

Climategateway

Integrating science into planning policy



Adaptation in the agricultural sector is a focus of Thematic Centre 1
Photo: iStock

EU launches climate adaptation platforms and initiatives

Mayors Adapt — The European Commission launched the Covenant of Mayors Initiative on Climate Change Adaptation in March 2014. The initiative aims to engage cities in taking action to adapt to climate change and will showcase local actions on adaptation.

Climate Adapt — The European Climate Adaptation Platform helps users to access and share information on: expected climate change in Europe; vulnerability of regions and sectors; adaptation strategies; adaptation case studies and tools that support adaptation planning. For more information, visit: <climate-adapt.eea.europa.eu/>.

EU Cities Adapt — This DG Climate Action project provides capacity building and assistance for cities to develop and implement adaptation strategies. Learn more at: <eucities-adapt.eu/>.

DG Climate Action publication summarises Pilot Study 2

The publication *Climate change adaptation practice across the EU: Understanding the challenges and ways forward in the context of multi-level governance* was issued in 2013 by the EC's Directorate General for Climate Action. The publication contains a brief overview of climate change impacts on key policy sectors, including agriculture and forestry; biodiversity; coastal areas; disaster risk reduction; health; infrastructure; and water management. Examples of good practice are presented as possible adaptation responses. The publication also contains 10 case studies that demonstrate the research, delivery and planning that goes into climate change adaptation strategies across the EU. One of the presented studies is OrientGate Pilot Study 2, "Climate change adaptation measures in Romanian agriculture".

Elena Mateescu • NMA; Venelina Varbova • REC

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If you would like to subscribe to the project newsletter *Climate Gateway*, please write to Venelina Varbova.

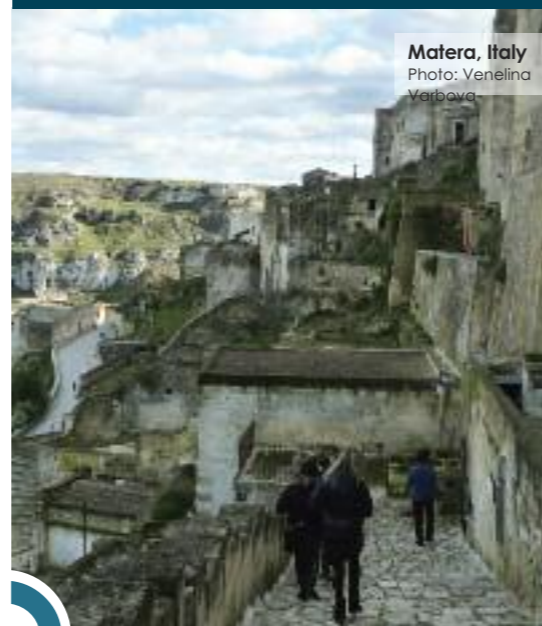
In order to enhance the impact of the project, the OrientGate partners would be happy to get in touch with other similar initiatives, individual regions with good practice in the field, as well as companies and/or organisations carrying out research on the topic. If you have relevant experience to share, please write to Giulia Galluccio or Venelina Varbova.

www.orientgateproject.org

PROJECT PARTNERS PLAN FINAL PUBLICATIONS

The final output of the OrientGate project will be a handbook that will summarise the results, lessons learned and conclusions of the OrientGate partnership. The handbook is expected to provide practical recommendations for European policy- and decision makers working in the field of climate change adaptation. The publication will be finalised in autumn 2014 and will be presented at the OrientGate final conference in December. Hosted by Regione Basilicata, a meeting of the working group of project partners involved in the preparation of the OrientGate handbook took place on January 29-30, 2014 in Matera, Italy. The project partners agreed on the structure, content and development process of the handbook, as well as on the input needed from partners.

Filomena Pietrapertosa •
CNR-IMAA (Regione Basilicata)



Matera, Italy
Photo: Venelina Varbova

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Flooding in Brcko, Bosnia and Herzegovina, 2014
Photo: Reuters/Dado Ruvic

Rising to the adaptation challenge

As a response to the unavoidable impacts of climate change, adaptation is a relatively new policy area, but one that is increasingly important at national, regional and local level. The challenge is also being addressed at European level: the EU envisages spending at least 20 percent of its 2014–2020 budget on climate-related measures, including adaptation. One of the thematic objectives of the Cohesion Policy for this period is dedicated exclusively to climate change adaptation and risk prevention. Financial resources will be allocated for improving the resilience of the built environment; protecting human health; reducing pressure on water resources; investing in flood and coastal defences; and decreasing ecosystem vulnerability.

