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CONFLICTS BETWEEN STATE AND CIVIL SOCIETY RELATED TO INFRASTRUCTURE PROJECTS

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DISCUSSION PAPER

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ABSTRACT

Environmental impact assessment is currently the major Brazilian institution that routinely seeks community input about infrastructure projects. It is criticized both by activists who think it permits projects it should not and by project proponents who think that it is too slow and blocks projects it should allow. In this paper, I evaluate how Brazilian environmental licensing works in practice as an institutional mechanism for resolving state conflicts with civil society over infrastructure projects. I draw on a recent study of community conflicts in 302 electricity projects there, showing that such conflicts are less common than often believed and happen in about 20 percent of the projects. Almost two-thirds of the protests are "informative" in nature, designed not to block the project but to communicate information about the effects of the project or its implementation, often long after licensing is complete. Almost two-thirds also raise socioeconomic issues rather than environmental issues *per se*. Given these characteristics of current community-based conflict, I explore a number of alternatives to current Brazilian licensing practices. Some, like new regulations on wind power plants or processes that seek free prior informed consent, show potential to productively address state-society conflict on projects, while others – like recent Congressional efforts to speed licensing – are only likely to displace conflict from institutional to non-institutional processes.

Keywords: environmental licensing; participation; socioenvironmental conflict; social movements; energy.

FOREWORD

This paper is one of the products of the research project called "Institutional Constraints for the Implementation of Investment in Infrastructure", conducted by the Institute of Applied Economic Research (Ipea) with the collaboration of researchers from several universities. Even though the investment rate in infrastructure projects rose considerably in the period between 2000s and 2010, especially as a consequence of the availability of fiscal resources and the efforts that followed that implementation of the Growth Acceleration Program (PAC), several studies have pointed out the difficulties in implementing these investments by the public sector and also by the private sector. Thus, the research project in question has investigated the institutional factors that impact the schedule and budget

of the major infrastructure projects, including: the quality of engineering works, government coordination, environmental licensing, the actions of regulatory, auditing and control agencies and the participation of civil society. The research was based on the study and comparison of empirical cases that integrate PAC's portfolio, which includes different areas of investment (logistics, energy and social-urban) as well as complementary formats of implementation involving the public sector, the private sector, the federal government and states and municipalities. In addition to this, a partnership between Ipea and the National School of Public Administration (Enap) enabled the application of a questionnaire with more than two thousand federal employees in the infrastructure sector in order to identify their profile, background and preferences, and the main constraints to their activities. We believe that the findings provided by this research are an important contribution to the understanding of the performance of the Brazilian state in a field that is largely underexplored, but at the same time essential for economic, social and environmental developments – especially as regards the improvement of planning processes and management of the investments.

1 INTRODUCTION

Infrastructure projects often present a conundrum in that projects are simultaneously nationally beneficial *and* harmful to particular locations (Altshuler and Luberoff, 2003). They are critical for long-term national development needs: building and upgrading electricity generation plants, roads, ports, and many other similar projects facilitate expanded economic activities of many kinds. At the same time, each of those projects must be sited (*localizada*) in a particular place. In those locations, the project may bring significant impacts for the local community and/or for local ecosystems, many of them negative.

The regulatory framework most often used globally to handle this dilemma is environmental licensing. First proposed in the United States, National Environmental Policy Act of 1969, environmental licensing has become the most common environmental regulatory framework around the world, and is present in some form in more than 180 countries (Morgan, 2012, p. 6). Brazil adopted regulations for obligatory environmental licensing comparatively early, in 1986 (Landim and Sánchez, 2012). Environmental licensing generally, and in Brazil, requires the actor undertaking a project with potential environmental impact to set out the likely and potential impacts of the project, to consider alternative formulations that would prevent impact, and to propose compensation for impacts that cannot be avoided (Glasson; Therivel; and Chadwick, 2012). The Brazilian system also handles socioeconomic impacts through the same process, which is less common (Hochstetler, 2011).

In this paper, I evaluate how Brazilian environmental licensing works in practice as an institutional mechanism for resolving state conflicts with civil society over infrastructure projects. One important section will assess how often and why such conflicts have actually occurred in recent electricity projects in Brazil. These are less common than often believed, but can be stressful for communities and project proponents alike. The paper will also present an analysis of the conflicts themselves, highlighting the grievances and influence strategies of civil society actors.

In addition to providing this overview of recent conflicts, the paper will also consider actual or potential proposals for alternative regulatory approaches. The paper will assess the likely effects that recent changes in environmental licensing – notably the

2014 Conama regulations for wind power projects and the proposed changes in PLS 654 – will have on conflicts with civil society over infrastructure projects. In addition, the paper will place the Brazilian institution and regulations in comparative context, with the aim of showing alternative policy frameworks for achieving similar aims.

2 DESCRIBING AND EXPLAINING CURRENT CIVIL SOCIETY CONFLICTS OVER INFRASTRUCTURE PROJECTS

There are remarkably different views about civil society conflicts over infrastructure projects in current Brazil. On the one hand, the private sector and government agencies from the economic and planning ministries are concerned about the ability of civil society groups to regularly delay and even stop key infrastructure projects. The situation rooms (*Salas de Situação*) of the PAC (Programa de Aceleração do Crescimento) are one of the clearest emblems of this view, with civil society opposition to projects a regular theme in the discussions there about how to clear the bottlenecks (*gargalos*) to completing a project. The environmental licensing process and delays introduced by it directly or through legal challenges to licensing from the Ministério Público are also commonly identified as bottlenecks (Hochstetler and Tranjan, 2016; Pêgo et al., 2016).

