



# National Observatory of Athens (NOA)

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Research Director & Coordinator of GEO-CRADLE

**GEO-CRADLE** started as a CSA project funded by the H2020 but today is a GEO Initiative after the decision taken in the last GEO Ministerial in Kyoto

**Horizon 2020 Regional Seminar Addressing Euro-Mediterranean Common Challenges through Research and Innovation Cooperation, 22 January 2019, EuroMed University of Fes, Morocco**



# GEO-CRADLE

<http://geocradle.eu>

**GEO-CRADLE** coordinates and integrates state-of-the-art EO activities in the regions of **North Africa, Middle East, and Balkans (NAMEBA)** and develops links with GEO related initiatives towards GEOSS, contributing amongst others to EuroGEOSS and AfriGEOSS.



## THE OVERARCHING GOAL

**Develop and sustain updated the roadmap** for the implementation of GEO, GEOSS, and Copernicus in regions

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





# GEO-CRADLE

<http://geocradle.eu>



## GEO-CRADLE

- ✓ Brings together key players representing the **entire EO value chain** (> 300 stakeholders) from **29 countries**
- ✓ Promotes the **uptake and exploitation** of innovative **EO activities** in **NAMEBA**



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# The GEO-CRADLE addresses



Pilots  
applicable  
&  
adaptable  
to all  
countries

Adaptation to  
Climate  
Change (ACC)



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



Access to  
Raw  
Materials  
(ARM)



Access to  
Solar Energy  
(SENSE)



End users &  
stakeholders  
engagement

Through the support of

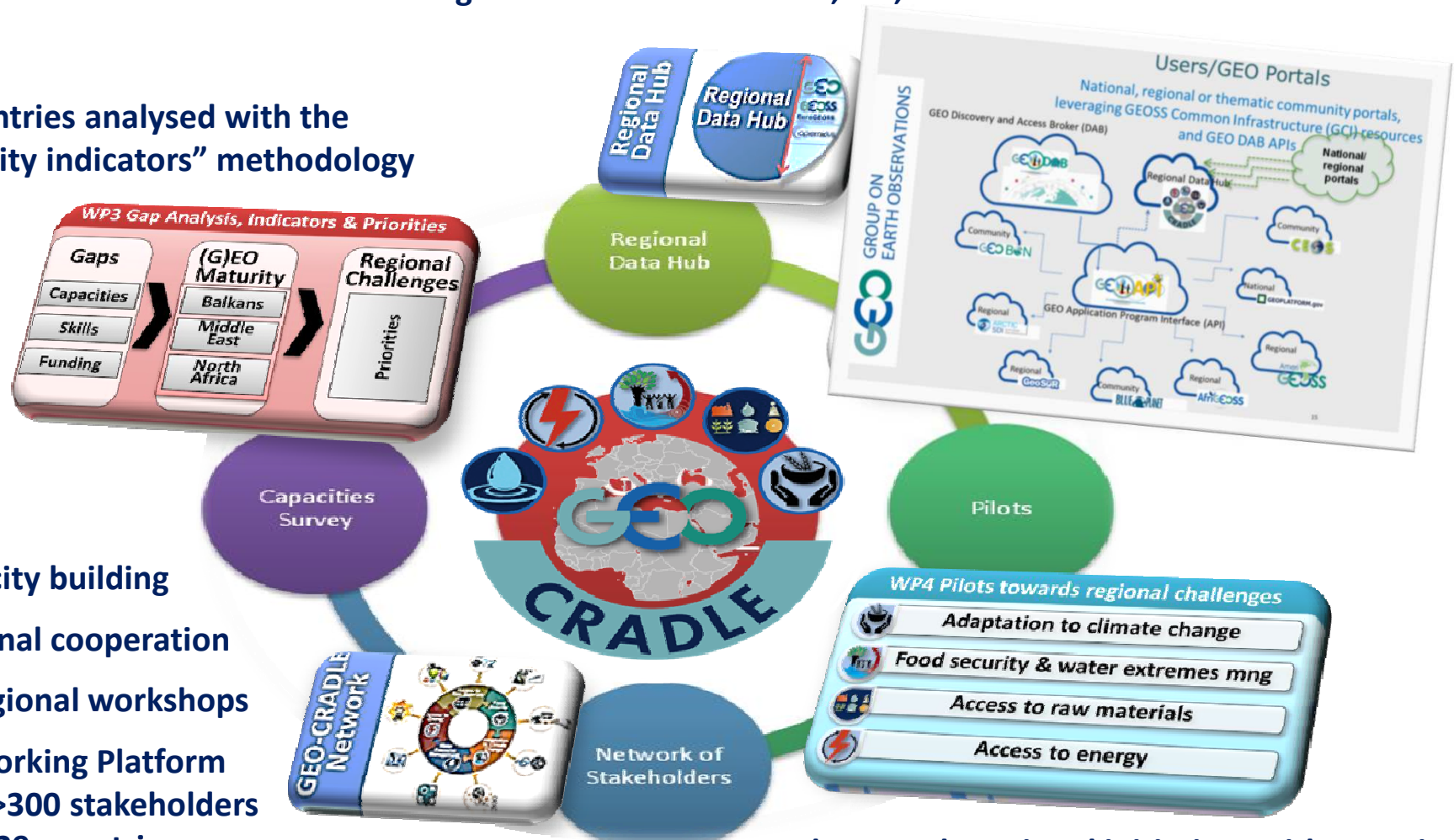
- ✓ Regional Cooperation
- ✓ Awareness raising
- ✓ Capacity building
- ✓ Training upon Open data accessing, sharing and exploitation



# The Activities

Regional Data Hub with >25,000,000 datasets

11 countries analysed with the  
“maturity indicators” methodology



Capacity building

Regional cooperation

16 regional workshops

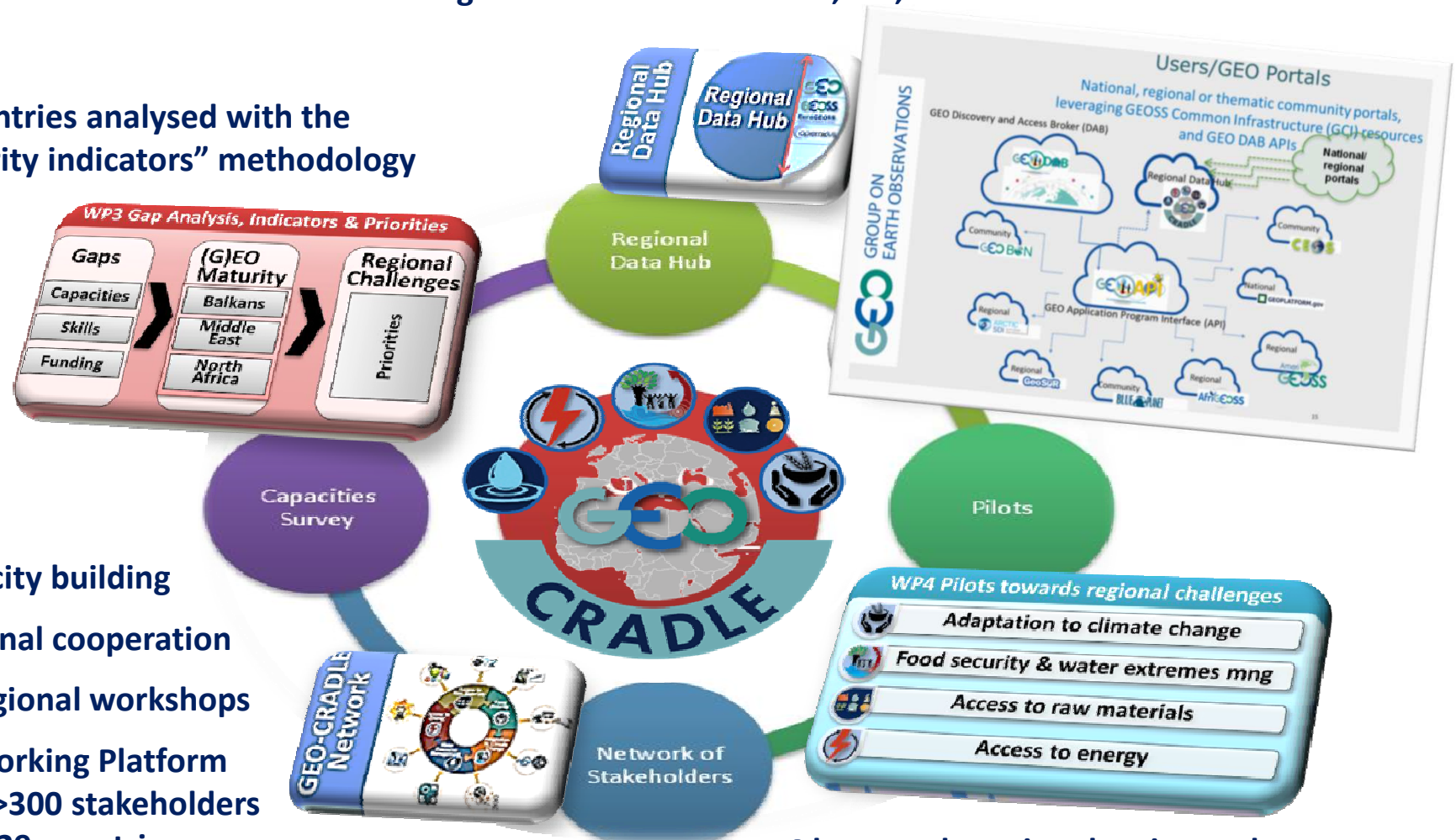
Networking Platform  
with >300 stakeholders  
from 29 countries

