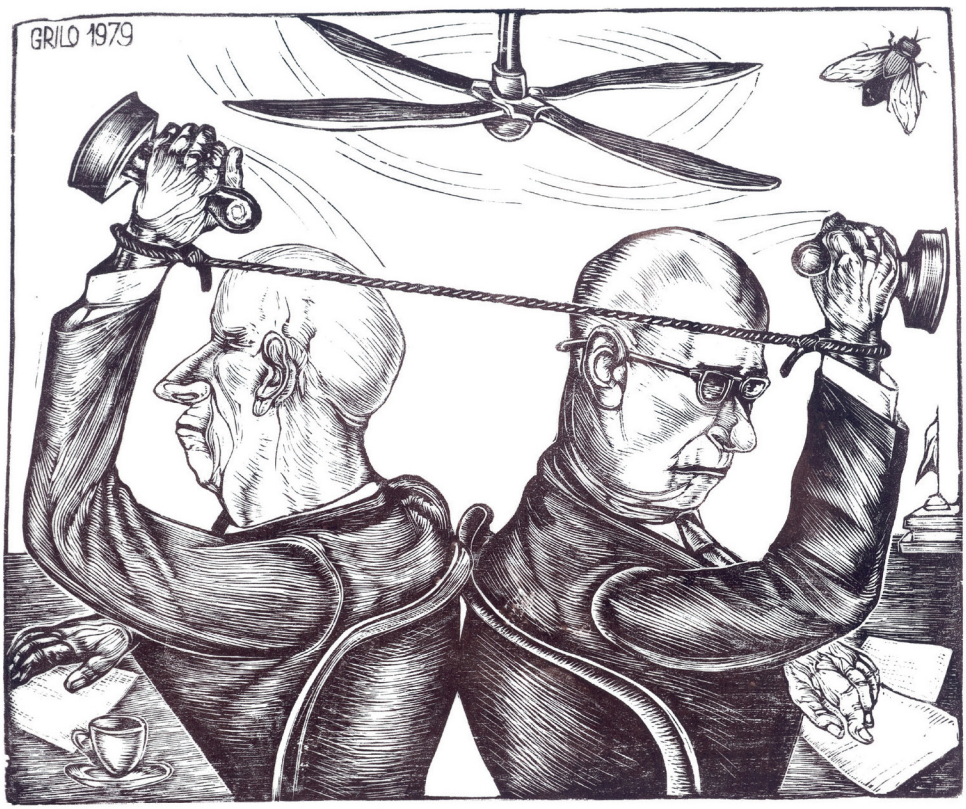
INSIDE BRAZILIAN BUREAUCRACY

POLITICS AND POLICY IMPLEMENTATION IN BRAZILIAN STATES

EDITED BY
Barry Ames and João V. Guedes-Neto



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Politics and Policy Implementation in Brazilian States

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CONFLICTS OVER WATER CHARGES IN ESPÍRITO SANTO'S DOCE RIVER BASIN

Euzeneia Carlos, Andressa Christiane Pereira, and Nara Lima Mascarenhas Barbosa

The Doce River runs through two Brazilian states, Espírito Santo and Minas Gerais. Along with the central government, these states share responsibility for managing the Doce.[1] This chapter focuses on management of the river basin in Espírito Santo, with comparisons to the river's management in Minas Gerais. The chief divergence between the two states has been the *taxation* of water usage in the implementation of the "Integrated Water Resources Plan" (PIRH Doce). The governmental entities sharing basin management differ in terms of public bureaucracy, regulations, and implementation of water resource management (Lascoumes and Le Galès 2007). Minas Gerais drafted its State Plan for Water Resources in 2010. In Espírito Santo, the drafting of a similar plan began only in 2017, and the State Council of Water Resources approved the draft in 2018. Minas Gerais began charging for water in the tributary basins of the Doce in 2012, just after the federal government approved such charges. Espírito Santo, by contrast, has implemented water charges only since 2019, even though the basin management committees of two of its municipalities, São José and Guandu, began considering a water use charging system in 2011.

Shared management of the Doce River basin involves, on one side, the water resources agencies of Minas Gerais, Espírito Santo, and the federal government, and, on the other, the basin committees. These committees are collegiate bodies with representatives from civil society, the government, and water users. As Abers and Keck (2013, 4) point out, water management involves an

1 We would like to thank Barry Ames and João V. Guedes Neto for their contributions to the improvement of this chapter.

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"entanglement of powers" distributed according to different logics among several organizations and actors. Such arrangements open possibilities for creative and innovative action at the institutional level (idem). At the same time, the different interests and motivations of the players create arenas of conflicts that are not always negotiable, making policy implementation more complex. In their "practical authority" approach to institutional change, Abers and Keck explore how activists inside and outside the state "navigate the complex configurations of organizations and rules in which institutions are embedded and in which they must act if they are to produce change" to create, for example, new institutional arrangements in complex environments (p. 3). "Practical authority" is generated when actors develop capabilities and win recognition to act within a particular policy area, enabling them to influence the behavior of other actors (idem).

We emphasize the issue of charges for the use of water because of the conflicts between the players involved. These conflicts had repercussions in Espírito Santos' failure to decide on implementing charges in its portion of the basin. Given that Minas Gerais implemented charging soon after the formulation of the PIRH Doce, why was charging not implemented in Espírito Santo? What decisions, actions, and conflicts led to the postponement of charging as an instrument of basin management? What constraints imposed on bureaucrats, committee members, and public authorities prevented a decision to implement charging? What constrains the bureaucratic autonomy of the players and the political costs of the decision? Our approach focuses on the actors who made the decisions, their institutional or societal locations, their sociopolitical profiles and paths in the public bureaucracy, their motivations and constraints, and their capacity to make decisions.

We consider two institutional contexts for implementing the PIRH, that is, before and after the environmental disaster in the Doce River, a disaster caused by the rupture of the tailings dam of the mining companies Samarco, Vale, and BHP Billiton in 2015. The magnitude of the disaster created a critical juncture in terms of its environmental and socioeconomic impacts (Souza and Carlos 2019).[2] We identify the new opportunities and motivations in the course of decisions, the players involved and their capacities to act, and solutions to persistent conflicts such as charging.

In the first five-year period (2010–2015), the implementation of the PIRH Doce progressed slowly. Even in priority programs that were to be executed quickly, implementation was incomplete or partial. Obstacles to the implementation of the Plan include managerial and operational difficulties and financial limitations that were magnified by the interstate institutional arrangement. But

2 A critical juncture consists of a specific configuration, one comparable to a situation of exceptionality, that may facilitate the action of agents capable of introducing new ideas, models, or policies by changing the paths of institutions (Mahoney & Thelen 2010).

they also include conflicts of interest and understanding about the scope of the Plan and about charges for water use, the latter having fueled opposition among managers, councilors, unions, and economic groups.

Implementation of PIRH Doce was a partial success, notably in the implementation of water resource management instruments. The critical juncture of the environmental disaster encouraged changes in the course of decisions, opening new windows of opportunity. These opportunities leveraged redefinitions around controversial issues and long-term conflicts, such as charging for water use. From the perspective of institutional change in the context of slow-paced policy implementation processes, the disaster played an important role in the emergence of new decisions that may drive implementation. From the perspective of decision-makers, the exceptional nature of the disaster boosted the basin committees' engagement in basin recovery and impacted the course of decisions favoring charging in Espírito Santo's portion of the basin and also favoring the exercise of bureaucratic autonomy.

Our research constitutes an in-depth case study developed through semi-structured interviews with key players as well as documentary analysis. We conducted 17 interviews with 14 different individuals, including managers of state public agencies, congressional advisers, technicians from the interstate water agency, basin committee advisers, and activists from environmental movements.[3] To help reconstruct the players' decisions, we analyzed numerous documents, including plans, reports, regulations, laws, meeting minutes, and motions.

The chapter is structured in three major sections. The first presents the institutional context of the PIRH Doce formulation. The second section discusses the decisions, strategies, and conflicts in the implementation of the PIRH, particularly regarding the creation and implementation of the basin's management instruments, such as the water agency and the charging for the use of water. The third section analyzes changes in decisions on charging when windows of opportunity emerged from the critical juncture of the disaster, reducing political costs and constraints on bureaucratic autonomy.

1. Water policy formulation and its institutional context

The Federal Constitution of 1988 encouraged the creation of basin committees and mandated civil society participation in the management of government policies and programs. In 1997, President Fernando Henrique Cardoso instituted the National Policy of Water Resources. The new legislation established the water resources plan and the basin committees as management instruments shared by government, civil society, and user representatives.

3 This chapter omits the first names of the committee members and managers interviewed, ensuring their anonymity by utilizing fictitious names. The names of the authorities have been kept.

The governments of Minas Gerais and Espírito Santo, along with the Federal Government, civil society organizations and state legislators, played core roles in the creation of the Doce River Water Basin Committee (CBH-Doce). In 2000, the two state governments created the Doce River Pro-Committee, which held nine extended meetings with civil society actors (including environmental NGOs) and government agents. One year later, the National Council of Water Resources approved the creation of the CBH-Doce. That same year, the governor of Espírito Santo, Paulo Hartung, created the State Environmental Institute (IEMA) and gave it responsibility for water resource management.

These legal steps were followed by a process of social mobilization supporting the creation of basin committees.[4] According to Sérgio, an environmentalist and activist from the Pro-Doce River movement and representative of civil society in municipal and state councils, several strategies of social mobilization were developed in the two states:

> In 1991 a voyage was taken down the entire Doce River. . . . In 1996 it was repeated, then in 1998. In 1998 we were on the eve of the formation of the committee . . . the third trip gathered the many NGOs, the Pro Doce River Movement, that later became the Pro Doce River NGO.
>
> *(01/09/2018)*

In the same year that the CBH-Doce was established, the National Water Agency's CEO, university professor Jerson Kelman, signed an agreement with the Pro-Doce River movement to install the committee. The movement carried out a series of mobilizing activities, including training and planning workshops in more than 40 regional meetings in Minas Gerais and Espírito Santo and electing committee members in five state assemblies. The CBH-Doce held its first collegiate meeting in 2003 and remains active to this day.