As well as challenges, climate change presents many opportunities for European regions, municipalities and cities, which are at the front line of response to extreme weather events. Adaptation is largely a local and regional topic: local and regional authorities are the first to face the impacts of disasters and the first to implement prevention and adaptation measures. This spring's devastating floods in Serbia and Bosnia and Herzegovina clearly illustrate the need for strong, local, coordinated action. They also highlight a insufficient understanding of climate change and the need to raise awareness and encourage strong stakeholder involvement in policy planning.

The emphasis on climate change in the 2014–2020 programming period is an unprecedented opportunity for regional and local authorities to start developing strategies to address priority challenges and build resilience to climate change impacts. Transnational cooperation can help authorities to build their knowledge base and gain a better understanding of their capacities and needs. The OrientGate project is helping to address these challenges by combining scientific expertise with local knowledge in order to test practical adaptation solutions and engage stakeholders early on in the adaptation planning process.

Venelina Varbova • REC

OrientGate hosts COP 19 side event

The 19th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 19), held in Warsaw in November 2013, resulted in a decision to continue efforts towards reaching a universal climate change agreement in 2015. One of the objectives of this agreement is to build adaptation capacity.

The OrientGate project was presented at a COP 19 side event titled 'Integrating Climate Knowledge into Planning: OrientGate and Other Case Studies in South Eastern Europe'. The side event brought together scientists, policy advisors and policy makers who shared their experience, knowledge and expertise in addressing climate change issues.

The participants presented case studies, project activities and concrete strategies, such as the Regional Climate Change Strategy for Lombardy, Italy. They also discussed adaptation in urban areas, the economic and social impacts of climate change on health, regional governance models across Europe for enabling adaptation efforts, and regional activity within the context of the new EU Adaptation strategy.

Giulia Galluccio • CMCC



OrientGate at COP
Photo: Venelina Varbova

Vineyards by Lake Santa Massenza, Trento, Italy
Photo: iStock



Tracking project progress in Trento

The OrientGate project's Scientific Committee met for the fourth time on December 2, 2013, in Trento, Italy, followed by a third meeting of the Steering Committee. Partners discussed the coordination of training activities and seminars, the structure of the OrientGate final publication and other scientific issues.

The meeting was also an opportunity for partners to share experiences acquired during the implementation of the six pilot studies being carried out under the project's three thematic centres.

The Euro-Mediterranean Centre on Climate Change, Italy (CMCC) provided an update on the data platform, explaining its design and the directory structure. The Republic Hydrometeorological Service of Serbia (RHSS) provided information on the NMMS model's resolution and initial and lateral boundary data for the downscaled period. The CMCC gave another presentation titled 'Climate Simulations with COSMO-CLM, and Bias Correction of Data on the Trento Pilot Study'.

For Pilot Study 1, Adapted forest management at LTER Zobelboden, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) provided information on training activities carried out in 2013, and on the forthcoming international workshop "Forest for Water". The construction of the model and the work being carried out on indicators and the integration of model-building results were presented.

Representatives of the National Meteorological Administration and Environmental Protection Agency of Covasna, Romania, gave an update on Pilot Study 2, Climate change adaptation measures in Romanian agriculture, focusing on the monitoring of crops at selected sites. The speakers discussed a questionnaire that was distributed to farmers in order to determine the impacts of climate change on agriculture and the technologies needed to cope with them.

For Pilot Study 3, Climate change adaptation in the new water regime in the Puglia region, the CMCC discussed the Work Package 5 meeting held in Thessaloniki, Greece; progress made in terms of data, indicators and preliminary results; and the stakeholder meeting held on October 24, 2013, in Bari, Italy. The goal of the stakeholder meeting was to present approaches, methods and data, while stimulating a participative approach. Data availability was also investigated, and — most importantly — the usefulness and communicability of planned outputs.

The main goal of Pilot Study 4, focusing on Greece's Attica region, is to integrate a strategy and action plan into public consultation on territorial planning for the 2015–2020 period.

Regarding Pilot Study 5, Water resources and hydroelectric use, the Autonomous Province of Trento provided an update on current data collection efforts, including datasets on meteorology, river flows, withdrawal and large hydroelectric plants. Partners were also brought up to speed on model improvements, model testing and model performance.

