



GEO-CRADLE project in context of regional needs

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*Funded under H2020 - Climate action,
environment, resource efficiency and raw
materials*

*ACTIVITY: Developing Comprehensive and
Sustained Global Environmental Observation and
Information Systems*

*CALL IDENTIFIER: H2020 SC5-18b-2015
Integrating North African, Middle East and
Balkan Earth Observation capacities in GEOSS*

Project GA number: 690133

Total Budget: 2,910,800.00 €



The **GEO-CRADLE** project has received funding from the European Union's **Horizon 2020** research and innovation programme under grant agreement No 690133





Challenges in GEO-CRADLE

... is the only EU GEO funded CSA that runs over the diversified territories of North Africa, Middle East and Balkans;

- ✓ **Identifying common needs and regional priorities;**
- ✓ **Fostering the regional cooperation and integration of monitoring capabilities and skills, and facilitating the networking of stakeholders;**
- ✓ **Defining coordination and support actions that are beneficial from societal and market wise point of view, and also realistic and in line with the domestic priorities and user needs;**
- ✓ **Proposing/setting up large scale regional initiatives in Earth Observation (space based and in-situ) relating to capacity building and delivery of services and innovative information in the thematic areas of the project such as:**

Adaptation to Climate Change

Improved Food Security – Water Extremes Management

Access to Raw Materials

Access to Solar Energy

Objectives

- ✓ Promote the uptake of EO services and data in response to regional needs.
- ✓ Support the effective integration of existing Earth Observation Capacities in the region.
- ✓ Facilitate the engagement of the complete ecosystem of EO stakeholders in the region.
- ✓ Enhance the participation in and contribution to the implementation of GEOSS and Copernicus in North Africa, Middle East and the Balkans.



GEO-CRADLE Thematic Areas vs UN SDGs



**SUSTAINABLE
DEVELOPMENT** **GOALS**
17 GOALS TO TRANSFORM OUR WORLD



Adaptation to Climate Change (ACC)

13 CLIMATE
ACTION



11 SUSTAINABLE CITIES
AND COMMUNITIES



3 GOOD HEALTH
AND WELL-BEING



15 LIFE
ON LAND



Improved Food Security – Water Extremes Management (IFS-WEM)

2 ZERO
HUNGER



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Access to Raw Materials (ARM)

1 NO
POVERTY



2 ZERO
HUNGER



Access to Solar Energy (SENSE)

