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Dear Reader,
I am very pleased to welcome you to read the third newsletter of the Disaster Risk Management Knowledge Centre (DRMKC). Situated right at the heart of the interface between science and policy, the Knowledge Centre aims at contributing to a Europe which is better prepared for disasters within Europe and globally.

Natural and man-made disasters strike worldwide and regardless of borders with often devastating consequences for human lives, communities, environment and economies.

The better we are prepared for upcoming disasters, the faster we can react during crises to save lives and the more information we have to plan a swift recovery, the more losses can be avoided and negative impacts be reduced. The 2011 flood event in Thailand illustrated drastically how in increasingly globalized economies local events do not only affect communities directly involved. Instead their impact can quickly grow to global scale for an extended period of time, especially when supply chains become interrupted – in the case of Thailand companies producing critical computer components were forced to stop production resulting in interruptions, delays and negative effects for computer manufacturer’s around the world for several months. Thus global and cross-sectoral solutions are required.

For this reason the European Commission has specifically integrated Emergency Management into the portfolio of Copernicus, the European Union’s Earth Observation programme. The Copernicus Emergency Management Service (EMS) supports actors dealing with natural disasters, man-made emergency situations, humanitarian crises as well as recovery activities. EMS has now been operational since 2012 with a mix of early warning systems and mapping activities. The early warning systems include the European Flood Awareness System (EFAS) and the European Forest Fire Information system (EFFIS). While the early warnings systems are naturally thematically focused, rapid mapping as well as risk & recovery mapping components address a wide range of emergency situations. By addressing disasters in a multi-hazard context, Copernicus directly contributes to the goals of the Sendai framework.

An important element in the success of the Copernicus programme is that it is user driven and involves a multitude of users and stakeholders in its decision making processes. By creating networks and partnerships of scientists, engineers, practitioners and policy makers across Europe and worldwide, Copernicus serves not only as an important data and service provider but also as a hub for exchanging information across sectors and disciplines. As part of the DRMKC, it therefore contributes to enlarge the community to include other sectors and stakeholders potentially affected by disasters.

I am confident that you will enjoy reading this third edition of the DRMKC newsletter where you will learn more about Copernicus EMS, and the importance of the multi-hazard approach in disaster risk management.

Philippe Brunet
The first-ever World Humanitarian Summit convened 9000 participants from 173 Member States, including 55 Heads of State and Government, hundreds of private sector representatives, and thousands of people from civil society and non-governmental organizations to seek ways to prevent and end crises as well as to strengthen and reshape the way aid is delivered. Convened by the UN in response to an unprecedented increase of people affected by conflict and natural disaster, the summit set an ambitious goal that the safety of people, their dignity and the right to thrive are placed at the heart of global decision-making. The European Union (EU) is committed to strong progress on each of the five core responsibility areas, for which core commitments have been formulated by the UN for the World Humanitarian Summit. The EU proposed commitments concern policies, programmes and funds it is responsible for.

EC Commitments and tools

The EU, represented by Vice-President of the European Commission Kristalina Georgieva, EU Commissioner for Humanitarian Aid and Crisis Management Christos Stylianides and EU Commissioner for International Cooperation and Development Neven Mimica, supports the entirety of the core commitments put forward by the UN and has proposed 100 individual commitments for action. Among these, Commission tools and platforms support some of the actions on preventing and ending conflict and managing risks to natural disasters and climate change.

The EU will actively use its Early Warning System for Conflict to identify and anticipate risks of conflict or escalation of existing conflict in order to inform decisions on the prioritisation of resources. The system is the output of the Global Conflict Risk Index (GCRI), developed by the JRC and the EU External Action Service (EEAS). The GCRI index also provides input for the man-made risk or human hazard category of the Index for Risk Management (INFORM), the first global open-source risk assessment tool for humanitarian crises and disasters resulting from joint efforts of a partnership of international organisations and governments, including the JRC and the Commission’s Director-General for Humanitarian Aid and Civil Protection (ECHO). Another EU commitment emphasises support to the EU’s Global Climate Change Alliance plus (GCCA+) programme which aims to help the most vulnerable countries to respond to climate change in the period up to 2020.

