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## NEWSLETTER # 2

### PAN EUROPEAN NETWORK PROFILE



The Pan European Networks Science and Technology magazine published an interview to the RASOR Coordinator Roberto Rudari to clarify objectives of the Project within the European and Global context. Here we report part of this interview that you can find integrally at:

<http://www.paneuropeannetworkspublications.com/ST12/#222>

#### How will RASOR build on established crisis management platforms and technologies?

It is a sensible approach to build on successes of other services, and, of course, we were asked by the European Commission to make the best of what had already been established within the Copernicus framework in terms of core services and other downstream services. The key innovation offered through the RASOR project is integration. That includes integrating existing applications with the next-generation Digital Elevation Model TanDEM-X, provided by DLR and Airbus over all RASOR case study areas.

#### How do these pieces, once together, support the full cycle of disaster management?

RASOR was conceived first and foremost as an analysis tool to be used to simulate scenarios and improve mitigation before disasters strike. The 'R' of the 'RASOR' acronym stands for 'rapid', but this does not refer to rapid mapping or near-real-time monitoring. Instead, it refers to being able to update models and scenarios in hours and days instead of

weeks and months. That said, RASOR can also be used to track the evolution of risk during the warning phase and to track impacts during response.

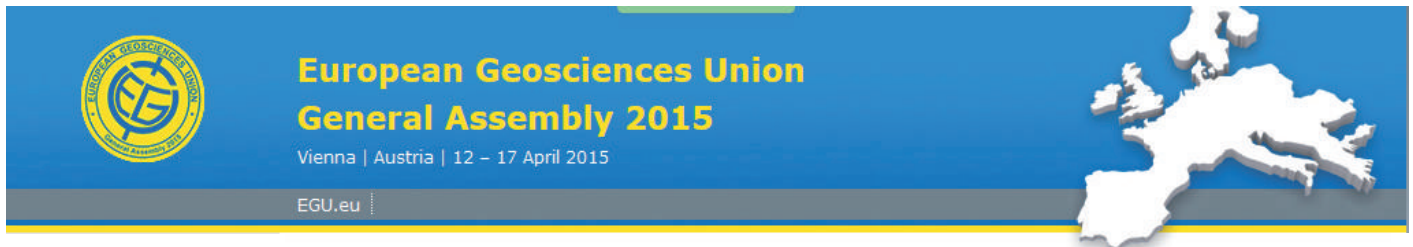
#### What progress has been made to date, and what are your long term goals?

Our long term is next April, when we will see the release of the first platform. Next June, we will present the first version of a platform to supporting partners. We will use the feedback from this to amend our work throughout the following year, with the Seventh Framework Programme phase of the project ending mid-2016. We believe that, after that, the RASOR tool can be made freely available to the global user community, together with add-on products and services provided on a commercial basis. This innovative business model means users worldwide will have access to the unique RASOR services at no cost – to either them or donors. Achieving this will be a huge step forward for global disaster risk management, and we look forward to working with global DRM stakeholders and donors to make that happen.

### PARTNERS



## RASOR @ THE EGU GENERAL ASSEMBLY 2015



**The RASOR Project will be present @the EGU** in a dedicated session on EO data application to Natural hazards and risk studies. The Session will be held on Thursday 16th at the EGU 2015 General Assembly. More than 30 contributions were received from more than seventy scientist world wide. The description of the Session follows.

**NH9.20** Application of remote sensing and Earth-observation data in natural hazard and risk studies

**Conveners:** Matthew Blackett, P. Webley , Robert Wright , Charley Hill-Butler , Roberto Rudari , Fifame Koudogbo , Alanna Leigh Simpson

Remote sensing has many fundamental applications in the study of natural hazards and risk. It has a number of advantages over traditional fieldwork expeditions including safety, the provision a synoptic view of the region of interest, the availability of data extending back several years and, in many cases, cost savings. Its applications range from visualisation and quantification of hazard phenomena to more novel approaches in hazard characterisation, modelling and risk assessment and mitigation.

The use of Earth-Observation (EO) data for such applications is all the more important today given the increased risks posed by natural hazards due to the challenges posed by contemporary issues such as climate change, population pressure and increasingly complex social interactions.

Fortunately, the advent of new, more powerful sensors and more finely tuned detection algorithms provide the opportunity to image, assess and

quantify natural hazards, their consequences, and vulnerable regions, more comprehensively than ever before.

This session will provide a forum for the dissemination of research into using new sensors and techniques for application to natural hazards. The research presented might focus on: the determination of vulnerable areas; the observation of possible precursory events and evaluation of potential predictive capabilities; the monitoring of a hazard event as it runs its course; the development of tools and platforms for assessment and validation of hazard models, or on the assessment of post-event damage. An additional application which has shown great utility in recent years has been the use of remotely detected data for hazard and risk assessments, decision support and emergency management.

