



Task Force 02

**SUSTAINABLE CLIMATE ACTION AND INCLUSIVE JUST ENERGY TRANSITIONS**

## Opportunities and Challenges for Promoting Sustainable, Resilient and Inclusive Infrastructure in Environmentally-Sensitive Regions

Brent Millikan, Grupo de Trabalho Infraestrutura e Justiça Socioambiental (Brazil)

Maria Elena Rodriguez, Brics Policy Center, PUC-RJ (Brazil)

Ricardo Abramovay, PROCAM/IEE/USP (Brazil)

Cesar Gamboa, Derecho Ambiente y Recursos Naturales (Perú)



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## Abstract

In recent decades, infrastructure investments in environmentally-sensitive regions - such as the Amazon biome, shared by nine countries - have often prioritized mega-projects - especially transportation corridors for export-oriented agribusiness and mining commodities and large hydroelectric dams with associated transmission lines. Such interventions have contributed to conversion of forests and other native vegetation and associated greenhouse gas emissions, loss of biodiversity, land conflicts and migration to urban peripheries that lack basic infrastructure services, failing to improve the quality of life of the vast majority of local populations.

An alternative pathway should be based, firstly, on protecting the infrastructure of nature; as in the case of the Amazon, forests and rivers that provide ecosystem services essential for maintaining local livelihoods, as well as regional and global benefits in terms of conservation of biodiversity, regulation of hydrological cycles and climate resilience.

An urgent priority is to overcome deficits in essential infrastructure for people's well-being, especially among marginalized groups, in terms of healthcare, education, sanitation, access to energy, mobility and communications. This should include special attention to improving the quality of life in urban areas, which are increasingly vulnerable to extreme weather events intensified by climate change.

Additionally, infrastructure investments in transportation, energy and communications should be reoriented towards support for economic alternatives based on the sustainable use of biodiversity, value-added supply chains, and technological innovation, prioritizing community-based initiatives and valuing traditional knowledge.

We argue that national and multilateral public financial institutions can play important roles in supporting the design and implementation pathways for sustainable, resilient, and inclusive infrastructure in environmentally sensitive regions such as the Amazon, including support for upstream planning based on innovative, participatory methodologies. Similarly, foreign direct investments should be based on the guidelines of this alternative pathway.

**Keywords:** Infrastructure, Climate Resilience, Social Inclusion, Sustainability, Finance

## Diagnosis of the issue

The adverse social and environmental consequences of large infrastructure projects in environmentally-sensitive regions such as the Amazon biome have been closely related to deficiencies in planning instruments and decision-making processes in sectoral planning in terms of alignment with sustainable development goals, prior analysis of socio-environmental risks, economic viability and alternatives, and mechanisms to ensure transparency and participation of civil society (6,7). In this regard, we highlight the following key points:

a. Sectoral planning for transportation infrastructure has often prioritized corridors for export-oriented agribusiness and mining commodities while neglecting other critical needs, such as logistics to support economic activities based on the sustainable use of biodiversity, especially at the community level (1). Political decisions regarding logistical corridors have frequently not been preceded by robust analyses of socio-environmental risks, economic viability, and alternatives in terms of social, environmental, and economic cost-benefit. Transparency and participation of civil society have also tended to be lacking, contributing to undue influence by corporate lobbies and corruption (7).

b. Within the energy sector, decisions on large projects in environmentally-sensitive regions, such as hydroelectric dams and fossil fuel exploitation, have not been part of strategic plans for a just energy transition that include comparative analyses of alternatives in terms of social, environmental, and economic factors, with transparency and civil society participation. Large hydroelectric dams have frequently been mistakenly characterized as sources of “clean energy”, downplaying their adverse social and environmental impacts. (2,3). In the Amazon, a longstanding problem in the Amazon has

been an excessive dependence on fossil fuels for electricity generation and transportation, both in urban and rural areas, reflecting a neglect of potential alternatives, such as substituting diesel generators with solar power or using biodiesel originating from sustainable use of local plant species in remote communities (11).

c. A recurrent problem in the planning of large infrastructure projects, especially in frontier regions such as the Amazon, is the need for greater attention to how issues of **territorial governance** contribute to socio-environmental risks and impacts (4,7,8,12). These include phenomena such as: i) land tenure policies that facilitate real estate speculation and land-grabbing on public lands, with forest clearing often recognized as an ‘improvement’ for purposes of granting private titles, ii) lack of recognition of territorial rights of indigenous peoples and other traditional communities and disregard for the right of indigenous peoples and other traditional communities to process of Free, Prior and Informed Consent (FPIC), as established by Convention 169 of the International Labor Organization (ILO) and other legal statutes, iii) ‘flexibilization’ of norms on natural resource exploitation within conservation units and other protected areas, catering to narrow political and economic interests, iv) backsliding on policies to address organized crime involved in such activities as illegal logging and mining. (9) Tendencies to downplay such factors can negatively affect decision-making on alternative projects and needs to strengthen territorial governance prior to the initiation of infrastructure projects (7).

d. Within this context, economic viability studies have often failed to internalize the costs of preventing, mitigating, and compensating social and environmental impacts. Proponents of mega infrastructure projects in the Amazon have been characterized by excessive optimism regarding construction costs and timelines in planning these projects.