The Global Disaster Alert and Coordination System (GDACS), developed by the UN and the JRC, will be used to better address integration of transnational detection and early warning and alert systems in order to enable a rapid response to major disasters. GDACS provides disaster managers with timely and accurate geo-spatial information, such as satellite-based maps for preparedness, emergency response and recovery monitoring of major disasters through the Copernicus Emergency Management Service. Related to the Copernicus programme, a side event was organized by the European Commission with the objectives of: i) Demonstrate the added value of geospatial information for the management of emergencies and humanitarian crises; ii) Present the benefits of the European Union’s free Copernicus Emergency Management Service (EMS) for global Humanitarian Aid and Disaster Risk Reduction actors; iii) Share information effectively and efficiently through the use of maps and statistics.

Monique PARIAT, Director-General of DG-ECHO highlighted the role of the Copernicus programme in harvesting the best of innovation for providing more efficient and effective ways for assisting emergency managers and humanitarian actors. DG GROW introduced Copernicus, the EU’s earth observation programme, now a 4.6 billion euro programme whose 6 thematic services are free of charge and can support the information needs of 9 out of the 17 Sustainable Development Goals. The JRC presented the Copernicus Services for Emergency Management and Humanitarian Assistance and provided examples of rapid mapping and risk and recovery products.

The online knowledge hub, the Disaster Risk Management Knowledge Centre (DRMKC), will allow the EU to further engage with the research community to better address disaster risk management knowledge and technology gaps and to encourage a stronger science-policy interface in decision-making.

The special session on risk and vulnerabilities focused on the development of a new, Global Risk Platform that will link various approaches to risk assessment, monitoring and management to create one global community of practice for all stakeholders, from all relevant disciplines, in order to inform decisions in humanitarian, disaster risk reduction and development sectors. The importance of risk-based decision making for sustainable development, global growth, and resilience-building was recognised and the Commission’s Disaster Risk Management Knowledge Centre will contribute to the core objectives of the platform on science and research.

More info: https://www.worldhumanitariansummit.org/
From 6–7 April the 11th EFAS annual meeting was held in Seville and opened by a welcome speech held by Mr. Anto-nio Galan Pedregosa, the general manager of the Water and Environmental Agency of Andalusia which is co-re-sponsible for the hydrological data collection for the Coper-nicus Emergency Management Service.

The EFAS annual meetings are a forum for the operational centres to brief the EFAS partners on updates and developments. An important part of the meeting consists in the feedback of the partners and the discussion of further service evolution. This year, the focus of service evolution was on rapid risk assessment, the extension of the EFAS domain and the integration of radar data from the pan-European OPERA network providing overviews over past and upcoming rainfall fields blended with nowcasting techniques. The methodology has been developed as part of the ERICHA project which was funded by DG ECHO.

Presentations related to the Copernicus rapid mapping and the evolution of the Copernicus Space Component were chosen to foster further exchange of expertise with the hydrological community for the Copernicus services. In particular, the use of flood forecast information to trigger timely production of satellite rapid mapping is still one of the key issues for further research and development.

Furthermore, the EFAS meetings are also a means of presenting new, relevant developments in related initiatives. In this context an introduction to the DRMKC was given highlighting the benefits of coordinated knowledge management for the hydrological forecasting community. The support service as well as the cross-linking to other networks such as the loss and damage networks was highlighted as a definite added value. The DG ECHO Pilot project Early Warning System for natural disasters “ARISTOTLE” was also presented as one of the DRMKC initiatives. ARISTOTLE will provide the European Civil Protection with a multi-hazard impact assessment and is executed by the meteorological and hydrological services in Europe.

More info:
http://www.efas.eu
From Sendai to Paris: climate action and disaster risk reduction

The EU and its 28 member states signed the Paris Agreement on climate change on 22nd April, as part of a total of 175 countries. This first-ever universal, legally binding global climate deal is a major milestone in global efforts to fight climate change. The Paris Agreement sets out a global action plan to keep global temperature rise this century well below 2°C and to drive efforts to limit the increase even further to 1.5°C above pre-industrial levels. It also aims to strengthen the ability of countries to deal with the impacts of climate change and contains substantial provisions on financial and technical support for developing countries.

Many of the outcomes of the Paris Agreement and the Sendai framework on disaster risk reduction (DRR), agreed at the United Nations World Conference on DRR in March 2015, are mutually reinforcing in their goal to promote resilience to natural disasters and reduce the vulnerability of people exposed to climate change impacts. The Paris Agreement’s objective of limiting global temperature rise to well below 2°C was set in recognition of scientific evidence: staying below this limit will significantly reduce the risks and impacts of climate change. Moreover, the Agreement establishes a global goal on adaptation to these impacts. Countries committed to enhancing their adaptive capacity, reducing vulnerability and engaging in adaptation planning, including the development of impacts and vulnerability assessments.