4 large scale regional initiatives with capacity building and delivery of innovative services in support of 11 UN SDGs

# The Activities

## Regional Data Hub with >25,000,000 datasets

## 11 countries analysed with the “maturity indicators” methodology



**4 large scale regional actions relevant to capacity building and delivery of innovative services in support of 11 UN SDGs**

# Results: Maturity Indicators Methodology & Assessment



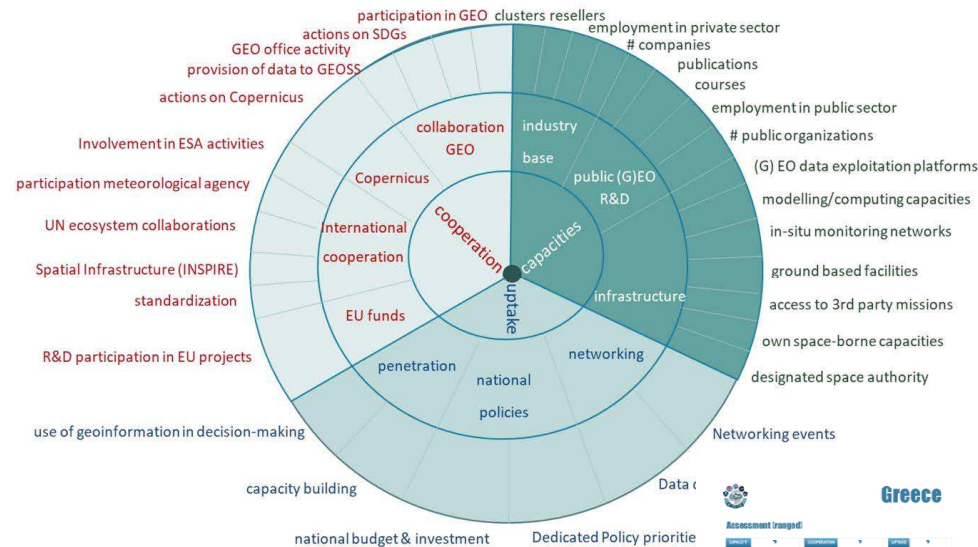
Innovative, independent,  
up-to-date and replicable  
methodology for the  
assessment and monitoring of  
EO maturity at national level

A very extensive set  
of 32 indicators was  
defined across 3  
main fields:

1. Capacities
2. Cooperation
3. National Uptake and Awareness

Application of the methodology in 11 countries of the  
BAMENA region:

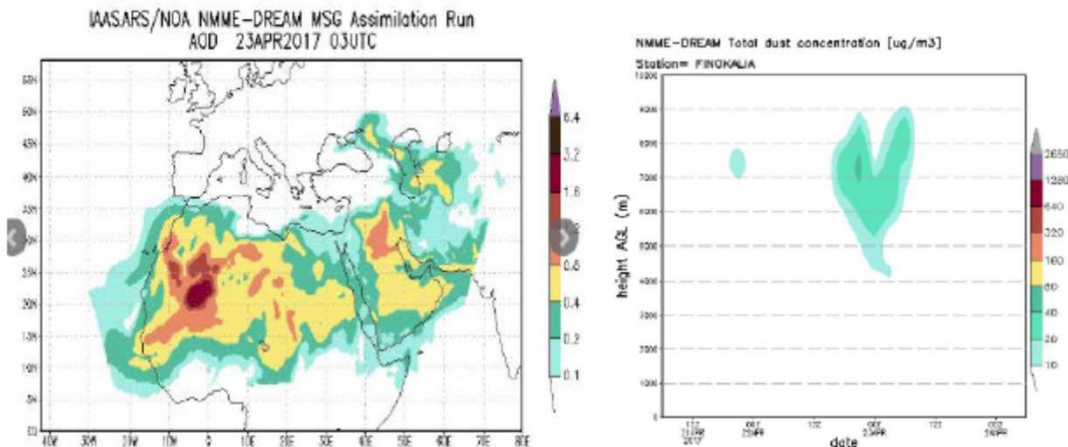
Albania, Bulgaria, Cyprus, Egypt, FYROM, Greece,  
Israel, Romania, Serbia, Tunisia, Turkey,



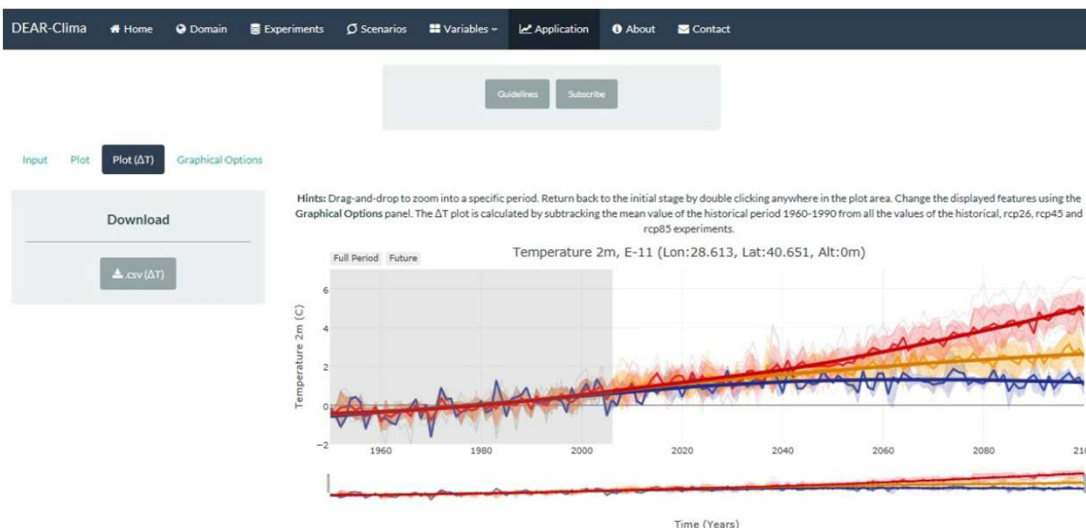


# Results: Thematic 1 – Adaptation to Climate Change

## Desert Dust services:



## Regional Climate Change services:



## Engagement of end-users:



Office National de la Meteorologie - Algeria



Ministry of Electricity and Renewable Energy - Egypt



Institute for scientific research - Kuwait



Balloonera Company - Serbia



GEO-CRADLE SENSE pilot solea company for solar energy



University of Belgrade - Serbia



Department of Meteorology - Cyprus



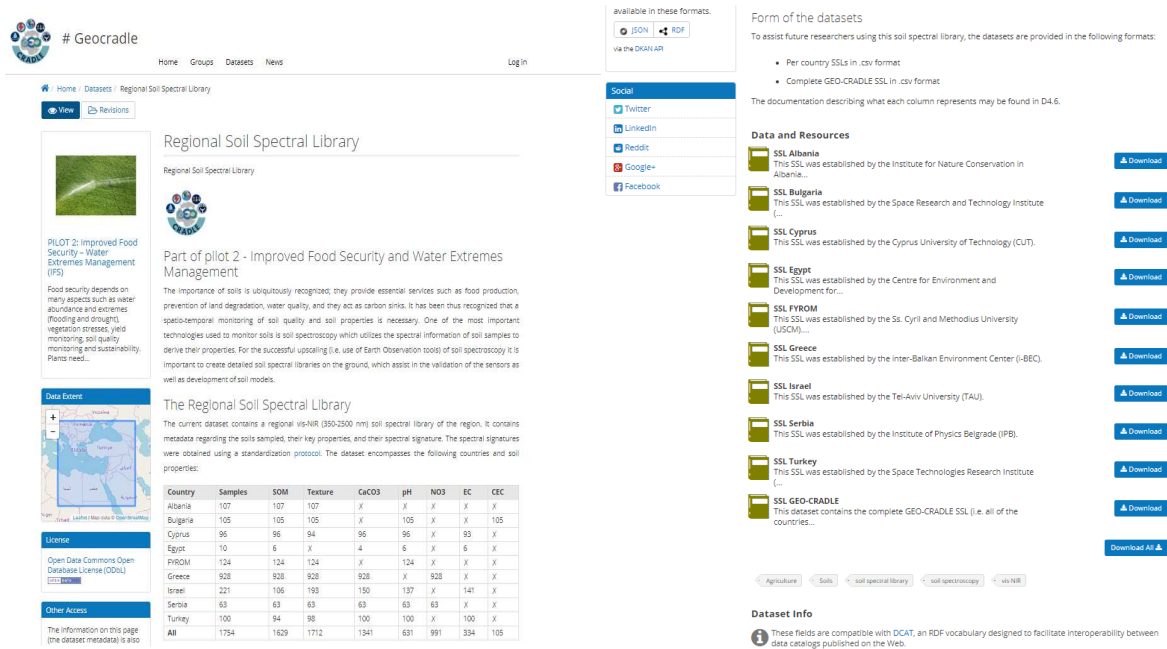
National Technical University of Athens - Greece



