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debt and development

Reclaiming sustainable infrastructure as a public good



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Executive summary

> **"An aborted economic recovery, or worse, another lost decade, is not preordained. It is a matter of policy choice."**
>
> UNCTAD, Trade and Development Report 2020

Infrastructure is key for achieving sustainable development and for improving the living conditions of people across the world, in line with the Sustainable Development Goals (SDGs), the Paris Agreement and commitments on gender equality. Sustainable infrastructure investments are placed at the centre of development strategies by many donor governments and international financial institutions (IFIs), and governments across the world.

Yet, in the face of systemic deterrents to developing countries' domestic resource mobilisation – illicit financial flows, unsustainable and illegitimate debt burdens, unfair trade agreements, tax abuse by multinational corporations, and insufficient financial sector regulation – the mainstream narrative on infrastructure finance calls for the use of public resources and institutions to leverage private finance to fill in the so-called 'financing gap' for sustainable development. But this policy choice presents numerous risks, especially considering the unsustainable debt burdens already faced by countries in the global south, increasing inequalities and looming ecological collapse. Now that a 'private finance-first' discourse is gaining further traction as a policy response in Covid-19 recovery plans, a critical analysis and debate from a civil society perspective becomes increasingly important.

This report analyses infrastructure from a systemic perspective, examining it through the lens of four interconnected pillars: economic, governance, social and ecological. It also provides a working definition of what truly sustainable would mean if considering all these interlinked dimensions. Based on joint reflections by Eurodad and the Society for International Development (SID), the report builds on our work with partners from the global north and south, who provided in-depth and evidence-based analysis on concrete experiences that illustrate practices going on at the country and regional level. They are: AFRODAD (Africa region), Asociación Ambiente y Sociedad (Colombia), Fundación Ambiente y Recursos Naturales (FARN, Argentina), Observatori del Deute en la Globalització (ODG, Spain), Universidade Federal Rural de Pernambuco and Articulação Semiárido Brasileiro (URFPE and ASA, Brazil), and VB Platforma, Lithuanian NGDO Platform (Lithuania).

The study highlights that an emphasis on attracting (foreign) private investments towards infrastructure projects raises major concerns. Not only does this approach fail to address the structural barriers to socioeconomic transformation in developing countries, but it also exacerbates the existent development obstacles faced by these countries including indebtedness, commodity dependence, vulnerability to volatile capital flows, environmental damage, and weak public infrastructure systems.

In contrast, projects which have implemented active participation and even co-creation with local communities, integrated a gender-sensitive lens, and responded to local and national needs throughout their planning, design, and financing, are more cost-effective and ecologically sustainable. They also contribute towards the long-term development plans of countries whilst simultaneously serving the interests of local communities.

Civil society has a key role to play in reclaiming sustainable infrastructure as a public good by calling on decision makers and IFIs to shift course. We provide policy recommendations to advance this collective agenda, with actions that encompass the four interconnected pillars of our analysis.

Policy recommendations

1. Scale up publicly financed infrastructure, particularly in social sectors. Public financing is often less costly, more financially sustainable, and more directly accountable to citizens than private financing. Moreover, public interventions are critical for social equity reasons or where social returns are much larger than private returns. This requires:

    a) Putting in place an ambitious plan at the international level to increase domestic resource mobilisation, including through clamping down on losses of public resources through tax abuse, dealing with unsustainable debts through a new fair, democratic and transparent sovereign debt workout mechanism, withdrawing from and/or rejecting new unfair international trade agreements, and increasing levels and quality of international concessional resources.

b) Promoting industrial policies as an essential part of national development strategies for countries in the global south. These can enable countries to move away from commodity dependency and export-oriented strategies and move towards socioeconomic transformation through diversified, dynamic, inclusive and sustainable economies.

2. Rethink the promotion of private finance for infrastructure. An infrastructure finance agenda focused on developing 'infrastructure as an asset class' and promoting PPPs risks undermining progress on meeting the SDGs. Private finance might be appropriate in some circumstances, but only when democratically owned development plans are followed, high quality and equitable public services are prioritised, and international standards of transparency and accountability are met. National governments should preserve their capacity to regulate in the public interest.

3. Improve the quality and sustainability of infrastructure, including its systemic considerations. Sustainable infrastructure and its financing mechanisms must be rooted in human rights and socioeconomic transformation, high standards of democratic accountability, and take an intergenerational approach to climate adaptation. This includes:

a) Prioritising measures aimed at improving governance. The governance of infrastructure concerns the prioritisation, planning, financing, regulating, contracting, and monitoring of the built assets and associated services that are essential for economic diversification and human development.

b) Integrating resilience into planning and delivery systems. New and existing infrastructure development must take a systemic perspective into consideration when planning for resiliency in a broad sense (social, economic, ecological). Infrastructure must be designed and adapted to withstand, respond to and recover rapidly from disruptions related to environmental hazards caused by climate change. It also requires considering the disproportionate impact of disruptions on the lives of girls and women, and transgender people, due to existing inequalities and gender-based roles, and adopting measures to reduce and eventually eliminate inequalities.

c) Promoting people-centred regional connectivity. This includes creating decent jobs, stimulating local economic development, protecting the environment, reducing inequality, promoting gender equality and social inclusion, and building peace.



Mrs Mô, her daughter and the cistern, Surubim – Pernambuco

Introduction

Infrastructure is key for achieving sustainable development and for improving the living conditions of people across the world, in line with the Sustainable Development Goals (SDGs), the Paris Agreement and commitments on gender equality.

The importance of investments in sustainable infrastructure, and its contribution towards decent employment, food sovereignty,[1] territorial integration and access to essential services, appears as a prominent topic of international debate, especially as we enter the decade of delivery of the 2030 Agenda for Sustainable Development. Sustainable infrastructure investments are touted as "the most promising strategy for delivering decent jobs and climate resilience"[2] and as a key pillar of "building back better" strategies by many donor governments and international financial institutions (IFIs), particularly by the World Bank Group (WBG). China's controversial Belt and Road initiative,[3] the G7's Build Back Better World (or B3W),[4] and US President Joe Biden's infrastructure investment plan[5] are just some of the recent examples of how infrastructure is and will remain central for major development and Covid-19 recovery plans for years to come.

Yet, while the global pandemic and the interrelated economic, social, political and climate crises forced us to acknowledge our global interdependence, the capacity to respond to the current crises has been shown to be deeply uneven across the global north and south. After decades of deregulation and austerity, combined with massive debt servicing, constrained fiscal space and privatisation of public services, developing countries are facing the crises from extremely vulnerable conditions on both the health and economic fronts. The rules that govern hyper-globalisation,[6] namely trade and investment liberalisation, financial deregulation and corporate tax cuts, have amplified structural inequalities within and between countries, led to increased market concentration, and contributed to widespread ecological destruction, underfunding of public services and insufficient progress towards universal social protection, all now impossible to ignore.

In the face of underfunded services, mechanisms to leverage private finance, including public private partnerships (PPPs), have been increasingly promoted as a way to fill in the 'financing gap' to deliver on national development plans (see box 1).[7] Catalysing private finance is likely to continue in the forefront of IFIs' agenda, as the blueprint for a so-called "resilient recovery" from Covid-19.[8] But this policy choice presents numerous risks, especially considering the unsustainable debt burdens already faced by countries in the global south, increasing inequalities and looming ecological collapse.