The Paris Agreement also recognises the importance of addressing loss and damage associated with the adverse effects climate change. It aims to promote further understanding and action for example through early warning systems, comprehensive risk assessment and management, and risk insurance tools. The importance of understanding disaster risk in all its dimensions is also a priority for the Sendai framework.

Now is the time to implement what was agreed in Paris and Sendai. Further developing synergies and coherent approaches to climate change adaptation and disaster risk reduction will be key to promote effective action towards a more risk-aware and resilient society.


PLACARD Workshop: Key Outcomes

On May 17th 2016 the workshop “Learning across communities of practice: risk assessment for disaster risk reduction and climate risk management” was held at Ca’ Foscari University in Venice. The event was co-organised by the Foundation Euro Mediterranean Centre on Climate Change (CMCC), Fondazione Eni Enrico Mattei (FEEM) and Ca’Foscari University in the context of the European research projects PLACARD1 and ENHANCE2, and featured as a session of the Understanding Risk Forum 2016 (16-20 May).

The workshop focused on the vital role empirical and evidence-based risk analysis and assessment can play in disaster risk reduction (DRR) and climate change adaptation (CCA). It was organized around three thematic sessions. The first two parts aimed at reviewing and comparing quantitative and qualitative methods and tools for risk and impact assessment in the environmental and economic disciplines respectively, while the third one was devoted to discussing the opportunities and constraints that emerge when moving from risk assessment to the implementation of sound policies.

As highlighted during the event, a better understanding of natural hazard risks, the ensuing economic losses and the perception of risk is of utmost importance. This helps in preventing macroeconomic imbalances, coordinating responses to shocks and crises and facilitating post-disaster recovery as well as enhancing the understanding of natural impairments which hold up economic, social and territorial cohesion.

Discussions underlined the growing demand for multi-scale integrated and operational climate risk assessments to inform climate change adaptation strategies, identify hotspot regions and sectors, and monitor and evaluate measures taken in the past.

The importance of using interdisciplinary approaches (including methods, tools, indicators and decision criteria) was emphasised and the essential role of local government commitment, strong stakeholder involvement and co-production of knowledge in reducing disaster risks and their further implications (e.g. on cultural heritage) was stressed.

While encouraging dialogue across different communities of practice, the workshop provided a unique opportunity for exploring gaps and fragmentation challenges in current CCA and DRR research, policymaking and practice. These include, for instance:

- the mismatch between information produced by scientists on one hand and the needs of practitioners and policy makers on the other;
- the lack of data on physical infrastructure assets and economic commodities;
- the efficiency of overall data sharing;
- the need for tools to support proactive decision-making;
- the need for an enhanced involvement of the business and private sector.

More info:
http://www.placard-network.eu/
http://www.enhanceproject.eu/
The European Commission held its Disaster Prevention Expert Group meeting on 26 April in Brussels. The Expert Meeting gathered representatives of 21 Participating States and a number of relevant Commission services (JRC; CLIMA, and REGIO) and projects (ARISTOTLE).

The main objectives of the meeting were to provide an update on the National Risk Assessments submitted by 22 December 2015, for which 30 contributions have been received to date. The meeting also allowed for a first discussion on the revision of the EU overview of risks and to update Participating States in the Mechanism on relevant policy initiatives and developments such as critical infrastructure protection, climate change adaptation, Sendai Framework Action Plan, Cohesion Funds, Disaster risk insurance and the ARISTOTLE early warning network.

**Disaster Prevention Expert Group National Risk Assessment discussion**

**DRMKC lunch event**

The ARISTOTLE project was invited to a lunch seminar on 27th April in order to share with DG ECHO the aims and developments of the project as well as the ways it will support ECHO’s work.

The European Commission (Ian Clark, DG ECHO) chaired the event and presented the objectives of the DRMKC and the role it intends to play in the disaster management community. In addition, he highlighted the gaps that it aims to bridge between the scientific and the DRM communities through the use of different tools, one of which is ARISTOTLE. The European Commission (Spyros Afentoulidis, Olimpia Imperiali, DG ECHO and Alessandro Annunziato, Ioannis Andredakis, DG JRC) stressed the need for increased collaboration between science and the DRM community and expressed the relevance of the ARISTOTLE project to the work of the Emergency Response Coordination Centre (ERCC), which acts as a coordination hub in the Union Civil Protection Mechanism at the forefront of supporting the affected population within its mandate.

The ARISTOTLE project was presented by the project coordinator, Alberto Michelini, who introduced the processes put in place for internal project communication and the delivery of products to the ERCC. ARISTOTLE brings together 15 leading institutions from different European countries in a common endeavour to build up a scientific partnership that can be of support to the ERCC around the clock.