On the other side, civil society activists see an infrastructure juggernaut that they cannot stop. Environmental licensing and civil society mobilizations, in their view, present only the most minimal of pauses in a process that is generally oriented toward racing towards a foregone conclusion that projects will be built regardless of their social costs (Bermann, 2014). An academic presentation of this view speaks of the *Limites da resolução negociada de conflitos ambientais* and is dramatically subtitled *Formas de Matar, de Morrer e de Resistir* (Zhouri and Valencio, 2014).

In short, one side complains that infrastructure projects cannot be completed, while the other laments instead that they cannot be stopped. It is difficult for both of these sides to be correct simultaneously, and so I begin with an evaluation of the empirical evidence. My starting point is the contention that both sides tend to be arguing from small numbers of especially prominent cases of civil society protest, like those against the Belo Monte hydroelectric dam. But many hundreds of infrastructure projects have been

built in Brazil in recent years, and little is known about most of them. Do most of them face civil society opposition? Of what kinds? On what grounds? Does the opposition succeed in blocking such less-known projects?

Studies of social mobilization often begin by studying actual cases of mobilization. But they say much less about instances of non-mobilization, when there is a situation – like the building of an infrastructure project – that could, but does not, generate civil society opposition (McAdam and Boudet, 2012). The only way to identify the latter is to begin with a large set of projects and then see which do and do not generate civil society opposition and the results of that opposition. I do that in this section, using a large dataset that I have already compiled with a doctoral student assistant (J. Ricardo Tranjan) for a previous research project funded by the Social Sciences and Humanities Research Council of Canada. We used a Freedom of Information Request to acquire information from the BNDES about the industry and infrastructure loans it contracted between 2002 and 2012. We then used this information and BNDES press releases to construct a dataset of the 302 loans the BNDES contracted during this period to build electricity generation plants of all kinds.

These gave us a large set of projects in which to examine potential conflicts between state and civil society. In these cases, there was a clear state role in the projects we studied: the electricity generation plants had all won Aneel's auctions to supply electricity to the state-controlled national electricity grid or did so through state policies like Proinfa, a short-lived feed-in tariff for alternative renewable energies like wind and small hydro power. All of the projects had also won public funding support through the BNDES. Finally, all the projects underwent environmental impact analysis by Ibama (an agency of the national Ministry of the Environment) and/or state-level environmental agencies.

We then looked to see how civil society responded to these projects. We did so through extensive electronic searches in newspaper, governmental, and civil society websites to identify which of these projects generated opposition from civil society groups, both local and national. We conducted full text searches on the name of the project in the online archives of the *Folha de São Paulo* and *Globo* newspapers, as well as at least one state-level newspaper. We also searched on webpages of the licensing agencies and federal and state-level Ministerio Público offices for evidence

of protracted and contentious licensing. Finally, we looked on the webpages of organizations that monitor BNDES funding, such as Plataforma BNDES, and/or electricity projects for their records of projects that they challenged. What these searches produced was an extensive record of when local communities and other activists in civil society were able to call public attention to their mobilization about an electricity project.[1] I call any instance of civil society mobilization a "challenge" and discuss the overall frequency of challenges first before going into greater detail on the nature of the challenges below.

Table 1 shows the overall results of this research. It divides the projects by the kind of electricity plant – both size and type of fuel – and then shows the rates of challenges from various kinds of civil society actors. The first column tallies the number of times that the local community was said to question an electricity plant and to mobilize to challenge it in some way. It was not possible to tell in most of the news stories how many people in the local community were organized, but we did not count news stories about the opposition of single individuals. The second column tallies the number of times that specific civil society organizations – typically a non-governmental organization (NGO) or university – were identified as working with the local community in its challenge. As can be seen in the close similarity of the numbers, challenges from local communities were nearly always accompanied by specific civil society organizations and vice versa. A few local communities mobilized without specific partner organizations being identified, but not many. (In our statistical analysis, there was so much overlap between the two categories that the analysis had to be completed without using the organizational variable. See Hochstetler and Tranjan, 2016).

1. There are well-known biases in newspaper coverage of civil society action, so that large, violent, and unusual mobilizations receive much more coverage (Earl et al., 2004). This is a limitation of the newspaper-based methodology used here, although it is still the most common methodology for large-n studies of social protest. We therefore probably undercount the instances of mobilization, especially if they are small. We address this limitation in part by including searches in a regional newspaper. More importantly, consulting the websites of activists gives us a wholly different source of information that is biased toward including even small mobilizations with little impact.

TABLE 1
Electricity projects by number and nature of challenges from civil society

Type of project	Total number of projects	Local community contention (% challenged)	NGO support for contention (% challenged)
Wind power plant	138	21 (15.2)	17 (12.3)
Small (under 30 MW) hydroelectric power plant	109	22 (20.2)	20 (18.4)
Large (over 30 MW) hydroelectric power plant	41	17 (41.5)	16 (39.0)
Fossil fuel power plant	13	1 (7.7)	1 (7.7)
Nuclear power plant	1	1 (100.0)	1 (100.0)
All projects	302	62 (20.5)	55 (18.2)

Source: Calculated by the author and J. Ricardo Tranjan from BNDES data on electricity project loans and research on challenges to particular electricity projects, as described in Hochstetler and Tranjan (2016).

