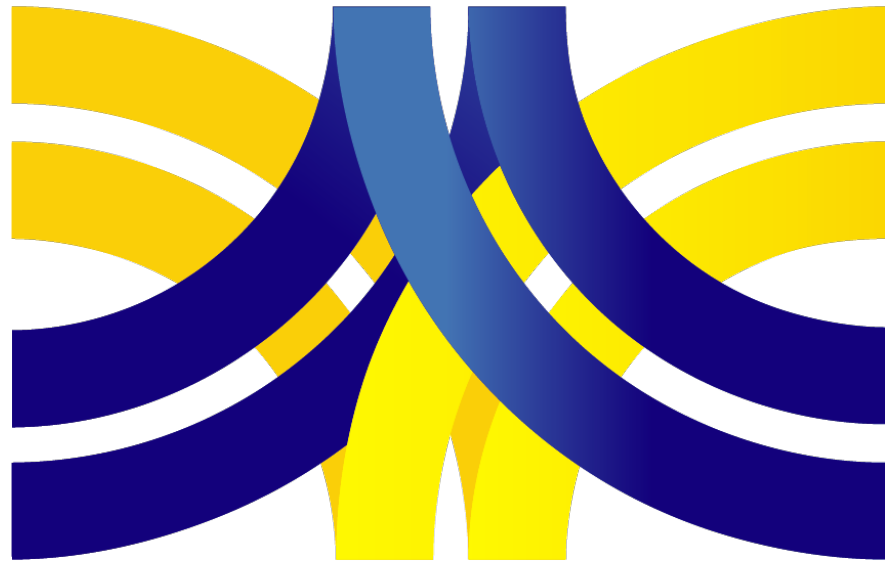


ASECAP DAYS



BRUSSELS 2022

Save Money, Save the Planet!

*The role of Integrated Decision
Support Systems in Infrastructure*

PIETRO TORCHI LUCIFORA

General Manager Ecogest SpA

ANTONIO STORNELLO

CEO of Kassandra

In collaboration with Miriam Olmeda Alarcon – Scientific Researcher at CCSC



DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



Collapse of the bridge along State Road 195 over the Santa Lucia River (Cagliari, Italy). Source: La Repubblica, 2018.



“Vegetation adaptation strategies are essential in a climate change context”

Miriam Olmeda Alarcon - Scientific Researcher at CCSC



CLIMATE CHANGE
STUDY CENTRE



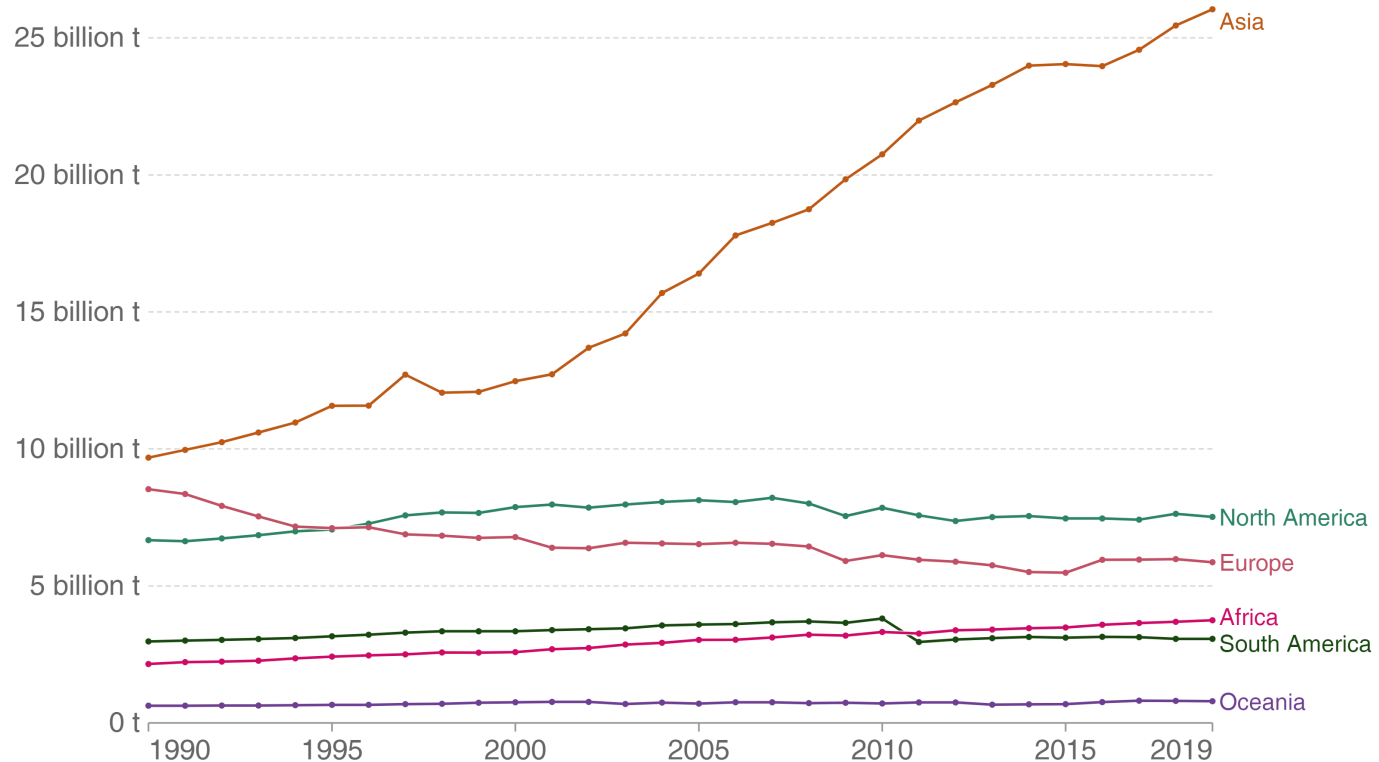
ECOGEST



Total greenhouse gas emissions

Greenhouse gas emissions¹ are measured in carbon dioxide-equivalents (CO₂eq)². Emissions from land use change – which can be positive or negative – are taken into account.

Our World
in Data



Source: Our World in Data based on Climate Analysis Indicators Tool (CAIT).
OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

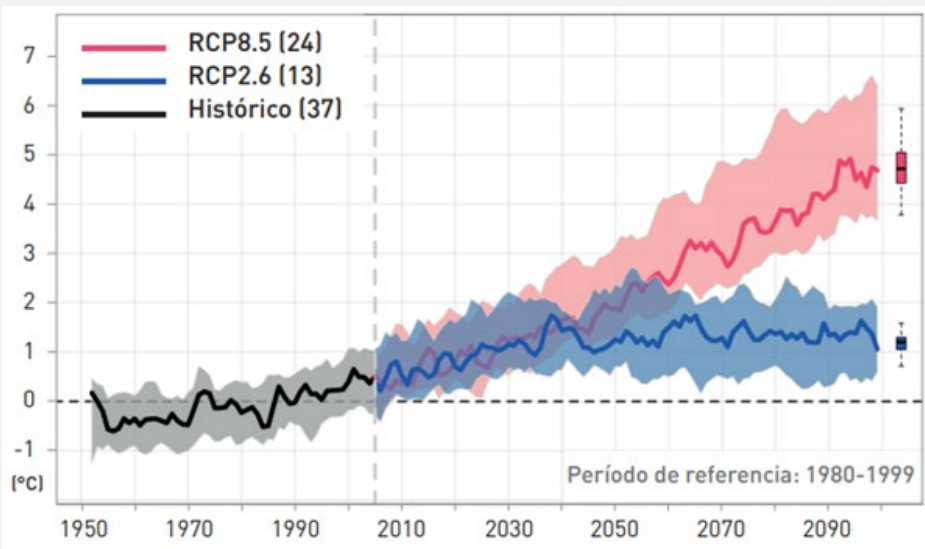
Miriam Olmeda Alarcon - Scientific Researcher at CCSC