The core concept of the project is that the partnership, which extends over a wide range of natural hazards (earthquakes, tsunamis, volcanic eruptions, floods and severe weather), will deliver a dedicated reporting service to the ERCC. That will also include scientific advice by a panel of selected experts with the final objective of increasing ERCC and UCPM Participating States’ preparedness levels thereby decreasing response time. In addition, the partnership aims to eventually integrate further partners across all natural hazards and hence its structure will be developed so as to be fully scalable.

More info:
http://drmkc.jrc.ec.europa.eu/
On 17th May 2016 the Science for DRM report workshop with Coordinating Lead Authors was held in Venice back-to-back with the Understanding Risk Forum. The location was kindly provided by the Fondazione Eni Enrico Mattei (FEEM) and the Euro-Mediterranean Centre on Climate Change (CMCC) at the University of Ca’ Foscari (Venice). The event had a parallel session on “Learning across communities of practice: risk assessment for disaster risk reduction and climate risk management”, which was organised in the frame of the ENHANCE and PLACARD projects.

The workshop was the first physical meeting organized with Coordinating Lead Authors of the "Science for Disaster Risk Management 2017: Knowing better and losing less" report. The Authors’ team consists of 7 Coordinating Authors, 29 Lead Authors and more than 80 Contributing Authors from different European countries and institutions.

This multi-author report is one of the activities promoted within the Disaster Risk Management Knowledge Centre to support a solid science-policy interface for DRM. The report is the first in a series and will be comprehensive in scope but selective in topic. It will fill the gap in preparation for the Sendai framework for DRR and show the positive exploitation of EU research funding. It shall provide reviews of the scientific evidence base and its practical use in various areas of disaster risk management in Europe. It will be written in a format that is intended to be accessible to the well-informed practitioner and policy makers, seeking to understand the scientific issues of relevance to their work. The focus will be on European contributions but on topics that can be global scale.

It follows the “Bridge concept” where the scientific part of the report represented by two chapters of “Understanding disaster risks” and the governance part of the report presented by chapter “Managing disaster risk” is bridged by a “Communicating disaster risk” chapter, intended to explain how to approach various DRM actors as well as the public.

During the meeting DG ECHO’s representative, Ian Clark, outlined the main expectations from the policy side with respect to the Science for DRM report while Sergio Castelletari from the European Environment Agency ensured that the scoping process is well coordinated with the 2017 EEA report on Climate Change Adaptation and Disaster Risk Reduction in Europe.

The meeting was dedicated to aligning Coordinating Lead Authors’ views, ideas and expectations in order to guarantee a coherent approach and to meet the goals of the report. Coordinating Lead Authors were able to express their views as well as the needs they have in facing a tough challenge in terms of scope.

The discussions allowed a common understanding of the concept and structure of the report thereby promoting internal cross-referencing, coverage of cross-cutting issues and coherence with other on-going activities.

On 16th and 17th March 2016, the European Commission’s Joint Research Centre organized a training workshop on "Risk assessment for natural-hazard impact on hazardous chemical installations". Focusing on EU Candidate and Neighbourhood Policy Countries, the workshop trained the participants in the assessment and reduction of chemical-accident risks triggered by natural hazards (so-called Natech risk) and provided hands-on training on the Joint Research Centre’s RAPID-N tool for rapid Natech risk assessment and mapping to support decision making. Several EU Member States also participated in the event.

The workshop showed that the participating countries are experiencing the same difficulties related to Natech risk reduction as EU and OECD countries:

1. The Natech risk in some countries is very high, as hazardous industry is located in natural-hazard prone areas.
2. Some countries have already experienced Natech accidents in their territory.
3. Frameworks for chemical-accident prevention and preparedness exist, but Natech risks are rarely explicitly considered.
4. Competences related to chemical and Natech risk reduction are sometimes distributed across ministries which can reduce the effectiveness of risk-reduction efforts.
5. There is a strong need for: Natech risk-assessment methodologies and tools, guidance on Natech risk mapping, early warning systems, and awareness raising and training.

There will be a follow up to this workshop to accommodate bilateral training requests. RAPID-N is currently implemented to assess the risk of earthquake impacts on fixed chemical installations and pipelines. Work to extend it to floods as accident triggers is underway.