Several important observations about civil society responses to infrastructure projects can already be made on the basis of just this table. The first is that the overall rates of challenges from civil society actors are quite a bit lower than they are usually perceived as being. Only about one in five of the projects faced enough mobilization to be publicly reported. Similar research on the United States has found that the incidence of resistance is also much lower there than many think (McAdam and Boudet, 2012). As suggested above, this is because people know about the cases where there are challenges but, almost by definition, "situations without challenges are not reported about and are not known". Newspapers do not tend to report on routine permits and approvals; they report on the instances when there is a physical interruption of the project or something else that is "newsworthy."

The second observation is that there is quite a bit of variation in the rates of challenge to different kinds of electricity plants. Setting aside the one nuclear plant, a kind of energy that has been resisted by activists in Brazil since 1982 (Hochstetler and Keck, 2007, p. 85), large hydropower plants are easily the most likely to be challenged by civil society actors. This is widely acknowledged, including by the Empresa de Pesquisa Energética (EPE) of the Ministry of Mines and Energy, which has had to incorporate such likely opposition into its planning processes. With the remaining likely locations for large hydropower all located in the environmentally important Amazon region, civil society opposition is likely to continue to this kind of electricity plant. At the other extreme, fossil fuel plants generate the least opposition from civil society, presumably at least in part because there is more flexibility in where they are placed. This shows that

civil society challenges are more responsive to immediate, short-term impacts rather than to the long-term diffuse impacts of climate change, since the fossil fuel plants are the worst options for addressing greenhouse gas emissions (see also Hochstetler, 2011; Hochstetler and Tranjan, 2016).

While local communities and organizations are about equally present for all the kinds of electricity plants, the organizational partners vary quite a bit by the type of plant. The organizational partners for local community challenges to large nuclear and hydropower plants are disproportionately national and international NGOs. The Movimento dos Atingidos por Barragens (MAB) is the single most-frequently mentioned NGO partner and, not surprisingly, it appears in challenges of mostly the large hydroelectric plants (UHE). MAB also partners with local communities to challenge some small hydroelectric projects (PCH). Other national environmental, human rights, and indigenous support NGOs also appear in the coalitions to challenge large hydro and nuclear power. For wind and small hydroelectric plants, the NGO partner is more likely to be a local organization or sometimes the local university. In general, then, the scale of the opposition tends to match the scale of the project itself.

Using the same electronic search methodology, we were able to record when environmental licensing agencies, and Ministério Público challenges to projects were substantial enough to be covered in local and/or national news. When state interventions result in the suspension of licenses and the interruption of construction works, media attention is almost certain. Here too, table 2 shows that the rates of challenge were lower than is often decried, again about one in five projects. Rates of state challenges to projects also differ across kinds of projects, but the patterns of challenges are somewhat different from those of civil society, and the overall rate of challenge is higher – only 70 percent of projects are built with no reported challenges. Notably, it is more likely that environmental licensing agencies and/or the Ministerio Público will challenge large hydroelectric and fossil fuel power plants than that civil society actors will. State action is less common than civil society action for the other kinds of electricity. As a result of these patterns, many civil society challenges take place without state support and vice versa. Nonetheless, in a statistical analysis of the correlates of the challenges, action by the other actor was one of the strongest correlates of a challenge by the other (Hochstetler and Tranjan, 2016).

TABLE 2
Electricity projects by number of challenges from civil society and state actors

Type of project	Total number of projects	Civil society contention (% challenged)	State action against project (% challenged)	Both civil society and state action (% challenged)
Wind power plant	138	21 (15.2)	11 (8.0)	6 (4.4)
Small (under 30 MW) hydroelectric power plant	109	22 (20.2)	22 (20.2)	11 (10.1)
Large (over 30 MW) hydroelectric power plant	41	17 (41.5)	23 (56.1)	11 (26.8)
Fossil fuel power plant	13	1 (7.7)	3 (23.1)	1 (7.7)
Nuclear power plant	1	1 (100.0)	0 (0.0)	0 (0.0)
All projects	302	62 (20.5)	59 (19.5)	29 (9.6)

Source: Calculated by the author and J. Ricardo Tranjan from BNDES data on electricity project loans and research on challenges to particular electricity projects, as described in Hochstetler and Tranjan (2016).

Speaking more substantively, these patterns suggest that even though environmental impact assessment includes consultation with local affected communities, this consultation has not managed to channel all civil society responses to projects. The relationship between environmental licensing actors and civil society groups is complex. It is often antagonistic, with civil society groups raising objections to the speed and lack of adequate consultation. However, the environmental licensing process can also bring civil society concerns into the discussion of a particular project in a policy context where there is no other format for systematic consultation with affected groups, and the result may mean a reformulated project that is responsive to civil society concerns. Almost all of the studies of civil society and environmental impact assessment in Brazil have focused on the cases where there is deep conflict between civil society and the licensing process, especially in the Belo Monte case (Bermann, 2014; Bratman, 2014; Hochstetler, 2011; McCormick, 2009), but this is also sometimes a collaborative relationship. As evidence, environmental activists have repeatedly hurried over the years to defend the institution of environmental licensing when it is threatened. Responding to the most recent Congressional efforts to rein it in, for example, 135 organizations signed a document that attested that "We will not solve socioenvironmental conflicts by avoiding doing environmental licensing (…) Improved and well done licensing, with broad societal participation and deep technical analyses, benefits all sectors of society".[2]

2. Available at: <https://goo.gl/sYts96>.

3 VARIATIONS IN CIVIL SOCIETY CONFLICT OVER INFRASTRUCTURE PROJECTS

Our dataset allows us to go deeper into the nature of civil society challenges to electricity projects and so it can help understand the ways that environmental licensing processes do and do not respond to citizens concerns. One important observation is that not all civil society conflict with respect to infrastructure projects is the same. I will be dividing the civil society conflict in these cases on two sets of dimensions and then showing how frequent each is in recent electricity projects. I also use the cases to provide specific examples of the demands made and strategies used by civil society actors. One dimension is the contrast between blocking and informational mobilization (defined below) while the second dimension looks at the content of the conflict: are the demands about socioeconomic, environmental, and/or about indigenous rights and outcomes?

