



SAPIENZA
UNIVERSITÀ DI ROMA

XIII Giornate della Ricerca MEMOTEF
27 - 28 Giugno 2023
Società Geografica Italiana



SUBMERGED LANDSCAPES

CHARACTERIZATION OF THE IMPACTS OF CLIMATE CHANGE ON ITALIAN BEACHES

FILIPPO CELATA

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THE PROJECT

- Report 2024 of the Italian Geographical Society

Submerged landscapes. Geographies of the climate crisis in the Italian coastal territories

- More than 50 researchers from all over Italy (geographers and others)
- Propose a geographical perspective to:
 - explore the *devastating effects* of the climate crisis on Italian coastal landscapes, already heavily compromised by decades of urban and territorial mismanagement;
 - compare evidence and forecasts with the different *values involved*;
 - analyze the *implications* of a territorial, landscape, ecological, socio-economic, socio-political nature;
 - reflect on the possibilities and conditions that bind the preparation of adequate *response strategies*.



2010. **Il Nord, i Nord.** Geopolitica della questione settentrionale (a cura della Società Geografica Italiana)

2011. **Il Sud, i Sud.** Geoeconomia e geopolitica della questione meridionale (a cura della Società Geografica Italiana)

2012. **I NUOVI SPAZI DELL'AGRICOLTURA ITALIANA** (a cura della Società Geografica Italiana)

2013. **POLITICHE PER IL TERRITORIO (GUARDANDO ALL'EUROPA)** (a cura della Società Geografica Italiana)

2014. **IL RIORDINO TERRITORIALE DELLO STATO RAPPORTO ANNUALE 2014** (a cura della Società Geografica Italiana)

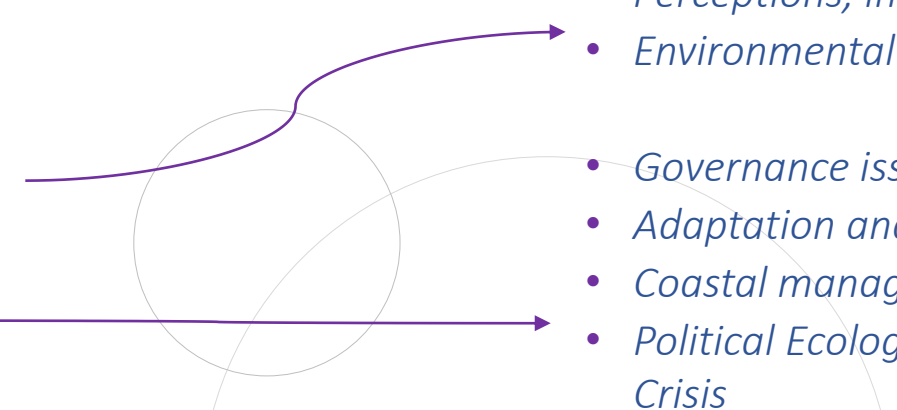
2018. **PER UNA GEOPOLITICA DELLE MIGRAZIONI. NUOVE LETTURE DELL'ALTROVE TRA NOI.** (a cura della Società Geografica Italiana)

2020. **Energia e territorio. Per una geografia dei paesaggi energetici italiani.** (a cura della Società Geografica Italiana)

2023. **Viaggio nella scuola d'Italia.** (a cura della Società Geografica Italiana)