As the Covid-19 pandemic exposes the fragility of our current systems – from international trade to public health infrastructure and climate disaster preparedness – and a "private finance-first" discourse gains further traction as a policy response in Covid-19 recovery plans,[9] a critical analysis and debate from a civil society perspective becomes increasingly important. While addressing the issue of infrastructure presents challenges, including how to finance it in a sustainable way, certain questions about the push for private financing mechanisms to develop infrastructure in the global south can be universal. This report builds on the previous civil society work on the issue[10] and aims to address some of the key questions that emerge when analysing the current trends in infrastructure development from a systemic perspective:

- What are the challenges posed by an agenda focused on attracting private investment in infrastructure? What kind of development model does it promote and what are its risks?
- What should be the role of the state in providing sustainable infrastructure?
- What are possible alternatives to the "private-finance first" approach for infrastructure?
- On what basis is it possible to reclaim sustainable infrastructure as a public good?

On this basis, we aim to contribute to ongoing and future debates on sustainable finance for sustainable infrastructure, within civil society and beyond. In particular, we seek to inform policy debates and decision-making moments such as the G20 agenda on infrastructure finance, the UN Financing for Development process, the work of Multilateral Development Banks and Public Development Banks on infrastructure finance, and Covid-19 recovery plans around the world.

Methodology

This report is the result of joint work by Eurodad and the Society for International Development (SID) with the aim of advancing the collective thinking on an issue that is of utmost importance for the future of development strategies. It also builds on our work with partners from the global north and south, who provided in-depth and evidence-based analysis on concrete experiences that illustrate practices going on at the country and regional level. They are: AFRODAD (Africa region), Asociación Ambiente y Sociedad (Colombia), Fundación Ambiente y Recursos Naturales (FARN, Argentina), Observatori del Deute en la Globalització (ODG, Spain), Universidade Federal Rural de Pernambuco and Articulação Semiárido Brasileiro (URFPE and ASA, Brazil), and VB Platforma, Lithuanian NGDO Platform (Lithuania).

This report is accompanied by **seven case studies**, from which we draw key insights to address the questions discussed here. These are emblematic infrastructure projects implemented across different regions. Five of the cases presented shine a light on problematic infrastructure projects that were designed to attract private investment in infrastructure. These are: the Nacala Road Development Corridor in Zambia, Malawi, Mozambique; the Myingyan Public Private Agreement gas power plant in Myanmar; the Cundinamarca Eastern Perimeter Corridor in Colombia; the Hydroelectric Power Plant Inga III in Democratic Republic of the Congo, and the Highways and Safe Routes Network – Phase 1 in Argentina. We also present two cases that illustrate alternative approaches to infrastructure financing and development, as they were designed and implemented in a participatory manner and responded to the interests and rights of local populations. These are: the One Million Cisterns Programme in Brazil, and the Prosumer Solar Community Model in Lithuania.

The authors draw on their extensive research in the field of infrastructure. They reviewed official and project documents, civil society reports and newspaper articles, and conducted interviews with affected communities and other relevant stakeholders. These cases serve to illustrate key trends in the area of infrastructure and support our process to deliver critical analyses and policy recommendations. Eurodad and SID benefited from the expert contribution of a diverse reference group that was set up to support the research process – we thank them in the acknowledgements section. Our interaction with this group included a virtual workshop to discuss the findings and main messages of the report.

Structure of the report

This report is structured as follows:

- Section 1 provides a framing to understand sustainable infrastructure from a systemic perspective, and in the context of current debates on sustainable development. It presents the prevailing infrastructure finance agenda set by donor countries across international policy spaces, such as the G20 and the IFIs, including its pitfalls and limitations. It provides an alternative viewpoint focused on global economic justice and developing countries' right to development, domestic resource mobilisation, and climate resiliency, including the role of public development banks and industrial policy in facilitating these.
- Section 2 reflects on evidence from case studies to make visible and concrete the argumentation around both the mainstream infrastructure finance agenda and the alternative pathways proposed.
- Section 3 concludes and provides policy recommendations towards socioeconomic transformation and sustainable infrastructure financing.

1. Framing sustainable infrastructure from a systemic and holistic perspective

Infrastructure refers to "the structures and facilities that are necessary for the functioning of the economy and society".[11] These are roads, electricity and telecommunication networks, water and sewerage facilities, schools and hospitals. This implies understanding infrastructure in a broad sense, away from a distinction between 'economic' and 'social' infrastructure, as both economic and social issues are indivisible aspects of a transformational approach to development.[12]

Infrastructure is here also understood as the underpinnings that enable and maintain different development paths – be it based on large-scale production or extraction for export (mine, forest and farm to port) or based on economic diversification and territorial markets.

The outbreak of the Covid-19 pandemic has only intensified the need for investing in infrastructure that prioritises local capacities, conditions and needs, particularly those linked to climate-resilient infrastructure that supports socioeconomic transformation and public services. However, not all types of infrastructure contribute to supporting the socioeconomic transformation and just recovery that most developing countries aim for. The mainstream economic thinking suggests states should operate as facilitators for private investments into infrastructure projects that would serve as an engine of economic growth. Such a market-led approach also means states effectively need to have a constant supply of profitable projects at hand, which transforms their developmental agenda, often leading to prioritising mega-projects that link production and resource extraction centres with consumers and aim to integrate developing countries into global value chains. Meanwhile, this puts the needs of investors (that is, maximising profits) before the rights of their citizens and the environment, contributing to export and commodity dependency and preventing economic diversification.

This way of understanding infrastructure is problematic, as badly designed and poorly implemented infrastructure projects can damage the environment, displace populations, lead to human rights abuses and lock countries into a high-carbon future. They can also create excessive fiscal burdens on the public purse, which in turn can lead to cuts in government spending.

This report focuses on sustainable infrastructure, which for the purpose of our analysis is examined through the lens of four interconnected pillars: social, ecological, governance and economic (see Figure 1).

In this report we defined sustainable infrastructure as a structure or facility that is planned, designed, constructed, operated and monitored in a transparent, participatory and context-appropriate way, contributes to national and local priorities, extends access to services, paves the way to a just transition towards sustainable and climate-resilient economies, and is financed in a transparent and sustainable way, meaning that it does not lead to unsustainable debt.[13] While we address the social, economic, ecological and governance aspects in our analysis, we give particular attention to questioning the prevailing narrative on infrastructure finance (the economic pillar), and how this in turn impacts the other three pillars.

