Institutional conditions for building proactive flood management: Lessons from Santa Fe in Argentina

Veronica De Majo\textsuperscript{a,b,*}

\textsuperscript{a} Department of Political Science, Orebro University, Orebro, Sweden
\textsuperscript{b} Department of Political Science, Dalarna University, Falun, Sweden

\section*{ARTICLE INFO}

Keywords:
Community-based activities
Institutional theory
Practical authority
Proactive flood management
Resilience

\section*{ABSTRACT}

Although national disaster risk reduction policies in Argentina are still incipient and fragmented, the city of Santa Fe managed to adopt flood-risk management strategies after a major flooding in 2007. This involved a shift from reactive measures to a proactive policy approach to manage one of the city’s main problems. Employing insights from institutional theory, this paper explores and elaborates on the institutional conditions that enabled policy change in Santa Fe. A qualitative case-study design is used, and the analysis builds on previous empirical studies of Santa Fe, policy documents and in-depth interviews. Three institutional conditions were identified as fundamental contributors to policy change: place identity, policy publics, and practical authority. These conditions were used and developed by the new administration elected after the flooding. This paper argues that the new administration took advantage of the ‘legitimacy vacuum’ of the old administration, following from its passivity and reactive handling of the flooding. The new administration mobilized and strengthened pre-existing institutional conditions, and reconfigured power relations through its practical authority. Instead of a partisan strategy, the new administration expanded agency in terms of a community-based approach (collective action), expert knowledge, and problem-solving skills, which underscores the importance of informal institutions to complement and reinforce formal ones. This article provides lessons for local communities with similar conditions as the city of Santa Fe, showing that local actors can develop proactive disaster risk reduction also in unfavourable national contexts.

\section*{1. Introduction}

Natural disasters affect local communities by causing damage, economic losses, and human casualties. To cope with natural disasters, an increasing number of local governments have developed disaster risk reduction (DRR) policies. These policies seek to identify and lessen the causal factors of disasters – namely exposure to hazards and vulnerabilities that increase communities’ susceptibility to the impact of hazards [1]; on vulnerability see also Refs. [2–5] – and involve the implementation of mitigation and adaptive strategies to enhance resilience [6]. This approach represents a shift from reactive post-disaster response and recovery measures to a more proactive strategy for avoiding disasters or mitigating the impact of hazards, and focuses on the reduction of existing disaster risks and the prevention of new ones [7,8].

A great number of disaster-prone communities are nevertheless not fully prepared [9]. In many cases, one of the main obstacles to preparedness is weak and unstable institutions, which is a particularly frequent problem in developing countries where strong formal

https://doi.org/10.1016/j.ijdrr.2022.103251
Received 15 September 2021; Received in revised form 2 July 2022; Accepted 11 August 2022
Available online 23 August 2022
2212-4209/© 2022 The Author. Published by Elsevier Ltd. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
institutions are often the ‘exception’ rather than the rule [10]. It is therefore crucial to get a better understanding of the conditions that may facilitate the development of proactive policies in such contexts.

National governments usually have the overarching role of setting the formal institutional context for the prevention and management of disasters and risks within their territories (e.g., laws, frameworks, institutionalized networks). National institutional foundations may set the ‘broader context’, but for each local community there is a range of different institutional mechanisms that can have great influence on the policy outcome and even ‘make policies work’ in a situation of weak national institutions. Local disaster management [11,12] and community-based DRR [13,14] are hence considered essential for increasing preparedness and coping with natural disasters. These approaches are not mutually exclusive [14], but rather complementary.

How national institutional systems function varies greatly between countries. National DRR policies can be relatively well developed and implemented, or they can be at an early stage, deficient or not exist at all. In some cases, the national institutional context can support the development of local DRR, while in others it can be non-supportive or even hinder the development of such local strategies. Even so, there are cases where local DRR policies are well developed despite obstacles originating in the national context. This is the case for the city of Santa Fe in Argentina, a country in which opportunities for local DRR capacity building have traditionally been limited [15].

Notwithstanding this adverse national institutional context, since 2008 the municipal government of Santa Fe has managed to implement proactive local DRR policies to mitigate flooding, one of the city’s main risks. These policies not only include flood protection but also the development of long-term measures seeking to enhance preparedness, that is the knowledge and capacities to effectively anticipate, respond to, resist and recover from the flood [16] (on preparedness, see also Refs. [3,17,18]). A proactive approach, thus, focuses on all the stages of the disaster cycle and seeks to mitigate existing and new risks [19], hence, increasing social resilience (on social resilience, seeRefs. [20–22]).

According to previous studies, the case of Santa Fe has shown the importance of community involvement, political leadership, and creativity, as well as of good communication and information to anticipate, mitigate and cope with the flood (see among others, Refs. [23–25]). As a result, the city was acknowledged as the first Role Model City in Argentina by the International Strategy for Disaster Reduction (UNISDR) campaign Making Cities Resilient. Furthermore, in 2011 the city government was awarded the UN Sasawaka Award for ‘effectively communicating risk to everyday citizens’ [26], and in 2014 the city was selected by the Rockefeller Foundation to participate in the programme 100 Resilient Cities [27].

Santa Fe has been extensively acknowledged as a good example of mitigating flood risks in an integrative way, which includes urban planning, social development, education, and communication. In this context, the reason for choosing Santa Fe as a case is twofold. First, it is important to critically review the implementation of these flood management strategies to add new insights into this ‘good case’; to understand if and in what sense it is a successful case. The second reason for the choice of Santa Fe is that it can bring new light on how institutional conditions can facilitate fundamental policy change in terms of proactive DRR, which is somewhat neglected in the literature and deserves more research attention.

The institutional context is a central component to be considered when implementing flood risk governance and adaptation strategies. Furthermore, social and institutional conditions are often identified as barriers for the implementation of these strategies [28–30] . The theoretical point of departure of this article is therefore that institutional foundations have strong impacts on policy formulation and implementation. Institutions are understood in a broad sense as formal institutions, such as laws and frameworks, but also informal ones, such as norms, understandings, habits, and practices that guide and prescribe human action [31–33]. Thus, institutions give some predictability and stability to human behaviour in a particular setting, constrain public policy, and can both enable and inhibit policy change.

Based on the insights from the case of Santa Fe, the aim of this article is to explore and elaborate on the institutional conditions that can facilitate fundamental policy change in terms of the formulation and implementation of ‘new’ proactive DRR policies, which implies that prevailing institutional conditions are undermined, leading to a wider institutional change. The ambition is also to develop some general lessons to draw from this good example.

This study seeks to answer the following research questions:

1. What strategies and measures has the municipality of Santa Fe developed and implemented since 2008, and in what sense can they be perceived as fundamental policy change at a local level?
2. What institutional conditions enabled this fundamental policy change in Santa Fe?
3. What general lessons, if any, can be drawn from the institutional insights of this ‘exemplary’ case?

This study contributes to the DRR literature in three ways. First, it provides a comprehensive empirical presentation of the case of Santa Fe by summarizing and analysing previous research and adding new empirical insights from an interview study.

