WORKING GROUP
Sustainable Infrastructure Development: Guidelines and Standards

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Sustainable Infrastructure Projects in the Brazilian Amazon: Lessons Learned from Two Case Studies

Paulo Branco, Lívia Menezes Pagotto, Mario Monzoni, Daniela Gomes Pinto

(Center for Sustainability Studies – Fundação Getulio Vargas)

The implementation of large infrastructure projects in the Brazilian Amazon has historically raised vigorous debates, particularly on the carrying capacity of hosting locations regarding environmental impacts and socioeconomic consequences. Small municipalities and surrounding areas where such projects are installed are usually ill prepared to manage the intense changes brought by them, and are characterized by fragile social organization and lack of financial resources. Migration, higher income basis, and pressure on infrastructure, services, social organization and natural resources represent long-term social and environmental repercussions.

Considering the flow of financial, material and human resources derived from the installation of large-scale projects, local communities and governments should be provided beforehand with the adequate institutional environment, policies and instruments for territorial planning in order to avoid later boom-collapse consequences, and to be better equipped to benefit from local development opportunities derived from those projects. In addition to it, a stronger territory reduces risks for large projects entrepreneurs.

One major milestone put a spotlight on the need of strengthening sustainability criteria into infrastructure projects in Brazil. The Growth Acceleration Program (PAC), created in 2007 by the federal government, fostered a boom of large infrastructure projects countrywide. Almost ten years later, there are many open questions about these projects' legacy for the Brazilian society and even for the national economy. In this same context, the main national regulatory instrument for controlling social and environmental impacts of infrastructure projects - the environmental licensing[1] – is being currently challenged by some groups that are willing to soften the constraints for entrepreneurs willing to install or renew the license to operate their businesses. This should bring further pressure on

[1] Brazil, 1981. Law 6.938/81 and the CONAMA Resolution 001/86 and No. 237/97.

already existent major challenges in delivering development with social justice, environmental protection and more equal distribution of economic development nationwide. Further, the set of processes and procedures adopted by infrastructure projects too often accumulate risks for businesses, with lawsuits and reputational scandals for entrepreneurs. Therefore, the incorporation of sustainability principles in such contexts requires innovative frameworks and initiatives.

Main Challenges

How to build strategies on sustainable infrastructure to be implemented by governments, private sector and key stakeholders in civil society? In the context of large-scale infrastructure projects in the Brazilian Amazon – and other similar contexts worldwide – three main challenges should be observed for sustainable infrastructure achievement.

First, any strategy for large-scale infrastructure investment should be connected to a **broader territorial planning strategy**, linked to national and regional development plans. This integration could guarantee that short-term investments are connected to public policies and broader investment plans, therefore triggering long-term benefits for the region. During the past 15 years, a set of national milestones determined the incorporation of the territorial dimension in government planning policies in Brazil[2]. These initiatives, however, has been either terminated or fail to effectively lead to territorial planning across the country[3].

The second main driver to be observed is that large scale infrastructure should be responsive to **local development** strategies. This so-called territorialisation of broader planning comprehends (i) an analysis of the integration of public and private investments for local development plans; (ii) strategies for federative cooperation; (iii) the identification of challenges not covered by national and state long-term plans (*PPAs* in Portuguese); and (iv) indicators for monitoring and evaluation[4].

Thirdly, there is the challenge of **connecting the environmental licensing of specific projects to a broader vision of territorial development**. Environmental and social constrains imposed to the projects' entrepreneurs by the national or state environmental authorities in order to mitigate or compensate environmental and social impacts are often related to territorial demands – such as hospital and school's construction, sanitation systems, and natural resources management. Those activities should be proposed and implemented with a clear focus on long-term goals instead of merely shortcuts for licenses permits, thus guaranteeing efficiency in resource use and more sustainable benefits.

[2] Examples are the National Development Agenda, the Sustainable Amazon Plan, the National Policy for Regional Development, the Citizenship Territories Program, and the Territorial Development Agendas (ALBUQUERQUE & COUTO, 2014).
[3] Garcia 2010 apud Garcia & Cardoso 2015
[4] Brazilian Federal Government, 2014.

