




ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

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## **CLIMATE AND CLIMATE SERVICES**

*Climate is among the most crucial areas of contemporary research given its direct impact on human activities, security and health.*



Climate research at the University of Bologna encapsulates a wide spectrum of cutting-edge activities including basic research of atmospheric and ocean processes, model development, data analyses of past records, impacts evaluation. Special effort is devoted to develop climate services, tackling greening the economy in line with the Sustainable Development Goals (SDGs).

The research of the University of Bologna covers a wide range of issues:

- fundamental atmospheric and ocean science research
- mitigation and adaptation strategies for urban, rural and coastal areas including biodiversity and ecosystem services
- Copernicus Services for climate change, land and marine environmental monitoring including short and long-term initiatives
- smart City, climate change and resilience of the built environment, development and assessment of low-impact technologies
- use of satellite products for land and water sustainability in arid and semi-arid watersheds including studies on recurring floodings and their impact
- paleoclimate
- heritage-led and conservation-friendly resilience enhancement and sustainable reconstruction of Historic Areas to cope with Climate Change and natural hazards

## HIGHLIGHTS

The University of Bologna has led and has been involved in several solutions-oriented national and European funded projects, among them: [\*\*MADFORWATER\*\*](#) - *DevelopMent AnD application of integrated technological and management solutions FOR wasteWATER treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries*; [\*\*OPERANDUM\*\*](#) - *OPEn-air laborATORies for Nature baseD solutions to Manage environmental risks H2020*; [\*\*SOCLIMPACT\*\*](#) - *DownScaling CLimate imPACTs and decarbonisation pathways in EU islands, and enhancing socioeconomic and non-market evaluation of Climate Change for Europe, for 2050 and beyond*, [\*\*AtlantOS\*\*](#) - *Optimising and Enhancing the Integrated Atlantic Ocean Observing Systems*, and [\*\*SHELTER\*\*](#) - *Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community based Resilience*.

The University of Bologna participates in the Ice-core drilling in East Antarctica: actions should build on the outcomes of the Horizon 2020 project [\*\*Beyond EPICA\*\*](#) and contribute to the European endeavor which aims to obtain a 1.5 million year old ice-core from East Antarctica.