eurac research

Return

Side event RETURN

From knowledge to action: knowledge, beliefs, and cooperation for disaster risk reduction and climate change adaptation

03.09.2025

Eurac Research, Bolzano, Italy

Eurac Research is proud to announce the upcoming PNRR Return event: **From knowledge to action: knowledge, beliefs, and cooperation for disaster risk reduction and climate change adaptation.**

The event aims to reflect on the contribution of inter-disciplinarity and transdisciplinary approaches in the context of ddisaster risk reduction and of climate change adaptation. During the day, we will discuss the scientific knowledge production process and examine how disciplines from both natural and social science can work together effectively to solve complex challenges within our natural-human system. We will also debate collective decision-making processes, specifically exploring how individual beliefs aggregate into collective choices, as well as how cooperation between public institutions and citizens can solve problems and foster resilient communities. Theoretical insights on these two key topics will be used to reflect on case studies and real-world practices.

The event will take place on September 3 at Eurac Research, in Bolzano, Italy.

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Ministero dell'Università e della Ricerca
Italiadomani PIANO NAZIONALE DI RIPRESA E RESILIENZA

Agenda

12:00–13:30 **Light lunch**
13:30–14:00 **Opening and introduction**
14:00–15:30 **Thematic session**

Andrea Pirni, University of Genova
Interdisciplinary knowledge production
The talk aims to address key issues and, in doing so, to promote an initial exploration of the relationship between the Mathematical-Natural Physical Sciences and the Social Sciences in the context of Disaster Risk Management. It seeks to explore ways of integrating phenomena, information, and data from the Social Sciences with the modelling and scenario-building typical of the MNF sciences. Finally, it also considers the development of a shared minimum scientific language.

Francesca Vigotti, Politecnico di Milano
Assessing and empowering fragile communities
This contribution presents the outcomes of Task 7.4.4, titled *"A New Approach to Integrated Planning Based on Co-Design Processes for DRR and CCA Policies."* The main objective of this activity was to develop antifragility strategies for fragile territories by integrating routine and emergency planning through participatory approaches. The focus was placed on territories characterized by multi-risk scenarios, demographic decline, and limited access to essential services. The research was grounded in three key pillars: Prevention and Resilience, Regeneration, and Education and Participation. The work was conducted across 12 municipalities in Lomellina, Lombardy, where a comprehensive assessment of strategic spaces was carried out. The results include tools–such as survey forms, mapping instruments, and educational materials–designed to enhance the understanding and management of built environments, cultural heritage, and open spaces.

Claudio Marciano, University of Genoa
Heatwaves and floods in Genoa: a risk storyline
Risk storylines are scenario-based techniques used to anticipate the impact chains of multi-hazard events and to identify the most relevant actions for mitigation, response, and learning. An interdisciplinary research team, working within the extended RETURN partnership, has developed a model for constructing such storylines and applied it in various urban contexts, including the city of Genoa. This paper outlines the model and presents the main results derived from a storyline focused on a heatwave followed by heavy rainfall in the Ligurian capital.

15:30–16:00 **Coffee break**
16:00–17:30 **Thematic Session**

Pavel Janda, University of Milan
Collective choices and collective beliefs
Collective choices depend on collective beliefs. The way individual beliefs are aggregated into collective beliefs largely determines the outcomes of collective decisions. This work focuses on belief formation methods that are resilient to manipulation and uphold key normative values by satisfying desirable properties. For instance, the method should not be dictatorial, nor should it be vulnerable to the strategic timing of information disclosure. That is, it should prevent actors from manipulating collective beliefs by selectively revealing relevant information before or after the aggregation process. The contribution explores various forms of manipulation in belief formation and examines how such methods can be made more resilient. It investigates whether, and under what assumptions, it is possible to circumvent Arrow's impossibility theorem when reinterpreted in the context of belief aggregation.

Riccardo Stupazzini, LABSUS
L'amministrazione condivisa dei rischi
This presentation critically explores the concept of shared administration of risks as an innovative governance approach to disaster risk management, emphasizing active civic engagement. Through an analysis of the case study of Bagnara Calabrawhere local authorities and citizens collaboratively established a civil protection agreementthe discussion illustrates how participatory frameworks enable communities and local governments to jointly identify vulnerabilities, implement targeted preventive measures, and build lasting resilience. Particularly in contexts where institutional resources are limited and vulnerability to extreme events is high, shared administration serves not merely as a supplemental strategy but as a fundamental mechanism for community empowerment, ensuring risk mitigation strategies are collectively devised, endorsed, and implemented.

18:15–19:00 **Aperitif and theater performance "CHANGE THE CLIMATE"**

Monitoring alpine glaciers, expeditions in caves, observation of the athletic performances of fishes, mobile labs, rain simulators, green surfaces: a performance standing between conference and theater to discover how scientific research and engineering contribute to face the challenges of climate change,.Change the climate is a performance designed by Faber Teater in cooperation with the Department of Environment, Land and Infrastructure Engineering of Turin Polytechnic.

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