

ENVIRONMENTAL PROTECTION ISSUE NETWORKS IN AMAZONIA*

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Abstract: This article focuses on environmental protection issue networks (EPINs), defined here as networks among domestic and international environmentally concerned actors that seek to protect local environments. EPINs may be important agents in efforts to promote environmentally sustainable development in Latin America, but their effectiveness has varied considerably. The article presents a model for assessing the effectiveness of EPINs based on their strategic capacity, the environmental visibility of the issues with which they deal, and the nature of their opposition targets. The model was inspired by hypotheses generated in comparing three EPINs established to address environmental and social problems created by development projects financed by the World Bank in Brazilian Amazonia between 1981 and 2000.

For the last twenty years, individuals and organizations throughout the world have become increasingly concerned about threats to the environmental sustainability of Brazilian Amazonia. Valuable research has been carried out on the causes for the region's environmental degradation and efforts to protect its human and natural environments,¹ but theoretical frameworks explaining the effectiveness of such efforts are scarce. In response, this article will propose a model to assess the effectiveness of environmental protection issue networks (EPINs), that is, networks of environmentally concerned actors that mobilize to promote local environmental protection.²

The model used here to evaluate the effectiveness of EPINs is based

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1. See Bunker (1985), Fearnside (1989), Binswanger (1989), and Hecht and Cockburn (1989), among others.

2. To assess the effectiveness of EPINs, one must measure their achievements against a pre-determined understanding of what environmental sustainability means for a given region. For the EPINs analyzed in this article, the conditions on the environmental and indigenous peoples' protection stated in the World Bank loan agreements for the Polonoeste, the Carajás Iron Ore, and the Planaflo projects provided the "baseline" against which EPINs' effectiveness was evaluated.

on hypotheses generated from a comparative analysis of three EPINs: the Polonoroeste, the Carajás, and the Planafloro.³ Study of EPINs and their levels of effectiveness is particularly relevant in light of current globalizing trends being experienced by Brazilian society and Latin America as a whole. On the one hand, the constraints that EPINs face in promoting environmental sustainability highlight the contradictions imposed on Latin American countries by the demands of global economic integration and the need to preserve finite natural resources. On the other hand, EPINs exemplify the many challenges faced by Latin American environmental and human rights groups when cooperating with international actors to promote a common goal.

The first section of this article will define the concept of EPINs and analyze its constitutive elements. The second will present a historical summary of the formation and actions of the Polonoroeste, the Carajás, and the Planafloro EPINs in order to compare their effectiveness. The last part will present a general model for assessing EPINs' effectiveness and will summarize its strengths and limitations.

DEFINING EPINs

The concept of environmental protection issue networks (EPINs) was inspired by two related concepts: issue networks and international issue networks (IINs). Issue networks were originally defined by scholars in sociology and social movements theory. The standard sociological concept of networks refers to relations established among individuals to influence and constrain behavior on a certain issue or set of issues (Boissevain 1974). While some social-movement theorists consider personal contacts among movement activists a key aspect of network building (Lawson 1983, Ross 1983), others have gone beyond the individual level of analysis and defined conditions for the establishment of group coalitions.⁴ Finally, the characteristic that distinguishes issue networks from other political rela-

3. I chose to focus on the EPINs associated with the Programa de Desenvolvimento Integrado do Noroeste do Brasil (Polonoroeste), the Projeto Ferro Carajás (Carajás), and the Plano Agropecuário e Florestal de Rondônia (Planafloro) because of their significance for other EPINs and the methodological advantages of studying them comparatively. These three EPINs dealt with the same geographical-cultural area, evolved almost simultaneously and thus experienced similar political and economic conditions in domestic and international contexts, and addressed problems created or aggravated by projects designed and funded by the same multilateral agency (the World Bank). These similarities were important in minimizing the problem of "many variables, small N."

4. These conditions include a concern among major groups for the emergence and survival of other groups; the existence of bridging groups in which activists can reach out to the public and interact with each other; and the existence of some groups with professional staff, research facilities, and funding experience to assist in coalition building (Zisk 1992, 186) as well as institutional mechanisms such as campaign mobilization (Freeman 1983).

tions is that their participants share knowledge on the issue at stake and exhibit intellectual and emotional commitment to it (Hecló 1978).

In international relations, the concept of issue networks has been useful for characterizing relations among nonstate actors as well as political relations that have not been bound primarily by traditional ideas about national sovereignty. Works on epistemic communities (Haas 1989) and international issue networks (Sikkink 1993) have defined different networks among nonstate actors and discussed their influence on domestic and international policy-making processes. The concept of IINs is particularly helpful in understanding EPINs. IINs are networks of organizations that share values as well as information and services in an uncoordinated and nonhierarchical manner. They come together out of their common concern about a given international issue. IINs are composed primarily of transnational actors, those whose actions affect both domestic and international arenas. Transnational actors participating in IINs may vary in nature. They may be sectors or departments within international governmental organizations (IGOs), international nongovernmental organizations (NGOs), domestic NGOs, private foundations, or local social movements. Members of IINs may also be individuals or groups within executive or parliamentary branches of governments, churches, trade unions, intellectuals, epistemic communities, or the media (Sikkink 1993, 415–17; Keck and Sikkink n.d., 5). While not all of these categories of actors belong to every IIN, international and domestic NGOs tend to “play a central role in most issue networks” through the use of creative strategies.⁵

As a distinctive subtype of IINs, EPINs are composed of political actors concerned with environmental issues and the promotion of environmental sustainability in a given geographic region.⁶ Usual participants in EPINs are national and international scientific associations, individual scientists, the specialized media, environmental activists, environmental and human rights NGOs at domestic and international levels, grassroots movements (such as small farmers’ associations, rubber tappers associations, and metal workers’ unions at local, regional, and national levels),⁷ profes-

5. Four of the strategies used by IINs are lobbying and awareness campaigns aimed at influencing decision-making processes; production and dissemination of information to the general public as well as to key policy makers; strategic alliances with powerful actors as a way of adding material and political resources to the network; and “accountability politics” that aim at changing the official discourse of states and organizations so that they may eventually be held accountable for their statements (Keck and Sikkink n.d.; Risse-Kappen 1994).

6. *Political actors* are understood here as entities that participate in political life (Frey 1985) and engage in power relations with other actors (Young 1972). The term is usually applied to a group of individuals who share common characteristics and behavioral cohesion. But it can also refer to institutions or sectors within institutions whose members have achieved such homogeneity (Fox 1992).

7. It is important to differentiate international and domestic NGOs from grassroots groups. For the purpose of determining an EPIN’s composition, the international and domestic

sional organizations, and churches, often through specific channels such as the Brazilian Catholic Church's Comissão Pastoral da Terra (CPT). EPINs may also include representatives of the private sector, whether they are companies or departments within a given company.⁸ Finally, EPINs may count on the participation of some sectors of state agencies (at the national and local levels) and those of multilateral organizations.

The inclusion of sectors of national and multilateral agencies among EPIN membership requires clarification. Bureaucracies tend to lack political coherence and be torn by internal conflicts (Fox 1992). Entire national and multilateral agencies would hardly ever be counted among an EPIN's members. Yet certain groups within such organizations or some of their sectors or departments may occasionally join an EPIN's efforts. It is to these groups, sectors, and departments that I refer when listing governmental and multilateral bureaucracies such as the World Bank Environmental Department, the Brazilian Fundação Nacional do Índio (FUNAI), and Brazilian environmental agencies as participants in the Polonoroeste, Carajás, and Planaflores EPINs.