Secondly, it explores and elaborates, through the lens of institutional theory, on the fundamental conditions that enabled the development of local disaster management in Santa Fe. It provides empirical and theoretical insights into how informal institutions emerge and are institutionalized and the extent to which they can function as a complement to, or substitute for, formal institutions [34].

Finally, the article contributes some general observations (‘lessons learned’) that can be useful to other communities facing similar ‘national’ adverse conditions when it comes to the development of local DRR policies. By analysing the case of Santa Fe, it is possible to identify and further elaborate on the institutional and political mechanisms that can facilitate the formulation and implementation of DRR policies ‘from below’.

This paper comprises seven sections, of which this introduction is the first. The second section accounts for policy and institutional
change and introduces institutional theory. This is followed by a method section presenting the case-study design and materials. Section four summarizes the institutional foundations for DRR policy in Argentina and presents the case of Santa Fe. Section five identifies central components of the proactive strategy for flood management developed by the new administration, with an emphasis on policy change. Section six assesses and elaborates on the institutional conditions that enabled policy change promoting proactive local disaster management. The last section presents the main conclusions of the analysis and engages in a discussion about the wider implications of the findings.

2. Conceptual framework: institutional and policy change

Public policy can be defined as the course of action (or inaction) that a government adopts to address a particular issue or problem, and governments make choices when dealing with social problems [35–38]. Governments accordingly define goals, design interventions, and assign resources to manage problems.

Well-established policies may exhibit long-term consistency in addressing a particular problem. In some cases, governments may consciously choose not to change the status-quo even when existing policies have proved obsolete. But oftentimes, policies need to be adjusted or novel policies need to be formulated to address ‘new’ problems. This is the case, for example, with climate change mitigation and adaptation policies, as well as strategies aiming to reduce disaster risks. Policy change can thus occur as the result of policy and social learning [39], in response to increasing societal demands and public debates, due to the action of policy entrepreneurs [40,41] and epistemic communities [42], or because of a combination of different factors. Policy change can be incremental or be triggered by an ‘external shock’ or ‘focusing event’, for example a disaster [40,43–45].

Disasters are viewed in the academic literature thus as potential determinants of policy change, which also underscores the significance of policy failure. External shocks can unlock ‘policy windows’, that is, opportunities for actors seeking dynamic change to advocate for alternatives to existing policies [40,41]. These actors identify – or re-frame – problems and present policy alternatives to try to break the status-quo. Nonetheless, not every focusing event leads to policy change, and there is limited empirical evidence to suggest, for example, that developing countries have used the ‘window of opportunity’ after a disaster to introduce DRR policies [46].

Policymaking is embedded in specific policy traditions with their own social, political, economic, and cultural characteristics. This particular institutional context not only shapes and constrains the character, content and outcome of policies [32,33,47] but also enables or hampers policy change [40], even when the window of opportunity may have opened.

To understand how policy and institutions are intertwined it is vital to define institutions in line with new institutionalism. Institutions are structural features that constrain and guide human behaviour and collective action, thereby lending some level of predictability and stability to political life [32,47,48]. Institutions can have formal or informal status, both of which are important for governing and policy [33]. Formal institutions are rules and procedures created and enforced by legislatures, bureaucracies, and organizations. Informal institutions are socially shared (and often unwritten) norms, routines, habits and practices, as well as understandings [34].

Well-established institutions and institutional stability are often taken for granted, but it is necessary to consider variations in the degree of stability and/or enforcement of formal institutions [10]. Furthermore, it is necessary to contemplate the extent to which informal institutions shape the performance and outcomes of formal institutions, for example, by creating or strengthening incentives to comply with formal rules [34]. Hence, informal institutions may not only reinforce effective formal institutions, but can also compete with, undermine, or even replace old institutions.

Institutional change is more fundamental and does not occur as often as policy change; therefore, new institutionalism faces limitations when it comes to explaining change [32]. As Bo Rothstein [49] emphasizes, ‘the cumulative effects of institutional reinforcement’ are what constrain political actors (path-dependence) and, thus, ‘the expected costs of institutional change are complex, and include the costs of learning how to operate within a new structure, of dealing with new sources of uncertainty, and of engaging in change itself’ (p. 152). Institutional change occurs through different stimuli or forces, both endogenous and exogenous, which include among others institutional crisis due to changing norms and demands, learning and adaptation to changing circumstances, and external shocks (or ‘critical junctures’) leading to a ‘punctuated equilibrium’ [32,47]. Institutional change can therefore be incremental as well as transformative or ‘punctuated’ [32,50].

Institutions transcend individuals by enabling and constraining their actions and engaging them in predictable patterned interactions [47], but institutional stability and change are to some extent affected by human agency [32]. Furthermore, the chances of achieving institutional change increase when actors expand their capacity for political action. Taking the C5 model of Lowndes and Roberts [32] as point of departure, Erik Hysing and Jan Olsson [50] argue that this expansion can occur through the development of collective power and a combative strategy, with cumulative effects and combinative solutions, and bending and breaking constraints on their actions (p. 103–104). According to this institutionalist view of agency, different actors possess a capacity for political action in different ways (e.g., in professional, political, and public roles) and together constitute a collective power base for institutional change [32].

In this context, to identify the conditions that enable the implementation of new policy responses, and subsequently fundamental policy change, it is central to pay attention both to previous (already existing) institutional conditions that can lay the foundations for this change, and the role of agency. This study departs from three fundamental conditions that have been identified in the academic literature as potential contributors to policy change in different ways, namely place identity [51,52], policy publics [53], and practical authority [54]. This conceptual framework is complemented by the C5 model presented above, which is a suitable model to make sense of agency in real life processes of institutional change.
2.1. Place identity

The first essential condition is place identity and is defined by Henry Proshansky [51] as the ‘dimensions of self that define the individual’s personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, feelings, goals, preferences, skills, and behavioral tendencies relevant to a specific environment’ (p. 155). Place identity consists of memories, conceptions, interpretations, ideas, and other feelings in relation to a specific physical setting [52]. Hence, ‘place’ includes both material and immaterial features; it is about the elements of a location, but it also comprises the associations and feelings that a person experiences when hearing and seeing a particular space [55].

Place identity can also give rise to a ‘territorial identity’ that can replace party political ideology as value norm for local political action [56]. When the geographical location becomes the common denominator to political life, local parties usually have a constructive, pragmatic, and problem-oriented approach to politics and a cooperative and consensus-oriented approach [57,58]. Furthermore, several studies have argued that feelings of attachment towards people and places can affect disaster preparedness in different ways [59,60] and can encourage people’s involvement in community response [61–63].

2.2. Policy publics

A second fundamental condition is the existence of policy publics, which is defined by Peter May [53] as ‘identifiable groupings who have more than a passing interest in a given issue debate or are actively involved in an issue debate’ (p. 190). Issues arise on the policy agenda when different interest groups hold competing definitions of the problem and possible solutions in a visible debate [53].

Furthermore, May et al. [64] underscore that the existence of organizing ideas, supportive policy publics, and institutional arrangements that support these policies enhance policy coherence (p. 57). The existence (or absence) of publics therefore has major implications for policy design and implementation, and for policy learning.