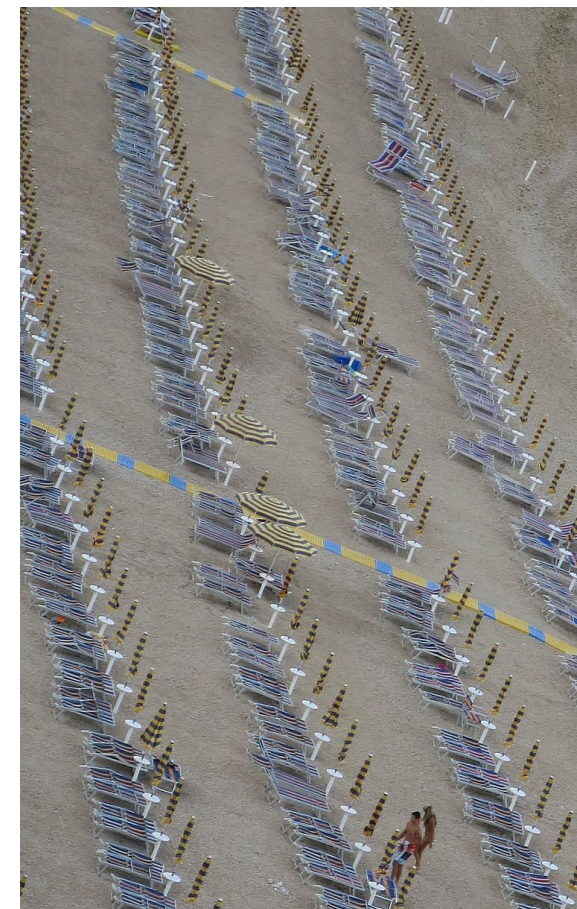
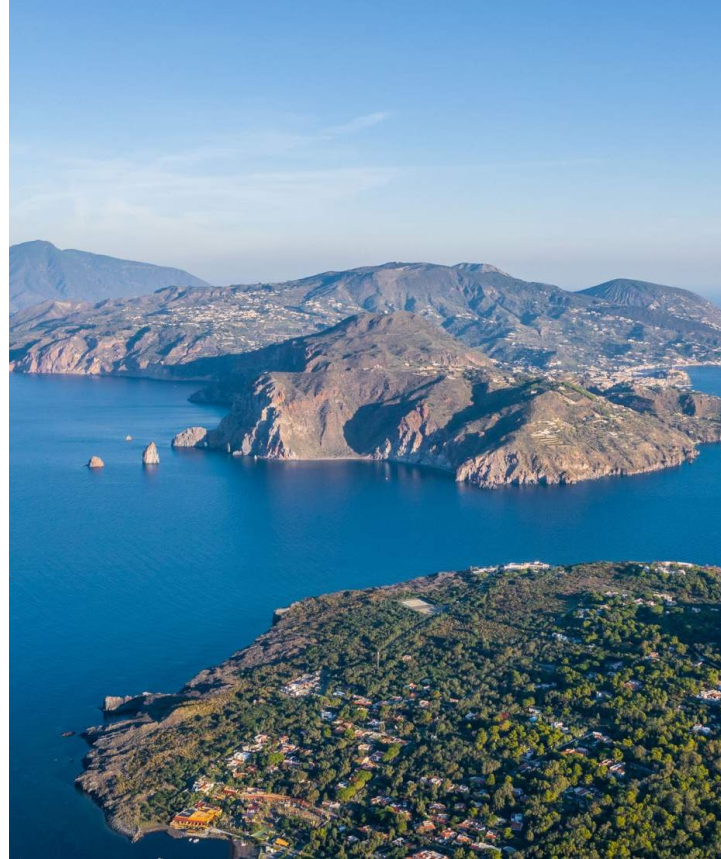
AN OVERVIEW OF THE REPORT

1. How did we get here? The current problematic state of the Italian coasts
 - *Evolution of coastal uses and landscapes*
 - *Taxonomy of coastal issues*
 2. Scenarios: The Italian coasts at (2050 and) 2100
 - *Forecasts, scenarios, and redesign of coastal landscapes*
 - *The impact of the climate crisis on the Italian coasts*
 3. Vulnerability and climate change: towards a holistic interpretation
 - *The story of the impact of the climate crisis*
 - *Perceptions, imaginaries, and expectations*
 - *Environmental and sea education*
 4. Narratives and imaginaries
 - *Governance issues, actors and cross-scale relationships*
 - *Adaptation and rescaling policies*
 - *Coastal management policies and issues*
 - *Political Ecology and Critical Geography of the Climate Crisis*
 5. Politics and policies
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SOME FOCUSES