In Amazonia, Brazilian governmental bureaucracies have always enjoyed a significant degree of autonomy from the federal government while being extremely permeable to the influence of regional and local elites (Bunker 1985). The administrative decentralization promoted by the 1988 Federal Constitution emphasized these conditions. As a consequence, the inclusion of state agencies (or sectors within them) in EPINs operating in Amazonia requires careful identification of their political and administrative loyalties to various national and local interest groups. For instance, at the federal level, the Instituto Brasileiro do Meio Ambiente e Recursos Naturais Renováveis (IBAMA) may support the initiatives of an EPIN and abide by environmental conditions of international loans. IBAMA's re-

NGOs are research or advocacy organizations that may provide support to grassroots groups at material and strategic levels but are not identified by "the rank and file" of such groups as coparticipants in their struggles. International and domestic NGOs distinguish themselves from grassroots groups in several ways: they are usually professionally organized and have headquarters, communication resources, and permanent staff. Despite the support they may provide to grassroots groups, domestic and international NGOs rarely have a mandate to represent them. Grassroots groups may or may not have formal headquarters and paid staff. They are usually informally organized, and their membership tends to be restricted to those directly involved in or affected by the issue that originated concern and mobilization. Examples of grassroots groups are rubber tappers' associations, neighborhood associations, indigenous peoples' confederations, and labor unions. Grassroots representatives usually have a mandate to represent a given population or social segment.

8. The environmental department of the Companhia Vale do Rio Doce (CVRD), then the state-owned mining company in charge of the Carajás iron-ore project, illustrates one of the many ways in which the private sector can be involved in an EPIN. The CVRD, which was recently privatized, has always had the profile of a private company (Neto 1990).

gional branch, however, may ignore such commitments in order to benefit local development interests.

The second element that requires clarification when defining EPINs is their focus on well-defined and relatively confined geographic regions. EPINs aim mainly at promoting local environmental sustainability. In this regard, the emphasis of EPIN actions differs from that of IINs, which mobilize primarily to influence international policies. As a consequence, while IINs rely heavily on the actions taken by their international members (international NGOs), EPINs' effectiveness depends mostly on their local membership base.⁹

The conceptual emphasis on EPINs' local membership base reveals yet another of their differences from IINs. IIN participants' main motivations in joining the network are shared values, principled ideas, or intellectual or emotional commitments. For EPIN participants, however, principles and ideas on environmental sustainability are not always the primary goal. Because alteration of environmental conditions in an EPIN's target area directly affects the lives of many of the network's members, their interests in joining in the mobilization effort is material or political as well as principled.

In seeking to promote local environmental protection, EPINs have modeled their strategies after those used by IINs¹⁰ and have also developed new ones. Main strategies of EPINs include court actions against government agencies, corporations, or individuals who have violated environmental laws and long-term structural environmental education of local populations (perceived by most networks as "the true stewards" of the environment).

An EPIN's effectiveness in promoting environmental protection may be constrained by both internal and external factors. Internal factors derive from the EPIN's structure (a determinant of its strategic capacity). External factors concern the issues addressed by EPINs (the environmental visibility of the issues) and the nature of the opposition actors they face.

The strategic capacity of an EPIN accounts for three factors: the nature of the EPIN's members (who they are, how they relate to each other, and who are the catalyst actors for the EPIN's mobilization); the level of a network's legitimacy; and the EPIN's structural capacity (the kind of resources and strategies available to it). EPIN catalysts are actors who initiate

9. The *local membership base* is that group of EPIN actors (individuals, organizations, and grassroots movements) that are located geographically at the site or region affected by a given development project or policy. To say that an EPIN has a local membership base is not to say that it has a large membership base or that its members represent large constituencies. Local membership base indicates only that an EPIN counts on and usually depends heavily on the participation of locally based actors who are actively pursuing the environmental sustainability of a given region or are clearly committed to this goal.

10. See examples in note 5.

mobilization and mediate relations among the various members of a given network. Catalysts usually occupy a privileged position for obtaining and disseminating information, and they have the resources to fund many of the EPIN's actions. Catalysts often become a network's key strategists, the ones who formulate the strategies through which the network's goals will be promoted. Catalysts may also be important sources of material and political resources for less resourceful members of the network, although on occasion, catalysts have been charged with misrepresenting the agendas and interests of fellow members in a particular EPIN. As an EPIN evolves over time, different network members may play the role of catalyst.

Legitimacy is likely to be the most important resource of an EPIN and its individual members. Legitimacy is related to whether an actor or actors are directly affected by the environmental problems that an EPIN addresses, or whether it represents the interests of a group in that situation. Because the concerns of EPINs are usually local and regional environmental conditions, the geographic location of an EPIN member greatly affects (without determining) its legitimacy. Other factors affecting legitimacy are the level and nature of cooperation among local and international members of a network (whether international members take into account local members' agendas or try to impose their own), its main strategies (whether such strategies target local structures or are intended to influence international policies), and the origins of its resources (whether local resources contribute to and shape EPINs' mobilization). The level of accountability of an EPIN to its constituency is also inherent to legitimacy.¹¹ Finally, structural capacity refers to the availability of technical, financial, and political resources and to the kind of strategies that an EPIN implements to achieve its goals.

The second variable affecting EPINs' effectiveness is the level of environmental visibility of the issues with which they deal. Such visibility is defined by the degree to which it can be readily perceived by an EPIN's target audience as being either an immediate cause or a consequence of environmental degradation (as examples, forest fires as a cause of diminishing biodiversity or disease among Amerindian peoples as a result of unrestrained contact with settlers). If the nature of the issue relates only indirectly to environmental degradation (like the impact of national tax and credit incentives for agribusiness on rates of deforestation) or such a relation requires elaborate explanations to appeal to an EPIN's intended audience, the issue lacks environmental visibility. Such visibility is not a para-

11. Not all members of an EPIN have the advantage of deriving their legitimacy from the support of a constituency. This attribute refers to grassroots movements, domestic and international NGOs with a large number of affiliates, and churches. For other EPIN members such as research organizations, legitimacy is a function of the quality of the studies produced; for media organizations, the accuracy of the information disseminated; and for committed individuals, their reputation and coherence of statements.

phrase of issue framing (Keck 1995). Whereas environmental visibility is conceived as an independent variable, issue framing is related to a network's strategic capacity, and thus issue framing and strategic capacity are covariables.¹²

The third variable affecting an EPIN's effectiveness is the nature of its opposition target. This factor determines the capacity of interest groups, state agencies, and international actors to oppose an EPIN's efforts to promote local environmental sustainability. The nature of the opposition target is defined in relation to an EPIN itself and by the context in which an EPIN operates. From the EPIN's perspective, the opposition target refers to the actor or actors selected as the focus of its leverage. In terms of context, an EPIN's opposition target includes all groups and actors whose actions contribute to local environmental degradation. Such an encompassing definition of opposition target forces analysts to assess the capacities of the various actors affecting environmental conditions in a given context and to evaluate the extent to which an EPIN's leverage on its chosen target actor can lessen environmental degradation (a target may be vulnerable to EPIN pressures and yet be incapable of changing local environmental conditions). Thus the key issues for any EPIN are twofold: first, to identify accurately the actor or actors who oppose environmental protection efforts; and second, to evaluate to what extent these actors have the capacity to alter the context once they have been affected by the EPIN's leverage. The risk that EPINs often run is considering their preassigned target to be the only (or main) source of opposition to their actions, when such a target may be simply the actor most vulnerable to EPIN pressure.

ENVIRONMENTAL PROTECTION ISSUE NETWORKS IN AMAZONIA

The area defined as Legal Amazonia (*Amazônia Legal*) covers 58 per cent of Brazil's national territory and consists of more than five million square kilometers.¹³ Amazonia contains the world's largest continuous tropical forest. It is estimated to host thirty thousand species of plant life, while more than three thousand species of fish inhabit its rivers (Moran 1981). The region also contains significant reserves of mineral resources, as exemplified by the Carajás mineral province, the world's largest reserve of high-quality iron ore (Fonseca 1981).

12. For instance, in Keck's (1995) analysis of the Brazilian rubber tappers' campaign for extractive reserves, she argued that the rubber tappers' success resulted partly from their "organizational and political strategies," which were intended to present their struggle in broad terms in order to establish a link between their goals and the interests, values, and beliefs of their target audience.

