



International Workshop on **Resilience - Harnessing Science for Better Disaster Management** 7th -8th October 2010

International Center for Climate Governance, Island of San Giorgio Maggiore, Venice – Italy

The International Workshop on “Resilience - Harnessing Science for Better Disaster Management” is the first of a series of events dedicated to Natural Hazards and Disaster Risk Reduction. The second one (Economics of Natural Disaster - Bridging Disaster Risk Reduction and Climate Adaptation Efforts and Strategies) will take place in February 2011.

The events are organised by the International Center for Climate Governance (ICCG – www.iccgov.org), the Fondazione Eni Enrico Mattei (FEEM – www.feem.it) and the Euro-Mediterranean Centre for Climate Change (CMCC – www.cmcc.it).

Background and Objective of the Workshop

Over the past decades, the European Union witnessed a striking increase in the losses caused by natural, particularly hydro-meteorological disasters. Every year large areas of Europe are hit by droughts and/or floods, directly or indirectly affecting many communities and economic sectors. The climate change induced alteration of rainfall pattern (form, intensity and timing of rainfall) will have significant effects on water availability and frequency of extreme events, thus causing additional social and economic hardship.

With natural disasters wrecking havoc all over the world, recently in Russia and Pakistan, resilience is gaining momentum both in risk research and policy communities. It has been converted into a symbol for endurance and a staying power, an emblem of sustainable societies. A symbol that we strive to turn into a guidance for better disaster risk reduction (DRR) strategies. With some success but still far from convincing.

Many have tried to pin down what the resilience is or should be, and how to measure and promote it. Intuitively, more than anything else, resilience is a knowledge. A proficient understanding of the disaster risk, its driving forces and impacts. Knowing how to prepare, respond and recover from disaster strikes. More than that, resilience is a capacity to deploy that knowledge. To help oneself to get back to the feet after having sustained a hit. To learn how to. Paraphrasing Reinhold Niebuhr’s poignant message, resilience is a wisdom of knowing how to put a stop to natural hazards turning into devastating disasters, and a wisdom of enduring risks that cannot be avoided.

Resilience refers to the capacity of the system to absorb disturbances and reorganize, while undergoing changes to retain essentially the same function, structure, and identity. Resilience co-determine the magnitude of the economic losses and the community ability to respond to, cope with, and recover from significant disruptions. Both »economic« and »social« resilience are malleable concepts with many different and inconsistent definitions. Although important for designing effective disaster risk reduction strategies, a widely accepted operationalisation of the concept is not available.



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A number of applied, policy-relevant research projects have been initiated to fill this gap. Some of these projects are listed further below. The scope of the workshop is to bring together the scholars from diverse fields, both natural and social sciences, working on practical policy application of the concept under EU Flood Risk Management Directive, EU Drought policy, and EU Disaster Preparedness and Prevention initiatives.

Expected Outcomes of the Workshop

- 1) A special issue of the Elsevier's Journal **Environmental Modelling and Software** (EMS) Journal will be compiled with individual and/or joint contributions by the workshop participants.
- 2) Position Paper containing the key messages coming out of the workshop will be submitted for the special issue of the **Journal Environmental Science & Policy** on EC research in the fields of natural hazards and disaster risk reduction (NH/DRR).
- 3) The workshop is also meant to strengthen the research network of social scientists working in the field of NH/DRR. A proposal for the **COST** (European Cooperation in Science and Technology) **Actions** is being developed.
- 4) A background paper as an input to the 2011 UN ISDR Global Assessment Report (GAR) on Disaster Risk Reduction.

European Projects dealing with resilience, vulnerability and capacity building:

DIANE-CM – Decentralised Integrated ANalysis and Enhancement of Awareness through Collaborative Modelling and Management of Flood Risk.

FIM FRAME – Flood Incident Management – A FRAMEwork for improvement.

FREEMAN – Flood RESilience Enhancement and MANagement: a pilot study in Flanders, Germany and Italy.

IMRA – Integrative flood risk governance approach for improvement of risk awareness and increased public participation.

RISK MAP – Improving Flood Risk Maps as a Means to Foster Public Participation and Raising Flood Risk Awareness: Toward Flood Resilient Communities.

SUFRI – Sustainable Strategies of Urban Flood Risk Management with non-structural Measures to cope with the Residual Risk.

UR-FLOOD – Understanding Uncertainty and Risk in communicating about floods.

ENSURE– Enhancing Resilience of Communities and Territories facing Natural and Na-tech hazards.

CLIMWATADAPT– Climate Adaptation: modelling water scenarios and sectoral impacts.

