

Environmental Observations

Informing citizens and supporting policymaking
through innovative applications



Environmental Observations (EO) taken by satellites, airborne or ground-based sensors and citizens provide a constant flow of information on the health of the planet, climate change and the impacts of human activities. The EU actively contributes to worldwide efforts to build a global EO network with the European Copernicus Earth Observation Programme and by funding indispensable research activities under Horizon 2020, as well as by being an active member of the Group on Earth Observations (GEO).

This CORDIS Results Pack showcases the results of nine Horizon 2020-funded projects that have developed user-oriented EO-based applications, creating benefits for citizens and supporting evidence-based policymaking. European EO assets, actors and initiatives are coordinated by EuroGEO, which is Europe's contribution to GEO and its Global Earth Observation System of Systems (GEOSS).

To access the full Results Pack please go to: cordis.europa.eu/article/id/421641

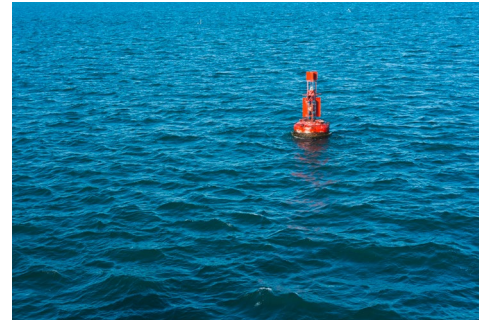
AtlantOS

(Optimizing and Enhancing the Integrated Atlantic Ocean Observing System), coordinated in Germany

A fully integrated Atlantic Ocean Observing System would bring huge societal, economic and scientific benefits, and this is precisely what the AtlantOS project set out to achieve, bringing 62 partners from 18 countries to build such a system. The project has enhanced cooperation, innovation and the integration of existing observation activities across the Atlantic. The project's legacy is the AtlantOS All-Atlantic Ocean Observing System Programme which was officially launched in 2019 and plays a pivotal role in shaping the future observing system.

→ PROJECT WEBSITE: atlantos-h2020.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421800



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ECOPOTENTIAL

(Improving Future Ecosystem Benefits Through Earth Observations), coordinated in Italy

ECOPOTENTIAL created a range of EO products and services providing accurate information about the state and trends of different ecosystems in Protected Areas across Europe and beyond. The project combined available EO resources – for example data from the Copernicus Programme – that were used to simulate scenarios assessing the impact of conservation management decisions. To ensure that the products and services met real needs, end users (principally park technicians and managers) were designated co-creators from the beginning.

→ PROJECT WEBSITE: ecopotential-project.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421805



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e-shape

(EuroGEOSS Showcases: Applications Powered by Europe), coordinated in France

E-shape is developing operational EO services by bringing together relevant actors and fostering entrepreneurship. Leveraging existing European EO capacities and improving the uptake of the data from EO assets worldwide, e-shape ensures that commercially viable services are developed with and for users. Over 4 years, e-shape will provide concrete, actionable EO services supporting food security and sustainable agriculture, health surveillance (specifically pollutants), renewable energy deployment, ecosystem monitoring, water resources management, disaster resilience and climate monitoring.

→ PROJECT WEBSITE: e-shape.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421806



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GEO-CRADLE

(Coordinating and integrating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East, and Balkans and Developing Links with GEO related initiatives towards GEOSS), coordinated in Greece

GEO-CRADLE supported the North African, Middle Eastern and Balkan regions in optimising the use of EO data by coordinating and integrating Earth Observation services and data to benefit local sustainable development. The project actively engaged with regional stakeholders to engage new users of EO information services. Four thematic pilots addressed the specific regional priorities: adaptation to climate change; improved food security (water extremes management); access to raw materials; and access to energy.

→ PROJECT WEBSITE: geocradle.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/266018



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Ground Truth 2.0

(Environmental knowledge discovery of human sensed data), coordinated in the Netherlands

The Ground Truth 2.0 project equipped citizens to monitor their local environmental conditions. It set up citizen observatories in Europe and Africa and set a path towards citizen-inspired decision-making. Throughout the project, citizens came together to discuss the specific data they were interested in, and the project helped them collect and generate data on the likes of water quality and quantity, air quality, heat stress, local weather conditions and wildlife.

→ PROJECT WEBSITE: gt20.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421807



Courtesy of Stijn Vranckx from VITO

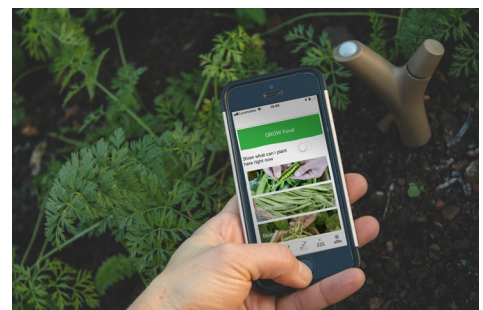
GROW

(GROW Observatory), coordinated in the United Kingdom

The GROW project helped to establish several communities of citizens who generate, share and utilise information on land, soil and water resources. Some 24 citizen communities were provided with 6 500 soil moisture sensors to complement satellite observations with in-field evaluation. GROW allowed farmers to better understand their soil, and showed how they can reduce the use of water for irrigation, find out when the soil reaches its full potential, as well as start correlating yield and plant health with moisture data.

→ PROJECT WEBSITE: growobservatory.org

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421801



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LANDSENSE

(A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring), coordinated in Austria

By developing applications that connect citizen scientists with satellite-derived imagery, the LANDSENSE project is transforming environmental decision-making. It has done this by creating low-cost methods for acquiring high-quality *in situ* data and high-accuracy environmental monitoring products. The project's philosophy stems from the belief that citizen scientists play a key role in land use and land cover monitoring by collecting information that is otherwise unobtainable.

→ PROJECT WEBSITE: landsense.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421802



Photo by Ludovic Migneault on Unsplash

NextGEOSS

(Next Generation GEOSS for Innovation Business), coordinated in Portugal

NextGEOSS brings together representatives from 10 EO communities, each addressing societal challenges such as biodiversity, air pollution and sustainable urban development. These researchers and application developers designed services within the project for their community using and continuously improving the NextGEOSS data hub and platform.

→ PROJECT WEBSITE: nextgeoss.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421803



Photo by NASA on Unsplash

SCENT

(Smart Toolbox for Engaging Citizens into a People-Centric Observation Web), coordinated in Greece

The SCENT project delivered two easy-to-use bespoke applications, SCENT Explore and SCENT Measure, that help citizens actively participate in environmental monitoring. By using the SCENT smartphone applications and portable sensors, citizens can report on land use in real time. They can also flag unusual events such as water blockages or measure such things as water levels and soil moisture.

→ PROJECT WEBSITE: scent-project.eu

→ CORDIS ARTICLE: cordis.europa.eu/article/id/421804



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EuroGEO



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