13. Legal Amazonia (*Amazônia Legal*) refers to seven states in Brazil's northern region and parts of two center-west states. This term is used by the government when drafting regional development policies (Mahar 1989).

Amazonia's economic integration into the rest of Brazil and the global economy has traditionally been based on an extractive model (Bunker 1985). The geopolitical goals of the military, who controlled the Brazilian government from 1964 to 1984, and growing pressure from the international economy mainly determined the transformations implemented in Amazonian economy, society, and natural environment in recent decades. Large development projects like the Polonoroeste, the Projeto Ferro Carajás, and the Planaflores have been cornerstones of these transformations. They were conceived within the context of a national development policy known as Polamazônia (Programa de Polos Agrícolas e Mineiros da Amazônia).

Polamazônia was the third in a series of development policies conceived by the Brazilian military.¹⁴ The objective of this policy was to encourage the investment of private capital in the region through incentives for agribusiness (in the 1970s) and for mining (in the 1980s). The policy strengthened agencies created in the late 1960s, namely the Banco da Amazônia (BASA), a major credit source, and the Superintendência de Desenvolvimento da Amazônia (SUDAM), which was in charge of infrastructure development. Tax incentives and credit for livestock and agribusiness skyrocketed under Polamazônia. At the same time, inflation of the Brazilian economy from the mid-1970s on made land an important resource against capital depreciation. Finally, the lack of colonization policies on small-scale farming led to a high turnover in landownership and eventual land concentration as well as to more clearing of the forest as peasants moved deeper into unclaimed areas.

In 1980 Polamazônia began to focus mainly on the mining sector, largely due to pressures from external interests of foreign governments (Europe and Japan) and multinational corporations. The Carajás mineral province was the main target of such interests (Neto 1990), and the Brazilian government inaugurated a set of development policies known as the Programa Grande Carajás (PGC). It expanded Polamazônia's tax and credit incentives schemes to economic initiatives implemented in the program's area. The PGC's other goal was to reduce conflicts over land and other social tensions in the area, particularly in the convergence among the Amazon states of Maranhão, Goiás, and Pará.¹⁵

Since the Brazilian military stepped out of power in 1985, policy priorities regarding Amazonia have changed. Economic subsidies to large-

14. The predecessors of Polamazônia are Operação Amazônia and the Plano Nacional de Integração (PIN) (Mahar 1989).

15. To promote colonization and manage land-titling issues, the government created the Grupo Executivo do Trabalho de Araguaia-Tocantins (GETAT). Yet GETAT was a complete failure because "rather than effectively redistributing land to the needy . . . , [it] consolidated a polarized structure of ownership . . ." (Hall 1989, 34).

scale agribusiness projects have plummeted, due in part to the structural difficulties faced by the Brazilian economy during the 1980s and in part to the criticisms of the international environmental community. The political and administrative decentralization promoted by the 1988 Federal Constitution also led the federal government to delegate to Amazonian states the ability to design regional development policies. The Polonoroeste, Carajás, and Planaflo projects exemplify well the evolution of Amazonian development policies.

The Polonoroeste EPIN

The Programa de Desenvolvimento Integrado do Noroeste do Brasil (Polonoroeste) was a road construction and settlement initiative intended to promote the occupation of Rondônia, a federal territory that later became a state in western Amazonia, and the northern part of Mato Grosso. The ecological fragility of the area and the risks that such a project presented to local Amerindian populations generated concerns that eventually led to formation of the Polonoroeste environmental protection issue network. This EPIN was composed of environmentally concerned individuals in the World Bank working on the project design, human rights and environmental international NGOs in the United States and Europe, professional associations (such as the Associação Brasileira de Antropologia, or ABA), and individuals who were ideologically and professionally committed to environmental and human rights in Brazil.

The catalysts for the Polonoroeste EPIN varied over time. In the project's design phase, the World Bank environmental staff played an important role in disseminating information among Brazilian anthropologists and bringing them into the project.¹⁶ On the advice of its environmental staff, the World Bank pressured Brazil to propose a revised version of the Polonoroeste project that would include an environmental protection component and an Amerindian Special Project (ASP). The bank also required that an independent institution, the Fundação Instituto de Pesquisas Econômicas (FIPE), monitor the environmental and Amerindian subprojects.¹⁷

The main resource available to the Polonoroeste EPIN during the project's design phase was the political weight of the World Bank itself. Brazil was still under authoritarian rule, and almost no domestic channels existed through which groups concerned with environmental and human

16. According to Betty Midlin, coordinator of FIPE's evaluation team for Polonoroeste, interviewed 12 Sept. 1994, São Paulo; and David Maybury-Lewis, World Bank consultant for Polonoroeste, telephone interview, 6 Mar. 1991, Cambridge.

17. According to José Juliano de Carvalho, coordinator of FIPE's evaluation team for Polonoroeste, interviewed 9 Sept. 1994, São Paulo.

rights issues could influence policies. The Brazilian government was, however, vulnerable to external pressure, particularly from a major funding agency like the World Bank. Despite such vulnerability, Brazil agreed to incorporate into Polonoroeste only the bank-proposed environmental conditions. The government kept the ASP as an independent subproject over which the bank had no direct say. The government argued that indigenous issues were part of Brazil's national sovereignty and therefore remained outside the purview of international negotiations.¹⁸

Within two years of the Polonoroeste's implementation, it became clear that despite the warnings of Brazilian environmentalists and the World Bank environmental staff, the Polonoroeste project was contributing to rather than mitigating environmental degradation in Western Amazonia. In 1983 the Polonoroeste EPIN gained strength from the actions of a new set of catalysts based in Washington, D.C. These were environmental NGOs, mainly the Environmental Defense Fund (EDF), the National Wildlife Federation (NWF), and the Environmental Policy Institute (EPI). These organizations help launch the multilateral development bank (MDB) campaign.¹⁹ Personal networks among the staff members of these organizations and Brazilian environmentalists led to the selection of the Polonoroeste project as the campaign's main case study.²⁰

The MDB campaign provided valuable resources for the Polonoroeste EPIN. Politically, it created important spaces for disseminating information about the environmental consequences of the Polonoroeste project. Such information was passed on to policy makers and the larger public in two ways: by launching a systematic media campaign²¹ and by organizing hearings in the U.S. Congress.²² Financially, international NGOs and foundations transferred resources to environmentalists in Brazil who used

18. Robert Goodland, World Bank advisor, Environmental Assessment Unit, interviewed 19 July 1993, Washington, D.C. He pointed out that although the ASP was an addendum to the Polonoroeste Loan Agreement, it still demanded compliance.

19. The MDB campaign consisted of coordinated actions among international environmental and human rights organizations and activists, such as media education, congressional hearings, and lobbying of decision makers. They demanded increased accountability from multilateral development banks, particularly in environmental and social policies.

20. Interview with Bruce Rich, Senior Attorney at the Environmental Defense Fund, 13 Mar. 1991, Washington, D.C.

21. Numerous periodicals published articles on the MDB campaign and its issues, including leading newspapers such as the *New York Times*, the *Washington Post*, the *Financial Times*, and the *Milwaukee Journal* as well as magazines like *The Economist*, *News and Comment*, and *U.S. News and World Report* and environmental journals like *The Ecologist* and *Conservation Biology*.

