

Second Scientific Seminar on Disaster Risk Management Science for Policy and Operations

Thursday, December 4, 2014				
Time	Session	Session Name		Speaker / Chair
12:00		Registration		
12:30		Lunch		
13:30	0	Opening session: "Progress since first workshop"	JRC / UK Met Office	Al Khudhairi, Delilah / Evans, Phil
13:50	0A	Feedback from EU Member State survey (use of science in National Risk Assessments; independent science support for events; science input to operational systems)	JRC	De Groeve, Tom
14:10	0B	Elements for improved science-policy interface at EU level	JRC	Annunziato, Alessandro
14:30	0C	Progress on EC User Group on Crisis Management	HOME	Quevauvillier, Philippe
14:50	0D	Regional coordination processes around the globe	WMO	Soares, Alice
15:10		Coffee break		
15:40	1	Panel Session 1 (Part 1): "Risk Assessments for Policy"	GFDRR	Ereno Blanchet, Edouardo
15:50	1A	Risk assessments at global level (methodology-based presentation)	UNISDR	Safaie, Sahar
16:10	1B	Risk assessment policies and methods from the EU	ECHO	Clark, Ian
16:30	1C	Risk assessments at national level (methodology-based presentation)	Sweden (MSB)	Andersson, Emmelie
16:50	1D	Global case study example	RMS	Muir Wood, Robert
17:10	1E	Regional case study example	OECD	Jacobzone, Stephane
17:30	1F	National case study example	UK NHP	Lisk, Ian

Friday, December 5, 2014				
	1	Panel Session 1 (Part 2): "Risk Assessments for Policy"		
9:00	1RT	Round-table: "Requirements for disaster risk assessments used in policy decisions at global, regional and national level"	ECHO	Clark, Ian
9:45		Coffee break		
	2	Panel Session 2: "Improving coordination and consistency of advice from, and interaction between, EWSS"	Meteo France	Honore, Cyrille
10:00	2A	ERCC developments	ECHO	Imperiali, Olimpia
10:20	2B	JRC developments	JRC	Thielen, Jutta
10:40	2C	WMO developments	WMO	Soares, Alice
11:00	2D	International EWS developments	WFP	Niebuhr, Emily
11:20	2E	Meteoalarm The European Multi hazard warning website	KNMI	Kroonenberg, Frank
11:40	2F	National EWS developments	Finland	Hyrkkanen, Juhana
12:00	2G	Value added human interpretation	UK Met Office	Britton, Dave
12:20	2RT	Round table: "Requirements for early warning based information for effective and efficient preparedness and response"	Meteo France	Honore, Cyrille
13:05		Lunch		
14:00	RT	Round table: Conclusions and recommendations for WCDRR-III/HFA2	UNISDR	Murray, Virginia
14:45		Closure	JRC / UK Met Office	Al Khudhairi, Delilah / Broad, Adrian

Surveying the landscape of science/policy interfaces for disaster risk management policy making and operations

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Stimulating innovation
Supporting legislation*