Agence du Bassin Hydraulique du Sebu - Morocco

# Results: Thematic 2 – Improved Food Security & Water Extremes Management

**Regional Soil Spectral Library: 1754 soil samples from 9 countries (Albania, Bulgaria, Cyprus, Egypt, FYROM, Greece, Israel, Serbia, Turkey)**



**Regional Soil Spectral Library**

Part of pilot 2 - Improved Food Security and Water Extremes Management

The importance of soils is ubiquitously recognized; they provide essential services such as food production, prevention of land degradation, water quality, and they act as carbon sinks. It has been thus recognized that a spatio-temporal monitoring of soil quality and soil properties is necessary. One of the most important technologies used to monitor soils is soil spectroscopy which utilizes the spectral information of soil samples to derive their properties. For the successful upscaling (i.e. use of Earth Observation tools) of soil spectroscopy it is important to create detailed soil spectral libraries on the ground, which assist in the validation of the sensors as well as development of soil models.

**The Regional Soil Spectral Library**

The current dataset contains a regional vis-NIR (350-2500 nm) soil spectral library of the region. It contains metadata regarding the soils sampled, their key properties, and their spectral signature. The spectral signatures were obtained using a standardized protocol. The dataset encompasses the following countries and soil properties:

Country	Samples	SOM	Texture	CaCO <sub>3</sub>	pH	NOS	EC	CEC
Albania	107	107	107	X	X	X	X	X
Bulgaria	105	105	105	X	X	105	X	105
Cyprus	95	95	94	95	95	X	93	X
Egypt	10	6	X	4	6	X	6	X
FYROM	124	124	124	X	124	X	X	X
Greece	928	928	928	928	X	928	X	X
Israel	221	106	193	150	137	X	141	X
Serbia	63	63	63	63	63	63	X	X
Turkey	100	94	90	100	100	X	100	X
All	1754	1629	1712	1341	631	991	334	105

**Form of the datasets**

To assist future researchers using this soil spectral library, the datasets are provided in the following formats:

- Per country SSLs in .csv format
- Complete GEO-CRADLE SSL in .csv format

The documentation describing what each column represents may be found in D4.6.

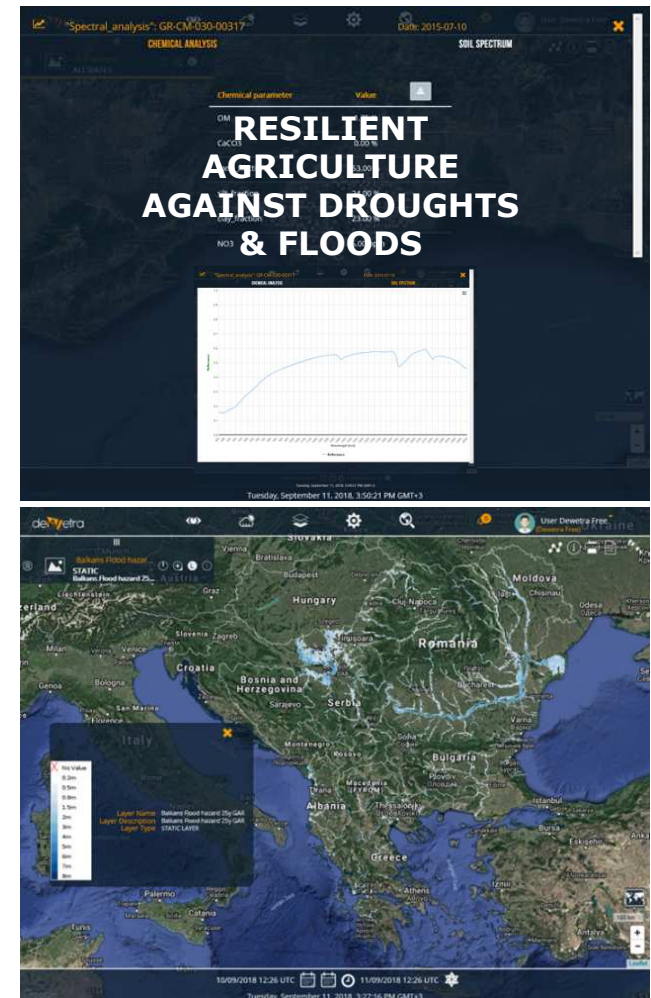
**Data and Resources**

- SSL Albania**  
This SSL was established by the Institute for Nature Conservation in Albania...
- SSL Bulgaria**  
This SSL was established by the Space Research and Technology Institute (I-SRTI)...
- SSL Cyprus**  
This SSL was established by the Cyprus University of Technology (CUT)...
- SSL Egypt**  
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- SSL FYROM**  
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- SSL Israel**  
This SSL was established by the Tel-Aviv University (TAU)...
- SSL Serbia**  
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- SSL Turkey**  
This SSL was established by the Space Technologies Research Institute (STRI)...
- SSL GEO-CRADLE**  
This dataset contains the complete GEO-CRADLE SSL (i.e. all of the countries)...

**Dataset Info**

These fields are compatible with DCAT, an RDF vocabulary designed to facilitate interoperability between data catalogs published on the Web.

**myDEWETRA platform:**



## Engagement of end-users:

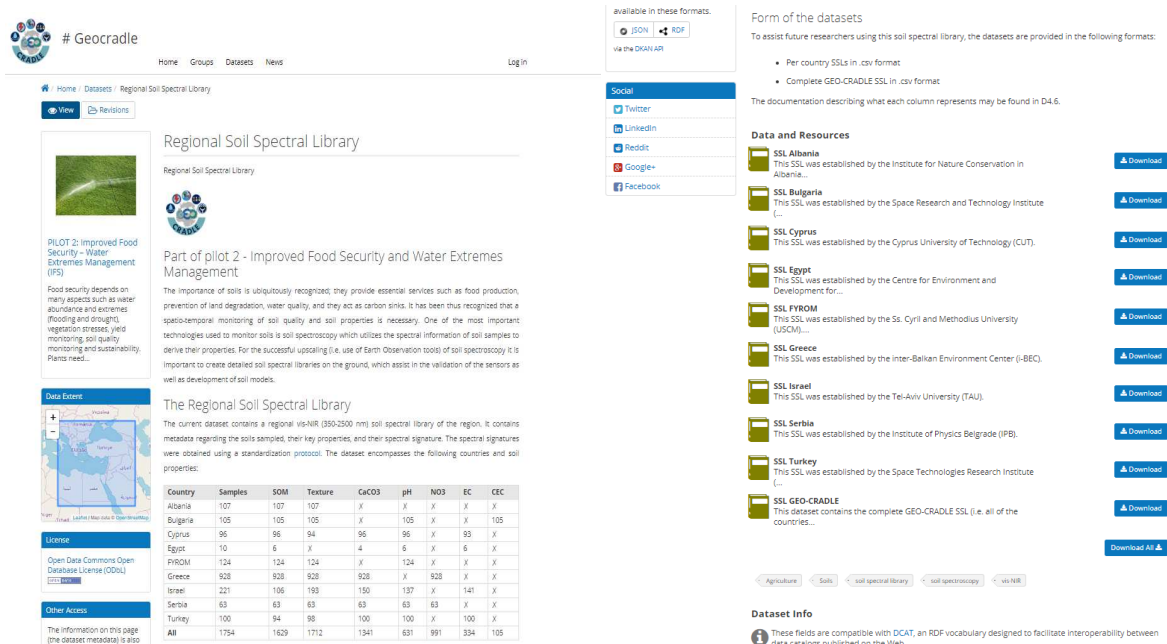
**Albania:** Ministry of Environment, Ministry of Economic Development, Tourism, Trade & Entrepreneurship

