



## Public-private provision of protection measures against natural hazards

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Natural hazards threaten human lives as well as economic values of a society. Due to an increasing population density, augmenting property holdings in congested areas as well as higher frequencies of catastrophic events, the damage potential associated with natural hazards is growing. In order to safeguard societal assets against this threat, active and passive protection measures can be established.

While passive protection measures provide for this type of risk by means of thorough land use planning, active protection measures aim at improving safety through technical or biological protective systems and structures. However, these provisions are costly and need to be handled prudentially. In most European countries protection measures against natural hazards are provided by the public. Specific governmental funds have been set up for the establishment of preventive systems as well as for damage compensation payments after the occurrence of catastrophic events. Though, additional capital is urgently needed in order to facilitate the realisation of all necessary projects in this field and to provide for maximal safety.

One potential solution for such financial deficiencies can be found in Public Private Partnerships (PPP). PPPs have been implemented as attractive concepts for the funding of diverse projects in the fields of e.g. road construction, municipal, health and social services. In principle, they could also provide alternative funding solutions for the establishment of crucial protective infrastructure in respect of natural hazards, adding private financial means to the currently available public funds. Thereby, the entire capacities for catastrophe funding could be enhanced. Beside PPPs, also alternative funding mechanisms such as the emission of catastrophe bonds, contingent credit lines or leasing arrangements may enhance available capacities for the financing of protection measures.

This contribution discusses innovative solutions for the funding of protection measures against natural hazards along with potential positive and negative implications. In particular, the suitability of various forms of Public Private Partnerships will be considered, as several issues need to be declared in order to render such partnerships successful and to avoid undesirable drawbacks. Finally, the author intends to suggest appropriate alternatives to the current system of (almost) exclusive public funding of protection measures against natural hazards.