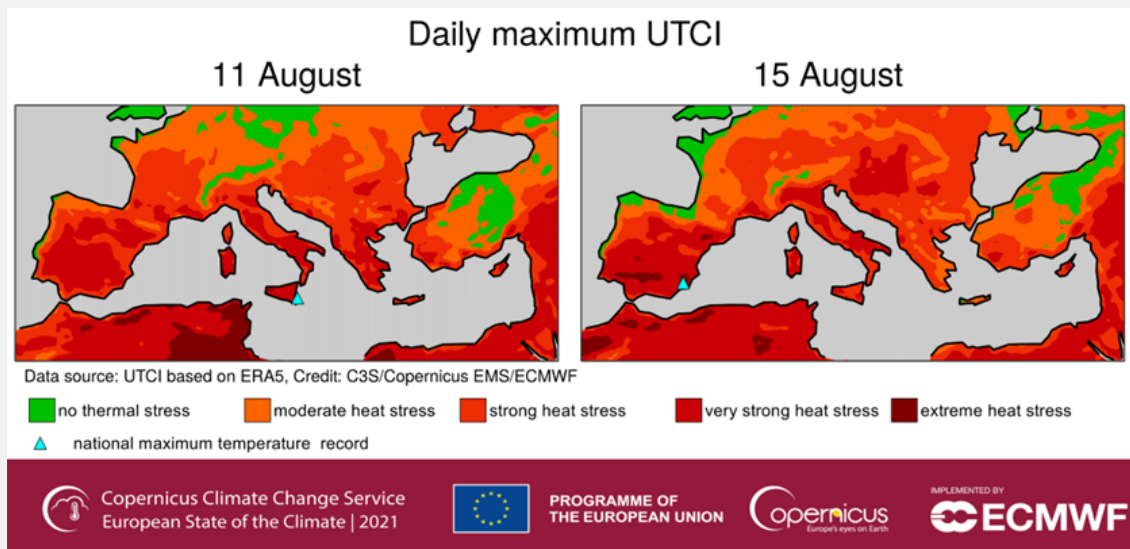
CLIMATE CHANGE
STUDY CENTRE



DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



Projected annual temperature changes compared to the reference period of the recent past (1980-1999), based on the EURO-CORDEX ensemble mean of 0.11°. Source: Cramer et al., (2020).



Universal Thermal Climate Index (UTCI) daily maximum for 11 and 15 August, showing the locations of the provisional national maximum temperature records observed in Syracuse, Italy and Alcantarilla, Spain. Data source: ERA5. Credit: C3S/Copernicus EMS/ECMWF.

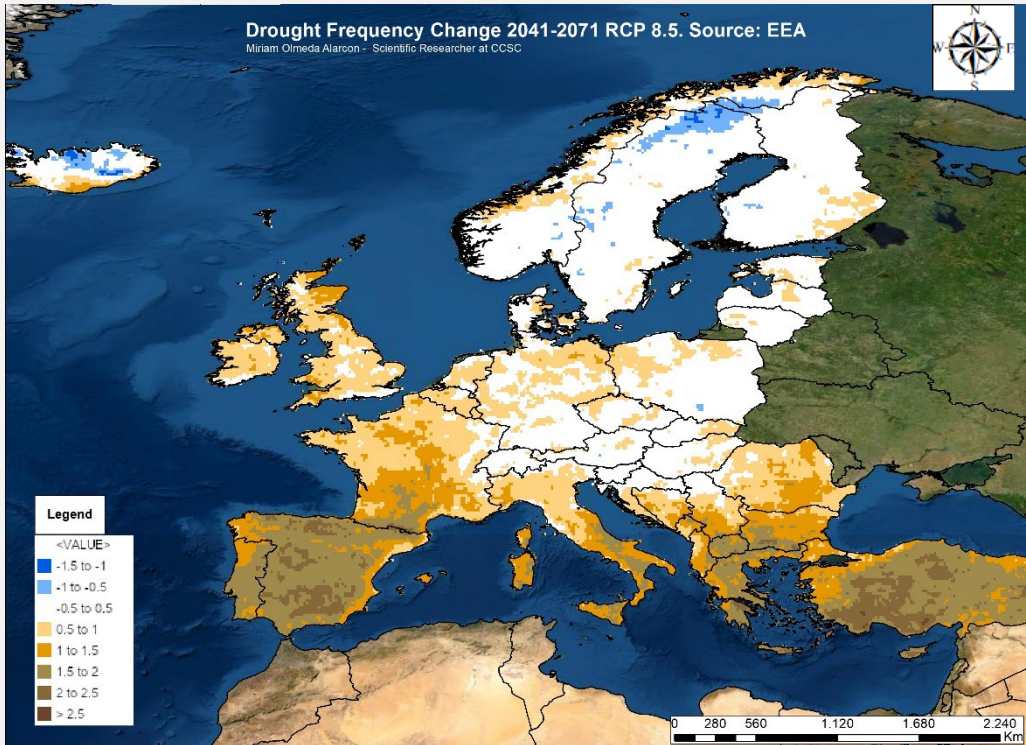
Miriam Olmeda Alarcon - Scientific Researcher at CCSC



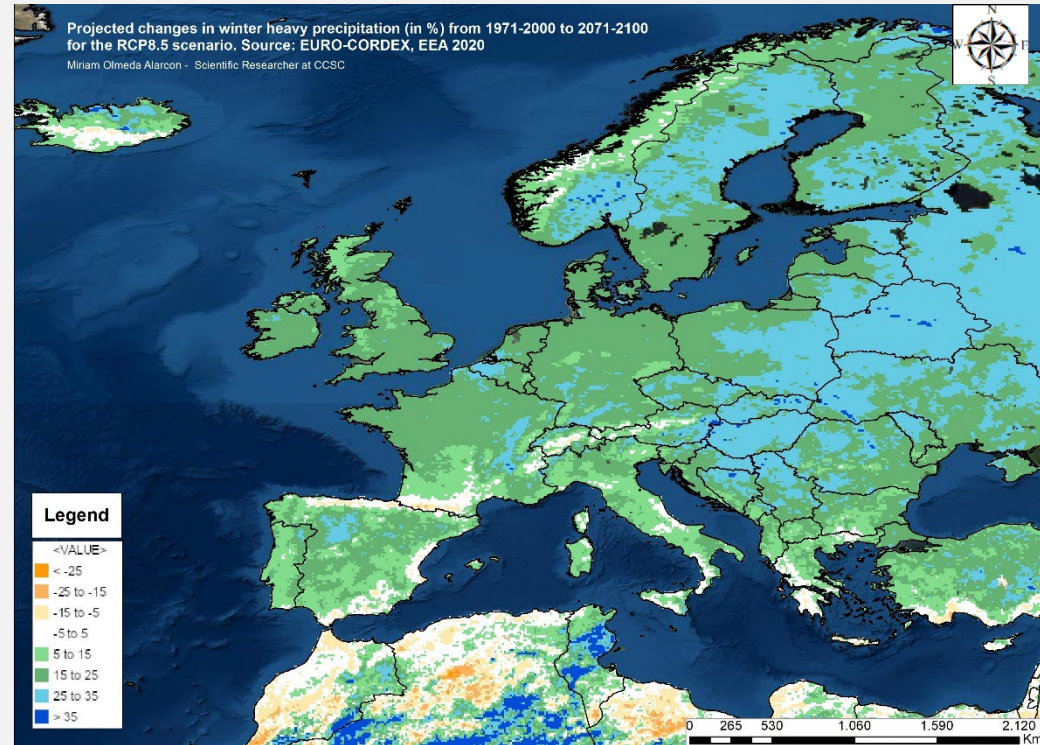
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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



