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Partnership for Risk Reduction



ENHANCE

Enhancing Risk Management Partnerships
for Catastrophic Natural Disasters in Europe

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Policy Brief: How does perception shape management within multi-sector partnerships in Europe?

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Introduction

Risk perception plays an important role in reacting to hazards and disasters. In cases in which people have poor perception or no perception of risk, their reaction might be unsuitable or even harmful (e.g. building houses in flood prone areas). In contrast, in other cases in which the perception of risk is shaped by historical and social events, the reaction to the hazards and disasters might be very appropriate to the event happening. This might reduce the possible harms.

Taking into account that natural hazard risk is usually not managed individually but by heterogeneous groups, the risk perception of those groups gains importance for our research. Within the ENHANCE project, we have therefore concentrated research efforts around **Multi-Sector Partnerships (MSPs)**. These partnerships have to be understood as:

'voluntary but enforceable commitments between partners from different sectors (public authorities, private services/enterprises and civil society), which can be temporary or long-lasting. They are founded on sharing the same goal in order to gain mutual benefit, reduce risk and increase resilience'.

We have looked specifically at factors that make risk management successful and reduce vulnerability. By identifying generic risk perception criteria through assessing different European risk cultures, it becomes possible to distil characteristics showing efficient risk governance structures. This enlarges the possibilities for other areas with similar risks to copy strategies and governance procedures that might also reduce their vulnerability to natural hazards.

Risk in the context of Multi-Sector Partnerships

The risk of natural hazards, that might become disasters, is influenced by social, political and economic issues, but depending on the **perceptions** of people, the degree of risk is considered high or low. Perception is a social, not just individual, phenomenon. Perception is the way we think to understand the world around us. Then, to understand risk perception means to recognise and to accept the social dimension of risk. Cognitive psychologists consider that perceptions are formed by common sense reasoning, personal experience, social communication and cultural traditions. Thus, risk perception is both a social process and a cultural construction. Every social group has different perceptions and responds in a different way to risk. Risk understanding is the result of different mental constructions from the perception of the affected people and their interpretations and responses. Those, in turn, depend on social, political, economic and cultural contexts and judgments.

A MSP is a critical element that in a situation of risk might support proper management instead of facing a difficult situation. Usually MSPs are embedded in networks of experts that provide sufficient scientific and expert knowledge. The role of every institution within a MSP is to provide information and knowledge as well as data; they are in some cases representatives of users too.



The tasks developed by MSPs are preventive and forecasting measures, analysis of perceptions, exchange of knowledge and experiences, definitions of rules of management, group organisation, monitoring evaluation, conflict resolution (discussion) and minimisation of hazard effects. These tasks are achieved thanks to strategies such as knowledge and experiences sharing, involvement in working groups, and training and research activities.

MSPs are generally voluntary, except some partnerships focussing on civil protection. Almost all are regulated by official legislation. Within ENHANCE we have analysed which are the risk management characteristics of the MSPs, how we can define their cultures of risk management and which perceptions bring them to act collectively.

Insight on how risk perception shapes risk management

Risk management can be defined as the process of (a) identifying a risk, (b) assessing this risk, (c) responding to it, (d) monitoring it, (e) and reporting the risk. But the perception influences also the management of the risk.

The process enables 'risk managers' to make decisions based on their perception of different risks, and in due course to respond proactively to any alteration caused by the risks by mitigating the threats. Therefore, risk management is shaped by three elements (see Figure 1). Firstly, the **natural hazard**, then the **perceived risk** based on the interpretations about the hazard, as well as the experiences, knowledge, preparedness strategies, responses and beliefs of affected people, and finally the proper **management** to regulate the hazard considered as risk.