Hence, governments oftentimes mobilize groups to generate the policy demand for their own policy agendas [65]; see also Refs. [66,67]. By doing so, policy makers engage with interest groups in an anticipatory and consensus-based agenda-setting style [65].

According to May [53], public risks, and hazards, which are related to high levels of uncertainty, have traditionally been more technocratic and elite-driven and, therefore, have produced limited incentives for publics to form. In a more recent study on American politics May et al. [68] identified a relative strong engagement of publics in issues such as climate change, terrorism, and extreme events, but the presence of competing views of the given problem, as well as moderate to high partisan conflict, and weak institutional linkages fractured policymakers’ attention (p. 110) and, thus, limited problem resolution.

2.3. Practical authority

The third and final condition enabling fundamental change is practical authority that is defined by Rebecca Abers and Margaret Keck [54] as the power-in-practice that is generated when certain actors (individuals or organizations) develop capabilities and win recognition within a particular policy area, which enables them to influence the behaviour of others. Practical authority is therefore not a direct function of formal political authority, and it is rather built from the demonstrated capability to solve social problems within complex operational contexts [69].

In this context, authority has to ‘be made real in practice’ through action [54]. Practices can constrain behaviour by setting an example, for instance when ‘actors understand how they are supposed to behave by observing the routinized actions of others and seeking to recreate those actions’ [32] (p. 57). Practical authority commonly involves creative action [70], and can be built by both state and non-state actors.

What characterizes practical authority is a relational process comprising agency and power; new institutions are thus created through concrete actions aiming to change ideas and laws, but also through efforts to transform organizational resources and relationships [54]. By doing so, societal actors reconfigure authority relations.

When these three conditions coincide, it is likely that political actors take a problem-oriented approach to politics with a collaborative and consensus-based policymaking style, which can expand agency and develop collective power that enables these actors to implement change. This study seeks to identify if these intertwined features contributed to fundamental policy change in Santa Fe.

3. Method and materials

For this study, the selection of Santa Fe as a case of local disaster management was made using a heuristic and explorative rationale [71]. Santa Fe is hardly representative of the broader universe of local communities in developing countries and it is studied as a deviant case [72]. Although national DRR policies in Argentina are still incipient and fragmented [15], Santa Fe became the first municipality in Argentina to incorporate a proactive approach to disaster risk management and was one of the few municipalities participating in the Argentinian National Platform for Disaster Risk Reduction. Due to the achievements in flood management obtained by the municipality, Santa Fe has been internationally recognised as ‘exemplary case’ and has become a role model for building resilience. Hence, Santa Fe’s successful development of proactive DRR measures within an adverse and/or uncooperative national system makes it able to provide some positive insights for other communities facing similar unfavourable national settings.

This qualitative study follows an abductive logic of enquiry [73] (to make sense of the process of policy change in Santa Fe post 2007. This approach involves an inferential iterative process that departs from the empirical material but also contemplates possible and feasible explanations to policy change employing insights from institutional theory and reviewing other empirical studies.

The analysis builds on empirical materials of different kind. Previous empirical studies of disaster management in Santa Fe serve as a starting point for the analysis. These studies encompass an anthropological analysis of local flood management and the ‘logic of
out in November 2015 and are used to verify and add to the insights drawn from previous empirical studies and the document analysis.

Three were conducted in Santa Fe, with an expert holding a high position at the Risk Management Office, a member of a non-governmental organization who actively worked with the local community, and an academic involved in workshops for public servants and community members. These informants were chosen due to their active participation in the development of local DRR. The fourth interview was carried out in Buenos Aires with an expert who was involved in a disaster management project at the provincial level (Province of Santa Fe) financed by the Inter-American Development Bank, chosen for his expertise and knowledge on the case. All but one of the interviews were taped and transcribed. At the remaining interview, the author took notes which were then approved by the interviewee. See Table 1 for an overview of the interviewees.

The combination of different kinds of empirical material provides for a nuanced and comprehensive analysis of the process, thereby enabling a novel contribution to current research on the issue.

4. Setting policymaking in context

To understand why Santa Fe is an important case study for gaining knowledge on how disaster risk reduction can be built from below, it is necessary to identify the critical contextual factors of this case. First, an account is given of the broader context of local policymaking, focusing on the national-political and institutional foundations that constrain DRR policymaking in Argentina. Secondly, the case of Santa Fe is introduced, and some insights are provided into the institutional context prior to 2008.

4.1. Institutional foundations for DRR policy in Argentina

Institutional and political features of Argentina have fundamentally undermined the quality of public policy, including long-term strategies, policy coordination and inter-organizational cooperation [84], and DRR is no exception. Institutional instability and weakness [85] and the country’s extreme political volatility [86,87] have led to a relatively fragmented polity [88]. In addition, corruption at the governmental level has become a highly problematized issue since the 1990s [89]. Some scholars relate this to a crisis of representation taking place in Argentina’s political life during the same period (see e.g. [90]). This crisis revealed a discrepancy between society’s demands and interests and the behaviour of politicians and parties. The slogan ‘¡Que se vayan todos!’ (They all must go!) symbolizes a disappointment with and lack of trust in politicians in general [74] that in its extreme form can be depicted as a widespread ‘anti-political vision’ [89].

Furthermore, the absence of a professional and independent bureaucracy undermines policy coherence and the institutionalization of working practices. The high political turnover after Argentinian elections has given rise to a parallel, ‘loyal’ and temporary bureaucracy [84,88] that contributes to the politicization of public problems.

In this context, DRR policies in Argentina are still ‘in the making’ and quite fragmented [15]. Instead of developing proactive DRR measures, the Argentinian state has long relied on an ad hoc, reactive strategy in the face of disasters. Policy learning is also constrained by rather detrimental institutionalized practices, such as the parallel bureaucracy, a general trend of interagency rivalry [91] and the related culture of ‘monopolizing data and information’. An additional practice hampering learning is the ‘blame game’ [92], whereby powerful actors at the top of the administration attempt to avoid demands for accountability from civil society by making ‘scapegoats’ of officials at the secretarial level or heads of local governments [15].

Finally, the federal political system, defined by Iván Llamazares [87] as competitive rather than cooperative, has a ‘paternalistic’ tradition whereby national authorities provide relief aid. This situation further limits institutional capacity-building for local DRR [15]

Table 1
List of interviewees.

| Interviewee 1 | Expert Risk Management Office, Santa Fe Municipality |
| Interviewee 2 | Expert local NGO |
| Interviewee 3 | Expert UNL - Universidad Nacional del Litoral [National University of the Littoral] |
| Interviewee 4 | Expert involved in a DRR project in the Province of Santa Fe |
Taken together, this means that Santa Fe can be said to have developed proactive flood management strategies in a non-supportive national institutional context. It is therefore crucial to pay attention to the local institutional conditions that enabled policy change, particularly informal institutional conditions that can complement or substitute for formal institutions.

