



# Disaster Risk



# Management



# Knowledge Centre

Pooling knowledge and networks in disaster risk management

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NEWSLETTER #5

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## A year of solid results!

*One year ago, on 30th September 2015, the DRMKC was launched. One year later we can summarise the DRMKC's activities in numbers...*

**49** GDACS Alerts

Global Disaster Alert and Coordination System: 15 red level and 34 orange level alerts

**>60** Sub-National INFORM

Countries with Sub-National INFORM Multi-Hazard Risk Assessment

**106** News & Events

Shared by our users through DRMKC website

**>120** Scientific Authors

Scientific experts in natural and man-made hazards for report

**>150** Reviewers

Policy Makers, Practitioners and Scientists for report

**160** Registered Users

Experts registered in DRMKC website

**176** Uploaded Documents

Documents available to registered users

## **A year of solid results!**

**281** Project Coordinators  
EU Coordinators of DRM related projects

**384** Projects  
EU DRM related funded projects gathered

**641** Newsletter recipients  
DRM related experts receiving our Newsletter

**>1000** Participants  
DRM experts participating in DRMKC events

**2491** Organisations  
Research organisations involved in DRM projects

**24.000** GDACS Users  
User registered at the GDACS Portal

**590.000** Alerting SMS  
Messages sent by GDACS in the last 12 months

**1.400.000** Alerting emails  
Emails sent by GDACS in the last 12 months

***A huge THANK YOU to our network!***

## Editorial



Vladimir Sucha, Director General, Joint Research Centre  
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*One year ago, on 30th September 2015, the JRC together with six other Commission services launched the Disaster Risk Management Knowledge Centre. At the time of the launch we agreed to work together in a new way to bridge the gap between science, policy making and operations, and I am very happy that the Knowledge Centre has been working exactly in this spirit.*

*The Knowledge Centre has been conceived to pool knowledge, to make it available in the right format at the right time to conceive evidence-based policy, and to help knowledge to cross borders between nations, institutions, disciplines and sectors.*

*I believe that during this first year it has already started delivering on these objectives and I am very proud to mention some of its achievements:*

The Knowledge Management concept has been widely embraced across the Commission and JRC is one of frontrunners of it. In this spirit and to provide a strong base for the DRMKC, I have created a Unit dedicated to knowledge production and management in disaster risk, including civil protection, climate adaptation, urbanisation and conflict.

Our number of partners within the Commission increased during this first year. Three more Directorates-General have joined the Knowledge Centre: SANTE, GROW, and REGIO, bringing into it various new dimensions such as health and pandemics, the Copernicus Programme and the Urban Agenda. This interest proves that science is a common baseline to several policy areas, and can provide a platform for cross-policy discussions.

Furthermore, the Knowledge Centre at EU level was able to mobilise stakeholders from academic, scientific, practitioner and policy backgrounds to meet and share ideas. Tangible outcomes are already visible even in this short period.

The DRMKC has enabled sharing knowledge among 17 existing EU and international networks, has facilitated capacity transfer among Member States (projects with Italy, Spain and UK), has piloted a 24/7 science-advice service (ARISTOTLE), and has mapped a Community of Users in Horizon 2020.

The DRMKC is also working on a flagship science report with over 120 authors. The report "Knowing Better and Losing Less" will be released at the UNISDR Global Platform in Cancun, Mexico in May 2017. It is a first report in a series aimed at identifying gaps and opportunities for future research to achieve the ambitious goal of the Sendai Framework for Disaster Risk Reduction.

Member States are also fully on board. The next assembly is the Second Scientific Seminar of the DRMKC, on 9-10 March 2017 in Rome, will be hosted by the Italian Civil Protection. It will be an opportunity for all stakeholders to meet, discuss progress and future objectives of the DRMKC.

I congratulate the whole community involved in the Knowledge Centre to make this initiative a success, and I would like to assure you that the JRC remains committed to drive this process, together with participating DGs in the Commission, in order to put science to work to increase resilience in all Member States and beyond.

**Vladimir Sucha**

## Partnership

### Asem high-level meeting on disaster risk reduction and management: innovation and technology for resilience-based sustainable development



Attendees at the ASEM high-level meeting on disaster risk reduction and management

© Ministry of Agriculture and Rural Development of Viet Nam

On 14th and 15th September 2016 in Da Nang City (Vietnam), the Asia-Europe (ASEM) High-level Meeting brought together over 120 participants, from a broad range of backgrounds.

From the policy side there were senior policy-makers, national and local government officials as well as practitioners and representatives from international and regional organisations.

In addition, experts from ASEM members, disaster managers and researchers were present alongside international humanitarian assistance organisations, NGOs and businesses.

The 2 days meeting provided a platform for ASEM members to exchange best practices and to consolidate proposals to enhance cooperation in the application and utilisation of innovation and technology in disaster risk reduction. It focused on supporting the achievement of the goals of:

- A.** Sendai Framework for Disaster Risk Reduction 2015–2030
- B.** 2030 Agenda for Sustainable Development
- C.** Paris Climate agreement.

The Conference outcomes included a number of recommendations to enhance the cooperation between ASEM partners in DRRM, including:

- Science and Technology for effective and transparent decision- and policy-making in Disaster Risk Reduction and Management (DRRM)

- Strengthening Asia–Europe Cooperation and dialogue on innovative tools for resilience-based sustainable development
- Strengthening cooperation on investment in innovative technology and raising awareness of resilient communities
- Innovative Disaster Risk Reduction Financing for Sustainable Development

The DRMKC will contribute to promoting the ‘partnership approach’ which brings scientists from different disciplines and regions together and connects them to practitioners and decision makers. This mechanism aims to accelerate the use of science and technology for disaster risk reduction.