7 AFFORDABLE AND
CLEAN ENERGY



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



17 PARTNERSHIPS
FOR THE GOALS



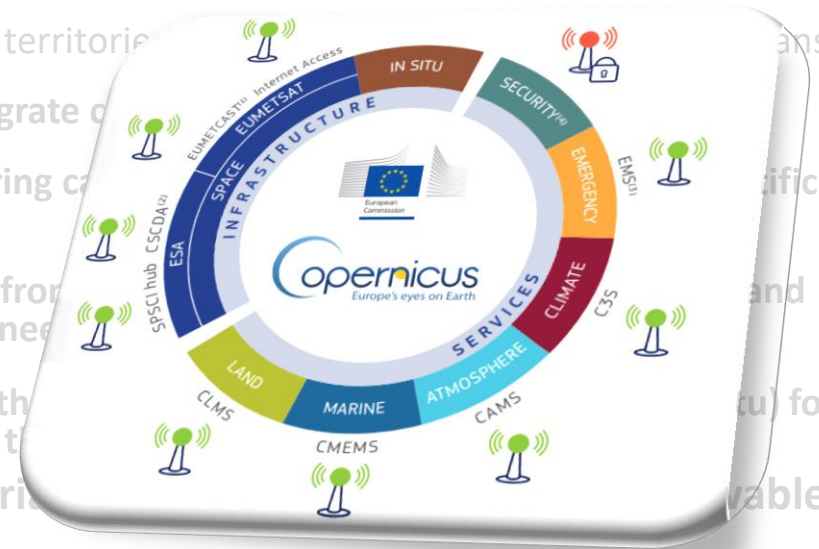
5 GENDER
EQUALITY





Challenges in GEO-CRADLE

**GEO GROUP ON
EARTH OBSERVATIONS**

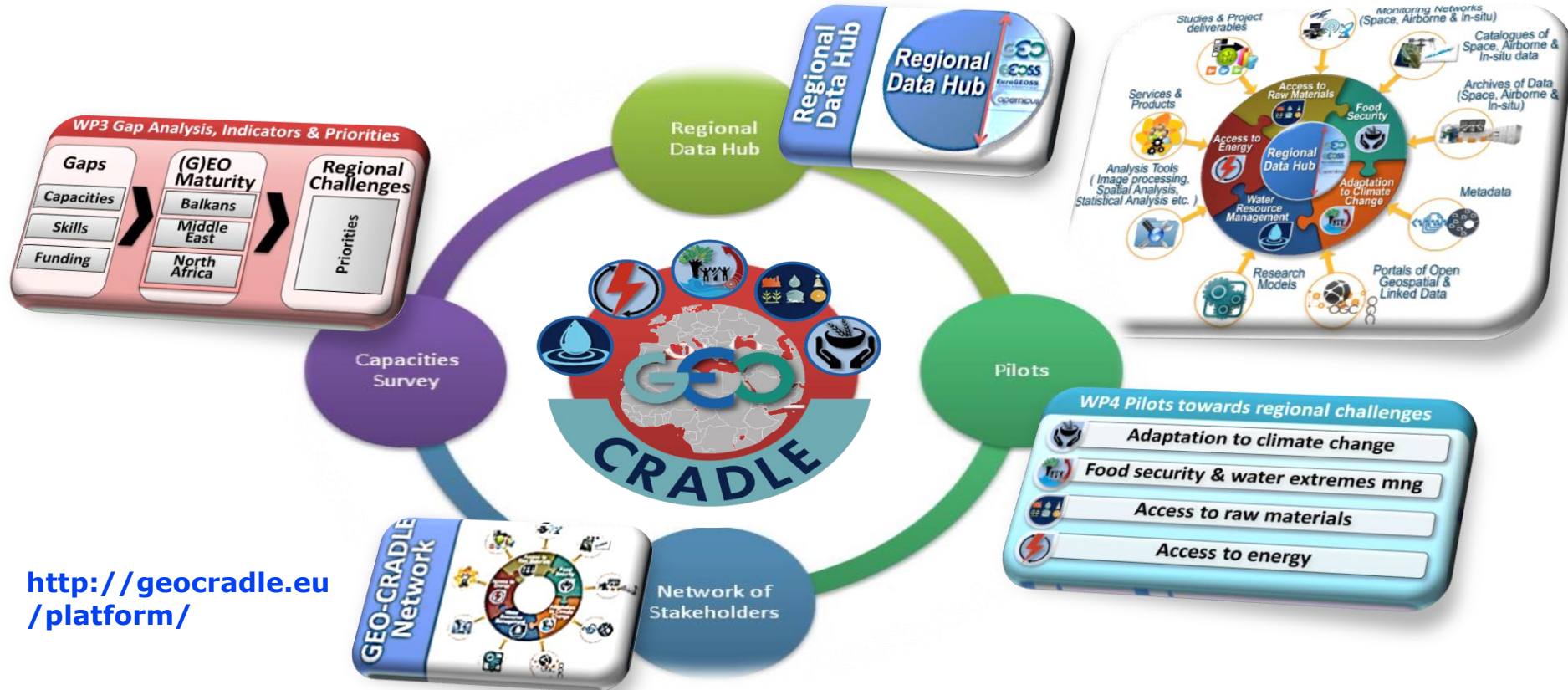


Objectives

- ✓ **Promote the uptake of EO services and data** in response to regional needs.
- ✓ **Support the effective integration** of existing Earth Observation Capacities in the region.
- ✓ **Facilitate the engagement** of the complete ecosystem of EO stakeholders in the region.
- ✓ **Enhance the participation** in and contribution to the implementation of **GEOSS and Copernicus** in North Africa, Middle East and the Balkans.