The first dimension of the variations in civil society conflict is whether the conflict is aimed at blocking or stopping a project altogether versus conflict that is what I call informational. *Blocking* conflict represents a strong challenge to the state and private sector actors who are building a project. It is zero-sum: one side wants the project built and one side does not. Only one side can win. *Informational* conflict, in contrast, is meant to change some aspect of how the project itself is being carried out. It can also be about how accompanying compensation is carried out. Informational conflict may seek to redistribute costs and benefits associated with the project, but not to stop the project. It is, of course, possible that both kinds of conflict can emerge in response to a particular project, especially when the hosting community is divided about the project. It is also possible that one kind of conflict can turn into another. For example, blocking conflict may become informational conflict over time if sufficient compensation is offered. Conversely, informational conflict may become blocking conflict if civil society actors feel like the project proponents are not being responsive to their concerns about how the project is being carried out, even if they did not object to the project at the outset.

With respect to these electricity projects, the large majority of the civil society conflicts – 64 percent of them – were informational conflicts. Many of these were about compensation to local communities. While compensation is meant to be handled early in the environmental licensing process, the conflicts sometimes tried to reopen compensation

debates to include additional communities or further benefits. The conflict also sometimes reflected claims that promised compensation had not been delivered, or was not delivered as the community expected it. Such conflicts about compensation were especially common for large hydroelectric plants. In other cases, communities called attention to ways that projects had gone awry: to give just a few examples, fish were dying in large numbers, an unexpected fence limited traditional access to a public beach, or water levels became too low to support a tourist industry's boats. Citizen responses may thus be constructive, offering the opportunity for real and manageable improvements to proposed projects. Decades of citizen resistance to hydroelectric dams in Brazil, for example, have forced project planners to be much more careful in their project designs than they were in an earlier generation of plants and the plants themselves are correspondingly better at generating electricity (Hochstetler, 2011).

The large numbers of such conflicts reflect institutional gaps. The primary institution for community consultation in Brazil is environmental impact assessment, which operates *prospectively* to prevent environmental damage, if possible. Community consultation is done early in the process and ideally acquires community members' understanding of the impacts the project will have locally. In practice, the consultations often fail in this and work more to inform the community about project planners' assessment of the impacts (Abers, 2016). Thirteen percent of the civil society mobilizations, including some categorized as informational, also raised complaints about inadequate consultation. The situation is even worse for impacts that appear only later in the project's construction and operation. There is no single institution or process designed to routinely channel community feedback later as the project unfolds. As a result, even fairly small community demands end up presented through conflictual strategies, including road blocks, protests, and legal challenges.

Such conflictual strategies are even more common in the zero-sum situations where civil society actors are actually trying to block projects from being built. At least some civil society actors are making such claims in 27 percent of the instances of civil society conflict, or about 6 percent of the total set of projects. While blocking conflict is comparatively rare, these cases set the tone for how actors on both sides view state-society conflict on infrastructure projects. The decades long, sometimes violent, efforts to build or block the Belo Monte hydroelectric dam stand out for the sheer intractability of the conflict (Bratman, 2014; Hochstetler, 2011; Pereira, 2014).

Such conflicts are often dismissed as "Not in my Back Yard" (NIMBY) conflicts, interpreted as representing narrow self-interest in the face of public goods (Dear, 1992, p. 288). Empirical research on the NIMBY phenomenon shows that these interpretations actually greatly understate the diversity and character of much opposition to projects (Horst, 2007; Hunter and Leyden, 1995). Opponents may well not want the project anywhere rather than just protecting their own turf, especially if they see unacceptable systematic hazards of the project type, like nuclear energy (Aldrich, 2009). Those are the terms in which the opposition to the one nuclear plant and several of the large hydroelectric plants in the Amazon are framed: they want no projects of this kind, not just in this location. The sheer scale of the projects tends to call national and international allies, who stress that the projects can have equally large-scale impacts on regional ecosystems and even global atmospheres, far beyond a "backyard" (McCormick, 2009).

Environmental impact assessment processes can be used to block projects, but that is not their normal functioning. Instead, they normally work to consider the likely impacts of a project versus possible alternatives, aim to reduce or mitigate the impacts, and compensate for unavoidable impacts (Glasson, Therivel and Chadwick, 2012). That combination can be frustrating for all involved. As a former president of the International Association of Impact Assessment (IAIA) has said, "Proponents of projects often expect IAIA to make opposition go away; opponents of projects expect IAIA to prevent change from happening in their back yard" (Fuggle, 2005, p. 1). In the Brazilian electricity projects considered here, neither of these expectations is met when civil society actors seek to block projects altogether. In the final analysis, however, only one of the 302 projects in the data set was set aside altogether, a small hydroelectric plant in a protected area. So the pro-builders have eventually won nearly all of these confrontations, although civil society actors could successfully delay the projects, often for years.

