

The emBRACE Glossary

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The emBRACE Consortium

*em***BRACE**

BUILDING RESILIENCE AMONGST COMMUNITIES IN EUROPE

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Short Description: This glossary is intended as an aide memoire for project partners. It is purposefully kept short and we have tried to exclude terms for which there is a generally agreed understanding or where there are very many different understandings that are central to specific analytical or conceptual frameworks.

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About emBRACE

The primary aim of the emBRACE project is to build resilience to disasters amongst communities in Europe. To achieve this, it is vital to merge research knowledge, networking and practices as a prerequisite for more coherent scientific approaches. This we will do in the most collaborative way possible.

Specific Objectives

- ⇒ Identify the key dimensions of resilience across a range of disciplines and domains
- ⇒ Develop indicators and indicator systems to measure resilience concerning natural disaster events
- ⇒ Model societal resilience through simulation experiments
- ⇒ Provide a general conceptual framework of resilience, tested and grounded in cross-cultural contexts
- ⇒ Build networks and share knowledge across a range of stakeholders
- ⇒ Tailor communication products and project outputs and outcomes effectively to multiple collaborators, stakeholders and user groups

The emBRACE Methodology

The emBRACE project is methodologically rich and draws on partner expertise across the research methods spectrum. It will apply these methods across scales from the very local to the European.

emBRACE is structured around 9 Work Packages. WP1 will be a systematic evaluation of literature on resilience in the context of natural hazards and disasters. WP2 will develop a conceptual framework. WP3 comprises a disaster data review and needs assessment. WP4 will model societal resilience. WP5 will contextualise resilience using a series of Case studies (floods, heat waves, earthquakes and alpine hazards) across Europe (Czech Republic, Germany, Italy, Poland, Switzerland, Turkey and UK). WP6 will refine the framework: bridging theory, methods and practice. WP7 will exchange knowledge amongst a range of stakeholders. WP8 Policy and practice communication outputs to improve resilience-building in European societies.

Partners

- ⇒ Université catholique de Louvain (UCL) - **Belgium**
- ⇒ University of Northumbria at Newcastle (UoN) - **UK**
- ⇒ King's College London (KCL) - **UK**
- ⇒ United Nations University Institute for Environment and Human Security (UNU), **Bonn**
- ⇒ Accademia Europea per la Ricerca Applicata ed il Per-fezionamento Professionale Bolzano (EURAC) - **Italy**
- ⇒ Helmholtz-Zentrum fuer Umweltforschung GMBH - UFZ (UFZ) - **Germany**
- ⇒ Stockholm Environment Institute, University of York (SEI-Y) - **UK**
- ⇒ Stockholm Environment Institute - Oxford Office Limited (SEI-O) - **UK**
- ⇒ Swiss Federal Institute for Forest, Snow and Landscape Research - WSL (WSL) - **Switzerland**
- ⇒ Middle East Technical University - Ankara (METU) – **Turkey**
- ⇒ University of Reading (UoR) – **UK**

emBRACE glossary

This glossary is intended as an aide memoire for project partners. It is purposefully kept short and we have tried to exclude terms for which there is a generally agreed understanding or where there are very many different understandings that are central to specific analytical or conceptual frameworks. In the case of the latter partners are urged to define concepts at the start of their work. Where partner definitions deviate from those presented in this glossary a note should be made of this in the relevant text. This will enable comparative discussion without constringing research.

Definitions have often drawn heavily from established meanings offered for example by IPCC SREX or AR4, or ISDR. Where direct quotations are used citations are provided.

Actor (often pl; actors)

Individuals, social groups, communities and organisations with agency. Actors with a stake or interest in resilience concerning natural disaster events can be described as stakeholders.

Adaptation

Adaptation is a dynamic process of adjustment to actual or expected change and its effects, in order to moderate harm or exploit beneficial opportunities.

Adaptive capacity

“The combination of the strengths, attributes, and resources available to an individual, community, society or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm or exploit beneficial opportunities” (IPCC, 2012: 556)

Community

A group of actors (individuals, organisations, businesses) that share a common identity. Communities can have a spatial expression where a common identity coincides with shared use of space, but this is not essential.

Degeneracy

Degeneracy refers to partial functional overlap of components within a system, i.e. the ability of elements that are structurally different to perform the same function or yield the same output. System components are functionally plastic (multiple qualitatively different functions) and functionally redundant (functional overlap in only some of their functions), leading to conditions where agents can compensate for each other.

Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources” (UNISDR, 2009: 9)

Disasters are the result of a breakdown of the expected organizational and reproductive services in the social system (Lorenz 2011).