**Greece:** The Agriculture Cooperatives of Nestos, NESPAR, and the Cooperatives of Xanthi, Eleftheroupoli, and Volvi

**GEO's Secretariat**

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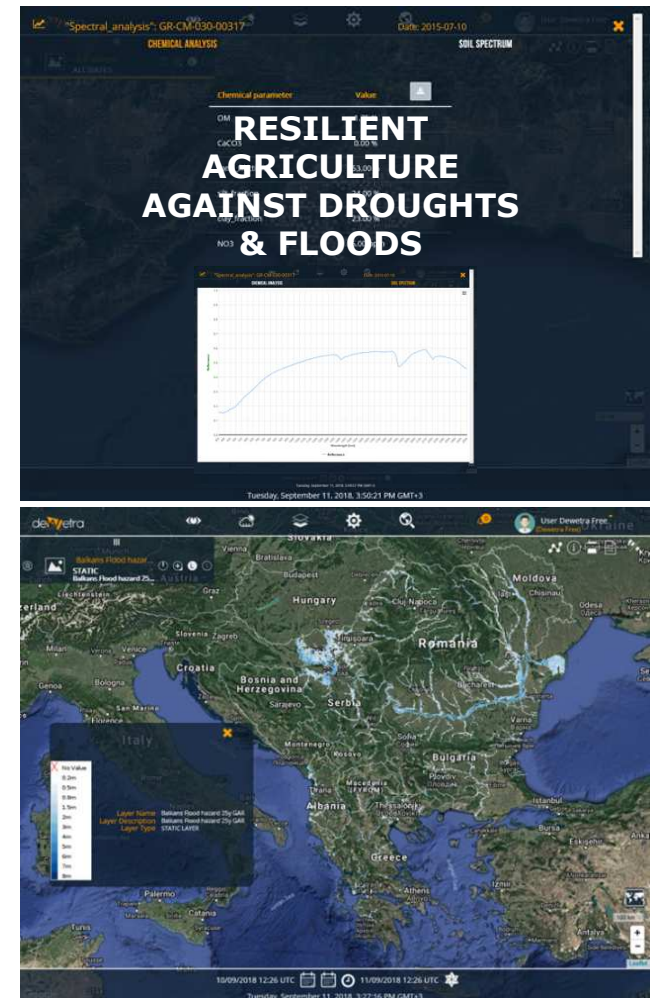
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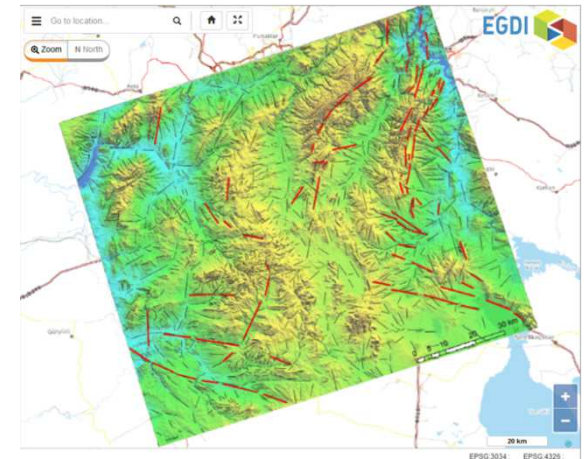
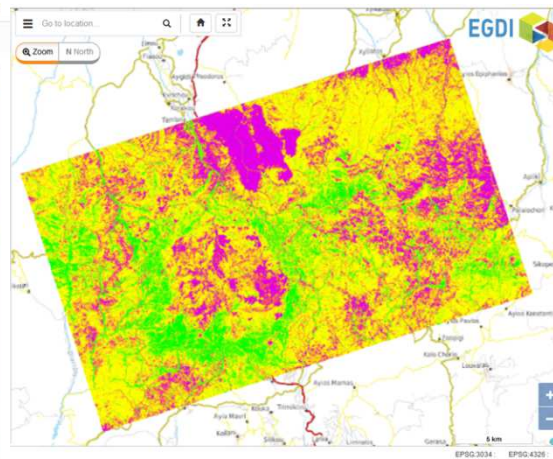
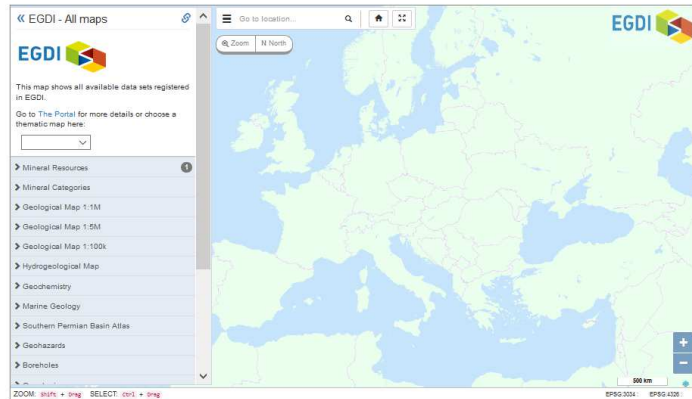


# Results: Thematic 3 – Access to Raw Materials

## EuroGeoSurveys' European Geological Data Infrastructure (EGDI): Products for 3 countries (Greece, Cyprus, Turkey)



Onshore | Marine | Minerals | Geohazards | Energy | Soil | Groundwater | All Maps | Metadata | About EGDI



## Engagement of end-users:

**Greece:** Ministry of Environment and Energy, Municipality of Alexandroupolis

**Cyprus:** Ministry of Agriculture, Rural Development and Environment, the Hellenic Copper Mines Ltd

**Turkey:** JADE - Association of Geological Researches of Turkey, and JeoDijital Bilisim Teknoloji Madencilik in Turkey

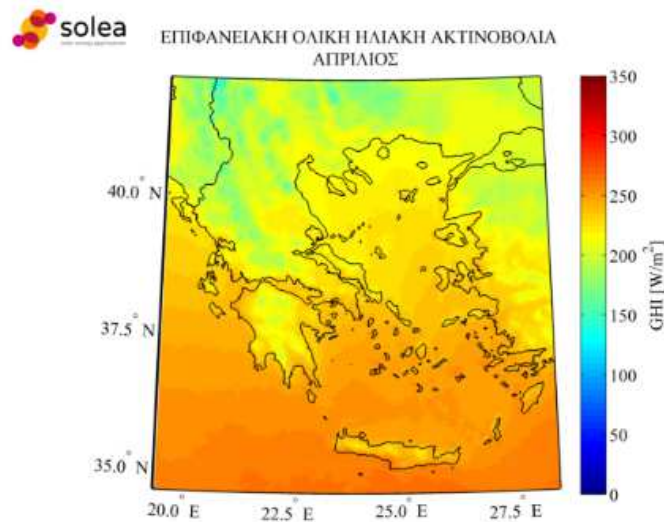
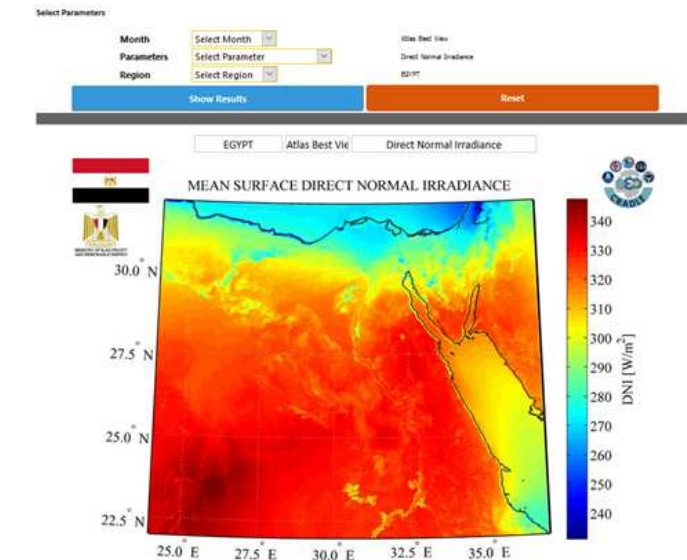
**Morocco:** Minister of Energy, Mining, Water and Environment

**Algeria:** Geological Survey of Algeria



# Results: Thematic 4 – Access to Energy

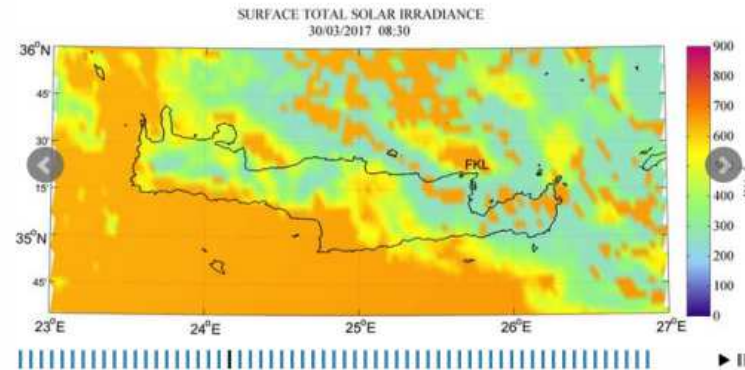
Solar Atlas for Egypt and Greece:



ΗΜΕΤΕΣΤΟ ΕΡΕΥΝΗΤΙΚΟ ΠΡΟΓΡΑΜΜΑΤΙΣΜΟ & ΕΚΔΟΣΗ ΑΝΑΤΙΣΤΕΣ  
ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

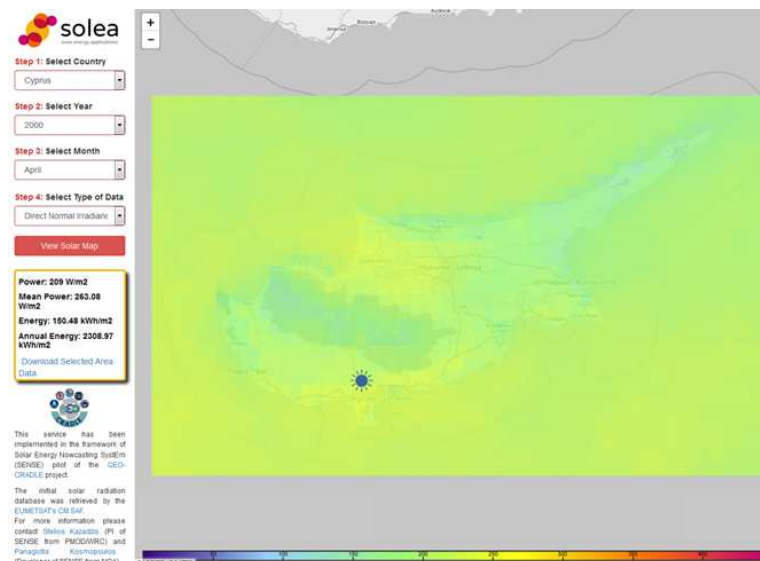
copyright 1999-2013 EUMETSAT

PRE-TECT campaign in Greece:



Graph 1.21: Surface total solar irradiance - 2017-03-30 08:30

PAR Atlas for Greece, Cyprus, Egypt:



Engagement of end-users:

Egypt: Ministry of Electricity and Renewable Energy

Greece: National Independent Power Transmission Operator, Attica Group with Bluestar and Superfast Ferries, National and Kapodistrian University of Athens

Pre-TECT campaign

# Results: Capacity Building & Stakeholders Engagement

Date	Location
28/04/2016	Cairo, Egypt
14/07/2016	Novi Sad, Serbia
26/09/2016	Tirana, Albania
17-18/10/2016	Rabat, Morocco
19/10/2016	Timimoun, Algeria
16/11/2016	Limassol, Cyprus
03/01/2017	Chişinău, Moldova
02/02/2017	Abu Dhabi, United Arab Emirates
24/03/2017	Sofia, Bulgaria
26/04/2017	Brussels, Belgium (Industrial market)
09/05/2017	Magurele, Romania
25/05/2017	Cairo, Egypt
14/09/2017	Tel Aviv, Israel
07/12/2017	Tunis, Tunisia
15-16/03/2018	Istanbul, Turkey
04-05/06/2018	Thessaloniki, Greece (3 <sup>rd</sup> South-Eastern Europe GEO Workshop)

**16 Regional Workshops** have taken place in the **BAMENA** region:

- advocating for free & open data policies in support of **GEO & INSPIRE** principles
- supporting **knowledge sharing - capacity building**
- providing a unique **cross-sector networking opportunity**
- identifying the potential **local challenges and needs** that can be addressed by Earth Observation
- enhancing **growth & innovation** in the geo-information sector
- enabling more **informed decision making**



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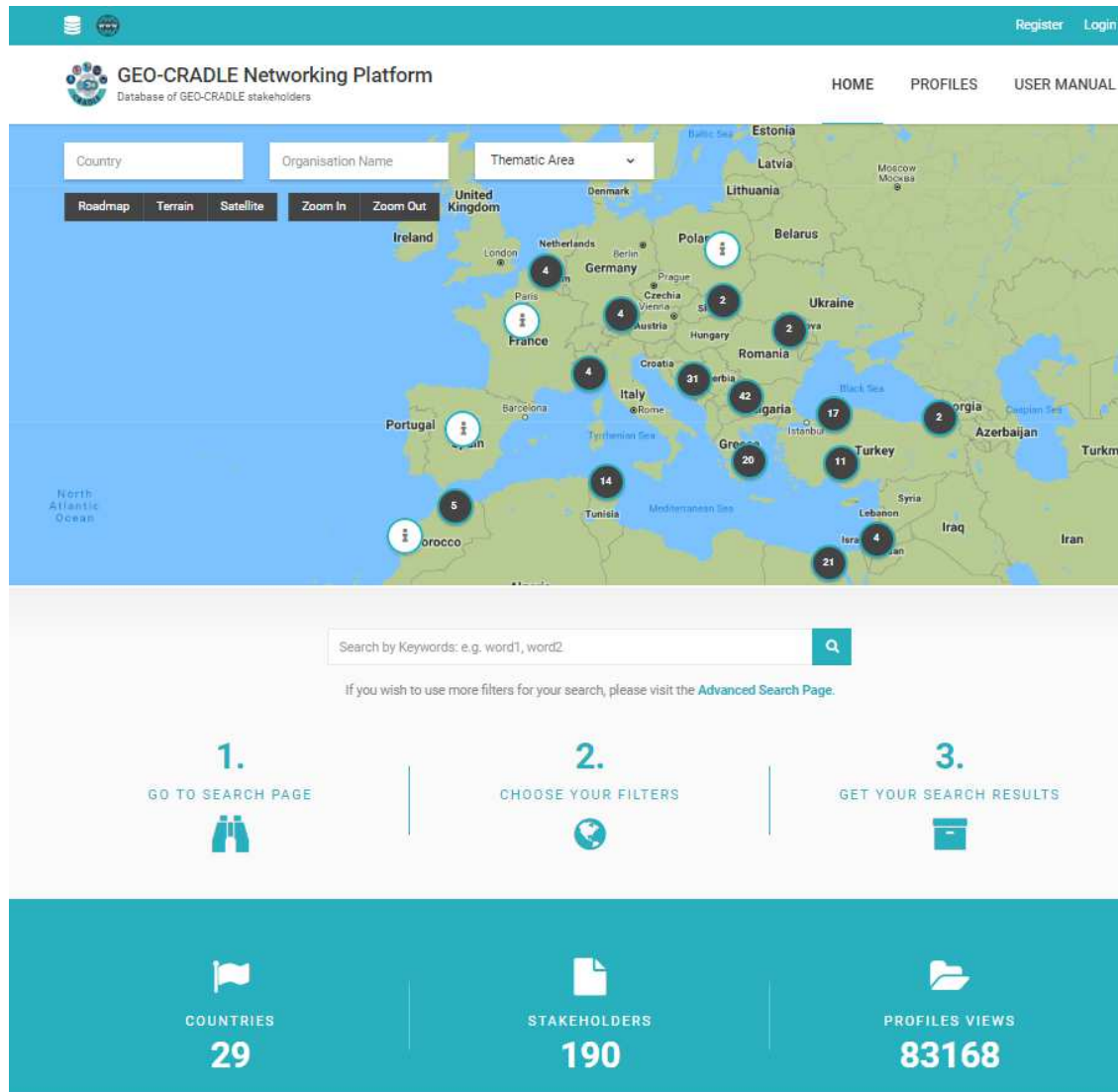
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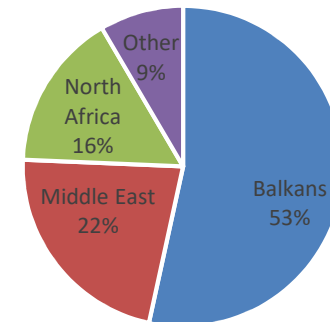