State legislators from Minas and Espírito Santo were also relevant players in the creation of the basin committees. Legislators created the Interstate Parliamentary Commission of Studies for the Sustainable Development of the Doce River Basin (CIPE) in 2001. The CIPE, made up of 22 congressmen from the two states, sought to promote study activities and social mobilization for environmental recovery actions. Sérgio, the environmental adviser to the deputy from Espírito Santo, highlighted the importance of parliamentarians for the creation of the committees:

> CIPE was fundamental in the formation of the basin committees, accompanying the environmental cause and providing support through the infrastructure

4 This process was led by the Pro-Doce River Movement, the Association for the Ecological Defense of Resplendor, the Association for the Ecological Defense of Caratinga, and the Colatina Association for Ecological Defense.

> and logistics of the legislative assemblies of both states for meetings and coordination between the players of the basin.
>
> *(01/09/2018)*

The creation of the Doce River basin committees was a milestone for the formulation and implementation of the Integrated Plan and the shared management of water resources. By 2008, all the committees of the Doce River basin and tributaries had been created, providing legal support to the formulation of the water basic management plan, the PIRH.[5] These committees have normative, deliberative, and advisory attributions at the basin level and are tied to the state and federal water resource councils.

The CBH-Doce is constituted by the federal government (National Water Agency and National Indian Foundation), state governments (water resources agencies and the secretaries of agriculture and supply of Minas Gerais and Espírito Santo), governments of the basin municipalities, users (urban supply, industry and mining, irrigation and agricultural use, and hydroelectricity companies), and civil society organizations. The latter include basin consortia and community associations, teaching and research organizations, NGOs (rural workers' unions, ecological defense associations, and the Pro-Doce River Institute), and indigenous communities. Figure 7.1 shows the Doce River basin with the tributary subbasins, territorial units of the respective committees.

The National Water Agency was also important for the formulation of the PIRH Doce. Beginning in Cardoso's presidency and extending to Lula's terms, the ANA brought the Doce River basin onto the federal government's environmental agenda. According to managers interviewed, ANA wanted to promote the PIRH at the Doce River, and the basin was included among the five critical strategic priorities for water units.[6]

In this institutional context, Marina Silva, Minister of the Environment in Lula's administration, appointed economist and former mayor José Machado as ANA's CEO (2004–2009). Machado's management goal was "to implement the national water use management system and overcome the resistance to charging for water use that has been demonstrated by some sectors."[7]

5 In 2008, the Doce River basin had a total of ten committees. The CBH-Doce manages the basin owned by the Federal Government. Six CBH committees were created in Minas Gerais: Rio Piranga, Rio Piracicaba, Rio Santo Antônio, Rio Suaçuí, Rio Caratinga and Águas do Rio Manhuaçu. The Espírito Santo portion had three: Rio Santa Maria do Doce, Rio Guandu, and Rio São José.

6 ANA prioritized the five basins—Paraíba do Sul, PCJ (Piracicaba, Capivari and Jundiaí), Velhas, São Francisco, and Doce—in the Project on Sustainable Development of Water Resources in Brazil executed by the Technical Cooperation Agreement signed in 2004 with UNESCO.

7 Available from: https://www.abas.org/abasinforma/154/paginas/12.htm. Accessed October 8, 2021.

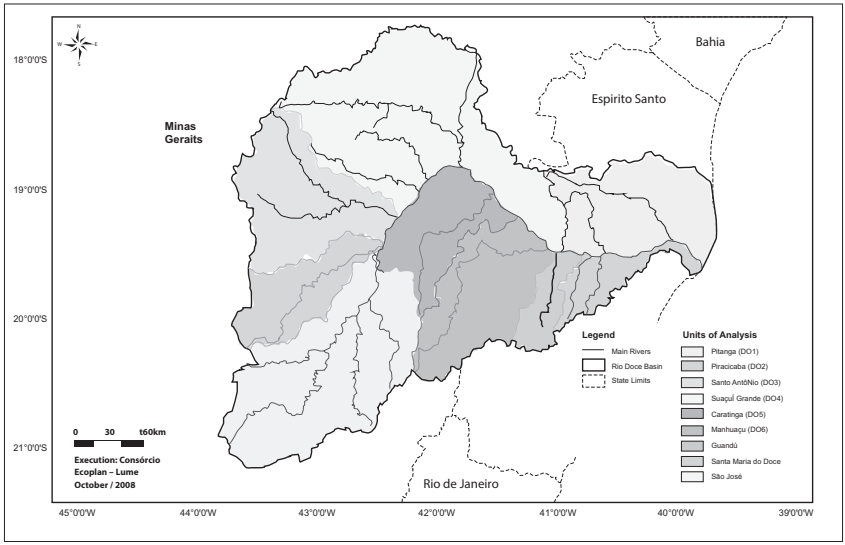

FIGURE 7.1 Doce River basin and its tributary subbasins

Source: PIRH Doce, Executive Report, vol. 1, 2010, 354.

According to the state managers we interviewed, the Board of Directors of the National Water Agency, through the elaboration of the Integrated Plan for the Doce River, sought to enable the establishment of shared management with the basin committees and implement, among the instruments of water management, charges for the use of water. The importance assigned by ANA to charging was emphasized by Paulo, Director of Water Resources of the State Institute of Environment from 2007 to 2009 and a career water policy bureaucrat. He highlighted the potential for collection in the Doce River basin by virtue of its productivity, a productivity based on the largest steel mill complex in Latin America, hydroelectric power production, and farming, cattle raising and agribusiness:[8]

> ANA was born in 2000, a regulatory agency that came with a set of other regulatory agencies. The ANA had to elect priorities. It identified the potential of charging in the [Doce] basin. This was a decisive criterion. The industrial park of Minas Gerais and Espírito Santo included large firms (Fibria, Petrobras). Productive arrangements that . . . generate a potential for charging. [With this] you can accelerate other instruments.
>
> *(12/21/2017)*

8 The steel mill complex in the Doce River basin is formed by large companies, including Arcelor Mittal, Acesita, Usiminas and one of the world's largest mining companies, Vale S.A.

As early as 2004, in line with the purposes of the ANA Board, the agency began a strategy to promote the PIRH in the Doce River basin. At the same time, ANA had acquired expertise by formulating integrated plans at other priority basins: "The first water resources plan was in the Rio São Francisco; the plan at the Doce River basin came after the basins of the Piracicaba, Capivari and Jundiaí rivers, and then the Paraíba do Sul" (Paulo, IEMA, Interview 12/21/2017).

As we shall see, the incentives provided by ANA's Board of Directors reached the implementation stage of the PIRH Doce, steering the early stages of the process through financial and human resource investments. Besides contributing resources for the elaboration of the Plan, ANA's high-level managers (such as Ney Maranhão) worked directly on building the capacity of the technicians from the state agencies, offering technical advisory services throughout the process. In the words of Paulo, ANA acted by "imagining the process of building an integrated plan, driving the flow of decisions, coordinating the state agencies, engaging the basin committees" (Interview 12/21/2017). ANA managers also coordinated the basin actors. Several state managers emphasized that "ANA played a core role, influencing the creation of the PIRH Doce and the instruments for the management of water resources, such as charges for the use of water."

2. Implementing the integrated program of water resources at the Doce River

In the implementation of the Doce River basin PIRH, three sets of decisions stand out: (1) governmental decisions elaborating the Terms of Reference, creating the Technical Follow-up Group, and hiring of a consulting company; (2) elaboration of the PIRH by the Ecoplan-Lume Consortium; and (3) federal guidance in the creation of the water agency and the implementation of charges for the use of water resources as management instruments.

Because of its interstate character, the successful implementation of the PIRH depended on agreements between actors from many institutions with different organizational objectives and perspectives. Disagreements and conflicts permeated crucial decisions. Many resulted in delays, but ultimately these delays were followed by coordination and collaboration between public agencies and basin committees.

Initial governmental decisions for implementation

In 2004, the National Water Agency's Superintendency of Water Resource Planning began discussing implementation of the Doce River PIRH. This discussion culminated in the proposal for the elaboration of Terms of Reference to hire a consulting company to prepare the technical proposal for the PIRH Doce. The ANA's Working Group gathered career bureaucrats from ANA, including Ney

Maranhão and Nelson Neto de Freitas, and state technicians from the Minas Gerais Institute for Water Management and IEMA. In 2005, the Minas agency created a Special Commission made up of bureaucrats from agencies in both states to draft the Terms of Reference.[9] Ultimately, it was approved by the collegiate of the Doce CBH.[10]

The content of this draft Terms of Reference generated conflict between the tributary basin committees and the governmental bodies. The draft limited the PIRH to the channel of the Doce River controlled by the Federal Government, thus excluding the tributaries of the water basin in Minas Gerais and Espírito Santo and restricting the participation of the committees to the Doce CBH (i.e., excluding the tributary committees). The issue was simple: Would the PIRH be a plan for the Doce River or an integrated plan for the whole basin? The councilors of the basin committees fought the government agencies, especially the National Water Agency, because the latter defended elaborating the plan just for the federally controlled channel. Councilor Sandra, nominated to the Doce CBH by civil society and a member of the Special Commission, clarified the terms of this interstate conflict and highlighted the opposition of the basin committees to the ANA's perspective: "While ANA defended the Rio Doce Plan, the basin committees supported an Integrated Plan encompassing both the Rio Doce (main course) and the tributaries, including all the territories of the Rio Doce Basin."[11]

The National Water Agency's defense of the plan in the Doce River was in line with a Cooperation Agreement signed with UNESCO. It corresponded, in addition, to its expectations of revenue collection, since the steel and agricultural complex of the basin was concentrated in the Doce. On the other hand, the state committees emphasized the importance of the whole water basin as necessary to its recovery and conservation. An integrated plan, moreover, would ensure the participation of the tributary committees in the decision-making process.