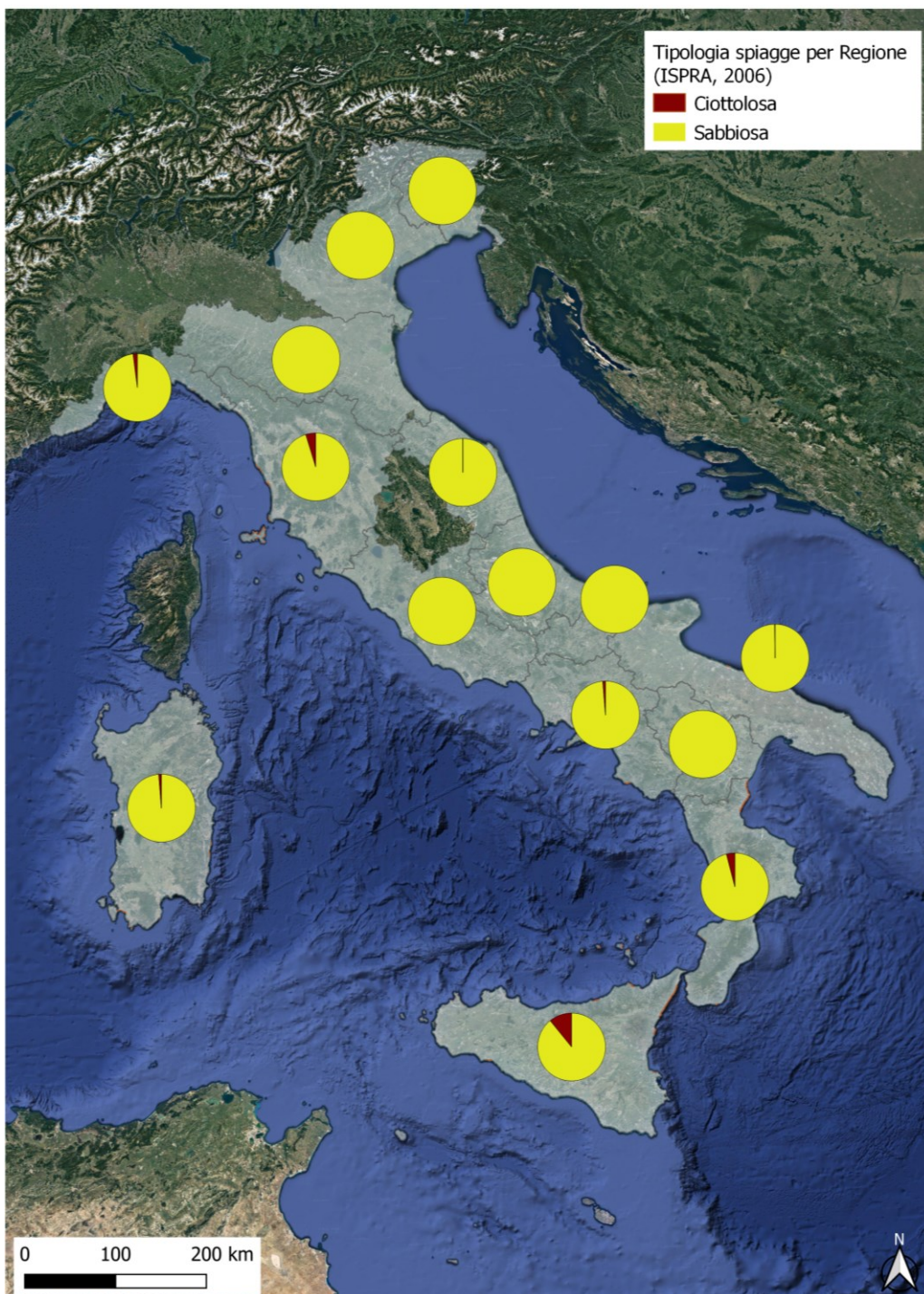
- › *The Venice Lagoon*
- › *Sandy coasts and seaside tourism*
- › *Coastal agriculture and salinization*
- › *Urbanized coasts and real estate values*
- › *Planned relocation policies*
- › *The Italian blue economy*
- › *Marine and coastal protected areas*
- › *The smaller Italian islands*
- › *Climate justice and overcoming the
petroleumscape in coastal and offshore mining*



THE CURRENT VULNERABILITY OF THE ITALIAN COASTS

- Physical → Transition zone between terrestrial and marine contexts (sea level rise, changes in the hydrological regimes, erosion)
- Economical → Urbanization; Touristification; Real estate values
- Social → Multi-scalar policies and governance; Climate injustice; Relocation





SANDY COASTS AND SEASIDE TOURISM

- 3.346 km : total length of the beaches
- 61.426 : total concessions for maritime state property
- 12.166 : concessions for beach facilities
- 1.838 : concessions for campsites, sports clubs and tourist complexes
- 42,8 % : sandy coast occupied beach facilities, campsites, sports clubs and resorts