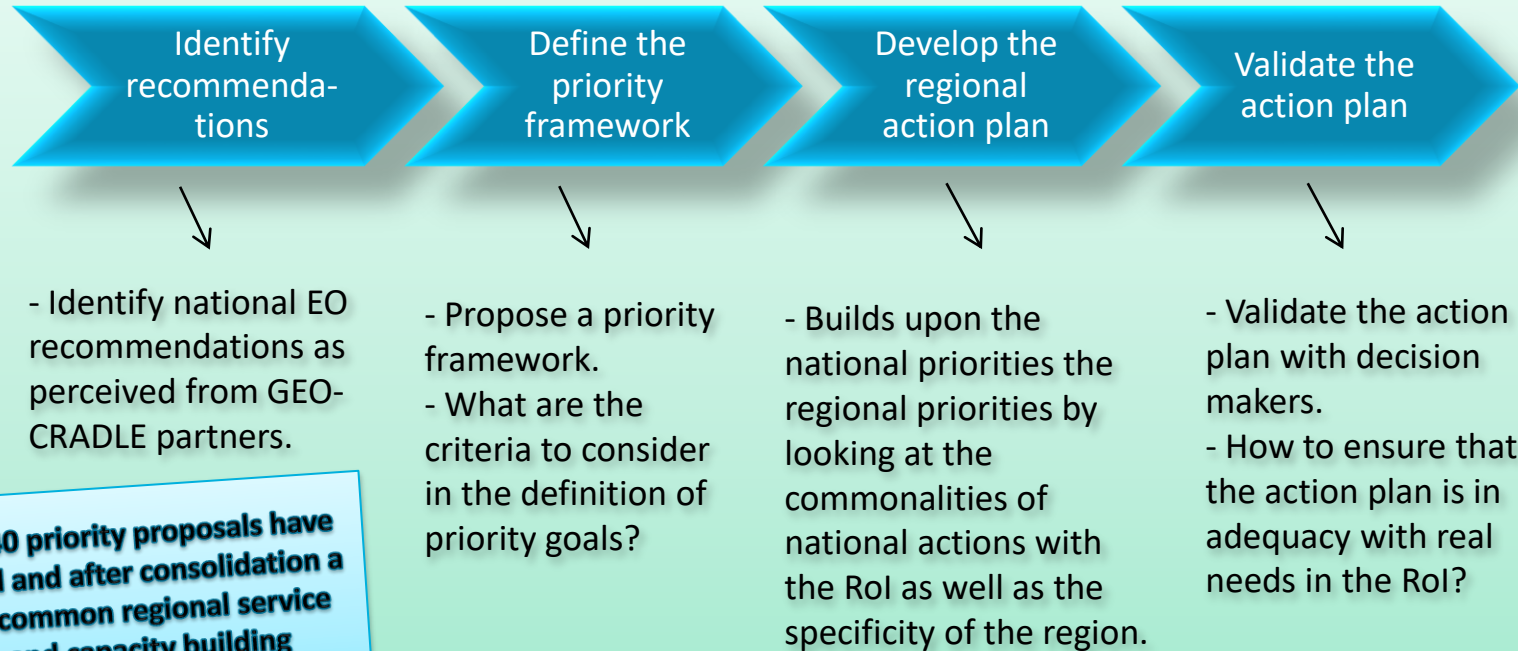


What useful results have emerged so far





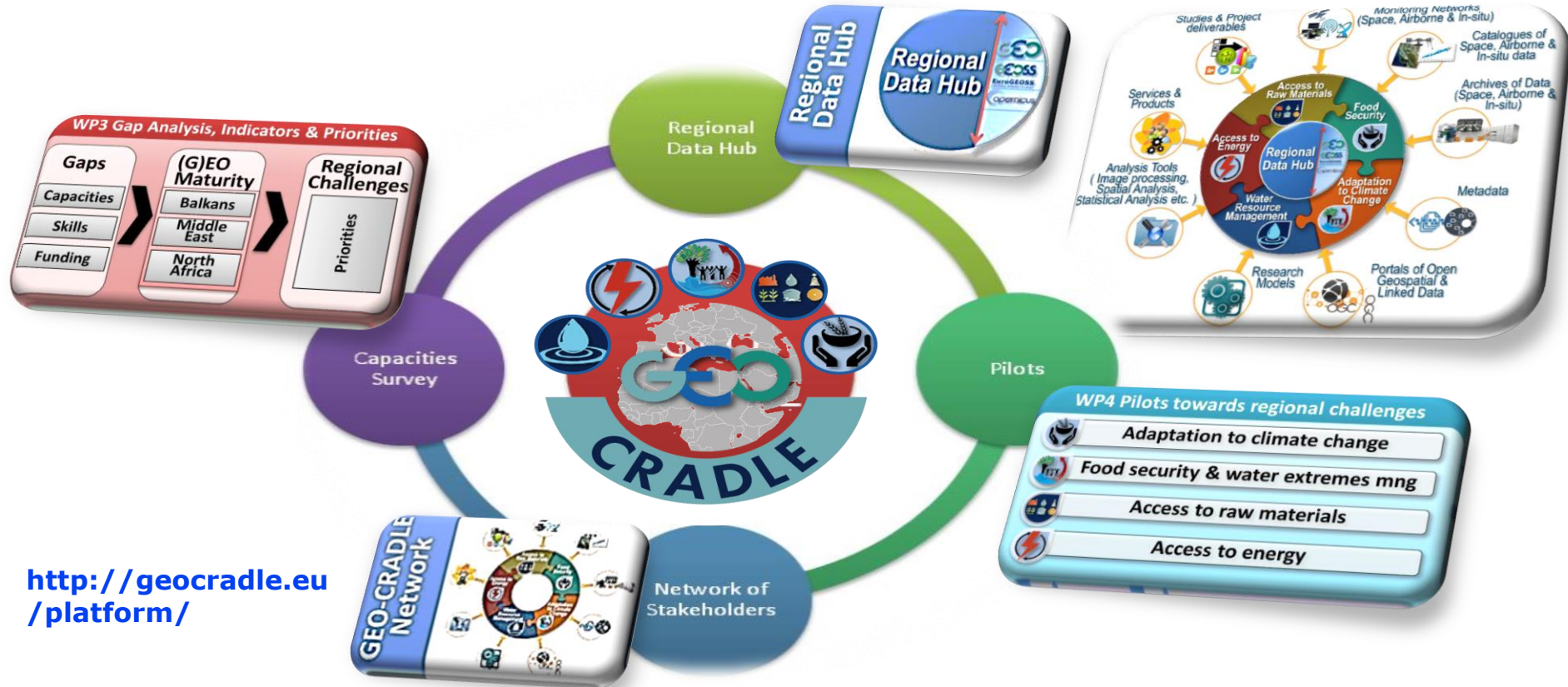
The Regional Priorities - Priority Definition Workflow



More than 40 priority proposals have been drafted and after consolidation a number of common regional service delivery and capacity building challenges were promoted.