1.1 The prevailing narrative on infrastructure finance

Since the adoption of the SDGs in 2015, there has been increased attention to the infrastructure needs of developing countries, as there is a dedicated goal focused on infrastructure: SDG 9 aims to "build resilient infrastructure, promote sustainable industrialization and foster innovation". Moreover, infrastructure has direct and indirect implications on achieving all other interrelated goals. For instance, infrastructure development directly affects access to safe and affordable drinking water, and adequate and equitable sanitation (SDG 6), affordable and clean energy (SDG 7), access to quality essential healthcare services (SDG 3), and the building and upgrading of education facilities (SDG 4). Infrastructure is also central to the roll-out of industrial policies and national development strategies, which can have medium to long-term impacts on addressing climate change (SDG 13), reducing inequalities (SDG 10), promoting decent work (SDG 8), gender equality (SDG 5) and responsible

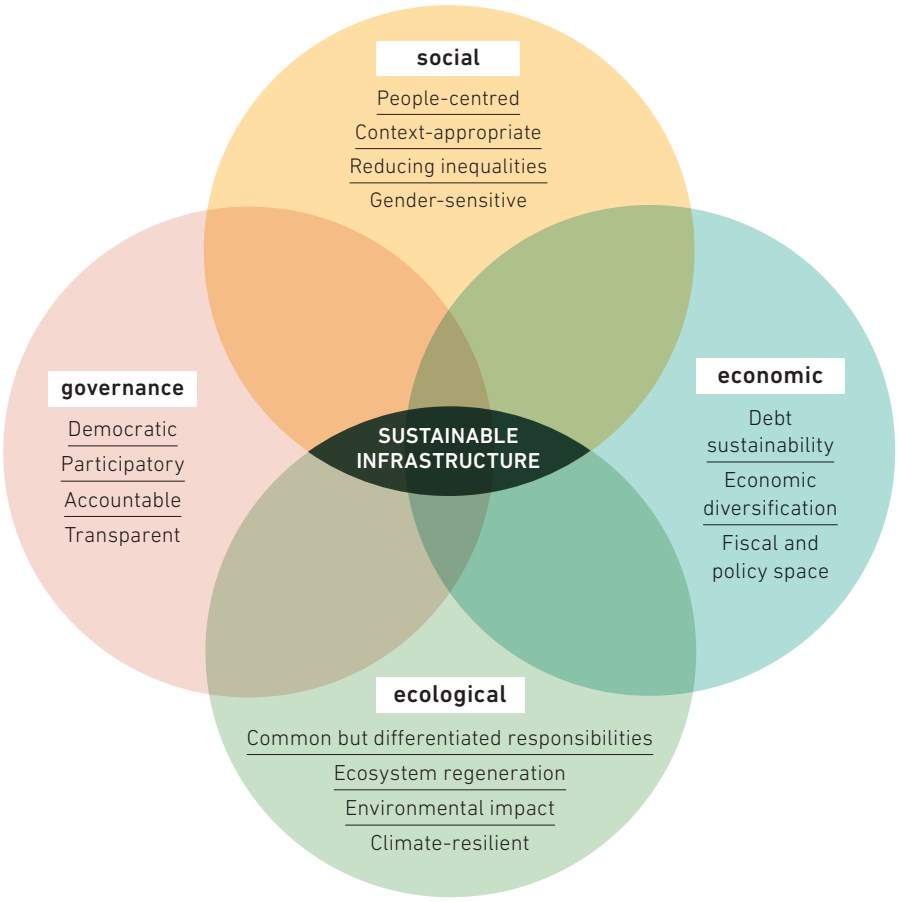


Figure 1
Sustainable infrastructure pillars

production and consumption (SDG 12). These commitments have further intensified different interpretations about how development projects will be delivered and financed.

As part of this debate, the WBG and others like G20 have argued that one of the main issues countries face when it comes to meeting the SDGs and the infrastructure challenge is that global levels of infrastructure investment are too low. And for that diagnostic of an infrastructure 'financing gap', innovative financing solutions are promoted as the cure. As the so-called 'financing gap' supposedly cannot be filled by (scarce) traditional financing methods, a scaling up of private-sector focused approaches to infrastructure finance is seen as the way of delivering on the goals. According to the WBG, "reinvigorating the supply of infrastructure within the developing world requires supplementing traditional sources of official finance with new resources of equity and debt finance."[14] To this end, the WBG launched in 2017 the 'Maximising Finance for Development' (MFD) or 'Cascade' approach[15] to infrastructure finance. This approach seeks to attract global institutional investors, such as hedge and pension funds, insurance companies and sovereign wealth funds, by lowering the (perceived) risks for infrastructure investment. This entails changing the policy and regulatory environment, and providing subsidies, guarantees and various other risk-mitigation instruments. Public-private partnerships are promoted as a key financing tool to make this happen (see Box 1).

Taking their cue from the WBG, the G20 has been promoting similar ideas for infrastructure financing. "Boosting private sector-led growth through investment in infrastructure" was a major theme under the Australian G20 in 2014,[16] when the Group established the Global Infrastructure Hub. 'Infrastructure for development' was a priority under the 2018 Argentinean presidency, when G20 Finance Ministers agreed that mobilising additional private capital was needed to meet global infrastructure needs. They agreed "to promote the necessary conditions to help develop infrastructure as an asset class,"[17] and endorsed the G20's Roadmap to Infrastructure as an Asset Class (see Box 2),[18] which set up different workstreams to move this agenda forward. Following up on this, the 2019 Japanese presidency focused on the issue of quality infrastructure – one of the workstreams of the Roadmap – and launched the G20 Principles for Quality Infrastructure Investment,[19] with indicators to implement them still to be agreed. While the Principles include welcome language on different areas, a key shortcoming is that they do not bring substantive changes in the ways in which infrastructure is framed. Meanwhile, in 2020 the Saudi Arabian presidency endorsed the Riyadh InfraTech Agenda, which "promotes the use of technology in infrastructure, with the aim of improving investment decisions over the project life cycle", among other objectives.[20] Finally, the 2021 Italian presidency of the Group continues to move this agenda forward, which includes continuing the "dialogue between public and private investors to mobilise private capital".[21]

Box 1. What are public-private partnerships (PPPs) and what are their implications?

Despite the huge amount of work devoted to studying PPPs, there is not a universally agreed definition of the term. We use the most widely accepted definition of PPPs, which can be formulated as follows. A PPP is:

- a medium- or long-term contractual arrangement between the state and a private sector company
- an arrangement in which the private sector participates in the supply of assets and services traditionally provided by government, such as hospitals, schools, prisons, roads, bridges, tunnels, railways, water and sanitation, and energy
- an arrangement involving some form of risk sharing between the public and private sector

There are two PPP funding models:

- user-funded PPPs, where a private partner charges the public a fee for using the facility, sometimes subsidised by government or local authorities.
- government-funded PPPs, where a private sector company builds and runs infrastructure and receives regular payments by the public partner based on the level of service provided

Both models can – and often do – ultimately weigh heavily on the public purse: government-funded PPPs rely heavily on public expenditure, while even user-funded PPPs may entail costs for the government through subsidies.

In addition, the distinction between funding and financing is important to help understand the true costs of PPPs:

- Financing is the money the private company raises to complete the project and can be done through debt and equity instruments. In other words, how you meet the upfront costs of infrastructure. It does not affect the government accounts.
- Funding is the way that the company will be repaid in the long term. Usually this will not show up as a deficit for the government accounts, except in the rare cases where the asset is considered to be controlled by the government.