As a result of the conflicts between the state entities and the Federal Government, several meetings were held in 2006 between the councilors of the basin committees (Doce River and tributaries) and the state and federal managers. The debates produced a document built from the perceptions of the CBH-Doce councilors and tributary committees on the problems and expectations to be considered in the implementation of the PIRH. Many of the managers interviewed emphasized the importance of the mediating role played by the Minas Institute for Water Management, which took over the coordination of the work of the Special Commission, and its role in improving the Terms of Reference.

The conflict between players from different institutions had implications for the earlier decisions taken by the Special Commission, changing its previous

9 Deliberation of the Doce CBH (No. 15, 08/25/2005).
10 Deliberation of the Doce CBH (No. 18, 12/2005).
11 Interview on 01/29/2018.

decision to one favored by the basin committees. Thus, the Terms of Reference launched in 2007 by the Minas Gerais Institute for Water Management (IGAM) accepted the PIRH as an integrated plan, incorporating a Water Resources Action Plan for the tributary basins and utilizing a new form of monitoring that included the ten basin committees.

The second relevant governmental decision was the creation of the Technical Follow-up Group anticipated in the Terms of Reference to follow the elaboration of the PIRH by the consulting company. The Technical Follow-up Group, instituted by the National Water Agency's Board of Directors in 2008, included bureaucrats from ANA, IGAM, and IEMA along with advisers from the Doce River Basin Council and the tributary committees. It sought to integrate the teams of government technicians, consultants, and councilors of the committees. Consider the remarks of Pedro, Director of the nongovernmental BioAtlantic Institute Doce Water Agency:[12]

> Through an ANA Ordinance, the Technical Follow-up Group was created with representation from all the Doce committees and from the managing body acting on the basin. Throughout the drafting of the plan, this group was responsible for technical follow-up. . . . The group was created when the consulting company was hired to prepare the plan.
>
> *(01/24/2018)*

At that moment, both government players and committee advisers knew that uncoordinated and conflicting actions, including delaying or stopping the process, would hinder the formulation of the PIRH. The Terms of Reference stressed the need for the actors to collaborate to avoid fragmenting initiatives and reinforcing conflicts around the basin's water issues (IGAM 2007). According to Ana, a career bureaucrat from IEMA and permanent member of the Technical Follow-up Group, the group "played an active role in monitoring all stages of the Plan formulation by the consulting company, linking government technicians and managers to the consultants and mediating the dialogue with the basin committees and other societal participants."[13]

The final step was the hiring of the consulting company Ecoplan-Lume Consortium to elaborate the PIRH Doce. In 2008, Governors Aécio Neves (Minas Gerais) and Paulo Hartung (Espírito Santo), along with National Water Agency CEO José Machado, signed the Term of Commitment. The contract ensured the contribution of financial resources through agreements between the states and

12 Formally, the BioAtlantic Institute is known as IBIO-AGB; the AGB refers to aboveground biomass.

13 Interview conducted January 25, 2018.

the Federal Government.[14] Several interviewees emphasized the importance of the support for these agreements by President Lula and the governors of Minas and Espírito Santo.

The elaboration of the PIRH Doce

The Ecoplan-Lume Consortium prepared the PIRH Doce and the PARHs for the tributary basins in the period from 2008 to 2010. The Terms of Reference originally expected the reports to be ready in 15 months; ultimately 24 months were needed. High-ranking National Water Agency bureaucrats participated in the various stages of the work group's deliberations. The ANA exerted a strong influence, according to interviewees, not only by developing the policy but also by participating in its implementation, especially in negotiations with the states and in technical training for the managers.

In Ecoplan-Lume's PIRH elaboration, three moments were decisive: (1) diagnosis and prognosis scenarios; (2) management instruments for the basin; and (3) programs, subprograms, and projects. The Follow-up Group participated in Ecoplan-Lume's work by means of monthly meetings. In the Group, the technical language of state managers mixed with the popular knowledge of councilors, the latter fostered by the experience of the players from watershed territories. According to Soraia, IEMA's technical agent and member of the Group:

> The mixture . . . of technicians and non-technicians, many holding knowledge acquired from their experience in the basin, was common. Conflicts in this diverse group were very common. Often the technician brings results that do not reflect the beliefs of people who experience the basin.
>
> *(01/22/2018)*

Actors from many social organizations and economic groups participated in the public meetings. These included unions, associations, basin users, NGOs, universities, and companies in the basin. In the words of Pedro, Technical Director of IBIO-AGB and member of the GAT:

> At some points in the elaboration of the Plan there were up to 30 public meetings . . . Rural unions, fishermen's associations and basin users . . . NGOs such as the Pro-Rio Doce Institute and others, the Academy, CREA, companies such as Vale, Aracruz Celulose, Cenibra and the main companies in the basin.
>
> *(01/24/2018)*

14 The MMA Minister at the time, José Carlos de Carvalho, also signed agreements with the governors of Minas Gerais and Espírito Santo.

The CBH-Doce and the tributary committees played an important role in this process. Managers and consultants believed that "the process of elaborating the Plan was characterized by broad public participation, involving the ten active committees in the basin" (PIRH 2010, 15). The motivation to include social participation lay not only in the Water Law but also in the recognition by managers of the legacy of social mobilization in the Doce River basin, a legacy that involved environmentalists and social organizations. In strategic terms, the participation of players in the basin reflects a co-optative process facilitating the construction of negotiated decisions and increasing conflict mediation. Concomitantly, however, it increased the time required to elaborate the Plan, thus explaining the nine-month delay in delivery.

Public meetings to present the results of the consultancy work stages were held around the basin (PIRH 2010). As Soraia explained:

> As they were prepared [diagnostics and prognostics] they were presented by the Technical Follow-up Group [in public meetings]. . . . The diagnosis was approved, pointing to a series of problems in the basin, especially sanitation. The prognosis brought some optimistic scenarios for the future . . . with a planning horizon of 20 years.
>
> *(01/22/2018)*

Despite the participatory plan drafting, the extended meetings between government technicians, consultants, committee advisers, and social and economic groups had limitations. Given the territorial dimensions of the basin, meetings were few in number. Moreover, the technical language of the process restricted the participation of ordinary citizens. Most of the specific issues were decided by the Technical Follow-up Group, which prioritized technical knowledge often far from committee members' understandings. The participation of councilors, according to our interviewees, was more effective in the diagnostic stage of the basin project, where nontechnical knowledge was more common.

The second category of decisions concerned basin management instruments, including the granting of water rights, framing, charging for water use, and the information system (Law N. 9.433/97). At the time of the PIRH Doce elaboration, the implementation of these instruments was slow and delayed (PIRH 2010, 44). Granting of water resources was only partially implemented: the framework was in the development phase, and charging and information systems were nonexistent. For this reason, the state and federal managers and the basin committees decided unanimously to implement all management instruments within no more than two years.

Finally, the third decision category consisted of the programs established in the PIRH. Seventeen programs were broken down into subprograms, projects,

and actions.[15] These programs were distributed, besides the Doce River, in the tributary basins of Minas Gerais and Espírito Santo through the PARHs. Programs were prioritized through a hierarchy based on their urgency.[16] Top priority programs were those linked to sanitation and to management tools (PIRH 2010, 46–60). The most urgent actions would start in the first year (2010); less critical ones would start in 2018. Others would be distributed over a 20-year period.

Ecoplan-Lume delivered the Executive Report of the PIRH Doce in June 2010.[17] Figure 7.2 summarizes the various governmental decisions and basin committees in the elaboration stage of the PIRH Doce, that is, the period from 2004 to 2010.

Strategies and conflicts in the creation of the water agency

In order to implement the actions of the PIRH Doce, the "Technical Cooperation Agreement for the Integrated Management of Water Resources of the Doce River Basin" was signed, in March 2010, by the CEO of the National Water Agency, the governors of Minas Gerais and Espírito Santo, and the basin committees. The goals of the "Pact of the Waters" agreement included the creation of a water agency and the implementation of charging at the Doce River Basin between 2010 and 2011.

The Water Law assumed that each basin would have its own water agency, that is, an integrated management structure supporting the implementation of the PIRH programs and actions. In 2011, the managers of ANA, IGAM, and IEMA created a Technical Chamber of Integration to hire the water agency. The result was the appointment of the BioAtlantic Institute (hereinafter the IBIO-AGB Doce).[18] Headquartered in Governador Valadares (MG), IBIO-AGB Doce sought to manage the allotment of resources collected from water use

15 P11—Basin Sanitation Program; P12—Program to Control Sediment-Generating Activities; P13—Program to Support Effluent Control in Small and Micro Companies; P21—Program to Increase Hydric Availability; P22—Program to Encourage the Rational Use of Water in Agriculture; P23—Program to Reduce Losses in Public Water Supply; P 24—Water Producer Program; P31—Program to Combat Floods; P41—Sanitation Universalization Program; P42—Rural Sanitation Expansion Program; P51—Environmental Assessment Program for the definition of areas with use restrictions; P52—Program for the Recomposition of PPAs and Springs; P61—Program for Monitoring and Follow-up of the Implementation of the Integrated Water Resources Management; P62—Program for the Monitoring of Water Resources; P71—Action Program Communication; P72—Environmental Education Program; P73—Training and Capacity-Building Program (PIRH 2010, 51–58).

16 Six programs were classified as priorities: P11, P31, P41, P61, P62, and P71 (see note 18).

17 The report was approved by Vicente Andreu Guillo, CEO of ANA, Cleide Izabel Pedrosa de Melo and Sueli Passoni Tonini, CEO of IGAM and IEMA, respectively, and by the National Water Resources Council.

18 In that same year, the Doce CBH and the tributary committees of Minas Gerais approved the Instituto BioAtlântica (IBIO) to perform this function.