RAPID-N is freely available at http://rapidn.jrc.ec.europa.eu
For training requests, contact Elisabeth Krausmann: elisabeth.krausmann@jrc.ec.europa.eu
More info: http://publications.jrc.ec.europa.eu/repository/handle/JRC61931

The Adaptation Futures 2016 conference held from 10 to 12 May in Rotterdam addressed the science, policy and practice of climate change adaptation both in the EU and internationally. The event also looked at links between climate change adaptation (CCA) and disaster risk reduction (DRR).

The conference was organised by the Dutch Government, the European Commission (with the Directorate-General for Research and Innovation in the lead) and the UN adaptation science network PROVIA. This fourth worldwide conference by PROVIA brought together over 1700 scholars, practitioners, policymakers and business people from 110 different nationalities. More than 160 high level plenaries, roundtables, science and practice sessions covered seven themes and three cross-cutting issues, including disaster risk reduction and risk assessment.

A dedicated session on the second day focused on fostering synergies between CCA and DRR at different governance scales with presentations from the UN Office for Disaster Risk Reduction (UNISDR), the European Investment Bank and the Global Network of Civil Society Organizations for DRR.

The session concluded that while CCA and DRR offer solutions to promote sustainable development, many challenges still exist in terms of putting these solutions into practice. International frameworks such as the Sendai Framework for DRR and the Paris Agreement on climate change show us the way, but increased coherence is needed to facilitate implementation at the local level. Interesting options in this regard include supporting partnership and implementation initiatives, developing strategies that leverage each other, aligning tools and metrics to assess progress, sharing risk information and developing knowledge on risks and risk assessment.

Moreover, it is essential to promote risk-informed policies which take into account the interconnections between risks and can therefore better respond to the complexity of challenges faced at the local level.

More effective participatory approaches should also be developed to involve local communities in strategic planning. Local residents understand climate change, disasters and poverty in a more holistic way and can help develop more resilient answers. Better two-way communication between global actors and local communities is thus needed to take advantage of the opportunities created by the global agreements concluded in 2015.

The importance of fostering synergies between DRR and CCA was also highlighted in the concluding plenary by Jos Delbeke, Director General for Climate Action.

A view on more resilient flood risk governance – six key findings

European countries, especially in urban areas, face increasing flood risks due to urbanization and the effects of climate change. Dealing with these increasing flood risks is a persistent governance challenge. There is, however, a knowledge gap. Comparative studies that provide encompassing institutional analyses of flood risk governance, focus on multiple countries and assess the actors, rules and resources related to multiple flood risk management strategies are missing.

The EU FP7 project STAR-FLOOD (2012-2016) addressed this gap. The project has led to key findings based on analyses, explanations and evaluations of flood risk governance arrangements in Belgium, England, France, The Netherlands, Poland and Sweden. Based on these key findings, design principles for appropriate and resilient flood risk governance were identified. The key findings pertain to:

• the actual and necessary diversification of flood risk management strategies
• developing connectivity between actors, levels and sectors
• the involvement of private actors, including businesses, NGOs, and citizens in flood risk governance
• diversification of rules and regulations related to FRM
• the development of appropriate financial and other types of resources (e.g. knowledge)
• evaluations of flood risk governance in terms of resilience, efficiency and legitimacy.

The project’s main results can be downloaded at www.star-flood.eu. These main results include six country-specific reports, eight policy briefs, a practitioner’s guide and a final report entitled “A view on more resilient flood risk governance”.

More info:
http://www.starflood.eu/

Interview with

John Marinos
UN-OCHA Asia Pacific

On 20 and 21 February 2016 Tropical Cyclone WINSTON, the most powerful cyclone to strike the Pacific in recent times, devastated Fiji, killing 44 people and damaging or destroying 32,000 houses. Around 40% of the nation’s population was affected.

On 20 and 21 February 2016 Tropical Cyclone WINSTON, the most powerful cyclone to strike the Pacific in recent times, devastated Fiji, killing 44 people and damaging or destroying 32,000 houses. Around 40% of the nation’s population was affected. John Marinos, Regional Information Management Officer for UN-OCHA Asia-Pacific was dispatched to Fiji to support the coordination of the humanitarian emergency response; his role is to ensure data and information is professionally collected, processed, analyzed and disseminated.

Q1 - What were the conditions that made OCHA mobilise you to Fiji and what were the timescales of the mobilisation?
TC Winston was tracked by OCHA for several weeks as it moved across the south Pacific. The threat was amplified by the issuance of a GDACS red alert on 17 Feb. When it became clear that Winston would strike Fiji with potentially
serious humanitarian impacts, two staff were sent as surge support from OCHA’s Bangkok office to reinforce the regional office in Fiji.

