

Supplement of Nat. Hazards Earth Syst. Sci., 18, 3137–3143, 2018  
<https://doi.org/10.5194/nhess-18-3137-2018-supplement>  
© Author(s) 2018. This work is distributed under  
the Creative Commons Attribution 4.0 License.



Natural Hazards  
and Earth System  
Sciences  
Open Access  
EGU

*Supplement of*

## **Brief communication: Strengthening coherence between climate change adaptation and disaster risk reduction**

**Jaroslav Mysiak et al.**

*Correspondence to:* Jaroslav Mysiak (jaroslav.mysiak@cmcc.it)

The copyright of individual parts of the supplement might differ from the CC BY 4.0 License.

## 1. Material and methods

This short communication introduces and summarises the report of the European Environment Agency (EEA) »*Climate change adaptation and disaster risk reduction in Europe: enhancing coherence of the knowledge base, policies and practices*« (EEA, 2017). The Report is a result of joint efforts of the EEA, the European Topic Centre on Climate Change Impacts, Vulnerability and Adaptation (ETC/CCA, [cca.eionet.europa.eu](http://cca.eionet.europa.eu)), and the European Topic Centre on Inland, Coastal and Marine waters (ETC/ICM, [icm.eionet.europa.eu](http://icm.eionet.europa.eu)), as well as various services of the European Commission, such as the Joint Research Centre (JRC), DG Climate Action and DG Humanitarian Aid and Civil Protection. The Report relies on many sources and contributions, including:

- [1] an extensive desk/literature review conducted by the authors, and including major recent thematic assessment reports,
- [2] results of an expert workshop held on 11-13 April 2016 in Copenhagen (EE premises), which involved sixteen experts from twelve EEA member countries, as well as staff members of the Joint Research Centre (JRC) and other services of the European Commission (EC), and the staff of the United Nations Office for Disaster Risk Reduction (UNISDR),
- [3] written contributions from 22 EEA member and cooperating countries, collected through a call for evidence launched in February 2016, on the status of integration of climate change adaptation (CCA) and disaster risk reduction (DRR) at the national or subnational levels.

The draft report was extensively reviewed by a number of European experts and EIONET country representatives.

The report is structured around six chapters. Chapter 1 introduces the topic and describes the methodological approach used. Chapter 2 provides a detailed overview of the policies, methods and tools used, and current practice at the national and subnational level that characterise the integration of CCA and DRR. Chapter 3 describes observational trends and projections for selected weather- and climate-related hazards. Chapter 4 addresses the recorded impacts of past extreme weather- and climate-related events. Chapter 5 reviews the extent to which coherence between CCA and DRR practices in Europe can be effectively enhanced in areas where this would be beneficial, and in which cases. Finally, Chapter 6 summarises the main results of the report and describes the identified opportunities for a greater coherence of CCA and DRR policies and practice.

## 2. Key definitions used in the article and the Report

	<b>Climate change adaptation,</b> <i>based on terminology of the Intergovernmental Panel on Climate Change IPCC (Field et al., 2014)</i>	<b>Disaster risk reduction</b> <i>based on the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction (UNGA, 2017)</i>
<b>Disaster</b>	Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require immediate emergency response to satisfy critical human needs and that may require external support for recovery.	A serious disruption of the functioning of a community or a society at any scale, due to hazardous events interacting with conditions of exposure, vulnerability and capacity that lead to one or more of the following: human, material, economic and environmental losses and impacts.
<b>Coping capacity</b>	The ability of people, institutions, organizations, and systems, using available skills, values, beliefs, resources, and opportunities, to address, manage, and overcome adverse conditions in the short to medium term.	The ability of people, organizations and systems using available skills and resources to manage adverse conditions, risks or disasters. The capacity to cope requires continuing awareness, resources and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks.
<b>Disaster risk assessment</b>	(Risk assessment) The qualitative and/or quantitative scientific estimation of risks.	A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.
<b>Adaptation</b>	The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects	
<b>Disaster risk reduction</b>	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	Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development
<b>Resilience</b>	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	The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.
<b>Vulnerability</b>	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.	The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards

### 3. References

EEA: Climate change adaptation and disaster risk reduction in Europe - Enhancing coherence of the knowledge base, policies and practices, 15/2017, European Environment Agency, Copenhagen (Denmark). [online] Available from: <https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster>, 2017.

Field, C. B., Dokken, D. J., Mastrandrea, M. D., Mach, K. J., Bilir, T. E., Chatterjee, M., Ebi, K. L., Estrada, Y. O., Genova, R. C., Girma, B., Kissel, E. S., Levy, A. N., MacCracken, S., Mastrandrea, P. R. and White, L. L.: Annex II: Glossary, in Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, edited by V. R. Barros, C. B. Field, D. J. Dokken, M. D. Mastrandrea, K. J. Mach, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, and L. L. White, pp. 1757–1776, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA., 2014.

UNGA: Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. A/71/644, United Nations General Assembly, New York (USA),, 2017.