



8th International
Conference on
BIG DATA
& Data Science for Official Statistics

BILBAO 2024

Informing Climate Change and
Sustainable Development Policies
with Integrated Data

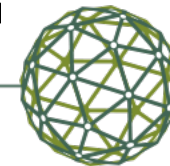
BILBAO, SPAIN | **10-14 JUNE 2024** | **#UNBigData2024**

Linking global climate science with local decision-making

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Climate Change Adaptation Group, Tecnalia Research & Innovation





SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY 	2 ZERO HUNGER 	3 GOOD HEALTH AND WELL-BEING 	4 QUALITY EDUCATION 	5 GENDER EQUALITY 	6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY 	8 DECENT WORK AND ECONOMIC GROWTH 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	10 REDUCED INEQUALITIES 	11 SUSTAINABLE CITIES AND COMMUNITIES 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION 	14 LIFE BELOW WATER 	15 LIFE ON LAND 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS 	17 PARTNERSHIPS FOR THE GOALS 	

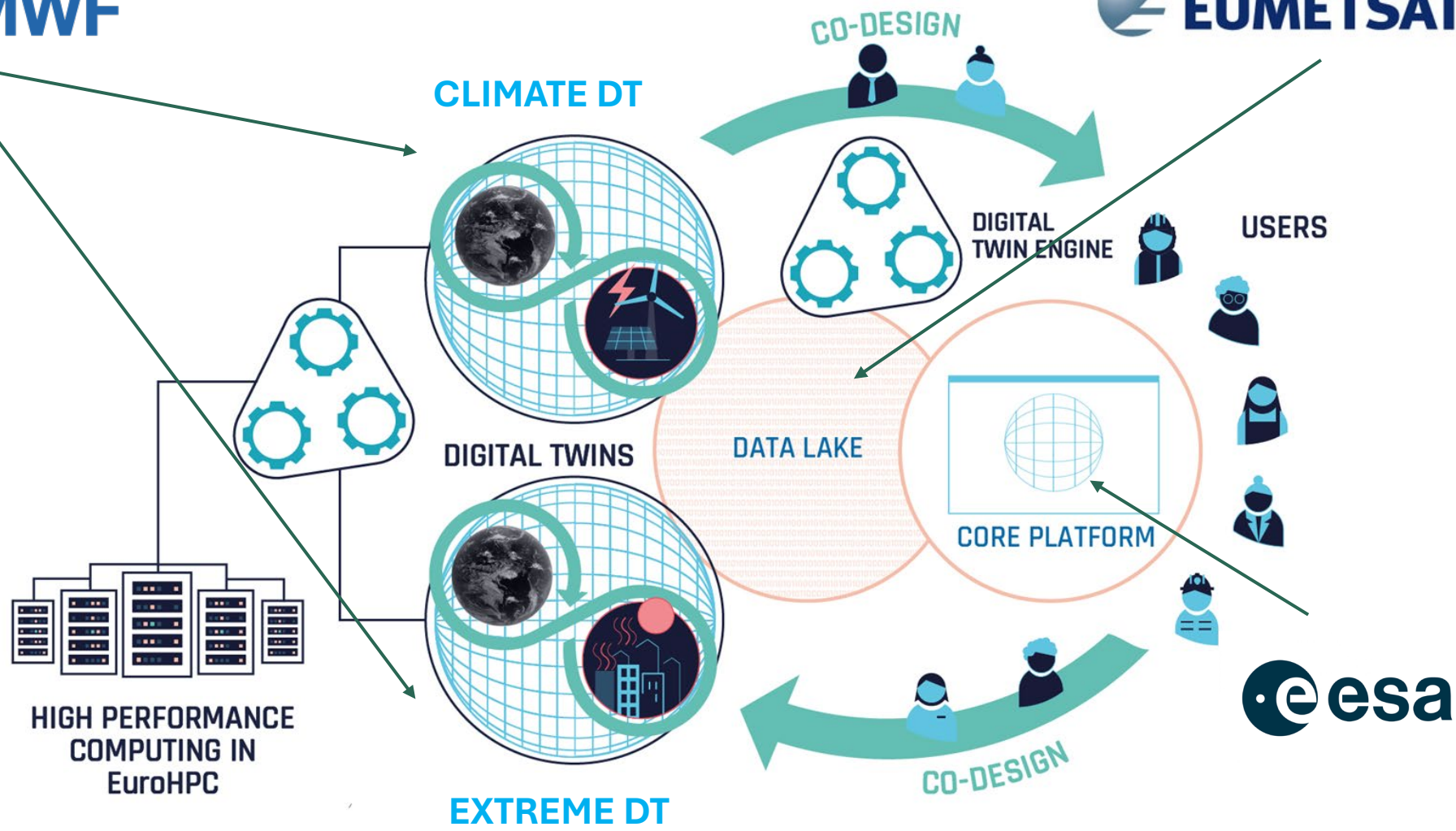


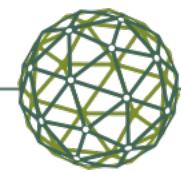
CURRENT STATE OF THE ART

- ✓ Low temporal resolution: 3 or 6-hourly data
- ✓ Low spatial resolution: regional downscaling needed
- ✓ No information at hub height
- ✓ Large data extraction required

CLIMATE DT

- ✓ Global 1-hourly
- ✓ 5km resolution, globally
- ✓ 100 m wind speed
- ✓ Customized information will be produced and streaming





Climate data
(projections)



Input data

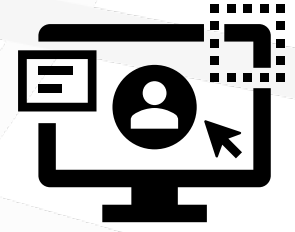


DE Climate DT



Climate data (projections)