As the literature on PPPs clearly shows, while the private sector may bring some finance up front, in the long run the PPP can only be funded (including shareholder profits) either by users of the infrastructure or service in the host country (for example, paying a toll charge to use a bridge) or by the government using taxpayers' money. As a result, the staff from the IMF Fiscal Affairs Department and others have stressed that PPPs can generate a problematic "fiscal illusion" that may increase total fiscal risks in PPPs.[22]

Risk allocation is a crucial point in the debate around PPPs. Infrastructure projects face different kinds of risks – for instance, project risks, macroeconomic risks, and political and regulatory risks. They might vary depending on the country where the project is implemented, the nature of the project and the assets and services involved. To compensate for these, the public sector often offers subsidies or guarantees which can generate financial implications for the public sector. Given the fact that PPPs are used as a mechanism to deliver public services, the 'risk sharing' is somewhat uneven. The public sector is always the residual risk holder should the private sector fail, which experience says is not infrequent.

PPPs can lead to high public costs for infrastructure in three main ways:

- higher direct costs from higher interest rates (the cost of capital), a high expected rate of return for the private operator, and higher construction costs
- higher indirect costs from limited competition and costs of negotiating complex contracts, including high fees from consultancy firms, and renegotiating of contracts – the IMF staff estimates that more than half of all PPPs are renegotiated23
- hidden costs, either because of accounting methods that keep PPPs off the government's books, or because of high levels of contingent liabilities

For these reasons, and many others, Eurodad has repeatedly called on the World Bank and others to stop promoting PPPs until they are radically reformed.

Box 2. What does 'developing infrastructure as an asset class' mean?

An asset class is a group of tradable securities or investments - for example equities or bonds. Transforming infrastructure into a tradable asset class would mean repackaging money invested in an infrastructure project into a number of standardised financial instruments which are easy to buy and sell, and which provide an attractive revenue stream.

Infrastructure assets such as shares in infrastructure companies, government infrastructure bonds and specialist infrastructure investment funds are by no means new. However, the concept of grouping financial infrastructure assets together to form a distinct class is relatively recent.[24] The promotion of a tradable infrastructure asset class can be seen as part of a drive by multilateral institutions such as the WBG to attract private investors to *specific* projects, as well as to infrastructure development in general.

1.2 A critical perspective

The prevailing narrative relies on increasing private investment as key to financing infrastructure. This is based on a series of biased assumptions.

First, assuming that traditional public financing methods are incapable of filling the 'financing gap' only tells one side of the story. It fails to account for systemic issues that can be tackled through international cooperation and policy choices, yet remain unsolved and continue to further expand such a 'financing gap' for developing countries: tax abuse and illicit financial flows; unsustainable and illegitimate debt (or the need for debt architecture reform); predatory trade and investment agreements; (not) meeting internationally-agreed ODA commitments in quantity and quality; and (barriers to) technological transfers (see also Box 3). The current economic order creates the problem and then offers a false, yet profitable, solution to the problem it has itself generated.

In particular, the G20 Roadmap argues that "given the magnitude of the infrastructure gap, the G20 must adopt a new collaborative approach to crowd in private capital in order to harness the large pool of private savings looking for long-term investment."[25]

However, as researchers from SOAS University of London highlight, "while undoubtedly developing countries' infrastructure sectors need extensive investment, attempting to fill the gap with private investment is not necessarily an obvious policy response. The calculation of a 'financing gap' could lead to calls to raise tax revenue, to curb capital flight, to raise aid flows, to improve fiscal management or to raise public bonds. But policy advocacy instead has been dominated by measures to attract global private capital,"[26] which corresponds to the mass of wealth in the hands of institutional investors that are seeking profitable and stable investment opportunities. Indeed, as of December 2019 the world's largest money managers held an all-time high asset, exceeding US$100tn.[27]

Moreover, this prevailing narrative is not based in evidence, as infrastructure has been historically financed mostly by the public sector. As the 2021 Inter Agency Task Force Report on Financing for Sustainable Development, and others including the WBG, acknowledge, public investment has dominated, and will continue to dominate infrastructure spending in many areas, "especially in sectors where public interventions are critical for social equity reasons or where social returns are much larger than private returns".[28]

Second, the firm belief in private finance as the only solution leads to the assumption that the role of MDBs and governments should be to act as facilitators for private finance as their ultimate end goal.

This agenda is part of the implementation of what Professor Daniela Gabor terms the 'Wall Street Consensus', which she describes as "an elaborate effort to reorganize development interventions around partnerships with global finance".[29] It implies a new, and problematic, way of framing the role of MDBs, namely as institutions that 'de-risk' private investments in developing countries, and 'create markets' for private investors. In the context of the Covid-19 crisis, and the climate emergency, new markets for health and climate infrastructure will likely become 'investment opportunities' for institutional investors. Moreover, it implies a redefinition of the role of the state. All too often, the state is defined by its capacity to protect investors' profits from demand risks attached to commodified infrastructure assets, and from political risks attached to policies that would threaten cash flows, including higher minimum wages, climate regulation and from liquidity and currency risks.[30] But these risks do not disappear; they are all too often transferred to the balance sheet of the state, which is very evident in the case of PPPs (see Box 1).

Third, it assumes more private finance is inherently good, while failing to acknowledge that the type of infrastructure projects designed to attract private investors and generate quick returns might not match the public interest and national priorities.

While it is true that many developing countries face important infrastructure needs – such as schools, hospitals, water, sanitation, electricity and roads – it is not easy to unpack what current estimates of the infrastructure needs include, and one could argue that these figures are calculated on the basis of the mainstream growth-oriented paradigm, which is not ecologically sustainable.[31] For instance, in 2017 the G20's Global Infrastructure Hub estimated "global infrastructure investment needs of US$94 trillion out to 2040", and this does not include health and education-related infrastructure. This was "US$15 trillion more than projected spending based on prevailing trends", which is presented as an "investment gap".[32] In the context of the Covid-19 pandemic, one could argue that infrastructure financing needs have increased, as countries face the twin burden of projected economic downturns and fiscal distress, on top of the climate crisis.

Fourth, the assumption that private finance will be allocated in a way that supports the SDGs and reaches those most marginalised ignores the fact that investors seek the most profitable investments. This will not lead to sustainably allocating resources to developing countries most affected by climate change, for instance, as that incurs further risks.

For instance, according to the G20's Global Infrastructure Hub, private infrastructure investment has been heavily focused on high-income countries, which raises questions even for its own promoters. In 2019 "private infrastructure investment in high-income countries was triple that in low-income countries."[33] This leads the Hub to state that "at these rates, the mobilisation of private investment in developing countries falls short of international ambitions, with both the scale and amount of investment falling short of what would be needed for transformation." In response to this, a strong focus is placed on following investors' needs by creating a pipeline of bankable projects, and promoting greater standardisation of projects, so as to make them comparable across countries and over time.[34] This view is reflected in a May 2021 IMF paper from the African Department, which argues that "in a global context of sustained low interest rates, infrastructure investments in Africa could offer relatively high, inflation-protected, and stable returns."[35] However, as we will see below, this debate misses the point. The priorities should be instead about identifying what kind of infrastructure is needed to promote the structural transformation of national economies and to serve the needs of local people, and how to finance this in a sustainable way.

Infrastructure for whom?

The conventional rationale presents physical infrastructure as one of the main engines of economic growth, as infrastructure and related services – such as transport and telecommunications – play a crucial role in the flow of international trade.[36] What is more, large infrastructure projects are often presented as both essential pieces of national economic development, and opportunities for attracting private investments. Importantly, if PPPs are the preferred financing mechanism for infrastructure projects, it is expected that larger projects will be pursued, as the transaction costs of PPPs make them unattractive for small projects. As such, an agenda focused on attracting private investment – through PPPs – comes with a bias towards standardised and often large infrastructure projects.