Drought Frequency Change 2041-2071 RCP 8.5. Source: EEA. Cartography by: Miriam Olmeda Alarcon – Scientific Researcher at CCSC.



Projected changes in winter heavy precipitation (in %) from 1971-2000 to 2071-2100 for the RCP 8.5 scenario. Source: EURO-CORDEX, EEA 2020. Cartography by: Miriam Olmeda Alarcon – Scientific Researcher at CCSC.

Miriam Olmeda Alarcon - Scientific Researcher at CCSC



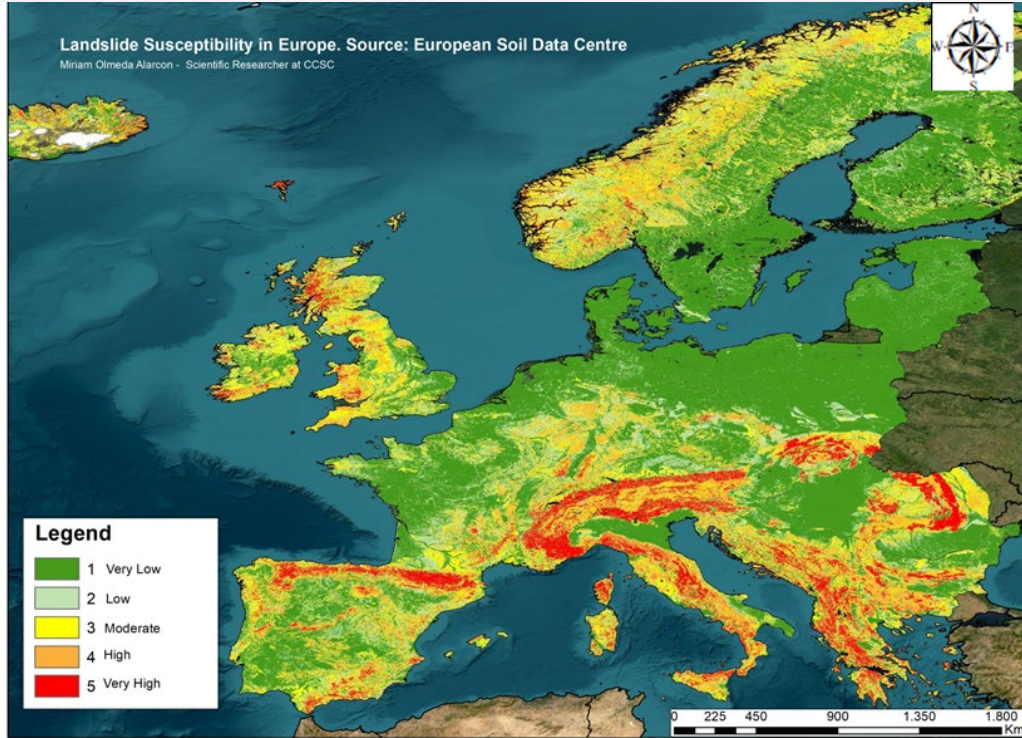
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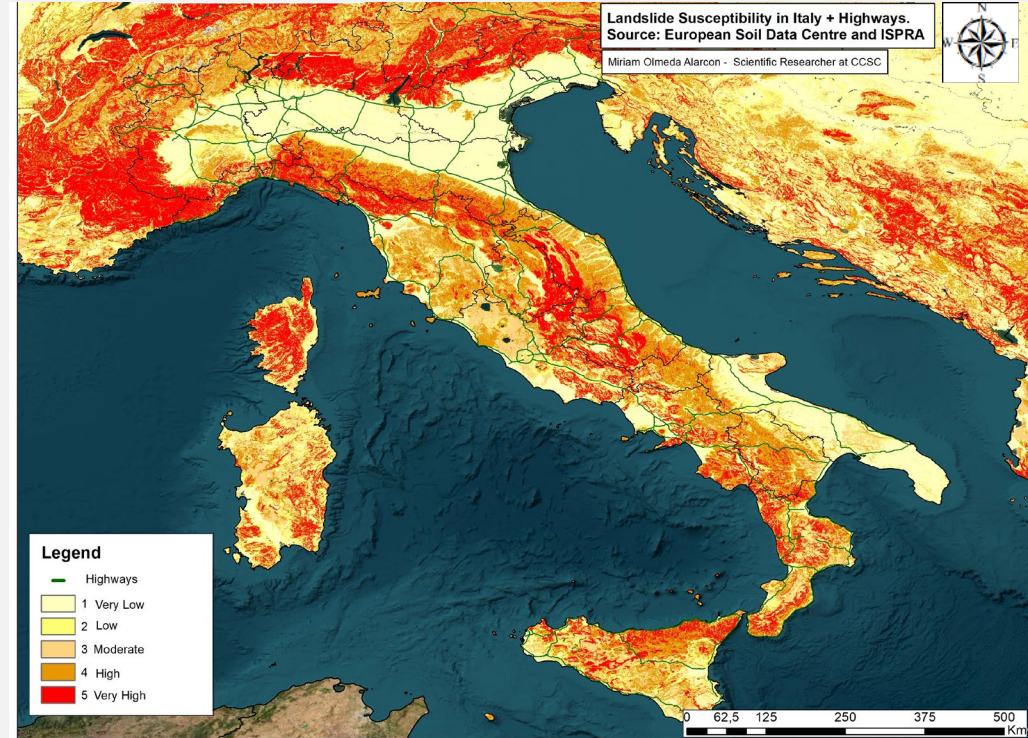
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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



Landslide Susceptibility in Europe. Source: European Soil Data Centre. Cartography by: Miriam Olmeda Alarcon – Scientific Researcher at CCSC



Landslide Susceptibility in Italy + Highways. Source: European Soil Data Centre and ISPRA. Cartography by: Miriam Olmeda Alarcon – Scientific Researcher at CCSC

Miriam Olmeda Alarcon - Scientific Researcher at CCSC



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ARE WE READY?