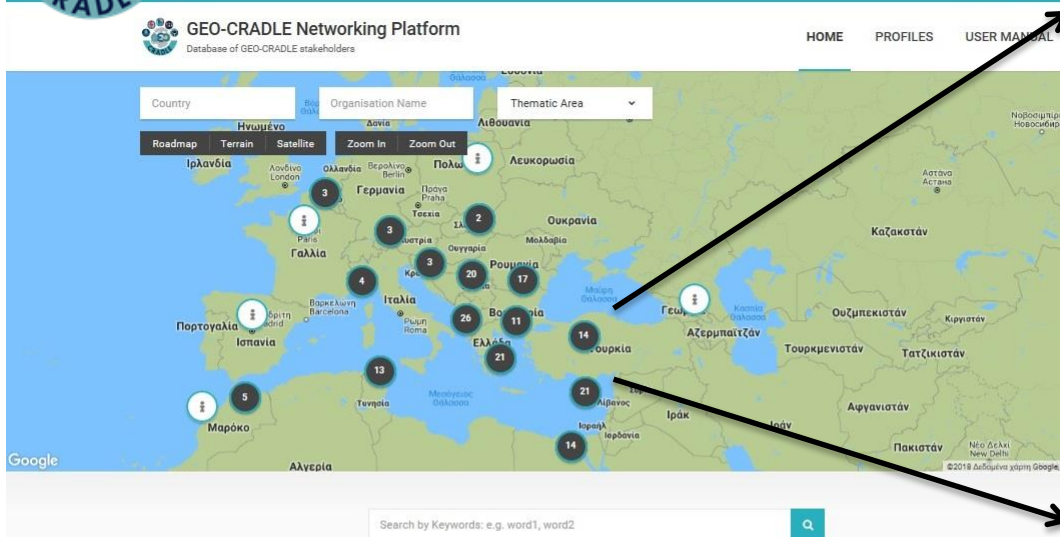


What useful results have emerged so far





GEO-CRADLE Networking Platform



1.
GO TO SEARCH PAGE

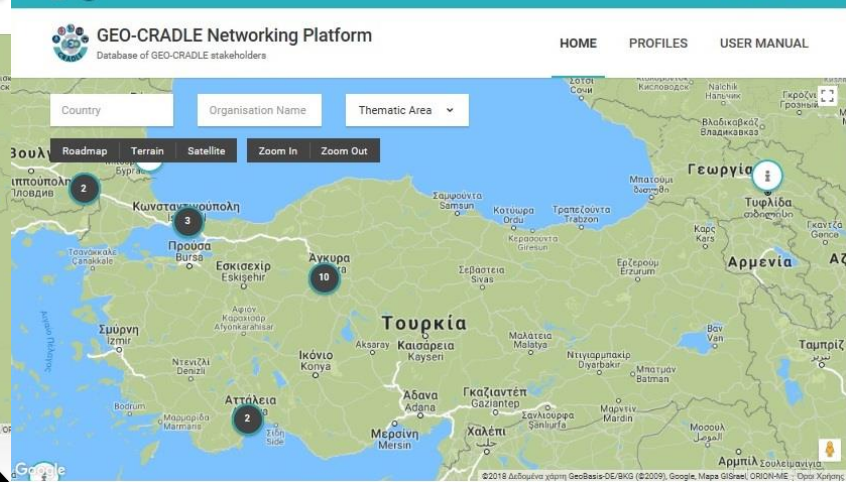
2.
CHOOSE YOUR FILTERS

3.
GET YOUR SEARCH RESULTS

COUNTRIES
29

STAKEHOLDERS
183

PROFILES VIEWS
40354



4 Institutional:

General Directorate of State Hydraulic Works
General Directorate of Forestry
Central Research Institute
Ministry of Food, Agriculture and Livestock