DE Service Platform

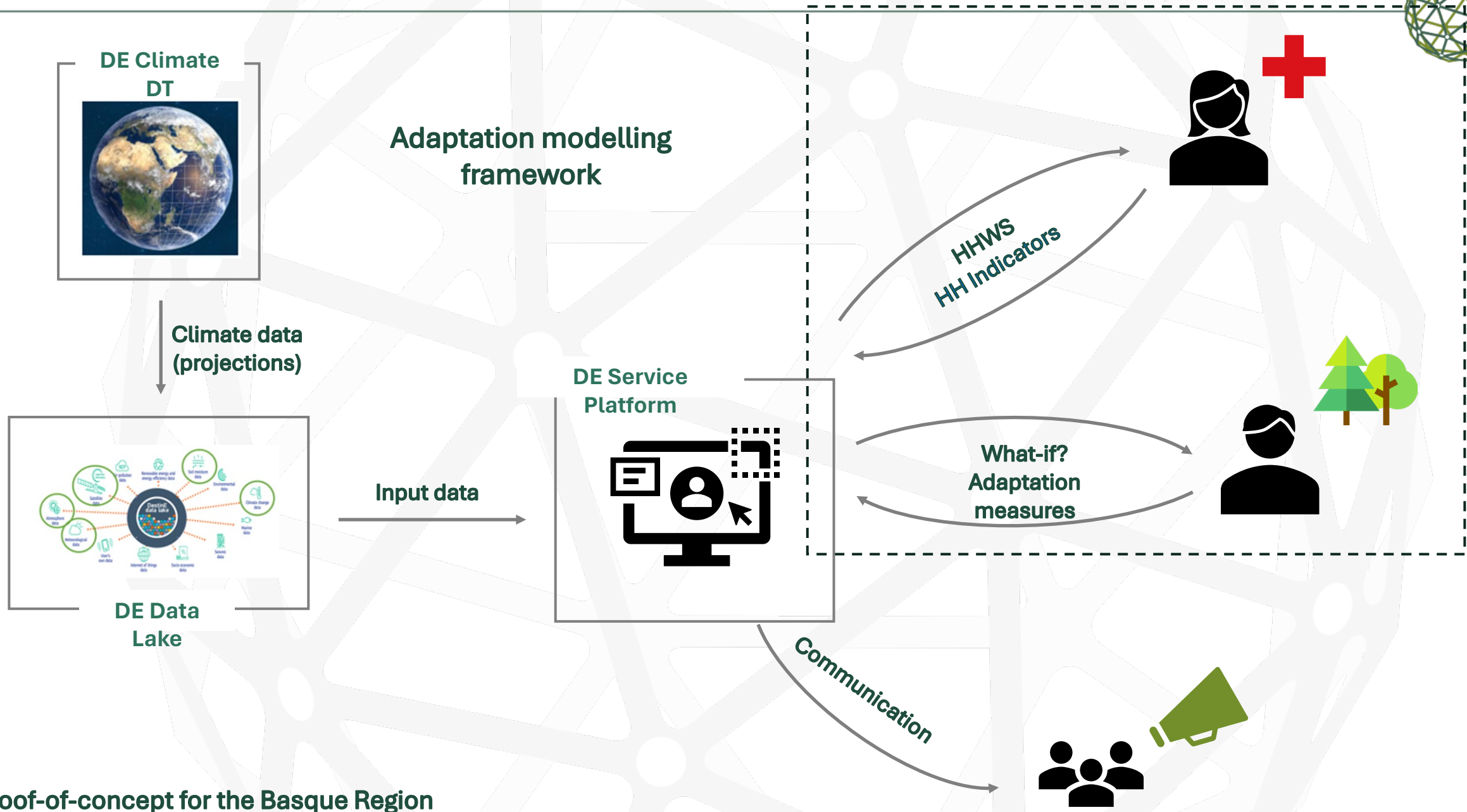


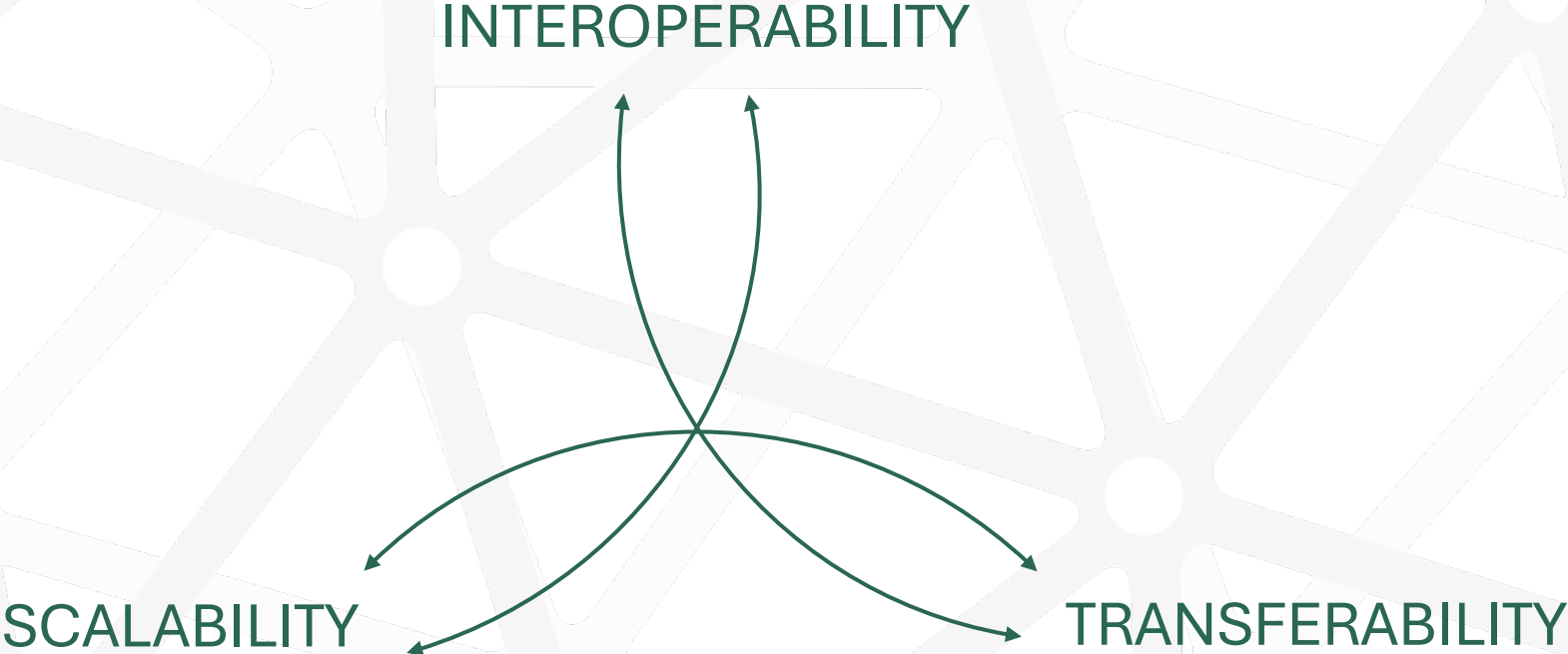
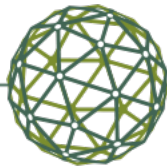
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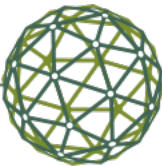