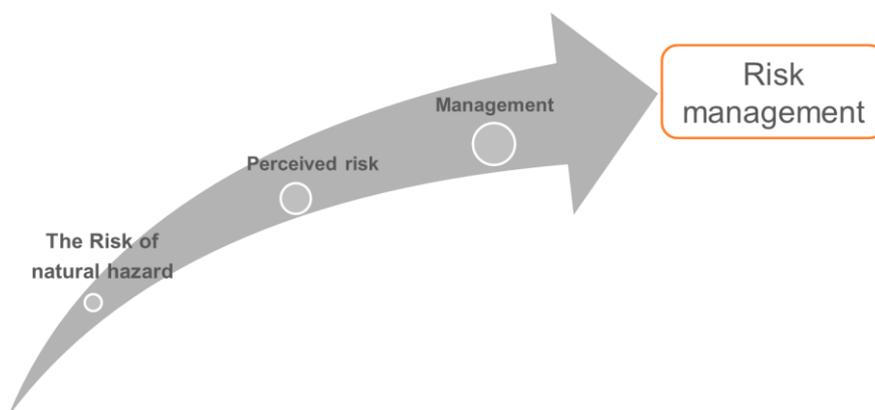


Figure 1. Risk management steps

Following this interpretation, several factors need to be taken into account for analysing the perception of risk within the MSPs. These include the experiences, knowledge, preparedness strategies, responses and beliefs that people have. These factors are reflected in the policies implemented by the MSPs as managers of the risk and in their responses to cope with risks.



Perceived risk

In ENHANCE we analysed the perceived risk that shapes management, the measures implemented to face this risk, and how different MSPs perceive the effectiveness of the measures.

In some cases, the risk identified was different from the one observed. That is the case of Austria (case study focusing on avalanches) in which the MSP representative ranked floods higher than avalanches, but looking at the last events in Austria (floods), these responses reflected rather their perception.

The main socio-economic and environmental impacts perceived by the MSPs are loss of production and land degradation respectively. Almost all respondents believe that there will be an increase in the frequency of disasters, mainly due to increase/decrease of precipitation (depending on the region and natural hazard observed); sea level rise; increase in climatological intensity; increase of human settlement in some areas and also human abandonment in others; deficiency in infrastructures; and climate change.

Information and networking were commonly regarded as policies with higher effectiveness in improving risk assessment. On the other hand, climate simulations are seen as less effective measures.

In the opinion of the representatives of the institutions analysed, to enhance risk preparedness, the most effective policy is to have an appropriate risk management plan. 83% of the respondents consider themselves to be better prepared to manage risks in the future if they compare their current management with the last events. Only 8% have the perception of having been as well prepared in the past as they are in the present.

Regarding the effectiveness of prevention and mitigation measures, respondents show that insurances are perceived as one of the most effective instruments (90%). However, it might be mentioned that only 17% of the analysed institutions use insurance as a measure to support prevention and mitigation. In general, awareness-raising (88%) was also considered to be very effective.

Perceptions on policy implementation sometimes mark a difference between the measure in use and its real success. This means that not every measure with a high degree of use is perceived as effective. For example, capacity building is less used but perceived as highly effective. In most of the MSPs analysed capacity building is being implemented since more than 15 years.

Financial resources are one of the most important aspects for managing the working process to face risk. Most respondents consider monitoring outcomes as very effective in some cases with a history of 70 years.

In general, the decision-making processes are perceived as mostly transparent and fair. The representatives of the institutions analysed consider their partnerships quite successful (81%). No one describes them as a poorly successful.



Culture of risk of the MSPs

Decision-making processes, embedded in a culture of risk management, are made on a consensus basis, involving all members of the membership within a democratic process, e.g. the members have an equal right to vote and be active in the decision-making practice, and are equally represented in the partnership. Usually mechanisms of participation exist that regulate the participation.

Expert knowledge available is considered an important element of a culture of risk. This knowledge should not be only understood as knowledge acquired through formal education, but also includes the historical knowledge of dealing with a risk and how this has been managed (learning from the past to face the future). Many of the instruments and actions implemented by the MSPs to face a risk arose from past experiences.

