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INSTITUTIONALIZATION OF DISASTER RISK MANAGEMENT IN THE LOCAL ENVIRONMENT

Dr. João Luiz da Matta FELISBERTO
Military Police of Minas Gerais, FPL Educational
E-mail: jlmfelisberto@gmail.com
ORCID ID: 0000-0002-7917-6919

Dr. Daniel Jardim PARDINI
FUMEC University
E-mail: pardini@fumec.br
ORCID ID: 0000-0003-0422-1639

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Abstract. *This study aims to analyze the institutionalization of the organizational field of disaster risk management, at the local level, in Brazil. The research is developed through in-depth interviews. Data are interpreted using content analysis techniques. In particular, it appears that the civil defense units, in the organizational field researched, have structure and resources that are still inadequate and insufficient, lacking technical training and structure to develop the activity. There are entrepreneurial actions by the State, however, there is a need to foster partnerships with Education. Institutional legitimacy is still small in the social context in which it operates. There are no interfaces with urban planning for disaster mitigation. It is necessary to strengthen the process of institutionalizing disaster risk management at the local level in the researched territory.*

Keywords: *disaster management, disaster risk management, institutionalization, organizational field*

Introduction

Disaster Risk Management (DRM) is the way in which public authorities, media, the private sector and civil society coordinate at communities (local level) and at regional and national levels in order to manage and reduce risks related to disasters. disasters (Djalante & Lassa, 2019). Ishiwatari (2019) highlights that the integrated approach is one that involves a wide range of stakeholders from central and local governments, the private sector, academia, civil society organizations and local communities.

In fact, just as disaster risk management is essential for the prevention and reduction of disasters (Nyanga, et al., 2018), the institutional configuration is essential to increase the level of preparedness of a city. Furthermore, a municipality needs to implement preventive actions to deal with exposures and susceptibility and transform its institutional structure by developing coping and adaptation capacities (El-Kholei, 2019). In any case, it is widely recognized that public policies need to provide an enabling environment that not only guides stakeholders in developing the planning and execution of disaster prevention, adaptation and response interventions, but also enables communities to adapt to their risks. (Ampaire et al., 2017).

Institutional theory, an important theoretical support in management research, has as its central premise that individuals and organizations end up behaving in ways they do not do for economic efficiency, but rather to achieve and maintain legitimacy in a social context (Burton Jones et al., 2020). In this context, if the relevant public policies require an organized administration through well-established processes, media control and a professional and qualified technical staff, the new challenges and the evolution of contemporary demands indicate the need to add new managerial characteristics to the public administration, taking into account to the wishes of the citizen (Felisberto et al., 2019).

From this perspective, governed by a set of institutional logics and characterized by a particular set of technologies, rules, networks, relationships, expectations, habits, frameworks and meanings, the concept of organizational field encompasses individuals and organizational actors who consider each other in their categories. and symbolic practices (Jefferies et al., 2019). Anyway, Fakhruddin et al. (2019) highlight that effective disaster risk management requires comprehensive coordination, the establishment of strong partnerships and adequate urban development. Sanderson (2019) corroborates, highlighting that prevention and response to crises in urban areas must, first of all, belong to local governance structures, however imperfect they may be.

Based on the theoretical-empirical model developed by Felisberto and Pardini (2022), this study aims to analyze the institutionalization of the organizational field of disaster risk management at the local level in Brazil. The research is developed through in-depth interviews with players with privileged knowledge and extensive experience in the organizational field investigated. Data are interpreted using content analysis techniques. The collective subject discourse is constructed from the research findings. In particular, it appears that the civil defense units, in the organizational field researched, have structure and resources that are still inadequate and insufficient, lacking technical training and structure to develop the activity. There are entrepreneurial actions by the State, however, there is a need for state action in order to foster partnerships with Education. The institutional legitimacy of the empirical phenomenon researched is still small in the social context in which it is inserted. There is no culture of training in prevention, as well as there are no interfaces with urban planning with a view to mitigating disasters, factors that denote the need to strengthen the process of institutionalizing disaster risk management at the local level.