But the issue of who benefits from infrastructure development projects is a complex one. It includes considerations that go beyond the scale of infrastructure, encompassing questions such as the type of infrastructure designed to prioritise reaching those at the last mile. When considering the local, national and regional context needs, a small decentralised energy grid, or local roads, can be as important for territorial integration and connectivity as a large infrastructure project – for instance, a national railway or telecommunications system. On the other hand, depending on the type of financing, governance, and the social and ecological sustainability considerations taken, large infrastructure projects can be particularly relevant in the context of developing countries' socioeconomic transformation. In other words, large- or small-scale projects are not per se bad or good types of projects.

With regards to mega-infrastructure projects, there are some important points to consider. Mega-infrastructure projects (such as mega-transport corridors) which connect places of natural resource extraction to points of export, and aim to integrate developing countries into global value chains, can be seen as the tangible physical means to reproduce a global division of labour entrenched in colonial roots (see Box 4). While the infrastructure project itself becomes an asset for foreign investors, the service it provides continues to lock countries in export-oriented development models and commodity traps.[37] Moreover, delays are more common in larger projects, and they cause both cost overruns and benefit shortfalls. Larger projects also increase the likelihood of giving preference to multinational companies, which have greater resources to implement them, thus crowding out local businesses.

Badly designed and poorly implemented mega-projects can also damage the environment, displace populations, lead to human rights abuses, and create excessive fiscal burdens on the public purse, which in turn can lead to cuts in government social spending and exacerbate inequalities.[38] Many countries have suffered a history of 'white elephant' infrastructure projects which are often driven by donors' interests and are marked by lack of transparency, public participation and monitoring. Additionally, such projects rarely reflect the needs of the community in which they are built or consider social and ecological considerations.

While it is key that countries refrain from implementing 'white elephant' and/or problematic mega-infrastructure projects, the key question may not be one of scale. Instead, it should be about (a) who benefits from the infrastructure, (b) how to design infrastructure projects that respond to an industrial policy that allows for the structural transformation of national economies – away from the export of raw commodities, and (c) how to prioritise the difficult-to-reach citizens or the 'last mile', which could easily be the most expensive or technically challenging part of infrastructure construction – for instance, in water, electricity, communication and transport projects.[39]

Box 3: Closing the 'infrastructure gap' for the long run – global tax and debt justice

> **"New estimates by the African Development Bank suggest that the continent's infrastructure needs amount to US$130– US$170 billion a year, with a financing gap in the range US$68–US$108 billion."**
>
> African Economic Outlook 2018.

While the so-called 'financing gap' narrative has left many countries in the Global South hostage to the one-size-fits-all policy approach of financial sector deregulation and a race to the bottom on taxation to attract private investors, major structural barriers to domestic resource mobilisation have been for a long time left nearly intact. A broken global financial architecture has been enabling the plundering of natural and financial resources out of developing countries, made possible by policy and legal frameworks within jurisdictions designed to make tax abuse and illicit financial flows possible.

While estimates may differ, according to 'The State of Tax Justice 2020' report, the world is losing over US$427 billion per year to international tax abuse. Of the US$427 billion, nearly US$245 billion is lost to multinational corporations shifting profit into tax havens in order to underreport how much profit they actually made in the countries where they do business, and consequently avoid paying their fair share. The remaining US$182 billion is lost to wealthy individuals hiding undeclared assets and incomes offshore, beyond the reach of the law. The report concludes that countries around the world are on average losing the equivalent of 9.2 per cent of their health budgets to tax havens every year, with lower-income countries losing much larger equivalent proportions than higher-income countries.

At the same time, many countries experiencing climate shocks and the devastating impacts of the Covid-19 pandemic, already faced vulnerabilities in their public finances, having limited fiscal space to raise spending levels to recover when a climate and/or health disaster hits. At the end of 2018, 12 Caribbean countries registered debt-to-GDP ratios exceeding the 60 per cent threshold usually considered a benchmark for debt sustainability, with several of them ranking among the most highly indebted countries in the world. Similarly, total debt-service payments averaged more than 30 per cent of government revenue in 2017.[40] This debt servicing pressure has led to reductions in public expenditure, reflected in public investment cuts which prevent the present and future investments needed, in social and physical infrastructure, for instance. This fiscal situation is a factor that could lead to a vicious circle in which reconstruction is not completed after a disaster and such reconstruction as is carried out is not resilient because of a lack of financial resources.

With the coronavirus pandemic putting a spotlight on the shocking cost of underfunded health infrastructure and public services around the world – which are both exacerbated by and exacerbating deep underlying structural inequalities – some of the unacceptable facets of an unfit global financial architecture also came into focus. To close the infrastructure financing gap in a sustainable way, a systemic reform of the international debt architecture is required, while the complicity of multinational corporations and a number of national governments that have stalled meaningful reform of the broken international tax system must come to a halt.

Box 4: What do the terms large infrastructure, mega-project and mega-corridor mean?

Large infrastructure projects are mainly large engineering projects, which are complex systems that are usually led by a sponsor but include other players, such as regulators, bankers and lenders. These projects take various forms, ranging from highways, railways, ports, airports, industrial processing plants, oil or gas pipelines and storages, to large dams and other energy production systems.

The concept of mega-projects (and the related term mega-infrastructure, used when talking about infrastructure) is particularly relevant when discussing issues around unclear governance and lack of open decision-making processes, connected with the usually severe social-ecological impacts and consequences they bear. As Oxford University Programme Management Professor Bent Flyvbjerg points out, mega-projects are "large-scale, complex ventures that typically cost US$1 billion or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people".[41]

The 'global infrastructure agenda', promoted by the World Bank and others, along with the corporate sector, under the banner of achieving the SDGs, also seeks to create infrastructure 'mega-corridors' in the name of development. Infrastructure corridors are not a new idea. But the plans that are now on the drawing board are on a scale as yet unimagined, hence explaining the growing use of the term 'mega-corridors'. No continent (apart from Antarctica) is excluded. From Africa to Asia and South America, infrastructure masterplans have been drawn to reconfigure whole land masses (and the seas connecting them) into 'production and distribution hubs', 'development corridors', 'special economic zones', and 'interconnectors'.

The mega-infrastructure model has a devastating climate impact, putting in danger future generations and communities which are impacted by climate change, especially in the global south. Mega-corridors designed all over the world are based on high-carbon transport (airports, motorways) and energy infrastructure (including fossil fuels). As a result, the infrastructure agenda as promoted by the G20 and IFIs simply does not fit with decarbonisation targets, nor with claimed plans to tackle climate change on a global scale and align financial flows with the objectives of the Paris Agreement.

An adaptation from 'CFJ Spotlight on Financial Justice', by Nicola Scherer and Xavier Sol

1.3 Infrastructure as a public good: sustainable infrastructure as an opportunity for transformative change

The challenges posed by the global health, economic and climate emergencies transcend national borders and test collective capacities to deal with risks, build resilience, and reduce inequalities within and between countries. If governments and multilateral financial institutions are serious about sustainable infrastructure investment being intrinsic to a resilient recovery, the agenda for sustainable infrastructure and its financing mechanisms must be rooted in human rights and socioeconomic transformation and contribute to climate resilience, instead of being preoccupied with returns on private investments. This also implies a greater focus on democratic governance of infrastructure.