Concerning Pilot Study 6, Vulnerability assessments for Budapest and Veszprem, the REC raised the topic of mainstreaming health adaptation needs into the Veszprem city plan and Budapest's District XIII. Details about stakeholder consultations were also provided in the context of developing the vulnerability assessment study. ○

Giulia Galluccio ● CMCC

"[We] joined the OrientGate partnership to further enhance our efforts to address climate change in Bulgaria at a regional level. The extensive research, analyses, case studies and policy guidelines resulting from the project will help us to integrate a number of significant topics and priorities related to coping with climate change into our national framework for regional development.

Klimentina Deneva ● Chief Secretary of the Ministry of Regional Development of the Republic of Bulgaria



Drystone trulli dwellings in Alberobello, Puglia, Italy
Photo: iStock

Thematic Centre 2: Drought, Water and Coasts

The OrientGate project is carrying out three pilot vulnerability studies within its Thematic Centre on Drought, Water and Coasts.

Pilot Study 3: Climate change adaptation in the new water regime in the Puglia region, Italy

The pilot study in Puglia is evaluating the region's water resource vulnerability in terms of magnitude, duration and frequency, based on expected climate variations. The analysis builds on observed and projected climate trends over 100 years (from 1970 to 2070), and on the estimated biophysical and economic impacts on those sectors in the region which depend greatly on water availability — namely the domestic, agricultural and tourism sectors. Existing and emerging climate-based metrics will be used as impact indicators to represent three dimensions of drought: meteorological, agricultural, and hydrological.

These indicators will be combined in order to map the most critical areas and to assess environmental, human and economic values, projected damage and adaptive capacity. The integration of impacts is facilitated by the formulation of compound and synthetic indicators that not only represent, quantify and communicate multiple impacts and their specific interactions at crossing thresholds, but also their onsite and offsite effects, as well as their immediate, long-term or cascading effects.

This wide range of activities is framed coherently with the other pilot studies, which share a number of choices for managing issues or dealing with constraints through a continuous process of interaction. The ultimate goal is to be able to replicate the chain of analysis when new and improved climate projections will be available, or when additional impacts will help to provide a more comprehensive assessment.

Pilot study 4: Effects of climate change on the wetland ecosystems of the Attica region, Greece

Pilot Study 4 focuses on the impact of climate change on wetland ecosystems, and specifically on 19 of them within the Greek

region of Attica. Both historical and recent data on climate conditions and land use are being investigated for use in impact and adaptation analyses to produce vulnerability assessments for each wetland ecosystem. The study is being carried out by the Greek Biotope/Wetland Centre (EKBY), while the Attica region is responsible for coordination, consultation and dissemination of information.

The Attica region has included the OrientGate project in its five-year programme to plan and implement policy to address the effects of

optimised management of water resources, with a particular focus on the hydroelectric sector. The study will analyse the expected impact on water resource availability as a consequence of different climate change scenarios in a context characterised by the presence of different competing anthropogenic water uses.

The study analyses two river catchments, the Noce and the Brenta, representing two different situations typical for the Alpine context — mountainous catchments where hydrologic behaviour differs due to the presence or lack of feeding glaciers.



OrientGate explores the issue of water resource vulnerability
Photo: EKBY

climate change on the environment. The region is also drafting the Preliminary Action Plan for Conservation and Ecological Regeneration of Wetland Ecosystems.

In order to disseminate information about OrientGate and to promote consultation at regional and local levels, Attica region organised a session of the Regional Council on March 27, 2014, with the involvement of mayors of municipalities in which the wetlands examined by Pilot Study 4 are located.

Pilot study 5: Water resources and the use of hydroelectricity in the Autonomous Province of Trento, Italy

The pilot study being carried out by the Autonomous Province of Trento aims to develop new guidelines for sustainable and

The aim of the study is to identify and analyse a set of hydrological indicators suitable for assessing water resource availability in both natural and anthropogenic scenarios, which allows for comparison between current situations and projected climate change scenarios. The study will identify and analyse a set of indicators related to potential hydropower production, and produce and assess vulnerability maps depicting hydropower sustainability in the context of climate change and multiple uses of water resources. The pilot study will propose criteria to improve policy for the development of the hydropower sector and guidelines for the renewal of concessions of water withdrawals for hydroelectric use. ○

Monia Sanfina ● CMCC, Eleni Mouggiakou ● Attica region, Roberto Barbiero ● PAT

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