This opportunity for research dissemination is particularly timely as the European Commission recently funded a Research project RASOR (Rapid Analysis and Spatialisation of Risk) which focuses on integrating multi-hazard and risk analysis with the help of satellite data. Of these possible research themes, the use of different types of remote sensing (e.g. thermal, visual, radar, laser, and/or the fusion of these) might be considered, with an evaluation of their respective pros and cons. Evaluation of current sensors, data capabilities and algorithms will be welcomed, as will suggestions for future sensor considerations, algorithm developments and opportunities for emergency management agency buy-in.

THE 3RD WORLD CONFERENCE ON DISASTER RISK REDUCTION (WCDRR),  
14-18 MARCH 2015, SENDAI, JAPAN.



UN World Conference on  
Disaster Risk Reduction  
2015 Sendai Japan

**The Third UN World Conference on Disaster Risk Reduction** will be held from 14 to 18 March 2015 in Sendai City, Miyagi Prefecture, Japan. Several thousand participants are expected, including at related events linked to the World Conference under the umbrella of building the resilience of nations and communities to disasters.

The United Nations General Assembly Resolution for 2013 on International Strategy for Disaster Reduction states that the World Conference will result in a concise, focused, forward-looking, and action-oriented outcome document and will have the following objectives:

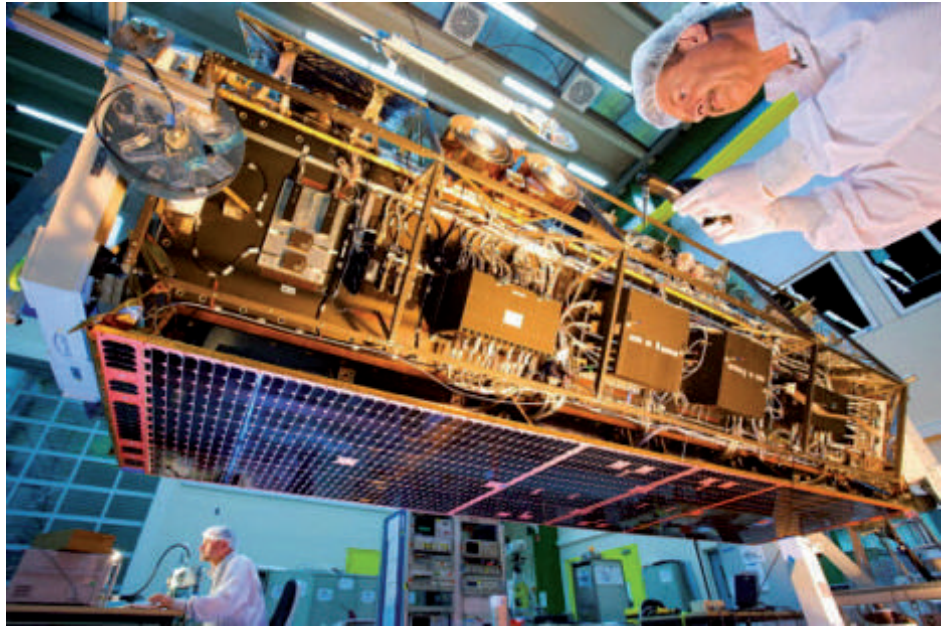
- To complete assessment and review of the implementation of the Hyogo Framework for Action;
- To consider the experience gained through the regional and national strategies/institutions and plans for disaster risk reduction and their recommendations as well as relevant regional agreements within the implementation of the Hyogo Framework of Action;
- To adopt a post-2015 framework for disaster risk reduction;
- To identify modalities of cooperation based on commitments to implement a post-2015 framework for disaster risk reduction;
- To determine modalities to periodically review the implementation of a post-2015 framework for disaster risk reduction.

The Third UN World Conference on Disaster Risk Reduction and its preparatory process welcome the participation and contributions of all relevant stakeholders, including parliaments, civil society, the International Red Cross and Red Crescent Movement, non-governmental organizations, national platforms for disaster risk reduction, focal points for the Hyogo Framework for Action, local government representatives, scientific institutions and the private sector, as well as organizations of the United Nations system and intergovernmental organizations.

Space technology is aiming at gaining even more importance in the DRR process and for the purpose strong involvement is expected from ESA and CEOS, key reference players for RASOR. RASOR being a pilot project for the CEOS Disaster pilot Working Groups will be hosted in the CEOS booth in order to gain appropriate visibility as a key project contributing to the CEOS disaster pilot. Similarly EC has some side events to the conference including one on ICT related project and Disaster Risk Reduction. RASOR will be presented at this side session named **“Environmental Supercomputing and Disaster Risk Reduction”**, showing the added value of using new technologies in DRR.