In this context, the activities of the DRMKC were presented in order to provide the EU experience. The DRMKC attempts to improve science-based services through networks and partnerships as well the collaboration among relevant stakeholders from the DRM community (research centres, practitioners, governments and private sector). All the pillars and objectives of the DRMKC were mentioned, with a focus on Partnership activities.

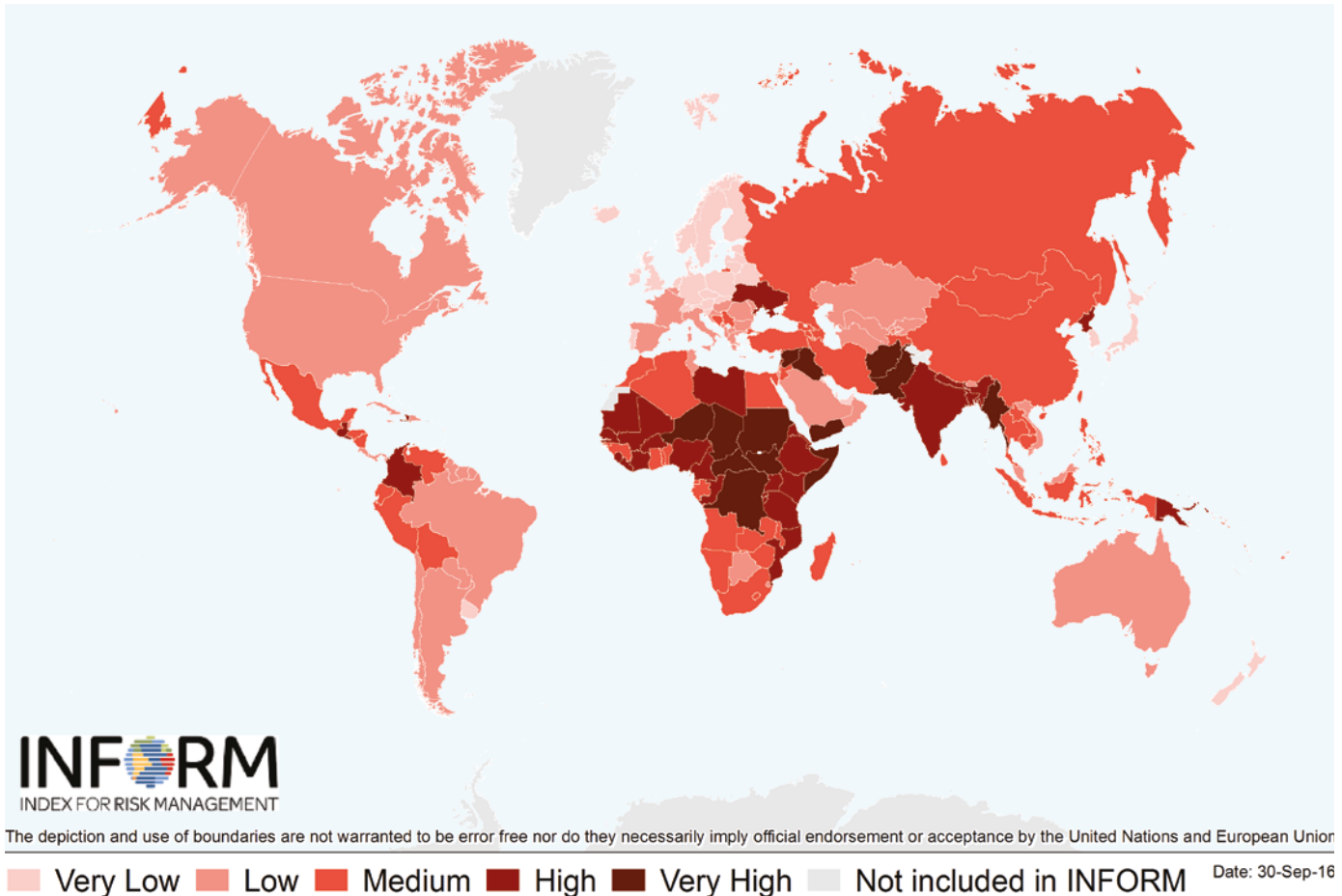
Regarding the specific partnerships to enhance cross-cutting collaborations among stakeholders in Asia – Europe, 3 were presented: Global Disaster Alert and Coordination System (GDACS), Copernicus EMS and Natech (eNatech and RAPID-N).

More info:  
<http://www.aseminfoboard.org/>  
<http://emergency.copernicus.eu/>  
<http://www.gdacs.org/>  
<http://rapidn.jrc.ec.europa.eu/>





## Release of the 2017 INFORM Global Risk Index



Map showing the INFORM 2017 risk results

© INFORM

INFORM has released the results of its 2017 Global Risk Index. INFORM is an open-source risk assessment tool designed to support decisions on crisis and disaster prevention, preparedness and response. At [www.inform-index.org](http://www.inform-index.org) you can find a spreadsheet containing the results and also find more information.

