



Balancing dimensions of vulnerability and social justice in climate change adaptation policy

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Natural hazards cause considerable economic loss and social disruption. Vulnerability is influenced by the level and type of economic activity in an area, as well as the local institutional framework including previous decisions about the spatial and social allocation of natural hazard protection. A thorough understanding of vulnerability is essential for assessing and selecting strategies for managing natural hazards. Considering only the absolute loss height of natural hazard events might be misleading to select optimal risk mitigation strategies unless these losses are put in proportion to the regional economic activity. Therefore, the development of methodologies for a comprehensive assessment of costs of natural hazards, including direct and indirect effects, has been controversially discussed (e.g., Thaler et al., 2018). One reason is that protection from natural hazards faces the key challenge that not everyone living in a high-risk area is threatened equally. Areas hit by natural hazards are not monolithic but rather mosaics of unequal distribution, leading to a multitude of effects spanning from disastrous to almost negligible outcomes in affected communities. Current strategies mostly disregard the fact that not all members of a specific stereotypical group encounter the same challenges or conveniences. Decisions on hazard mitigation are often based on economic assessments, which repeatedly cause conflicts regarding the question of whom to protect. There are different and contradicting concepts of social justice, which differ in interpretations of fair resource allocation and distribution. Answers to the question of ‘What’s the right thing to protect?’ are thus guided by underlying, often implicit concepts of social justice. We propose a conceptual framework how to account for multiple factors contributing to vulnerability and impairing social justice when dealing with (future) natural hazard events. Relevant criteria and indicators are compiled to comprehensively cover vulnerability as well as coping capacities to recover from and prepare for hazard events. Dependent on the applied principles of justice, assets in one criterion may compensate shortcomings in another criterion. Issues of social justice and climate resilience do not only/exclusively concern private citizens, but also extend to the business sector. Companies increasingly need to integrate stress factors caused by climate change and associated hazards into their risk management. Particularly micro businesses may be driven to insolvency if a natural hazard coincides with other entrepreneurial crises. Yet, awareness and preparedness towards adapting to increasing natural hazards currently have a low priority on the business agenda. This research contributes to the ongoing debate on challenges of social justice in decision-making processes, and offers a broader examination on how different concepts of justice provide different answers and perspectives in current flood risk management strategies in mountain areas.

Thaler, T.; Fuchs, S.; Priest, S. & N. Doorn (2018): Social justices in the context of adaptation to climate change – reflecting on different policy approaches to distribute and allocate flood risk management. *Regional Environmental Change* 18 (2). p. 305-309