The second varying dimension of these civil society conflicts involves the content of the civil society opposition. Is it on socioeconomic, environmental and/or indigenous rights grounds? In Brazil, all of these dimensions are handled through the environmental impact assessment process. The technical staff of the environmental licensing agency assesses the first two, while Funai assesses the last, at least at the federal level. Other agencies also consider the historical patrimony that may be involved. All of these reports are made to the environmental licensing agency which then makes

a second overarching decision to grant the license or not. (Below, I present several comparative examples that illustrate that not all countries bundle all of these assessments into a single environmental impact assessment process, as Brazil does, and discuss the implications of the bundling for Brazil).

A large majority of the demands made by civil society actors in these conflicts are socioeconomic ones. Sixty-four percent of all community mobilizations make such claims. This is the same as the incidence of informative challenges and, not surprisingly, there is a great deal of overlap between the two categories. As already noted, civil society is most likely to mobilize around issues related to compensation for damages from the project and those are mostly socioeconomic in their content. Just 37 percent of all challenges raise environmental issues, sometimes in conjunction with socioeconomic ones. The frequent complaints about dead fish resulting from hydroelectric dam construction, for example, have both a socioeconomic and environmental dimension. There is a disjuncture between the major institutional framework for consultation, environmental impact assessment, and the content of the complaints articulated by civil society, of which only a minority raises environmental issues (see also Moraes, 2005, p. 220-221). The federal licensing agency, Ibama, does have analysts of a wide variety of disciplinary backgrounds who can help to assess socioeconomic impacts, but this is a heavy burden for small state and municipal agencies. The predominance of non-environmental demands is a distortion in Ibama's workload too, but there are no other institutionalized routes for citizens to offer opinions and concerns about specific economic projects. I return to this point below.

Environmental demands also overlapped with a final category of demands, which asserted indigenous rights to special consultation, land claims, and similar demands. These were 19 percent of the civil society conflicts. Indigenous rights demands were central to the lengthiest and most protracted licensing processes, usually tied to large hydroelectric dams in the Amazon. Indigenous activists often sought to block projects altogether, and frequently found allies in national and international NGOs as well as the Ministério Público. Nonetheless, some of the civil society conflict that raised indigenous demands also fit the broader pattern of informative demands for socioeconomic compensation for projects on indigenous land or affecting traditional indigenous uses of the locale.

4 THE CORRELATES OF CIVIL SOCIETY CONFLICT

Describing the patterns and nature of civil society conflict over recent energy infrastructure projects in Brazil is informative in itself. In an earlier analysis, I also used quantitative methods to identify the correlates of contention (Hochstetler and Tranjan, 2016). One of the clearest conclusions of this analysis was that civil society conflict responds to the size of the project: in a number of different models, the larger the project, the more likely that it would generate civil society conflict. This is not a surprising result, as big projects cause big impacts and are very evident to any casual observer. Even so, placing multiple small projects on the same river or in the same municipality can also create cumulative impacts that can be as substantial as the single large project (Bakken et al., 2012). In none of the models were such multiple projects more likely to generate civil society conflict, although Brazilian environmental activists in the Mato Grosso area have mobilized around such issues in the past (Hochstetler, 2002). Interestingly, once size was accounted for in the models, wind and small hydro power plants became the most likely forms of electricity to generate civil society conflict.

Beyond the physical questions of size and fuel type, the quantitative analysis also found that the existence of civil society conflict was correlated with the presence or absence of various potential coalition partners (Hochstetler and Tranjan, 2016). One of the strongest correlates of civil society mobilization was the existence of an extended environmental licensing process and/or a legal challenge from the Ministério Público, which is not surprising since these actors often work together to challenge infrastructure projects (Hochstetler, 2011). When the mayor of the municipality where the project was located was from the PT, civil society opposition was more likely (although a challenge from the licensing agencies or the Ministerio Público was less likely). In addition, there was a very strong relationship between civil society conflict coming from the local community and the presence of national and international NGOs. The broader lesson of these correlations is that civil society conflict depends on the ability of local communities to find coalition partners with whom they could mobilize.

In the quantitative analysis, we also examined a number of socioeconomic characteristics of the hosting community. This part of the analysis is related to environmental justice arguments, where critics see infrastructure projects as particularly likely to be built in poor, weak communities (Acselrad, Herculano and Pádua, 2004). Here, we were surprised to find few statistically significant correlations between civil society conflict and such characteristics, including the number of NGOs per thousand people

(an indicator of the level of existing civil society organization) and the municipality's GDP per capita. Against expectations, municipalities with higher rankings on the World Bank's Human Development Index were actually *less* likely to develop civil society conflict in response to an electricity project.

Assessing the likely impacts on civil society conflicts of recent proposed regulatory changes

Proposed regulatory changes often have a particular conception of a problem and what would resolve it built into the changes. Two recent alterations of environmental licensing, Conama Resolution 462/2014 on the licensing of wind power projects and PLS 654/2015 on environmental licensing in strategic projects, are no exception. In this part of the paper, I briefly examine each for its conception of the problem that is to be fixed and compare it to what the first part of the paper shows about the actual nature of recent civil society conflicts over infrastructure projects. Given that analysis, I will evaluate whether the changes are likely to in fact reduce civil society conflicts with infrastructure projects.