22. The *New York Times* indicated that by 1986, the MDB campaign had organized seven-teen congressional hearings, six of them addressing the Polonoroeste project (between 1983 and 1984). See "World Lenders Facing Pressure from Ecologists," *New York Times*, 10 Oct. 1986, p. D24.

them to collect data and conduct research on the extent of the environmental degradation that would be caused by the Polonoroeste and ways to mitigate it. Strategically, the leaders of the MDB campaign benefited from an alliance with Republican U.S. Senator Robert Kasten, Chairman of the Appropriations Committee. Senator Kasten was known for opposing U.S. foreign aid. The MDB campaign's hearings in 1983–1984 on the Polonoroeste project suggested that the World Bank was using U.S. taxpayers' money to finance environmental destruction abroad. Charges against Polonoroeste's environmental record mounted, as did pressure from the MDB's own environmental staff and the public (which manifested outrage through media channels and letters to bank officials). All these factors, combined with Senator Kasten's implied threat to reduce U.S. contributions to the MDB, played a part in the World Bank's decision to interrupt disbursements for the project because of its negative environmental performance. This decision marked the first time that disbursements of an international loan had been interrupted for environmental reasons (Goodland 1989).

Suspension of funding for the Polonoroeste project represented an important victory for the MDB campaign. It also established a significant precedent for future international lending in requiring that development projects financed by multilateral agencies had to be environmentally accountable. Yet it was less of a victory for the Polonoroeste EPIN. To guarantee the resumption of funding, Brazilian officials took remedial actions, such as providing emergency health care for the Nambikwara Indians and formally demarcating selected Amerindian and ecological reserves. The effects of such measures were short-lived, however. After loan disbursements were reinitiated, Brazilian authorities ignored any residual commitment to environmental and Amerindian protection in the Polonoroeste area. The single exception consisted of the isolated efforts of a minority group within the FUNAI bureaucracy.²³

The high level of environmental visibility of the problems in the Polonoroeste region recommended the selection of the project as the MDB campaign's main case study. Photos of Nambikwara Indians weakened by disease as well as the clear correlation between migration to Rondônia and the state's deforestation figures between 1978 and 1990 enabled the Polonoroeste EPIN's audience to understand the network's struggle and to support it.²⁴ But while the environmental visibility of the issues benefited the

23. Interview with Midlin, 12 Sept. 1994, São Paulo. For specific examples, see Price (1989).

24. In 1980, one year before the Polonoroeste project began, Rondônia had 262,530 inhabitants, and an area of 4,200 square kilometers had been deforested. In 1990, three years after the project was completed, the population of Rondônia had almost doubled to 474,702 inhabitants, while deforestation had increased eightfold to 33,500 square kilometers (IBGE 1993 and INPE 1992).

Polonoroeste EPIN, its identification of opposition actors did not. Through the EPIN's access to the MDB campaign structure, it attempted to change World Bank policies on the Polonoroeste project and those of the Brazilian federal government. The EPIN's strategies aimed to hold the bank and Brazilian federal authorities accountable for the commitments made in the Polonoroeste Loan Agreement (the implementation of the environmental protection subcomponent of the Polonoroeste project and of the ASP). Yet the real forces operating contrary to the EPIN's efforts to protect western Amazonia were politicians in the newly formed state of Rondônia, local cattle ranchers and loggers, and small- and large-scale mining interests. Even at the peak of mobilization, the Polonoroeste EPIN was unable to devise coherent strategies to counteract the steps taken by these actors and their negative consequences on the environment.

The Carajás EPIN

The Projeto Ferro Carajás involved constructing a mine in the heart of eastern Amazonia and building the related transportation infrastructure (a railroad and a deepwater port). The project's main implementing agency, the Companhia Vale do Rio Doce (CVRD), was a public company with a large international presence in mineral markets. It was careful to present the project to the World Bank as "a model" of an environmentally sound initiative (Goodland 1989). Yet from the outset of the project, its environmental impact raised concern among World Bank staff familiar with the region and among Brazilian organizations and individuals concerned with environmental and indigenous rights.

Mitigating the environmental impacts of the Carajás project became particularly important for a group of individuals within the World Bank. These individuals were aware of the problems created by the Polonoroeste and wanted to avoid repeating them in the Carajás project.²⁵ They also worried about the World Bank being singled out by international environmental NGOs as lacking in environmental accountability. Bank officials focused mainly on Amerindian groups likely to be affected by the project. At the same time, the bank praised the CVRD for addressing some of the Carajás project's environmental risks, such as establishing forest "buffer zones" around mining sites and along the Carajás railroad as well as internal teams to monitor water and air quality at the mining sites and in the port of São Luis.

At the World Bank's request, FUNAI, the Brazilian Indian agency, was brought into the negotiations and asked to draft a special project to ex-

25. Interviews with Maria de Lurdes Freitas, head of the CVRD environmental department from 1982 to 1986, 21 Apr. 1995, Rio de Janeiro; and with Iara Ferraz, anthropologist consultant for the Carajás project, personal communications, 24 May 1995, Rio de Janeiro.

pand the scope of the Carajás project's Amerindian component.²⁶ Unlike the Polonoroeste project, the Amerindian Special Project for the Carajás area was drafted within the scope of the World Bank Loan Agreement, thus increasing bank access to issues related to its implementation. The bank also requested that the CVRD hire a group of Brazilian anthropologists to oversee implementation of the Carajás project's Amerindian component. Over time, these individuals became extremely active in the Carajás EPIN. Brazilian anthropologists worked closely with the staff of the CVRD's environmental department, but even though their relationship was constructive, their influence on the CVRD's operational divisions was limited.²⁷

Cooperation among World Bank environmental staff, the CVRD environmental department, and Brazilian anthropologists was established at the outset of the Carajás project, with the CVRD environmental department becoming the catalyst in this regard. The catalyst's main resource for the EPIN was its privileged access to information about implementation of the project's environmental components.

During the first three years of project implementation, the Carajás EPIN accomplished little. Brazilian consultant anthropologists, for instance, faced obstacles imposed by FUNAI in monitoring the implementation of the Amerindian project. The anthropologists resented the lack of effective oversight of subproject funds by the CVRD's environmental department. The latter, however, was unprepared to deal with FUNAI's bureaucratic and corporatist resistance. Finally, FUNAI resisted outsiders' (consultants') recommendations.²⁸ The World Bank's environmentally concerned staff mediated these relations as best they could. Yet they were incapable of controlling mounting tensions between the Brazilian consultant anthropologists along with their professional association (ABA) and the CVRD environmental department on the issue of Amerindian lands.²⁹

Eventually, the CVRD environmental department, under the leadership of Maria de Lurdes de Freitas, became sensitive to the anthropologists' criticisms of FUNAI management of the special project. According to the consultants, the two main problems of the subcomponent were that it allocated almost 30 percent of the funds to improving FUNAI's infrastructure

26. Interviews with Freitas and Goodland.

27. The CVRD's environmental department was created primarily to address environmental issues emerging from the Carajás project and thus respond to increasing levels of environmental concerns in the company's primary market, Western Europe. To this day, the CVRD remains attentive to projecting the image of an environmentally responsible firm. According to interviews with Freitas and with Mário Borgonovi, the CVRD's environmental advisor, 31 May 1995, Rio de Janeiro.

28. Interview with Maria Elisa Ladeira, consultant anthropologist for the Carajás project, 13 Sept. 1994, São Paulo.

29. The ABA eventually withdrew from the project, although individual consultants continued to be involved.

(for the purchase of vehicles and construction of new Indian posts) and only 1.6 percent to the demarcation of Amerindian lands (Treece 1987, 38). Without legal proof of ownership of their lands, Indian groups in the area impacted by the Carajás project could not defend themselves against invaders. In addition, the project allowed an excessive presence of FUNAI staff in Amerindian villages. That disrupted traditional organizational structures and led Amerindians to become increasingly dependent on the CVRD's funds (channeled through FUNAI) for every aspect of their subsistence (Magalhães 1985).

In 1986, fully supported by the World Bank, Freitas suspended CVRD funds for FUNAI on the grounds of mismanagement of the Amerindian project. Despite the anger of FUNAI officials at the CVRD's direct intervention, they eventually revised the Amerindian project according to the consulting anthropologists' recommendations. The revised project cut administrative and infrastructure expenditures and increased resources for health and land demarcation. The Carajás EPIN's success in forcing FUNAI to prioritize demarcation of Amerindian lands thus resulted from effective monitoring of the Amerindian project by the Brazilian consultants and the legitimacy of their demands (based on their technical expertise and commitment to Amerindians' well-being), combined with the political weight of the World Bank in support of Freitas's decision and the CVRD environmental department's increased experience in dealing with environmental and indigenous issues in the Carajás area.