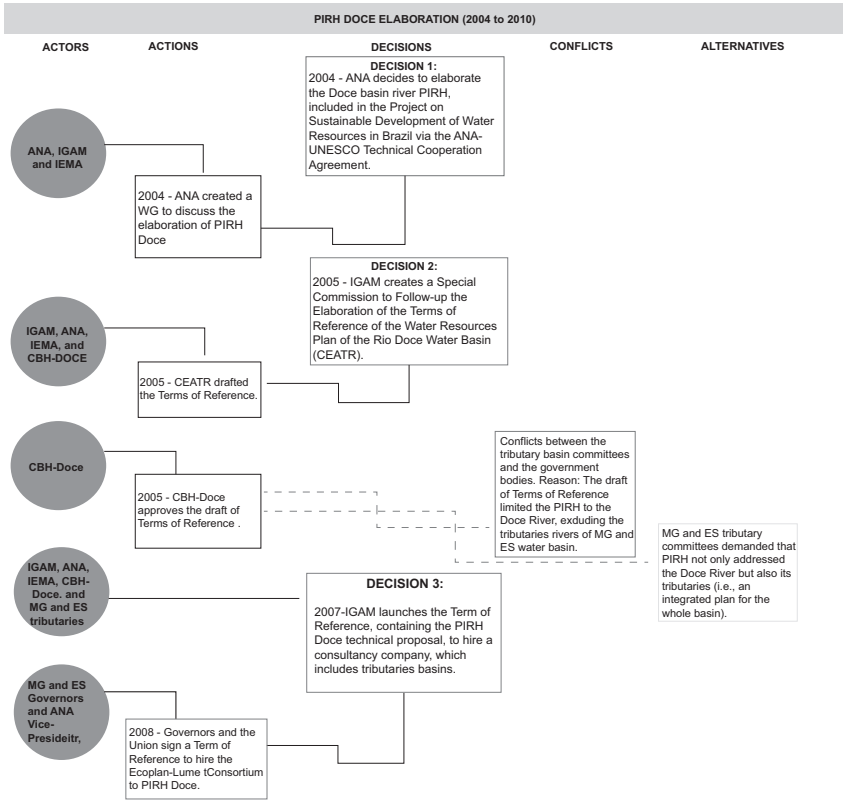

FIGURE 7.2 Elaborating the PIRH Doce (2004–2010)

Source: Own elaboration.

charges for projects to improve the quality and volume of water in the basin (CBH Doce 2011). Beyond its role as executive secretary of the Doce CBH, the IBIO-AGB Doce was responsible for executing the actions planned in the PIRH with resources from water use charges and from other sources (IBIO-AGB Doce 2012). The efforts to integrate the CBHs also led to the creation, in 2014, of the Integration Committee of the Doce CBH, composed of representatives of the Doce CBH and the tributary committees. For the management of the basin in the federal government's domain, the National Water Agency signed a contract with the IBIO-AGB Doce. IGAM signed a similar contract for the tributary basins of Minas Gerais. In the case of Espírito Santo, no management contract between IEMA and IBIO-AGB was signed because water use charges had not been implemented.

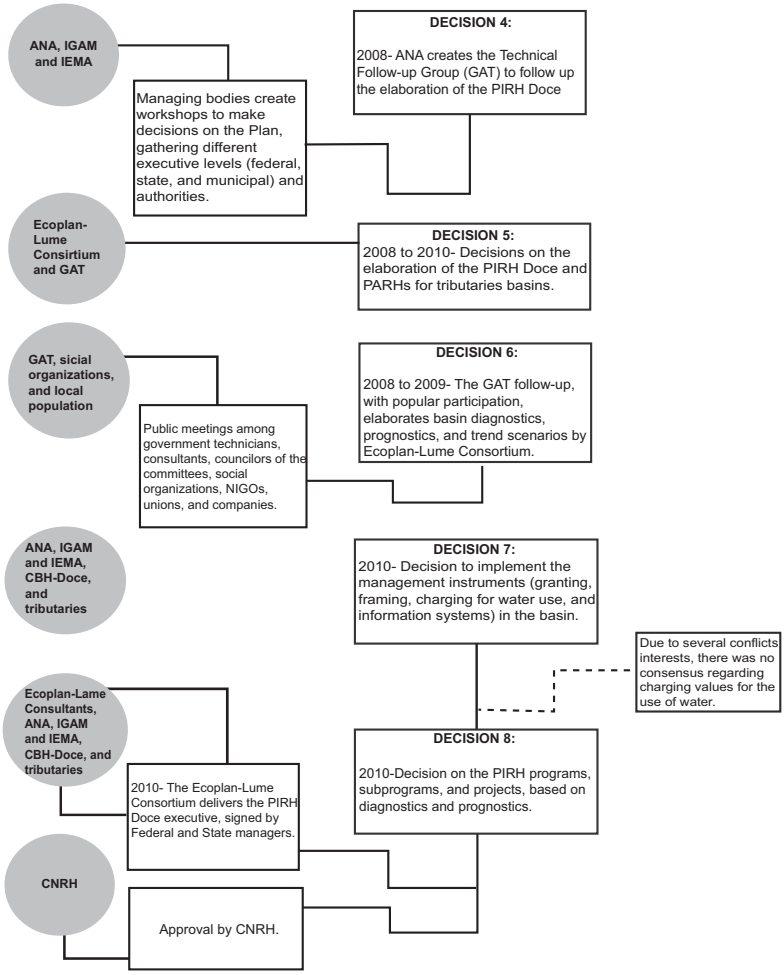

FIGURE 7.2 (Continued)

Nonetheless, in December 2013, Espírito Santo's governor, Paulo Hartung, created the State Water Resources Agency. The separation of water resources policy and environment policy (IEMA), through the creation of the state water agency, granted administrative and financial autonomy to the water sector in terms of legislation, bureaucracy, and resources. The following year, Governor Renato Casagrande instituted, with the approval of the state legislature, the state's Integrated Water Resources Management System. IEMA's Director of Water Resources, Paulo, stated that the incentives for the creation of the state

water resources agency came not only from the state governor but also from the National Water Agency, the CERH, and the basin committees. As Paulo pointed out, the creation of the agency was motivated:

> by the need to strengthen water resources management, the full implementation of management instruments and the planning, design and management of water infrastructure works. [Conferring] greater administrative and financial autonomy, greater ability to streamline the management of water resources and to support the watershed committees.
>
> *(12/05/2018)*

The creation of the water resources agency, in the view of the managers, occurred without conflicts. Its creation was not foreseen in the PIRH; rather, it was an outcome of the PIRH structuring water resources policy in Espírito Santo. The agency contributed to the implementation of the Plan's management instruments, especially the granting of water permits and the registration of users, as well as framing and supporting the basin committees. Figure 7.3 traces the decisions to implement the management instruments of the PIRH through the creation of the water agency (and other actions).

Conflicts around water use charges

Two sources of financial resources were foreseen in the implementation of the PIRH: charges for water use and external resources. All the programs in the Plan except sanitation had their budgetary forecasts linked to water charges, a total of 10% of the global investment of US$ 7.3 million budgeted at the time for the ten-year period (PIRH Doce 2010, 63). Initially, charging in the basin was set to begin in 2012, two years after the elaboration of the Plan.

The National Water Agency's interest in charging was explicit from the beginning of water policy formulation, and its Board of Directors instituted water charges in the Doce basin on November 4, 2011 (with the approval of the CBH-Doce). Months later, on January 10, IGAM implemented charging in the tributary committees of Minas Gerais. Marcos, President or Vice President of the CBH-Doce for four terms (2008–2017), thought that the charging decision in the Minas committees was more consensual because discussion of the instrument was already occurring:[19] "The CBHs of Minas were constituted before the committees in Espírito Santo, and they had been discussing charging for longer.

19 Councilor of the committee for Espírito Santo, Marcos' profile was sociopolitical. He participated in the elaboration and implementation of the PIRH Doce for a long period and, in that time, was twice Mayor and Vice-Mayor (2005–2016) of Colatina, one of the largest cities on the Doce River. Marcos became CEO of the Water Resource Agency in 2017.

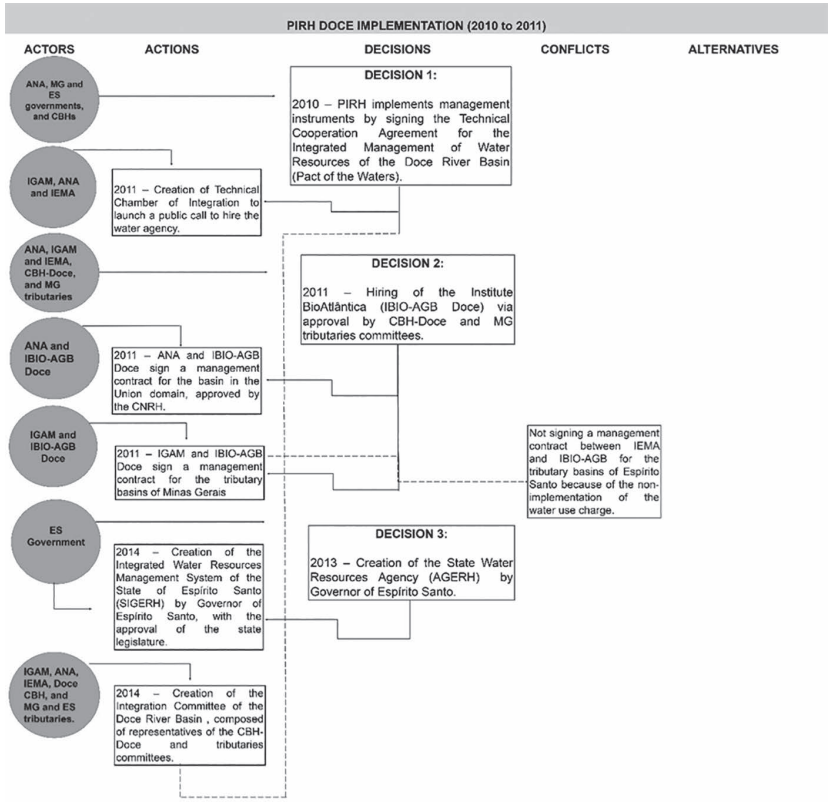

FIGURE 7.3 Implementing the PIRH and creating the water agency (2010–2011)

Source: Own elaboration.

This favored a more consensual process among the basin players" (Interview 12/11/2017).