Materials and methods

The achievement of this study takes place from the theoretical-empirical model of disaster risk management validated by Felisberto and Pardini (2022). The aforementioned authors teach that the organizational field of disaster risk management is formed by the variables: civil defense units, social actors, institutional entrepreneurship, public policy networks, disaster dimensions and institutional legitimacy. Table 1 presents the characterization of the variables that make up the organizational field of disaster risk management, as validated by Felisberto and Pardini (2022).

Table 1. Variables of the organizational field of disaster risk management.
Source: Felisberto and Pardini (2022)

VARIABLES	DESCRIPTION
Civil defense unit	At the federal, state and municipal (local) levels, it is the body responsible for achieving disaster management and disaster risk in the respective territory. At the local level, it is the City Hall body that has the mission of coordinating all disaster prevention, preparation, response and recovery activities within the municipality – it is the central body of the civil defense system.
Social actors	The actors that act in disaster risk management, including government, citizens, companies, regulatory bodies, among others, are divided into: **sectoral bodies** - organizations and entities of the municipal, state and federal public administration headquartered in the respective municipality (Military Police, Military Fire Brigade, Municipal Departments, among others); and **support bodies** -

	community organizations and private companies operating in that particular municipality.
Institutional entrepreneurship	It encompasses individuals or organizations as actors who strive to implement and initiate institutional changes, regardless of initial intentions and final results, in short, it is a type of institutional work in which actors initiate and implement changes in an institution or create a new one (Battilana et al., 2009).
Public policy networks	Representation of symbolic relational spaces where all participants contribute to the choice and definition of strategies in a position of equality among themselves under the attribute of democratic governance, attributing meaning to the strategic content and the individual and collective actions of actors involved in public policies (Chaddad , 2012).
Dimensions of disaster management	**Prevention:** actions focused on completely eliminating adverse impacts and threats, through structural and non-structural measures. It is not always possible to completely avoid losses and the preventive action can become mitigation in practice (UNISDR, 2016). **Mitigation:** structural actions aimed at reducing or limiting adverse impacts. It should be considered that the quality of public policies and the level of public awareness influence the results (UNISDR, 2016). **Preparation:** capacity to develop to know the risk and know how to act, through scientific and technological knowledge and the training of people (UNISDR, 2016). **Answer:** actions taken immediately after the occurrence of the disaster to save lives, reduce health impacts, ensure public safety and meet the basic survival needs of victims. They can extend and confuse with recovery (UNISDR, 2016). **Recovery:** starts shortly after the response and aims to restore and improve, where necessary, facilities, livelihoods and livelihoods. It must be guided by the principle of "rebuild better" (UNISDR, 2016).
Institutional legitimacy	Perception that an organization's actions are desirable or appropriate within a socially constructed system of norms, values, beliefs and definitions (Burton-Jones et al., 2020).

In the first stage of the field research, twelve exploratory interviews were carried out, with key informants, individuals with privileged knowledge in the organizational field investigated. These interviews were not recorded, they served as a pre-test. In the second stage, fifteen players were interviewed with greater rigor and richness of detail (five municipal civil defense coordinators with extensive experience in disaster management, from small, medium and large municipalities in the state of Minas Gerais, Brazil; six civil servants of the executive branch of the state of Minas Gerais, Brazil, with activities affecting the environment, civil defense, and public security; a professional from a private company who works in the organizational field object of this study; and three community leaders from municipalities in the state of Minas Gerais , Brazil, affected by disasters). These interviews were recorded and transcribed. A script (protocol) of in-depth interviews with guiding questions was used as a data collection instrument. The interviewed players were chosen by criteria of capacity, competence and convenience.

