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MAPPING REAL-TIME AIRBORNE PARTICLE POLLUTION

How did the story evolve?

In the last few years, the proposed solution has been significantly improved and used broadly at other municipalities. Including the "first case" in the Copernicus4Regions publication (2018) helped substantially in the dissemination of the proposed solution.

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	TIER 1: SERVICE PROVIDER	TIER 2 PRIMARY USER	TIER 3 SECONDARY USER	TIER 4 END USER BENEFICIARIES
BENEFICIARIES	University of Patras, Greece	Region of Central Macedonia; Municipality of Therm	Municipality technical staff and policy makers; Scientists	Citizens and Society
SERVICES	Sentinel-5P; Copernicus Atmospheric Monitoring Service	A real time PM concentration monitoring network of certified and regularly calibrated sensors (Patrasair.gr)	Air quality index values; References for policy measures (e.g. actions for reducing the reduction of particulate matter concentrations)	Near real-time information on air-quality; Limit of citizens exposure in case of high particulate matter predictions; Improved environmental education and awareness

Value chain definition following SeBS Methodology - https://earsc.org/sebs

The space-based solution

This Copernicus-based solution was produced by a scientific entity for other users such as companies, professionals, agencies, associations, single citizens. From technical perspective, the current solution is more accurate and reliable.

The Usage Maturity Level

In the past few years the solution has transitioned to a higher level. The main reason enabling such transition was identified in the increased awareness about Copernicus programme at decision-making level.

Thematic Area: PUBLIC HEALTH

Region of Application: CENTRAL MACEDONIA - THESSALONIKI

Sentinel mission used: S5P

Copernicus Service used: CAMS

Usage Maturity Level: 4

Overall benefits

ECONOMIC

- The replicability of the solution was achieved

ENVIRONMENTAL

- Reduced pollution

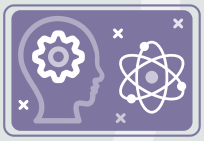
REGULATORY

- The solution has helped to inform the design and review of policy parameters

INNOVATION

- The solution has helped to introduce some innovation in the functioning of the public administration

SCIENCE



- There was an increase in technical/scientific expertise related to Copernicus/EO within the PA
- There was an increase in technical/scientific expertise related to Copernicus/EO at the service provider
- There was an increase in the research budget share of the institutions involved in the solution

SOCIETAL

- Improved coordination and governance has been registered
- Sense of trust and community for the involved actors has increased
- Civil security has improved
- There have been improvements in public awareness about societal and climate threats

Benefits classification following SeBS Methodology - https://earsc.org/sebs

Interesting facts...

From technological point of view, the in-situ component is now more robust. The CAMS products have been validated and site adaptation techniques have been developed. The platform (available both via website and app) has been significantly updated, providing feedback to the citizens and society.

Outlook to the future

For the future, an improvement of the entire solution is foreseen, by enhancing the in situ measurement network. Also, a more robust forecast will be provided, based on the synergy with the Copernicus-based products and ground-based measurements.

Acknowledgements

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Find the original story at
www.nereus-regions.eu/copernicus4regions/user-stories-sheets
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