## RASOR makes an agreement with AIRBUS DEFENCE AND SPACE ON THE USE OF TANDEM-X

TanDEM-X is one of the key assets of RASOR. AIRBUS DS is holder of the exclusive commercial exploitation rights of the TanDEM-X Mission data and the WorldDEM products derived from such data; and AIRBUS DS has a strategic interest in marketing and selling products and solutions derived from the TerraSAR-X and/or TanDEM-X mission which provide high-resolution synthetic-aperture radar (SAR) imagery independent of weather conditions and illumination for change detection, topographic mapping, Digital Surface Models (DSMs), Digital Terrain Models (DTMs), and Geophysical survey. Cooperation is therefore crucial within the RASOR project framework and in future phases for the sustainability of the RASOR idea. A Cooperation Agreement is under signature between CIMA and AIRBUS DS in order to define the use of the DTM within the RASOR platform on the test sites of the RASOR Project and in future on a global scale.



The Parties agree on long-term cooperation for the joint exploitation of RASOR platform and associated services during the operative phase after end of the

FP7-project period. This joint exploitation includes free services for the RASOR Core Services, and a joint commercial exploitation for enhanced, value-added services provided by the Consortium.

## RASOR PRESENTED AT THE COPERNICUS EMERGENCY PROJECTS WORKSHOP 4 DECEMBER 2014, REA



EUROPEAN COMMISSION  
RESEARCH EXECUTIVE AGENCY

Space Research

The workshop was co-organised by the REA and by DG ENTR1. REA implements part of the FP7 and H2020 Work Programme for Space on behalf of DG Enterprise and in particular manages and monitors the progress of Copernicus projects - including projects related to Emergency - funded by the EU Framework Programme for Research and Innovation. DG Enterprise has the overall responsibility for the provision of the Copernicus Emergency Services.

The workshop aimed at presenting these new products to the EC services and at offering the opportunity to the projects to further identify cooperation opportunities and synergies between the teams. Finally the objective was also to provide an initial feedback on how projects results could be taken into account in the frame of EU needs and policy requirement.

RASOR presented its ideas and proposed its platform as an integrator of technologies and services developed by other projects. Collaboration started to concretise with LAMPRE and APHORISM as well as with other projects.

## RASOR TEAM HEADS TO INDONESIA TO MEET WITH END USERS AND DEVELOP JOINT VISION FOR RASOR ROLL-OUT IN INDONESIA.



A team led by Joost Beckers of Deltares (Flood WP leader) and made up also of Andrew Eddy (RASOR PM) and Stefano Salvi (georisk WO leader) traveled to Indonesia to meet with local end users and stakeholders. The team received strong local support from Sinta Kaniawati, RASOR Advisory Board member and General Manager of the Unilever Indonesia Foundation. The RASOR team focused its discussion on both National End user BNPB and community actor Planas, but the mission included broad ranging discussions on everything from Capacity Building and Training to local end users needs (AIFDR). The organizations that met with the team included:

**BPBD DKI** (Regional Jakarta Disaster Management Agency)

<http://bpbj.jakarta.go.id>

**PLANAS** (National Platform for DRR)

<http://www.preventionweb.net/english/professional/contacts/v.php?id=4276>

**BNBP**

<http://bnpb.go.id/?lang=EN>

**AIFDR** (along with the **Humanitarian OpenStreetMap** Team and **UNOCHA**)

<http://aid.dfat.gov.au/countries/eastasia/indonesia/Pages/humanitarian-init1.aspx>

**Institute of Technology Bandung** with participation from **World Bank Jakarta Office** and **iRisiko** (flood modeling)

<http://www.itb.ac.id/en/>

<http://www.irisiko.com>

**PusAir**

<http://www.pusair-pu.go.id>

**Java Spatial Model**

<http://www.significance.nl/papers/2008-IRSA-Java-Spatial-Model-and-water-management.pdf>

**LAPAN** (Indonesia Space Agency)

<http://www.lapan.go.id>

The mission was a resounding success, confirming both strong local and national interest for RASOR in Indonesia and Jakarta/Java, but also the relevance of the approaches being developed in RASOR to end user needs. It was decided that means should be explored now to develop a broader application of RASOR in Indonesia, identifying key hotspots and expanding the name of case study areas considered. Scenarios for funding the extension are being developed. Key end user BNPB was enthusiastic about integrating RASOR into operational work flows, but asked for a formal proposal to show the planned roll-out and integration. This proposal is also under



development and will be completed early in 2015. Indonesian ends users BNPB and PusAir will be joining RASOR colleagues from around the globe at the upcoming RASOR User Workshop in Savona, June 9 and 10, 2015.