In the hydroelectric sector, estimates of the generation capacity of Amazonian dams have been based on historical data, overlooking the impacts of climate change and regional deforestation on hydrological dynamics while downplaying the potential risks of extreme weather events, both in terms of droughts and flooding (2,3).

e. While mega-infrastructure projects have contributed to the displacement of rural populations, there has been a growing deficit of essential infrastructure in nearby urban areas where local populations increasingly reside - in terms of healthcare, education, access to water, and sanitation, mobility, public safety, and communications. In the case of the Amazon, such deficits are particularly acute in the peripheries of large cities such as Manaus and Belém, as well as remote urban areas (1,2).

f. Problems related to deficits in transparency and civil society participation in infrastructure planning have contributed to a preference for mega-projects catering to the narrow interests of powerful economic and political groups. Such phenomena have often been linked to corruption schemes, as illustrated by recent cases involving large hydroelectric dams and highway construction projects in the Amazon (2,5,6).

g. Finally, public and private financiers still require more robust due diligence policies to avoid supporting large infrastructure projects with high socio-environmental risks, including violations of local communities' rights. Typically, safeguards of financial institutions have been limited to formal requirements, such as the presence of an environmental license, which may be granted and/or maintained despite violations of human rights and environmental legislation (8).

## Recommendations

Given the above diagnosis, we propose an alternative pathway for promoting sustainable, inclusive, and resilient infrastructure in the Amazon Basin based on the following recommendations for practical steps to be taken by government and multilateral agencies in collaboration with communities, civil society organizations, and the private sector:

i. There is an overarching need to **strengthen the governance of infrastructure planning in environmentally-sensitive regions such as the Amazon**, ensuring that instruments and decision-making processes, beginning with upstream sectoral planning, are based on alignment with sustainable development goals (including those related to Nationally Determined Contributions (NDCs), biodiversity, and human rights), effective tools for the improved analysis of socio-environmental risks (including cumulative impacts with other projects), economic viability and alternatives, based on multi-criteria methodologies that incorporate social, environmental and financial variables, with mechanisms to ensure transparency and effective civil society participation (7).

ii. Such improvements in planning, which can enormously help identify and design projects that best serve the public interest while screening for high-risk projects to avoid, require adjustments to **planning and regulatory frameworks** at the national and regional levels (in the latter case, including cross-border infrastructure) (7).

iii. While improved upstream planning can significantly reduce the risks of ill-conceived projects and their adverse social and environmental consequences, it is also critical to ensure that instruments and decision-making in the **project phase** avoid tendencies to downplay socio-environmental risks, undermining their potential to prevent

and mitigate negative impacts. This should include mitigation measures related to ‘indirect’ and a priori impacts such as land speculation, that are typically fueled by the announcement of projects, prior to their construction phase. Mechanisms to ensure effective participation, including local communities' perspectives of development, and transparency, facilitating public access relevant data throughout the project cycle, should be an integral part of such efforts (6,7).

iv. Analyses of the socio-environmental risks of large infrastructure projects in environmentally-sensitive regions such as the Amazon require particular attention to **risks of unsustainable patterns of natural resource exploitation and related socio-environmental conflicts**. An essential step towards minimizing socio-environmental risks of infrastructure projects, especially in frontier regions such as the Amazon, is to **strengthen territorial governance**, guaranteeing the presence of the State and the rule of law, addressing such critical issues as a) recognition of territorial rights of indigenous peoples and other traditional communities, b) consolidation of conservation units and other protected areas, with legal mechanisms to avoid decommissioning in response to narrow interests of powerful economic and political actors, and c) control of land-grabbing on public lands and other serious crimes, such as illegal logging and mining, and use of slave labor, prioritizing intelligence and technological innovation, including cross-border cooperation among neighboring countries. If decisions are made to go ahead with infrastructure projects based on robust and transparent criteria, concrete steps to strengthen territorial governance – should precede the initiation of civil works.

v. In the **transportation sector**, there is an urgent need to revise project-level guidelines for studies on the technical, economic, and environmental impacts of industrial waterways (*‘hidrovias’*) based on the transportation of export-oriented agribusiness and



mining commodities (7,12), which downplay the extent of the regional effects in the Amazon.