Multilateral and bilateral investment agreements, as well as project contracts providing for privately financed infrastructure, often lead to the compromise of states' human rights obligations and of their right to regulate for public policy purposes and to protect the population in relation to private investments.[42] This became even more visible during the Covid-19 pandemic, while even as death tolls were exponentially growing, governments taking action to fight economic collapse were faced with hefty lawsuits by foreign investors.[43]

While it is relevant to work with the private sector to deliver on the SDGs, mobilising private capital should not become a goal in itself. A narrow focus on financing gaps neglects the longer-term underlying structural issues in uneven global development, and do not cover the "other infrastructure gap,"[44] which specifically refers to sustainability and human rights considerations. Numbers say nothing about what infrastructure is needed, by whom, and for what purpose. As the pandemic forces us to undertake a deep rethinking of current systems and policy choices that have not delivered on their promises, it can serve as an opportunity for transformative change. Infrastructure is rightly placed as central to strategies aimed at sustainable development and socioeconomic transformation. But the question of which development models it serves and leads to still has to be further explored.

If we embark on an exercise of collective imagination about what a future with vibrant local and regional economies, sustainable food production, public low-carbon transportation, equity and climate resilience looks like, we might conclude that an overreliance on mega-infrastructure projects and export corridors might not take us there. As part of this exercise, we might also realise private investors' search for quick returns might be incompatible with the type of infrastructure that bridges the present and the type of resilient and just future we want to build.

Thinking about sustainable infrastructure as a public good might entail considering types of infrastructure that actually serve to reduce countries' commodity dependence. Depending on the context, it might mean infrastructure oriented towards regional integration or connectivity between rural small-scale farms and urban markets; it might be focused on long-term development impacts, transparency, public participation and accountability instead of focused on private profit. For this to be possible, at least three key elements have to be considered: fiscal and policy space, public investment, and industrial policies.

First, systemic solutions that address the barriers to domestic resource mobilisation by countries in the global south – including debt cancellation, international cooperation to address tax abuse and achieve tax justice, financial sector regulation and capital market controls – must be pursued. This will expand countries' fiscal and policy space to finance sustainable infrastructure projects and can in turn contribute to economic diversification and industrialisation, leading to less dependence on aid and commodity trade.

Second, it is key to unlock public investment in infrastructure. This can be done by reclaiming the role of public development banks (PBDs). PDBs, particularly national and subnational institutions, can (and should) play a crucial countercyclical role in the financing of sustainable infrastructure projects. These institutions can tap into global and domestic financial markets to provide 'patient' capital that promotes strategic investments for economic development, such as infrastructure projects, or for projects that address social and ecological challenges, such as financing renewable energy and investing in agroecological food systems.[45] While PDBs should work with private investors, both as a source of capital and as a recipient of support, public policies and the public interest should prevail.

Third, it is imperative to promote sustainable infrastructure as part of broader industrialisation policies. After decades of neoliberal policies in developing countries showing few signs of delivering economic diversification, strong productivity growth or technological upgrading, and with many suffering a growing informalisation of economic activity, industrial policy began to return to the policy conversation.[46] A diversified, dynamic, inclusive and sustainable industrialisation is at the very heart of socioeconomic transformation, without which the SDG agenda remains a patchwork of goals that do not address the financing means for self-sufficiency and self-determination.

Fourth, it is key to address the problems associated with private sector engagement in infrastructure projects, either in direct private sector-led projects or in PPPs. Private investors can play a relevant role in infrastructure development, but mobilising them requires applying the right policy instruments. These have to be designed, implemented and monitored in the public interest, and regulated by the state, with transparency and democratic accountability at the core.

2. Infrastructure finance – insights from the ground

This chapter presents some of the common themes that emerge from the case studies conducted as part of this research project, and reflects on them from the perspective of the prevailing trends on sustainable infrastructure development. As such, it aims to contribute to the current debate on sustainable infrastructure, as it elaborates on the interlinked aspects of good governance, including accountability and transparency, fiscal sustainability, social participation and benefits, and ecological issues such as climate indebtedness – all of which emerged as key concerns in a 'private finance-first' approach to infrastructure development.

The **case studies**, which are all available in full online, are analysed through the lens of the four interconnected pillars we consider essential to characterise sustainable infrastructure: economic, governance, ecological and social (see Figure 1 above). They encompass diverging approaches towards infrastructure finance and development (see Box 5). One approach is geared towards private sector interests, which conceives infrastructure as an asset class, prioritising large-scale projects that contribute to a growth-oriented and export-led development path. A contrasting approach views infrastructure as a public good meant to serve local communities' needs and human rights, relying on public financing, and active citizen participation.



The Inga III dam power plant in the Democratic Republic of Congo

Box 5. Key highlights from emblematic case studies



ARGENTINA

Argentina's Highways and Safe Routes Network was a PPP project implemented in 2018. It was specifically designed to attract private investment and presented as a project that will pave the way for other large infrastructure projects. However, the project has several limitations:

- The national government reallocated taxpayers' money away from public infrastructure and towards domestic and foreign private investment.
- Due to the Argentinean economic crisis, capital markets were only prepared to offer financing at high interest rates. To save the project, the government worked with international financing institutions to mobilise funds and provided guarantees and loans using public funds.
- The project ultimately increased its investment costs, which contributed towards Argentina's indebtedness.

COLOMBIA

The **Cundinamarca Eastern Perimeter Corridor in Colombia** is a PPP road logistics project that aims to increase connectivity in the country's capital, Bogotá. This case illustrates conflicts in infrastructure development that cannot be underestimated, including:

- failure to prove that this project was in the public utility
- increased tax burden for Colombia's citizens
- lack of meaningful consultation and accountability

There are doubts about the correct application of the social and environmental safeguards of financial institutions, specifically the Inter-American Development Bank (IDB) policy framework, and compliance with the Performance Standards of the International Finance Corporation (IFC).

DEMOCRATIC REPUBLIC OF CONGO

The **Inga III dam power plan in the Democratic Republic of the Congo** is a PPP hydroelectric project that is currently in its design phase. The project was preceded by failed mega-infrastructure dams. The project is described as a step towards the creation of a continental electricity market that is important for accelerating the region's industrial economic development. However, it raises a series of concerns:

- It is designed to meet investors' needs rather than prioritising development goals.
- It is likely to lead to increasing indebtedness.
- Transparency issues make it difficult to ascertain the details of who benefits from the project.
- It contributes to ecological degradation and displacement of communities.
- The adverse impacts on gender are especially visible, since a community of previously self-sufficient women have lost their livelihoods.

MYANMAR

Myanmar's Myingyan gas power plant is the first PPP in the country's energy sector. It is financed by a consortium of MDBs and commercial lenders. While MDBs' engagement could indicate that social and environmental processes were to be followed, the systems used during the project development phase did not adequately consider how to ensure that social and environmental benefits for local communities are prioritised alongside the economic fulfilment that the private investors in the project are reaping.