In Espírito Santo, in turn, the implementation of water use charges at tributary basins has not yet been effectively implemented, although the committees approved it in 2011.[20] At the time, charging required regulation by the state legislature. In 2014, the legislature approved an initiative of the Governor allowing charging all users, including rural producers, for water use. Even with legislative approval, as we shall see, a water use charging system for the state was only implemented in 2019.[21]

20 CBH Guandu, Deliberation N. 01 (04/20/2011); CBH São José, Deliberation N. 02 (04/19/2011); CERH/ES Resolution N. 35 (09/14/2012).

21 The initiative of the Executive Branch, State Law N 10.179 in March 2014, established the State Policy on Water Resources and instituted a management system.

What explains the long delay in the implementation of user charges in Espírito Santo? What are the motivations of players and their conflicts that prevented a decision to implement charging? What are the political costs for the leaders and the constraints to the autonomy of bureaucrats?

In Espírito Santo, the decision to implement charges for water use was driven by conflicts of interest and disagreements about charging as a management instrument and about the amounts to be charged. These conflicts prevented any reasonable consensus. The "non-decision" on the implementation of charging was tied to a political conflict that polarized supporters and opponents of the instrument. For almost a decade, the conflict generated serious obstacles to the implementation of the PIRH in the basins of Espírito Santo.

ANA and the state agencies overvalued the charge as a management instrument and its revenue potential for financing the programs. In spite of the importance given to revenue collection by the Federal Government, few resources were allocated to the projects linked to the players involved, including the Collection Acceptance Evaluation and the Charging Collection Projects. Charging was defined as indispensable for the implementation of the PIRH, but the managers made no efforts to make it a reality in the whole water basin. For their part, the state governments underestimated the conflicts over charging, neglected it, and failed to outline strategies for negotiation and resolution. Beyond a few initiatives for public discussion, the CBH-Doce and the tributary committees of Espírito Santo failed, according to our interviewees, to put the subject on the agenda of their meetings. Espírito Santo's tributary committees, of course, were far from a consensus about charging.

Antagonistic positions regarding charging had their origins in the elaboration stage of the PIRH. Conflicts of interest involving governments, civil society, and water users, especially in mining and agriculture, were at the epicenter of the dispute. According to Pedro, Technical Director of IBIO-AGB Doce, the interests of economic sectors guided the debate on charging since the initial discussions in Minas Gerais, where the mining industry opposed charging. Pedro followed the debates at the Doce River basin as coordinator of the Regional Unit of the National Water Agency in Governador Valadares (Minas Gerais) and during his work at the Technical Follow-up group. In his view, Espírito Santo's agricultural sector has been the obstacle to the implementation of water use charges (Interview 01/24/2018). Councilor Sandra also emphasized the agricultural sector's opposition.[22] Farmers, she explained, had little understanding about charging and considered it a punishment (Interview 01/29/2018). They noted that the state legislation compensates farmers who develop rural activities through

22 Sandra was civil society representative in the CBH-Doce and in the Guandu and Santa Maria tributary committees, former secretary of the Guandu River Consortium, and coordinator of the Inter-Municipal Sanitation Consortium.

the Water Producer Program because they replenish water resources. For these farmers, water charges would bring financial losses rather than rewards. Government technicians countered that the amounts charged would be minimal. Antônio, Water Resources Manager of IEMA, emphasized this interpretation of the conflict:

> The actors feared that the charge would enter as a penalty. In Minas the industrial sector; in Espírito Santo, agriculture. Sanitation resists a little less . . . they can pass on the costs. Some leaders connected to agriculture resist more, but as they get to know the charges they also give in . . . the Ouro Preto [Minas Gerais] meeting was supposed to be technical, but it was an important negotiation moment . . . larger users were represented.
>
> *(01/11/2018)*

The Executive Secretary of the Guandu River Consortium concurred that many disagreements were motivated by the lack of understanding of charging and by insecurity regarding the application of these resources in the execution of projects. Default was also a concern (Interview with Patricia, 12/22/2018). Misinformation and a lack of transparency in the potential use of resources fueled the polarization around charging.

The IMPOM Opinion Survey (commissioned by IBIO-AGB Doce in 2015 as part of its assessment of basin charges) is revealing. The survey sought the opinions of paying users in Minas Gerais (both river basins and tributaries) and Espírito Santo (river basins alone) where charging had been implemented. A high proportion of users were unaware of the objectives of charging, unaware of how much was collected, and unaware of how the funds were used. The ratepayers' main criticisms and suggestions called for greater dissemination and clarification on the use of resources (IMPOM 2015).

The poll revealed that over 90% of paying users supported charging (IMPOM 2015). Still, support for charging in Minas Gerais and Espírito Santo varied according to user type. In the mining segment, 86% supported charging; in industry, support rose to 93%. The greatest opposition to charging was found in farming and livestock (irrigation and animal husbandry), with 35% of paying users opposing the instrument. Charging received unanimous support from users in only two segments: supply and sanitation and energy.

Opposition by agriculture and cattle raising in Minas Gerais did not prevent the adoption of a charging policy, but the biggest share fell on mining and industry, the region's predominant activities. In Espírito Santo, on the other hand, opposition by agriculture and cattle ranching was noteworthy given their weight in the local economy.

One mid-level career bureaucrat from IEMA argued that the disagreement about charging among users from various economic sectors began with the

drafting stage of the PIRH. At that time, charges were on the agenda of several public meetings, but no decision was reached.

> Meetings led to simulations of possible rates. Agriculture has always been very resistant. . . . The information discussed in the plenary of the CBH Doce did not reach agriculture, so meetings were held with them in Colatina. At the end of the meetings they understood. So, the chronology began with this unit in Brasilia, a technical group formulating or reformulating, followed by a technical committee that discussed it and, finally, the plenary of the Doce Committee. The whole process involved 35 meetings throughout the basin.
>
> *(Antônio, 01/11/2018)*

Sandra, the councilor of the CBH-Doce, reinforced this perception, recalling a discussion about charging in Espírito Santo during the early-stage elaboration of the PIRH Doce. Actors positioned themselves for and against, and fierce disputes resulted. Some organized groups, including farmers and rural workers unions, as well as representatives of industries operating in the areas of the Doce River (Vale, Arcelor Mittal, and Fibria Celulose), mobilized to exert pressure on authorities and politicians (Interview 01/29/2018).

Conflicts around charging thus stood out, and the authorities made few mediation efforts. According to Ana (career manager at IEMA), at the end of the elaboration of the PIRH Doce the actors could not arrive at a majority for any proposal on collection that defined values and parameters for charging. With the conflicts of interest and the different conceptions of the actors' institutions, collegiate bodies, and private companies, there was even less consensus about norm enforcement. Instead, the PIRH report included three different scenarios for charging but recommended that norms be specified *a posteriori*, during implementation.

The failure to decide on the establishment of charging during the drafting of the Plan illuminated the ongoing conflict between the federative entities. Soraia, a high-level career bureaucrat in various agencies related to water, explained that charging requires approval in the basin committees, the CERH, and the state legislature. Espírito Santo's failure to establish a charging regime resulted from the conflicts of interests and opposition of landowners, industrialists and elected politicians.

> Collection was delayed. There was regulation only in 2015, when CERH voted the resolution regulating charging [in Espírito Santo]. . . . Charging is controversial. Agriculture was against . . . arguing that they conserve water. Small farmers are more fixed in their opposition. The industrial sector is more willing. In the political context there is a lack of understanding regarding the charge, that is, a lack of information and discussion on the topic.
>
> *(01/22/2018)*

Due to the interests of agriculture and, to a lesser extent, mining and cellulose, the charging issue led to a political impasse, with consequences for the electoral interests of governors, mayors, and state representatives. Pedro, IBIO-AGB Doce's Technical Director, spoke of this lack of decision in Espírito Santo:

> Users did not want to pay . . . the Espírito Santo managing body lacked a willingness to implement . . . concern of Espírito Santo's governors with elections and the political risk of losing electoral support with the implementation of charging . . . the farming sector does not want to pay. At the beginning of the discussion about charging there was resistance from mining. In Espírito Santo it is basically the farming and cattle raising sectors that oppose.
>
> *(01/24/2018)*

The conflicts of interest involving users from different sectors of the economy became an issue of "electoral connection" in the sense that a strategic perspective toward elections motivated the decision of public authorities. The farmers' and rural workers' unions lobbied elected politicians and authorities. Governors and mayors perceived charging as a risk to their political and electoral interests. The CERH/ES had regulated charging in 2015 through an internal resolution, and AGERH and the State Secretary of Environment supported this decision. The blocking decision occurred in the legislative arena, even though executive-legislative relations usually reflect the subservience of parliamentarians to the demands of the Executive (Tomio and Ricci 2012; Zorzal and Carlos 2017). In the view of the CBH-Doce councilors, some elements in the state government opposed implementing a charging scheme. Given the opposition from economic sectors, the electoral interests of governors and mayors pushed them to decide against charging, even if they had no prior preferences on the issue. In other words, the electoral interests of political elites constrained the autonomy of the state technicians, generally mid-level career bureaucrats with little involvement in civil society organizations, who were directly involved in the implementation of charges.

Finally, consider the effects of the absence of charging at Espírito Santo's tributary basins on the relations between the council members of the basin committees of Minas Gerais and Espírito Santo. Espírito Santo's failure to implement charging generated conflicts between councilors of tributary committees from the two states. As Marcos, President of CBH-Doce, noted, it is necessary to "harmonize regional conflicts over the use of the resource derived from water charging" (Interview 12/11/2017). Pedro, Technical Director of IBIO-AGB Doce, described a conflict between the committees of Minas and Espírito Santo that had occurred in 2015, during the discussion of the Pluriannual Application Plan (PAP) for 2016–2020. The discussion concerned the use of charging

resources at the Doce River channel by the tributary committees of Espírito Santo:

> Espírito Santo uses resources from the channel to execute programs in the state. But some committees do not agree with the transfer of this Federal Government resource to Espírito Santo because it has not implemented charging. . . . In general, this resource is used to support plenary meetings and travels of the committees to fulfill their functions. It was US$ 32,000 for each committee in Espírito Santo. In Minas Gerais, each Doce committee receives US$ 100,000 for the channel and an additional US$100,000. On the other hand, some advocate for maintaining the transfer to Espírito Santo due to the need for integrating actions.
>
> *(01/24/2018)*

Councilor Sandra, representing civil society on the CBH-Doce, also pointed out the impact of Espírito Santo's failure to charge on the prioritization of the PIRH Doce programs for the state's tributary basins:

> Programs and actions are carried out in the PARH and PAP [Pluriannual Application Plan] by watershed. The Espírito Santo committees receive [only] the resource from the channel and deliver the PAP. Each committee selects the programs it will work on during the period. [In contrast] The Minas Gerais committees have larger programs because they have their own collection.
>
> *(Interview 01/29/2018)*

The direct consequence of the absence of charging at the tributary basins in Espírito Santo is the partial implementation of the actions carried out by IBIO-AGB Doce agency. Since the basins in Espírito Santo generate no revenue, project implementation relies purely on the resources collected by charging at the Doce River channel, a channel under the control of the Federal Government.