4.2. Flood management in Santa Fe: historical background

Santa Fe has a population of around 423,000 inhabitants [94] and functions as the provincial capital of Santa Fe province. The city is situated in El Litoral between two river systems, the Parana to the east and the Salado to the west, a location that has favoured the city’s economic activity. Santa Fe’s history as a port city has shaped its economic and social character [23]. However, this geographical condition makes the city highly vulnerable to hydro-meteorological hazards. Flooding produced by river floods, rain, or a combination of both, has historically caused major disasters, despite the construction of some sections of the embankment and the installation of water evacuation pumps. Furthermore, years of poor, ill-functioning, or non-existing urban and territorial planning have increased Santa Fe’s vulnerabilities, which have historically been unevenly spread across districts. In general, the Northwest, Coastal and Northeast districts of the city have been the most affected [23]. This situation can worsen since the risk of hazardous events is expected to increase as a consequence of climate change [95].

Two major flood disasters have left a mark on the history of Santa Fe, those in 2003 and 2007, which exposed infrastructure failures (e.g., unfinished embankment and malfunctioning water evacuation pumps) and deficient urban development plans and preparedness and mitigation policies. Historically the Parana River has flooded most frequently, but in 2003 the waters of the Salado River overflowed the incomplete flood-protection embankment and covered a third of the city. The result was 23 deaths, 130,000 people evacuated, and losses and damage amounting to three billion USD [81]. The city collapsed. It took a long time to return to normality, and the reconstruction process, for example, in terms of relocation, is still in progress. The absence of organized assistance together with a lack of information resulted in chaos, and the citizens lost their trust in the local government [81]. As highlighted by Hardoy et al. [78], although ‘the Instituto Nacional del Agua (INA) was monitoring water flows and peaks and had informed both city and provincial authorities of the potential flood risk’, the local government was unprepared to deal with the 2003 flood (p. 407).

Susann Ullberg [74] points out that ‘even when the city was in chaos and evacuation would be required in certain areas’ the mayor declared on the radio that ‘mass evacuation would probably not be necessary, certainly not on the Westside and Southwest Side’. A few hours later both these districts were completely flooded (p. 77). Ullberg explains that many people did not evacuate because of the mayor’s declarations. Further, as stated by one of the interviewees, ‘the Salado River was almost overflowed [April 15, 2003]; only one more rain would cause the overflow, and they did not give the warning. If they had done that, at least the lower zones could have been evacuated … no one would have died. Twenty-three people died. Why? They [the authorities] did not want to alarm the population because elections were about to take place on [April] 30 and [the] Governor … gave no warning. He should have done that’ [Interviewee 4, expert involved in the provincial project].

According to the Organic Law of Municipalities and other municipal regulations, the mayor has the main responsibility to prevent disasters, such as flooding, and he is also in charge when an emergency occurs. It is only when events exceed the capacity of the municipality that the provincial government and, as last instance, the national government must provide assistance. Yet, both provincial and municipal authorities denied responsibility for the disaster, based on a technical discourse that accounts for the exceptionality of the phenomenon [77].

The flooding affected lower-income households living in low-lying areas of the city who traditionally had voted for Peronist candidates, which follows a partisan loyalty for the Peronist party that is common in Argentina and that is often based on clientelism and politics of subsidies [25,96]. Furthermore, on this occasion, middle-income households were also affected, which led to widespread post-disaster protests demanding political accountability and increased media attention [74].

Protests were carried out by different movements, called ‘el movimiento de inundados’ (‘the movement of the flooded’). The movement included several organizations; for example, the ‘Permanent Assembly of People Affected by the Flood’ (‘Asamblea Permanente de Afectados por la Inundación’) gathered NGOs (among others, Cáritas or the ‘Los Sin Techo’ movement), groups and networks [74]. The organizations that participated in this movement had different beliefs and perceptions of what constitutes appropriate action, but initially they shared the same goals [78].

Although most of those involved had been affected by the flooding, the movement also included individuals who had not been directly affected [74]. Except for those who participated as representatives of NGOs, the activists had scarce or no experience of street protests or political activism prior to the flooding.

Another thing that changed in 2003 is how natural disasters, in particular the flood, are understood and defined as a policy problem. Tamara Beltramino [77] explains that before 2003, natural disasters were understood as ‘dangerous’ events brought about by an external cause (nature). When this political discourse was predominant, the authorities were not questioned, and protests were thus rather limited. After the 2003 flood, natural disasters were generally understood as a ‘risk’ that needed to be assessed and mitigated, leaving space for accountability demands to grow. However, the ‘official’ discourse remained focused on the unpredictability and exceptionality of the flooding (pp. 65, 70–71).

Policy change did not occur until, yet another flood struck in 2007. This flood was caused by heavy rainfall and was exacerbated by insufficient drainage and storage capacity, as well operational problems in the pump system that was supposed to pump the water away towards the Salado River. The emergency response system showed deficiencies, and the same district that had endured the worst of the 2003 flood was once again the hardest hit. Some 28,000 people had to leave their homes, the flood forced the closure of numbers of streets, roads and frontage roads, and the city became isolated [81].

After this new event, public demands increased. There was widespread condemnation of the inaction of municipal authorities,
whom people called ‘los inundadores’ (flood makers) and demands for accountability and compensation for damages and losses. As María Evangelina Filippi [25] underscores ‘(u)nderlying the antagonism between inundadores and inundados, there was a crisis of representation signed by the failure of the authorities to comply with the essential duties and obligations towards the represented community’ (p. 161); see also [97].

The political opposition lead by Mario Barletta, a hydraulic engineer who had previously been the principal of the National University of the Littoral (in Spanish, Universidad Nacional del Litoral - UNL), took advantage of the ‘legitimacy vacuum’ of the old administration. While the municipality claimed that no one knew about the risk of flooding, Barletta listed in a press conference every risk and flood-related study that had been carried out at UNL since the 1990s, which pointed to the risk of flooding as nothing new or ‘unpredictable’ [23].

The political opposition challenged the ‘official’ denial of any knowledge of an existing risk, and thus of any political responsibility and made the management of flooding a key issue of the electoral campaign [25]. In September 2007 Barletta was elected Mayor of Santa Fe. Representing the coalition Progressive Civic and Social Front, a left-centre political alliance, he put an end to a long cycle of Peronist governments.

The 2007 flood opened a window of opportunity for policy change, while the turnover after elections in combination with the legitimacy vacuum resulting of post-disaster discontentment laid the ground to enact policy change. As one of the interviewees stresses, the opportunity to do things differently came with Barletta, an expert in hydrology who also ‘knew teachers and researchers who for years had worked with issues related to flood management’ [Interviewee 3, UNL].

The following section will present key policy measures undertaken by the Barletta administration to develop DRR policies with particular focus on flood risk management.

5. Policy change to promote proactive flood management in Santa Fe

After being elected, the mayor declared a hydrological emergency, which was the point of departure for major changes to the flood-management system [80]. Santa Fe’s ‘new’ administration took a myriad of measures aiming to strengthen preparedness to anticipate and respond to the flood, improve the structural protection of the city, relocate vulnerable people living in informal settlements located in risk-prone zones, as well as to increase accountability and political transparency. These measures will be presented in more detail to illustrate the different dimensions of the proactive approach.

5.1. Restructuring the municipal government

The Department of Civil Protection was replaced by the Risk Management Office, which coordinates the Municipal System of Risk Management (Ordinance 11.512/08) and reports directly to the mayor, who is also one of its members. The system was built upon a Central Committee and several specific commissions dealing with prevention, preparation, response, and recovery [81]. This fundamental organizational change indicates a shift from civil protection to risk management. The main responsibility of disaster risk management rests with the mayor.

