

When the plan is not enough

Civil Protection Emergency planning for effective Disaster Risk Reduction

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The research work here presented is framed in the wide discourse concerning Disaster Risk Reduction, focusing the attention on the relation between emergency management, emergency planning and spatial planning. Empirical recognition – coming from previous research work and confirmed by the literature – of a biased approach to emergency management and planning is what switched on my interest on the topic. Emergency planning is often dismissed by planners for being too dedicated to action, lacking a deeper thought on the territorial implication of the operational decision of emergency plans. Likewise, practitioners in charge of emergency management seem not to consider the spatial implications of their operational choices, underestimating the importance of a complex understanding of the territory in risk reduction practices. This lack of interaction among emergency operational management, dynamic understanding of the territory and territorialization of practices, creates disconnection among mitigation, preparedness, response and recovery, the four phases of the disaster cycle, hindering the cooperation of the various players that – in different roles - deal with risk as well as with the various instruments involved.

Starting from this general consideration, the present project is articulated around two guiding hypotheses. The first one concerns the central role played by spatial planning in all the four moments of the disaster cycle, therefore including preparedness and response, the emergency-related phases. Several aspects of spatial planning can, in fact, give a valuable contribution to contingency planning, not only helping rescue operation, but also enhancing the rebound of disaster-stricken territories and community. This leads to the second guiding hypothesis, which is that emergency planning is not to be considered just an operational activity nor a static sort of goal, but rather it should be regarded as a process, including governance implication and strategic territorial perspective. The planning process itself, not the planning outcome, should be the object of evaluation, as it is the instrument that connects all the different pieces of the disaster cycle puzzle.

Based on this, the research question is structured as follows:

How can emergency management and planning trigger effective Disaster Risk Reduction in spatial planning?

Hence, focusing on the emergency-related phases of the disaster cycle, considering the complexity of DRR and including the multiplicity of stakeholders and instruments that play a role in the process, the final objective of the research is to define practices, tools, and areas of intervention that can serve as a bridge between emergency planning and spatial planning.

This aim is achieved through a case-study methodology, analysing two specific activities of the Italian Civil Protection, a central stakeholder of the emergency management system: the execution of a national Civil Protection exercise, the *EXE Sisma dello Stretto*, and the participatory process for the drafting of the Civil Protection plan in the town of Bagnara Calabria (RC). These two activities were chosen as they represent key moments of the disaster cycle, as well as important elements for the description of a bounded system as the one of the Civil Protection. Comparison is not the objective of the analysis. On the contrary, the combination of the two experiences results in the creation of context-dependent knowledge to which the Disaster Risk Reduction gaps identified in the theoretical framework were sought after.

The dissertation is organized in three sections.

Part I: Disaster Risk Reduction. A comprehensive framework develops the theoretical framework of the topic. The focus of this section is the deconstruction of the concept of risk, in order to move from the early conceptualisation based on environmentally deterministic approaches, to a more holistic risk concept that integrate environmental, social, economic, political, infrastructural and governance-related issues. This is instrumental for questioning the concept of effectiveness in Disaster Risk Reduction, developed as complementary to the DRR Gaps: risk assessment, risk awareness and risk governance. The outcome of this first phase of the research gives the key for the development of the following one, as it defines the critical issues that will be highlighted and deeply investigated in the fieldwork: subdivision of competence among actors of the disaster cycle, knowledge transfer risk-related, digital transition, policy implementation and temporality of activities.

In the second phase of the work, *PART II. Case study analysis: the Italian Civil Protection System*, the focus is on the empirical recognition of the critical categories identified in the first part, through the analysis of selected case studies. As for the risk knowledge category, the analysis aims at understanding if and how the civil protection activities analysed contribute to the creation of risk knowledge and if this is efficiently transmitted and used. Deeply connected to the risk knowledge category, there is the one of risk awareness. Here the objective is to define if the emergency management and planning activities influenced community's and involved actors' risk perception. Moreover, the connection between risk perception, risk awareness and willingness to act will be investigated. Finally, as for the risk governance category, the reconstruction of the connecting network will provide a synthetic framework of actors, territorial scales and temporal scales, in order to explicit competences, contradictions and overlaps of the risk governance system.

Third and last section of the dissertation, *PART III. Planning effectively for Disaster Risk Reduction*, regards the elaboration of the results obtained by the analysis and the proposition of guiding areas of intervention and instruments that can help in the construction of the common foundations for an integrated approach in emergency and spatial planning.

Data collection is made through qualitative methodologies, using instruments such as direct observation, informal and semi-structured interviews, participation in meetings as well as analysis of documentation and critical review of plans and norms related to the subject. Given the highly operational nature of the research topic and case study, the fieldwork assumes a central role in influencing the research development.

The analysis indicates a significant shortfall in the effectiveness of Civil Protection practices and planning instruments to implement effective Disaster Risk Reduction measures within spatial planning. This inadequacy stems partly from limitations within Civil Protection practices that fail to address gaps in DRR identified in the literature. Additionally, there is a lack of recognition of the vital role that territorial issues play in emergency management and planning, which directly affects DRR initiatives. While operational and procedural elements are essential components of the Civil Protection plan, territorial considerations are often treated as secondary, thereby diminishing the overall effectiveness of risk management strategies.

To address these shortcomings, the research suggests some guiding development areas, aimed at integrating emergency and spatial planning.

First, the research proposes the implementation of a DRR relational database, an operational tool that enhances the disaster cycle model by systematizing connections between stakeholders, information, actions, timelines, and data. This aims to clarify the complex processes observed, allowing for better coordination of communication across different phases of the disaster cycle.

However, the database must be supplemented with concrete actions involving relevant stakeholders. Ultimately, the research advocates for a shift from the traditional Civil Protection plan to a Strategic Civil Protection program, encompassing both operational and spatial components.

In conclusion, the study's contributions are dual. First, through the systematization provided by the DRR relational database and the suggested Civil Protection strategic programme, the work aims to offer an agile tool for understanding the relationships among the different actions, tools, and actors involved in the

emergency-related phases of the disaster cycle, facilitating risk reduction interventions. Second, the work seeks to initiate a theoretical reflection on Civil Protection emergency planning, a topic rich in operational and technical studies but lacking in-depth reflection on the nature of its instruments and practices. The integration of Disaster Risk Reduction into spatial planning requires a nuanced understanding of both the procedural and strategic dimensions of planning, necessitating a holistic approach that bridges the gap between emergency management, emergency planning and spatial planning.