CLICK HERE TO WATCH THE VIDEO



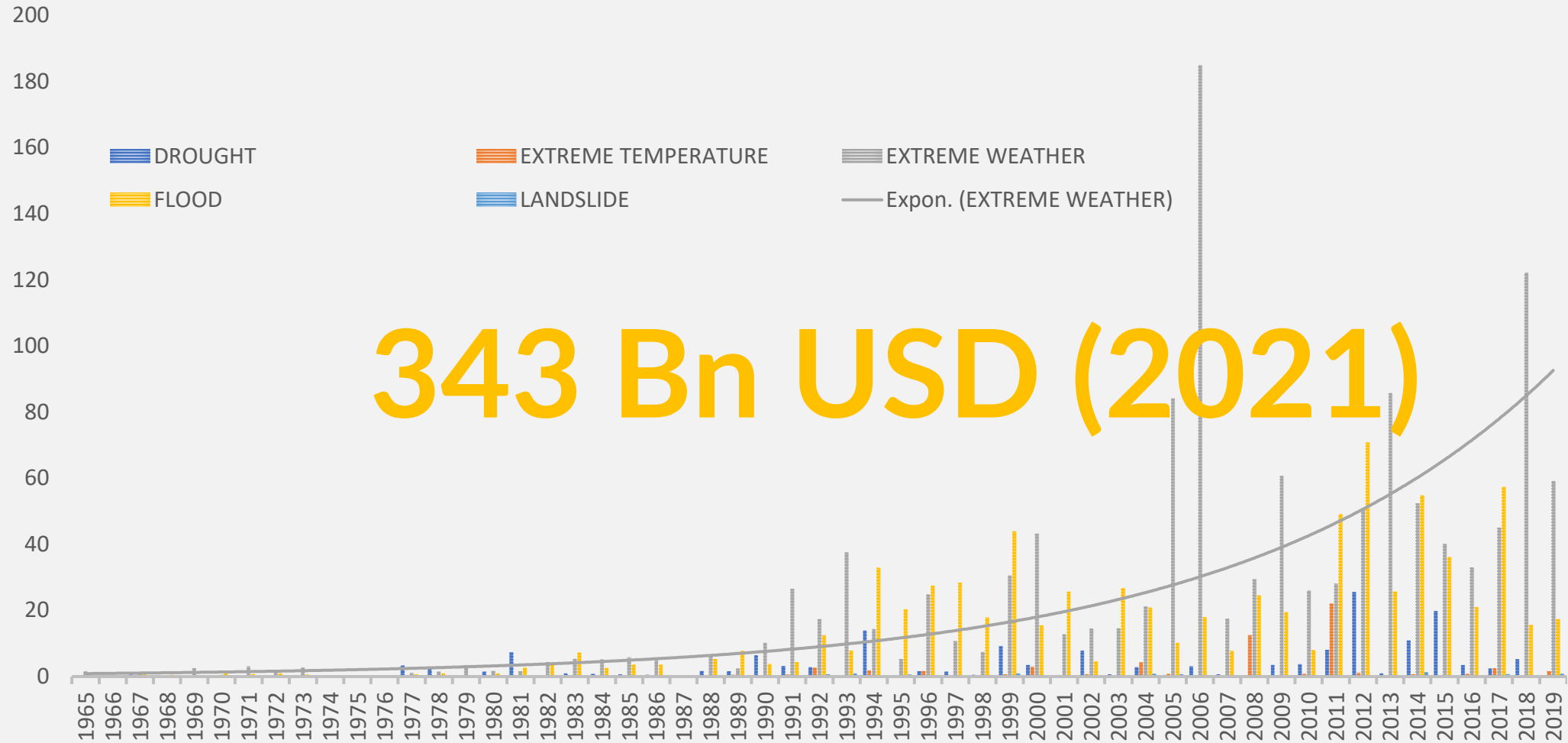
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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



(<https://www.aon.com/weather-climate-catastrophe/index.aspx>)



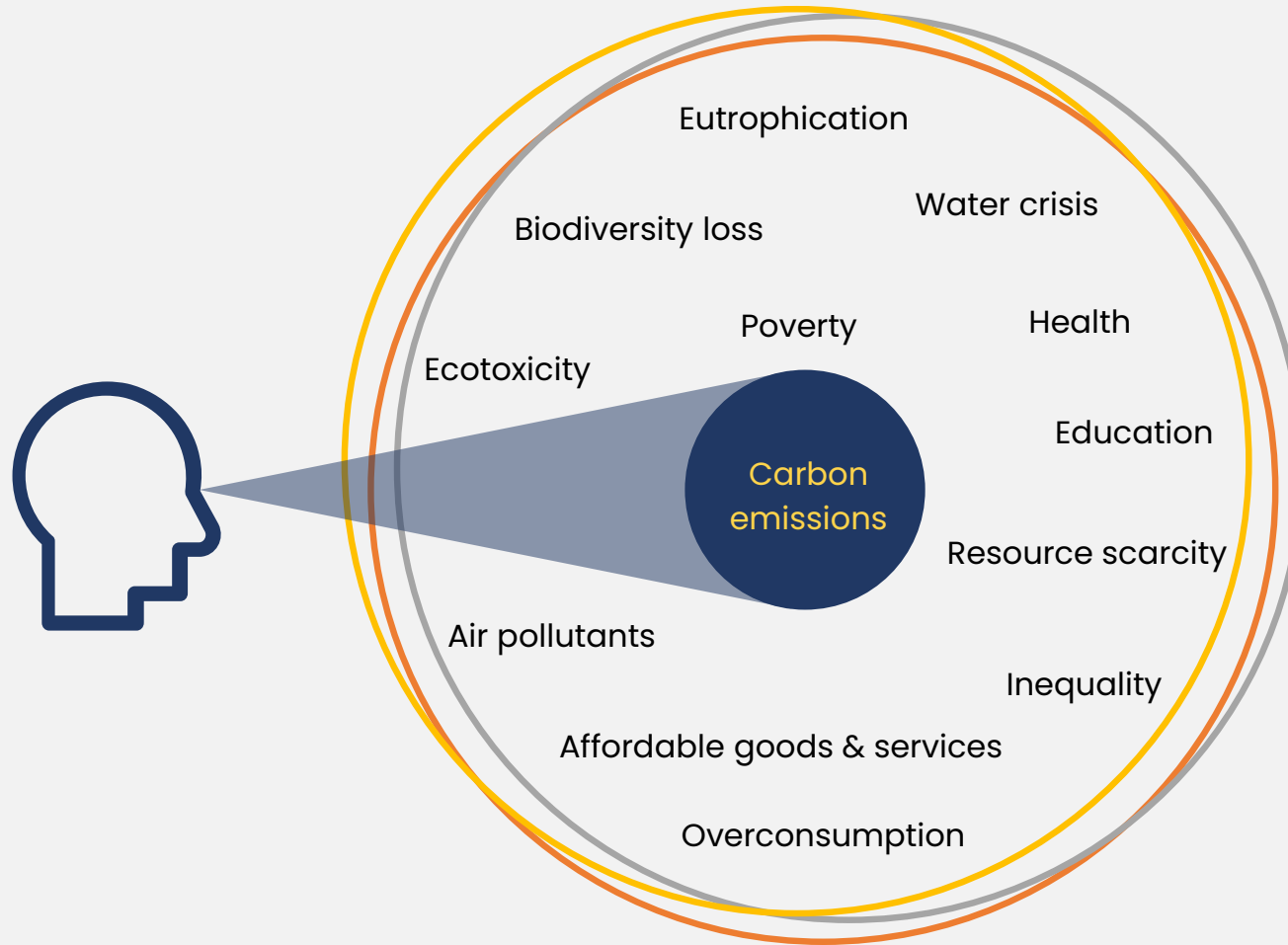
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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



