Learning from Place-based Flood Prevention Policies: A Realist Approach



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This article summarises the Article: "Learning from Place-based Flood Prevention Policies: A Realist Approach", published in Regional Studies (Melloni, 2024).*

Flooding: one of the most pressing climate threats

Flooding is one of the most pressing climate threats, affecting billions of people

worldwide and having far-reaching economic and social development implications. The European Union alone has faced over EUR 145 billion in economic damages in the past decade due to such events, with countries like Italy and France being particularly hard hit. Especially in remote areas, the lack of readiness to face flood events could not only intensify their downward spiral but also may affect neighbouring, more productive ones.

Fostering place-based flood control policies means attempting to overturn these dynamics and trigger new development pathways. The article also proposes a realist methodology as a tool for learning from successful flood prevention initiatives implemented in specific local contexts.

Why a Place-based Perspective for flood prevention policies?

Traditional flood prevention policies have predominantly relied on centralized planning models, which emphasize technical and infrastructural solutions. These approaches aim to minimize the immediate human and economic costs of flooding by implementing large-scale infrastructure projects such as dams, levees, and drainage systems. However, while these centralized efforts are crucial, they tend to overlook the unique characteristics, needs, and resources of local areas. This can lead to a mismatch between the solutions provided and the actual needs and interests of the communities at risk. The distributive character of the post-flood recovery policies makes them more attractive, politically and economically, for local actors than investing in prevention, also given that flood management policies are often handled in places distant from where flood occurs.

Assuming a place-based approach means considering flood prevention policies not only as a means to prevent downward spirals of the affected territory, but also as part of the strategy for fostering its economic development. Unfortunately, the local territorial level and especially marginal areas often lack of intervention models suitable for such places. The problem of how to promote the creation and diffusion of place-based innovations has been debated. The goal of this paper is to contribute to the development of a toolbox for learning from place-based strategies.

How Can the Realist Approach Help?

The article proposes the adoption of a realist approach to flood prevention policy

design and evaluation. This approach seeks to answer the question: “What works, for whom, in what circumstances?” by analysing the underlying mechanisms that drive outcomes in different contexts. The article illustrates the application of the realist approach through a case study of a place-based flood prevention initiative in Northern Italy.

Case Study: The Community Road Maintenance Workers Succeed

The “community road maintenance workers” initiative, co-funded by the Interreg Italy-France Programme ALCOTRA, was developed in the Liguria region of Northern Italy, an area characterized by its mountainous terrain and frequent flash floods. The project, implemented by a group of small municipalities, involved hiring local farmers to perform maintenance tasks on the region’s extensive network of roads, many of which are located in remote and difficult-to-access areas. These tasks included cleaning gutters, removing debris, and monitoring road conditions, all of which are critical for preventing landslides and ensuring that roads remain passable during heavy rainfall. The farmers were compensated for their work, providing them with an additional source of income while also contributing to the community’s flood resilience. A monitoring system was developed as well, involving the citizens in the process of reporting road maintenance needs.

The outcomes from a realist perspective

The “community road maintenance workers” initiative resulted in several positive outcomes. First, it significantly increased the frequency and quality of road maintenance, which in turn reduced the risk of landslides and other flood-related damage. The initiative also proved to be cost-effective, as the maintenance work performed by the farmers was less expensive than the previous system of outsourcing these tasks to specialized contractors.

The realist analysis revealed some key mechanisms that contributed to these outcomes. One of the most important was the perception of opportunity among the local farmers, who saw the initiative as a way to supplement their income while also serving their community. Social rewards further reinforced their involvement, as the farmers received recognition and appreciation from their neighbours for their efforts. The project also leveraged a feedback mechanism

that allowed for more efficient communication between the farmers and local authorities, leading to quicker and more targeted responses to maintenance needs.

What Are the Policy Implications?

The findings from the case study have implications for flood prevention policy at both the local and broader levels. Although the involvement of local actors is considered very important, it is nevertheless difficult to achieve, not only due to *participation fatigue* but also to conflicting interests and misplacements between local and supra-local planning. A place-based perspective shows a pathway for a more effective contribution, provided that forms of economic or social interest were recognised for the stakeholders involved, as well as forms of accountability for this contribution. The above-local regulatory actors should acknowledge these types of practices and encourage them, providing for the appropriate space and funding within the basin-level prevention plans.

Fostering place-based flood prevention policies, however, requires special knowledge about what works at the local level. Policymakers should not assume that a one-size-fits-all approach will be effective. A key takeaway from the realist analysis is the importance of understanding the mechanisms that drive successful outcomes in different contexts.

Conclusion

This study advocates for integrating a place-based perspective into mainstream flood prevention strategies. More generally, the literature has shown that combating floods requires a complex balance of forces at various levels of government and attention to the interplay of environmental and social elements. Adopting a place-based approach can provide an opportunity to engage more effectively with the local actors in this challenge, thanks to the stimulation of economic and social rewards for this involvement.

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