AN AIR-QUALITY-APP FOR GERMANY

⟫⟫ *A few years later*

The Air-quality application was launched in 2019 and continuously improved over the last years. It provides an air quality index on station level or as map of Germany. This allows users to easily consult qualitative air quality index values which have been determined within each federal state. Selecting any station, a detailed map section is opened, showing the exact location of the station. The application has been further optimised for tablet users and is also available in dark energy-efficiency mode. The application is still provided free of charge.

Stefan Feigenspan | German Environment Agency, Air quality assessment

BENEFICIARIES	German Environment Agency	Public administration; German Environment Agency, Unit "Air quality assessment"	Specific higher risk groups, such as elderly people, pregnant women, children and individuals with chronic respiratory conditions	Citizens and Society
	TIER 1: SERVICE PROVIDER	**TIER 2 PRIMARY USER**	**TIER 3 SECONDARY USER**	**TIER 4 END USER BENEFICIARIES**
SERVICES	Sentinel-5P Copernicus Atmosphere Monitoring Service (CAMS)	Air-quality application for smart-devices; Air quality forecast models at a 15 x15 km grid	Near real-time (NRT) European air quality forecasts; Advices in terms of "Recommendations for behaviour" regarding suitable outdoor activities	Improvements in public awareness about local air-quality; Improved quality of life

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

The space-based solution

Copernicus-based solution developed by the Public Administration for other users such as companies, professionals, agencies, associations, single citizens. Technical improvement sees the use of additional Copernicus Services data, namely information derived from Copernicus Atmosphere Monitoring Service (CAMS).

The Usage Maturity Level

In the past few years, the solution has passed to the higher level reaching its operational phase.

Thematic Area	Region of Application	Sentinel mission used	Copernicus Service used	Usage Maturity Level
PUBLIC HEALTH	BERLIN GERMANY	S5P	CAMS	5

THE EVER GROWING USE OF COPERNICUS ACROSS EUROPE'S REGIONS: A selection of 99 user stories by local and regional authorities

Overall benefits

ECONOMIC

No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

INNOVATION

No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

ENVIRONMENTAL

Reduced pollution.

SCIENCE

No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

REGULATORY

No noticeable additional modification/impact on the functioning of the public administration nor on the lives of the citizens since 2018.

SOCIETAL

There have been improvements in public awareness

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

Interesting facts…

The app posts hourly updated data on harmful pollutants such as particulate matter (PM10), nitrogen dioxide and ozone. The data is collected from more than 400 air quality measuring stations across Germany. An air quality index (AQI) ranging from "very good" to "very poor" also provides an instant view of the air quality at every station. Depending on the data reported, the app issues health advice about doing outdoor activities. Users can choose to receive warning alerts when air quality is poor.

Outlook to the future

For further improvement of the forecast quality, the Agency is working with the German Weather Service in a Copernicus User Uptake project to develop a Copernicus Downstream Service. The aim is to implement air quality forecasts for NO_2 and particulate matter (PM) for regional and local levels using national models and Model Output Statistics (MOS).

Acknowledgements

CAMS provides model based air quality forecasts. It combines the output from several models and satellite data on a European scale. Within the air quality app, the CAMS data can be used in combination with measurement data to reach the national (regional) scale in a good quality.

Contacts

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