

enhance

Partnership for Risk Reduction



www.enhanceproject.eu

ENHANCING
RISK MANAGEMENT
PARTNERSHIPS FOR
CATASTROPHIC **NATURAL**
HAZARDS IN EUROPE



ENHANCE PROJECT



Co-funded by the 7th
Framework Programme
of the European Union

What's ENHANCE?

ENHANCE aims at developing and analysing new ways to enhance society's resilience to catastrophic natural hazard impacts. For this, the project will develop new multi-sector partnerships (MSPs) between public and private sectors, with an important role for the financial sector (e.g. insurers). The hazards are related to heat waves, forest fires, flood, drought, storm surge, and volcanic eruptions.

The project delivers:

- New risk based scenarios of hazards and socio-economic trends in collaboration with stakeholders in 10 case studies.
- Concepts for new multi-sector partnerships that reduce or redistribute risks.
- Policy Recommendations, with support from our key partner UNISDR.

The Challenge

Risks from natural natural hazards are increasing through climate change and socio-economic developments. However, these trends are highly dynamic, with varying impacts at different times and places. Especially extreme – low probability - events are difficult to predict. The ENHANCE project will develop new risk scenarios with a focus on extremes. These will be evaluated in close collaboration with partners in the public and private sectors, and will contribute to the development of new multi-sector partnerships throughout Europe to reduce or redistribute risks. The role of the financial sector is critical in this process.

AT A GLANCE

Instrument:
FP7 – Collaborative project

Total Cost:
€ 7,687,123.20

EU Commission's contribution:
€ 5,992,084.80

Duration:
4 years (2012-2016)

Consortium:
24 partners from 11 countries

Project Coordinator:
Prof. Jeroen. Aerts,
VU University Amsterdam
jeroen.aerts@vu.nl

Project Objectives

- Describe indicators for successful (and unsuccessful) partnerships in improving resilience, and identify processes for fostering novel MSPs.
- Provide methods and guidelines for a harmonised scheme for risk assessment and scenarios through an inventory of existing risk information, and by developing new methods and scenarios for (low-) probability risk assessment in collaboration with MSPs.

- Describe and test through case studies, which concepts of economic instruments, including insurance and risk management policies, work for MSPs.
- Provide guidelines and policy recommendations for the horizontal integration of risk management and climate-proofing in policies.

Methodology

- The promotion of participatory processes for designing new MSPs is at the heart of the ENHANCE methodology.
- Hence, the project is designed around a work package of 10 selected participatory case studies on risk reduction of catastrophic events taking place at different geographical and spatial scales in Europe. The potential for new MSPs will be explored and resilience measures and policies will be tested and disseminated.

Expected results

- Harmonised dynamic scenarios of vulnerability, exposure, and hazard at the pan-European scale, using existing information and new probabilistic approaches for multi-hazards, heat waves, forest fires, floods, droughts, storm surges, and volcanic eruptions.
- Guidelines and key features for enhancing MSP interaction in successful resilience enhancement and risk reduction. These will be pre-tested via participatory workshops on risk-based scenarios.
- Methods for linking MSPs to novel scientific risk scenarios and assessments.

10 case-studies



Air industry response to volcanic eruptions



Building railway transport resilience to alpine hazards



Climate variability & technological risk in the Po basin



Drought management in Jucar river basin district



Flood risk and climate change implications for MSPs



Flood risk management for Rotterdam Port infrastructure



Health preparedness and heat wave response plans



Insurance & forest fire resilience



North Sea / Wadden Sea storm surges – risk culture, perception and management



Stress test: Testing the Solidarity Fund for Romania and Eastern Europe



- A toolbox of economic instruments and non-structural mitigation measures for assessing risk and increasing societal resilience. Developed in a participatory manner, these will be applicable at national, regional, and local levels.
- Policy recommendations to the EU and the Hyogo Framework for Action (HFA) signatories delivered through a dissemination platform for enhancing

resilience that encompasses all levels from governments to local communities.

Beneficiaries

The ENHANCE consortium represents a balance between academic, private, and public authorities from different European regions. Together its members are capable of achieving the project objectives.

Organisations

Institute for Environmental Studies, VU University Amsterdam	NL
Fondazione Eni Enrico Mattei	IT
Helmholtz- Zentrum Geesthacht, Zentrum für Material-und Küstenforschung	DE
International Institute for Applied Systems Analysis	AT
London School of Economics and Political Science	UK
The United Nations Office for Disaster Risk Reduction	CH
Université catholique de Louvain	BE
European Business and Innovation Centre Network / ARCTIK	BE
Instituto de Ingeniería del Agua y Medio Ambiente, Universitat Politècnica de València	ES
Environmental Change Institute, University of Oxford	UK
HKV Consultants	NL
Joint Research Centre, European Commission	EU
Instituto Superior de Agronomia, Universidade Técnica de Lisboa	PT
Academia de Studii Economice din Bucuresti	RO
University of Iceland	IS
Institute for Earth and Environmental Science, Universitaet Potsdam	DE
ClimateWise	UK
Willis Research Network	UK
Empresa Mixta Valenciana de Aguas S.A.	ES
OpenTrack Railway Technology GmbH	AT
Perspectives GmbH	DE
Agenzia Regionale Prevenzione e Ambiente dell' Emilia-Romagna	IT
Wadden Sea Forum e.V.	DE
Metacortex S.A.	PT