



Stakeholder Networks in International Development Projects in the Amazon rainforest

Lucas de Oliveira Paes

Key points:

- Networks of stakeholder engagement reveal power relationships in multilevel governance structures.
- Stakeholder networks in international development projects in the Amazon rainforest show a division of labor between actors that have recurring or varying partners across projects.
- Big transnational non-governmental organizations and intergovernmental organizations work as bridges across stakeholders and different projects, while national states actor concentrates both such bridging positions and are part of dense webs of recurring relations.
- Other local and transnational stakeholders such indigenous organizations and research institutions have many relationships with recurring project partners.
- The concentration of bridging positions can reveal relevant sources of expertise for project development and execution, but it also shows an untapped potential for wider range of actors being involved in the scaling up of experiences and forms of knowledges in the region.

Introduction

The governance of environmental issues has become a central challenge in world politics. These issues are often complex, thus requiring flows of knowledge and resource from multiple actors across multiple levels. International development cooperation is a channel for these varied sets of actors to join their efforts in concrete projects and policies, allowing for global engagement with local environmental challenges. It thus can anchor policy networks capable of structuring polycentric modes governance. Yet, empirical research has shown that policy networks are sites of political disputes, (re)producing power relations and affecting the capacity of different social groups to influence relevant outcomes. In this brief, we examine such dynamics in the network of stakeholders involved in development, execution or governance of internationally funded projects in the Amazon.

The Global Environmental Facility and the International Development Cooperation in the Amazon Rainforest

The preservation of the ecosystem anchored in the Amazon basin has relevant history in the development of transnational environmental advocacy networks. In the 1980s, the merger of social concerns of Amazonian grassroots activists in Brazil and the environmental concerns of national and international non-governmental organizations (NGOs) was fundamental to the incorporation of key sustainability norms in multilateral development assistance frameworks. After the United Nations Conference on Environment and Development (UNCED) in 1992, development initiatives targeting environmental issues became more and more relevant.

One of such pioneering initiatives was the Global Environmental Facility (GEF). Established in the UNCED in 1992, the GEF is a partnership of multiple UN agencies, multilateral banks, states, and civil society actors with

the mandate of assisting countries in the implementation of international commitments. The GEF has been operating since 1995 and has become the largest multilateral financial mechanism for environmental cooperation. The Amazon region has been a locus of GEF projects since its pilot phase, having granted 437,4 Million USD and mobilized 2,2 Billion USD in co-financing to 60 projects over the years. Table 1 detail project allocation by focus.