The data obtained were analyzed and interpreted using content analysis techniques, using the NVivo 11 Plus software. Divided into stages: pre-analysis; material exploration; and treatment of results, inference and interpretation. The pre-analysis phase consists of a

preliminary reading of the entire content of the material collected in the field research (reading of the transcripts of the interviews carried out). In the stage of exploration and treatment of the collected material, there is an effort to point out the latent categories, focusing on the identification of the so-called "semantic nodes" (analysis of the text obtained with the transcription of the interviews - cut into recording units). In the stage of treatment of results, inference, and interpretation, the contents are compared through the juxtaposition of the categories that emerge from the analyses.

The grouping of speeches was classificatory. The starting point was raw speeches with submission to an analytical work of selection of the main central ideas of each of the individual speeches converging to a synthetic form providing the discursive reconstitution of the social representation. Thus, through the fragments of individual speeches, (synthesis-discourses) representative of the phenomenon under study, it was obtained that the speech of all was the one of only one – speech of the collective subject. Nevertheless, the discourse of the collective subject was constructed from the variables of the organizational field of disaster risk management proposed by Felisberto and Pardini (2022).

Discussion

Under the aegis of a perspective of shared responsibility with all stakeholders in disaster risk reduction, primarily States, the Sendai Framework presents a set of thirteen guiding principles and seven global goals, expanding the scope of disaster possibilities encompassing as such extensive threats, both technological and biological (UNISDR, 2015).

Fernandez and Ahmed (2019) underline that disasters are recognized and leveraged as opportunities for change and improvement, and in some cases even considered a "useful interruption" to previously unchallenged inappropriate policies and practices. On another turn, Gebreyes (2018) points out that the role of institutions in natural resource management, disaster risk management, adaptation to climate change and related topics is well recognized. This angle of reasoning reinforces the view of institutional theory, which has as a basic premise that people and organizations behave to achieve and maintain legitimacy in a social context. These behaviors accumulate over time and become embedded in the way work is performed (e.g., structures, artifacts, values and habits), so that organizational networks emerge, which continually maintain and guide, constrain and enable the behaviors (Burton-Jones et al., 2020).

The concept of organizational field brings together organizational relationships and creates opportunities and spaces for value creation (Jefferies et al., 2019). From the perspective of the need to improve the performance of public policy management, with the key idea of sustainability and efficiency of disaster risk reduction, it appears that political, cultural and procedural conditions within a community can influence both the quality democracy and management in civil defense at the local level (Fernández, 2017). In this reasoning, it is important to present and discuss the findings of this research describing the practices observed among the actors involved in disaster risk management and the actions of agents present in the organizational field under study (interviewed players).

Institutions channel human behavior by creating stable structures to promote efficiency in human interactions and the reduction of uncertainties, aligning the actions and expectations of individuals in a society (Friel, 2017). In any case, legislation alone is not definitive in consolidating public policy, and between its formulation and implementation there are several necessary elements so that it can actually insert a culture of disaster risk reduction in the country (Nogueira et al., 2014). In this perspective, the research findings demonstrate that the

institutionalization of civil defense units at the local level is directly related to the size of each municipality, however, in most municipalities it is still incipient.

In any case, disasters should not be treated as unexpected fatalities, with a degree of surprise on the part of the actors who gravitate in their orbit. These actors must develop effective and efficient strategic alternatives in order to minimize the institutional pressures that impact this field (Pardini et al., 2018). It emerges from the findings of this study that the role of the state as a social actor in the organizational field under study strengthens civil defense units and provides greater learning and evolution in the above-mentioned field, while strengthening the process of institutionalizing disaster risk management. It is also possible to abstract the importance / need of social actors in the configuration of the organizational field in question. However, the findings point to the need to evolve the process of structuring the organizational field of disaster risk management in such a way that, through interorganizational links, values are shared, strengthening the respective institutionalization process.