3. The Rio Doce's environmental disaster and its effects on water use charging

On November 5, 2015, the Fundão tailings dam failed. The collapse of this dam (owned by Samarco, Vale, and BHP Billiton) caused the biggest environmental disaster in Brazil and the biggest mine tailings disaster ever recorded in the world (Bowker and Chambers 2015). Tailings sludge reached the district of Bento Rodrigues, in Mariana (Minas Gerais), and traveled down the Rio Doce channel to its mouth on the coast of Espírito Santo. In the Rio Doce basin 41 municipalities were affected by water pollution, supply interruption, fish kills, inundation of springs, and degradation of the Atlantic Forest (IBAMA 2015).

The environmental disaster was a "critical juncture" because of the size of its environmental and socioeconomic impacts (Souza and Carlos 2019). In such urgent situations, states are allowed to produce rules, norms, and procedures quickly; the emergency impacts the linearity, normality, and normativity of state actions (Mahoney and Thelen 2010). The disaster opened new windows of opportunity for governmental and nongovernmental players and enabled the emergence of new decisions and actions. These decisions and actions, however, were not immune to the historical legacy of institutions or to the players' previous decisions. This section considers the changes in actors' decisions about water charging in the Rio Doce basin. How was the charging conflict negotiated between players with divergent motivations? What actions favored bureaucratic autonomy in decision-making?

New context, old problems, emerging decisions: the CBH-Doce searches for recognition and participation

The disaster spurred changes in the Doce PIRH implementation through the inclusion of the impacts of the dam's collapse and their mitigation onto the committee's agenda. These changes included re-prioritizing programs and projects as well as restructuring management instruments, including the basin agency and charges for water use.[23] The new context reignited latent conflicts in the committee arena, bringing up old issues, including the implementation of water charges in Espírito Santo.

After the environmental disaster, water resource management in the Doce River basin underwent considerable change—especially with regard to the organizational dynamics of the CBH-Doce—as new issues, strategies, and arenas for action were incorporated. Beyond the operational issues related to its functioning, councilors started promoting actions of social mobilization and coordination with institutional players in order to participate in the authorities' decisions regarding governance.

The CBH-Doce adopted strategies aimed at its own legitimacy as a relevant basin player. These claims generated new motivations that drove the engagement of councilors in post-disaster environmental recovery. According to the councilors we interviewed, the CBH-Doce's efforts were motivated by the sense that the dam's failure worsened the basin's critical situation, by feelings of impotence and inertia in the face of environmental impacts, by the perception of loss of the legacy of previous actions, and by the insight that the disaster represented a political opportunity to implement the PIRH. Consider this statement

23 In 2018, the CBH-Doce deliberated about the revision of the Doce PIRH, scheduled to occur ten years after its elaboration. In 2019, ANA, IGAM, and AGERH began the reformulation upon approval of the Terms of Reference.

by board member Francisco, a member of the committee representing Minas civil society:

> We were surprised with the news of the rupture. Imagine: we were engaged, committed . . . years of effort to build the PIRH and PARH, many discussions, a very democratic process and an arduous effort moving, creating policies, structuring councils, right?. . . And suddenly, the Doce River, already considered an extremely affected river (by sewage, by degradation, one of the worst rivers in Brazil), is faced with the Mariana mud, right? . . . The whole world started to look at their territory, at that river that we had been working on for a long time. This impact was tremendous . . . you feel powerless in the face of all that effort you had made up until then and it's null, it's inert. Because everything you had done up to that point, and the river was even more affected.
> *(09/01/2020)*

The CBH-Doce mobilized to promote post-disaster diagnoses and prognoses in the basin. From the collapse of the dam in November 2015 to mid-2016, CBH-Doce advanced several strategies. Among the most important was its coordination with federal and state authorities through an expanded meeting in December 2015. This meeting, attended by the main authorities of the basin, lasted an entire day.[24]

At that time, federal authorities considered the disaster to be a national problem requiring national measures. In the words of Francisco Gaetani (Ministry of Environment): "It is not only a regional problem, but also of national scope." President Rousseff established a Crisis Committee to monitor recovery actions in the basin. IBAMA's President imposed fines and penalties on Samarco. Vicente Andreu (National Water Agency) announced a transfer of US$2.7 million to the CBH-Doce to develop basin actions. Andreu emphasized the importance of the committee in the dissemination of information to society and called for a greater leadership role (CBH-Doce, Meeting Minutes, 12/01/2015).

The collegiate board of directors of CBH-Doce launched a manifesto on November 30, 2015, defending its legitimacy as a relevant player in the basin and recognizing its legacy and leadership in the face of the disaster:

> The letter aims to reference the work developed by the CBHs of the Doce basin and the actions aimed at the recovery of the basin, with emphasis on

24 Representing the Federal Government: Vicente Andreu Guillo, CEO of the National Water Agency; Marilene Ramos, President of IBAMA; Francisco Gaetani, interim Minister of Environment; Mauro Almeida, Legal Adviser of the Ministry of Environment; Paulo Henrique Kuhn, Federal Attorney General; and Renato Rodrigues Vieira, Federal Attorney General. Representing Minas Gerais: Governor Fernando Pimentel; State Secretary Luiz Tadeu Martins Leite; and Elisa Costa, Mayor of Governador Valadares.

> those provided for in the Integrated Water Resources Plan and in the Action Plans of the tributary basins. The CBHs also demand legitimacy, as protagonists and in articulation with the federal and state governments, of all the mitigation actions related to the environmental disaster resulting from the Samarco dam collapse in Mariana-MG.
>
> *(CBH-Doce, Manifesto Letter, 12/01/2015)*

Two technical units in the committee played key roles in monitoring authorities' decisions. These units included the Technical Chamber of Training, Information, and Social Mobilization and the Technical Chamber of Critical Event Management. Their actions led to reports that expressed "the importance of the committees in the revitalization of the Doce River, their history of action in the construction of programs and projects that can contribute" to the mitigation of the disaster (CBH-Doce, Meeting Minutes, 01/28/2016).

In addition, extra-institutional actions were launched to generate social mobilization and influence the authorities. In December 2015, for example, the campaign "The Doce River has not Died" and the "Mariana Mission" promoted a visit by councilors from the 12 committees of the Doce basin to Bento Rodrigues (MG), where 19 people were killed.[25] The mobilizing actions of the councilors helped unify the committees of the watersheds of MG and ES.

The CBH-Doce's quest for recognition allowed it to participate in the National Task Force and the Minas Gerais Task Force, created by the Federal Government and the Minas Gerais government in January 2016. In each task force, two representatives of the committee's board participated in meetings and workshops preparing an action plan for the Doce. These studies provided the basis for lawsuits filed by the federal government and the States of Minas Gerais and Espírito Santo against Samarco, lawsuits demanding that the companies responsible for the damage pay about US$ 6 Billion for repair and compensation.[26]

Still, CBH-Doce participation in the actions of federal and state authorities was neither free nor without conflict. As Francisco, a civil society adviser, pointed out: "We had to knock on the door to get in. We had to demand participation":

> A working group was set up, a crisis committee that started with the Minas Gerais government, the federal government, and the Ministry of the Environment. Astonishingly, the basin committees were not included. In any other culture in the world . . . the committees would be the first to be triggered. There is no other institution more knowledgeable about the river than the river basin committee . . . We are on the side of the river, and we have lived

25 Francisco, councilor CBH-Doce, Interview 01/09/2020.
26 ACP n 0069758-61.2015.4.01.3400.

> with reality for years dealing with the Doce. And then the state government and the federal government set up groups to deal with the crisis . . . and the committee was not immediately remembered.
>
> *(09/01/2020)*

In other words, the basin committees were excluded from the initial decisions and ignored by authorities as a relevant actor in basin management. The CBH-Doce pled for the recognition of the two committees directly affected by the disaster, the Doce River Committee and the Piranga Committee, the former because its river channel was damaged from MG to ES, and the latter because it is the basin of the city of Mariana.

For the councilors, the disaster represented a window of opportunity to implement the PIRH Doce. The CBH-Doce consistently defended the PIRH as the official plan for the basin and proposed that the Plan be used as a guide for post-disaster environmental recovery actions. The committee organized an entourage of 12 councilors to deliver a DVD containing the Doce PIRH to Izabella Mônica Vieira Teixeira, Minister of the Environment (MMA) in the Rousseff administration. Board member Francisco explained their motivations:

> I said to Marcos, we have to show the government of Minas and the federal government the dimension of the programs we already have. We have the opportunity. Marcos was mayor of Colatina. He had contact with the relevant agencies in Brasília . . . an appointment with the Minister of Environment in Dilma's administration, and he managed to get all the presidents of the committees of Minas and Espírito Santo to have a representative of each committee in this audience with the minister. We had the opportunity to deliver a DVD, which is always circulated among our committees, containing our PIRH and our PARH.
>
> *(09/01/2020)*

The MMA found two main problems in the CBH-Doce proposal to use the PIRH as the basin's recovery plan. First, the impact on the Doce River was both environmental and socioeconomic; the PIRH included only environmental programs. The programs and projects of the Plan, moreover, were based on an environmental diagnosis from 2010 and did not foresee the damage caused by the mine tailings sludge. Second, the Environment Minister argued that the CBH was not a legal entity and, contrary to its lawsuit, would not have the managerial structure to execute a budget of US$ 5 billion. Councilor Francisco told us that at the Brasília hearing, the Minister said: "No. There will be a parallel structure, a new one." Francisco added that "the minister already had in mind the creation of a new entity . . . foreign to our territory, which culminated in Renova and the Interstate Committee" (09/01/2020).