For the 2017 INFORM, several improvements have been made:

- A measure of reliability is now displayed for each country. It is presented as a Reliability Index on a scale from 0-10 and takes into account missing data, out of date data, and conflict status. Countries with lower Reliability Index scores have risk scores that are based on more reliable data.
- “Maternal mortality ratio” has been added as a new indicator in the “Access to Health System” component of the “Lack of coping capacity” dimension.

- The Global Conflict Risk Index, which is used in the “Projected Conflict Risk” component of INFORM, has been significantly improved.

- The exposure layer used for Natural Hazards has been changed from LandScan to the Global Human Settlements Layer Population Grid by JRC.

Later in 2016, INFORM will release its Annual Report with further analysis. The results are released in advance so that they can be used to support annual planning processes.

More info:  
<http://www.inform-index.org/>



## Flood Emergency Response Co-organized by Community of Users and DRMKC 21 October 2016, Lyon

This side event to the FLOODrisk2016 conference aimed to identify practical, efficient and intuitive ways to support working practice of the Emergency Response Community of Users – in this instance, in relation to flood risk management and emergency response.

There are complex interactions between different types of stakeholder and different types of flood (coastal, fluvial and flash floods). Stakeholders are involved in civil and environmental protection as well as spatial measures and governance, all of which require a structured dialogue and actions to ensure that emergency response measures are effective and remain an essential ingredient in the required mix of solutions.

The way in which research-related and technological solutions are initiated and transferred to "end users" varies from country to country, and between different networks and industry sectors. Examples of success stories and failures offer a valuable learning opportunity for identifying solid and sustainable mechanisms that might be developed to support the Community of Users, building from both international and local actors and looking at both the push and pull of information and technologies.

Hence, during this event focus was put on what works well and what does not when it comes to the translation of science to policy and subsequently to the implementation of tools (including their access to the market) for emergency response management in the field of floods. This was undertaken through a combination of plenary examples of practice that has worked and not worked in different situations, followed by group sessions to collate and consider wider feedback on suggested priorities and process. The need for enhanced cross and trans-disciplinarity, and for mechanisms of information flow from the international to the local levels and vice versa have been of particular interest.

More info:  
<http://floodrisk2016.net/>



© FLOOD Risk

## Joint Expert Meeting on Disaster Loss Data: EC, Organisation for Economic Co-operation and Development (OECD) and PLATform for Climate Adaptation and Risk reDuction (PLACARD)

The Expert Meeting will take place from the 26th to the 28th October 2016 at the Organisation for Economic Co-operation and Development (OECD) Headquarters in Paris. The workshop will gather around 50 experts from National Authorities, academia and international organisations to facilitate an exchange on the progress made to improve disaster loss data collection in EU countries and the wider OECD country context.

Relevant international frameworks are now dealing with disaster loss data. In particular, the Sendai Framework 2015-2030 is leading the development of indicators on loss data through the Open-ended Intergovernmental Expert Working Group (OIEWG) on Indicators and Terminology for Disaster Risk Reduction. The indicators set in the Sendai Framework will be used in other agreements dealing with disaster losses, including the climate change Paris agreement and the Sustainable Development Goals (SDGs).

The expert meeting is organised at a crucial moment before the last round of the OIEWG. The meeting can serve as a platform to discuss, before the final global negotiations to be held in November 2016, the relevance and feasibility of proposed indicators in the data-rich environments of EU and OECD countries. The objectives of the workshop are:

- Evidence-based assessment of the Sendai Indicators in the data-rich environments of EU and OECD countries;
- Integration of Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA): benefits from recording and sharing loss data in a common way;
- Feasibility of reporting for Sendai Framework: good understanding of the achievements of the OIEWG on Sendai indicators and ways the European Commission can support Member States (through the DRMKC)
- Better understand current country practices to consolidate expenditure data on disaster risk management ex-ante and ex-post;
- Distil good practices and existing challenges when it comes to consolidating public expenditure data for disaster risk management;
- Facilitate exchange and contribute to the discussion on how governments can introduce methodologies and standards to produce comparative data on disaster risk expenditures to inform policy decisions.

More info:  
<http://drmhc.jrc.ec.europa.eu/>



## Four Tsunami Service Providers Accredited



Participants of the ICG /NEAMTWS-XIII, Bucharest, Romania, 26-28 September 2016, Source: Denis Chang Seng/ IOC-UNESCO

© Denis Chang Seng/ IOC-UNESCO

The Thirteenth Session of the Intergovernmental Coordination Group for the Tsunami Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and connected seas (ICG/NEAMT WS) was held from 26–28 September 2016 in Bucharest and hosted by the National Institute for Earth Physics of Romania. It marked an important milestone in the development of NEAMTWS.

The session will be particularly remembered for the Group’s approval of the accreditation of the four Candidate Tsunami Service Providers:

- CENTre d’Alerte aux Tsunamis (France)
- Istituto Nazionale di Geofisica e Vulcanologia - Centro Allerta Terremoti (Italy)
- National Observatory of Athens (Greece)
- Kandilli Observatory and Earthquake Research Institute (Turkey)

The Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and connected seas (ICG/NEAMTWS) was formed in response to the tragic tsunami on 26 December 2004, in which over 250,000 lives were lost around the Indian Ocean region. Since 2005 this group has worked to create an official monitoring structure that sends out alerts in the case of a Tsunami event, in a similar way to the PTWC in the Pacific Ocean. The structure that was created in the NEAMTWS foresaw the creation of several Tsunami Service providers (4 at the moment but Portugal is preparing to become an additional Provider for the North Atlantic Region, currently covered by CENALT, France).