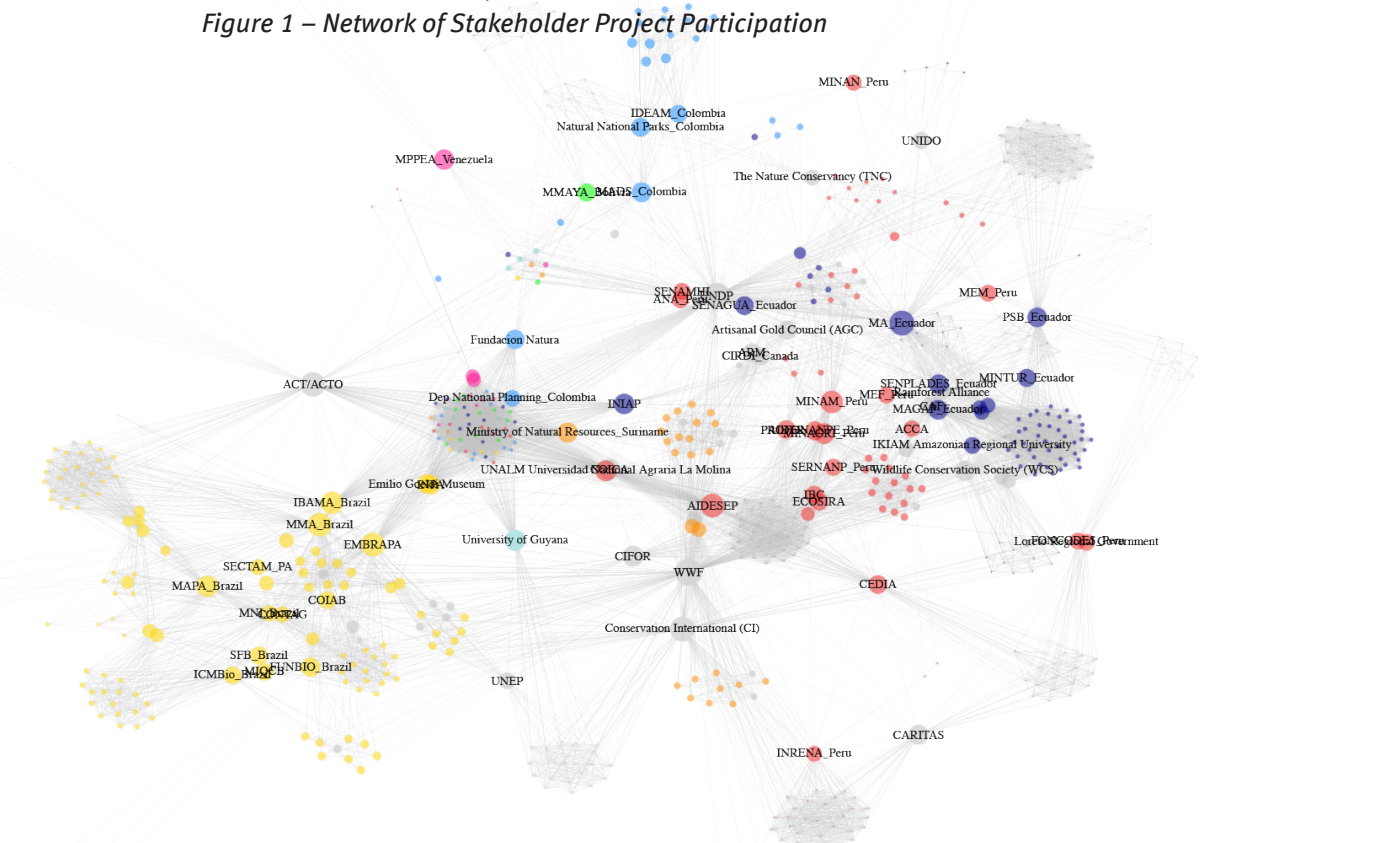
While relevant, the GEF is not the only channel of international cooperation on the Amazon rainforest. Many other partnerships have flourish recently. In particular, initiatives related to the payments for forest-based emissions reductions, such as the Amazon Fund and the Green Climate Fund, have become key forms of global cooperation in the region. Nevertheless, GEF’s pioneering role in structuring international environmental projects can be an important baseline to which compare networks of participation in other initiatives.

Mapping Stakeholder Networks in the Amazon rainforest

Stakeholder network can be conceived as an aggregated policy network, in which each relationship reflects a pair of actors working together in a project. For this analysis, we focused on all the 60 projects that have the Amazon biome as an implementation site. Hence, this excludes projects with Amazonian countries that have only a national scope or focus on other subnational regions. We consider as participants in a project both the executing agencies and the actors listed in the project’s documents as being a being part of the project governance (i.e., in a steering or advisory committee) or being listed as a partner in the project execution.

Each actor was then classified by nationality and type. Actors with transnational or international character have

Figure 1 – Network of Stakeholder Project Participation



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been classified apart in the nationality criteria. In terms of types, actors have been grouped as either: National State Organizations, Subnational State Organizations, Intergovernmental Organizations (IGOs), Non-Governmental Organizations (NGOs), Indigenous Organizations, Labor Organizations, Industry Associations, Research/Educational Institutions or Private Firms. Figure 1 shows the resulting stakeholder network, in which each circle (or node) represents a stakeholder, and each line reflects co-participation in at least one project.

A first glance at the stakeholder network depicted in figure 1 already gives some insight into patterns of interaction in international cooperation in the Amazon. The colors of nodes in the network reflect the national affiliation of actors. One can then see that projects interactions are most frequent among actors of the same country, as nodes of the same color cluster in the network. In particular, Brazilian actors (in yellow) have worked mostly with other Brazilian actors, composing a segment less connected to the overall network. Cross-national cooperation is somewhat more noticeable among Colombian (in blue), Ecuadorian (in purple), and Peruvian (in red) actors, as well as among the latter and actors from Suriname (in orange). We can also see that transnational/international actors, represented with gray circles, are placed between these nationally anchored segments of the network. Some of these actors are institutions of UN-system, such as UNEP and UNDP, others are big international non-governmental organizations, such as the World Wildlife Fund (WWF) and Conservation International (CI).