We were deployed before the storm made landfall on February 20th on a ‘no regrets’ basis so that we were positioned and ready to fly to Fiji as soon as the airports opened. Once the scale of the emergency and response was apparent a 20+ OCHA and UNDAC team deployed to reinforce the Fiji office to assist the government in coordinating the response.

Q2 - What were the primary needs and what kind of challenges did you face in terms of Disaster Management?

The immediate needs were the same needs in all such disasters; shelter, food, water and sanitation, and health, all underpinned by the need for logistics coordination support. Initial assessments confirmed that food, shelter and debris clearance were among the most urgent needs. The challenges faced in terms of disaster management were also similar to other emergencies.

There was an urgent need for information at a time when accurate information is incredibly difficult to get. Which areas are damaged? How bad is it? What are the priorities? What assistance have they already received? Who is providing assistance and where? What can we do to assist those in the most urgent need? In this situation, the information challenges were compounded by the geography of Fiji, with damage spread across close to 200 islands. These are all the types of questions that needed to be answered with contributions from the various partners working in the field including the Government of Fiji, but also the UN, Red Cross, INGOs, Local NGOs, foreign militaries, and the private sector. Harnessing all this goodwill and capacity in an emergency environment is inherently difficult.

Q3 - To come to Disaster Risk Management, do you think that better DRM (mainly by the local authorities) would have helped you (as OCHA) and themselves be better prepared and deal better with the situation? In which ways?

This is hard to say and not my area of expertise. However, OCHA’s Regional Office for the Pacific has invested heavily in training disaster responders across the region to help prepare for events like Winston. It has paid off with the Government leading this response using established and recognized systems to quickly get assistance to those in need.

Q4 - One of the main objectives of the DRMKC is to increase the role of science in DRM. Could you identify some ways in which Science helped to deal with the situation? (For example, through early warning data, risk maps etc.) How could Science have helped to reduce the risks even more?

Science related to early warning saved lives during TC Winston and alerted the humanitarian community so that they could prepare for the threat posed by this storm. The fact that a curfew was imposed on the day of the cyclone’s arrival and emergency evacuation procedures issued, definitely saved many lives. However, we cannot take for granted that everyone in every community has the same level of understanding of what a “Category 5” cyclone or a large storm surge means in practical terms. The scale of this cyclone and its impacts was unprecedented in Fiji and people simply had no point of reference to help them adequately prepare. Ongoing work is needed to ensure people fully understand their warnings and the steps they must take to prepare for the arrival of such a cyclone.

The Fiji Meteorology Service storm track itself, in conjunction with population projections from the census were used to estimate the number of people potentially affected. This was essential to inform early planning. Satellite imagery, aerial photography and mapping also provided early insight to which areas were the worst affected.

Q5 - Another pillar of the DRMKC is to improve science-based advice through networks and partnerships. Can you think of ways that the situation in Fiji could have been better dealt with, had there been more cooperation between DRM-related organisations?

That is a hard question to answer. The reality is that the Government of Fiji did an excellent job responding to the situation. Generally speaking, my advice to DRM-related organizations who want to help during an emergency response is to work closely with those agencies on the ground, first and foremost the Government authorities.

Q6 - You’ve been involved in precursor work in OCHA for the Index for Risk Management (INFORM). Can you comment on how such an open, collaborative and shared approach to risk assessment adds value?

I was involved in managing the precursor to INFORM. That process presented challenges because part of the methodology was proprietary and available to others only at a price. Moving to an open and collaborative process, meant a more robust and defensible methodology. It ensured and encouraged transparency.

This collaborative approach results in greater buy-in from all stakeholders and facilitates the aid community to rally behind a single risk model for common planning. There is no question that the approach taken for INFORM is an improvement in every possible way. Additionally, being aware of risks and government capacities helps in advance mobilisation, prepositioning and contingency planning for timely and effective response.
Q1 - Which are the most important natural risks and disasters Andalusia is facing? How is your administration managing multiple threats and dangers?

The most important hazards are floods, droughts and fires. We have produced flood hazard and risk maps for all our hydrographic basins, as well as information on erosion, desertification and fire risks. With regard to fires, our regional fire management plan, called INFOCA, is an international reference. We are also a partner in the European Forest Fire Information System (EFFIS) network. When we look at the number of fires and burnt areas, in relation to other regions located in areas which are less prone to fire proliferation, we achieve very good results with our approach.

Q2 - Which are the most important natural risks and disasters Andalusia is facing? How is your administration managing multiple threats and dangers?