The Risk Management Office consisted of a small but highly competent group of experts. As it was emphasized in one of the interviews, the office was given the rank of Secretariat to give it a higher degree of authority and facilitate rapid decision-making in times of crisis, as well as to enable direct communication with the mayor [Interviewee 1, Risk Management Office]. The management of the issue at the secretarial level is considered to provide some hierarchical structure to the policy problem, facilitating the formulation of cross-sectional strategies within the different municipal areas, such as public works, urban planning, social development, environment, education, culture, and communication [83]. Hence, the new strategy sought to avoid an overlapping of tasks and responsibilities between different areas of government and to achieve better allocation of resources [81].

With the adoption of the City Development Plan in 2008, for the first time in the history of Santa Fe, disaster risk reduction was treated as prioritized public policy and a cross-sectional issue that should be incorporated into urban and environmental planning [81, 83]. When Santa Fe’s Urban Plan was formulated in 2010 with the technical assistance of the PROCIFE (Programa de Cooperação Intersetorial Frente a la Emergencia), a collaboration between several universities including the UNL) special focus was put on vulnerability reduction, sustainability, environmental planning, socio-economic inclusion, and empowerment [23,79]. One of the experts explained that the overall guiding principle was to improve disaster management in ‘an integral way, and not as a temporary solution’ [Interviewee 1, Risk Management Office].

5.2. Strengthening preparedness to anticipate and respond to the flood

The local government developed contingency plans for heavy rains and river overflows and several emergency protocols [81]. The contingency plans define how the municipality should be organized both for ‘everyday’ management and during an emergency and specify how collaboration with other institutions should take place [98]. However, these were not the first contingency plans concerning flooding; their predecessor, though ‘formally in place’, had not been used since 1996. Quoting Susann Baez Ullberg [75] it was ‘cajoneado’, that is, ‘shelved and forgotten’ (p. 57), which indicates that, at least for a decade, emergency management relied on ad hoc measures taken in the face of flooding.

The new administration activates the emergency protocols when an emergency occurs. As described by one of the experts, the protocol concerning flooding and rain comprises ‘a single sheet for each stage, simple and concise …. everyone must know the contents by heart … And they do; and whoever doesn’t, he/she has to give an explanation’. Even the mayor has a responsibility to fulfill in accordance with this protocol: ‘When we launch Protocol 1, the mayor has to go to the fire stations and verify that the [water extraction] pumps are working … You can justify many things … blame nature at some point … But you cannot justify … that a pump
does not work’ [Interviewee 1, Risk Management Office].

Furthermore, the administration developed evacuation plans [80], which, according to one of the interviewees, were harmonized with the evacuation plans already prepared by several neighbourhoods. For instance, as one of the interviewees points out, two neighbourhoods had produced their own evacuation plans as early as 2005 and 2006 and the administration treated this work ‘very respectfully’ and included it, with some modifications, in the official plan [Interviewee 2, NGO]. Community representatives and neighbors also had the possibility to share their experiences and claims that could be useful for the elaboration of these plans [81].

The formulation of formal instruments, such as ordinances, contingency plans, and protocols, was necessary to provide directives and frameworks for everyday disaster risk management and a handbook to follow during an emergency. Yet, one of the interviewees emphasizes that these instruments are only considered as the starting point for a long and hard effort. The expert explains that ‘(t)he process of risk management may start with a law, an ordinance, but to carry out and implement what that law says, that ordinance, is an extremely long and winding road, which furthermore never ends … The real work consists of trying to develop these guidelines, lay the groundwork, try to involve as many actors as possible’ [Interviewee 1, Risk Management Office]. The interviewee adds that the local government sought to gain consensus among different societal actors, with diverse interests and beliefs, about what was conceived as ‘the project, the vision’.

The new administration further assembled a strong risk communication strategy, which included, for example, the incorporation of a special section on the website of the municipality with specific information about the city and its risks [81]. The Risk Communication Program was, hence, launched to raise awareness and promote participation and information exchange between different institutions and actors [83]. Several publications produced by the municipality, such as Living in Harmony with the River (2013) and Coexist with the River (2013) treat flood risks management as a relevant part of the cultural identity of Santa Fe. In addition, an agreement was signed with the local media to ensure responsible information about disaster risk reduction and when covering emergencies [81].

To foster spaces for community participation the Decentralization Plan divided the city into eight districts. Departing from this division, the administration sought to pinpoint the issues that were relevant for each district and identify different levels of vulnerability across the city [81,86].

As regards training and education, the municipal government carried out workshops for municipal officials and authorities in close collaboration with the UNL. This practice allows for the creation of a space to share ideas and contributes to a collective project. Educational activities also took place at schools and involves NGOs and neighbourhood organizations [83]. Furthermore, the administration sought to foster a ‘preventive’ thinking and practice embedded into daily life, for example, by raising awareness about the importance of correct waste management for preventing flooding [25,83] (for everyday life preparedness, see [99].

Aiming to enhance their capacity to effectively respond in the event of a flood, the administration established local hydrometeorological early warning systems of both the Paraná and the Salado rivers, which exchanges data and information with national and provincial organizations. They also established an own early warning system for heavy or abundant rains that provides the monitoring center with real time information for decision making [81].

Other key measures were the establishment of a secure communications system and a Citizens Service Center (Sistema de Atención Ciudadana) [80,83]. The latter is a formalized ‘complaint system’ that fosters community participation and functions as a key element for effective disaster response since during emergencies it channels complaints to the right recipients [83]. One of the interviewees points out that the system is ‘archaic … but very efficient’ and explains that it provides ‘geographic information … They received 20, 30, 50, 100 calls a month … and during an event 400, 500. What does this indicate? That the system works, and that people call because there is a response; if there wasn’t, they wouldn’t call. And at a certain point, I have a map where everything [the affected area] appears’ [Interviewee 1, Risk Management Office].

5.3. Resisting and mitigating the impact of floodings

The new strategy also included the development and maintenance of protection measures. The structural protection was enhanced by completing the embankment, which previous governments had failed to do, and strengthening the city’s hydraulic infrastructure and stormwater runoff drainage systems [81].

The complex and dynamic nature of floods requires interventions based on constant evaluation and assessment of experiences of previous emergencies and crises, and of the performance of existing strategies. When emergencies and incidents occur, different types of evaluations are carried out in Santa Fe, and the post-incident evaluations are used to gain valuable information after each incident. One of the experts explains that the municipality assesses ‘the impact of each event on the city, the areas that were affected, and what resources were used … A problem that we have is that we are constantly modifying the land [through different measures] … Thus, each event, even though similar to past events, can require a different type of response; but evaluations are still useful for improving planning … These assessments are usually done at our evaluation meetings … ‘ [Interviewee 1, Risk Management Office].

The relocation of families settled in flood-prone areas was also a priority to lessen the impact of floodings and as a part of sustainable recovery measures. The government carried out a participatory urban development planning [24] and the available data show that between 2008 and 2018, 410 families living in flood risk areas were relocated [94]. Furthermore, in 2012, the Comprehensive Urban Programs (PUI) were launched in the northeastern and western areas of the city. Within the framework of these programs, the municipal and the provincial governments together with the ‘Los Sin Techo’ ['the homeless'] movement built several social homes on safe land [81].