DE Data Lake









ESPON PORTAL and access to ESPON CLIMATE

database@espon.eu

Stories & Applications

Discover the activities related to this topic

Greenhouse gas impact assessment (GGIA)

Assess how spatial planning decisions impact greenhouse gas emissions related to transport, buildings, land use and consumption patterns for your neighbourhood, municipality or region.

Spatial implications of climate change risk in Europe

The Spatial implications of climate change risk in Europe story showcases regional disparities of risks related to heat stress, floods, droughts and wildfires.

ESPON's SDGs benchmarking tool

Monitor achievement of the 17 sustainable development goals at territorial NUTS 2 level by tracking progress and benchmarking it with other region's achievements.

Map Catalogue

Explore the maps related to this topic

Climate change risks, aggregated

These maps present aggregated risk of climate change, covering the 'baseline' climate (1981–2010) and 'very high emissions' scenario (1970–2100) in cases of relative and absolute exposure. Very high emissions scenario is based on the IPCC RCP8.5 which represents a very high emissions scenario where emissions continue to rise throughout the century.

Source: [ESPON Climate Update \(2022\)](#)

Aggregate risk of climate change, baseline climate...

Aggregate risk of climate change, baseline climate...

Aggregate risk of climate change, very high emission...

Aggregate risk of climate change, very high emission...

Individual impact chains

The disaggregated results show that certain territories present a greater risk with comparable levels of hazard due to greater vulnerability and exposure.

Legend

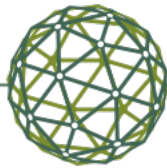
- Very high
- High
- Medium
- Low
- Very low
- No data

Actions

- Drag and move the vertical bar to switch between the two maps.
- Open the legend located in the bottom left corner.

Overall, it can be summarised that the impact chains associated with temperature and water availability also show a clear pattern of risk

- ESPON Portal [maps, dashboards, data stories] - <https://www.portal.espon.eu>
- ESPON Climate - <https://www.espon.eu/projects/espon-2020/monitoring-and-tools/climate-data-and-maps-update>



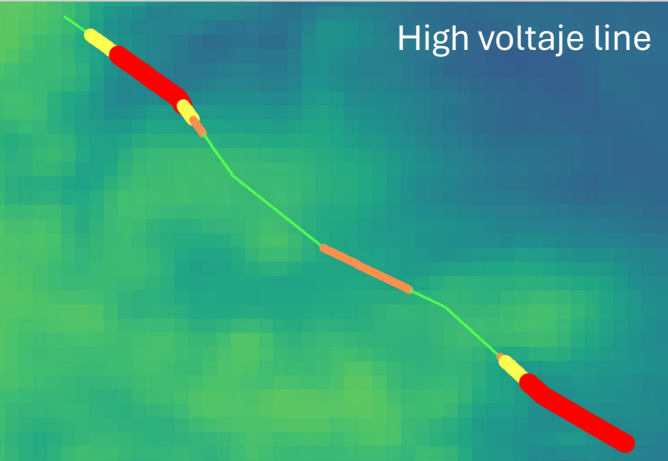
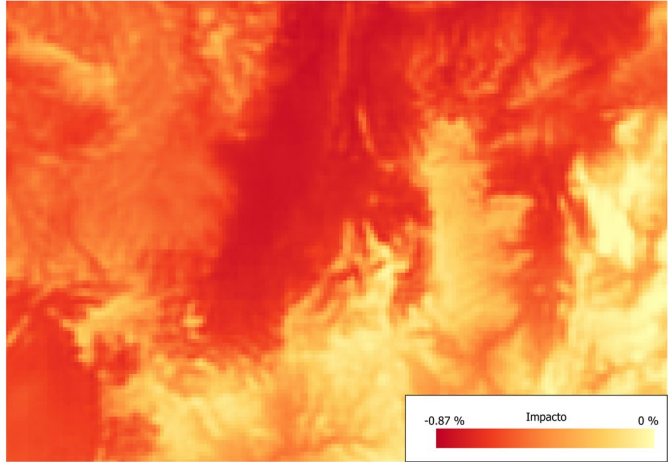
Present and future risk