In the late 1980s, however, it became clear that the socioenvironmental impact of the Carajás project had exceeded the CVRD's concession area (limited to the mine's immediate perimeter and the margins of the railroad). During the implementation of the Carajás project, thirty-four charcoal-consuming projects were either approved or in the process of obtaining approval for installation in the area of the Programa Grande Carajás (PGC). Most of projects produced pig iron (crude iron), which were entitled to credit and tax incentives from the federal government. In addition to credit and tax incentives, three other factors attracted the pig-iron industry to eastern Amazonia: the transportation infrastructure and the reliability of iron supply associated with the CVRD and the Carajás project as well as the "cheap fuel" (charcoal) that could be obtained freely from native forests (most located on public and Amerindian lands).³⁰

The number of pig-iron projects planning to establish operations in the PGC area in the mid-1980s raised serious concerns in the Brazilian en-

30. According to Anthony Anderson, if all charcoal consuming projects are approved, they "will require over three million tons of charcoal per year—which represents over 14 million tons of wood. About 86% of this amount will be utilized for production of pig iron" (Anderson 1991, 1194).

vironmental movement.³¹ Brazilian legislation had conditioned the approval of pig-iron projects on presentation of a forestry-management plan and an environmental impact assessment (EIA). Although companies blatantly ignored these requirements, the PGC Conselho Interministerial allowed them to start operations anyway. This illegal procedure provided the basis for a court action, initiated on 12 October 1988, by sixteen Brazilian environmental and human rights groups against the PGC Interministerial Council and federal and state environmental agencies (IAJP 1989). The mobilization process that led to this court action sought to expand the scope of the Carajás EPIN in terms of participants and the issues it addressed.

The court action against the pig-iron industry marked a new phase for the Carajás EPIN. In this phase, the geographical boundaries between the Carajás project and the PGC area were erased in the perceptions of individuals and organizations committed to the human and natural environments in eastern Amazonia. Brazilian human rights groups stressed the causal links between the presence of the CVRD in the region and its implementation of the Carajás project and the intensification of endemic social problems like uncontrolled migration, land conflicts, and environmental degradation. In this new phase of the Carajás EPIN, the struggle for environmental sustainability was orchestrated by an umbrella organization, the *Seminário Consulta Carajás*, which was supported by European environmental and human rights NGOs.³²

The *Seminário Consulta Carajás* is a network of social movements (such as regional rural and metalworkers' unions), churches and their agencies (such as the *Comissão Pastoral da Terra* and the *Conselho Indígena Missionário*), research organizations (such as the *Sociedades para a Defesa dos Direitos Humanos* in Pará and Maranhão), international funding agencies mostly in Europe (GKKE-Dialogprogram, *Miseror*, *Bread for the World*), and some elements of local administrations. Two organizations within the *Seminário Consulta Carajás*, the *Sociedades para a Defesa dos Direitos Humanos* of Pará and Maranhão, took charge of initiating the court action to stop the pig-iron industry in the Carajás area.

The pig-iron issue in the Carajás EPIN highlights the importance of environmental visibility. The imminent devastation of forested land and increased pressure on Amerindian lands mobilized public attention domesti-

31. See as examples technical information in IDESP (1988), Fearnside (1989), and Anderson (1990).

32. Consultant anthropologists for the Carajás project and their professional association (the ABA) remained active within the EPIN during its second phase of mobilization. The role of the CVRD's environmental department decreased significantly, however. The end of the project's implementation phase reduced the environmental department's say in operations in Carajás. Yet organizational changes within the CVRD downgraded the environmental department to a subdivision of the *Superintendência de Desenvolvimento Auto-Sustentável*.

cally and internationally.³³ The charges against the support provided by the PGC Interministerial Council and the CVRD of pig-iron production embarrassed the Brazilian government and the CVRD in international fora. NGOs in the United States and Europe immediately seized the opportunity to question international financing for development projects in tropical areas. The involvement of the World Bank and the European Community in the Carajás project was seriously criticized because an essential condition for funding—the environmental preservation of the project's area—was not being met. Pig-iron projects were operating precisely along the Carajás railroad. Furthermore, international NGOs argued, the CVRD's direct and indirect involvement with the pig-iron industry in the PGC area violated conditions in loan agreements requiring Amerindian protection.³⁴

In response to EPIN pressure, the state of Pará's Secretaria da Saúde deactivated one hundred and eighty charcoal furnaces in the PGC area in 1988 (Ripper 1989). International and domestic pressure on the Brazilian government eventually led to the decision to suspend temporarily federal and regional incentives for pig-iron projects in the PGC.³⁵ Of the original thirty-four charcoal-consuming projects that awaited authorization in the mid-1980s to begin operations in the PGC, only six have actually been implemented (Carneiro 1995, 109).³⁶

The Carajás EPIN correctly singled out the CVRD as the primary target of its mobilization efforts. The CVRD was in fact the actor most capable of affecting environmental conditions in the Carajás project area, with both material and legal resources to implement environmental protection. Certain environmentally sound measures adopted by the CVRD were in the company's economic best interest (such as hydroseeding to avoid mud slides over the railroad and establishing a private forest police to prevent il-

33. See the EDF's open letter, "Ongoing Violations of World Bank Carajás Iron Ore Project and the Brazil Power Sector II Loan," 15 Dec. 1988; Rich's testimony before the House Subcommittee on Foreign Operations, Committee on Appropriations on the Environmental Performance of the Multilateral Development Banks and the International Monetary Fund, 24 Apr. 1989; and European Parliament Session Documents, Doc. A 2-124/89 on the negative effects of financing from the European Community and various international organizations on the environment of Amazonia.

34. European Parliament, Session Documents, 27 Apr. 1989, Document A 2-124/89, "Report Drawn Up on Behalf of the Committee on the Environment, Public Health and Consumer Protection on the Negative Effects of Financing from the European Community and Various International Organizations on the environment of the Amazon Region."

35. To this end, the Carajás EPIN and other groups concerned with Amazonian environmental preservation counted on the collaboration of José Lutzenberger. When invited to head Brazil's Secretaria do Meio-Ambiente, he conditioned his acceptance on finding a solution for the pig-iron issue in the PGC area (Carneiro 1995).

36. One should not exaggerate the impact of these achievements, however. A recent report from the London-based group Anti-Slavery International denounced the fact that charcoal furnaces are still in operation in the PGC area. In some cases, their employees are kept under conditions of semi-slavery (Sutton 1994).

legal settlements in the greenbelts around the mining site). But the EPIN's leverage accounted for the partially successful implementation of measures in which the CVRD had no economic interest, such as the demarcation of Amerindian lands.³⁷

Yet when the Carajás EPIN expanded its scope of mobilization beyond the CVRD's concession area, it became less effective. The targets of the Carajás EPIN's second phase were actors with a much lower capacity in the context (regional environmental agencies and the federal government), and even when these actors responded to the EPIN's pressure, their actions had a limited impact in improving local environmental conditions. Frustration with the results of the 1988 court action led the EPIN to refocus its attention on the CVRD. The EPIN has since tried to push the company to assume its share of responsibility for the social and environmental degradation of the PGC area. The EPIN's main argument is that the infrastructure and development opportunities created by the Carajás project have changed social and environmental conditions far beyond the project's concession area. But the Carajás EPIN has not been successful in holding the CVRD accountable to the environmental sustainability of the PGC area. The company's conservation efforts in the region have been limited to sporadic or superficial initiatives that did not tackle the core causes of environmental degradation.