5.4. Increasing transparency and accountability

The administration also put effort on promoting an open exchange of information among actors and organizations, and to respond to social demands, all of which would contribute to increasing accountability and political transparency [24]. Apart from the Citizen
Service Centre, the administration created a municipal archive centre allowed for the storage of numerous public documents from 2003 to the present [25,76]. Both centres were introduced in response to public demands. The incorporation information technologies aimed to create a ‘digital and open government’ and, thus, improving accountability and transparency, as well as to make administrative tasks easier for residents [25].

Furthermore, representatives of the administration met and listened to members of the neighbourhood organizations ‘vecinales’, which were the formal representative bodies of the various neighbourhoods and thus key political actors in Santa Fe, to harmonized different interests. The role of these institutions was reshaped and, hence, they became the institutional intermediaries between the citizens in the neighbourhoods and the municipal government [74].

Another important priority was to carry out independent evaluations post-incidents, that are the responsibility of the Municipal auditor. This institution assesses the performance of all involved actors no matter their rank or status, which at the Risk Management Office is considered as something positive and valuable. As emphasized by one of the interviewees, ‘the importance of information lies in the honesty of the decision maker since the information can be used well, for the purposes for which it actually was developed, or it can be used for something else’ [Interviewee 1, Risk Management Office]. The expert explains that the goal is to ‘do better, not punish’, though keeping in mind that public servants must be held accountable for their actions.

In sum, Santa Fe’s flood management policy portrayed the flood as a risk to be mitigated and DRR as a cross-sectional issue. Based on the measures presented above, it can be stated that this policy represented a fundamental shift from a reactive approach to flood management – based on flood defences and other protection measures and ad hoc activities to respond to the flood – towards a proactive strategy for flood risk management. The ‘new’ strategy included measures to anticipate, mitigate, respond to, resist, and recover from the flood by enhancing preparedness, raising awareness of risks, improving the structural protection, and making the city more resilient. Thus, the new administration enacted a major policy change.

The window of opportunity provided by the 2007 flood was exploited by the political opposition that won the election in September, in a context of already existing protests demanding long-term measures to cope with the recurring floods and political accountability. A central aspect of a proactive approach is the development of sustainable long-term measures. The same political coalition has remained in power since 2007 and, according to the elections results, citizens support has increased over the years. The coalition Progressive Civic and Social Front obtained 32.65% of the votes in 2007 [100], 45.05% in 2011 [101], 39.5% in 2015 [102], and 47.66% in 2019 [103]. Del Corral was the candidate in 2011 and 2015 and, thus, he was the first re-elected mayor in the history of Santa Fe. Furthermore, the flood management policy has been institutionalized and it is developing towards further enhancing resilience [82]. During the past thirteen years, different events have put the flood management system to the test, for example, the rise of the Paraná River in 2010 and 2012, and of the Salado River in 2014, as well as several periods of heavy rainfall – but no major flooding has occurred [83].

6. Institutional conditions for policy change in Santa Fe

The fundamental policy change that occurred in Santa Fe after the 2007 was the result of a combination of different endogenous factors that included, among others, policy failure, the erosion of political support and a legitimacy vacuum of the Peronist administration, and the action of political actors within the new administration who presented ‘new’ policy alternatives responding to societal demands. Considering insights from institutional theory, it is necessary to critically assess the previous institutional conditions that may have contributed to this change, as well as the importance of expanding agency.

6.1. Place identity formed through the ‘coexistence’ with the river

The first condition to assess is place identity, which is a social construction about the nature of a place. The relationship between the place and people’s identity is complex; in the case of Santa Fe, people are literally ‘surrounded by the river’. Whereas the river has been an ‘ally’ in terms of commercial and economic benefits, it also represents a hydro-meteorological hazard. Santa Fe has traditionally been a vulnerable community due to the long-term absence of measures to reduce exposure and the underlying causes of vulnerability that has caused several flood disasters. This geographical location has created a particular need to coexist with the river – and to deal with the flood.

Place identity is shaped by memories, conceptions, interpretations, ideas, and other feelings of a specific physical setting. ‘Making memory’ is therefore a central feature of place identity and in Santa Fe memories are associated to the flood. As Susann Ullberg [74] explains, memories of the flood reinforced the ‘collective self-identification of a cohesive community of sufferers’ (p. 46) among many city residents who ‘came from different social and economic backgrounds, identified with different ideologies and rejected any attempt from the established political parties to represent them’ (p. 119).

During the Peronist administrations, ‘making memory about the flood’ became a community practice. Several reminders of the floods were created, including books written by the people affected, music and musical performances, photographs, movies and documentaries, graffiti and wooden crosses memorializing those who died, as well as unofficial monuments to commemorate the flood [74]; [Interviewee 3, UNL]. Some of the reminders aimed to accuse the former mayor or the governor and demanded accountability. Whereas individuals identified themselves as a ‘cohesive community of sufferers’ – los inundados – they portrayed the municipal authorities as the ‘flood makers’ – los inundadores.

The new municipal government strategically embraced the place identity in its communication strategy for raising awareness, for example, drawing on the ‘symbolic’ role of the river. Some examples can be found in the publications The City and the River (2009), Living in Harmony with the River (2013), and Coexist with the river (2013). The local government also created a flood memorial museum and organized commemorative activities.
This strategy of ‘making memory’ can be understood as a mechanism for increasing preparedness and, thus, lessening social vulnerabilities that otherwise could be reinforced by an ‘unequal remembering’ of disasters [74]. In this context, the process of ‘remembering’ came to be a part of Santa Fe’s formal history and developed into an institutionalized practice through the actions of the local government, in collaboration with academia and civil society organizations [23].

Santa Fe’s place identity generates a ‘territorial identity’ based on the collectively experienced problem of flooding, which had been poorly managed by previous political authorities, and required a resolution. In this context, the new administration (and the administrations that succeeded it) took a pragmatic, and problem-oriented approach, which included community-based DRR strategies to increase preparedness to cope with the flood. This process resulted in a shift away from party political ideology to a territorial identity that became the value norm for political action.

The coalition Progressive Civic and Social Front has dominated local politics since 2007 and won more electoral districts over the years. Furthermore, those living in areas that traditionally were affected by the flood – who in the past voted for Peronist candidates – started to vote for the new political alternative, which resulted in what Filippi [25] describes as the breakdown of a ‘blind’ affiliation often based on clientelistic practices and the politics of subsidies’ (p. 161). According to Filippi’s study, opposition parties began to acknowledge the urge to have ‘an opinion and proposals’ on issues related to floods and flood risks to be able to represent the electorate (p. 177).

This study shows that, as a subjective social construct, Santa Fe’s territorial identity became an informal institution that has been reconstructed and reinforced after several crises through memories of the flood, as well as feelings, values, and preferences. It can be argued here that these gave rise to ‘new’ norms and shared understandings on, for example, how to manage the flooding, which constrain behaviours and shape expectations of both the community and political actors.