The JRC’s role over the years has been to support several Tsunami Centres (Greece, Turkey, Romania and Portugal among the ones mentioned above) with provision of the Tsunami simulation database and the Decision Support System Software (Tsunami Analysis Tool).

More info: [http://www.jcomm.info/index.php?option=com\\_oe&task=viewEventRecord&eventID=1867](http://www.jcomm.info/index.php?option=com_oe&task=viewEventRecord&eventID=1867)



## Innovation

### DRMKC Support Systems

JRC is organizing the 7th European Crisis Management Laboratory (ECML) workshop on Social Media for Crisis Management in order to discuss opportunities and challenges in relation to the use of social media in Crisis Management. In the last decade, social media tools (e.g. social networks) have changed the landscape of personal interactions and - to some extent - the relation between citizens and Institutions.

Recently some organizations have attempted to use Social Media also in the field of crisis management, from preparedness to disaster response. While people affected by natural disasters seek and share information through SNS (social networking websites), increasingly governments and response agencies could rely on social media to get first-hand information and, inter alia, coordinate relief efforts, as shown in 2010 during the Haiti earthquake or in the case of the Haiyan Tropical Cyclone in Philippines of 2013.

The aim of this workshop is to invite tool providers and end users (e.g. Civil Protection, First Responders, Coordinating Institutions, Early Warning Authorities) to explore the present and the future of technologies in this field. The number of participants is limited to 35. Participation is free of charge. Lunches, coffee breaks and social dinner are courtesy of JRC. Registration is mandatory for preparing entry permits to the JRC site.

#### Structure

The workshop is divided in two days. While on the first day, the participants will explore topics and/or explain case studies through presentations, on the second day a set of activities will be carried out.

These activities aim both to assess tools and to discuss options (e.g. technological innovations but also latest research developments) for the future. In doing so, the workshop will shed light on approaches to social media in the field of crisis management and on practical demonstrations alike.

More info: <http://drmkc.jrc.ec.europa.eu/laboratory/SupportSystem>

Risk Assessment

Disater Loss Data

Risk Management Capability Assessment

Science Policy Interface

Early Warning

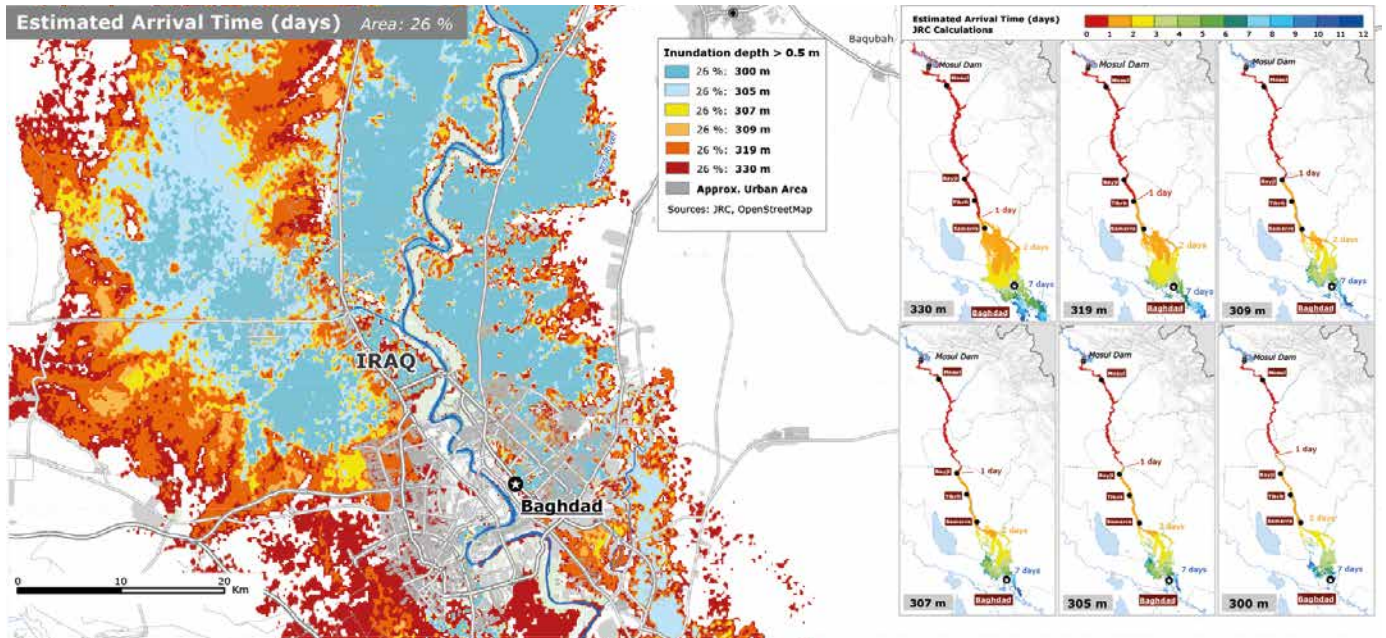
DRMKC facilitates the sharing of good practice between Member States

© European Commission





## JRC Studies on the Mosul Dam Failure consequences



The map above reports the inundation areas of Baghdad as a consequence of several scenarios of various Mosul Dam Lake Sea Level (from 300 to 330 m). The highest is the initial sea level the widest is the inundation. On the right site the inundation timeline is shown. The smallest is the sea level the largest is the time for the wave to reach the various areas along the Tigris river.