Disaster Preparedness

“The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent and current hazard events or conditions” (UNISDR, 2009: 21)

Disaster Recovery

“The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors” (UNISDR, 2009: 23)

Disaster Response

“The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected” (UNISDR, 2009: 24)

Disaster Risk Management (DRM)

Social processes and the outputs of, designing, implementing, and evaluating strategies, policies and measures that promote and improve disaster preparedness, response, and recovery practices at different organizational and societal levels.

Disaster Risk Reduction (DRR)

“Denotes both a policy goal or objective, and the strategic and instrumental measures employed for anticipating future disaster risk; reducing existing exposure, hazard, or vulnerability; and improving resilience” (IPCC, 2012: 558)

Flexibility

Flexibility describes the degree to which an actor can adjust practices, structures or goals without distorting its key objectives. It also denotes the degree to which a policy system or regime can adjust, for example in reallocating resources to ensure societal needs continue to be met under changed circumstances.

Environmental Governance

An interrelated system of formal and informal rules, rule-making systems, and social networks that steer societies towards preventing, mitigating, and adapting to environmental change.

Natural Hazard

“A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage” (UNISDR, 2009: 17)

Hazard Mitigation

The lessening or limitation of the potential for adverse impacts of hazards on human systems and ecological underpinnings, and associated disaster risk.

Institution

Institutions provide formal (legislative) and informal (normative – e.g. the family) rules (values and norms) and incentives that influence human and societal behaviour and actions.

Networks

Networks are identifiable, durable patterns within social groups. Networks link individuals, communities and organisations and can be informal or formal in nature. Networks are based on relationships of trust or authority and involve the negotiation of common interests between actors who may have different values and worldviews.

Organisation

Organisations are formalised social and/or administrative structures

Panarchy

Panarchy is the structure in which systems, including combined human-natural systems, are interlinked in continual adaptive cycles of growth, accumulation, restructuring, and renewal. It highlights the interactions of components within and across scale.

Parsimony

According to the parsimony rule, action requiring least expenditure of resources will be undertaken first and the best adaptive choice is that which expends the least resource.

Redundancy

“Redundancy refers to the coexistence of identical components with identical functionality within a system. It enhances reliability and provides robustness against variations of a very specific type, i.e. redundant parts can substitute for others so that functionality can be maintained in the event of failure” (Whitacre and Bender, 2010).

Region

Regions are groupings defined by shared features including location and governance. Two broad sub-categories are generally considered: supra-national regions and sub-national regions, although cross-borders regions also exist. Sub-national regions tend to be administrative, fiscal or political systems (e.g. provinces or states). Supra-national regions are international actors with inter-governmental functions (e.g. The European Union).

Resilience

Glossary Version 1 - Original working definition: The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration or improvement of its essential basic functions (UNISDR, 2009)

Glossary Version 2 - Revised working definition (integrated into all project deliberations and outputs following the 2nd Project meeting in Bolzano (7th-9th May 2014): The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation. (IPCC, 2014: p.5)

Resistance

The capacity to withstand stress and preserve functions with a view to achieving stability and maintaining the status quo.

Risk

“The combination of the probability of an event and its negative consequences” (UNISDR, 2009: 25)

Robustness

Strength or ability of elements, systems or unit of analysis to withstand a given level of stress without suffering degradation or loss of function (Bruneau et al., 2003)

Self-organisation

Self-organisation is the ability for social structures to spontaneously emerge without direction from external organisations including the state.

Social Capital

Norms of trust and reciprocity that underpin collective behaviour. Social capital is expressed through networks, communities and social organisation.

Social Learning

Social learning is a change in understanding which arises through interactions between actors within a social network, community or organisation. The capacity and process through which shared values, beliefs and behavioural norms develop.

Social-ecological system

Social-ecological systems are complex and integrated, emphasising interactions between human and environmental (including ecological) systems.

System

A set of elements that work together as an interconnected whole but may be open to external influence as well as influencing the external environment.

Thresholds / tipping points

Thresholds define qualitative or quantitative points or zones that imply a possible shift or transition of the state of a system (i.e. a critical value that should not be crossed). Tipping points are the limits beyond which a system actually changes its function and organisation.

Transformation

“The altering of fundamental attributes of a system (including value systems; regulatory, legislative or bureaucratic regimes; financial institutions; and technological or biological systems)” (IPCC, 2012: 564)

Vulnerability

The characteristics and circumstances of an individual, community, system or asset that make it susceptible to the damaging effects of a hazard.

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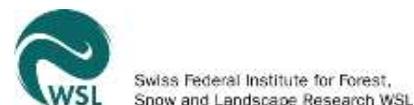
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