Conama Resolution 462/2014

Just over 15 percent of Brazil's wind power plants are challenged by local communities' objections. Brazil is not unique in this, as communities around the world often object to having wind turbines placed locally (Bell et al., 2013; Brower Brown, 2011; Wanen et al., 2005). Local community opposition to wind power was initially a surprise, especially since environmental activists have strongly supported wind power and even promoted it over considerable electricity industry opposition (Vasi, 2011). In addition, the level of generalized support for wind power is often high, 80 percent and higher, even as communities object to particular locations (Bell et al., 2013). This is a classic "green vs. green" dilemma, where an economic project that is environmentally beneficial on some grounds, say the contribution to climate change mitigation, may still carry environmental costs for particular localities, ecosystems, and species (Wanen et al., 2005; Yonk, Simmons and Stead, 2013).

In this broader context Conama began in 2012 to discuss environmental licensing for wind projects.[3] Conama's own membership is diverse, with representatives

3. This discussion is based in part on an interview with João Paulo de Faria Santos, Director, Departamento de Apoio ao Conama, Brasília, 30 September 2014, who participated in the process, as well as the review of documents and other conversations.

of all three levels of government as well as NGOs, business, and other participants. These formed the core of two years of debates, along with additional participants like ABEEólica, the wind industry association and the Ministério Público. Collectively, the group worked to simplify the environmental licensing process for some wind power projects, with the overall aims of both incentivizing more wind power (by making it easier to site than higher impact sources of electricity) and more of some kinds of wind power projects than other wind power projects. After considerable discussion, the group focused on expediting licensing for some wind projects on environmental grounds, notably the potential for pollution.

Wind power projects are eligible for an expedited environmental review based on their location. They can receive it only if they are *not* located in or with high impact on dunes, mangroves, and other specific kinds of ecosystems; the Mata Atlântica; the Coastal Zone; holistic conservation areas; migratory bird routes; if they involve removal of communities; or areas of endangered species (Conama Resolução No. 162, 24 July 2014). It should be pointed out that nothing forbids a wind power plant in these areas, but they will have to face the longer and costlier full environmental review.

With respect to community challenges, the new regulations have a number of important aspects. First, the regulations were formulated through a process that was broadly participatory itself, even though it did not include local residents. Second, while the Conama group considered offering the expedited licensing only for projects that avoided indigenous and *quilombolo* communities and areas with local community residents, it recognized that communities have been genuinely divided over wind power, with some welcoming it while others do not. Rather than using the expedited regulations to avoid the communities altogether, then, the new regulations continue to call for consultation with local communities in both the simplified and normal process. Finally, the Conama approach is genuinely preventive of conflict, in that many of the early community protests against wind projects were exactly because they were to be placed in dunes or coastal areas where they would cause significant environmental impact.

In short, the new, expedited wind regulations are likely to both speed up environmental impact assessment for the sector *and* reduce the likelihood of negative environmental and community impacts for host communities. In both process and outcome, they are comparatively positive.

PLS 654/2015

In both its process and its content, Legal Project 654 in the Senate is much less likely to reduce both socioenvironmental impacts and conflicts around them than are the new wind regulations. PLS 654 received only truncated discussion in the National Senate, as have related bills and constitutional amendments. Any discussion has taken place in the extremely fragmented national political setting of the impeachment trials of President Dilma Rousseff, the complete turnover of the ministry with Interim President Temer's entrance, and the backdrop of the corruption trials of *Lava Jato*. NGOs withdrew from a parallel discussion process in the Conama that aimed to inform and get ahead of the congressional debates because of the compressed time frame. For example, 800 comments were analyzed in one two-hour meeting.[4]

The legal project itself sets out its purposes quite clearly in Article 3, saying the purpose of the law is to improve the speed, cooperation, economic viability, and efficiency of the environmental licensing process. None of these are linked to the aims of environmental licensing, which are to protect the environment and affected communities, except to ask that those core aims are executed more quickly. Even the minimalist public hearings of traditional licensing, conducted by the licensing agencies (Abers, 2016), are set aside in favor of a Program of Environmental Communication that the developer itself is to provide. The developer is also to provide a location to receive criticisms, suggestions, and demands (Articles 11-12). The finished Environmental Impact Studies will be made available at the end of the process, but Ibama's post-2005 practice of making documents available online throughout the licensing process is abandoned.

The focus on speed – if timeframes are not met, permission is assumed – and the lack of controls during and after building are apparently expected to limit conflict on socioenvironmental grounds. However, as I have already noted, much of the conflict that arises from local communities is already not channeled through the prospective hearings of environmental impact assessment, but articulated through mechanisms from physical stoppages of work to court cases. These will continue to be available to local communities, and they will probably be used more. The strong mobilization of not just environmental activists, but also members of the Ministério Público and professionals in the environmental licensing area, against PLS 254/2015 should make

4. See: <http://goo.gl/IE42Oc>.

its proponents aware that socioenvironmental conflicts cannot just be wished away with tighter time frames. In a democracy like Brazil, citizens have both institutional and non-institutional routes for expression. When institutional routes like those of the environmental licensing process are shut down, more conflictual routes like the courts or protest are still available. Keeping institutional routes open can actually help prevent conflict and may prove to be the fastest route to project completion in the final analysis.