It is imperative that the cross-cutting urgencies to address accelerating environmental pressures and entrenched structural inequalities seek to improve prospects for sustainable and equitable development, thereby stabilizing and reversing the global pressure built up in the face of an articulated, shared and protective vision to tackle a complex amalgamation of climate change, socioeconomic inequality and accelerated urban growth (Holloway et al., 2019). The findings denote the pressing need to act in public policy networks for the success of disaster risk management. The discourse of the collective subject points to the need to strengthen public policy networks in disaster risk management in such a way as to make them perennial, with greater organizational links, rather than being strengthened only in periods of higher incidence of disasters, on the other hand, it corroborates that acting in a network of public policies is the way to consolidate the process of institutionalizing disaster risk management.

Gimenez et al. (2017) point out that the level of resilience of an organization can be improved through collaboration and the development of partnerships before the occurrence of a disaster, therefore, it is fundamental, for the exercise of the above mentioned management, to seek spaces for local articulation, such as partnerships with universities, lines of international funding, in addition, of course, to articulated work within the local government. The results of this research indicate the importance and pressing need for action in public policy networks to include higher education and research institutions.

The lack of institutionalization process of public policy networks in the organizational field of disaster risk management is also evident, in the sense that the participation of science (universities) in the aforementioned field is still discreet. In this scenario, the urgent need to bring scientific knowledge, embodied in universities, to the fore of the organizational field of DRM is abstracted, promoting, therefore, advances and the strengthening of the institutionalization of the entire institutional environment that encompasses this field. Furthermore, as recommended by the United Nations, one of the essential steps to build a resilient city is precisely the strengthening of institutional capacity for resilience (UNISDR, 2015).

In this endeavor, it is important to highlight that in the organizational field of disaster risk management, establishing a mechanism for collaboration between interested parties and sectors is a challenge. Collaboration between various organizations requires proactive political entrepreneurs, bringing together concepts of disaster risk reduction visions, plans and programs, clear rules for sharing responsibilities and providing funding and knowledge resources (Ishiwatari, 2019). From this point of view, the research findings indicate that the organizational field of disaster risk management lacks greater organizational ties in such a way as to promote

the approximation of relationships and evolve towards the sharing of values and to the increase of its points of contact with in order to enhance the process of institutionalization of the field, since, as highlighted by Ishiwatari and Surjan (2019), from experiences around the world, it was found that in local bodies trust in stakeholders is essential to strengthen the mechanism of collaboration. The United Nations approaches risk management as the systematic approach and practice of managing uncertainties to minimize potential damage and loss (UNISDR, 2016). In this sense, Raikes et al. (2019) understand that disaster and disaster risk management require governance and management considerations. With regard to management and governance processes, the research findings indicate that the variables of disaster management, within the scope of the research carried out in this study, do not present institutional evolution in the same proportion of the international scope.

Mehta et al. (2017) believe that institutional legitimacy originates in the convergence between organization and culturally defined environment. In this endeavor, the context of disaster management and the risk of disasters occurring provides an interesting lens to examine trust, translated into institutional legitimacy, which takes on new meaning as people use information to make quick and critical decisions about how protect lives and property. The collective subject discourse reveals the need for actions oriented towards institutional legitimacy in the organizational field of disaster risk management. Despite entrepreneurial actions having emerged, the findings indicate that the institutional legitimacy of the empirical phenomenon under study is still incipient. The research results also indicate guidelines for obtaining/improving institutional legitimacy and, therefore, for the evolution of the process of institutionalization of disaster risk management, despite the incipience of institutional legitimacy in the field under study.