5 Research & Academic:

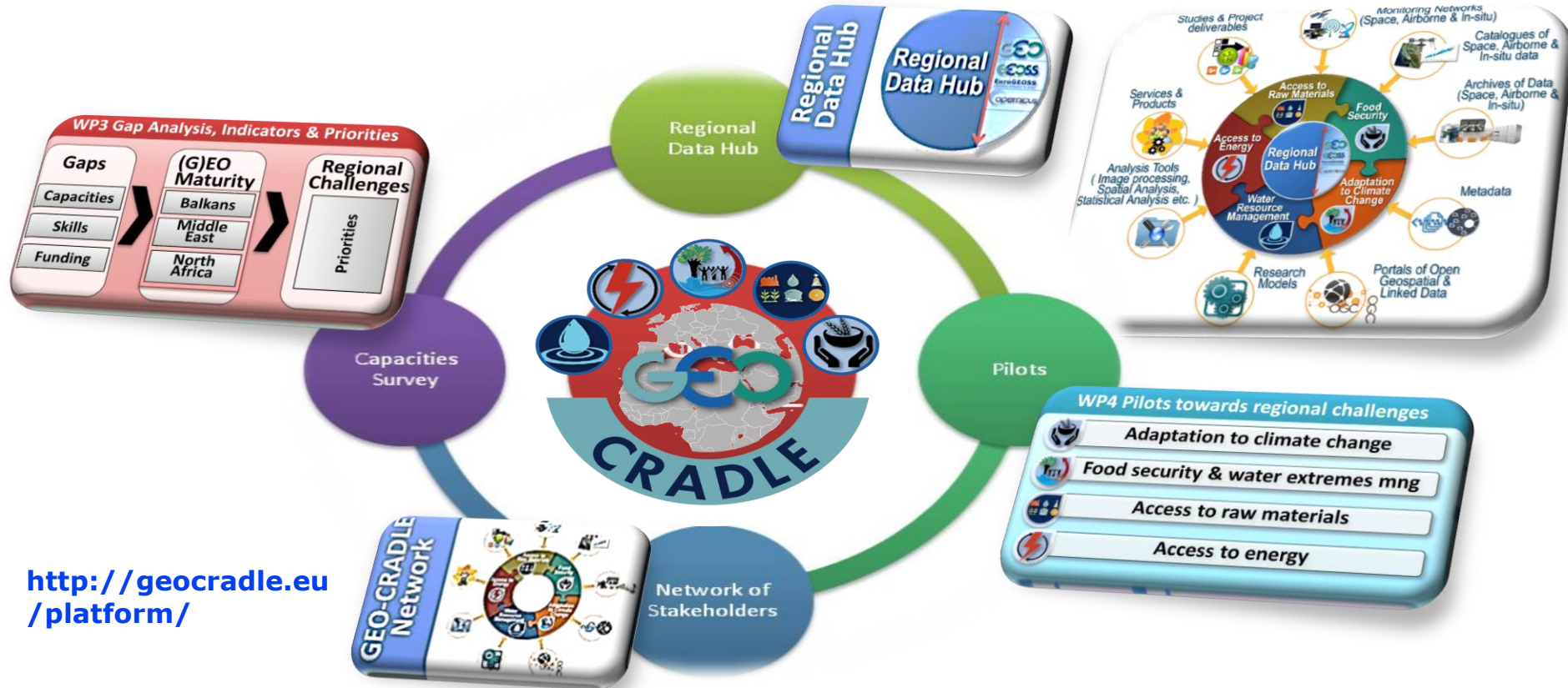
TÜBİTAK UZAY Space Technologies Research Institute
Akdeniz University - Space Science and Technologies
Akdeniz University - Remote Sensing Research and Application Center
Bogazici University - Center for Climate Change and Policy Studies
Istanbul Technical University - Center of Satellite Communication and Remote Sensing

6 Commercial:

Mekansal Software
Turksat Uydu Haberleşme Kablo TV Ve İşletme A.Ş.
Basarsoft Information Technology
NiK İnşaat Ticaret Ltd. Sti.
Atay Mühendislik Teknik İşçiler Ltd. Sti.
Jeodijital Ltd. Sti.



What useful results have emerged so far



<http://geocradle.eu/platform/>



Regional DataHub – Connection with GEOSS & Regional Portals



Geocradle

Home Groups Datasets News

Log in



[About](#)

Utilizing the GEO DAB
APIs and DKAN for
easy access and
discovery of regional
EO data

The Regional DataHub (RDH) provides access to both region-related datasets, portals and services developed by a regional network of raw data providers, intermediate users, and end-users from industry, Academic and Public Sector from the Region of Interest, and, also, datasets and services directly fed from the GEOSS. Moreover, being the centralized gateway for regional data providers to contribute easily and timely their products to GEOSS, the Regional Data Hub is designed to become the focal node in the region in the context of GEOSS and Copernicus implementation. The RDH facilitates access to downloadable files of Space-borne data from real-time EO campaigns, in-situ observations; data from Airborne campaigns performed in the region; In-situ data; and Models such as Atmospheric and Climate.

