



Attica and metropolitan area of Athens ...

ICP-AGIR PROGRAMME 1ST BILATERAL MEETING

15/03/2022

Earth Observation applications for climate change adaptation & mitigation



www.eiffel4climate.eu



REVEALING THE ROLE OF GEOSS AS THE DEFAULT DIGITAL PORTAL FOR BUILDING CLIMATE CHANGE ADAPTATION & MITIGATION APPLICATIONS

The future in our hands:
Cities can become more resilient to
#climatechange

Pilot 4: Sustainable Urban
Development Local | Regional Scale

EIFFEL project is a game changer in the domain of climate change adaptation and mitigation by harvesting the benefits of the GEOSS data. The project exploits existing GEOSS datasets from Earth Observation and also builds upon prior knowledge, with minimal new data collection activities. Added-value services interoperable with GEOSS are designed, using cognitive search and metadata augmentation tools based on Artificial Intelligence.



This project has received funding from the European Union's Horizon2020 research and innovation programme under Grant Agreement No 101003518

19 PARTNERS

8 EUROPEAN COUNTRIES

1 GOAL

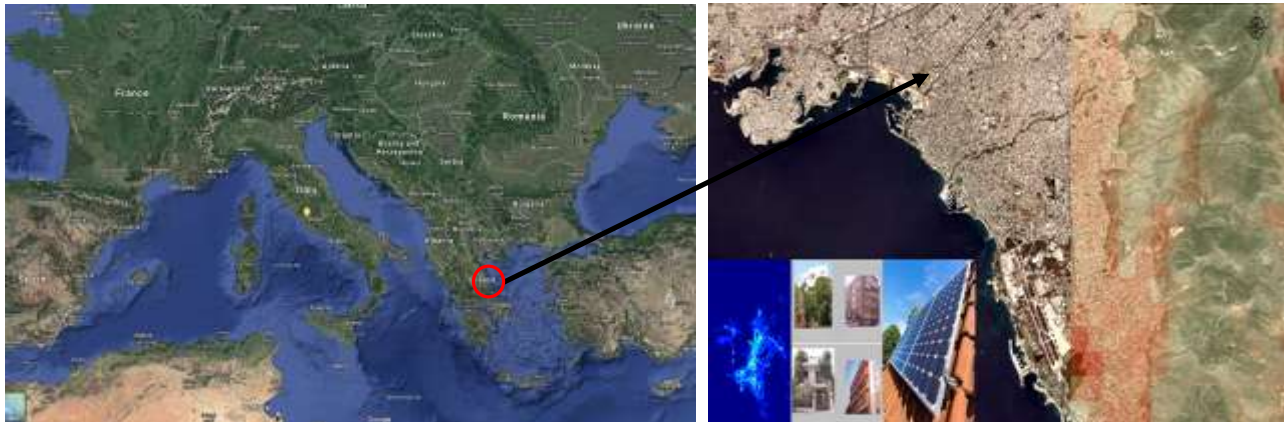
TACKLE #CLIMATECHANGE

EUROPEAN COMMISSION
EUROPEAN PARLIAMENT

Pilot in a nutshell: Sustainable Urban Development Local | Regional Scale



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General Directorate of Sustainable Development and Climate Change co-designs the development of a **Decision Support Application (DSA)** to enable inspection of **GHG mitigation scenarios**, in three urban-critical sectors:

- **Building energy efficiency**
- **Photovoltaic penetration in urban environments**
- **Vehicle fleet emissions** in support of carbon neutrality in a metropolis, the Greek capital city of Athens

Athens pilot

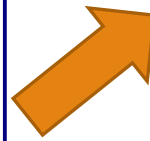
The added value of the applications will be **demonstrated at two levels:**

- Local level (Local Administrative UNIT - DSA will be tested in full force)
- Regional level (the whole Region of Attica).

DSA will be applied by NOA in close interaction with the Region



Upscaling to regional level via
i. products available at the regional scale,
ii. projection of outcomes from the pilot to the whole region,
taking into account the characteristics of the sub-areas and local knowledge.



DSA results, with respect to the abatement of GHG per sector and overall, will be incorporated into the **Regional Plan for Adaptation to CC of Attica** and taken into account in its implementation.

Joint quantification of GHG measures against the **National Plan for Energy and Climate from the Greek State**.

Launch of the first solar «cadaster» for Athens

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The solar “cadaster” application estimates the rooftop photovoltaic energy potential (in Wh/m²) for the city of Athens. It deploys a sophisticated three-dimensional ray tracing and shadowcasting by using fast radiative transfer models advanced graphic creation platforms in conjunction with Earth Observation data sources.

Impact

- **SDG support:**



- Robust methodology to calculate, evaluate and scale up urban measures and their outcomes pursuing the **Greek National Plan for Energy and Climate** targets by 2030
- Exploit the application's results within the frame of the implementation of the **Regional Plan for Adaptation to CC of the Region** (2022 onwards) providing knowledge and a DS tool
- Compile a BSM (Building Stock Model), **leveraging EO** and AI driven classification to map the building stock
- Use city-scale modelling to translate GHG abatement scenarios in population exposure/health outcomes, **illustrate co-benefits**
- Allow a unified exploration of urban GHG abatement measures (>10 scenarios to support carbon neutrality)



REGIONAL
DEVELOPMENT
FUND
OF ATTICA