We have produced flood hazard and risk maps for all our hydrographic basins, as well as information on erosion, desertification and fire risks. With regard to fires, our regional fire management plan, called INFOCA, is an international reference. We are also a partner in the European Forest Fire Information System (EFFIS) network. When we look at the number of fires and burnt areas, in relation to other regions located in areas which are less prone to fire proliferation, we achieve very good results with our approach.

Q3 - How do disaster risk management plans managed and implemented in Andalusia, especially when it concerns multiple risks and threats?

We have a good coordination among all the administrations levels. All emergency plans are managed through Civil Protection (112), which depends on the Justice and Home Affairs Council of the Andalusian Government. The regional centre is in Seville and every province has a local centre from which all types of emergencies are coordinated. We organize regular training sessions to increase our preparedness and render our coordination more efficient. For example, yesterday we practiced an earthquake simulation in Seville, coordinated by the Justice and Home Affairs Council and with the participation of the central government, city councils, etc. Simulations of this kind help us to reduce the impact of a disasters when they strike.

Q4 - What is the added value for Andalusia to take part in the European network on disaster risk management?

Sharing experiences with experts and technicians from other areas enriches the way in which we tackle the natural disasters. We learn from other areas of Europe with a long experience in, for example flood risk management, and we export knowledge in areas where we are acknowledged experts, like forest fires.

Q5 - How important is communication in the multi risk pre-alert service, and what are the obstacles to ensuring its efficient implementation?

Facing an upcoming catastrophic event, the first priority is to inform the population – but sometimes the new communication channels seem to change faster than the capacity of the administration to adapt. Therefore the use of the new technologies and keeping them up to date is essential.

Q6 - The European answer to the UN Sendai Framework for Disaster Risk Management has been the creation of the Disaster Risk Management Knowledge Centre (DRMKC), which aims to share scientific information in Europe. What benefits are you expecting from the Knowledge Centre?

Catastrophes have no frontiers, therefore coordination across countries and different levels is essential for adequate responses. Initiatives such as the DRMKC are key to improving the communication and coordination between countries, regions, and other institutions. Sharing information, knowledge and experiences on best practices within Europe is essential and important for our region.

Q7 - How does Andalusia manage to integrate scientific and technical information to the political and legal ambit and how this could improve?

Research and science play an important role in our policy making. Inside the Andalusian council we have high level experts and we connected to many scientific projects. Policy decisions need to take in house scientific and technical knowledge into account. Furthermore, we also have agreements with other scientific institutions, agencies, the national Scientific Research Superior Council (CSIC), which provide us with their knowledge which we then integrate into our daily management.
The purpose of the meeting will be to allow the partners to connect-up and take forward reflections on the INFORM partnership, methodology, ongoing and new initiative at global, regional and national level and other past and future work that the INFORM group has been engaged with.

16-17 June, Florence (IT) High Level Forum on Implementing the Sendai Framework for Disaster Risk Reduction at Local Level

In lieu and on the occasion of the 50-year anniversary of the devastating Florence floods, the Government of Italy and the City of Florence in partnership with the United Nations Office for Disaster Risk Reduction (UNISDR) are organizing a High Level Forum gathering Ministers, Mayors, policymakers, local government authorities, private sector, experts urban resilience and disaster risk reduction.

29 June-01 July, Ispra (IT) Global Flood Partnership Annual Meeting

The meeting’s theme is “Linking Global Flood Information with Local Action” and it aims review the advances and success stories of the Partnership, to assess the challenges and opportunities ahead, and to discuss steps needed to further strengthen the partnership in order to address users’ needs effectively.

14 July, Colorado (USA) Engineering for Climate Extremes Partnership Workshop

The Engineering for Climate Extremes Partnership (ECEP) is a collaboration between Industry, Commerce, Society, Academia and Government facilitated by NCAR with the goal of developing robust, well-communicated predictions and advice on the impacts of weather and climate extremes to support robust/resilient decision-making.

13-14 June, Milan (IT) Science for DRM 2017 report June workshop for Coordinating Lead Authors and Lead Authors

The main scope of the Workshop will be to finalize the agreed by coordinating lead authors and lead authors abstract, table of content and set of key words for each one of the subchapters.

15 June, Paris (FR) PREDICT Project Workshop “Enhancing preparedness for and response to cascading effects - Showcasing the PREDICT decision support tools”

PREDICT project has been running for two years now and important milestones have been achieved in the development of the PREDICT Tool Suite (IPDT). During this 4th expert workshop, participants will be given an overview of the PREDICT solution and some of the tools integrated in the solution will be demonstrated live. Participants will then be able to use these tools during hands-on sessions.