6.2. Policy publics formed in the aftermath of the flooding

A second fundamental institutional condition to be assessed is policy publics, which in Santa Fe was formed because of the floods and, hence, can be related to the existence of the place identity presented above. It took several years, but policy publics eventually formed in Santa Fe. A contributing factor was that in 2003 both low-income and middle-income households were affected to a greater degree, which spread public demands in the local community.

The perceived repeated negligence and inertia of previous municipal governments, and their further failure to cope with the 2007 flooding intensified the public demands and eroded the political hegemony of the Peronist party. Organized public demands, such as ‘el movimiento de inundados’ became, thus, crucial for triggering policy change. The different groups within ‘el movimiento’ often represented diverse and contradictory interests, values, and beliefs but they had some demands in common, such as the prosecution of those responsible for the flooding and full economic compensation for disaster victims’ losses [74].

The publics in Santa Fe perceived flooding as a risk that authorities needed to mitigate, and because the Peronist governments had not acknowledged that risk, or at least had underestimated it, they should be held accountable. Even those who traditionally held a partisan loyalty with the Peronism party challenged the ‘logic of subsidies’ and acknowledged that the authorities ‘had the duty and the obligation to deal with the consequences’ [25] (p. 161).

The members of the new administration mobilized and capitalized the publics and matched their demands with their own political agenda, thereby showing responsiveness. The political authorities underscored the value of transparency and accountability and opened channels for community participation. With a consensus-based agenda-setting style, they approached the neighbourhood organizations ‘vecinales’, which were institutionalized as intermediaries between the citizens and the municipality. In this context, the territorial identity became the key value of political life diminishing partisan conflict.

This study argues that the administration’s growing capacity to cope with the flooding, and their consensus-seeking approach were essential to win the publics recognition and trust. In line with Mintrom och Norman [104], it is possible to assert that when policy actors get along well with others and strengthen their connections with the community, they tend to achieve more success in securing policy change (p. 652).

6.3. Practical authority developed by the new administration

The third condition to be considered is practical authority. Barletta, as the leader of the political opposition in 2007, focused electoral promises on, among other things, solving the flooding problem about which he had expert knowledge. The fact that the new political coalition was not associated with the disaster and the proposition of ‘new’ policies were likely crucial for Barletta’s electoral victory. Yet, his formal authority had to ‘be made real in practice’ to win the recognition of other actors and to regain legitimacy and trust.

Mayor Barletta played an important role in the process of building ‘power-in-practice’. As the mayor and a hydraulics expert, he was personally engaged in managing the flooding problem, which also had implications for the prioritization of the issue in the municipal agenda [25]. And as an active member of the Municipal System of Risk Management, Barletta was responsible for enhancing preparedness as well as playing a leading role during an actual crisis, which enabled him to make his authority real through practices.

Other high-ranking officials, such as the Director of the Risk Management Office and the Secretary of Communication had the expertise required to perform their tasks. Insights from the interview material revealed that the Director of the Risk Management Office was directly involved in several activities, such as neighbourhood meetings and workshops with the civil society. One of the interviewees explains: ‘in the first period of government 2008/2012, they arranged workshops in the city [in collaboration with the university] … And the chief of the Risk Management Office participated several times; he is the most open, the most approachable person [within the municipal government]’ [Interviewee 2, NGO].

The new administration sought the cooperation of technical groups of the universities and a great number of academics were
appointed to high rank positions [Interviewee 3, UNL; Interviewee 2, NGO]. As emphasized in Filippi’s study [25], for the first time in the history of Santa Fe, there were ‘so many people from the universities and from all disciplinary backgrounds working in the teams of the municipality, beyond politico-partisan affiliations’ (p. 164).

The new administration also initiated the modernisation of the public administration and institutionalized the professionalization of bureaucracy, which is not a common feature in Argentina. These ‘innovative’ measures are essential for the development of sustainable and coherent long-term policies that ‘transcends the program of the incumbent government’ [25] (p. 180).

The new administration established several mechanisms for constraining behaviours in ‘new’ ways. One of these mechanisms was the formulation of emergency protocols with specific practices that ‘everybody’ involved in emergency management needed to ‘know by heart’. And these protocols had to be followed. Such formal instruments encourage certain practices to be repeated or routinized to effectively respond to emergencies [25].

Other practices focused on the development of disaster risk ‘thinking and acting’ at the community level. Disaster risk management was translated into specific everyday practices – e.g., a correct garbage management to effectively prevent blockages in the drainage system –, playing down the high technical and scientific rationality that characterizes this policy field [105,106]. Furthermore, the practice of ‘making memory’, as well as the use of narratives related to Santa Fe’s place identity strove for changing behaviours and fostering a culture of preparedness. Behaviours were guided towards the achievement of a ‘collective project’, that is, coping with the flooding and reducing flood risks, which also had implications for tackling vulnerabilities in an effective way [Interviewee 1, Risk Management Office].

Narratives and discourses were used to legitimize political action. The new administration made a radical turn when framing the flooding as an actual risk and acknowledging the pressing necessity to cope with it. Accordingly, they took on the political responsibility of implementing a proactive approach to flood management, leaving behind the negligence and passivity of past administrations. Furthermore, instead of being framed as mainly victims of flooding, community members were viewed as individuals with responsibilities, who can develop an ‘institutional membership’ defined by specific roles that they are expected to play in specific situations, including how to prevent flooding.

This study demonstrates that the expertise, experience, and skills regarding flood-management shown by the local government provided legitimacy to their actions, which can be inferred in from the growing electoral support over the years. By opening new communication channels and employing a community-based approach, the new administration sought to strengthen its relationship with the community and empower individuals. In addition, the municipality successively showed that it could manage the flood risk through concrete action. By doing so they configured new forms of authority relations in Santa Fe.

6.4. Expanding agency

The 2007 flood uncovered, once again, the failure of the Peronist administration to cope with flooding as the result of years of reactive strategies to flood management, and exposed infrastructure failures that point to the negligence and inaction of political authorities. This situation resulted in a crisis of representation and triggered a legitimacy vacuum in Santa Fe’s political life. Thus, the 2007 flood opened a window of opportunity for policy change. The municipal election took place in a context of post-flood mobilization, people demanded accountability, giving answers to those affected by the floods, and ultimately, achieving resolution of the flooding problem [78]. The political opposition was represented by a new coalition that was not associated with the disaster and proposed an alternative course of action to cope with the flood.

This study demonstrated that this opposition took advantage of the political situation and displayed the political will to prioritize flood management matching the publics demands, and that they also had the capacity to formulate effective policies to cope with problem. A proactive strategy to flood management was implemented with the aim to enhance preparedness at all stages of the disaster cycle, reduce risks and mitigate the impact of flooding. The goal was to make Santa Fe a resilient community. The administration sought to regain legitimacy and repair the broken trust between the Santa Fe population and public officials, mainly by effectively dealing with city problems such as the floods and opening channels for community dialogue. Pre-existing institutional conditions, for example, place identity, were mobilized and developed to foster a culture of preparedness. It can also be argued that the administration capitalized the existence of supportive policy publics, which led to the enhancement of policy coherence. A fundamental policy change was triggered and secured in line with public claims.