This project illustrates the risks of non-transparent PPPs for ensuring government accountability to citizens and residents, and the pitfalls that can arise from private sector involvement in projects that are meant to prioritise the public good.

LITHUANIA

Lithuania's Prosumer Solar Community is a government-led project that allows citizens to buy or rent a remote solar panel through an online platform. Individuals are both producers and consumers, or 'prosumers' in this model. The project provides sustainable energy at low cost and empowers communities to lead in climate change mitigation strategies at a household level. This shared scheme brings governments, organisations and private consumers together and ensures the creation of a shared goal. The government provides incentives and subsidies to citizens, as well as a public infrastructure and technological support.

While Lithuania is the first country in the world to launch an online platform to buy solar energy, there are other similar projects in progress. We can expect to see more advanced solutions for developing solar energy production around the globe in future.

ZAMBIA, MALAWI & MOZAMBIQUE

The **Nacala Road Development Corridor in Zambia, Malawi and Mozambique** is a regional mega-enterprise logistical project developed to enhance the regional connectivity of southeast African countries and to improve their further integration into global trade. The project has been implemented as a PPP by which the governments of Zambia, Malawi and Mozambique set up joint ventures to develop and manage the infrastructure and equipment in the corridor. However, improvements in regional connectivity and competitiveness have come at the cost of substantive negative impacts for local communities and the environment, including deforestation and illicit logging of trees, leading to soil erosion. This, in turn, has threatened the livelihoods of rural populations along the corridor. The main beneficiaries of the project include actors in the transport industry, export/import operators, freight operators and the business community, and debts accumulated through loans for the project have come at the expense of citizens' welfare.

BRAZIL

Brazil's One Million Cisterns Programme (P1MC) is a civil society organised and community-led project that addresses water shortages in Brazil's semi-arid region through cistern storage. The individual cost for building a 16,000-litre plate cistern is R$ 4,560.11 (US$ 815). In its 20 years of implementation, the project has achieved the following targets:

- It has benefitted 628,355 families.
- The list of people registering includes 70 per cent female beneficiaries.
- The project has demonstrated the potential to stimulate the economic development of the region and contribute to increasing food security whilst enabling an ecologically friendly and community-centred approach.

The process has empowered communities and has been especially beneficial to families and women.

Economic: the costs and risks of infrastructure projects

Infrastructure's impact on the economy is far reaching across space – not only at the project or national level through its contribution to employment, economic outputs or debt, but also at the global level, as it is inherently linked to international trade and the global division of labour.[47] Infrastructure investments are also widely impactful across time, as the lifespan of built infrastructure is typically measured in decades and its footprint measured in centuries, tending to lock in impacts for the longer term.[48] The economic influence of infrastructure is systemic too, as infrastructure systems can either contribute to entrenching or transforming development paths – for instance, expanding a development model based on commodity dependence and integration into global value chains, or paving the way towards one based on economic diversification.

While PPP projects are presented as delivering on the so-called 'value-for-money' promise, the converse is often true. When projects are not financially sustainable, governments are often caught in long periods of extensive repayments which can also affect how much fiscal space is available for funding other important public priorities, such as social spending and investments in public services. In addition, governments are also left alone to bear additional costs associated with the infrastructure projects but not included in the private financing package. Some examples of these include costs for resettlement programmes for displaced populations, building of feeder roads, and interconnection costs to the national grid.

All too often, the financial burden is transferred to users via fees. Inflated user fees and costs to the public sector are therefore a design feature of the private finance agenda, since projects have to ensure returns to the private sector. All of this fosters greater inequality within communities as the costs are typically borne by the end user and/or taxpayer. PPPs can also bring issues of distributional outcomes and international equity where shareholder returns come from developing country tax payers or service users. Ultimately PPPs lead to outflows of funds, often from the global south to north.

The cases analysed by our partners clearly illustrate these points. In the case of the Nacala Road Development Corridor, local communities have been charged for the maintenance of road assets, which suggests that fees may be rolled out to offset the costs of the project initially covered by private investors. A hike in toll fees and licences causes indebtedness, effectively cancelling the claims of 'sustainability' associated with the project. Moreover, the project mainly connects the countries – Zambia, Malawi, and Mozambique – to export corridors and global value chains, that is, extractive and low-value-added activities to ports of export, with contracts awarded mostly to foreign private sector companies. Argentina's Highways and Safe Routes Network was not only mired in inefficiency but the contractors were unable to attract international financing at sustainable interest rates. Similarly, in the case of the Myingyan Power Plant, the costs of gas production were so high that the government made huge losses and passed this cost on to consumers. Worryingly, the massive cost of the Inga III dam power plant threatens to plunge the DRC further into debt, compromising the country's long-term future and its prospects for inclusive and sustainable development.

This evidence comes to support existing concerns regarding the problematic nature of the current narrative on sustainable infrastructure. In its current form, it can easily become a false promise, prioritising the private finance approach whilst also commodifying infrastructure through the transformation of infrastructure into an asset class.

Governance: democracy and accountability at stake

The promotion of private finance-led infrastructure projects has actually shaped national policies and development plans such that they serve the purpose of attracting private investors. Implementing PPPs has entailed an extensive restructuring of existing domestic and regulatory models to accommodate the entry and participation of new stakeholders, in most cases foreign private investors. In recent years, the World Bank and other development actors have actively encouraged countries across the world to enact PPP laws, establish PPP units, and develop legal frameworks, guidelines and operating procedures to scale up their capacities to implement PPP projects.[49] These advocacy efforts have also reoriented the role of national public financial institutions, adding new pressures and duties for public authorities and administrations to attract and accommodate the interests of the private financiers.

In Colombia, for example, a PPP law was enacted in 2012 to allow for PPPs. In the case of DRC, the PPP law was adopted in 2014, and in Argentina in 2016. Meanwhile, in the cases of Mozambique, Malawi and DRC, their policies and plans have been geared towards promoting private sector participation in infrastructure development, through mechanisms like PPPs. In all the cases analysed, MDBs have played an active role advising the country and supporting the projects, acting as a facilitator of foreign private investment. While most of them have environmental and social safeguards procedures in place, as we will see below, they are not always properly implemented.

Moreover, the creation of new bureaucratic entities is not only an added cost borne by the state, it also raises the question of accountability and democracy, since a fragmented group of private shareholders effectively emerge as governance partners on a par with the state. PPPs can also result in hasty implementation of legislative reforms without proper democratic, public consultation, which limits the ability for checks and balances to be conducted. In the Cundinamarca Eastern Perimeter Corridor in Colombia, the process through which domestic and foreign actors formed partnerships was expedited without actually establishing that the project was in the public interest. The fact that the project involved land acquisition which displaced communities further countered this claim.

Additionally, this raises the issue of sovereignty. The case of the Nacala Road Development Corridor**,** running across Zambia, Malawi, and Mozambique, shows that large regional infrastructure projects can alienate domestic governments and communities. The mobilisation of resources and selection of the project was largely a product of regional and continental agreements tied to increasing the competitiveness of the region. Meanwhile, the role of national governments in aligning their transport ministries to the project was vague. It was difficult to establish how regional competitiveness aligns with domestic issues of accountability towards displaced communities, public indebtedness, environmental damage and climate resilience.