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Infrastructure and cities are complex systems

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An **experimental application** of Kassandra is currently being carried out on a series of specific sections of a motorway operated by **Concessioni Autostradali Venete S.p.A**



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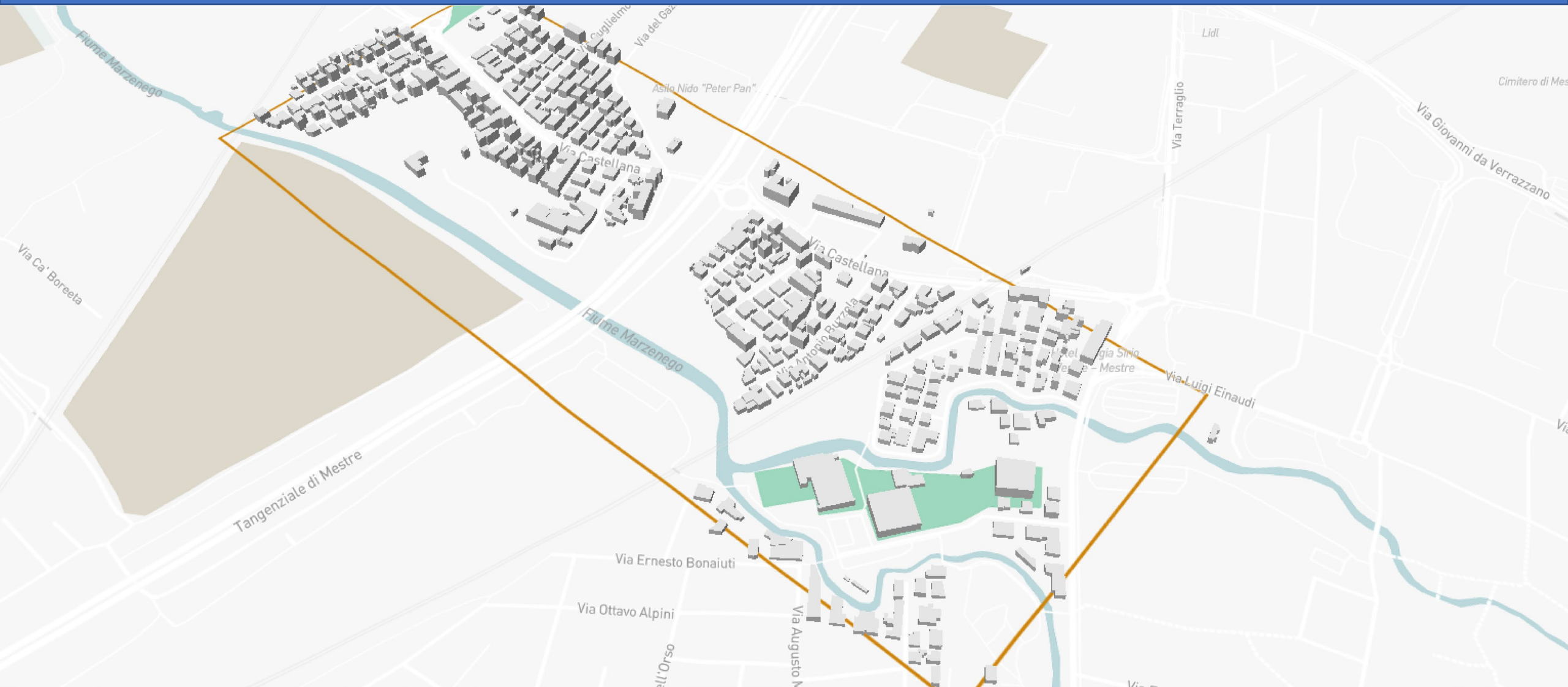