Placing the Brazilian experience in comparative context

For assessing regulatory frameworks and practices, it is often useful to consider a national example in the comparative context of similar processes elsewhere. I do so by focusing on the question of local consultation in particular, which does not need to be fully handled through the environmental licensing process as it is in Brazil. This is an important point given that much local opposition to Brazilian infrastructure projects is not actually environmental *sensu stricto*, so is not inherently part of environmental impact assessment. In this part of the paper, I will briefly discuss two major alternatives. One of them is the "prior consultation" (*consulta prévia*) or Free Prior Informed Consent process promoted first by the International Labour Organization and now the World Bank to gain the assent of indigenous populations prior to large-scale projects on their land. Brazil has a version of this in its Política Nacional de Gestão Territorial e Ambiental de Terras Indígenas (PNGATI) and elsewhere, and I contextualize the Brazilian version here. A second major alternative is presented by South Africa, which is similar to Brazil in holding auctions for private actors to build electricity infrastructure for the national grid. Brazilian electricity auctions select winners only on the prices they bid, while South African auctions select winners based on both the prices bid (70%) and the compensation offered to local communities (30%), following well-established guidelines. The purpose of this part of the paper is to use these options to generate awareness of the range of institutional options available for resolving potential conflicts between civil society and planning for infrastructure projects.

Free Prior Informed Consent

Ideas about Free Prior Informed Consent (FPIC) have many sources, which have converged to create a set of shared discourses and expectations. The International Labour Organization's Convention 169 of 1989 is often cited as the precursor of a particular set of ideas about the rights of indigenous populations to be consulted about economic

activities on their land, and it is the only binding treaty declaring such rights (Fontana and Grugel, 2016, p. 252). ILO 169 does not use the language of consent, but it is the foundation for the 2007 UN Declaration on the Rights of Indigenous People, which calls for consent when indigenous peoples are to be relocated and in some other circumstances, and introduces the language of free, prior, informed consent. These are stand-alone consent processes, not embedded in other licensing or permitting processes. A second parallel stream of origin comes from corporate social responsibility traditions. Some firms have voluntarily engaged in such informed consent processes as part of risk management or of securing the so-called "social license" to operate. FPIC provides a more concrete, less *ad hoc* approach to the same set of concerns (Owen and Kemp, 2014, p. 93).

Such regulations have been introduced as national requirements in Australia, Bolivia, Guyana, Indonesia, Malaysia, Peru, the Philippines, Suriname, and Tanzania so far (Fontana and Grugel, 2016, p. 253). Many details of the functioning of such clauses are still being worked out in practice. Among the most important questions are whether actual consent must be granted and under what circumstances. As consultation becomes more binding, questions like what it means to be informed and the boundaries of the community that must give consent also become even more critical (Owen and Kemp, 2014). One notable question is why such consultation should be limited to only indigenous peoples.

While FPIC processes are still quite incipient as regulatory processes, they are likely to get a major boost and considerable refining with their inclusion in the World Bank's proposed new Environmental and Social Framework (World Bank, 2015). The draft version of the framework calls for "early and continuing engagement and meaningful consultation with stakeholders, in particular affected communities, and in providing project-based grievance mechanisms" (World Bank, 2015, p. 9). This focus on continuing engagement and grievance mechanisms marks a notable advance beyond even the traditional FPIC processes themselves, as well as beyond Brazil's PNGATI; the consent is not just given *prior* to the project beginning, but community stakeholders and others will continue to have a forum for their complaints later on. This would be an important institutional innovation in the Brazilian case more generally, especially because of the large number of informative complaints that arise well after environmental licensing and other initial consultations are complete. It also seems especially

important since many communities are not necessarily seeking to block projects altogether, but to manage their costs and benefits.

Finally, in the Bank's proposed framework, indigenous peoples would warrant FPIC beyond the normal consultation with stakeholders because they are often particularly vulnerable to land loss. Consent would not need to be unanimous, but the Bank would need to ascertain that general consent has been granted or it would forgo funding the part of the project that would generate the impacts to which the indigenous groups do not consent (World Bank, 2015, p. 19). This is a draft document and many of these clauses have generated particularly heated discussion. However the issues are finally settled, the World Bank's turn to this framework is likely to have a decisive impact on community consultation and consent processes around the world. In an earlier generation of such norm-setting, the World Bank first adopted environmental impact assessment itself and then extended it through its lending (Wade, 1997) – although Brazil was a rare loan recipient whose impact assessment regulation actually predated the Bank's.

As noted, Brazil's PNGATI (Decree 7747/2012) also includes indigenous peoples' right to be consulted on use of their historical lands, referencing ILO Convention 169, which Brazil adopted in 2004 (Guimarães, 2015; Leonhardt, Stump and Branco, 2013). Subsequent discussions were coordinated by the Secretary-General of the Presidency, the Ministry of Foreign Relations, and the Ministry of Justice between 2012 and 2014.[5] The discussions still left many questions unanswered, but helped open the legal and political foundation for Ibama's decision in April 2016 to withdraw the environmental license for the São Luiz dos Tapajós hydroelectric plant following Funai's conclusion that the dam would involve irreparable harm to local indigenous peoples. While this event suggests a newly strong interpretation of the meaning of consultation in the Brazilian context, it remains to be seen whether this will be an isolated event or is indicative of a new blocking capacity for at least indigenous communities. Thus in Brazil, the World Bank, and elsewhere, just what Free Prior and Informed Consent might mean is being worked out both legally and in practice.