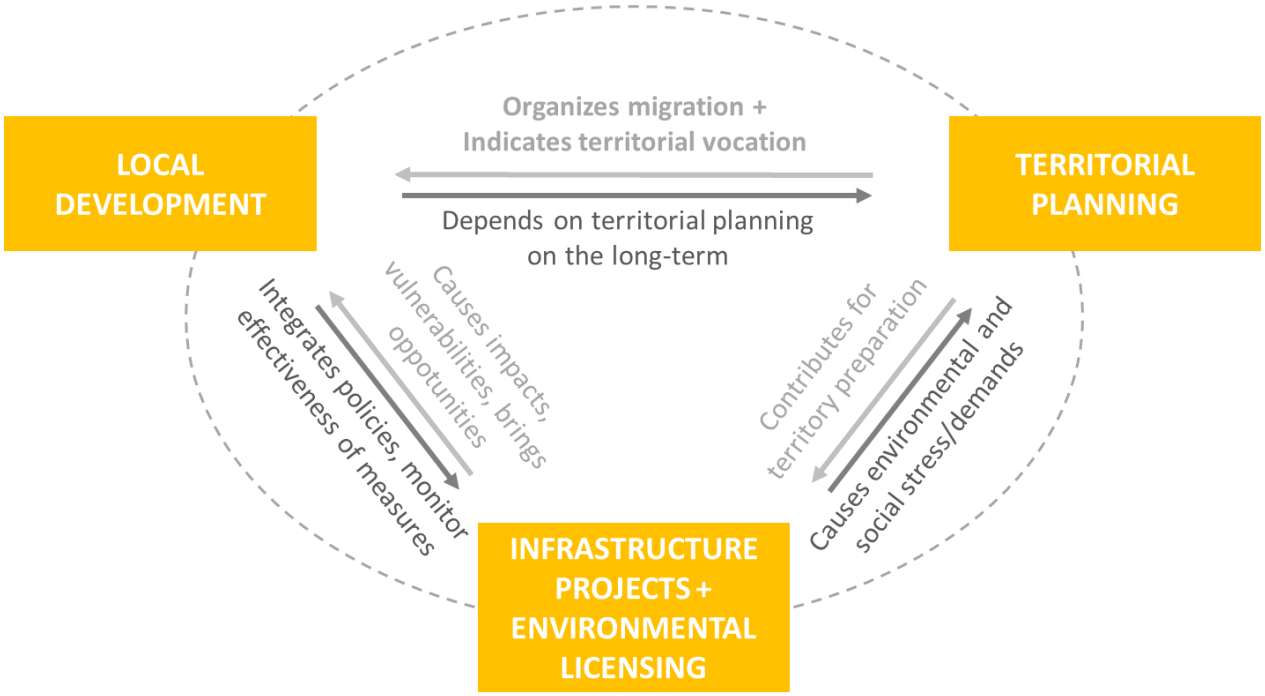

Figure 1: Main challenges for building strategies on sustainable infrastructure
Source: Own elaboration.

CASE STUDIES

This section presents lessons learned by two initiatives focused on fostering sustainable practices in infrastructure projects in the Brazilian Amazon at governmental and/or corporate level.

Case 1: Main challenges for incorporating national standards/good practices into corporate and public procedures in environmental licensing process: the Belo Monte Hydroelectric power plant experience

The Center for Sustainability Studies of the Getulio Vargas Foundation implemented a 2-year project comprising the construction of a social control tool for observing compliance of environmental and social licensing in the context of the Belo Monte Hydroelectric Power Plant. Based on this experience, some challenges were identified regarding incorporation – or lack of - of guidelines for sustainable infrastructure in Brazil.

In Belo Monte, there were huge expectations regarding the promotion of regional development through investments brought by Belo Monte Hydroeletric power plant. Besides U$ 10 billion invested in the plant and further U$ 800 million designated for compliance of environmental and social constrains, another U$ 160 million were compromised for the implementation of the Sustainable Regional Development Plan of Xingu (PDRSX) – a multistakeholder territorial planning strategy aiming to prepare the region for the huge investment – and disturbance - in sight. In spite of the elaboration of much needed **territorial planning** and after the composition of a complex

multistakeholder governance for its implementation, challenges remain on how to cope with the dramatic and rapid changes brought by the project, and with the inequalities between local capacities for long-term territorial actions and corporate capacities for project implementation. Initial findings point to the need of **"taylor-made" local development guidelines and tools** in cases of territories hosting large-scale investments.