The committee's advisers recognized the disaster's complexity, with its environmental and socioeconomic dimensions: "One thing is the river restoration, another thing are issues of heritage, of lives, of compensation" (Francisco 09/01/2020). Still, these advisers tried to maintain a middle position: "Social compensations, the moral and social damages, could have another structure, but the issue of repairing the river would not necessarily need to be rethought . . . the ecological issue, revitalization and restoration, could have begun utilizing the structure of the committees" (idem).

The committee's proposal to use the Doce PIRH as a guideline for environmental reconstruction measures was overruled by the MMA. The federal government resolved to institute an entirely new, hybrid institutional model, that is, a private nonprofit foundation, the Renova Foundation, with equity contribution and management by the mining companies, that would execute the reparation and compensation programs. The federal government also created an institutional framework to supervise Renova's actions that included the Interstate Committee and a set of advisory and technical support units, mainly made up of public agencies. The Renova Foundation and the CIF set up the disaster governance system through an agreement between the Federal Government, the governments of MG and ES, and the mining companies.[27] This hybrid governance system resulted in a peculiar combination of corporate governance and public and social "misgovernance," that is, governance contrary to public control that resulted in disorganizing state and social capacities and limiting enforcement by the Interstate Committee (Gurza Lavalle and Carlos 2022).

With this crucial agreement signed, the counselors of the CBH-Doce gained seats in the CIF, the working groups, and on the Advisory Board of the Renova Foundation.[28] In this respect, the CBH's demands for recognition and participation were met. The committees were included, however, only to play a particular role. Civil society board member Francisco elaborated: "We had to plead, dig, discuss spaces for us to be within the structure of the CIF, the Renova Foundation, the technical chambers, the councils" (09/01/2020).

The decision of the CBH-Doce's board of directors to participate in the CIF and in Renova's Council led to disagreements among the board members and criticism from civil society organizations. According to Marcos, president of CBH-Doce, the committee's board "decided to take an active role . . . the greater sense of urgency was to participate in mitigation actions for the disaster" (07/09/2020). The conflict among the councilors revolved around the role of the basin committee in disaster mitigation. The risk of "emptying the functions

27 This agreement was signed on March 2, 2016.

28 The CBH-Doce has secured seats in the following Technical Chambers of the CIF: Water Safety and Water Quality, Forest Restoration and Water Production, Conservation and Biodiversity, and Waste Management and Environmental Safety.

of the basin committee as it became part of the CIF" was a concern for some councilors. In particular, the civil society councilors urged nonparticipation in the governance agencies and maintenance of the committee's critical role. Marcos argued that there was no unanimity and that the majority of the councilors favored "active participation in the reparation process . . . the majority understood that they could not stay out, but without assuming the execution" of reparation measures (idem).

Given these internal conflicts, participation in disaster governance led the committee to improve its organizational dynamics, especially with regard to decisional transparency, transmission of information to the collegiate, and accountability. These improvements include the creation of clearer rules for the appointment of board members to participate in these spheres, definition of their attributions, and elaboration of norms for information sharing (CBH-Doce, Meeting Minutes, 10/14/2016).

The dispute for recognition and participation space in governance affected the organizational dynamics of the committee, leading to a sense of greater committee unity. This is remarkable because the committee is a collegiate body with a propensity for conflicts. On the one hand, it engaged in civil society mobilizations but also in state institutions through the actions of government agencies and the Task Force. On the other hand, it favored the emergence of new decisions based on confronting preexisting conflicts, including, as we shall see, the redefinition of charging in Espírito Santo. Extreme environmental cases, it seems, redefine the notion of "public" and the capacity for action, establishing new perspectives and motivations through the strengthening of bonds of belonging and the networks of engagement in problem-solving (Cefaï 2011). This process favored the construction of practical authority, as Abers and Keck put it (2013), on the part of the basin committees; that is, they develop capabilities and win recognition to act in the recovery of the Rio Doce.

Redefining water charges in Espírito Santo

The disaster created a critical juncture and a configuration favorable to the reconsideration of charging. When the programs of the PIRH were re-prioritized for execution in the PAP for 2016/2020, the controversy was reignited.

Decisions about the 2016/2020 PAP focused on the deliberations of the CBH-Doce and the Minas Gerais tributary committees. Although they had the right to speak, the Espírito Santo committees did not discuss the investments because the state was generating no revenue from charges.[29] At that moment,

29 In March 2015, a decree established other committees in Espírito Santo: the CBH-Pontões e Lagoas do Rio Doce and the CBH-Barra Seca e Foz do Rio Doce (formerly CBH-São José). In 2016, the CBH-Santa Joana was created, for a total of five tributary committees.

the regional conflicts between the committees of Minas Gerais and Espírito Santo pivoted on the use of the resources from charging at the Doce River for the tributary basins of Espírito Santo. This dispute hindered the integration of management in the watershed.

In June 2017, the CBH of Guandu (ES), in a meeting that included representatives of agriculture, approved charging. The decision took into account the 2015 CERH/ES charging guidelines and the time elapsed since the approval of charging by Guandu in 2011 (CBH Guandu 2017: N° 03). The Guandu committee's deliberation defined the minimum volume of capture for charging purposes, with the intention of exempting average captures by the agricultural sector. This process signaled the need for negotiation with the agricultural sector, the traditional opponents of charging in Espírito Santo.

One year later, CBH-Doce moved for the immediate implementation of charging in the basins of the Doce River in Espírito Santo. The committee approved the motion in a plenary meeting (June 12, 2018) and forwarded it to the governor, Renato Casagrande, and the five tributary committees. The issue came up during the discussions on updating the mechanisms and values of water charges in the basin during the administration of the new president of the CBH-Doce (2017–2019). The Legal Institutional Technical Chamber of the committee then created a working group made up of representatives of ANA, IGAM, AGERH, municipalities and user sectors. The major dispute came from the proposal to reduce the charging value for the agricultural sector by 95%. As the agriculture and cattle raising sectors already had the smallest collection level, their burden of water charges would become negligible. The rapporteur, representative of the Rural Union of Governador Valadares, defended the proposal; it was approved 29–3 (with 1 abstention).

After conceding to the agricultural sector by approving this reduction in water charges, attention turned to implementing charging at the tributary basins in Espírito Santo. In their defense, the Technical Chamber councilors argued for (1) the need to ensure investment capacity to fund the PAP actions; (2) the financial impacts of failing to collect in Espírito Santo (the imbalance in egalitarian benefits); (3) the duty of the state of Espírito Santo and its tributary committees to maximize efforts for immediate charging; (4) the existence of the legal framework necessary to regulate charging; (5) the full operation of charging, since 2012, in Minas Gerais (CBH-Doce, Motion 2018).

Two councilors, representatives of the State Agency for Water Resources of Espírito Santo and the Union of Workers in the Water and Sewage Industry of Minas Gerais, spoke against the motion, recommending "strategic planning to discuss the matter." The councilor representing the Association of Family Farmers of the Guarani stream defended charging in that portion of Espírito Santo, arguing that it was "a matter of management and not of collection." This motion was approved by 25–8, with 2 abstentions (CBH-Doce, Meeting Minutes 2018).

In this changing course of decisions, we observe a process of policy diffusion, a process in which the deliberations of the CBH-Doce were influenced by the previous decision of the Guandu committee that had approved charging through the conciliation of interests with the agricultural sector. Although concessions implied potential revenue losses, getting the support of the agricultural sector was only possible in the face of major concessions.

In this process of policy instrument diffusion, a new mentality emerged in the opposition to charging. It was now seen as management rather than penalty. In addition, the Doce Committee's motion constrained the Espírito Santo actors, impelling them to redefine charging. The motion caused the committee considerable discomfort. Marcos, former president of the CBH-Doce, noted that the motion was an embarrassment for the Espírito Santos portion of the plenary meeting because the members from that state were part of both the CBH-Doce committee and the Integration Committee.[30] He questioned, in addition, whether the Technical Chamber had the autonomy to discuss political matters or whether it should stick to technical matters, as the discussion was creating discord and dividing the Espírito Santo group from the Minas group (CBH-Doce, Meeting Minutes, 12/06/2018).

The debate in the committee contrasted political and technical issues, referring to the limitations of bureaucratic autonomy. For board member Marcos, charging was a political rather than a technical issue. In this view, the interests of political elites constrained the autonomy of the Technical Committee to influence the charging issue.

As Souza and Fontanelli point out, bureaucratic autonomy is crucial for the functioning of governments and the implementation of public policies (2020, 50). The technical knowledge of experts is important both for convincing the political elite and for the continuity of these agents in implementation. In the case of charging in the Doce River basin, however, technical expertise was unpersuasive, and charging embroiled overlapping interests in a political conflict. Notably, the motivational and ideational opportunities emerging from the charging conflict drove changes in policy directions. These changes included the committee's engagement in environmental disaster governance, the embarrassment caused by equal distribution of goods to unequally contributing entities (emblematic in the case of the Minas and Espírito Santo committees), the need to maximize the collection capacity of the basins to finance the PIRH in the scenario of worsening environmental degradation, and the action of state agencies of Espírito Santo and the committees to implement charging.