# Results: The Regional Networking Platform

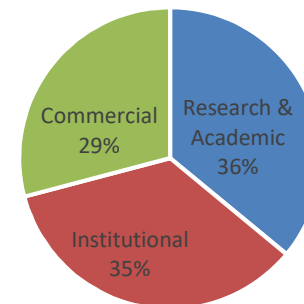


STAKEHOLDERS PER REGION



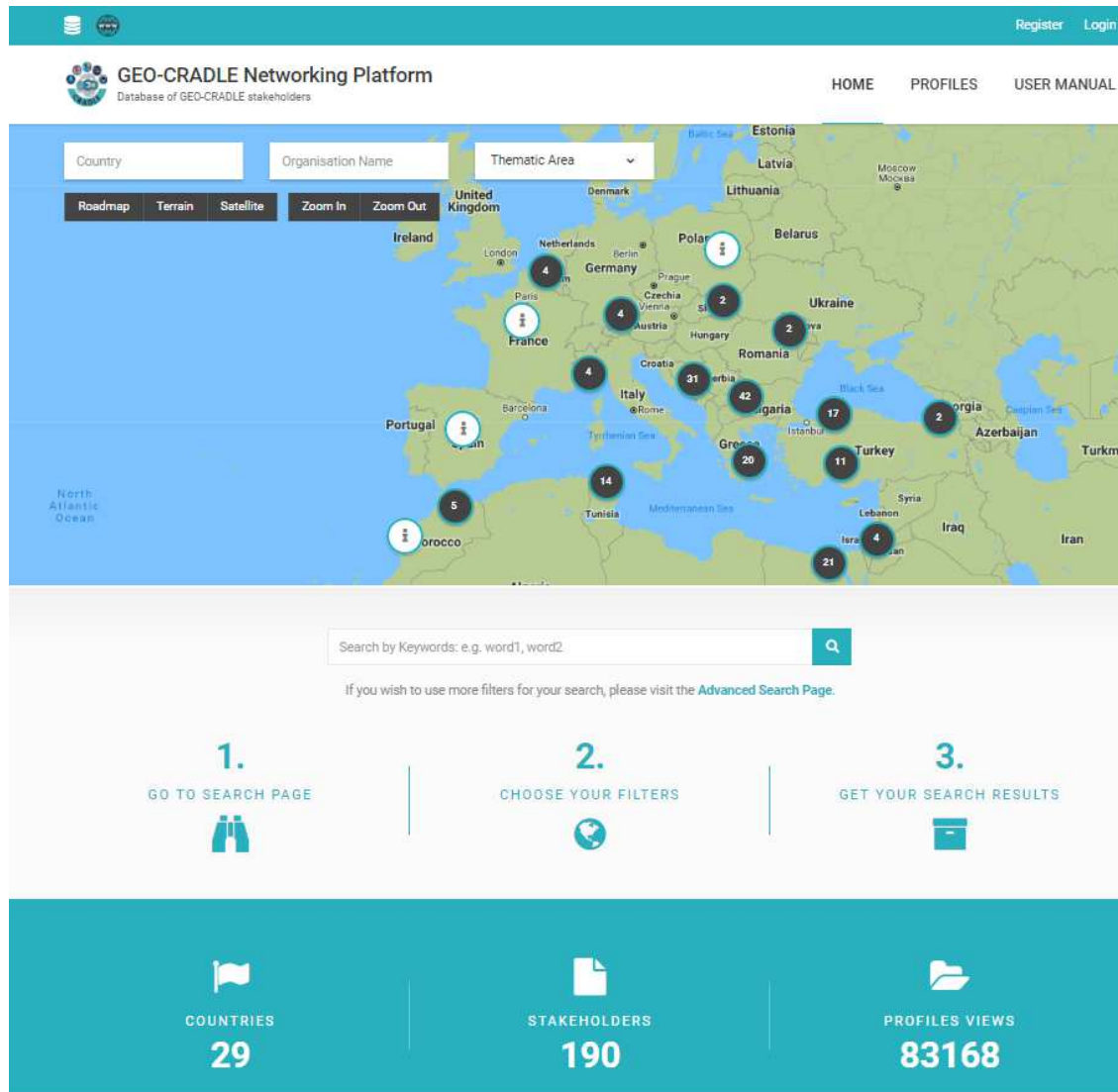
■ Balkans ■ Middle East ■ North Africa ■ Other

STAKEHOLDERS PER TYPE

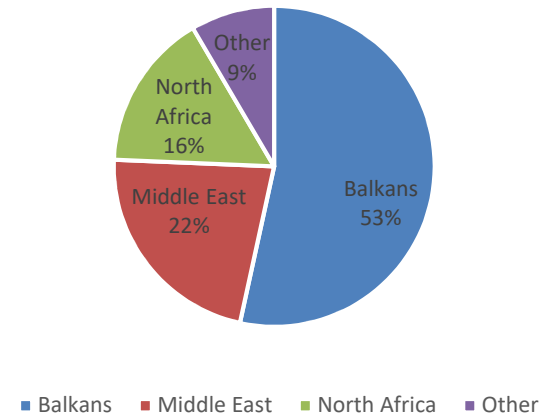


■ Research & Academic ■ Institutional ■ Commercial

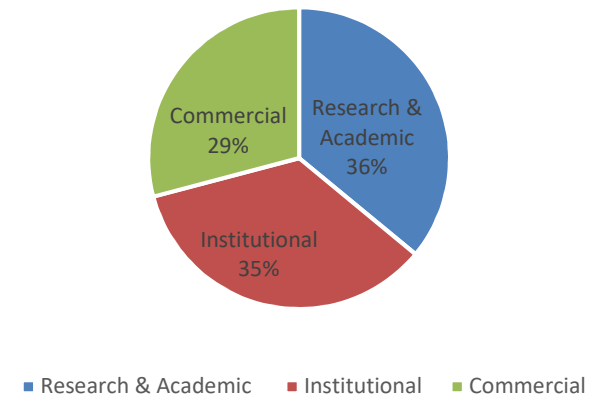
# Results: The Regional Networking Platform



STAKEHOLDERS PER REGION

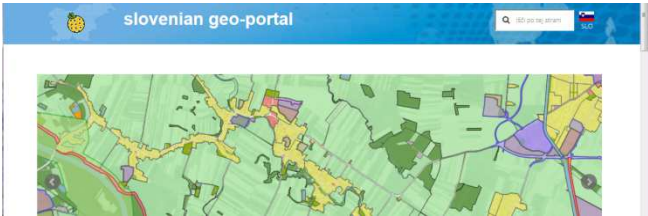


STAKEHOLDERS PER TYPE



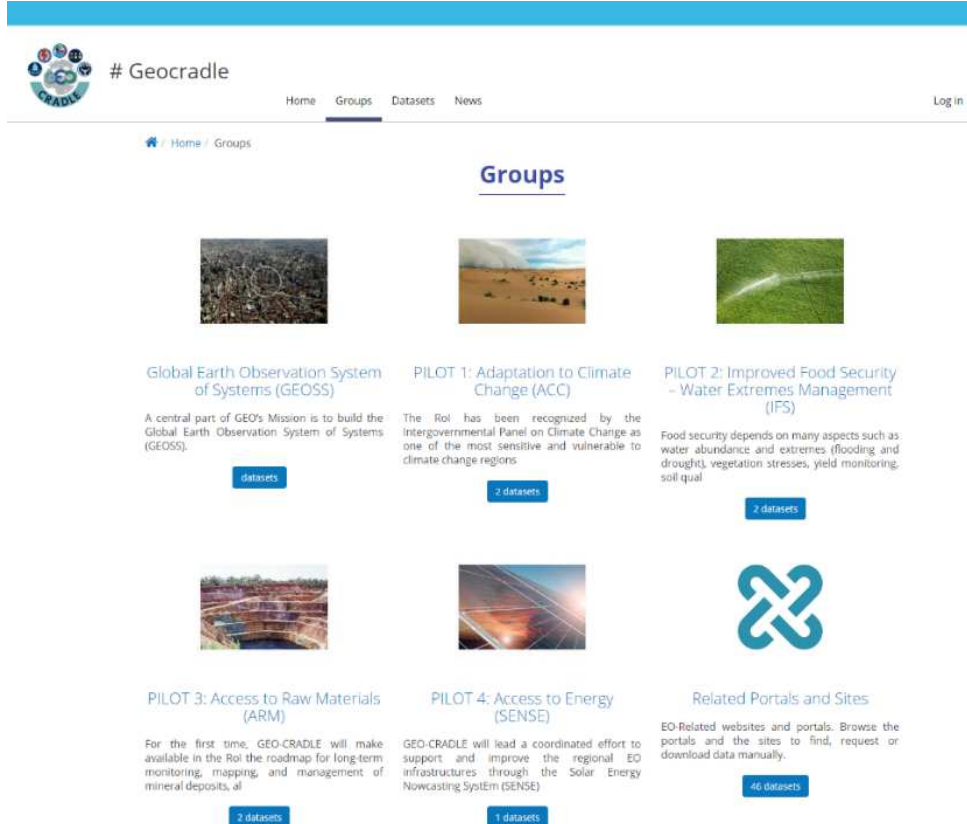
# Results: The Regional Data Hub

25534239 datasets & 45 related portals and sites



**slovenian geo-portal**

INSPIRE - Infrastructure for Spatial Information in Europe




**# Geocradle**

Home Groups Datasets News Log in

**Groups**

- Global Earth Observation System of Systems (GEOSS)**  
A central part of GEO's Mission is to build the Global Earth Observation System of Systems (GEOSS).  
**datasets**
- PILOT 1: Adaptation to Climate Change (ACC)**  
The RoI has been recognized by the Intergovernmental Panel on Climate Change as one of the most sensitive and vulnerable to climate change regions.  
**2 datasets**
- PILOT 2: Improved Food Security - Water Extremes Management (IFS)**  
Food security depends on many aspects such as water abundance and extremes (flooding and drought), vegetation stresses, yield monitoring, soil quality.  
**2 datasets**
- PILOT 3: Access to Raw Materials (ARM)**  
For the first time, GEO-CRADLE will make available in the RoI the roadmap for long-term monitoring, mapping, and management of mineral deposits, etc.  
**2 datasets**
- PILOT 4: Access to Energy (SENSE)**  
GEO-CRADLE will lead a coordinated effort to support and improve the regional EO infrastructures through the Solar Energy Nowcasting System (SENSE).  
**1 datasets**
- Related Portals and Sites**  
EO-Related websites and portals. Browse the portals and the sites to find, request or download data manually.  
**46 datasets**