© European Commission

In June DG-ECHO held a coordination meeting with the EU Civil protection agencies and UN-OCHA in order to report the results of an exploratory mission conducted on site and to start the preparation of a deployment plan to be implemented in case of a failure of the dam. The plan should be used as a tool providing guiding principles for a rapid and coordinated response.

JRC contributed to this activity by providing a series of calculations on the possible effects of the dam failure in order to support the UN mission on-site and give them concrete reports to be shown to local government, thereby to convince them to start a serious preparation activity for a potential large humanitarian crisis.

The main scenario, where the dam is 26% destroyed and the level is at its maximum value of 330m, results in a very high wave (25m high, mean height around 12m) arriving at Mosul city in less than 2h. The capital Baghdad is reached after about 3.5 days with a max water height of 8m and a mean of around 2m. The simulations suggest that in the above scenario a total of more than 6 million people would be affected by floodwaters, with two million of them facing water of more than 2m. Another important conclusion of the study showed that a parallel channel, that was supposed to avoid the flooding of Baghdad, in reality had only a minor influence on the city inundation extent and depth.

More info:  
<http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101555/lbna27923enn.pdf>

## The Mosul Dam

*The dam of Mosul on the Tigris river in northern Iraq is the largest in the country and holds around 11 km<sup>3</sup> of water. Built on water permeable rock, the inherent instability of the Mosul dam has been known since it was built and this was mitigated by continuous grouting.*

*In recent years, adequate maintenance has not taken place, leading to concerns about the safety of the dam. In 2003 the government decided to lower the maximum water level from 330 to 319 metres. During the recent conflict, due to the temporary occupation by the ISIS, maintenance has again been disrupted and signs at the dam have triggered renewed concerns.*

*As a result, the government of Iraq have contracted the Italian engineering company Trevi to undertake remedial work on the dam. A UN mission of UNDAC experts left for Iraq in early April to assess the situation, supported by an associated expert from the European Union Civil Protection Mechanism.*



## Final dissemination workshop of STREST project



Critical Infrastructures

© STREST

The final dissemination workshop of the 'Harmonized approach to stress tests for critical infrastructures against natural hazards' (STREST) project took place on the 16th of September 2016 at the University of Ljubljana.

The project, funded by the European Union's Seventh Framework Programme, aimed to design an innovative **stress test framework for non-nuclear critical infrastructures**. The main objectives of the workshop were to present to stakeholders the stress test methodology and results of the exploratory application and to discuss with representatives of the INTACT, RAIN and INFRARISK research projects their work and possible future steps.

Focusing on earthquakes, tsunamis, geotechnical effects, floods and various domino effects, STREST tackled the following themes: lessons learned from existing regulations and past research projects, **hazard assessment** of low-probability high-consequence events, **vulnerability** of critical infrastructures to extreme events, development of the STREST **stress test methodology** and framework, **exploratory applications** on six key representative critical infrastructures in Europe.

STREST produced knowledge, methodologies and tools for improved and more reliable stress tests for critical infrastructures, decision-making, prioritisation of mitigation options and preparedness, all leading to **increased societal resilience**. These results support the implementation of the European policies for disaster risk reduction and the

Sendai Framework target for reducing disaster damage to critical infrastructures.

The presentations highlighted a number of **technical aspects** that should be further developed in future studies, such as the treatment of uncertainties, cascade effects and multiple hazards, the lack of loss data for model calibration, and the effects of cumulative damage and long-term degradation of components.

A key issue that emerged from the exploratory applications is the **lack of harmonised levels of acceptable risk** across countries and types of critical infrastructures. It is therefore recommended that regulators and operators define common levels of risk objectives.

The participants agreed on the need to capitalise on the wealth of knowledge produced within the EU Framework Programme for Research and Innovation and to promote transnational cooperation and the wider involvement of operators and regulators, with a view to the **development of guidelines** for stress tests of critical infrastructures.

More info:  
[www.strest-eu.org](http://www.strest-eu.org)





## 6th International Disaster and Risk Conference 2016



Walter J. Amman, President and CEO Global Risk Forum, addresses the conference. D. Chirondojian (JRC), G. Peter(JRC), S. Nishikawa, S. Cauffmann, P. Gelton and A. Molenaar also on the panel.

© European Commission

Resilient communities and societies are in a position to withstand major disruptive events, with minimal losses and optimised recovery times.

Resilience is not an intrinsic capacity of communities and societies; it rather requires investment, collaboration among authorities involving critical infrastructure owners as well as the civil society in the framework of an inclusive effort of planning, implementation, review and adaptation to emerging challenges. Resilience is an iterative process that needs to be unequivocally introduced in the overall planning of modern communities and societies. Emerging issues in Europe and worldwide are dictating a paradigm shift: It is not just adverse events that stress communities and societies, the current socio-political situation needs to be considered and taken in to serious consideration.

The JRC organised a plenary session during the IDRC 2016 conference with the involvement of the Dutch Ministry of Security and Justice, the Rotterdam city (one of the 100 resilient cities) the National Institute for Standards and Technologies from the US and the Japan Centre for Area Development Research, all providing their experience in an effort to create stronger links between research and implementation, policy and practice.

This session stimulated the debate in the scientific community towards identifying innovative and novel ways to address current and future challenges related to resilience, leveraging the research efforts in several areas. On the other hand, it demonstrated the gap that exists in terms of implementation of resilience in developed areas and the need for closer collaboration and dissemination of best practices at global level.