Greenway
group srl

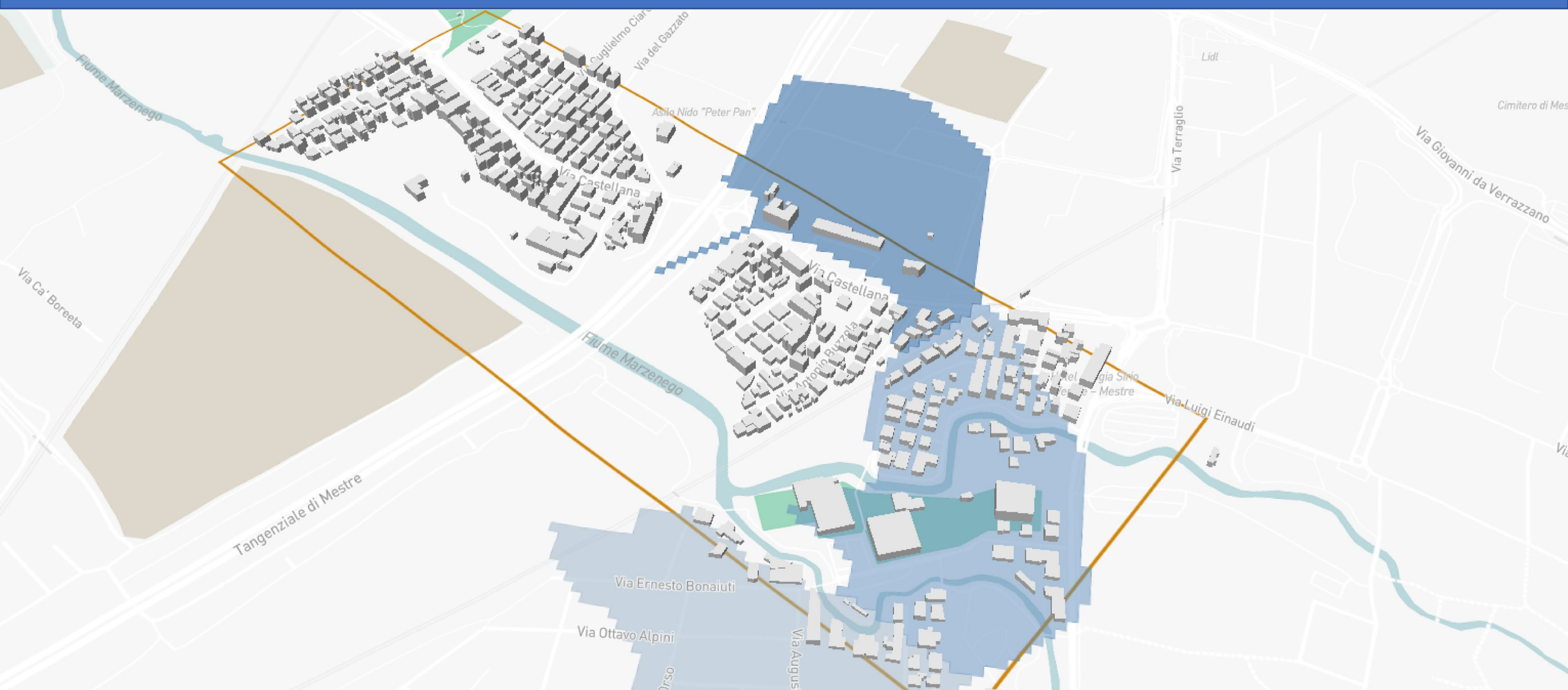
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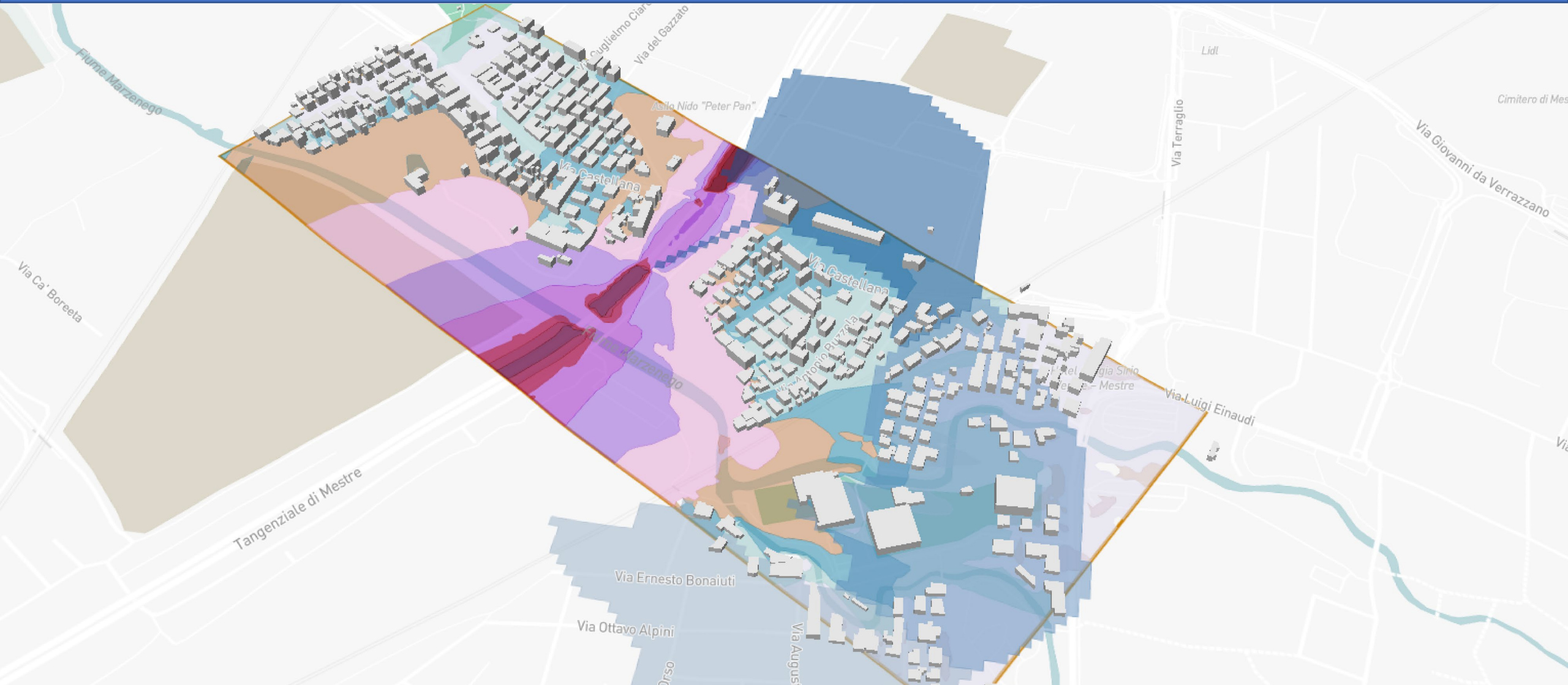
DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