A second element, the sociopolitical profile of the committee's leadership, also stands out. In 2017, a new president of the CBH-Doce, one with a more

30 The Doce River Basin Integration Committee includes representatives from the CBH-Doce and the tributary committees in MG and ES.

technical and specialized sociopolitical profile, was elected. Representative of the civil society segment through the Association of Municipalities of the Mid-Doce River Microregion, the new president had a long history in the basin committees of Minas Gerais. Her roots in civil society and her public career history lowered the political cost of her decisions and increased her bureaucratic autonomy.[31]

Thus, in addition to the motivational opportunities for policy diffusion that emerged at the critical juncture and their impacts on decision-making capacity, the new committee leader's profile, a profile rooted in civil society, favored the players' autonomy. It reduced the political costs of the decision to charge. Rather

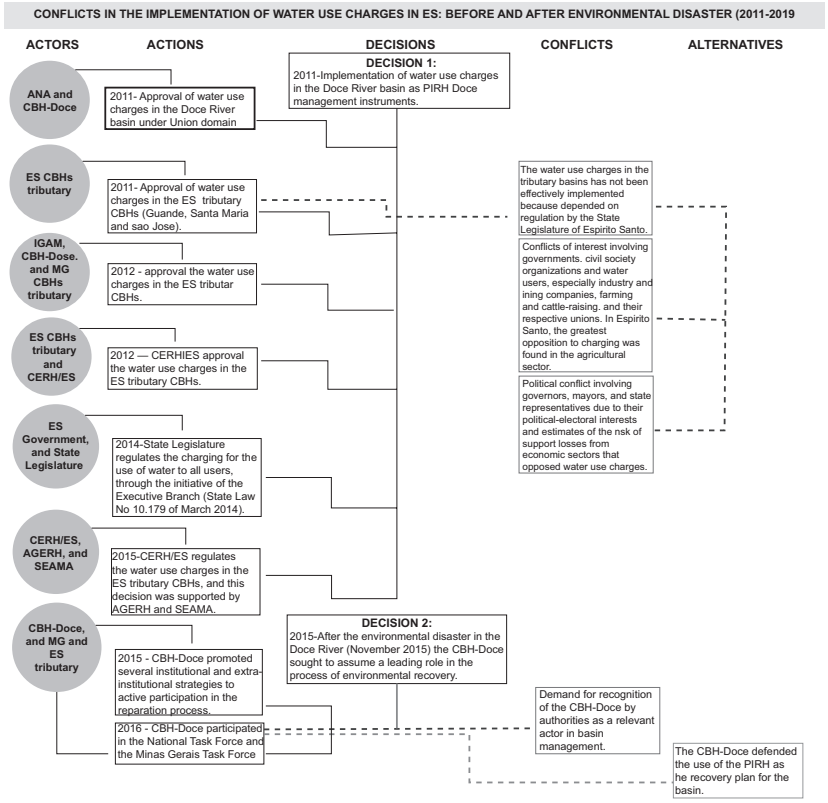

FIGURE 7.4 Conflicts in implementing water charging in Espírito Santo (2011–2018)

Source: Own elaboration.

31 Biologist by training, public servant in the municipality of Governador Valadares and teacher in the public education system of MG.

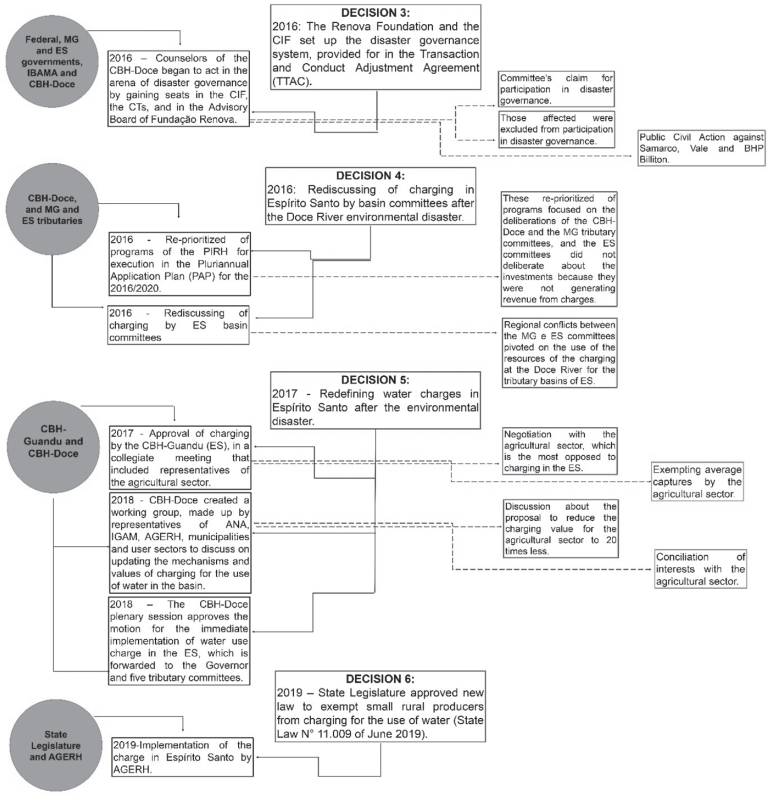

FIGURE 7.4 (Continued)

than opposing technical and political arguments, the new motivations favored the "inserted autonomy" of the committee's players in relation to economic and political elites while maintaining close ties to them (Evans 1995).

Like other policy diffusion processes, the redefinition of charging in the scope of the committees impacted the state legislature. In 2019, Adilson Espíndola introduced a bill in Espírito Santo's assembly to exempt small rural producers from water charges. The proposal's justification was twofold: to develop family farming and rural entrepreneurship, and to mobilize rural producers and agricultural organizations to demand exemption from the charge. It went through the state assembly on an accelerated timeline, and the reporting committee's favorable opinion highlighted the project as an incentive to small producers and as a reflection of the social interest. The bill, which passed quickly and unanimously, exempts those farmers and rural entrepreneurs who hold up to 80 hectares and predominantly use their own family's labor (PL 172, 03/14/2019).

The charging policy codified by this new law resulted from negotiation between water user segments, public authorities, and civil society organizations present in the basin committees. Ultimately, concessions to small rural producers resolved the political conflict and reduced constraints on the autonomy of water agency managers to implement charges.[32] Figure 7.4 summarizes the decisions, actions, and players involved in the nearly decade-long political conflict around the implementation of water charges in Espírito Santo.

Conclusion

The implementation of the Integrated Program for Water Resources in the Doce River Basin represents a partial success in water management policy. The initial stage, the drafting of the Terms of Reference, stalled for two years due to conflicts between the states and the federal government about the Plan's scope. Motivated by their own understanding of the policy problem, the basin committees of Minas Gerais and Espírito Santo won approval of an alternative proposal that included the tributary basins in the PIRH and gave rise to the Integrate Water Resources Plan. This chapter demonstrated that shared management of the Doce River basin involves an "entanglement of powers" between government actors and committees, in which opportunities are created for the emergence of innovative alternatives. Ultimately, the basin committee exercised "practical authority" by developing capacities and understanding that enabled them to act in the formulation of policy and to influence decision-making.

The initial elaboration of the Doce PIRH then took place roughly in the expected time frame through the hiring of the Ecoplan-Lume Consortium. The main governmental decisions in implementing the PIRH consisted of structuring new instruments for water resource management, an institutional arrangement reflecting a symbiosis between the water agency and the establishment of water use charges. The Plan was implemented on schedule through the contracting of IBIO-AGB Doce to perform the duties of the water agency. Water charges, on the other hand, were only partially implemented: charges, that is, were implemented only in the portion under the Federal Government's control (the Doce River) and in the tributary basins of Minas Gerais. In the tributary basins of Espírito Santo, charging was not implemented for almost a decade.

This chapter focused on the failure to implement charging in Espírito Santo. Implementation of charging became an enduring axis of conflicts between councilors of the committees, users, and state and federal bureaucrats. Our case analysis supports two main arguments explaining the failure to implement charging

32 The change in the state law on charging has also had effects in other watersheds, such as the CERH's decision to approve charging in the Jucu River basin in greater Vitória (Resolution 003/2021, CERH).

and the changing course of decisions after the environmental disaster in the Doce River. Charging could not be implemented in Espírito Santo due to conflicts of interest involving the economic interests using the basin and the political risks charging posed to government authorities. Opposition to charging, especially from agriculture, created a political impasse affecting the political-electoral interests of governors, mayors, and representatives. Decision blocking occurred in the state legislature, even though the executive-legislative relationship is traditionally one of subservience of deputies to governors. Governors, for their part, failed to outline strategies for negotiation and conflict resolution. The governors' paralysis in negotiating the conflict resulted from their perception of the electoral costs of supporting collection. The "electoral connection," in other words, affected both the legislature and governors, and the electoral interests of political elites limited the autonomy of the technicians involved in implementation. These technicians were generally mid-level career bureaucrats with little engagement during their career paths with social organizations. In the end, the autonomy of bureaucrats to implement charging was countered by the political elite's control of the bureaucracy.

The environmental disaster was a critical juncture that encouraged changes in the previous decisions about charging. Windows of opportunity opened, boosting the redefinition of charging at basin committees. These committees were immersed in the dispute for recognition and participation in the environmental recovery of the Doce River, and the dispute generated new capabilities and greater unity to cope with persistent problems. Like other policy diffusion processes, the negotiations with the agricultural sector in the Guandu basin affected positively the decisions of the Doce River committee in favor of charging, and the change in the committees' positions was followed by a favorable outcome in the state legislature. Motivational and ideational opportunities also appeared, including incentives for the emergence of a new mindset about charging as a management instrument.

Extreme environmental events create opportunities for the construction of practical authority of committees in problem-solving. Institution-building practices forged through experimentation and networks of engagement can lead to a transformation of ideas, resources, and relationships, a transformation that can increase actors' capacity to act and their recognition by authorities in a specific policy sector.

Finally, the profile of the Doce River Committee's president changed in 2017 from a purely electoral-political background to a president with both a civil service career (teacher, municipal-level bureaucrat, biologist) and roots in civil society (Association of Municipalities in a Minas microregion). This shift reduced the political costs of implementing water charges and augmented bureaucratic autonomy. No longer subordinate to an electoral connection, committee presidents were less constrained by political elites. Although this does not mean the absence of partisan preferences, the construction of committee

presidents' practical authority (recognition and capabilities) was sustained by a strengthening of the bonds of belonging and by the basin's networks of engagement rather than by an electoral connection.

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