WATER2ADAPT– Resilience enhancement and water demand management for climate change adaptation

PREEMPT – Policy-relevant assessment of economic and social effects of hydro-meteorological disasters

MOVE – Methods for the Improvements of Vulnerability Assessment in Europe



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DAY 1: Thursday, October 7th, 2010

12:00-13:00 Lunch

13:00-15:00	SESSION 1: Conceptual definition and measurement of resilience and vulnerability Chair: Reinhard Mechler
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13:00-15:00 **Jaroslav MYSIAK** - *Fondazione Eni Enrico Mattei and Centro Euro-Mediterraneo per i Cambiamenti Climatici, Italy*
Scope of the Workshop

Mariele EVERS - *Leuphana University of Lüneburg, Germany*
DIANE-CM project

Stefan GREIVING - *Institut of Spatial Planning, TU Dortmund University, Germany*
IMRA: Measuring And Communicating The Institutional Dimension Of Resilience

Natasha MARINOVA - *Alterra, WUR, The Netherlands*
ClimWatAdapt: Vulnerability of Water Resources Exercise

Vasileios MARKANTONIS - *Helmholtz Centre for Environmental Research (UFZ), Germany*
CapHazNet and RiskMap: Natural Hazards Management Projects including the Issue of the Socio-Economic Resilience.

Scira MENONI - *Politecnico di Milano, DIAP, Italy*
ENSURE: Vulnerability and Resilience: Exploring the Response of Systems and Communities Exposed to Natural Hazards

Maarten VAN AALST - *Red Cross/Red Crescent Climate Centre, The Netherlands*

15:00-15:30 Coffee Break

15:30-17:00	SESSION 1: Conceptual definition and measurement of resilience and vulnerability Chair: Daniel Schaffer
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15:30-17:00 **Reinhard MECHLER** - *IASA and Vienna University of Economics and Business, Austria*
Modelling and Communicating Economic Resilience

Kristien SCHELFAUT - *Soresma nv, Belgium*
FREEMAN: Bringing Flood Resilience into Practice.

Jaroslav MYSIAK - *Fondazione Eni Enrico Mattei and Centro Euro-Mediterraneo per i Cambiamenti Climatici, Italy*
FREEMAN and Water2Adapt: Community Resilience to Hydro-Geological Hazards: a Case Study of Calabria/Italy

Karen SUDMEIER-RIEUX - *University of Lausanne, Switzerland*
Comparing factors of vulnerability and resilience in mountain communities affected by landslides in Eastern Nepal

Stefan SCHNEIDERBAUER - *EURAC - European Academy, Institute for Applied Remote Sensing, Italy*
MOVE and others: Terminology and Definitions in the Context of Vulnerability and Risk Research at EURAC



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17:00-18:00 **PANEL 1: Research needs and priorities**
Chair: Jaroslav Mysiak

Panel discussion on further research needs and their priorities.

20:00 *Social Dinner at Ristorante a la Vecia Cavana (Cannaregio 4627 - 30131 Venice)*
The meeting point to walk all together to the restaurant is at 7:45 pm in the hall of the Ca' dei Conti Hotel

DAY 2: Friday, October 8th, 2010

9:00-12:00 **SESSION 2: Policy requirements and measures to boost resilience**
Chair: Salvano Briceno

Salvano BRICENO - *United Nations International Strategy for Disaster Reduction (UNISDR), Switzerland*
The International Strategy for Disaster Reduction and its Hyogo Framework for Action (2005-2015):
Building the Resilience of Nations and Communities to Disasters

Demetrio INNOCENTI - *United Nations International Strategy for Disaster Reduction, Switzerland*
ISDR and HFA Implementation in Europe

Francesco FUSTO - *Regional Environmental Protection Agency of Calabria - Functional Centre, Italy*
The Early Warning System for Hydrogeological Risk Monitoring and Forecast of Calabria Region

Daniel SCHAFFER - *TWAS, the Academy of Sciences for the Developing World, Italy*
Natural Disasters in Developing Countries: A TWAS Perspective

Federica FRANGHIERI - *The World Bank, USA*
Safe and Climate Resilient Cities - Lessons Learnt From Recent WB Works

11:00-11:30 *Coffee Break*

11:30-12:00 Views from the International Non-Governmental Organisations:

Diana Rocio ROJAS ORJUELA - *IUCN - International Union for Conservation of Nature, Costa Rica*
Water Governance Capacity and Ecosystem Based Adaptation

Serena ARDUINO - *ACRA, Italy*
ACRA Initiatives for the Resilience of Communities in Latin America

Julio MONTES DE OCA LUGO - Wetlands International, Panama

12:00-13:00 **PANEL 2: Policy needs and priorities**
Chair: Diana Rocio Rojas Orjuela

Panel discussion on policy priorities.

13:00-14:00 *Lunch*



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List of Participants

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