More info:  
<http://idrc.info/>

## Making Cities Sustainable and Resilient

Over the next three years the UN Office for Disaster Risk Reduction (UNISDR) and the United Nations Human Settlements Programme (UN-Habitat) aim to reduce disaster losses in some of the world's most hazard prone cities with the aid of an initial €6 million grant from the EU.

Mr. Neven Mimica, European Commissioner for International Cooperation and Development said "Strengthening disaster risk governance is an essential part of sustainable development and a key priority of the Sendai Framework. I am delighted that with EU support this project will help vulnerable cities become more resilient to disasters, increase the awareness of local authorities of future risks, and promote engagement of people living in these cities in reducing disaster risk."

The project "Making cities sustainable and resilient: implementing the Sendai Framework for Disaster Risk Reduction 2015-2030 at the local level" is key to achieving a substantial increase in the number of countries with national and local disaster risk reduction strategies by 2020 as called for in the Sendai Framework, the global blueprint for reducing disaster losses. Making cities and communities resilient is also key to achieving the Sustainable Development Goals. The cities and towns covered by the project include Kathmandu, Nepal, a country where almost three million remain homeless following an earthquake last year which killed 8,800 people, and Port Vila, Vanuatu, which suffered heavy economic losses as a result of Category 5 Hurricane Pam which hit in March last year.

The project also seeks to expand the Making Cities Resilient Campaign with a further 560 new cities and local governments to join the 3,200 cities and towns that already participate in the Campaign which requires a commitment to implement ten essential actions for building resilience. The Campaign was launched five years ago by UNISDR and the Campaign Steering Committee is currently chaired by UN-Habitat. Through the project, at least 200 cities and local governments will be assisted in assessing their gaps and progress in building resilience.



Post-earthquake reconstruction efforts get underway in Nepal

Photo: International Federation of Red Cross and Red Crescent Societies

More info:  
<http://www.unisdr.org/campaign>

## 1st International Workshop on Resilience



Attendees at the 1st International Workshop on Resilience at the JRC in Ispra

© European Commission

Despite the substantial progress made in science and technology towards improved performance of the built environment, during recent decades natural disasters, acts of terrorism, and social unrest have persistently been responsible for loss of life, disruption of commerce and financial networks, damaged property, and loss of business continuity and essential services.

Many physical infrastructures are vulnerable to natural hazards (e.g. along coastlines and in earthquake-prone regions) as well as man-made hazards, and across the world the risk of damage due to hazardous events continues to increase.

Resilience of infrastructure is of fundamental importance in recovery from a disaster. Major research activities on resilience-based earthquake engineering have been supported and coordinated by large research groups and networks. However, even with this progress, the earthquake engineering community is still facing many new challenges. Today, a principal question is how to use resilience-based seismic engineering in practice to steward our built environment and make it safer, resilient and sustainable in the future.

To address these fundamental issues the 1st International Workshop on Resilience was organized by the Politecnico di Torino and the JRC from 20th – 22nd Sept. 2016. Its aims were to develop a common global vision for earthquake engineering and resilience design, while recognizing unique regional traditions and to assess and develop strategies to improve community resilience against a major event.

In the case of the Amatrice earthquake, which was cited as an example in a presentation, the resilience problem was immediately evident. In fact, despite the overall excellent level of the Civil Protection services, the inefficiency of several critical infrastructures was identified. In particular the local hospital was seriously damaged and rendered inoperative; the emergency and first-aid units had to be installed in the car park located in front of the damaged buildings.

Moreover, the incoming first-aid operations became extremely difficult due to the loss of functionality of the transport infrastructure (roads, bridges, etc.); several ambulances and emergency vehicles had to wait in line at the city borders. Some police stations were also severely damaged and schools collapsed.

During the workshop a path was charted for tackling the challenging issues in assessment and repair of existing structures, design of new structures and infrastructure, cost-effective risk management, and impact on society and the economy in order to increase the resilience of the communities in which we live. In this direction, it is worth citing the impressive ongoing program set up by the US National Institute of Standards and Technology, in which the Center of Excellence for Risk-Based Community Resilience Planning (NIST-CoRE) has also been created.

More info:  
<http://www.workshop-torino2016.resiltronics.org/>





## Science for Policy Interface



The science-policy interface represents a space where both scientists and policy makers can interact and cooperate using the available knowledge and their existing needs to develop a “ready for use” knowledge directly applicable to the support of policy implementation.

Depending on the institutional and social context, the structure of these interfaces varies. Two previous JRC studies, “Surveying the landscape of science/policy interfaces for disaster risk management policy making and operations” and “Science Policy Interfaces in Disaster Risk Management in the EU”, highlighted the important role of science in disaster risk management among EU Member States and mapped who and where were the actors providing scientific input.

Nonetheless, in practice, many barriers hinder the translation of science into policies and programmes. In particular, lack of resources, expertise and trust can impede the production of relevant, legitimate outputs. In fact, every year much research is funded but its impact seems to remain low.

Based on publicly available material and interviews with practitioners, policy-makers and scientists, the current study presents tools and mechanisms implemented in different countries to link science and disaster risk activities. These “smart practices” depict procedures that facilitate the production of information in line with end-user needs while at the same time ensuring that the most robust available science is at hand for policy-making and investment in DRR.

On the one hand, these practices will be the basis for formulating a framework for DRM to be monitored in the EU to facilitate and replicate effective interactions between the three communities (scientists, policy-makers and practitioners) and, on the other, for sharing European expertise and capacities within the DRMKC.