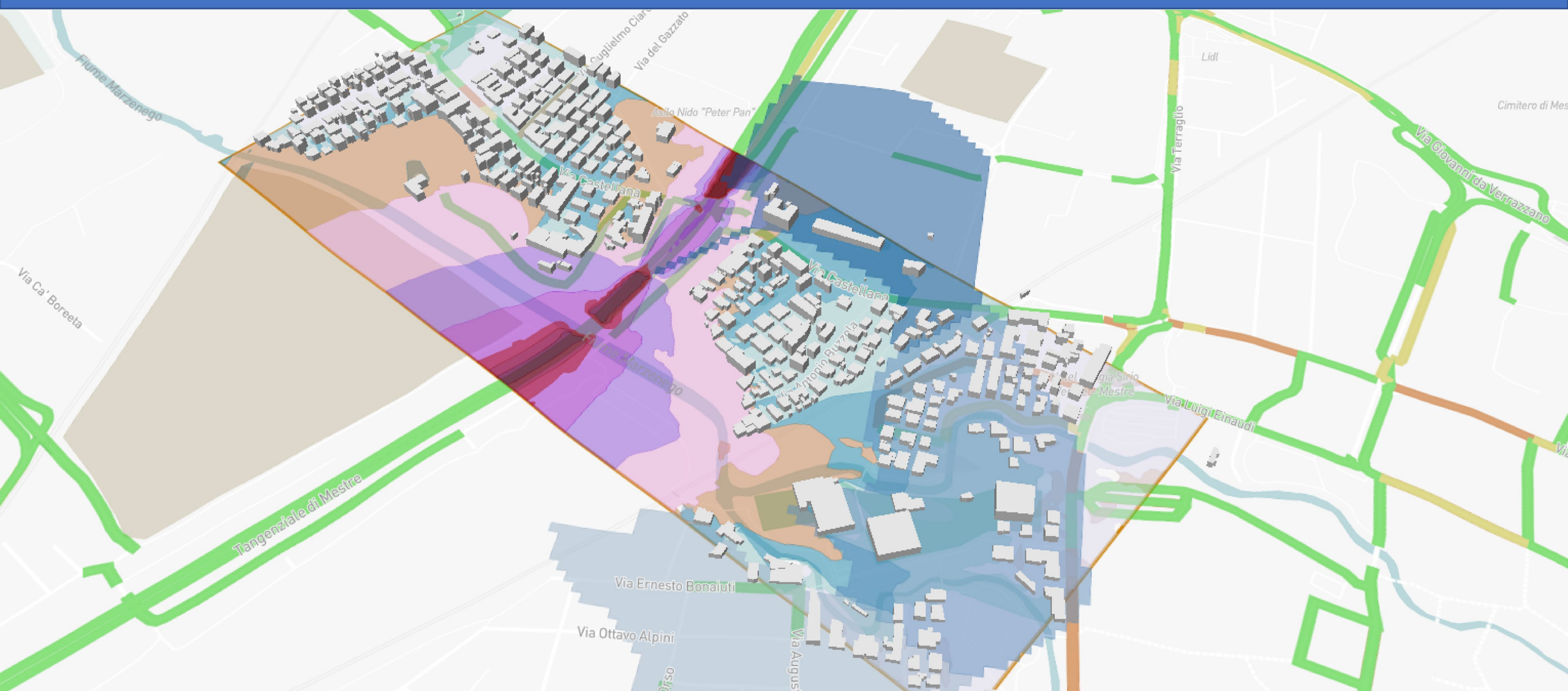
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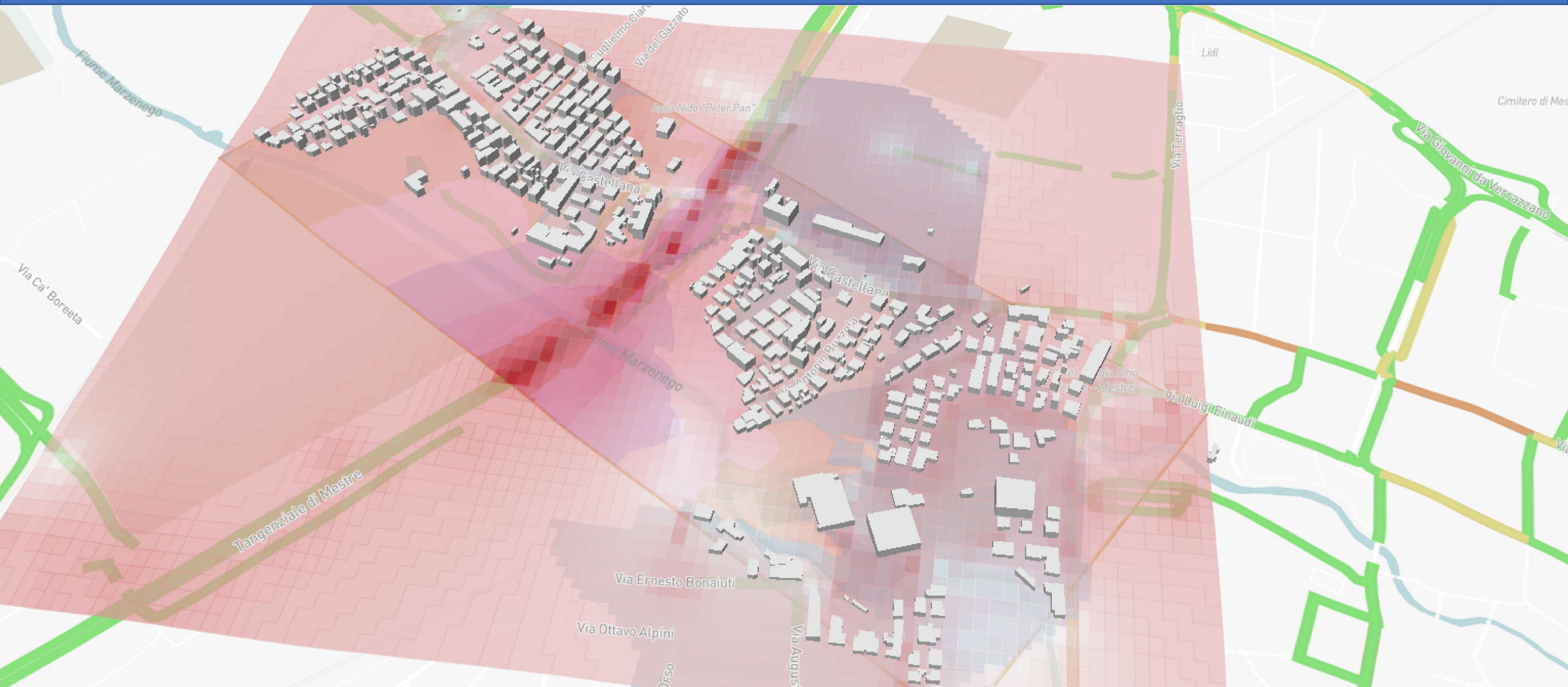
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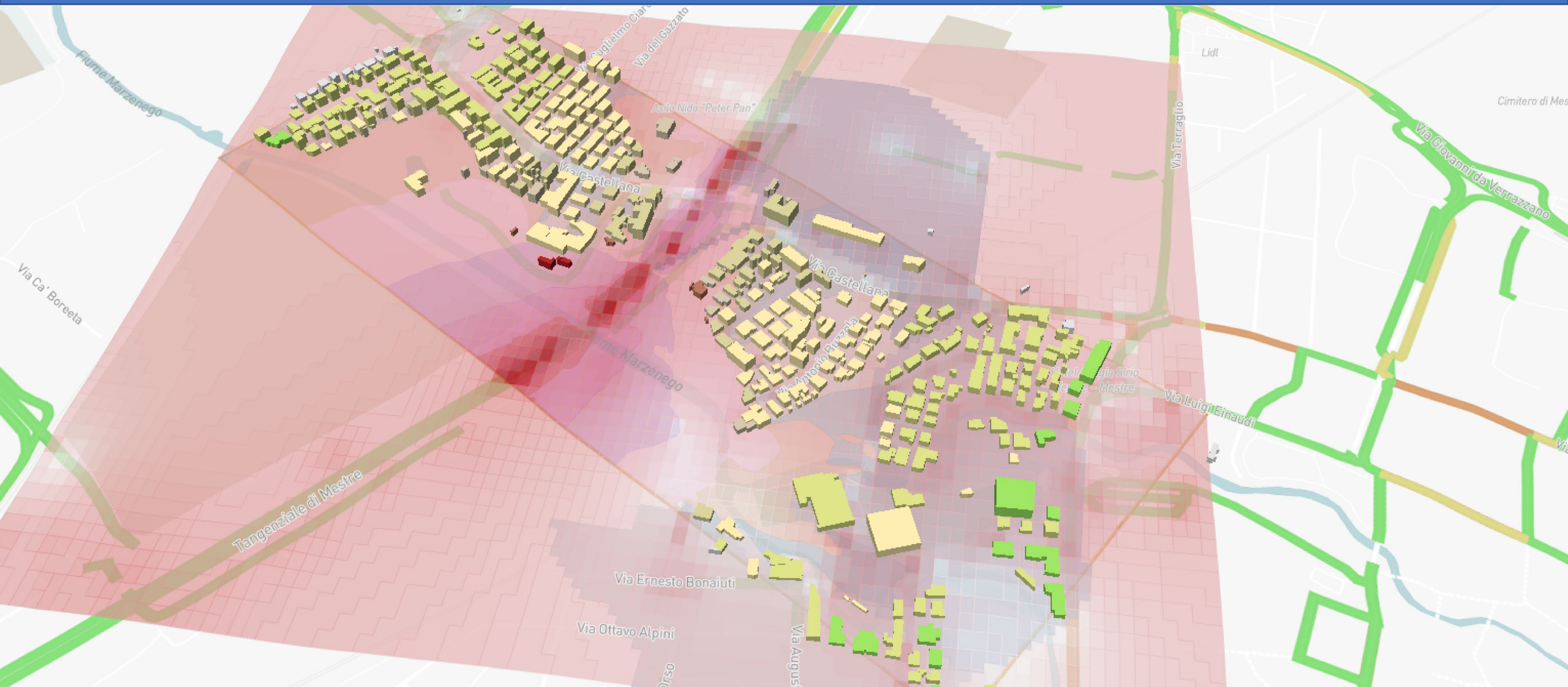
DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