According to Rapeli (2017), disaster risk-oriented governance, based on the articulation and recognition of all stakeholders, is urgent as an element that strengthens disaster risk management capabilities, where local actors are crucial. Thus, discovering what can be developed at the local level in order to optimize institutional capacities for risk reduction is a measure that strengthens disaster risk management. With this in mind, it emerges from this study that entrepreneurial actions by the State are present in the field, such as the standardization of models of contingency plans and training for municipalities. On the other hand, the distancing of the State from municipalities emerges as a challenge. Additionally, there is a need for state entrepreneurial action to foster partnerships with Higher Education Institutions (HEIs), promote studies for critical analysis of lines of action and possibilities for innovation, promote technical/scientific knowledge for local civil defenses, and enable/foster the professionalization of the civil defense manager. Thus, there is a need for a requalification of know-how, requiring changes in practices and processes associated with the search for resilience and strengthening the field, which is permeated by challenges and uncertainties. Furthermore, it emerges from the results found that the action focused on disaster risk management, and especially its maintenance over time, depends on a structural conjunction expressed by elements and values necessarily shared between the social actors involved. There is a need to strengthen public policy networks in disaster risk management in such a way as to make them perennial, with greater organizational ties to the detriment of being strengthened only in periods of higher incidence of disasters. Acting in a network of public policies is the way to consolidate the institutionalization of DRM.

Regarding the issues of relational networks, numerous researchers emphasize that there is an urgent need for administrative reforms to advance the notion of collective resilience (Sukhwani et al., 2019). From the research carried out, it is possible to conclude that in the field

under study there are occurrences of political disputes, which make more effective and continuous actions impossible, harm organizational ties, and make it impossible to approach relationships. Furthermore, there is low integration of civil defense units with planning and budget teams, the articulation between organized civil society and government bodies is insufficient and, in general, HEIs are absent in the aforementioned network, such that there is incipience in the promotion of scientific knowledge for disaster management as a whole, despite the fact that some states have disaster research centers.

From experiences around the world, it appears that in local bodies, trust in stakeholders and the use of local knowledge are essential to strengthen the collaboration mechanism (Ishiwatari, 2019). In this same perspective, Vicari et al. (2019) underline that there is an emerging need for more integrated participatory planning approaches in order to enable resilient and healthy urban and rural environments. Another conclusive point is that there is no culture of training in prevention, as well as there are no interfaces with urban planning (urbanization works) with a view to mitigating disasters, factors that denote the need to strengthen the process of institutionalization of risk management. disasters at the local level.

Finally, it appears that the DRM has been gaining ground among public managers. It is imperative that they conceive the municipality from the perspective of disaster risk management, and know the risks and threats that plague their respective local scope. It appears that the institutional legitimacy of the empirical phenomenon researched is still small in the social context in which it is inserted. People only give credibility to what is said when they perceive changes in everyday life, thus, there is a need for cultural change in the population, which has a low culture of self-protection. It is concluded that there is a need for the involvement of the education area to promote community involvement and, finally, to evolve in the culture of risk. The main research findings are presented in Table 2.

Table 2. Systematic summary of the main research findings.
Source: Made by the authors from the research carried out.

VARIABLES	MAIN RESEARCH FINDINGS
Civil defense units / social actors	- The structure and resources of civil defense units are directly related to the size of each municipality, being still insufficient and inadequate in most of them. Municipalities, in general, are unprepared for disaster risk management, lack technical training and structure to develop the activity; - The municipal civil defense unit is the central body in the organizational field of disaster risk management. Support bodies (community organizations of the respective municipality). Sectoral bodies (bodies and entities of public, federal, state and municipal administration, operating in the respective municipality).
Institutional entrepreneurship	- The State strengthens the civil defense units and provides greater learning and evolution in the field. Distancing the State from the municipalities is a challenge. Military Police and Military Fire Brigade emerge as the main institutional entrepreneurs; - The disaster makes it possible to create local institutions and activities for the rehabilitation and repair of local damage, but it does not change the situation of low investment in risk prevention and management (institutional degradation); - There is a need to promote partnerships with HEIs, promotion of technical/scientific knowledge for municipal civil defenses, professionalization of civil defense managers. In some states there are disaster research centers;