Furthermore, this study illustrates that individuals cannot be seen as neutral actors within an institutional structure because they may eventually choose to challenge ‘old’ institutions [107]. Whereas individual actors played a crucial role in challenging the status-quo and in the development of the new administration’s practical authority, we also need to pay attention to the collective power base that can expand action and, thus, enable fundamental policy change giving rise to a wider institutional change [32]. In Santa Fe, a collective dimension of power can be identified when assessing the policy over time. Policy publics were mobilized, networks of academics were capitalized, and a community-based approach was employed. The aim was to build a ‘collective project’ and foster a culture of preparedness, which resulted in an institutional membership and provided a new institutional stability that so far has been maintained. The new administration also capitalized relationships outside the municipality, when approaching international organizations or participating in national and global platforms for DRR.

The development of combative forces that seek to break the status-quo is central for expanding agency. In Santa Fe, social movements developed combative strategies that were complemented and reinforced by the political opposition after the 2007 flood, matching publics’ demands with their own political agenda. This process resulted in a cumulative effect, whereby the exertion of power by these different actors accumulated over time and finally produced a systematic impact in the institutional context. In Santa Fe, this is represented by the erosion of the political hegemony of the Peronist party and the end of a cycle of reactive flood management. Thus, after years of negligence, the mobilization of policy publics and the efficient action of the new administration gradually undermined
some institutional mechanisms (e.g., weak institutions and a non-professional bureaucracy, ineffective flood-management policies, and a logic of omission regarding the flooding risks) to the point of causing institutional disruption.

Expanding action is also the result of individuals carrying out a combinative strategy, for example, connecting flood risk management to other policy areas (e.g., urban planning, social development, culture, and education) to effectively cope with the flood and to increase the publics’ support. Furthermore, in a context of widespread discontent due to the inability of politicians and parties to meet public demands, the new administration had a more constructive, pragmatic, and problem-oriented approach to politics.

Thus, whereas agency is constrained by a pre-existing institutional context, the new administration not only mobilized and strengthened place identity and policy publics, but also developed practical authority by showing ‘how things should be handled in practice’. A key factor was the action of strategic political actors with expertise, local knowledge, and problem-solving skills. Agency and power were materialized in concrete actions and policies that guided individuals in a new direction of collective action [31–33, 47]. By doing so, the new administration reconfigured its authority relations with other actors. In line with Rothstein’s [49] remark, the cumulative effects of the reinforcement of a reconfigured institutional arrangement – including past and new institutions – has been constraining political actors in Santa Fe since 2008.

In this context, stable institutions and transparency also reinforced the legitimacy of the ruling party in Santa Fe. During the period 1983–2007, Peronist candidates won eight of nine elections, but this trend was broken in 2007. Since then, the coalition Progressive Civic and Social Front has won every election, which has also enabled the implementation of a more coherent and long-term flood management policy. This situation gave rise to higher levels of political and institutional stability at the local level.

7. Conclusions

The aim of this article was to explore and elaborate on the institutional conditions that enabled the formulation and implementation of proactive flood management policies in Santa Fe post 2007. This study also sought to develop some general lessons to draw from this ‘exemplary’ case.

The case of Santa Fe presents a clear example of fundamental policy change that involved a shift from a reactive – or passive – flood management approach to a proactive strategy developed from below. The strategy aimed at enhancing preparedness for effectively anticipate, respond to, resist, and recover from the flood and, thus, mitigate risks and improve social resilience.

Three institutional conditions were identified as fundamental contributors to the policy change. Two of these emerged before the 2007 flooding, namely place identity and policy publics; however, they were not sufficient to trigger policy change, for example, in the aftermath of the 2003 flooding. The third condition, practical authority, which encompasses agency and power, was developed by the administration after the election in September 2007. What occurred in Santa Fe can be understood, thus, as a situation of punctuated change in which political actors played a central role. While change was constrained by both structural features and agency, this study has shown that the expanded action of political actors was a key determinant in triggering and securing change. The new administration took advantage of a legitimacy vacuum and mobilized and strengthened pre-existing institutional conditions. The administration also reconfigured power relations through its practical authority.

This study provided hence evidence of the value of expanding agency to achieve institutional change. Key actors expanded the capacity for political action when they developed a collective power base and a combative strategy that ultimately challenged old institutions. They also guided individuals in a new direction of collective action through combinative strategies and with cumulative effects that provided a ‘new’ institutional stability over time. Furthermore, the authoritative power of practices carried out by local experts revealed the importance of having informal institutions that complement and reinforce formal ones.

While it remains an open question whether institutional stability in Santa Fe can be maintained over time, the city has shown good prospects to become resilient. The case of Santa Fe reveals that it is possible for local communities to formulate and implement their own experience-based DRR systems, despite an adverse national context. Each community has its own institutional, political, and social conditions that can lay the ground for policy change. The contexts may be different, but a key factor is the commitment of community actors with expertise and self-confidence that are highly trusted to handle things efficiently on the ground. Institutions and agency are intertwined in different ways, and it is crucial to gain a better understanding of how this interaction occurs. This is one of the main questions that need to be addressed within institutional theory, and more empirical studies need to be carried out.

A common problem that democratic governance can face is when policy publics do not develop. However, political actors with scientific legitimacy can stimulate the formation of publics in contexts where the potential for harm is significant and there are recurring situations of crisis. Another issue concerns how to ‘match’ policy content and public expectations, while showing responsiveness and using expert knowledge as a foundation. All these matters also have implications for policy learning and for how local knowledge is used in policymaking. The implementation of a community-based approach contributes to the inclusion of local knowledge in DRR strategies. The relationship between publics and politics is dynamic and complex and, hence, needs to be further studied in the context of public risks.

The development of place identity is a self-referential process, and whether and how it forms can vary depending on different factors, for example, cultural and hazard contexts. When it develops in disaster-prone communities, it may increase the likelihood that those communities will build up their preparedness. The mobilization and capitalization of place identity may be vital for implementing long-term, coherent DRR policies. It can furthermore be used to create social resilience. The understanding of endogenous conditions that can favour change is an important area in need of further study.

The extent to which local disaster management policies become legitimized also depends on the professionalism, expertise, and concrete actions of political actors, as these factors are the foundations of the authoritative power of practical authority. Expert knowledge, a consensus-oriented approach and problem-solving skills can all be crucial in changing behaviours through practices and
can reinforce and complement formal rules. Whereas the role of agency and power has been under-theorized in institutional theory, this empirical study has shown the importance of understanding actor-induced change, and the interrelation between structure and agency in a specific local context.

Declaration of competing interest

The author declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Acknowledgments

The author would like to acknowledge the valuable comments on previous drafts provided by Jan Olsson, Monika Berg, Erik Hysing, Eva Hultin, Thomas Sedelius and Jenny Åberg.

References


[33] J. Rodin, And the next 35 resilient Cities are…, 12 December 2014. Available at: https://www.rockefellerfoundation.org/blog/next-35-resilient-cities-are/.


[56] Santa Fe Municipalidad, Los usos políticos de la corrupción en el contexto de riesgo de desastres: una perspectiva histórica, Inter-American Development Bank, 2016.