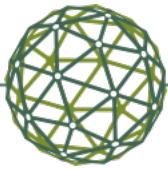


Priorisation

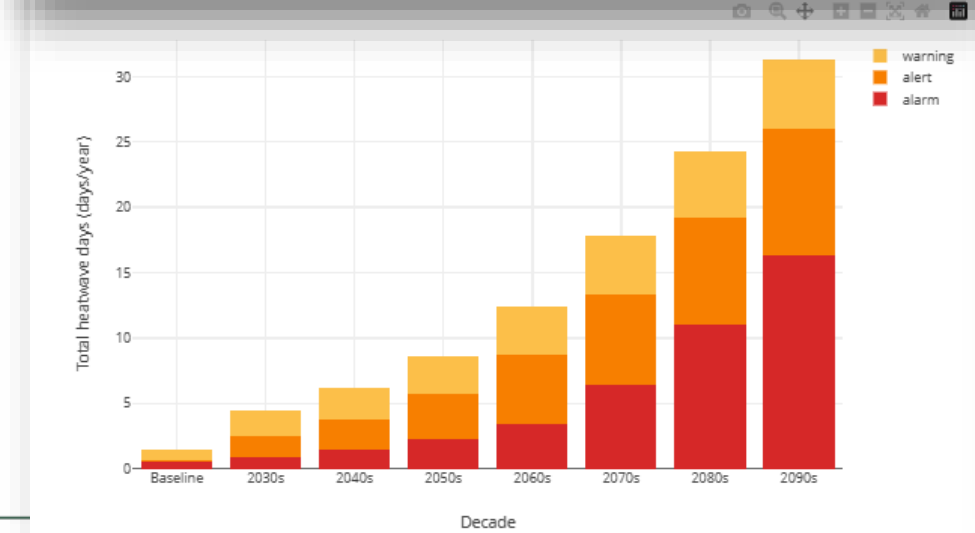
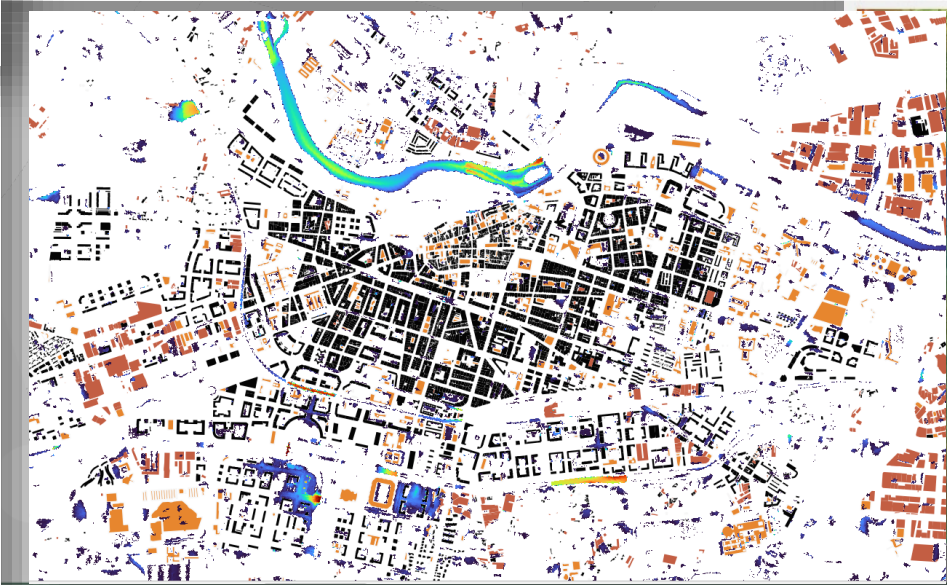
