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RASOR Project: Rapid Analysis and Spatialisation of Risk, from Hazard to Risk using EO data

Lauro Rossi, Roberto Rudari, and the RASOR Team
Cima Foundation, Savona, Italy (lauro.rossi@cimafoundation.org)

Over recent decades, there has been a dramatic rise in disasters, and their impact on human populations. Escalation in complexities in our societies is making risks increasingly difficult to understand and changing the ways in which hazards interact with each other. The Rapid Analysis and Spatialisation and Of Risk (RASOR) project developed a multi-hazard risk analysis platform to support the full cycle of disaster management. RASOR provides up-to-date hazard information across floods and geohazards, up-to-date exposure data from known sources and newly-generated EO-based data, and characterised quantitatively their vulnerabilities. RASOR also adapts the newly-developed 12m resolution global TanDEM-X Digital Elevation Model (DEM) to risk management applications, using it as a base layer to develop specific disaster scenarios. RASOR overlays archived and near real-time very high resolution optical and radar satellite data, combined with in situ data for both global and local applications. A scenario-driven query system allows users to project situations into the future and model multi-hazard risk both before and during an event. Applications with regards to different case study sites are presented in order to illustrate the platform potential.