Finally, the Carajás EPIN only recently started to address structural socioeconomic conditions in the PGC area.³⁸ Landed and political elites have opposed environmental protection initiatives because of their intrinsically distributive nature. Soybean production and cattle ranching, for instance, have benefited from increased land concentration in the area and have contributed to this trend. As a result, traditional forms of agriculture practiced by indigenous peoples and *caboclos* (non-Amerindian traditional inhabitants of Amazonia) have gradually disappeared, and pristine forests continue to be destroyed by landless migrants in search of fuelwood.

The Planaflores EPIN

Analysis of the Planaflores EPIN is particularly complex because the network remains mobilized as of late 1999. The Planaflores EPIN was originally composed of many actors who had been involved in the Polonoroeste

37. For the author's evaluation of the state of implementation of the Carajás ASP, please e-mail mrodrigu@holycross.edu.

38. The Carajás Consulting Seminar has led research and negotiation initiatives between grassroots groups and the region's business and agrarian elites in iron ore, soybean, paper, and wood production or exploitation. These are the sectors most affected by social tensions. The seminar holds that negotiations between different interests may benefit from research and popular education. Interview with José H. Benatti, consultant for the Sociedade Paraense de Defesa dos Direitos Humanos, 26 June 1995, Belém.

EPIN. This evolution was a natural one because the Planafloro project proposed to address environmental problems largely caused by or associated with the Polonoroeste project.

The goals of the 1992 Planafloro project were fourfold: to promote a socioeconomic and environmental zoning plan in the state of Rondônia;³⁹ to help make the state's public policies compatible with sustainable development; to limit the expansion of agro-industry (mainly cattle ranching) in the state; and to protect and enforce the borders of all conservation units and Amerindian reserves (World Bank 1992).

The Planafloro EPIN mobilized during the project's design phase (1987–1990) and was composed of NGOs and grassroots movements based in Rondônia, national NGOs and research institutes located in Brasília and São Paulo, and international NGOs with previous experience in environmental and indigenous issues in Rondônia. In the international sphere, U.S. environmental NGOs such as the Environmental Defense Fund and the National Wildlife Federation took the lead in monitoring project negotiations. In Brazil, concerns about the socioenvironmental impact of the Planafloro and the need to follow closely its preparation and design phases were voiced primarily by three grassroots organizations: the rubber tappers' Conselho Nacional dos Seringueiros (CNS), the União das Nações Indígenas (UNI), and the Central Unica dos Trabalhadores Rurais (CUT, one of Brazil's major labor confederations). Two research and public-advocacy NGOs supported these organizations' demands: the Instituto de Estudos Amazônicos e Ambientais (IEA) and the Instituto de Antropologia e Meio Ambiente (IAMA).⁴⁰ The Rondônia chapters of the Conselho Indígena Missionário and the Comissão Pastoral da Terra (CPT) have also participated in the Planafloro EPIN, as have government representatives and sectors of governmental agencies at the federal level, such as the Secretaria do Meio-Ambiente (particularly under José Lutzenberger in 1990) and FUNAI's Coordenação de Projetos Especiais. Finally, the World Bank's environmentally concerned staff have also participated in this EPIN at different junctures.

Originally, the Planafloro EPIN's structural capacity was largely a function of the financial, political, and technical support brought to the alliance by its international members. The public interest generated by the Polonoroeste case and accumulated knowledge about the area's environ-

39. The objective of the Rondônia zoning plan is to identify soil characteristics and natural resources potential in order to rationalize the state's economic development.

40. NGOs' concerns with the Planafloro project were justified by their previous experience with development projects in Amazonia but also by specific warnings made by Brazilian environmentalist Chico Mendes in an October 1988 letter to the World Bank. Mendes stated that the managers of Planafloro had no intention of establishing extractive reserves and would promote colonization projects instead. Mendes was assassinated in December 1988 by killers hired by rubber barons.

mental problems were important incentives for international NGOs to become involved in the Planaflores EPIN. As a result of such interest and commitment, grassroots groups in Rondônia benefited from funds for regional meetings, access to information (such as World Bank documents not readily available there), and technical advice on issues related to environmental zoning processes and World Bank policies. In some cases, the entire budget of a Rondônia-based activist group derived from international grants.⁴¹

But at times, the interest and support of international groups also became a liability for the Planaflores EPIN as well. Such interest enhanced competition among local groups vying for funds and political support, while encouraging the emergence of organizations with little legitimacy among those whom they claimed to represent. At the same time, the generosity and proactive participation of international NGOs in the earlier stages of the Planaflores EPIN tended to offset local strategies and initiatives.⁴² Both international and domestic groups readily perceived the importance of asserting the Planaflores EPIN's legitimacy as a truly local alliance concerned with local and regional issues. The creation of the Forum das ONGs e Movimentos Sociais que Atuam em Rondônia (called here the Rondônia Forum) and its quick rise to become the EPIN's main catalyst resulted in part from the EPIN's concerns about legitimacy.

The forum was created in 1991 and became instrumental in coordinating the positions of groups in Rondônia concerned about the Planaflores project. Its origins are linked to a meeting organized by World Bank representatives in response to the EPIN's charges that local groups and project beneficiaries had not been consulted. A number of Rondônia-based NGOs were invited to discuss with bank staff and state officials their specific views on the Planaflores project. The three parties eventually signed an agreement entitled "Protocolo de Entendimento," which defined the form and conditions of local groups' participation in the Planaflores. Representatives from NGOs in Rondônia would participate in a Conselho Deliberativo, the main decision-making body of the Planaflores project; NGOs and local groups would participate in the planning of specific subcomponents of the project; and the government would have to implement emergency measures to protect the local environment before the project's loan agreement was actually signed.⁴³

Creation of the Rondônia Forum shortly after these events and its formal recognition by the state of Rondônia and the World Bank fostered a

41. Interviews with Iremar Ferreira, CIMI consultant, 25 Nov. 1994, Porto Velho; and with José Maria dos Santos, vice president of the rubber tappers' Organização dos Seringueiros de Rondônia (OSR), 22 Nov. 1994, Porto Velho.

42. Interview with Ana Maria Avelar, president of the Instituto de Pesquisa em Defesa da Identidade Amazônica (INDIA), 22 Nov. 1994, Porto Velho.

43. Rondônia NGOs and the Rondônia government, *Protocolo de entendimento*, 1991.

general sense of empowerment among the NGOs and grassroots groups in the state.⁴⁴ National and local environmental and human rights groups had demonstrated a certain degree of political weight in Rondônia in promoting local and regional meetings of their constituencies, drafting letters to national and international audiences, and fostering media mobilization. Thanks to the constitution of the Rondônia Forum, these groups could now address the World Bank, the state government, and the federal bureaucracies directly, without having to depend on the mediation of organizations located outside Rondônia. Not that the Rondônia Forum intended to dismiss the support it had received from outside organizations. The alliance continued to welcome and rely on such support. What had changed was that unlike the situation with the Polonoroeste EPIN, the catalyst for the Planafloro EPIN was an organization based in Rondônia.

Paradoxically, the main asset of the Planafloro EPIN—its level of legitimacy via the creation of an active local membership base (the Rondônia Forum)—proved on occasion to be its major weakness. Between 1991 and 1994, the forum led the Planafloro EPIN's efforts to denounce the Rondônia government's complete disregard for the environmental conditions of the Planafloro agreement. Yet the forum remained associated with that same government through the participation of its representatives in the Planafloro Conselho Deliberativo, the project's operational plans, and oversight of the project's budget.