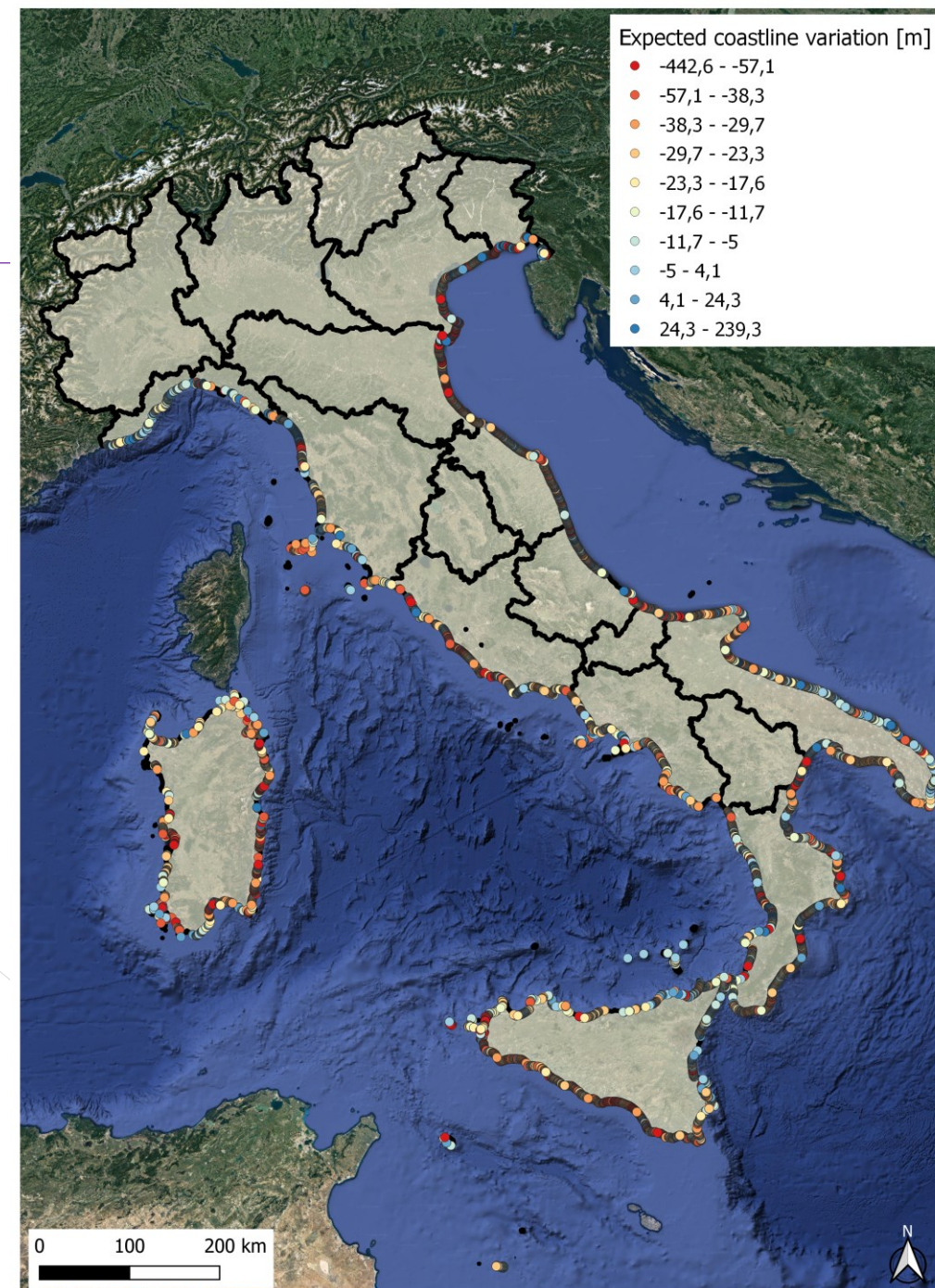
What will be the impacts
of climate change on
Italian beaches?

