e-shape

EuroGEO Showcases: Applications Powered by Europe

e-shape Workshop: EuroGEO showcase for Renewable Energy

31.5.2022

9:00 - 17:00 (CEST)

Hybrid | Location
MINES Paris – PSL,
Campus Pierre Laffitte,
1 rue Claude Daunesse,
Sophia Antipolis, France
Amphitheater Mozart,
Building A

e-shape Immersed
accelerating Earth Observation solutions

renewable energy

About this Webinar

To support the clean energy transition of the European Green Deal, the sector of Renewable Energy, from education and research to industry, public decision-making and citizens can largely lean on the open-source business-compliant Earth Observation (EO) access to data and supported by cloud facilities provided by the European program Copernicus.

The workshop "e-shape Workshop: EuroGEO showcase for Renewable Energy", in the framework of the on-going Horizon 2020 project e-shape (described in the section below), will be held on May 31st 2022 and will take place in the Campus Pierre Laffitte, MINES Paris in Sophia Antipolis, France. It will be organized as a hybrid workshop, allowing face to face interaction along with participation through a videoconference system.

The workshop aims at bringing together actors of the value chain from the Earth Observation to Renewable Energy with current or emerging applications based on Copernicus to answer the need of the renewable energy industries and decision-making. This workshop echoes a previous workshop Copernicus4Energy organized by the EU DG-GROW in 2017.

Objectives

> To present the four pilots of the e-shape showcase "Renewable Energy", in the domain of solar and wind energies, in interaction with some of their identified end-users (see next session for more information), empowering dedicated co-design approaches developed within e-shape.

> To invite other Copernicus EO-based applications or prototypes developers in the domain of Renewable Energy with identified users, opening the scope to other renewable sources such as marine, biomass, hydroelectric, geothermal, etc. but also considering different time scales, from historical to climate projection and different spatial scales from a worldwide coverage to local regions of interest.

> To have an updated overview of the current and emerging Copernicus offers in terms of data, information and cloud services with a focus on the renewable energy sector.

> To discuss the way forward to develop new applications based on Copernicus to support the clean energy transition of the European Green Deal and supporting EuroGEO.

Agenda

09:00 - 09:30	Registration
09:30 - 09:45	Welcome and presentation of e-shape, Prof. Thierry Ranchin
09:45 - 10:00	Presentation of the Showcase 3: Renewable Energy, Prof. Philippe Blanc
10:00 - 11:00	**Session 1, part 1 (15 min + 5 min Q&A)** → nextSENSE: solar energy nowcasting & short-term forecasting system, Stelios Kazadzis, PMOD WRC → High photovoltaic penetration at urban scale: Energy Modeling Application: Coupling to FlexiGIS, Suzanne Weyand and Jethro Betcke, DLR → High photovoltaic penetration at urban scale: near on-the-fly Service for solar variability assessment and forecasting, Philippe Blanc, ARMINES
11:00 - 11:20	Coffee break
11:20 - 13:00	**Session 1, part 2 (15 min + 5 min Q&A)** → Merging offshore wind products, Merete Badger, DTU → WindSight | First class input data for wind energy models, Torsten Bondo, DHI Gras → Finding the best deployment site for a combined floating wind and wave energy system, Marine Power Systems, TBC → Tidal Energy Assessment - TIDEA, Novelthis, TBC → Wildfire management for electric grids, SILVANUS, H2020, TBC
13:00 - 14:00	Lunch
14:00 - 15:40	**Session 2 (15 min + 5 min Q&A)** → Climate services for the energy sector: A few examples of practical applications developed in the context of the Copernicus Climate Change Service, Carlo Buontempo, ECMWF → Copernicus Data Access & DestinE Core Platform ecosystems, Eric Monjoux, ESA → EUSPA and Cassini program, Chiara Solimini, EUSPA → Copernicus and renewable energy, Maria Berdhal, DG Defis, TBC → EuroGEO as a collaborative framework to upscale EO derived application, Jean Dusart, DG RTD
15:40 - 16:00	Coffee break
16:00 - 16:50	**Session 3: Open discussion and Q&A**
16:50 - 17:00	Closing remarks, Prof. Thierry Ranchin