[Find](#)



Data



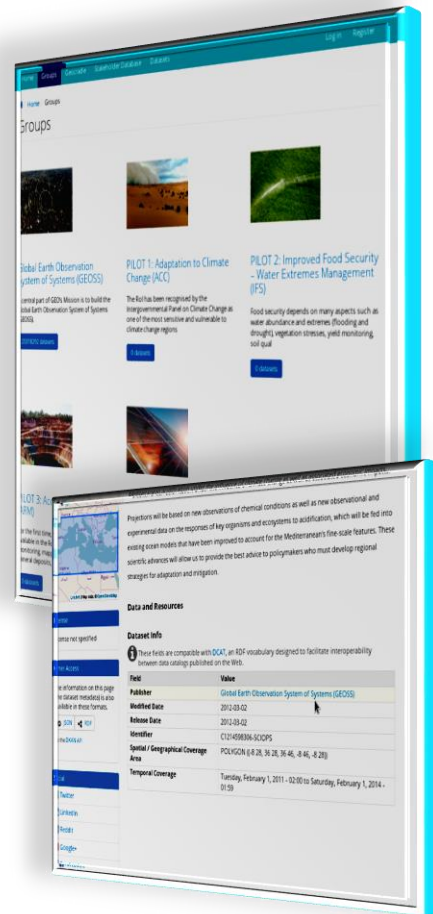
Innovation



Involvement



Growth







Identification and dissemination of information on funding

CRADLE

Search

About GEO-CRADLE Team Activities Regional Capacities Outreach Resources Tools News & Events English

Project

Developing Earth Observation activities

Survey & Networking Platform

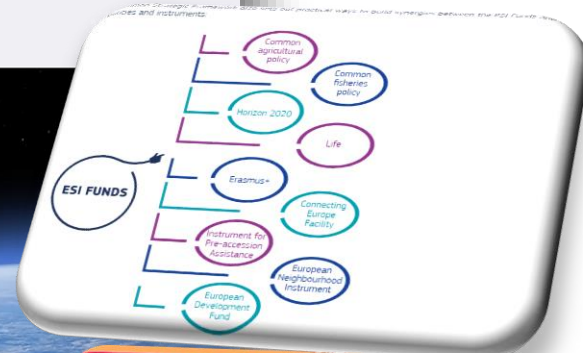
DataHub

Funding Opportunities

Take part in our

Access, search and share Earth Observation Data for the three regions.

Explore the available funding opportunities and the benefit of





Funding opportunities: EuroGEOSS

Short info about the call

EuroGEOSS (www.eurogeoss.eu) is a H2020 Innovation Action call under Work Programme Year H2020-2018-2020 whose main objective is to strengthen the benefits for Europe of the Global Earth Observation System of Systems (GEOSS). The main objective of this project is to accelerate users' uptake of open Earth Observation (EO) data and information for the benefit of Europe, through the effective use of European EO resources (including space, airborne, in-situ measurements and citizen observations) to prepare for operational environmental forecasting, and for mitigation and adaptation actions through building on Copernicus services and GEOSS initiatives and flagships.

Funding scheme

H2020 rules



Submission

It is a 2-stage proposal in which 55 organizations participated, under ARMINES coordination and NOA's participation as a key partner. Among the vast and multidisciplinary types of organizations, several members of the GEO-CRADLE consortium and networking platform participated.

No	Organization	Role in GEO-CRADLE
1	NOA (National Observatory of Athens / IAASARS)	Project Coordinator of GEO-CRADLE
2	i-BEC (inter-Balkan Environment Center)	Consortium Partner of GEO-CRADLE, Regional Coordinator
3	CEDARE (Centre for Environment and Development for the Arab Region and Europe)	Consortium Partner of GEO-CRADLE, Regional Coordinator
4	EARSC (European Association of Remote Sensing Companies)	Consortium Partner of GEO-CRADLE
5	PMOD/WRC (Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center)	Consortium Partner of GEO-CRADLE
6	CIMA (Centro Internazionale in Monitoraggio Ambientale)	Consortium Partner of GEO-CRADLE
7	TAU (Tel Aviv University)	Consortium Partner of GEO-CRADLE
8	EGS (EuroGeoSurveys)	Consortium Partner of GEO-CRADLE
9	BIOSENSE INSTITUTE (Research and Development Institute for Information Tech)	Member of the GEO-CRADLE Networking Platform
10	AoA (ACADEMY OF ATHENS)	Member of the GEO-CRADLE Networking Platform
11	EVENFLOW	Member of the GEO-CRADLE Networking Platform
12	DRAXIS ENVIRONMENTAL S.A.	Member of the GEO-CRADLE Networking Platform
13	NEUROPUBLIC S.A.	Member of the GEO-CRADLE Networking Platform



Funding opportunities: PRIMA

Short info about the call

PRIMA (<http://prima-med.org>) is a new Partnership for Research and Innovation in the Mediterranean Area, envisaged to develop (much-needed) solutions for a more sustainable management of water and agro-food systems. The main objective of this ten-year initiative (2018-2028) is to devise new R&I approaches to improve water availability and sustainable agriculture production in a region heavily distressed by climate change, urbanisation and population growth. PRIMA is being financed through a combination of funding from participating countries (currently €274 million), and a €220 million contribution from the EU through Horizon 2020, its research and innovation funding programme (2014-2020). PRIMA programmes support research and innovation through distinct types of actions/activities:

- In Section 1: Research & Innovation Actions (RIA), and Innovation Actions (IA) as defined in the General Annexes of H2020.
- In Section 2: Research and Innovation Activities (RIA*[2]) based on national rules.
- In Section 3: National research programmes (PSIAs).

