

Climate Neutral and Smart Cities

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Purpose of the Science Project

- Demonstrate that relevant environmental data and data on citizens' values, attitudes, behavior and involvement can be combined for social, political and scientific analysis
- Upgrade application to make data available to researchers
- Data available via the EOSC Platform via the application as a service

Do climate indices affect interview responses?



Climate Neutral and Smart Cities

The European Social Survey (ESS) is a biennial survey covering questions about attitudes, values and behaviours, fielded every second year since 2002. In 2016 the European Social Survey fielded a rotating questionnaire module about attitudes to climate change and energy use in more than 30 European countries.

A goal for the ESS has always been to be able to understand survey data in the context of the environment where the respondents live. Up till now population statistics from multiple sources has been made available for analyses together with the ESS data.

In order to facilitate research involving environmental contextual factors, the Climate Neutral and Smart Cities Science Project seeks to integrate ESS data for a selection of big European cities with a selection of climate and air quality related indicators, as well as to make data available to researchers for analyses.

Big European cities considered: Berlin, Brussels, Budapest, London, Madrid, Prague, Stockholm, Vienna etc.

Climate indices

- Standardized mean temperature anomaly
- Heat episode days
- Extreme precipitation days
- Storm - extreme wind

Air quality indices

PM10
PM2.5
SO2
NO2
O3

Poor or worse air quality by region and defined time periods (day, week, month), relative to when the interview took place.

Indicators by pollutant and overall

Data sources

- Interview data from the European Social Survey
- Climate data from Copernicus ERA5
- Air quality data from the European Environmental Agency EEA

Metadata



- Cross-Domain data integration
- Structural specification – very concept rich
- Captures provenance and work together with other standards

Get in touch

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Contributions

Access to data from diverse data sources transformed to a common format. Harmonised and aggregated measures as defined by domain expert in the various fields.

Data from different sources matched on time and geography.

Cross-domain metadata standards as a framework of interoperability and FAIR (meta) data.

Upgrade of application to handle and distribute the new types of data and metadata.

Service onboarded to the EOSC Platform.

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