Attica, Greece (http://www.eodathens.gr/)
3. IERSD/NOA, Greece (http://www.meteo.noa.gr/)
4. i-BEC, Greece (http://www.i-bec.org/)
5. GEOAPIKONISIS, Greece (http://geoapikonisis.gr/)
6. Xteam, Italy (http://www.xteamresearch.com/)
7. RST-TTO, Bulgaria (http://www.rst-tto.com/index_en.html)
8. Babes-Bolyai University Cluj-Napoca, Romania (http://www.ubbcluj.ro/en/)
9. INCA, Albania (http://www.inca-al.org/en/)
10. InoSens, Serbia (https://inosens.rs/)
11. JSI, Department of Environmental Sciences, Slovenia (https://www.ijs.si/)
12. IHE Delft Institute for Water Education, The Netherlands (https://www.un-ihe.org/)
13. CIMA, Italy (http://www.cimafoundation.org/)
14. TUBITAK UZAY, Turkey (http://uzay.tubitak.gov.tr/en)
15. MEKANSAL, Turkey (http://mekansal.com/)
16. CEDARE, Egypt (http://www.web.cedare.org/)
17. CERT, Tunisia (http://www.cert.nat.tn)

Types of organisations (Please select all types of organisations participating in your coalition)

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

Are you looking for additional, specific expertise along the value chain?

- ( ) Yes
- (•) No

2 YOUR EXPRESSION OF INTENT

* Descriptive title

200 character(s) maximum

Earth Observation for Disaster-Resilient Societies

Acronym (optional)

20 character(s) maximum

EO4DisasteRS

* Abstract/executive summary (including the overall description of the intended EuroGEOSS pilot application)

2000 character(s) maximum

EO4DisasteRS will develop an innovative smart application for floods, combining the expertise and the best practices from the following relevant pilot studies: 1)SCENT Pilot: Kifisos river basin 2)BEYOND Pilot: Mandra flood 3)GEO-CRADLE Pilot: Water extremes management 4)SMURBS Pilot: Disasters 5) COPERNICUS EMS Risk and Recovery activations: Floods.
The case study will be the Kifisos river basin, Attica,Greece, around the urban landscape of Athens, where flooding is a major problem for the local communities.
This study will rely on the state-of-the-art processing, modeling, assimilation, and crowd data techniques tested or under development in the above projects. It will also rely on the SCENT's in-situ campaigns and crowd data collected from 8/2018 to 7/2019 in Kifisos river basin. Citizens' photos of LU/LC through smartphones will be used for improving LU/LC maps, and also reporting facts before and during a flood event such as blockages. In-situ monitoring equipment to measure water level and river discharge data from the existing SCENT network and water level rods will be analysed with automatic image recognition tools, to serve as benchmarking/calibration points of the crowd-sourced observations and modeling. The same will be done with short videos showing the river flow. All crowd and in-situ equipment collected will be available from the project harmonisation platform and will be served in OGC compliant format.
EO4DisasteRS will combine the above mentioned sources and techniques with further EO data, e.g. very high resolution satellite images and UAV sensors, taking into account time series analysis of historic data bases e.g. the diachronic burnt scar mapping provided by the BEYOND/Firehub service for updating the LU /LC. The Copernicus DIAS platforms and the Hellenic Mirror Site will be envisaged as facilitators for cloud processing and real time access to EO data. Moreover, synergies will be made with the EUROGEOSS Disaster Showcase coordinated by NOA.

EXPECTED INNOVATION OUTCOMES
(to tick one or several options from the form)

* What main EuroGEOSS innovation outcomes?

- [x] Real life, user-driven demonstrated EO applications
- [ ] Reviews of user-related experience and questions
- [ ] Catalogues of good practices available in different languages
- [ ] Strategies for scaling-up new services including critical success factors
- [ ] Guidelines for business models, evidences on return on investment
- [ ] Innovative procurements of interoperable innovative solutions
- [ ] Innovation deals in the field of service solutions
- [ ] Reference site with high potential for replication in Europe
- [x] Inter-regional cooperation
- [x] Cooperation with H2020 projects
- [x] Awareness raising campaigns
- [x] Emerging themes of novel interest for European research & innovation.
- [ ] Education and training modules, including for trainers
- [ ] Other (please specify below)