**# Geocradle**

Home Groups Datasets News Log in

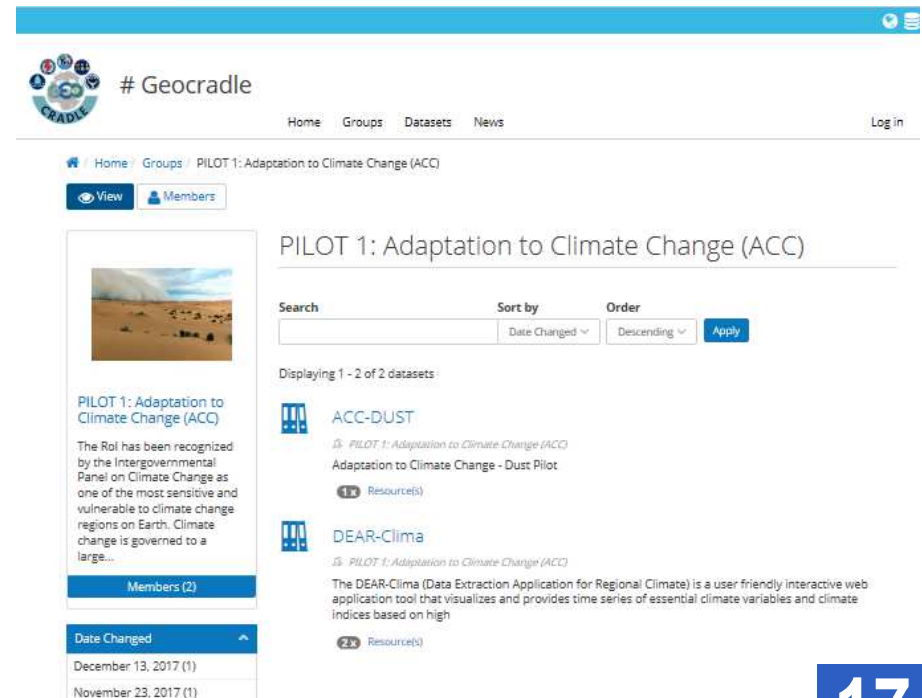
**About**

The Regional Data Hub (RDH) provides access to both region-related datasets, portals and services developed by a regional network of raw data providers, intermediate users/service providers, end users from industry, Academic, and Public Sector from the region of interest, and also datasets and services directly fed from the GEOSS-portal. 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 satellite missions acquisitions; data from Airborne campaigns performed in the region; In-situ data, and Models such as Atmosphere, and Climate.



**Find**

Data Innovation Involvement Growth



**# Geocradle**

Home Groups Datasets News Log in

Home Groups PILOT 1: Adaptation to Climate Change (ACC)

**View Members**

**PILOT 1: Adaptation to Climate Change (ACC)**

The RoI has been recognized by the Intergovernmental Panel on Climate Change as one of the most sensitive and vulnerable to climate change regions on Earth. Climate change is governed to a large...

**Members (2)**

**Date Changed**

December 13, 2017 (1)  
November 23, 2017 (1)

**Search**

Sort by: Date Changed Order: Descending Apply

Displaying 1 - 2 of 2 datasets:

- ACC-DUST**  
PILOT 1: Adaptation to Climate Change (ACC)  
Adaptation to Climate Change - Dust Pilot  
**1 Resource(s)**
- DEAR-Clima**  
PILOT 1: Adaptation to Climate Change (ACC)  
The DEAR-Clima (Data Extraction Application for Regional Climate) is a user friendly interactive web application tool that visualizes and provides time series of essential climate variables and climate indices based on high  
**2 Resource(s)**

# Results: The Roadmap

**GEO-CRADLE Gap Analysis**

- Findings of previous projects
- Inventory of EO capacities
- User Requirements Analysis
- Regional Priorities

**EO Maturity Indicators**

- National EO Capacities
- National User Uptake and Market Penetration
- International Cooperation

**Existing Documentation**

- GEO/GEOSS
- Copernicus
- Other Flagship initiatives, instruments & programmes

**Project Partners**

- State-of-play of EO at national level
- Insights on national markets
- Relaying insights by users

**Analysis and synthesis by GEO-CRADLE**

- Construct thorough picture of current state-of-play at regional level
- Identify key opportunities and major weaknesses/challenges in the region
- Define who, what, when, how in form of action plan

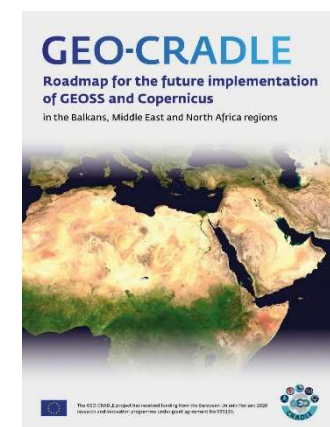
**External Experts**

- Insights through dedicated workshops
- Interviews with demand/supply actors
- Thematic expertise by advisory board

<b>Guides</b>	the implementation of GEOSS and the uptake of Copernicus in the RoI
<b>Assesses</b>	the readiness and maturity of each country in the RoI
<b>Lays out</b>	the actions for the long-term response to major regional challenges in the RoI
<b>Paves</b>	the ground for a potential regional large initiative

**Roadmap**

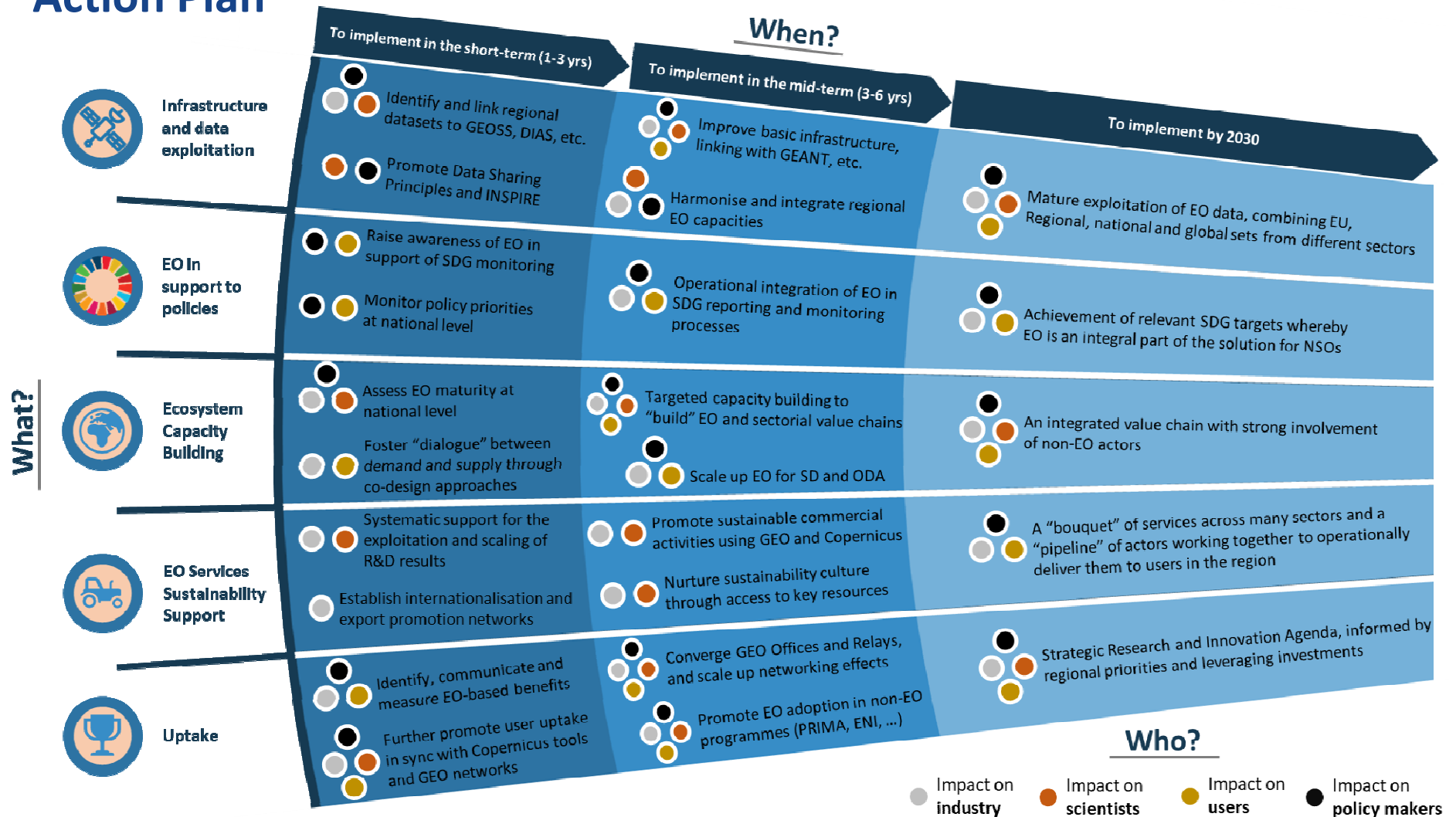
- Short vs long term actions for uptake of GEO and Copernicus
- Strategies for cross-fertilisation of programmes and activities
- Long-term exploitation of regional capacities/capabilities