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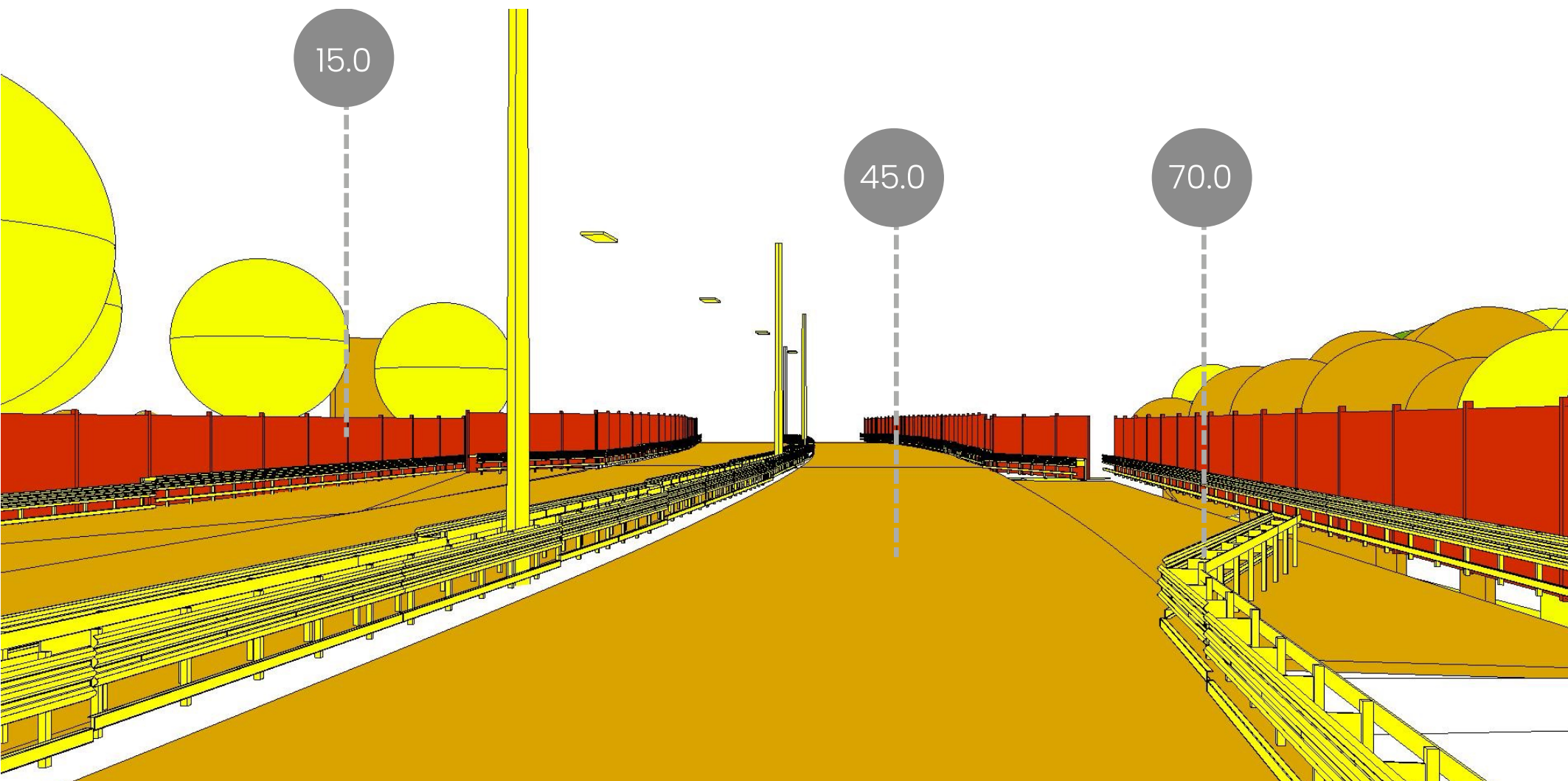
DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



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DECARBONIZING ROAD INFRASTRUCTURE: CHALLENGES, PERSPECTIVES AND ACTIONS IN TOUGH ECONOMY



MOTORWAY SECTION STUDIED

300 m



DATA POINTS

170

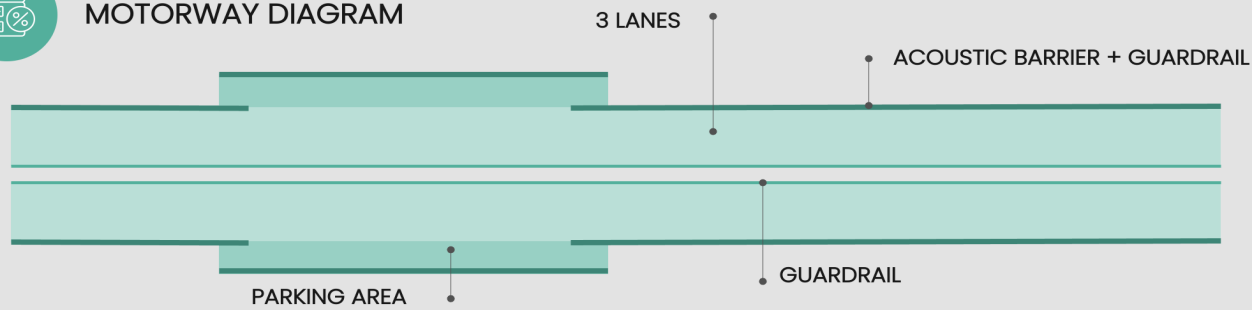


ROAD TYPE

VIADUCT



MOTORWAY DIAGRAM



ACOUSTIC BARRIER

| | |
|------------------|----------|
| Materiale | METAL |
| Total length | 560 m |
| Sound absorption | A3 |
| Condition | 1 (poor) |



TARMAC

SMA WITH AGGREGATES

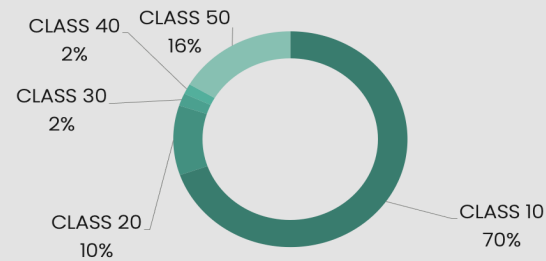


GUARDRAIL

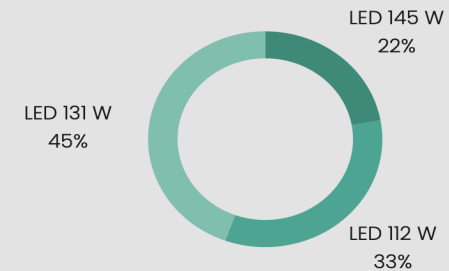
METAL TYPE: H3-A-W6 (3n28361)



TRAFFIC DATA



LIGHTING TYPE



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With the right decisions
it is indeed possible to
save money and
save the planet!



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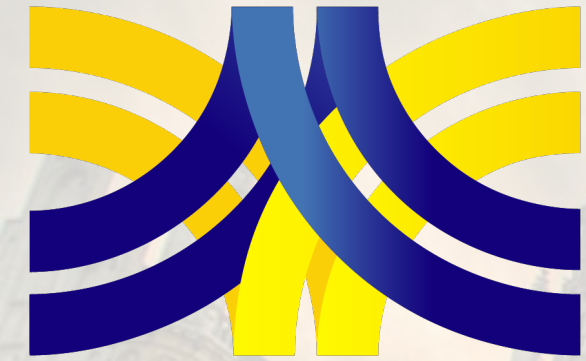


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ASECAP DAYS



BRUSSELS 2022

THANK YOU FOR YOUR ATTENTION

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