	- There is standardization of models of contingency plans and training for the municipalities. There is no innovation in disaster risk management, there are few possibilities for actions that are presented, there is a need for more studies to critically analyze the lines of action and the possibility of innovation.
Public policy networks	- There is a need to strengthen public policy networks in disaster risk management in such a way as to make them permanent, with greater organizational ties, rather than being strengthened only in periods of higher incidence of disasters; - Absence of the HEIs to promote scientific knowledge for disaster management, in some states there are disaster research centers. Acting in a public policy network is the way to consolidate the process of institutionalizing the DRM; - There is a need for greater organizational ties – closer relationships, political disputes over space make more effective and continuous actions impossible. Low integration of civil defense with planning and budget teams, insufficient coordination between organized civil society and government agencies.
Dimensions of disaster management	- The dimensions of disaster management, within the scope of the research carried out, do not present institutional evolution in the same proportion as in the international scope, the focus is still on the response. There is no culture of prevention; - There are no interfaces with urban planning (urbanization works) with a view to mitigating disasters. Municipalities, in general, are unprepared regarding the stages of disaster risk management. There is a lack of technical training and structure to develop the activity.
Institutional legitimacy	- The institutional legitimacy of the DRM is still small in the social context in which it operates. DRM actions do not produce practical effects for the population, they are very much in the government's field (with debates about competences, actions to be developed, definitions of parameters, etc.), people only give credibility to what is said from the the moment they begin to see changes in their daily lives; people don't really believe in civil defense; - International regulations are seldom applied due to factors such as culture, economy, politics. The theme needs to be the target of electoral and academic debates. Need for professionalization of the topic and development of research in partnership with universities; - There is a need for cultural change in the population. Low self-protection culture. Need for the involvement of the education area (civil defense at school and partnership with universities). Involvement of people and search for joint solutions and evolution of the risk culture; - Disaster Risk Management has been gaining ground among public managers. Need for the public manager to conceive the municipality from the perspective of disaster risk management, to know the risks and threats. Possibility of the topic being the target of upcoming electoral debates.

Conclusions

The research in question sought to analyze the institutionalization of the organizational field of disaster risk management, at the local level, in Brazil, developed by Felisberto and Pardini (2022). In fact, organizations must change the mindset and develop partnerships and the ability to listen instead of maintaining the attitude that they can develop strategies on their own (Hagelsteen & Becker, 2019). During the process of reviewing or formulating public

policies, it is necessary to apply meaningful participatory approaches that allow the inclusion of stakeholders from all levels of governance (Ampaire et al., 2017).

The findings corroborate that organizing and structuring civil defense units, based on disaster risk management, is an increasingly present strategy at the local level. In the organizational field itself, it is concluded that civil defense units have their birth and survival conditions favored by the institutional structure that emerged in the field, and that the structure and resources of civil defense units are directly related to the size of each municipality, however, in most municipalities it is still inadequate and insufficient, lacking technical training and structure to develop the activity. Additionally, it emerges that there are entrepreneurial actions on the part of the State, despite the need for entrepreneurial state action in order to foster partnerships with the area of Education. On the other hand, the institutional legitimacy of the empirical phenomenon researched is still small in the social context in which it is inserted.

As with any academic studies, this study has some limitations, thus providing opportunities for future research. There is a limitation of the nature of qualitative research, regarding restrictions on the generalization of results. In any case, future studies may benefit from different methods. Data obtained through quantitative methods can capture other relevant issues and enrich future work, analyzing the involvement of people in the search for joint solutions and the evolution of the culture of risk – the role of the State versus the participation and involvement of society.

This study contributes to the knowledge about the adoption of instruments that can institutionally add to the strengthening and maintenance of the activities of civil defense units and others involved in the organizational field of disaster management. It also contributes to the improvement of public policies and governance structures, offering reflections and perceptions that converge towards an improvement in the quality of life for society, strengthening disaster risk management in the direction of reducing human and material damages and economic, social losses. and environmental factors, thereby boosting resilience.

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