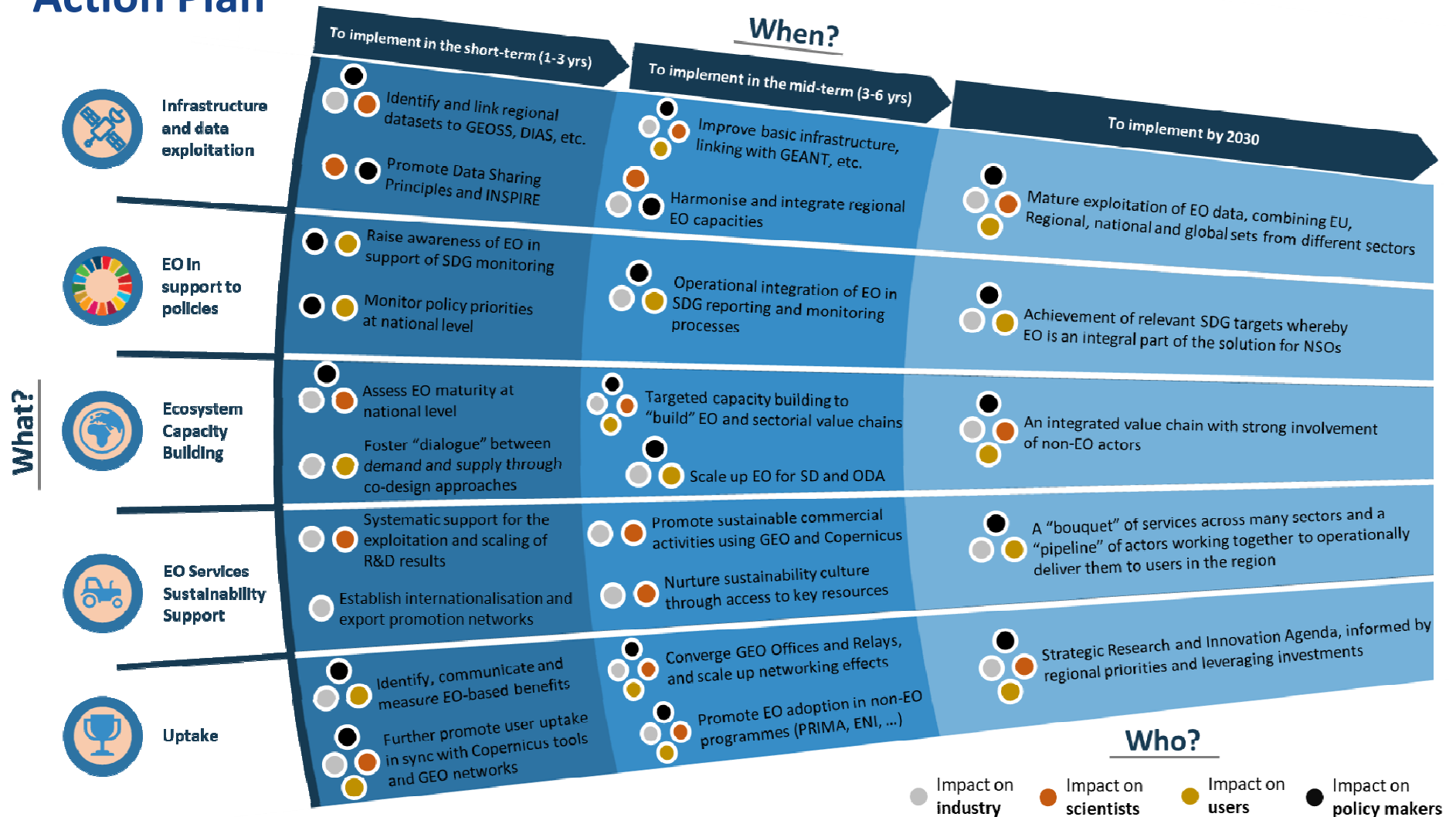
# Results: The Roadmap

## Action Plan



# Results: The Roadmap

## Action Plan



# Results: The Roadmap

## Action Plan

Action 1: Identifying regional priorities and leveraging investments  
 Action 2: Promoting regional cooperation  
 Action 3: Improving regional data  
 Action 4: Harmonising regional data  
 Action 5: Raising regional awareness  
 Action 6: Monitoring regional progress  
 Action 7: Fostering regional innovation

Action 8: Assessing regional data  
 Action 9: Fostering regional data  
 Action 10: Carrying out regional data  
 Action 11: Scaling up regional data

Action 12: Promoting regional data  
 Action 13: Establishing regional data  
 Action 14: Promoting regional data  
 Action 15: Nurturing regional data

Action 16: Identifying regional data  
 Action 17: Fostering regional data  
 Action 18: Carrying out regional data  
 Action 19: Promoting regional data  
 Action 20: Developing regional data

- DEVELOP AND IMPLEMENT A **STRATEGIC RESEARCH AND INNOVATION AGENDA**, INFORMED BY REGIONAL PRIORITIES AND LEVERAGING EXISTING INVESTMENTS
- EXPLOIT EXISTING **FUNDING INSTRUMENTS** IN SUPPORT TO **CAPACITY BUILDING AND SERVICE DELIVERY**
- ENSURE THE **ENGAGEMENT OF LOCAL ACTORS** IN EU PARTNERSHIP
- SUPPORT THE **DEVELOPMENT OF NEW EO SERVICES** FOR **SDG MONITORING AND POLICY PRIORITIES** AT NATIONAL LEVEL
- CARRY OUT **TARGETED CAPACITY BUILDING ACTIONS** FOR BUILDING EO **SECTORIAL VALUE CHAINS**
- CAPITALISE ON EXISTING INITIATIVES e.g. GEO-CARDLE, AFRIGEOSS, EUROGEOSS, TO **FOSTER HARMONISATION AND SERVICE DEVELOPMENT** BY INTEGRATING REGIONAL CAPACITIES, SKILLS
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# Results: The Roadmap

## Action Plan

Action 1: Identifying regional priorities and leveraging investments  
 Action 2: Promoting regional cooperation  
 Action 3: Improving regional data  
 Action 4: Harmonising regional data  
 Action 5: Raising regional awareness  
 Action 6: Monitoring regional progress  
 Action 7: Fostering regional innovation

Action 8: Assessing regional data  
 Action 9: Fostering regional data  
 Action 10: Carrying out regional data  
 Action 11: Scaling up regional data

Action 12: Promoting regional data  
 Action 13: Establishing regional data  
 Action 14: Promoting regional data  
 Action 15: Nurturing regional data

Action 16: Identifying regional data  
 Action 17: Fostering regional data  
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# Results: The Roadmap

## Action Plan

Action 1: Ident  
Action 2: Prom  
Action 3: Impr  
Action 4: Harm  
Action 5: Raise  
Action 6: Moni  
Action 7: Foste

Action 8: Assess  
Action 9: Foster  
Action 10: Carry  
Action 11: Scale

Action 12: Pro  
Action 13: Est  
Action 14: Pro  
Action 15: Nur

Action 16: Ide  
Action 17: Fur  
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# The GEO-CRADLE Initiative: Raise Awareness on Funding Resources





# The GEO-CRADLE Initiative: Proposal Submission in EU Calls

## Short info about the call

EuroGEOSS ([www.eurogeoss.eu](http://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

# The GEO-CRADLE Initiative: Proposal Submission in EU Calls

## 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

# The GEO-CRADLE Initiative: Raise Awareness on Funding Resources

## Short info about the call

CHIST-ERA ([www.chistera.eu](http://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.

## 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	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

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

# Areas Open to Collaboration

- Coordination of EO activities at regional level
- Capacity Building
- Networking & Stakeholders Engagement
- Assessment of EO maturity at national level
- **Operationalisation of EO-based services relevant to:**
  - **Adaptation to Climate Change**
  - **Improved Food Security & Water Extremes Management**
  - **Access to Raw Materials**
  - **Access to Energy**
  - **Disasters Management**
  - **Water Resources Management**
- Implementation of data sharing principles

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thank you!



<http://geocradle.eu>

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



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