In addition to the contradiction created by the forum's dual role—as the opposition to the Rondônia state's management of Planafloro yet one of the project's comanagers—the Rondônia Forum faced challenges arising from the Planafloro EPIN's internal cleavages. On one hand, the constituencies of some forum member-organizations began to pressure them to act independently, outside the forum's umbrella. Certain sectors of the Rondônian population, such as the rubber tappers, believed that neither the Planafloro project nor the Rondônia Forum had delivered on its promises. It was therefore judged best to be pragmatic and deal directly with implementing agencies while project funds were still available.⁴⁵ On the other hand, the forum eventually was criticized by international NGOs. Given the Planafloro's poor implementation record, these NGOs expected the forum to request the interruption of World Bank disbursements, not sharing fully the pragmatic approach that local EPIN members preferred.⁴⁶

The legitimacy challenges faced by the Rondônia Forum forced the Planafloro EPIN to reevaluate its strategies and goals and to overcome its

44. *Ibid.*

45. Interview with José Maria dos Santos, vice president of the rubber tappers' OSR, 22 Nov. 1994, Porto Velho.

46. Telephone interview with Stephen Schwartzman, Environmental Defense Fund anthropologist, Sept. 1995.

internal divisions. The year 1995 marked the maturing of the Planaflo EPIN. Three complementary strategies for protecting Rondônia's natural and human environments characterized this new stage. First, with the support of international and Brazilian NGOs, the Rondônia Forum presented in July 1995 its "Request for Inspection of Planaflo to the World Bank Inspection Panel."⁴⁷ This document signaled to both the bank and the Rondônia state government that significant sectors of the project's beneficiaries had serious reservations about its implementation.⁴⁸

After the bank's Board of Directors refused to authorize the investigation of Planaflo by the Inspection Panel, the Rondônia Forum returned to the negotiating table and participated in the restructuring of the Planaflo project in 1996–1997. This restructuring has affected some 44 percent of the initial budget. The demarcation of state conservation units based on the zoning plan has become the main focus of implementation activities in the project's environmental component. Project beneficiaries in areas already deforested (Zones 1 and 2 of the zoning plan) have been considered by the restructuring through the Programa para Apoio de Iniciativas Comunitárias (PAIC). This program is a demand-driven component being implemented under comanagement arrangements between implementing state agencies and specific communities (through their representative organizations in the Rondônia Forum). Twenty-three percent of the remaining Planaflo funds has been allocated to the PAIC (World Bank 1996).

Another key strategy is close monitoring by the Planaflo EPIN of the actions taken by the Brazilian colonization agency, the Instituto Nacional de Colonização e Reforma Agrária (INCRA). The focus on INCRA's actions reflected the perception among Planaflo EPIN members that regulation of land use and distribution is the cornerstone of the socioecological zoning plan. Until 1996 INCRA wielded almost absolute control over Rondônia's public lands. In complete disregard of the zoning plan, INCRA attempted to go forward with plans to create new settlement projects in ecologically fragile areas. In 1994 the Rondônia Forum filed a court action against INCRA. This *ação civil pública* eventually led to suspension of INCRA's colonization schemes in areas interdicted by the zoning plan. In addition, INCRA is now being investigated for alleged illegal land dealings involving local politicians and INCRA staff members (Millikan 1998).

The Rondônia Forum's campaign against INCRA proved to be an important strategy in making good use of the EPIN's technical and finan-

47. The Inspection Panel was created in 1994 by the World Bank to investigate charges of mismanagement of bank loans. The panel is composed of three members appointed by the Executive Directors and may act on request of a group of persons represented by an organization who are nationals of the borrower country and have proved to be affected directly by the consequences of the loan.

48. Note that only project beneficiaries can request an investigation by the inspection panel.

cial resources. Rather than threatening the network's internal cohesion and exhausting its limited resources by fighting too many diverse opposition targets, the Planaflo EPIN focused primarily on INCRA, at least during an important juncture of project implementation. The strategy succeeded because it led to the interruption of INCRA's colonization plans and to the agency eventually signing an agreement with the Rondônia government that transferred control of the state's public lands (Millikan 1998; Keck 1998).

A final constraint on the Planaflo EPIN's effectiveness has been the nature of the issues with which it has dealt. Unlike the Polonoroeste and the Carajás EPINs, which emphasized deforestation and indigenous peoples' cultural and physical survival, the Planaflo EPIN addressed these themes only as consequences of structural problems in the area (land-tenure conditions, policy reforms, and institutional constraints on state agencies' cooperation). These issues are extremely complex and lack environmental visibility. In addition, the Planaflo EPIN has evolved mostly during the "antyclimax" of global environmental awareness that followed the United Nations Conference on the Environment and Development in 1992.

Comparing EPINs' Effectiveness

Given the constraints on EPINs' effectiveness just described, how have the Polonoroeste, the Carajás, and the Planaflo EPINs fared? The Polonoroeste EPIN had a limited and short-term effect in guaranteeing environmental protection in the project area. The Polonoroeste EPIN's main sources of leverage were the high environmental visibility of the issues at stake and the EPIN's capacity to mobilize both the public and key political actors (such as Republican U.S. Senator Kasten) against such a disastrous project. Yet the EPIN's strategic capacity was restricted by its lack of a significant local membership base. Although the EPIN was able to affect international arenas of decision making on the Polonoroeste project, the network lacked the resources to influence local policies. The EPIN's efficiency was also constrained by its choice of opposition targets. Opposition to environmental protection in the Polonoroeste arose from various origins. The EPIN, however, targeted only the World Bank and the Brazilian federal government, which were incorrectly perceived as actors capable of determining environmental conditions in the area. As a result, although the EPIN succeeded in obtaining strong responses from these actors—the World Bank's temporary interruption of loan disbursements and the Brazilian government's formal demarcation of Amerindian reserves—ex post facto evaluations have stressed the limited impact of these measures in guaranteeing environmental protection of the area.

The effectiveness of the Carajás EPIN resulted directly from the evolution of its strategic capacity and from its tactical decision to focus also on targets other than the CVRD. At the beginning, the resources of the Carajás

EPIN were minimal. The network attracted little support from the international environmental coalition and depended heavily on committed individuals inside the project's implementing agencies. Ironically, selection of the CVRD as its opposition target enhanced the EPIN's effectiveness. The company had great capacity in the area where the Carajás project was implemented, and its responses to EPIN pressure tended to affect the local environment directly, as indicated by the CRVD's contributions to the demarcation of Amerindian reserves and the temporary improvement of the health of Amerindians.

The Carajás EPIN's second phase witnessed an increase in its strategic capacity. By broadening the scope of the issues with which it dealt, the EPIN expanded its alliances. The potential for widespread mobilization of the struggle against pig-iron projects helped attract the support of a larger number of environmental and human rights organizations, internationally and domestically. In this phase, the EPIN diversified its strategies and targets. Strategies were aimed at changing policies, such as the consistent implementation of environmental law and immediate changes in the government's criteria for authorizing pig-iron industries in the PGC area. Social and environmental education of the grass roots became another key strategy of the Carajás EPIN in the 1990s. Yet the EPIN's choice of targets—the defendants in the court action against pig-iron projects (the federal government via the PGC Concelho Interministerial and state environmental agencies)—restricted the EPIN's effectiveness. These actors had little capacity to affect the environment in the PGC region, and while their responses to the EPIN's court action limited the number of pig-iron projects, deforestation in the area continues to be rampant. And by focusing on new targets, the EPIN diverted its attention from the CVRD, which has since become less responsive to EPIN pressure.

The effectiveness of the Planaflo EPIN must also be evaluated in two phases: the first during project negotiations, and the second since project implementation began. During the project's design phase, the EPIN benefited from the Polonoroeste heritage. In contrast to the Polonoroeste EPIN, however, the Planaflo EPIN succeeded in broadening its local representation, which greatly increased legitimacy and capacity. In choosing targets, the Planaflo EPIN concentrated its efforts on influencing the project's negotiators, the World Bank, and the state government of Rondônia. These actors were in fact the ones capable of affecting the project design. They were also responsive to the EPIN's pressures. Several of the EPIN's demands were consequently incorporated into the project's loan agreement. The Rondônia zoning law and the participation of Rondonian civil society in the project—the main original priorities of the Planaflo EPIN—became preconditions for the project's approval. Even so, the EPIN's success was limited. Implementation of the zoning law as well as participation by civil society in project decision making have been restricted.