Since large-scale infrastructure interfere in territorial governance, it is imperative that programs and activities regarding impact mitigation and compensation within **environmental and social permits procedures should be deeply connect to territorial planning** in course. In Belo Monte, there were no clear procedures for such integration, nor in the planning phase, or later in the monitoring of both project and territorial planning execution. There was resistance to promote dialogue between conditionalities of the environmental licensing process and actions within the PDRSX, not only by local actors but also government bodies. Such a "firewall" to guarantee project execution disabled the possibility to implement integrated – and thus more efficient and effective - actions within environmental licensing and territorial planning.

The promotion of local development requires local actors to be empowered – not only by increasing their institutional capacity for tackling such new challenges, but also by bringing them autonomy and offer them effective accountability and monitor instruments and networks. Because of the lack of clear guidelines to achieve and monitor such efforts, in Belo Monte such **institutional capacity building strategy** was embedded in environmental licensing demands, therefore transmitting for the entrepreneur the responsibility to strength institutional capacity of developmental local authorities in all federative levels.

Finally, Belo Monte presented a variety of examples of poor **social participation** in the decision making processes[5]. The lack of participation of the local population in the implementation of the sanitation system and in the displacement of affected population are two drastic examples of how low compliance of existing guidelines regarding accountability, transparency and social control can trigger project delays and reputational costs for entrepreneurs.

Case 2: Guidelines for Public Policies and Corporate Practices on Sustainable Infrastructure in the Brazilian Amazon

The ongoing project *Guidelines for Public Policies and Corporate Practices on Sustainable Infrastructure in the Brazilian Amazon Region* is a voluntary and multistakeholder initiative dedicated to the creation of procedural strategies on sustainable infrastructure.

The activities started in 2015 under the joint leadership of the Center for Sustainability Studies of Fundação Getulio Vargas (GVces) and the International Finance Corporation (IFC) Brazil. Five thematic Working Groups – Local Development Agenda, Financing Instruments, Institutional Capacity, Vulnerable Groups and Human Rights, and Spatial Planning – led technically by the GVces, the IFC and specialists, subsidized the development of thematic working papers drafts and public periodic discussions.

[5] GVces, 2015: Road Map: Institutional capacities and social participation, Indicators of Belo Monte.

Altogether, more than 80 organizations and 250 people (indigenous communities, NGOs, private companies, public organizations, banks, specialists and scholars) are currently engaged in the initiative. Such an extensive and continuous stakeholder engagement's process aims at fostering that the future *Guidelines* are put into practice by different actors across multiple geographical and administrative levels.

So far, the main achievements obtained can be summed as follows:

- Systematized knowledge in main issues (territorial planning, financing instruments, institutional capacity, vulnerable groups and human rights, and spatial planning);
- Dialogue among a diverse set of actors (e.g.: federal and subnational governmental level, companies and NGOs);
- Strong engagement of private sector and civil society in discussions;
- Increasing engagement by federal government, including the National Environmental Protection Agency (Ibama), the National Economic and Social Development Bank (BNDES), and Secretary of State (Casa Civil);
- Engagement of Brazil's World Bank team, related to the discussions of infrastructure governance improvement in the country;
- Engagement of indigenous groups and traditional communities in the working groups
- GVces and IFC recognized as "neutral" players providing ambience for broader discussions and propositions.

Activities continue to be carried out in 2016 and some challenges are foreseen ahead. The current Brazilian political and economic turmoil situation can hinder the desired project's progress, especially because of hampering the engagement of public servants in the *Guidelines* development and distancing the project's objectives from the public policies. Therefore, the results are expected to be oriented also for self-regulation by corporate actors, stimulating an ambience for best practices. Moreover, because the initiative is providing a space of debate not previously existent, interest among different actors are increasing, including participants from remote areas (indigenous and traditional communities) thus increasing operational costs. Finally, a multistakeholder collective construction brings extreme different visions of a much heated debate in Brazil. To be able to systematize those learnings in consensual guidelines – and highlighting disagreements - is the main challenge for the success of the initiative.