21-23 June, Brussels (BE) Mid-Career Security Managers in Critical Infrastructure Protection and Resilience

Since February 2015, following a working document produced by the ERNCIP’s Academic Committee, the ERNCIP (European Reference Network for Critical Infrastructure Protection), in close collaboration with DG Home, is working on the establishment of a “pilot course for Mid-Career Security Managers in Critical Infrastructure Protection and Resilience”.

22-23 June, Brussels (BE) 4th CoU event on Crisis Management

The 4th meeting of the Community of Users (CoU) will focus on Crisis Management with a focus on natural hazards. A webstreamed plenary meeting will be held on the 22nd June, providing a general feedback about on-going and starting H2020 projects and policy updates, while a side-event on climate extreme events will take place on the 23rd June, gathering relevant FP7 and H2020 projects in this area.

12-15 September, Ispra (IT) 7th International Tsunami Symposium

The 7th International Tsunami Symposium of the International Tsunami Society will be held at the JRC in Ispra, Italy. The Symposium will focus primarily on Tsunami Risk Analysis and Disaster Management, on the 16 September 2015 Illapel, Chile Mw8.3 Earthquake, and on the near and far field tsunami impacts, as well as on potential future impacts from tsunamis generated in Central and South America.

16 September, Ljubljana (SL) Stress tests for critical infrastructures against natural hazards. The Stress project

Critical Infrastructures (CIs) provide essential goods and services for modern society; they are highly integrated and have growing mutual dependencies. Recent natural events have shown that cascading failures of CIs have the potential for multi-structure collapse and widespread societal and economic consequences.

20-21 September, Turin (IT) 1st International Workshop on Resilience

It is the objective of this workshop to assess and develop strategies on how to improve community resilience against a major event. We will chart a path for tackling new challenges in evaluation and repair of existing structures, design of new structures.

Read more and submit your events
http://drmkc.jrc.ec.europa.eu/overview/Events
and infrastructure, cost-effective risk management, and impact on society and economy to increase the resilience of the communities in which we live.

**4-8 July, Budapest (H)**
CEU Summer School – Geospatial Technologies and Remote Sensing for Monitoring SDGs
With the recent adoption of the Sustainable Development Goals (SDGs) and the call by UN Secretary General for a “revolution” in the use of data for sustainable development, geospatial technologies have tremendous potential to effectively and efficiently monitor SDG progress.

**11-15 July, Budapest (H)**
CEU Summer School – Innovations in Disaster Risk Reduction
The Innovations in Disaster Risk Reduction (DRR) workshop will highlight recent advances in information and communication technologies (ICTs) and how they are empowering both decision-makers and citizens to play a proactive role in managing disaster risks and providing more effective disaster response.

**12-16 September, Ferrara (IT)**
RISC-KIT Summer School on Disaster Risk Reduction in Coastal Areas
RISC-KIT, a European project funded under the 7th Framework Programme of the European Commission, is developing a toolkit to improve resilience and preparedness in exposed areas to improve Disaster Risk Reduction (DRR) and to protect human life and investment.

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**DRMKC pillars**

**INNOVATION**

**PARTNERSHIP**
Improving science based advice through networks and partnership

**KNOWLEDGE**
Improving the use and uptake of research and operational knowledge

**innovation**
Advancing technologies and capacities in disaster risk and crisis management

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**Where knowledge begins**
Fostering EU-level disaster science networks in support to the European Response Coordination Centre (ERCC) and Member States.

**Where knowledge applies**
Providing science-based advice to policy development and science-based support to policy implementation to improve science-policy interface.

**Where knowledge meets**
Pooling of information and granting accessibility to research results and expertise to boost transfer of research outputs to end-users.

**Analyzing existing knowledge and needs**
Dissemination of knowledge, research results and information looking for identification of research needs and gaps in disaster risk and crisis management.

**Filling the gaps**
Support System implemented to provide Member States with technical advice for a harmonized development of risk assessment and risk management capabilities.

**Innovating and testing**
Development of dedicated technologies and capabilities to support different types of emergency management operations and disaster recovery processes.

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**DRMKC Objectives**

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**DRMKC bridging science, policy and operation**

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The Disaster Risk Management Knowledge Centre (DRMKC) is aimed to enhance EU and Member State resilience to disasters and their capacity to prevent, prepare and respond to emergencies through a strengthened interface between science and policy.

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