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Time Dependency of Risk Governance Elements – Seeing Foresight and Prediction in a Disaster Management Context

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This contribution aims at stimulating a conceptual discussion within the disaster and risk management community. The framework of risk governance (according to the International Risk Governance Council) is introduced and placed in the more general context of disaster management. Disaster management has widely been regarded as a cyclic multi-stage process, ideally starting with risk analysis, followed by mitigation efforts, and rounded off by a response phase after a disaster strikes. With all different stages featuring spatially and temporally variable components, recent advancements of this well-established concept resulted in figuratively unrolling the cycle and moving to an infinite disaster management spiral. However, the ultimate goal remains the same, i.e. reduction of future risks and impacts particularly on social system dynamics. Learning from past disasters and corresponding adaptation of disaster management processes is essential in minimizing impacts of future events. It is however impossible to achieve zero risk. The residual risks keep the spiral on the loop despite continuous improvements in management practices.

The concept of risk governance promises to offer a comprehensive means of integrating risk identification, assessment, management, and communication. With governance implying a much broader scope of risk management than individual actors' actions, the four central actors in modern plural societies need to be involved: (1) governments, (2) economic players, (3) scientists, and (4) civil society. Governance also includes "building and using scientific knowledge, fostering innovation and technical competences, developing and refining competitive strategies, and promoting social and organizational learning". Looking at the structure of the risk governance framework, two interrelated spheres can be described: (1) an assessment sphere basically focusing on generation of knowledge and (2) a management sphere where decisions are made and actions are implemented.

Considering the conceptually differing approaches of foresight and prediction, the temporal dimension of risk governance can be explained and its integrated vision of participation and communication will be further revaluated. Foresight activities can be of particular interest and importance in the assessment sphere where risk perceptions, social concerns and potential social impacts are assessed and future risk profiles and risk reduction options are evaluated. The participatory nature of foresight is of utmost significance in the context of tolerability and acceptability judgment where also the long-term development of social systems has to be considered. By fostering participation, foresight activities strengthen public awareness and risk perception among relevant stakeholders. Active and transparent communication and participation is the key for successfully implementing risk governance. Relying on monitoring systems and predictions of certain physical conditions, hazard-wise early warning is possible to some degree. However, if the exposed population is not informed and not aware or if it is not convinced to 'accept' and cope with residual risk, disaster management will eventually not succeed.

Therefore, effective application of the risk governance framework within disaster management can just be achieved through integration of both long-term visions of future developments ("foresight") and short-term risk assessments and hazard predictions ("prediction").