A well-functioning culture of risk includes also the **collection and record of data** related to the hazards they might face, mostly collected through own data collection networks and empirical analysis. Therefore, the main tools used to support the decision-making process are database creation and risk mapping.

Part of the knowledge available to the MSPs is based on systematic monitoring carried out in the partners' own institutions about the risks they are exposed to. This monitoring is done through warning systems, sensing networks and remote sensing, GIS, systems of indicators and multidisciplinary monitoring.

Most of the MSPs developed management options combining past experiences with the obtained data, such as the creation of risk management models, defence programs, incorporation of new techniques and constructions, plans of emergency, increase risk perception among the population, the improvement of monitoring networks and simulation models.

Part of the risk culture created among the MSPs involved also the improvement of the following risk management steps:

Risk assessment → Risk mapping and regular monitoring policies are implemented, being even mandatory in many cases. This is anchored in their risk culture, in some cases even since the first half of the last century. It is noticeable that economic monitoring of losses does not form part of their usual instruments for monitoring risk. This is most likely due to the fact that economic losses are normally accounted for long after the catastrophic events have taken place. In addition, and due to the continuous improvement in risk minimisation in many cases, economic losses vary from one event to the next both in quantity and location complicating the monitoring process.

Risk preparedness → Risk management and emergency plans are created. In some cases, this has been done for 10 years and the plans are considered mandatory. In many countries there are national platforms for disaster risk reduction that support the involvement of public and governmental entities, civil protection departments, universities, infrastructure businesses and environmental agencies, among others, in the risk management process. Regional and local



platforms are responsible for the identification of needs, definition of measures and distribution of the financial support for their implementation.

Risk prevention and mitigation→ Awareness-raising campaigns are put in place. The use of insurance policies is low. In general, the MSPs collaborate through conventions, project evaluation, monitoring committees, governmental funds and mandatory insurance of properties in the coordination of actions oriented to develop guidelines for monitoring and management, to foster agreements between stakeholders, elaborate information and its dissemination, and to provide financial support for the implementation of all tasks at the regional and local level.

Risk recovery→ Long-term post-disaster policies and compensations funds exist in all countries.

Policy implications

Multi-Sector Partnerships have proven to be very effective to manage risk events; sometimes even more than governmental reaction. They have evolved around the creation of a culture of risk management and are very attached to particular locations suffering from recurring natural hazards. With the results of our analysis, we can confirm the main characteristics of a risk culture that are beneficial to manage a risk. Those characteristics are shaped by the perception of risk of the people involved in the partnership, which in turn shapes their risk management.

There is a need to support these governance structures arising from risk perception in the absence of a proper governmental reaction to hazards. Governments should support the creation of MSPs to manage risks and take advantage of the synergies. This support should also be reflected in the legislative field, including guidelines and criteria for the creation of MSPs that will in turn help to further analyse the effectiveness of the MSPs.

Nevertheless, we have to recognise that there is no 'one-size-fits-all' solution and that MSPs are shaped by the hazard they face and also by the social, political and historical background of the area where they are. For example, the creation of an MSP in areas dealing with the same hazard for many years will be easier than in areas where no tradition of a particular hazard's management exists. MSPs are very likely to occur even in an informal way in regions where a certain hazard has a recurrent nature (e.g. droughts in the Jucar River Basin District). Thus, it is important or even necessary that these informal MSPs are legalised and given a good governance structure in order to optimise the risk management process.

Another possibility is that risk management is done in a very local/individual basis. Our work strives to show that MSPs are the epitome for proper risk management, so there is an evolution from the individual to the partnership approach.



This policy brief is based on research of the ENHANCE project:

Carmona, M., Mañez, M., González Riancho Calzada, P., Surminski, S., Bayer, S., Hanger, S., Haro, D., Andreu, J. (2014). ENHANCE Deliverable 4.1. – Working paper: Risk perception and risk cultures in Europe. Available at: <http://www.enhanceproject.eu/deliverables/18>.

ENHANCE Deliverable 4.2. – Report and survey on risk perceptions.

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