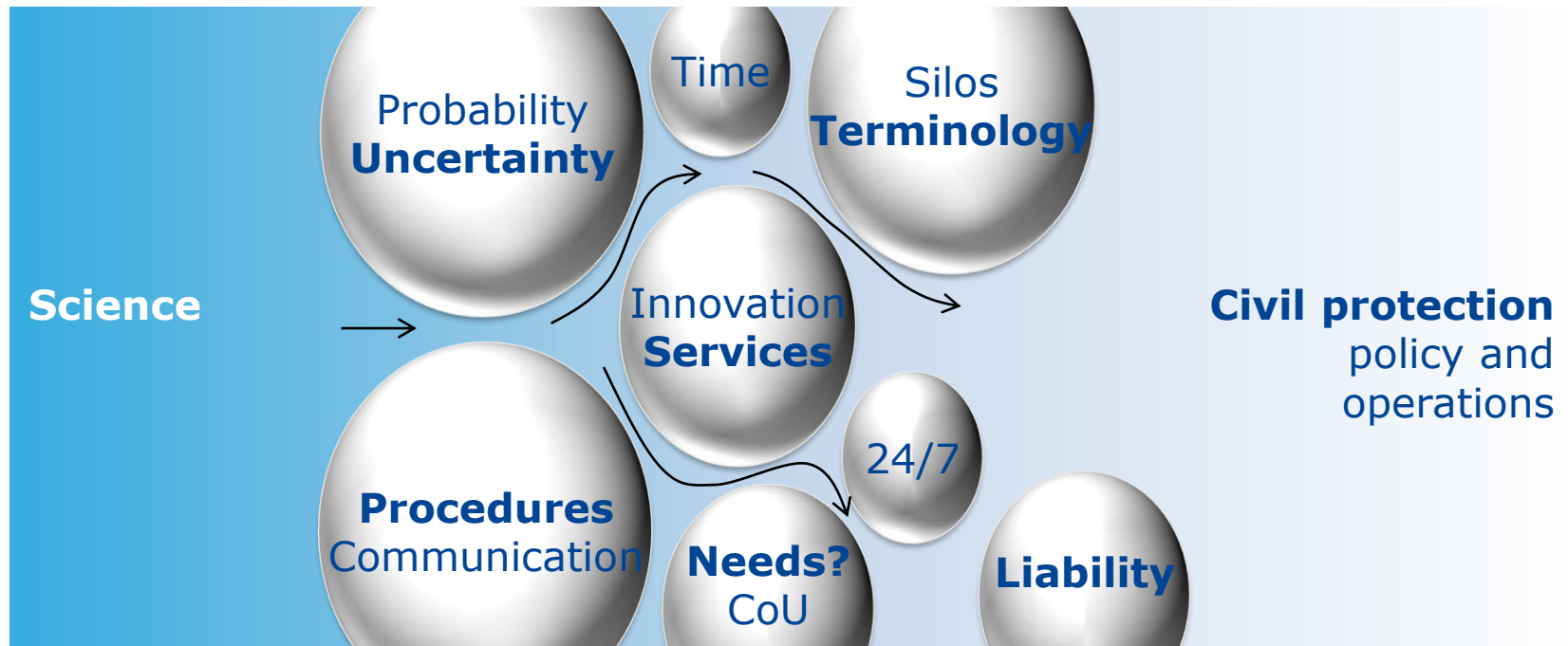
Science in Disaster Risk Management

- JRC and UK Met Office long tradition in
 - Forecasting
 - Early Warning System
 - Analytical / scientific products for EU Emergency Response Coordination Centre
 - Evidence-based recommendations for EU Disaster Risk Management Policy
- Observations
 - More science and evidence is needed for informed policy making and more effective crisis response
 - Existing science is not taken up completely
- JRC / UK Met Office / ECHO consulted EU Member States
 - Survey
 - Details on science/policy interface