This report will be published by the JRC in December 2016 and is one of the outcomes produced under the objective “Challenges and Gaps” within the pillar dedicated to the Knowledge at the DRMKC.

More info:  
<http://drmkc.jrc.ec.europa.eu>

## 2nd authors meeting of the 2017 EEA report: “Climate change adaptation and disaster risk reduction in Europe, Synergies for the knowledge base and policies”

On 27 - 28 September the 2nd authors meeting of the 2017 EEA report on integration of Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) was held at the European Environment Agency (EEA) in Copenhagen. In mid-2017 the EEA will publish the report “Climate Change adaptation and disaster risk reduction in Europe –Synergies for the knowledge base and policies”. It will provide an overview of the policies and practices at European and National level on CCA and DRR with particular focus on differences, opportunities and potential future synergies between the two communities.

The main objective of the meeting was to discuss the development of the report among core team authors from both the EEA and the European Topic Centre on climate change impacts, vulnerability and adaptation (ETC/CCA) as well as identify where further work is needed and find solutions to fill these gaps.

The JRC presented the expectations, the structure, the process and the current status of the first periodic DRMKC science report in order also to understand the synergies between the EEA and the JRC report. The first in the series “State of Science on Disaster Risk Management 2017: Knowing Better and Losing Less” shall provide reviews of the scientific solutions and its practical use in various areas of DRM in Europe and will be published as multi-author monography edited by JRC in May 2017.

The cross- collaboration among the editorial teams of the two key reports published next year is an essential part of the preparation processes on both sides (EEA and JRC). This has been achieved through informing each other on the concepts, structures and developments of the reports as well as being actively present at the authors’ meetings. As both reports are focusing on a similar target audience, i.e., policy decision makers and scientific/technical experts from disaster risk reduction and the climate change adaptation community, it is very important to ensure a well-coordinated scoping exercise that will result in coherent and complementary reports.

More info:  
<http://www.eea.europa.eu/>

### 3<sup>rd</sup> European Climate Change Adaptation Conference Our Climate Ready Future

Glasgow, 5th-9th June 2017

<http://ecca2017.eu/conference/>

## Upcoming Events



### PARTNERSHIP

#### **28 April-15 December, Various EU Neighbourhood Countries**

##### **Bilateral Workshops for Capacity Building in EU Neighbourhood Countries for Seveso Implementation**

DG-ECHO and JRC are launching a series of bilateral workshops with EU Neighbourhood countries to foster collaboration and exchange of knowledge and tools for chemical accident risk reduction in support of the ECHO/JRC project on building capacity in Seveso implementation in European Neighbourhood countries, an initiative within the EU Civil Protection Mechanism. JRC and Member State experts will focus on risk assessment methods and practical applications (including JRC tools) and provide insights into EU good practice for enforcement and risk management.

#### **23-24 November, Athens (GR)** **PSCE Forum Conference**

The key themes of the second PSCE Conference of 2016 are: 1) Border security – control & surveillance. 2) Natural disasters. 3) Security by Telecommunications in transport. 4. Broadband.

#### **28 November, Ljubljana (SI)**

##### **Joint UNECE/OECD Seminar on Fostering implementation of the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015–2030 for industrial accidents prevention, preparedness and response**

UNECE Convention on the Transboundary Effects of Industrial Accidents and the OECD Working Group on Chemical Accidents organize a Joint Seminar on Fostering implementation of the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015–2030 for industrial accidents prevention, preparedness and response on 28 November

2016 in Ljubljana, Slovenia. The main objective of the Seminar is to discuss how the work of UNECE and OECD on industrial and chemical accidents prevention, preparedness and response can contribute to achieving the sustainable development agenda, in particular the relevant Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development and the goals and priority actions set out in the Sendai Framework for Disaster Risk Reduction 2015–2030.

#### **23-24 February, Brussels (BE)** **Ministerial Meeting of the Global Health Security Initiative 2017**

A Ministerial Meeting of the Global Health Security Initiative will take place on 23-24 February, in Brussels, organized by the European Commission, aiming to discuss top priorities in health security. The Global Health Security Initiative is an informal, international partnership among Canada, France, Germany, Italy, Japan, Mexico, the United Kingdom, the United States, the European Commission, and the World Health Organization, to strengthen global health preparedness and response to biological, chemical, radio-nuclear threats and pandemic influenza.



### KNOWLEDGE

#### **5 November, Worldwide** **World Tsunami Awareness Day**

In December 2015, the UN General Assembly designated 5 November as World Tsunami Awareness Day. The Assembly called on all countries, international bodies and civil society to observe the day, in order to raise tsunami awareness and share innovative approaches to risk reduction. The debut World Tsunami Awareness Day focuses on education and evacuation drills.

#### **09 November, Toensberg (NO)** **Mutual Joint Visit Programme for Seveso Inspections on Explosive**

#### **and Firework Sites**

Together with the Norwegian Ministry of Civil Protection, the JRC will organise its annual workshop for Seveso inspectors under the Mutual Joint Visit Programme. This year's workshop will foster EU exchange on challenges and good practices for improving safety associated with explosive and fireworks manufacturing and storage.

