



Risk Governance of Multiple Natural Hazards: Centralized versus Decentralized Approach in Europe

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The multi-risk approach is a relatively new field and its definition includes the need to consider multiple hazards and vulnerabilities in their interdependency (Selva, 2013) and the current multi-hazards disasters, such as the 2011 Tohoku earthquake, tsunami and nuclear catastrophe, showed the need for a multi-risk approach in hazard mitigation and management. Our knowledge about multi-risk assessment, including studies from different scientific disciplines and developed assessment tools, is constantly growing (White et al., 2001). However, the link between scientific knowledge, its implementation and the results in terms of improved governance and decision-making have gained significantly less attention (IRGC, 2005; Kappes et al., 2012), even though the interest to risk governance, in general, has increased significantly during the last years (Verwey and Thompson, 2006). Therefore, the key research question is how risk assessment is implemented and what is the potential for the implementation of a multi-risk approach in different governance systems across Europe. More precisely, how do the characteristics of risk governance, such as the degree of centralization versus decentralization, influence the implementation of a multi-risk approach.

The methodology of this research includes comparative case study analysis of top-down and bottom-up interactions in governance in the city of Naples, (Italy), where the institutional landscape is marked by significant autonomy of Italian regions in decision-making processes for assessing the majority of natural risks, excluding volcanic, and in Guadeloupe, French West Indies, an overseas department of France, where the decision-making process is marked by greater centralization in decision making associated with a well established state governance within regions, delegated to the prefect and decentralised services of central ministries. The research design included documentary analysis and extensive empirical work involving policy makers, private sector actors and practitioners in risk and emergency management. This work was informed by 36 semi-structured interviews, three workshops with over seventy participants from eleven different countries, feedback from questionnaires and focus group discussions (Scolobig et al., 2013).

The results show that both governance systems have their own strengths and weaknesses (Komendantova et al., 2013). Elements of the centralized multi-risk governance system could lead to improvements in interagency communication and the creation of an inter-agency environment, where the different departments at the national level can exchange information, identify the communities that are most exposed to multiple risks and set priorities, while providing consistent information about and responses to multi-risk to the relevant stakeholders at the local level. A decentralised multi-risk governance system by contrast can instead favour the creation of local multi-risk commissions to conduct discussions between experts in meteorological, geological and technological risks and practitioners, to elaborate risk and hazard maps, and to develop local capacities which would include educational and training activities. Both governance systems suffer from common deficiencies, the most important being the frequent lack of capacities at the local level, especially financial, but sometimes also technical and institutional ones, as the responsibilities for disaster risk management are often transferred from the national to local levels without sufficient resources for implementation of programs on risk management (UNISDR, 2013). The difficulty in balancing available resources between short-term and medium-term priorities often complicates the issue.

Our recommendations are that the implementation of multi-risk approach can be facilitated through knowledge exchange and dialogue between different disciplinary communities, such as geological and meteorological, and between the natural and social sciences. The implementation of a multi-risk approach can be strengthened through the creation of multi-risk platforms and multi-risk commissions, which can liaise between risk management experts and local communities and to unify numerous actions on natural hazard management. However, the

multi-risk approach cannot be a subsidiary to a single risk approach, and both have to be pursued.

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