

Visualizing the inter-sectoral connections of climate risks

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It is now widely recognized that climate change is affecting various sectors of the world. Climate change impacts on one sector may spread out to other sectors including seemingly remote ones [1], a process which we call "interconnections of climate risks". While a number of climate risks have been identified in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) [2], there has been no attempt to explore the interconnections between them comprehensively [3]. Here we present a first and the most exhaustive visualization of climate risks and their interconnections drawn based on a systematic literature survey. Our risk maps and flowcharts depict that changes in the climate system impact the natural and socio-economic system, influencing ultimately human security, health, and well-being. Our findings point to the need to address the climate risk interconnections in impact and vulnerability studies. Furthermore, our diagrams are useful to educate decision makers, stakeholders, and general public about cascading risks that can be triggered by climate change.

[1] Helbing, D. Nature 497, 51-59 (2013)

[2] Birkmann, J., R. et al. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability (2014)

[3] Climate Change Risk Assessment (CCRA). The UK Climate Change Risk Assessment (2012)

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