Funding scheme: Based on National Regulations

Submission

NOA is coordinating under Section 2 - Thematic area 2: Sustainable farming systems under Mediterranean environmental constraints under Topic 1.2.1: Adaptation of Agriculture to Climate Change the submission of a proposal that will team up partners of the GEO-CRADLE project.



No	Organization	Role in GEO-CRADLE
1	NOA (National Observatory of Athens / IAASARS)	Project Coordinator of GEO-CRADLE
2	AUTH (Aristotle University of Thessaloniki)	Contributor to the Adaptation to Climate Change pilot implemented in the framework of GEO-CRADLE
3	CEDARE (Centre for Environment and Development for the Arab Region and Europe)	Consortium Partner of GEO-CRADLE, Regional Coordinator
4	TUBITAK UZAY (Space Technologies Research Institute)	Consortium Partner of GEO-CRADLE
5	CIMA (Centro Internazionale in Monitoraggio Ambientale)	Consortium Partner of GEO-CRADLE
6	CERT (Centre of Telecommunications Studies and Research)	Consortium Partner of GEO-CRADLE
7	CUT (Cyprus University of Technology)	Consortium Partner of GEO-CRADLE



Funding opportunities: CHIST-ERA

Short info about the call

CHIST-ERA (www.chistera.eu) is a 2017 Call for Research Proposals supporting 2 different topics: 1) Object recognition and manipulation by robots: Data sharing and experiment reproducibility (ORMR); & 2) Big data and process modelling for smart industry (BDSI). CHIST-ERA is a consortium of funding organizations with programmes supporting Information and Communication Sciences and Technologies (ICST). The CHIST-ERA consortium is itself supported by the European Union's Future & Emerging Technologies scheme (FET). CHIST-ERA promotes multidisciplinary and transnational ICST research with the potential to lead to significant breakthroughs. The funding organizations jointly support research projects selected in the framework of CHIST-ERA, in order to reinforce European capabilities in selected topics.

Funding scheme

National funding organization, thus each partner must fulfil the conditions of the funding organisation they are applying to.

Submission

Under NOA's coordination a proposal has been submitted on 2017-01-11 that teams up with 2 partners and 1 end-user of the GEO-CRADLE project.



No	Organization	Role in GEO-CRADLE
1	NOA (National Observatory of Athens / IAASARS)	Project Coordinator of GEO-CRADLE
2	PMOD/WRC (Physikalisch-Meteorologisches Observatorium Davos / World Radiation Center)	Consortium Partner of GEO-CRADLE
3	IPTO (Independent Power Transmission Operator of Greece)	End-User of the Solar Energy pilot implemented in the framework of GEO-CRADLE



Funding opportunities: EO4SD

Short info about the call

EO4SD (Larger scale EO exploitation activities in support of sustainable development initiative) is an ESA tender (EOP-SEI/SNC/VAE_SOW/17-027) aiming at building long-term sustainable use of EO-derived information services to support international development activities (e.g. World Bank, Asian Bank etc.). It focuses on 4 specific thematic domains of sustainable development, namely:

- Climate Resilience
- Disaster Risk Reduction
- Marine & Coastal Resources Management
- States Affected by Fragility, Conflict & Violence

Funding scheme

EC-ESA funding.

Submission

Under GMV's coordination the proposal was submitted in October 2017. NOA is one of the partners and exploits the "EO capacity building" competences that have been radically developed through the GEO-CRADLE project. In addition, SIGE, a Tunisian local company was reached through the GEO-CRADLE network, so as to act as a local office in this region.

No	Organization	Role in GEO-CRADLE
1	NOA (National Observatory of Athens / IAASARS)	Project Coordinator of GEO-CRADLE
2	SIGE (Société d'ingénierie géomatique et environnementale)	Member of the GEO-CRADLE Networking Platform



Funding opportunities: research and/or academic institutes

Short info about the call

A proposal has been granted between UAEU (United Arab Emirates University) being the PI and NOA (National Observatory of Athens) being the Co-PI, with a duration of 4 years (01/2018-12/2021). This research project is focused on the assessment and monitoring of the groundwater storage and dynamics in the city of Al Ain in the United Arab Emirates using primarily remotely sensed data. This will be performed through the integration of various remote sensing information products with in-situ groundwater level observations.

Funding scheme

Center Based Research Grant.