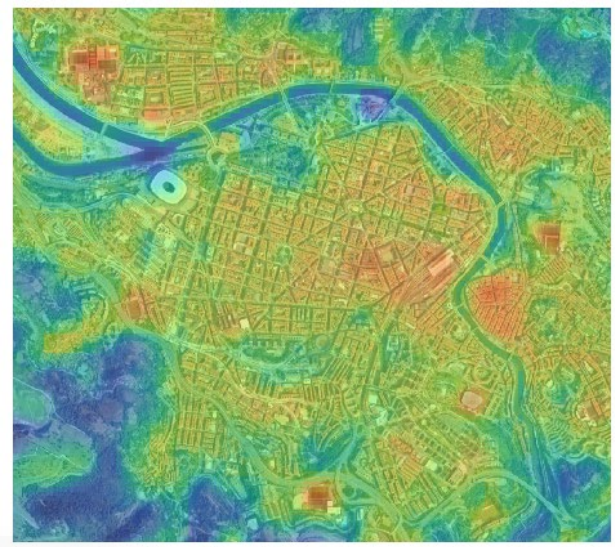
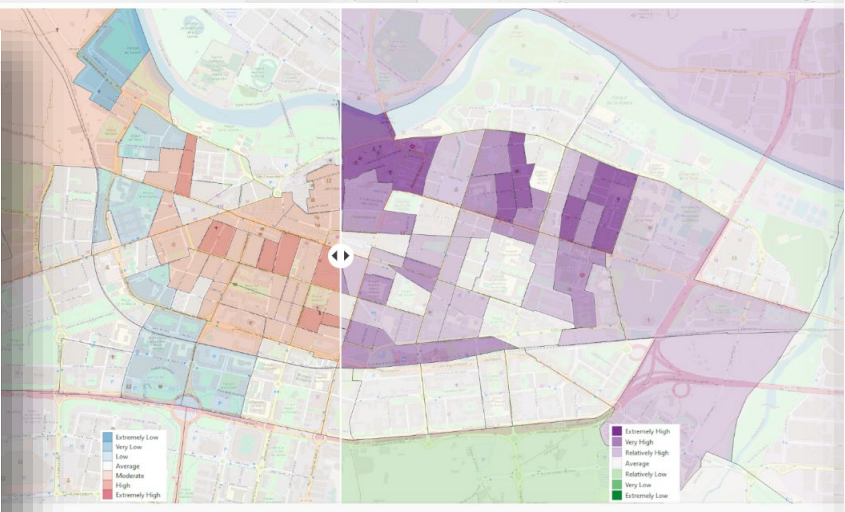
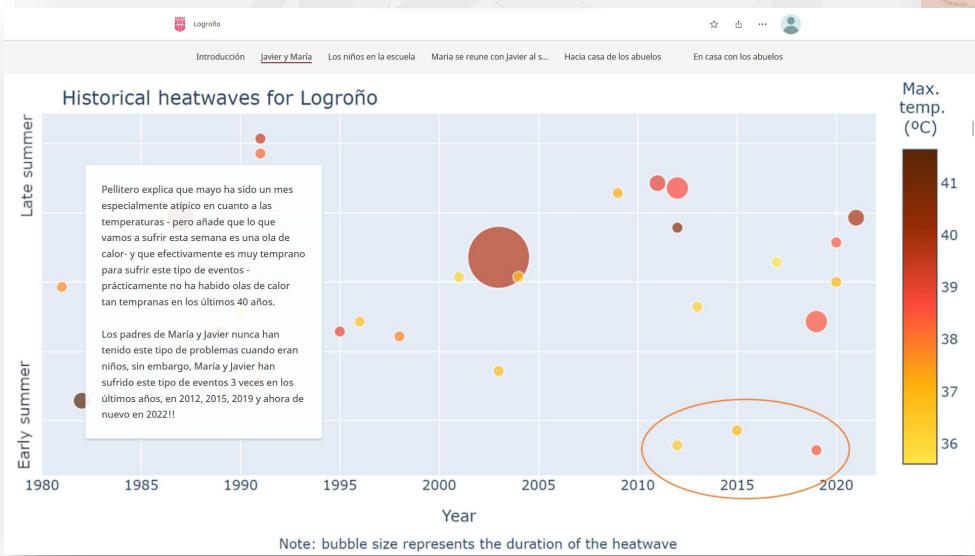