With the beginning of Planaflores implementation in 1993, the EPIN had to confront serious challenges to its legitimacy—a credibility crisis and increased cleavages among its members. By 1995, however, the EPIN had overcome these challenges. The network's maturity has been evident through its adequate selection of opposition targets and the emphasis on maximizing local resources. Such options have increased the EPIN's potential for long-term effectiveness.⁴⁹

EVALUATING EPINS' EFFECTIVENESS: A THEORETICAL FRAMEWORK

The environmental visibility of the issues with which an EPIN deals, the network's strategic capacity (its membership, degree of legitimacy, strategies, and resources), and the nature of its opposition targets determine the extent to which an EPIN can contribute to local and regional environmental protection. Although the hypotheses summarized in table 1 need further testing, they provide an initial framework for assessing the effectiveness of EPINs.

Hypothesis 1 suggests that when the environmental visibility of the issue with which an EPIN deals is high and both the EPIN's strategic capacity and the capacity of its opposition targets are low, the EPIN's effectiveness in promoting environmental protection is limited (some protective measures may be implemented briefly, but they eventually recede or become ineffective in preventing environmental degradation).⁵⁰ The Polonoroeste EPIN exemplifies this situation. This outcome suggests caution in assessing an EPIN's capacity for persuading or changing opponents' behavior merely on the basis of the emotional content of the issues. A more likely result is rhetorical manipulation, and the few cosmetic improvements that occur during project implementation tend to be reversed in the medium to long term. An EPIN whose strategic capacity is low in spite of dealing with emotional issues lacks the structural resources needed to guarantee environmental protection in the long run.

Hypotheses 2 and 3 suggest the same outcome as hypothesis 1—limited effectiveness. Hypothesis 2 accounts for an EPIN that deals with an issue with high environmental visibility, that has low structural capacity, and that chooses a target with a high capacity for effecting change. Hypothesis 2 is exemplified by the first phase of the Carajás EPIN, when it lacked the strategic capacity to pressure its target to change environmentally harmful practices. Yet because the issue had high environmental visi-

49. For a detailed assessment of the environmental and Amerindian-related conditions implemented and not implemented by the Polonoroeste, Carajás, and Planaflores projects, send e-mail request to the author at mrodrigu@holycross.edu.

50. For information on how variables were operationalized and how the criteria for "high" and "low" were assigned, e-mail the author at mrodrigu@holycross.edu.

TABLE 1 *Conditions Determining the Short- and Long-Term Effectiveness of Environmental Protection Issue Networks (EPINs)*

<i>Hypothesis</i>	<i>Issue Visibility</i>	<i>Strategic Capacity</i>	<i>Opposition Target's Capacity</i>	<i>Nature of EPIN's Effectiveness</i>
1	high	low	low	limited effectiveness; EPIN's achievements likely to be neutralized in the long-term.
2	high	low	high	limited effectiveness; EPIN may succeed in obtaining a response from a capable target, but sustainability is dependent on target's commitment.
3	high	high	low	limited effectiveness; EPIN is likely to succeed in obtaining a response from target, but target's limited capacity makes responses unlikely to affect the context structurally.
4	high	high	high	significant effect; achievements likely to be sustainable if mobilization is maintained.
5	low	high	high	significant effect; achievements are likely to be sustainable if mobilization is maintained.

NOTE: Short-term refers to an EPIN's achievement lasting up to two years after project completion. Long-term means that an EPIN's achievements have lasted for ten years or more since first implemented.

bility, the target (the CVRD) was sensitive to the EPIN's potential capacity to mobilize the public against CVRD practices (particularly in Europe). As a preventive measure, the company promoted some environmental protection measures to avoid a potential increase in EPIN pressure.

It should not be a surprise if during a "preventive process" (aimed at avoiding further pressures from an EPIN), some elements of the opposition become persuaded by the EPIN's arguments. If this change occurs, long-term environmental protection may result. This process is illustrated by the CVRD's continuing (although greatly reduced) funding for demarcation of Amerindian lands.

The Carajás EPIN's second stage of mobilization (characterized by its concern with the pig-iron industry and other socioecological problems in the Carajás region) supports hypothesis 3. In this case, the EPIN's redefinition of priority issues helped improve its strategic capacity. Yet the issues' high environmental visibility and the networks' increased capacity had only a limited effect in the context. The key factor constraining the EPIN's effectiveness was the limited capacities of the network's targets.

Finally, hypotheses 4 and 5, supported by the analysis of the first phase of the Planaflores EPIN and the network's recent evolution, suggest that regardless of the nature of the issue at stake (low or high environmental visibility), if the capacities of both the EPIN and its targets are high, the EPIN's effectiveness in promoting environmental protection may be significant. The results may contribute to rational utilization of natural resources.

The concept of environmental protection issue networks (EPINs) and the study of their effectiveness can be useful resources in both theoretical and empirical efforts to address environmental problems. Because these problems usually originate in local processes yet have global repercussions, their treatment requires action at both levels. Most environmental management initiatives, however, have focused on either the international or the domestic arena and thus have failed to integrate these spheres.

EPINs' dependence on their local membership base has major implications for theoretical efforts to analyze environmental management initiatives. As the results of my research suggest, analysts must be wary of the tendency to overemphasize the role of international actors and the scope of their actions at the expense of local dynamics. This lesson may also be of value to students of other transnational problems that plague specific Latin American countries, such as drug trafficking.

Finally, one of the most interesting questions not answered here is the extent to which EPINs may be a valid tool for evaluating environmental management alternatives in developed countries. Two important features of EPINs' structural capacity suggest that in the short and medium terms, they may not be effective in mobilizing against environmental degradation in the North. First, EPINs depend on cooperative arrangements between northern and southern nongovernmental groups to advocate their demands on a global level. It is unlikely, however, that southern nongovernmental groups will develop (at least in the short term) the technical and material capacity to participate effectively in local and regional environmental struggles in the North. Second, a key resource of EPINs is their skillfulness in influencing domestic and international environmental policies by pressuring actors like multilateral development banks. Environmental problems in the North are unlikely to be brought to such fora because national governments in the North are only marginally affected by the policies of multilateral development institutions. This scenario may change in the long term because globalization may help raise awareness of the transnational links between economic and environmental problems, and the transnational capacity of southern groups may also increase. Could the opposition to the 1999 meeting of the World Trade Organization (WTO) in Seattle have been a precursor of such change? If and when that happens, EPINs may become major contributors to environmental management initiatives not only in developing contexts but on the global level as well.

APPENDIX 1 *Abbreviations and Acronyms*

ABA	Associação Brasileira de Antropologia
ASP	Amerindian Special Project
BASA	Banco da Amazônia
CIMI	Conselho Indígena Missionário
CNS	Conselho Nacional dos Seringueiros
CPT	Comissão Pastoral da Terra
CTI	Centro de Trabalho Indígena
CUT	Central Unica dos Trabalhadores
CVRD	Compania Vale do Rio Doce
FIPE	Fundação Instituto de Pesquisas Econômicas da Universidade de São Paulo
FUNAI	Fundação Nacional do Índio
IAMA	Instituto de Antropologia e Meio Ambiente
IBAMA	Instituto Brasileiro do Meio Ambiente e Recursos Naturais Renováveis
IEA	Instituto de Estudos Amazônicos e Ambientais
INCRA	Instituto Nacional de Colonização e Reforma Agrária
OSR	Organização dos Seringueiros de Rondônia
PGC	Programa Grande Carajás
PLANAFLORO	Plano Agropecuário e Florestal de Rondônia
POLAMAZONIA	Programa de Polos Agrícolas e Minerais da Amazônia
POLONOROESTE	Programa de Desenvolvimento Integrado do Noroeste do Brasil
SUDAM	Superintendência de Desenvolvimento da Amazônia

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