



Reducing risk and increasing resilience in coastal areas: PEARL and RISC-KIT projects

Wednesday, June 3, 12:45 – 13:45
CICG, Salle 15

This side event will introduce PEARL (Preparing for Extreme And Rare events in coastal regions) and RISC-KIT (Resilience-Increasing Strategies for Coasts – toolKIT), two projects funded by the European Union's Seventh Framework Programme for Research, Technological Development and Demonstration (EU-FP7) under the theme "Coasts at threat in Europe: tsunamis and climate-related risks". As a partner to these projects, WMO cooperates with many organizations, universities and research institutes in the hydro-meteorological field in Europe as well as all over the world.



PROJECTS WEBSITES

www.pearl-fp7.eu

www.risckit.eu

Programme

12:45 – 12:50	Introduction	Harry Lins, President of the Commission of Hydrology of WMO
12:50 – 13:10	PEARL - Preparing for Extreme And Rare events in coastal region	Arlex Sanchez Torres, Member of the PEARL Management Group
13:10 – 13:30	RISC-KIT - Resilience-Increasing Strategies for Coasts – toolKIT	Ap van Dongeren, RISC-KIT Project Coordinator
13:30 – 13:45	Discussion	

Background

Among natural disasters, coastal floods represent one of the most insidious for Europe, especially considering the high level of urbanization of its littoral regions. The likely intensification of extreme weather events due to climate change, combined with continued economic development and population growth, is expected to notably increase the risk of coastal floods. Meant as the product of the probability of a hazard and its consequences, the latter will have direct and indirect impacts not only on European coastal areas, but also on their hinterland, because of the ripple effects of disasters.

In light of this, a re-evaluation of coastal risk management policies is required in order to introduce more effective measures aiming at **reducing risk** and, at the same time, **increasing resilience** of local communities. Those need to be based on a holistic multidisciplinary approach integrating the improvement of technical capabilities with supportive social, economic, institutional and organisational arrangements.

By adopting this view, PEARL (Preparing for Extreme And Rare events in coastal regions) and RISC-KIT (Resilience-Increasing Strategies for Coasts – toolKIT) projects seek to develop methods and tools for the enhancement of forecasting, prediction and early warning to support policy makers and emergency services in the design of broader robust prevention, mitigation and preparedness strategies encompassing both structural and non-structural aspects.

Why two different projects

PEARL and RISC-KIT aim at the same overall goal (reducing risk and increasing resilience to low-frequency extreme meteorological events in coastal areas) sharing a common holistic **multidisciplinary approach**. Nevertheless, they apply diverse research methodologies in the pursuit of similar objectives. Consequently, different but mutually complementary results are expected from the two projects:



PEARL's expected outcomes

- A Risk and Root Cause Assessment (RRCA) approach;
- An innovative flood modelling methodology emphasising flooding occurring from multiple sources;
- Early warning systems and technologies merging formal and informal approaches;
- Resilience strategies including engineering, environmental, operational, and governance arrangements;
- Stakeholder involvement through collaborative modelling and Learning & Action Alliances (LAA);
- Science-policy interface and outreach;
- Application of all of the above to fourteen case studies (Denmark, Germany, France, Italy, Spain, Greece, St. Lucia, St. Maarten, Japan, Indonesia, Bangladesh, Philippines, Thailand, Taiwan).



RISC-KIT's expected outcomes

- A Coastal Risk Assessment Framework (CRAF) to quickly assess present and future hot spot areas of coastal risk;
- A quantitative, high-resolution Early Warning and Decision Support System (EWS/DSS);
- A web-based management guide of innovative, cost-effective, ecosystem-based DRR measures;
- A Coastal Risk Database of present and historic socio-economic and physical data;
- Application of all of the above to eleven case studies (Italy, Germany, Sweden, France, UK, Portugal, Spain, Bulgaria, Belgium, Bangladesh).