5. See: <http://goo.gl/iAGj47>.

South Africa: "Community Renewables"

After several false starts, South Africa began to expand its renewable electricity procurement in 2010, using this as an opportunity to involve the private sector in large-scale electricity generation for the first time (previously, the parastatal Eskom generated over 95 percent of all electricity used in South Africa, mostly from coal). As South Africa did so, it used a set of post-apartheid requirements known as Broad-Based Black Economic Empowerment (BBBEE) policies to require the private sector to promote socioeconomic development in the communities located within 50 km of the wind or solar power plant. The unusual aspect of the South African arrangement is that these socioeconomic dimensions are handled through the auction process and are treated as concrete positive benefits to be offered to local communities for hosting projects rather than being offered as compensation for harms done that is measured through environmental impact assessment. Thus while Brazilian electricity auctions as conducted by Aneel consider only the price bid by the developer, the South African auctions evaluate the bids by the price (70 percent) and the socioeconomic benefits offered (30 percent).

The kinds of benefits counted are set out in advance rather than being negotiated for each project, as in Brazil. They include jobs to be created in installation and future operations and maintenance, local content levels of the components to be used, ownership (at least some percentage must be offered to the local community), management control for the local community, preferential procurement from firms owned by historically disadvantaged groups, and other provisions for enterprise development and socioeconomic development (Bode, 2013; Tait, Wlokas and Garside, 2013, p. 10). In the first two rounds, developers only needed to present some proposal on these dimensions, but later rounds have treated them competitively, so that firms can win the auctions only if their prices are low and their promises for local socioeconomic development are high (Tait, Wlokas and Garside, 2013, p. 11).

As a result, the socioeconomic promises have risen substantially over time (South Africa, 2015), especially between rounds 2 and 3. In round 1 and round 2, wind power developers promised only 2461 and 2238 maintenance and operations jobs, for example, while the number jumped to 8506 and 8161 in rounds 3 and 4, even for similar quantities of megawatts of electricity. The local content percentage in winning bids in round 1 for wind power was 21.7 percent, but 44.6 percent in round 4; solar rose from 28.5 percent to 64.7 percent. Prices in Rands/MWh dropped from 1143 to 519 for wind and from 2758 to 659 for solar over the same four rounds.

These socioeconomic gains from wind and solar power have been crucial for gaining political and social support for expanding alternative renewables in South Africa.[6] South African unemployment has regularly stood around 25 percent of the population, and informal estimates are even higher, so the jobs promises are particularly important. This process makes the proposed socioeconomic gains of hosting a project very clear to all involved. Observers suggest that local communities have resisted fewer than 20 of some 500 projects developed for the bidding process, or roughly four percent.[7] It is worth pointing out, however, that only some of the projects in rounds 1 and 2 are already in operation, so the long term potential of this process for reducing conflict is still unknown. The very clarity of the promises means it is especially likely that communities will notice non-delivery. Given that a number of the Brazilian community conflicts have to do with non-delivery of promised compensation, it seems at least possible that contention will develop in the future. In addition, the procedure used to determine which benefits to offer has varied widely, with some firms using extensive consultation with the recipient communities while others negotiate only with local leaders or simply develop the proposal on their own. This also means a potential for conflicts in the future if communities decide they would have preferred another set of benefits. Even so, the idea of a separate process addressing community development that encourages competition among private developers to offer more significant benefits is a novel approach with potential applications elsewhere.

5 CONCLUSIONS

The proponents of infrastructure projects frequently expect that if they follow environmental licensing processes that there will be no civil society opposition to their projects. Civil society opponents of infrastructure projects frequently expect that if they follow environmental licensing processes that the project will be stopped. Both sides are wrong. They also both misunderstand what environmental licensing processes

6. Interview with Mike Levington, Vice Chairperson, South Africa Photovoltaic Industry Association, Johannesburg, 23 April 2014; Interview with Johan van den Berg, CEO of the South African Wind Energy Association, Johannesburg, April 2014.
7. Skype interview with Paul Lochner, Manager, Council for Scientific and Industrial Research, Environmental Management Services; Lydia Cape-Ducluzeau, Coordinator of Solar SEA, CSIR; and Cornelius van der Westhuizen, Coordinator of Wind SEA, CSIR, May 2014.

are meant to do, which is to force a balance between avoidance, mitigation, and compensation for harms.

Civil society opposition to infrastructure projects in Brazil and elsewhere (see, for example, McAdam and Boudet, 2012 on the United States) is less frequent than most people think. The common view of how contentious these projects are is shaped by the rather small number of them that generate strong opposition, like the Belo Monte hydroelectric plant in Brazil. If projects do not generate opposition, that is not covered in newspapers and Facebook posts in the same way. Hundreds of Brazilian electricity projects were built without substantial civil society opposition – but with routine environmental impact assessment, compensation, etc. – between 2002 and 2012.

When local civil society groups protested and delayed infrastructure projects in Brazil, their concerns were often socioeconomic rather than environmental. Since the environmental licensing process is the only one that systematically consults the local communities that host infrastructure projects, that is where these conflicts have appeared. (Even PNGATI, in practice, often works through the licensing process – see Leonardt, Stump and Branco, 2013.) If the environmental licensing process is altered so that adequate consultation does not happen in it (as PLS 624/2015 aims to do by strongly limiting consultation), those socioeconomic grievances will be expressed somewhere else, *but they will not go away*. In the Brazilian context, they are likely to appear as local protests and possibly sabotage of operations or to be taken to the court system by the Ministério Público.

The patterns of local community conflict show that traditional conceptions of consultation which focus on prior consultation with communities through environmental licensing or specific Free Prior Informed Consent processes may also fall short because not all the problems can be anticipated. Many community mobilizations happened only once projects were well advanced because unanticipated problems appeared or because promised mitigation or compensation was not delivered. The new efforts by the World Bank to institutionalize ongoing consultation throughout the life of a project suggest an important addition that might help limit more open conflicts between communities and developers.

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