Submission

2017

UAEU



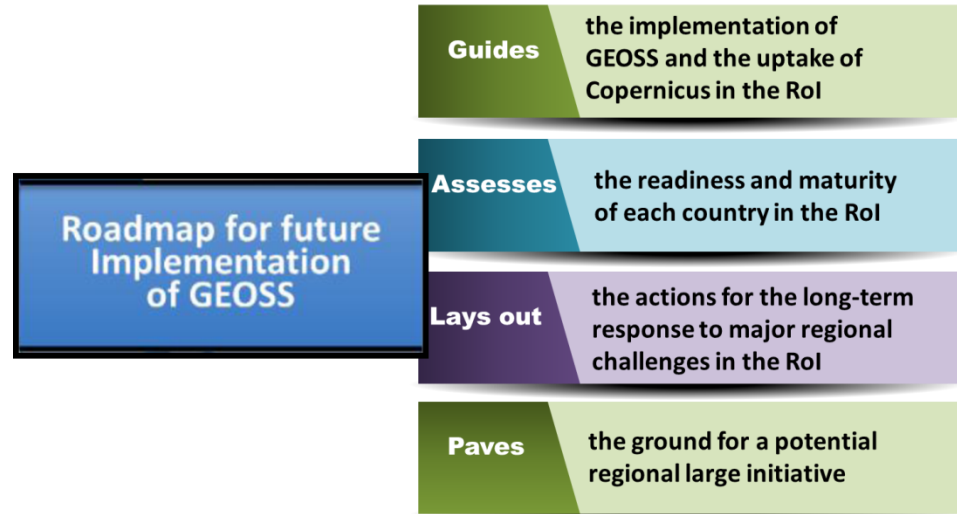
جامعة الإمارات العربية المتحدة
United Arab Emirates University

No	Organization	Role in GEO-CRADLE
1	NOA (National Observatory of Athens / IAASARS)	Project Coordinator of GEO-CRADLE
2	UAEU (United Arab Emirates University)	Cooperation Partner of NOA in GEO-CRADLE



GEO-CRADLE contribution to EO market uptake

1. **Submit a roadmap** together with funding priorities in relation to capacity building, service delivery, filling in gaps (networks, infrastructures, data sharing, skills), training, education, service provision, and business uptake at regional level.



2. **Engage the countries and regional stakeholders** in the data sharing process, the use of open standards, and facilitate the access of the local actors to existing portals, web servers, data repositories, and satellite image archives through big infrastructures such as GEOSS, the European Data Portal, Copernicus data/service portals, and any existing regional Data Hubs (e.g. GEO-CRADLE RDH).



GEO-CRADLE contribution to EO market uptake

3. **Generate and sustain a network stakeholders** to ensure visibility, and sharing of knowhow, excellence, and skills between the local actors and their counterparts worldwide.
4. **Deliver a prototype methodology and a detailed assessment** on the nations' (market and science) maturity in relation to EO.
5. **Support the EO market uptake and internationalisation** by,
 - ❖ Understanding the local market, and capacities;
 - ❖ Mapping existing policies in sectors that may need support from EO;
 - ❖ Facilitating access to open data;
 - ❖ Mapping the local competitive landscape;
 - ❖ Engaging the end-user community;
 - ❖ Facilitating partnering with international interlocutors (companies, researchers, industries);
 - ❖ Building trust / Overcoming cultural and linguistic issues.
6. **Advance the role of the countries in GEO, and Copernicus** by,
 - ❖ Setting up local GEO offices, Copernicus Relay Offices, and/or nominating official GEO representations at various levels;
 - ❖ Strengthening the EO industrial/research dimension by using Copernicus & GEO as key drivers;
 - ❖ Helping stakeholders understand how they can benefit from & contribute to GEOSS & Copernicus.



<http://geocradle.eu/>

The screenshot shows the GEO-CRADLE website homepage. At the top, there is a teal header bar with social media icons (Twitter, Facebook, YouTube) on the left, a search bar in the center, and icons for a printer, a magnifying glass, and a list on the right. Below the header is a light purple navigation bar containing the GEO-CRADLE logo and a series of menu items: About GEO-CRADLE, Team, Activities, Regional Capacities, Outreach, Resources, Tools, News & Events, and a language selector set to English. The main visual is a large banner image of a satellite in space above Earth's horizon. Overlaid on the bottom left of this image is a dark blue box with the text "GEO-CRADLE Project" and "Coordinating and integrating Earth Observation activities". Below the banner is a white section with four columns, each featuring a teal icon, a title, and a brief description. The columns are: Pilot Activities (gear icon), Survey & Networking Platform (crosshair icon), DataHub (database icon), and Funding Opportunities (euro symbol icon).

GEO-CRADLE Project
Coordinating and integrating Earth Observation activities

Pilot Activities	Survey & Networking Platform	DataHub	Funding Opportunities
Follow our pilot activities in four thematic areas:	Take part in our	Access, search and share Earth Observation Data for the three regions.	Explore the available funding opportunities and the benefit of



thank you!