Fast Facts

e-shape Showcase 3 | Renewable Energy

The on-going Horizon 2020 project e-shape (2019-2023) aims at bringing together decades of public investment in Earth Observation (EO) supported by recent cloud capabilities offered by the Data and Information Access Services (DIAS) into services for the decision-makers, the citizens, the industry, and the researchers. It allows Europe to position itself as global force in EO through leveraging Copernicus, making use of existing European capacities, and improving user uptake of the data from GEO assets.

The project e-shape is meant to be a support to the EuroGEO, dealing with seven showcases of societal challenge: agriculture, health, renewable energy, ecosystem, water, disasters, and climate.

The e-shape showcase "Renewable Energy" is contributing notably to the UN Sustainable Development Goal 7 (SDG7) and to the initiative *GEO VENER*, engaging collaborations between research centers, data providers, DIAS, and end-users from research, industries, decision-makers and citizens to provide from different Copernicus and other European EO sources, innovative and technology mature products and services for renewable energy development and management.

The showcase is composed of four pilots, including one on-boarded in 2020.Two pilots are dealing with Solar Energy and the two others with Wind Energy.

> The **first pilot on Solar Energy**, named NextSense, led by PMOD/WRC and NOA, provides continuous monitoring and short-term forecasting of solar energy in real-time for Europe and North Africa.

> The **second pilot on Solar Energy**, led by ARMINES and DLR, is focused on high photovoltaic penetration at urban scale and provides services for historical and forecasted time series of power output of fleets of distributed PV at urban scale and integration to FlexiGIS, the open-source GIS-based platform for modelling energy systems and flexibility options in urban areas.

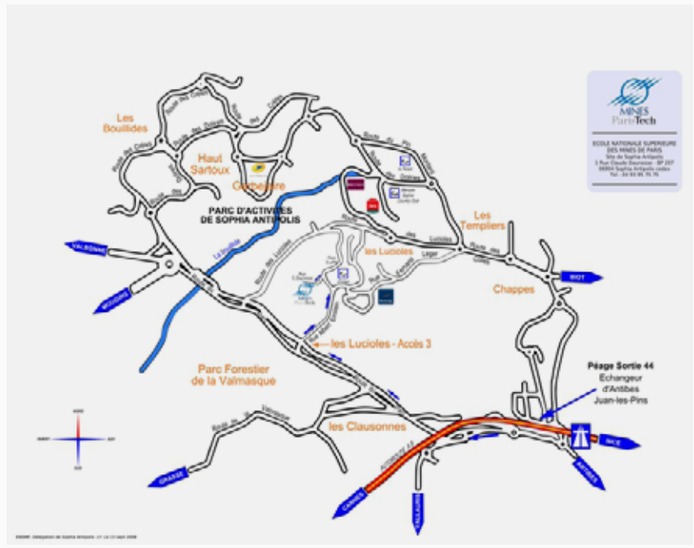
> The **first pilot on Wind Energy**, led by DTU, is dedicated to offshore wind energy and provides high-resolution wind maps in near-real-time and resource maps combining images from the heritage of European SAR and scatterometer missions.

> The **second pilot on Wind Energy**, led by DHI GRAS and on-boarded into e-shape on 2020, is providing EO-based first class data for on-shore wind to ensure optimal wind resource estimations from the combination of Copernicus Sentinel 1 and 2.

The Venue in Sophia Antipolis

AMPHITHEATER MOZART, Building A

The premises of MINES ParisTech, where the meeting will take place, are located at the Technological Park of Sophia-Antipolis, in the South of France. It is 20 km from the city of Nice. The airport connection is Nice.



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