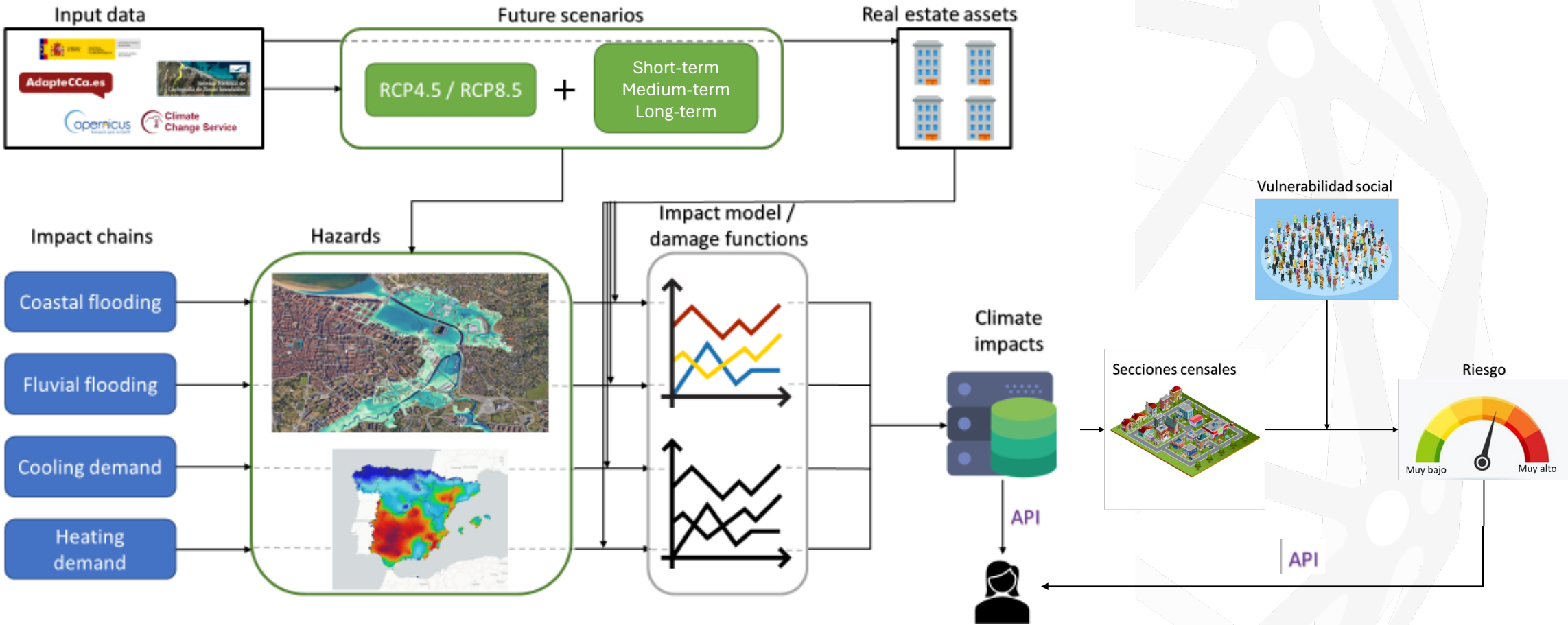
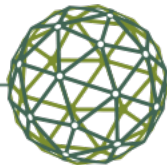
Communication and capacity building





Tailored and user-oriented climate services for and with 7 city-hubs partners





Thank you very much

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