vi. In the **energy sector**, there is a need to improve planning and licensing instruments related to specific investments, such as **hydroelectric dams and exploitation of oil and gas**, to better account for socio-environmental risks, including cumulative impacts, especially within the context of the climate crisis (2,3). At the same time, such initiatives should be situated within broader debates on **national plans for just energy transitions**, questioning whether there are better options to address the legitimate needs of societies.

vii. **Legal loopholes** undermining legislation and legal decisions in defense of human rights and environmental legislation in the planning, licensing and implementation of large infrastructure projects, such as the *Suspensão de Segurança* in Brazil (8) and declarations of ‘public necessity’ or ‘public interest’ in Peru and Colombia, should be eliminated. In Peru, these loopholes include using easements to limit land property rights, including indigenous lands.

viii. With regard to transborder infrastructure projects such as the “Routes for South American Integration” recently-proposed by the Brazilian Ministry of Planning, improved planning tools, such as strategic environmental assessments are needed to improve decision making on alternatives that optimize benefits and minimize socio-environmental risks, avoiding a repetition of past mistakes.

ix. A critical step for promoting sustainable infrastructure is to ensure that the right to **Free, Prior, and Informed Consultation and Consent (FPIC)** of indigenous peoples and other traditional communities is effectively internalized within relevant moments in the planning processes, ensuring that consultations occur before political decisions

concerning policies, programs and projects that potentially affect their territories and rights. Consultation protocols, developed autonomously by indigenous peoples and other traditional communities that provide guidelines for appropriate processes of good-faith consultation, should be respected by governments, financial institutions, and project developers (7).

x. There is an urgent need to overcome deficits in social infrastructure that cares for people, especially marginalized groups in urban and rural areas; a fresh approach to infrastructure planning should include **flexible approaches to support community-led initiatives** in the areas of health, education, basic sanitation, transportation, access to energy and communications (including high-speed internet access), prioritizing food security and sovereignty and socio-biodiversity production chains, generating employment and income. Infrastructure planning should be reoriented towards support for economic alternatives based on the sustainable use of biodiversity, value-added supply chains, and technological innovation, prioritizing community-based initiatives and valuing traditional knowledge. (1)

xi. There are significant challenges to promoting **sustainable infrastructure within urban areas** where the majority of local populations often reside, within contexts of severe inequalities and climate vulnerability, that requires a holistic approach that dialogues with sectoral policies in urban planning, housing, health and sanitation, mobility, recreation, and economic opportunities. Investments should prioritize innovative approaches to sanitation, mobility, access to renewable energy, construction design, and landscape planning (1).

xii. **Public development banks**, such as the Inter-American Development Bank (IDB) and the World Bank can do more to strengthen their contributions to sustainable

infrastructure. This includes supporting improvements in upstream planning instruments (using participatory methodologies), strengthening project-level safeguards within specific sectors and supporting community-based initiatives.

## Scenario of outcomes

The suggested recommendations in this Policy Brief are oriented towards achieving the desired scenario of outcomes of the G20, as expressed in the Issue Notes of the Working Groups on Infrastructure (IWG), Energy Transition (ETWG) and the Initiative on Bioeconomy (GIB). Indeed, a holistic approach to infrastructure planning and implementation - as outlined above - based on securing ecosystem integrity and climate resilience, provision of essential services for people's well-being, and economic alternatives based on the sustainable use of biodiversity, with strong civil society engagement and governance (1,7) - may make significant contributions to the G20 goals of promoting long-term economic growth, reduction of poverty and inequalities (including subnational disparities), access to infrastructure among all citizens; enhanced productivity, and the sustained use of biodiversity for a bioeconomy that acts as an enabler of Sustainable Development.

Improved planning within the transportation and energy sectors, with due attention to issues of territorial governance and alternatives, can make significant contributions to avoiding problematic projects, especially with regard to deforestation and socio-environmental conflicts, including violence in the countryside.

Improvements to institutional and regulatory frameworks can bring positive results, as they provide greater security to investors, with a more solid basis for analyzing project alternatives in terms of opportunities and risks and responsibilities. This is especially relevant given recent trends in the development of taxonomies for sustainable infrastructure projects and special lines of funding, such as 'green bonds'.

Improved governance, in terms of transparency and civil society participation, is critical for ensuring alignment of infrastructure planning to the public interest, including issues related to sustainability, inclusiveness and resiliency.

Finally, an approach based on recognition of the importance of forests and rivers as essential infrastructure that provides ecosystem services that maintain local livelihoods while benefiting regional economies and the planet, especially in terms of biodiversity, hydrological cycles, and climate balance - is critical for ensuring that development pathways are truly sustainable, resilient and inclusive.

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