From science to policy and operations



From science to policy and operations



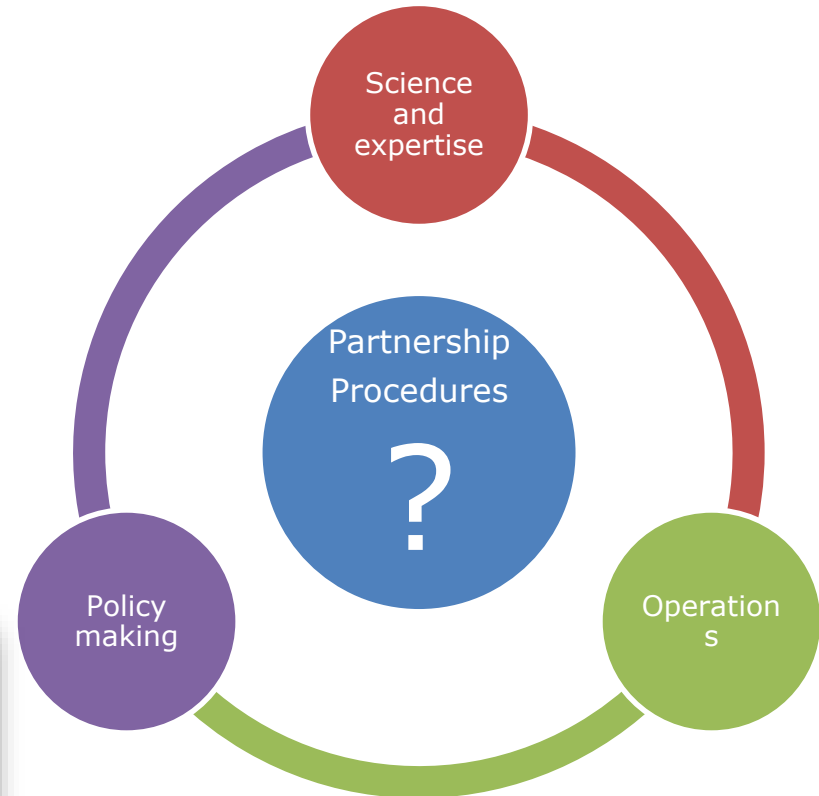
Survey

- **Clear need:** strong scientific evidence in disaster management; guide new scientific research
- **Good example:** UK Natural Hazard Partnership
- **Pilot study:** DG ECHO with 6 Member States, under the technical lead of DG JRC

Kick-off 14 October 2013

2. Launching the "Improving Science based advice for Risk Reduction and Emergency Response in the Commission and Member States" project

The complexity, severity and frequency of today's major disasters do not give us many options: scientific and operational communities need to join their efforts to improve the chain of information as well as the decision-making system without forgetting the final miles of the alerting process in order to build a more efficient European Response to disasters and a more resilient society. In that sense, our main objective is to improve the use of science for the disaster early warning and response.



Survey

- 6 countries
- 3 peril types: earthquakes, floods, wildfires
- Questions
 - Context: hazards
 - Relevant legislative and policy frameworks
 - Actors in risk management
 - Historical context and future outlook for science-based advice
 - Findings and recommendations

Country	Status	Comment
United Kingdom	Completed	Extensive survey based on coordinated input of multiple agencies
Sweden	Completed	Extensive survey based on coordinated input of multiple agencies
Finland	Completed	Extensive survey based on coordinated input of multiple agencies
Hungary	Completed	Summary report compiled by Disaster Risk Management Agency
Italy	Withdrawn	Due to other priorities during the Presidency, Italy decided not to complete the survey
Poland	Withdrawn	Poland decided not to complete the survey
Greece	Withdrawn	Due to other priorities during the Presidency, Greece decided not to complete the survey

United Kingdom

	Scientific & Technical	Advice (coordination)	Policy & Operational	Scope
Policy	Technical agencies	NHP	Cabinet Office (Chief Scientific Advisor): National Risk Assessment	
Early Warning	Technical agencies Impact based models	NHP	Risk Owners: Government Agencies	
Operational	Technical agencies and academics	SAGE STAC	COBRA Silver Command	National Regional
Communication	Technical agencies Impact based advice	NHP Human advisor	Chief Scientific Advisor	

United Kingdom

- The **Natural Hazard Partnership (NHP)**.
 - Significant achievements to date
 - More joined up scientific advice and analysis
 - Daily hazard assessment
 - UK National Risk Assessment
 - Development of novel products and services
- **Hazard Impact Model**
 - Impact-based alerts
 - Hazard impact models are available for all hazard types
- **Future priorities**
 - Development of interoperable Hazard Impact Model (HIM)
 - Coordinated scientific and technical advice

Sweden

	Scientific & Technical	Advice (coordination)	Policy & Operational	Scope
Policy	Technical agencies 6 reference groups of Academics	MSB MSB Scientific Council Nat. Platform for DRR	MSB (peacetime) Responsible agencies	
Early Warning	Technical agencies	MSB Local		
Operational	Technical agencies		Municipal Crisis Management Board County Administrative Board	Local Regional
Communication	Technical agencies	MSB	Responsible agencies Swedish Radio	