#### **28-30 November, Ljubljana (SI)** **Conference of the Parties to the UNECE Convention on the Transboundary Effects of Industrial Accidents**

The ninth meeting of the Conference of the Parties will take place on 28-30 November 2016 in Ljubljana, Slovenia and will provide an opportunity to review the work under the Convention and to determine future directions and priorities. In the framework of the 9th meeting of the Conference of the Parties, a Joint UNECE/OECD Seminar on Fostering implementation of the 2030 Agenda for Sustainable Development and the Sendai Framework for Disaster Risk Reduction 2015–2030 for industrial accidents prevention, preparedness and response will be held.

#### **29-30 November, Ispra (IT)** **Space Weather Summit "Space Weather & Critical Infrastructures"**

The Joint Research Centre of the European Commission, jointly with the Swedish Civil Contingencies Agency (MSB) and the UK Met Office are organising a Space Weather Summit which will: 1) Raise awareness of potential space-weather impacts on critical infrastructures among different stakeholder groups, 2) Present known vulnerabilities of different types of infrastructures and discuss resulting problem related to service disruptions and cascading effects, 3) Discuss how industry and government can prevent incidents and prepare for their consequences both from a sectoral and holistic point of view, 4) Identify remaining needs and gaps in risk reduction with respect to space-weather impacts and recommend a way forward, 5) Promote and support dialogue, exchan-

Read more and submit your events

<http://drmkc.jrc.ec.europa.eu/overview/Events>

ge of information and coordination among the stakeholders to foster a holistic approach to disaster risk reduction associated with extreme space-weather events.



### 116-18 November, Sofia (BG) First IFIP Conference on Information Technology in Disaster Risk Reduction (ITDRR 2016)

ITDRR-2016 provides an international forum for researchers and practitioners to present their latest R&D findings and innovations. The conference is especially focused on the various IT aspects and challenges of coping with disaster risk reduction. ITDRR-2016 invites experts, researchers, academicians and all others who are interested to disseminate their work. The conference establishes an academic environment that fosters the dialogue and exchange of ideas between different levels of academic, research, business and public communities.

### 22-23 November, Amersfoort (NL) European Multiple Environmental Threats Emergency Network (EMETNET) workshop

The EMETNET project team would like to invite you to an interactive workshop to discuss the risk assessment of environmental emergencies and how best to support the EU-level response to these emergencies. The workshop is aimed at experts and organisations with a role in the assessment of risks to public health and the environment. We will discuss the roles of DG ECHO and UN OCHA in the response to environmental disasters and how a network of expert risk assessors could support this response. In interactive sessions, we'll welcome your opinions and feedback on the rapid risk assessment methodology and expert network that we are developing.

## DRMKC Science Report for DRM 2017 to be released at the Global Platform, Cancun (Mexico) May 2017

**2016 January**

**1 EXPECTATIONS**

<b>Title</b>	• Science for DRM
<b>Purpose</b>	• Provide reviews of the scientific solutions in DRM for well-informed decision makers and practitioners.
<b>Focus</b>	• European contributions, but on topics that can be global scale
<b>Scope</b>	• Comprehensive in scope but selective in topics
<b>Message</b>	• Knowing better and losing less

**2 BRIDGE CONCEPT**

The report aims to bridge science and policy as well as operation communities, where a lack of risk-related knowledge is not always the key challenge, but lack of knowledge on how to overcome the barriers to implement knowledge is.

**3 ORGANIZATIONAL STRUCTURE**

The process of the preparation of the Report is carried out by three bodies, JRC Editorial Board, Authors Team, and Review Process. Their work is closely related but still independent.

**4 WRITING PHASE**

The report will be written in a format that is intended to be accessible to the well-informed practitioners and policy decision makers.

**30th September 2016: 1<sup>ST</sup> DRAFT**

<b>120</b> Authors	<b>90</b> Organizations	<b>20</b> Countries	<b>5</b> DGs
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**5 REVIEW PHASE**

We are just about to start the review phase. The reviewers team will consist of:

- Independent experts,
- practitioner and
- policy decision makers.

All reviewers will be acknowledged in the report.

**6 PUBLISHING**

We are planning for official release at the Global Platform for DRR in May 2017



## 2017 May SCIENCE FOR DRM 2017 Knowing better and losing less



22-26 MAY, 2017 | CANCUN, MEXICO  
**2017 GLOBAL PLATFORM**  
FOR DISASTER RISK REDUCTION

<http://www.unisdr.org/conferences/2017/globalplatform/en>

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.  
**CONTACTS:** [drmhc@jrc.ec.europa.eu](mailto:drmhc@jrc.ec.europa.eu) - <http://drmhc.jrc.ec.europa.eu/> - Editor: Brian Doherty

# DRMKC 2<sup>nd</sup> Annual Scientific Seminar

Hosted by Italian Department of Civil Protection  
9-10 March 2017, Rome Via Vitorchiano 2 - 00189



**D**isaster  
**R**isk  
**M**anagement  
**K**nowledge  
**C**entre

The seminar will

- **cover the progress made** by the DRMKC since its launch in September 2015
- **gather early input** to the upcoming 2018-2019 DRMKC Action Plan
- **address challenges** for policy and science in Disaster Risk Reduction, including DRM capabilities assessment and the Sendai monitoring framework
- **draw concrete conclusions** to feed into the upcoming Global Platform (Cancun, Mexico, May 2017)

The seminar aims to gather around 100 inter-disciplinary experts on disaster management, early detection, forecasting, warning and risk assessment of natural and man-made disasters, in both fields of civil protection and humanitarian aid.

The target audience includes scientists, practitioners and policy-makers at national, regional and international levels, as well as first responders, and private sector representatives.

<http://drmkc.jrc.ec.europa.eu>