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Rapid Analysis and Spatialisation Of Risk

The Rapid Analysis and Spatialisation Of Risk (RASOR) FP7 project has developed a platform for performing flood, seismic and other geohazard risk assessments. The platform allows risk managers to simulate and analyse disaster scenarios using an intuitive web interface.

RASOR uses a scenario-driven query system that allows users to simulate disaster scenarios based on existing and assumed conditions, to make comparisons with historical scenarios, and to model multi-hazard risk both before and during an event. Managers can, for example, determine the extent of flooding in a given area and assess risks for Critical Infrastructure Systems in terms of the residual functionality of a given system (such as energy, transport or health). Public authorities can determine the potential impact of sea-surge scenarios based on actual, accurate



subsidence data and the impact on flood defence infrastructure. RASOR allows managers to use real scenarios when determining new mitigation or prevention measures, and to integrate new, real-time data in their operational systems during response activities.

The RASOR platform has the functionality required to superimpose archived and nearreal time optical and radar satellite data, and to combine them with in-situ and model data for both global and local applications. A new 12m-resolution Digital Elevation Model (DEM) TanDEM-X was used



as a base layer for flood models that simulate disaster scenarios. Several case studies are available covering a variety of flood hazards in Indonesia, Greece, Italy, the Netherlands and Haiti. An additional case study in Malawi was developed in 2016 as part of a project for GFDRR/the World Bank. Ultimately, the RASOR Consortium will offer global services to support in-depth risk assessment and full-cycle risk management.

After thirty months of development and improvements, the RASOR project was terminated at the Understanding Risk event organised by the World Bank in Venice on 16-20 May 2016. However, as RASOR Coordinator Roberto Rudari said, "This is not the end, but the true beginning of what we have built up in the last two years". RASOR is an open platform with open data and models that enables communities to perform multi-risk analysis. "Thanks to the RASOR Project, we now can identify risks better and make better decisions," said Sinta Kaniawati, the General Manager of the Unilever Indonesia Foundation and a member of the National Platform for Disaster Risk Reduction in Indonesia. "We want the RASOR Project to help stakeholders all over world. Not just national governments, but also local agencies down to the community level. We hope work on RASOR will continue without interruption so that it can be a powerful tool that will help many of us to arrive at better solutions and build a safer world".

Map showing damage by flooding in Gonaives, Haiti

Further reading: www.rasor-project.eu