Source: Beaches Report 2022 (Legambiente)



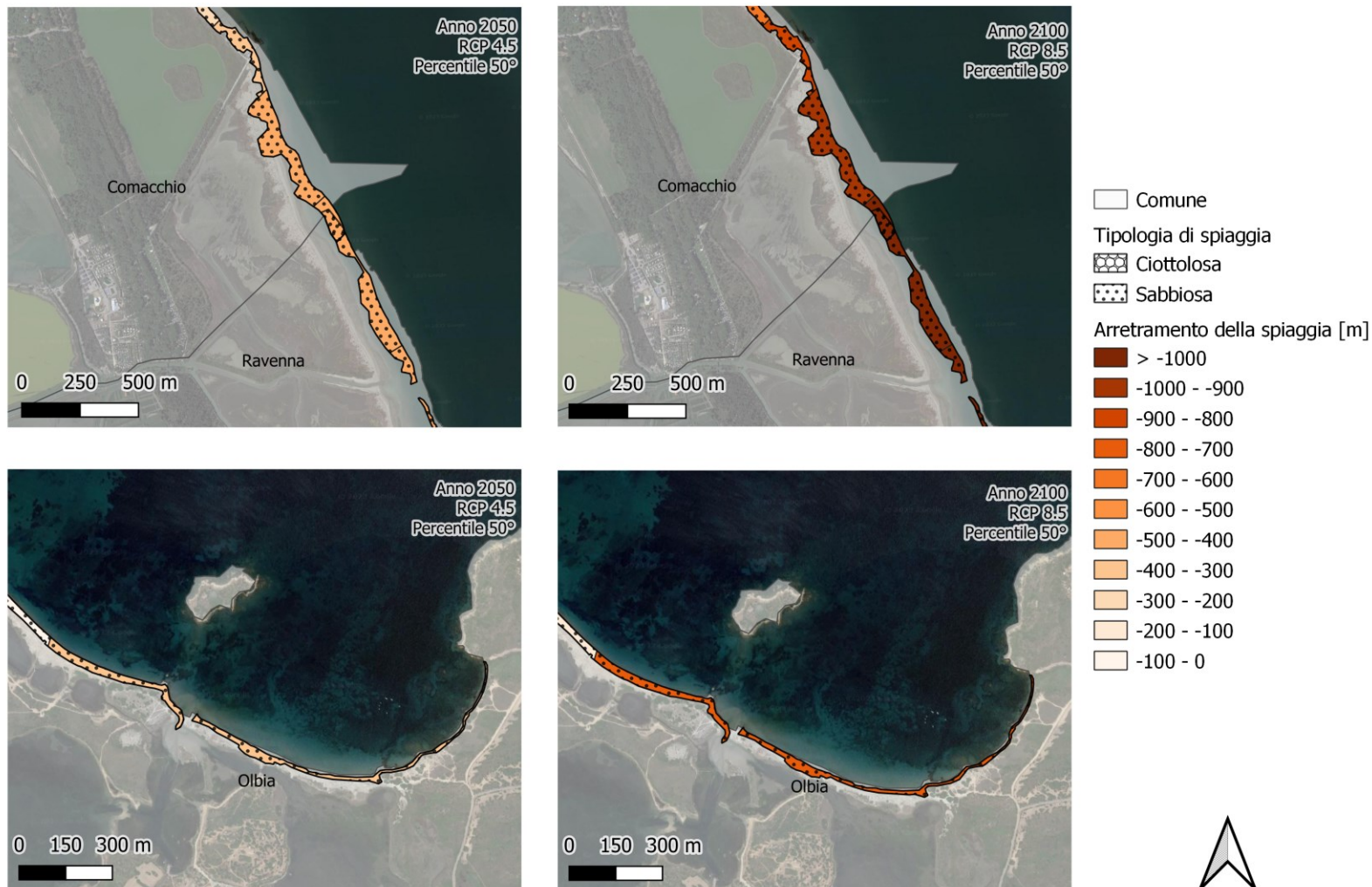
OBJECTIVES AND METHODOLOGY

- Identify beaches where coastal erosion and sea level rise scenarios (RCP 4.5 and RCP 8.5 for years 2050 and 2100) will lead to a retreat causing their disappearance or substantial reduction
 - Characterization of the coasts posed to potential retreat
 - Deduce impact scenarios on coastal tourism in 2050 and 2100 for the areas currently subject to beach concession
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- Analysis with Geographical Information System (GIS)
 - Comparison between coastal available datasets and erosion scenarios (Vousdoukas, M.I., Ranasinghe, R., Mentaschi, L. et al. Sandy coastlines under threat of erosion. Nat. Clim. Chang. 10, 260–263 (2020). <https://doi.org/10.1038/s41558-020-0697-0>)





PRELIMINARY RESULTS





NEXT STEPS

What will be the impacts of climate change on Italian concessions?





THANK YOU



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