Networked Politics in the Amazon rainforest International Cooperation

The scholarship on network analysis, in general, and stakeholder networks, in particular, provides several tools to further unpack the politics underlying these structures. One useful way of looking at these networks is by studying bonding and bridging positions. Actors in bonding positions are those who work in a close-knit group, with recurring and redundant interactions. This is the position occupied by actors within the several fully connected clusters in figure 1, where most actors have ties with all others. That indicates sites of closer collaboration and trust-building among actors that tend to work with the same others in one or multiple projects. Actors in bridging position are those working with groups of actors that do not have relations amongst themselves. They are associated with the capacity of bringing new sources of information and resources across groups, but also the power to control those flows. In stakeholder networks, bridging positions are occupied by actors that work with different sets of partners across many projects.

The network above has both bonding positions, occupied by actors in densely connected components, and bridging positions, occupied by actors whose ties span across groups. This structure may suggest aspects of polycentric

modes of governance, in which stakeholders in local environmental resource management work together recurrently, while other actors coordinate larger scale exchanges of resources and knowledge. Nevertheless, this structure may also reveal important power asymmetries stemming from the concentrated capacity of a limited number of actors to control which resources and information flow where, and which practices are scaled up and transferred across projects.

In this sense, it is important to examine which actor groups of actors occupy each position. These positions can be mapped through network centrality measures. Eigenvector centrality can help identifying bonding positions because it is a measure that takes into consideration both the number of ties of each actor and the number of ties of those with which they have relations. Hence, it helps identify positions in denser parts of the network. Betweenness centrality captures bridging positions quite precisely, as it measures the extent to which an actor intermediates connections among any other actors in the network.

Figure 2 describes the distribution of each centrality score by country and type of actor. It shows some interesting contrast between groups in terms of bonding and bridging position. Comparing graphs A and B, one can see how actors from the Amazonian countries have a considerably higher share of bonding position than bridging positions. Transnational/international actors, in turn, have the greatest share of bridging positions (graph B) while having only a minor share of bonding positions (graph A). Such a contrast is also existing among types of actors, as one can see comparing graphs C and D. Most actors have a higher share of bonding than bridging centrality, except for NGOs and IGOs. NGOs and IGOs concentrate almost half of bridging centrality but only 12% of bonding centrality. In fact, almost all NGOs with high bridging centrality are transnational and all IGOs are, by definition, international. In turn, actors with higher concentration of bonding centrality such as indigenous organizations and research institutions tend to be national (and often local). One exception in this pattern are the National state actors (those from Brazil in particular), which have a considerable concentration of the two types of centralities.

This concentration of bridging positions in IGOs, big transnational NGOs as well as national states, suggests important asymmetries in the multilevel governance of the Amazon rainforest, in the scope of this analysis. The role of these three types of actors in the broader architecture of GEF of course may explain this pattern. It also certainly reveals actors that concentrate expertise for project development and execution and are fundamental in the coordination of different initiative in the region. Furthermore, it is very possible that other types of local stakeholder engage with these bridging actors