EuroGEOSS POLICY PRIORITIES ADDRESSED BY YOUR INTENT (to tick relevant options from the form)

* **EuroGEOSS priorities**

- [ ] SDG2: Zero hunger
- [ ] SDG 14: Life below water / SDG 15: Life on land

- [ ] SDG 3: Good health and well-being
- [ ] SDG 6: Clean water and sanitation
- [ ] SDG 7: Affordable and clean energy
- [ ] SDG 9: Industry innovation and infrastructure
- [x] SDG 11: Sustainable cities and communities
- [ ] SDG 13: Climate action - Paris agreement
- [x] SDG 13: climate action Paris agreement
- [x] Sendaï Framework
- [x] EU policies

* **Link to GEO SBAs**

- [ ] Food sustainability and sustainable agriculture
- [ ] Public health surveillance
- [x] Water resources management
- [ ] Energy and mineral resource management
- [ ] Infrastructure and transport management
- [x] Sustainable urban development
- [ ] Biodiversity and ecosystem sustainability
- [x] Crosscutting: climate change and impact
- [x] Disaster resilience

Is your Intent supporting directly the implementation of a specific EU policy?

- (•) Yes
- ( ) No

In case of support to EU policies, please specify

500 character(s) maximum

EO4DisasteRS supports the following EU policies:
EU Civil Protection Mechanism (http://ec.europa.eu/echo/what/civil-protection/mechanism_en)
EU Adaptation Strategy (https://ec.europa.eu/clima/policies/adaptation/what_en)
EU Floods Directive 2007/60/EC (http://ec.europa.eu/environment/water/flood_risk/index.htm)
EU Water Framework Directive 2000/60/EC (http://ec.europa.eu/environment/water/water-framework/index_en.html)

EO application domains

- [ ] EO for sustainable agriculture
- [ ] EO for public health surveillance
- [x] EO for sustainable water management
- [ ] EO for renewable energies and energy efficiency
- [ ] EO tracking human settlement
- [x] EO for resilient cities
- [ ] EO for nature conservation
- [x] EO for climate services
- [x] EO for disaster risk reduction

* End user dimension (Who are the end users? How are they involved? How consolidated are the user needs?)

1500 character(s) maximum

The end users are coming from three sectors:
1) Public authorities: the Region of Attica (http://www.patt.gov.gr/), and the Special Secretariat for Water (SSW) of the Ministry of Environment, Energy and Climate Change (http://www.ypeka.gr/Default.aspx?tabid=347&language=en-US),
2) Private sector: Athens Water Supply and Sewerage Company S.A. (AWSSC) (http://www.eydap.gr/en/),
3) Non-governmental organizations: Hellenic Rescue Team Attica (HRTA) (http://www.eodathens.gr/).
All the above-mentioned end-users are deeply involved already in the SCENT project (https://scent-project.eu/). The Region of Attica and HRTA are SCENT partners; while SSW and AWSSC participate as external stakeholders who were engaged in the requirements phase and they will also be engaged at the stage of the Kifisos pilot demonstration. They give valuable input based on their long-term expertise in the field and their needs, which are consolidated and clearly defined by their mandate and mission.
They need to receive all the useful information available including the information derived from EO data that helps to map, monitor and analyse the flood events in order to facilitate the early warning and the mitigation of their impact.

* Market potential (Please document the level of already established market/uptake potential?)

1000 character(s) maximum

Using multisource input data and state-of-the-art models, together with sophisticated cloud-based technology solutions for back-office services, web-based quote-to-bind technologies, real-time awareness and end-to-end claims handling, are a potentially significant channel to address gaps in the under-represented flood insurance market. Putting it all together provides the value adding industry with new market growth opportunities in flood risks. With the proposed technology and observation means, inland flooding is better addressed than ever before. Data and mapping markets are greatly supported for monitoring and timely controlling of accumulations map readily to flooding applications. These markets and the homeowner concerns for awareness of floods are currently under-penetrated and the need for their uptake is massively increasing.

* Targeted Technology Readiness Level (TRL) (What level of service demonstration/validation have you achieved /do you aim to achieve?)

1000 character(s) maximum

SCENT (https://scent-project.eu/) technologies and more specifically (i) the Campaign Manager, (ii) the Harmonisation Back-End Platform, (iii) the Image Processing Tools and (iv) the Map Segmentation Module will reach TRL5 overall.
EO4DisasteRS with the addition of new data, such as further EO data (e.g. very high resolution satellite images and UAV sensors), and state-of-the-art services and models provided by the BEYOND & SMURBS, will achieve as an integrated solution the level of TRL6 overall.