Sweden

Recommendations

- The need for a **broad scientific basis**
 - different scientific perspectives
 - natural and social sciences
- **“Translating”** science into actionable knowledge
 - Data and the process of understanding
 - Reconciliation of opposing scientific views
- **Variations** in the need for scientific support
 - There is a time and place for each science (natural sciences for EW, social sciences for improving decision making)
 - Role of foresight

Finland

	Scientific & Technical	Advice (coordination)	Policy & Operational	Scope
Policy	Institutes / universities	TEA working group	Ministries AVI	National Regional
Early Warning	LUOVA: Met/Env/UHel (Seis) Radiation and Nuclear Safety Authority EFAS, Fin Flood Centre (2014)	(same institutes) ELY	Municipalities ELY ERC (2015)	
Operational	Radiation and Nuclear Safety Authority Env Institute Met Institute	(same institutes) ELY	Municipalities ERC (2015) Defence Forces, Coast Guard, Police... ELY	
Communication	Official notification transmission system			

Finland

- **TEA Working Group** (2014) to improved science-based advice for crisis management
- Challenges
 - structural measures (merger of institutes, cooperation)
 - funding (strategic R&D instruments, assessment, funding from ministries)
 - implementation (reorganisation, implementation and follow-up)
- 7 reform measures, including
 - improvement of relevance of research,
 - create networks of research centres to increase efficiency,
 - target funding to multidisciplinary research with clear targets and
 - create stronger R&D institutes

Hungary

	Scientific & Technical	Advice (coordination)	Policy & Operational	Scope
Policy	Academy of Sciences	NDGDM	NDGDM	National
Early Warning	Meteorological Service Water Authority Geological and Geophysical Institute	NDGDM	NDGDM	
Operational	Experts	NDGDM	NDGDM Local professional organizations	
9 December 2014 Communication	Legal thresholds	National contact points	NDGDM	

Preliminary Analysis and Conclusions

- Forthcoming in early 2015
 - In peer review



What is science contributing?

- **Science input to Policy**

- National risk assessments (holistic, multi-disciplinary, integrated processes)
- Coordination varies: public-public partnership, coordinating agency, coordination group, strong central coordination

- **Identification of common challenges**

- comparing risks of different hazards
- role of judgment

- **Science input to EWS development**

- Shift from threshold-based alerting to impact based alerting
 - Shifts the burden of interpretation and analysis to the alert creator
 - Issues of liability and responsibility are important and remain challenging.

How can science contribute better?

- **Risk assessment**

- Scientific evidence on hazard probabilities, impacts and geographic distribution
- Challenges
 - Integration across different hazard types
 - Compare risk assessments across countries
 - Integrating Foresight

- **Monitoring**

- Monitoring capabilities have increased rapidly, but no standard impact-based alerts
- Challenges
 - Standard scientific techniques for impact models
 - Maintaining sufficient investment in innovation
 - Variety of funding mechanisms: research funding, applied research funding, funding of services, public-public or public-private partnerships (shared mandate and cost).

Shared challenges and opportunities

- **Funding**

- Maintaining monitoring services + Investing in research
- Novel mechanisms for funding basic research (e.g. better uptake and exploitation of EU research results) and shared systems or services

- **Pan-European and Transnational risks**

- Some risks: risk management in one country can influence the risk in the next
- There is an agreement that pan-European and transnational risks should be tackled in a more coordinated way.

- **Common resources versus independence**

- Sharing resources (e.g. monitoring services) among countries may be cost-effective, but some services are strategic and must be run in-country. There is a need to identify services that can be shared.

Conclusions

- Pilot study on interface between science/policy
 - Pilot survey in 4 countries
 - What can be done at EU level?
- Common challenges and opportunities
 - In spite of variety of institutional, legal and hazard settings
- Interest to partner up at EU level
 - Sharing of best practices for using science in policy making, notably for risk assessments
 - Sharing operational scientific advice (impact-based) among Member States and with the European Commission