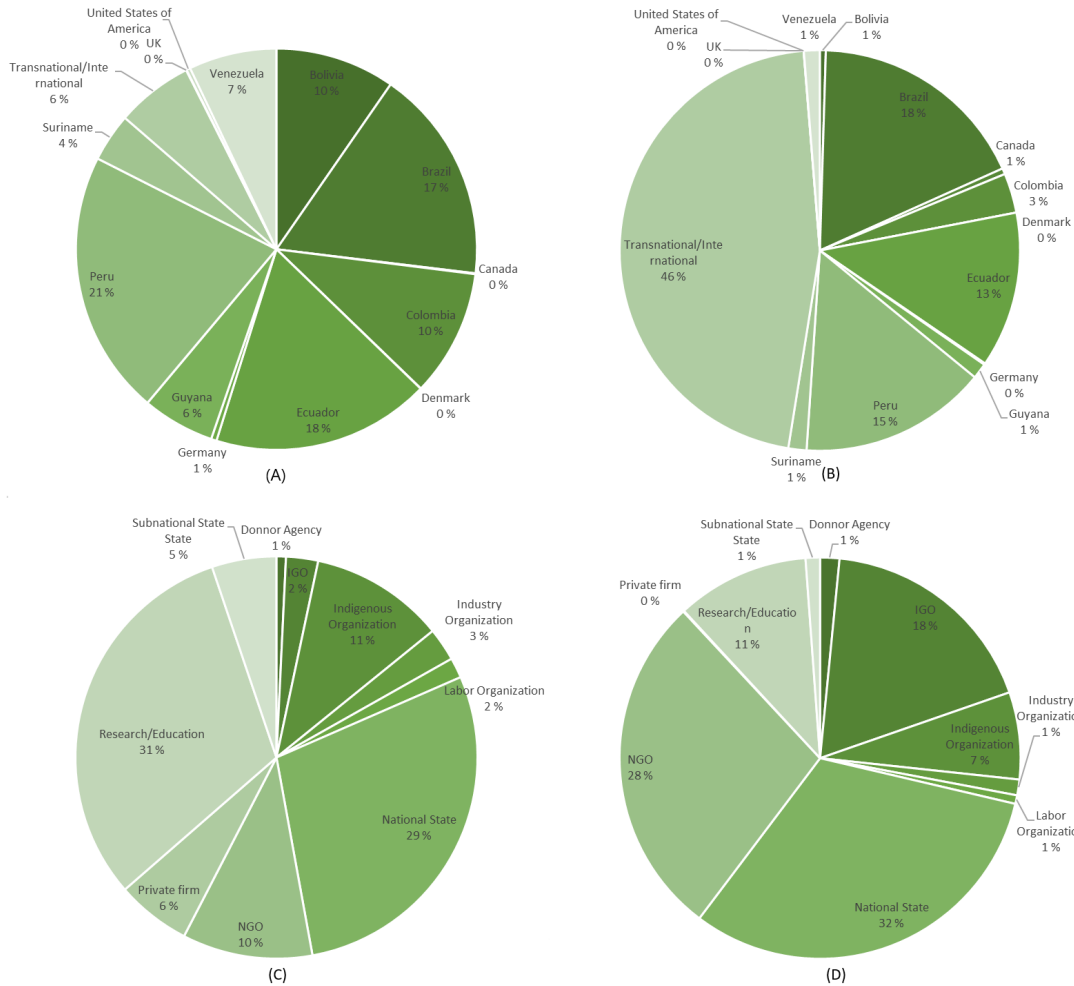


Figure 2 – (A) Shares of eigenvector centrality (bonding) by stakeholder nationality; (B) Shares of betweenness centrality (bridging) by stakeholder type; (C) Shares of eigenvector centrality (bonding) by stakeholder nationality; (D) Shares of eigenvector centrality (bridging) by stakeholder type.

through other channels than joint participation in the universe of projects analyzed. Nevertheless, the concentration of bonding centrality in other local and transnational stakeholders—such as indigenous organizations and research institutions—suggests that these actors may have expertise that they could be involved in scaling up to other projects. Therefore, these patterns point to an untapped potential for the involvement stakeholders such as national and transnational indigenous organizations or research institutions across projects in the region.

Endnotes

- 1 Ostrom, Elinor. “Polycentric systems for coping with collective action and global environmental change.” *Global Justice*, 2017. 423-430.
- 3 Berardo, Ramiro, et al. “Networks and the Politics of the Environment.” *The Oxford Handbook of Political Networks*. Oxford: Oxford University Press, 2016. 611-28.

Dr. Lucas de Oliveira Paes is a Senior Research Fellow at the Norwegian Institute of International Affairs.

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NUI
 Norwegian Institute of International Affairs
 C.J. Hambros plass 2D
 PO Box 8159 Dep. NO-0033 Oslo, Norway
 www.nupi.no | post@nupi.no

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