* Description of planned upscaling activities (e.g. wider user base, extended service quality with additional data sources, transnational
deployment in Europe, closer-to-market activity, service replication/incubation, other upscaling activity?)

1500 character(s) maximum

The outcomes of EO4DisasteRS will be upscaled to a wider user base, both inside Europe and in the neighbouring countries. The GEO-CRADLE Network in the Balkans, North Africa and Middle East will be exploited in this direction (http://geocradle.eu/platform). Moreover, the participation of key members of the partnership (e.g. ICCS and NOA) in current Collaborative and Support Actions and ERA-PLANET's Transnational Projects running in parallel to this initiative (e.g. the WeObserve project of upscaling Citizen Observatories in Europe www.weobserve.eu, and SMURBS/ERA-PLANET http://smurbs.eu) shall ensure the upscaling of the results to all Europe.
Furthermore, the service quality will be extended with additional data sources, both EO and in-situ, in selected countries. In particular, during the 3 years of EO4DisasterRS, the action group shall not only investigate the consolidation of different data types for an improved flood monitoring and management in the Kifisos river basin, but it will also extend this initiative across other regions, with different characteristics and flood policies.

* Link to GEO and GEOSS (How do you intend to take advantage of GEOSS data/GEO activities?)

800 character(s) maximum

EO4DisasteRS will use GEOSS data, and will produce data fully interoperable with the GEOSS portal. Furthermore all the data will be uploaded on the GEO-CRADLE Regional Data Hub.
EO4DisasteRS is linked to the GEO 2017-2019 Work Programme with the Initiatives: Earth Observations in Service of the 2030 Agenda for Sustainable Development, Data Access for Risk Management (GEO-DARMA), GEO Global Water Sustainability (GEOGLOWS), EuroGEOSS, and the Community Activities: Earth Observations and Citizen Science, Copernicus Atmospheric Monitoring Service (CAMS), Copernicus Climate Change Service (C3S), Earth Observations for Disaster Risk Management, GEO-CRADLE, Global Flood Awareness System (GloFAS), Global Flood Risk Monitoring, Integrated City-Region Systems Modelling resilience.io.

* Leveraging Copernicus (How about exploiting existing data/services/platforms/resources from the Copernicus programme?)

1000 character(s) maximum

EO4DisasteRS will exploit the Copernicus programme both in terms of data (Sentinels high resolution satellite images) and in terms of platforms (DIAS cloud processing).
Moreover EO4DisasteRS will leverage three important Copernicus Services: the Copernicus Emergency Management Service (EMS) (http://copernicus.eu/main/emergency-management), the Copernicus Atmospheric Monitoring Service (CAMS) (http://copernicus.eu/main/atmosphere-monitoring), and the Copernicus Climate Change Service (C3S) (http://copernicus.eu/main/climate-change).

Duration(starting from September 2018)

- ○ One-year duration
- ○ Two-year duration
- ◉ Three-year duration

* Funding resources (Reference to existing/upcoming funding resources or projects supporting your Expression of Intent)

50 character(s) maximum

SCENT and SMURBS project & seek upcoming funding.

Comments (optional)

1000 character(s) maximum

3 ABOUT THE EuroGEOSS REQUEST 2018

* How did you learn about this EuroGEOSS Request?

300 character(s) maximum

GEO-CRADLE Project Coordinator Dr Haris Kontoes (NOA, Greece) was invited by the EC to the Workshop on the EuroGEOSS 2018 Request for Expressions of Intent which was organised on June 6th 2018 in Brussels, Belgium.

Suggestions in view of future EuroGEOSS Requests (optional).
We would like to give you the opportunity to comment on this survey.
This will be taken into account for subsequent EuroGEOSS Requests after 2018.

1000 character(s) maximum

THANK YOU FOR YOUR COOPERATION.

Background Documents

EuroGEOSS Request 2018 for Expressions of Intent.pdf

EuroGEOSS concept paper.pdf

FAQ

SpecificPrivacyStatement_-_EuroGEOSS_2018.pdf

Contact

RTD-EUROGEOSS@ec.europa.eu