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Multi-vulnerability assessment for flash flood risk management in East Attica, Greece

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Vulnerability assessment implies a quantitative evaluation of the individual vulnerability components such as elements at risk, their physical exposure and social characteristics. Current approaches in vulnerability research are driven by a divide between social scientists who tend to view vulnerability as representing a set of socio-economic factors, and scientists who view vulnerability in terms of the degree of loss to an element at risk. To close this gap, a multi-dimensional vulnerability analysis has been undertaken focusing on flash flood hazards in Greece. To represent physical vulnerability, an empirical relation between the process intensity and the degree of loss was established. With respect to social vulnerability, an assessment was undertaken by means of empirical data collection based on a door-to-door survey. In general, both physical and social vulnerability was comparable low, which is interpreted as a result from (a) specific building regulations in Greece as well as general design principles leading to less structural susceptibility of elements at risk exposed, and (b) a relatively low economic loss leading to less social vulnerability of citizens exposed. It is shown that a combination of different perspectives of vulnerability will lead to a better understanding of perceptions of actors regarding their vulnerabilities and capacities.