

CLIMATE CHANGE IMPACT ASSESSMENTS FOR ADAPTATION

Take urgent action to combat climate change and its impacts

Potential Goal



Agenda 2030



ENEA has developed Regional Climate Models providing information on climate change impact on both health, agriculture, water ecosystems, energy production and on natural phenomena such as Mediterranean tropical-like cyclones (medicanes). The novelty and innovation of these models also stand in their high level of accuracy allowing their application to ever smaller areas, reaching a 5-to-12 km resolution.

Benefits and Advantages:

- Availability of increasingly reliable, high-resolution, relocatable regional climate models
- Ability to develop services addressing global change impact;
- Enhanced representation of extreme events, such as tropical cyclones, and higher-level prediction of their number and intensity with a good degree of approximation.

ENEA Service:

- Processing of climate data at local, regional and global scale
- Design and application of climate models on regional scale
- Consulting and technical support
- Training

Completed and Ongoing Activities:

The ENEA Casaccia Research Centre (Rome) hosts a Climate Modelling and Impact Laboratory, with a staff of 15 researchers specialized in atmosphere and ocean physics. The laboratory is actively involved in the study of climate variability and its impacts on the Euro-Mediterranean area and Sub-Saharan Africa.

The Laboratory has participated as both coordinator and/or partner in several European and national projects such as:

EU-FP7 CLIM-RUN (<http://www.climrun.eu/>) - IMPACT2C (<http://impact2c.hzg.de/>) - SPECS (<http://www2.specs-project.eu/>)
EUPORIAS (<http://www.euporias.eu/>) - SINGULAR (<http://www.singular-fp7.eu/home/>) - PERSEUS (<http://www.perseus-net.eu/site/content.php>) - NEXTDATA (<http://www.nextdataport.it/>).

Currently it is involved in the following projects: H2020 CRESCENDO (<https://crescendoproject.eu/>) - Interreg-MED PELAGOS (Promoting innovative networks and clusters for marine renewable energy power Grid synergies in Mediterranean Coasts and Islands) - Interreg-IT-FR STRATUS - COPERNICUS C3S (<https://climate.copernicus.eu/>) - RITMARE (<http://www.ritmare.it/en/>).

The laboratory also provides ENEL-GP with its technical support in terms assessment and predictions on the energy potential of oceans.

The Agency also takes part in the major international sector programmes, in particular the World Climate Research Program (WCRP <https://www.wcrp-climate.org/>) under CORDEX project (<http://www.cordex.org/>); it represents Italy within the Scientific Committee of Med-CORDEX (Mediterranean Coordinated Regional Climate Downscaling Experiment <https://www.medcordex.eu/>) and manages its database, the most important and updated source of climate scenarios for the Euro-Mediterranean area.

Keywords:

climate modelling, climate change, Impacts, adaptation, environment, health, agriculture, global change, extreme events, energy, Mediterranean, Africa.



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