Poor transparency is another feature of most PPP projects. These include secrecy around the PPP contracts and the use of non-disclosure agreements. For Myanmar's Myingyan PPP power plant, the Power Purchase Agreement is not publicly available, making it hard to determine the terms of the contract and the tariff fees. In the case of the Inga III dam power plant in DRC the contract with the private consortium that will build the dam has not been publicly disclosed. However, without transparency on the contracts agreed it is hard for citizens and residents to answer crucial questions on the final costs of the projects, and its fiscal risks, which are important determinants of the expected debt burden.

Moreover, most PPP projects lack meaningful civil society engagement throughout the project cycle. This includes poor implementation of free, prior and informed consultations with potentially affected communities. In ad hoc consultations regarding the Nacala Road Development Corridor, access to information was skewed to the benefit of the private sector entities rather than the communities impacted. Meanwhile, in the case of the Myingyan gas power plant in Myanmar local communities shared that initially there was a general lack of information on the project, and they were unclear about the project's impacts on their livelihoods and lives.

In contrast, the One Million Cistern Programme (P1MC) entails active engagement of the beneficiary community throughout the entire project cycle, as well as laying the decision-making on local institutions. In every municipality where the P1MC has been implemented, a Municipal Commission was organised with local civil society organisations, social movements, trade unions, and representatives of the municipal authorities, including from the health secretariat and social assistance secretariat. The Municipal Commission discusses the selection criteria for beneficiaries of the programme, selects the communities most in need of access to water (based on the previously established criteria), controls the implementation of the project and the use of the resource. This is a process that is rich in learning and expanding capacities (questioning and reorganising the social and political system) and creating new opportunities for access to services.

The Myingyan Gas power plant, Myanmar. Courtesy: Recourse



Ecological: climate-induced indebtedness and debt-induced climate impacts

Ecological and climate issues related to infrastructure projects include local impacts to people's livelihoods, debt sustainability issues which can hamper the most vulnerable countries in addressing development needs, and recovery from climate disasters. In addition, financing a just transition towards ecologically sustainable economies, and the potential to perpetuate countries' dependency on global value chains, also impacts their resiliency to climate shocks. Considering that infrastructure life cycles are typically a minimum of 15 years, investments in high-carbon energy infrastructure could lock a country into financing a stranded asset – that is, one that will suffer from unanticipated or premature write-downs – for at least that minimum of time. An important challenge remains to ensure an intergenerational approach to sustainable infrastructure, acknowledging that young people and future generations will be the most impacted by decisions and actions taken in the present.

In the case of Myanmar's gas power plant PPP, local communities reported several issues affecting their traditional livelihoods. For instance, the project's cooling plant wastewater pipeline goes through farmland and ends in a river used for fishing. Additionally, since the plant has come into operation, environmental and social monitoring of this river has shown that some of the wastewater quality parameters do not meet discharge standards, yet the significance of this has been deemed minor by evaluators.[50] Meanwhile, Inga III is likely to cause significant ecological damage in DRC, including a loss of biodiversity, increased threats to several endangered species, and a reduction in fish stocks. Furthermore, methane emissions are likely to increase as a result of the flooding of large tracts of forest. Inga III and the other phases of Grand Inga dam will also have an impact on the Congo plume, which as one of the world's largest carbon sinks is essential for the mitigation of climate change.

While impact assessment studies conducted as part of safeguards policies or performance standards of most multilateral institutions should serve to identify those risks and mitigate them, they face serious implementation challenges. In Colombia, in the case of the Cundinamarca Eastern Perimeter Corridor, communities argued that the company's socialisation of the Environmental Impact Study was poor and that there was no active community involvement in identifying the potential impacts of the project, nor in formulating management measures to mitigate them. In the case of Inga III a series of studies were to be conducted by the World Bank in order to comply with environmental and social standards, but these were never completed following its withdrawal of support for the project in 2016.

Meanwhile, infrastructure projects that are responsive to local priorities and actively involve communities in their entire life cycle can be of great benefit to those struggling with present impacts of the climate emergency. In Brazil's semi-arid region, the lack of access to water for families has serious consequences, including high levels of infant mortality and high incidence of diseases. Women often walk long distances to collect drinking water, which is often of poor quality. The project's proposed solution was to guarantee a structure for rainwater storage, which provides water security during the dry season for the family's consumption. Having access to simple and low-cost technologies such as cisterns was part of the process of questioning the development model that the region has historically been subjected to.

Social: serving the public interest or compromising it?

Infrastructure projects have the capacity to serve local communities by delivering the essential services that they need to improve their livelihoods, including energy, water and sanitation, and roads. The One Million Cistern Programme in Brazil and the Prosumer Solar Community Model in Lithuania show that problems can be overcome through domestic or public resource mobilisation, collaborative work between local, regional and national public administrations, and the active engagement and decision-making by local communities. These cases prove that public infrastructure can be cost-effective, consensus-based and heavily inclined towards serving the public interest.

The Prosumer Solar Community Model is unique in taking a horizontal approach to sustainable development whilst also being cost-effective. Although its applicability to developing countries is not straightforward, owing to geographical as well as grid infrastructure variations, a major lesson is the degree of support given to Lithuania by the European Union. The international community can replicate this support towards developing countries in implementing climate-neutral and public solutions promoting sustainability at very little cost. On the other hand, the One Million Cistern Programme shows how sustainable infrastructure approaches to development integrate gender equality considerations and enable women to maintain their autonomy.

However, if badly designed and implemented, infrastructure projects can also threaten the livelihood of local communities. The cases analysed by our partners added to the existing body of evidence.[51] In DRC, the history of displacement of populations for Inga I and II shows the devastating long-term human consequences of these projects, and the construction of Inga III will likely stir up these previous conflicts. The issues between the government and the communities are still unresolved and communities displaced by Inga I and II say they have not received the compensation promised. People of Mozambique, particularly rural populations, have also been negatively impacted by the Nacala Road Development Corridor, as their employment and livelihood opportunities have been reduced. Moreover, the case of Inga also illustrates how women can be negatively impacted. Women with independent livelihoods before the onset of the project suffered severe losses owing to displacement and lack of employment.

3. Conclusions and recommendations: towards a CSO agenda on infrastructure finance

Sustainable infrastructure investments are placed at the centre of development strategies, and rightly so, as they are key to delivering on the services and facilities that allow for the well-functioning of economies and societies. Yet, as this report shows, the prevailing narrative on infrastructure finance contains pitfalls and limitations that might undermine its stated objective. To address them, the report provides a framing to understand sustainable infrastructure from a systemic perspective. This focuses on global economic justice and developing countries' right to development, domestic resource mobilisation, and climate resiliency.

Having looked at what makes infrastructure and its financing mechanisms (un)sustainable through the four interconnected pillars of its economic, governance, ecological and social implications, a few conclusions and policy recommendations can be drawn.

The full case studies, which we encourage readers to **access online**, highlight that the emphasis on attracting private investments towards large infrastructure projects or mega-corridors raises major concerns. Not only does this approach not address the structural weaknesses of socioeconomic transformation in developing countries, but it also exacerbates the existent development obstacles faced by these countries, including indebtedness, commodity dependence, vulnerability to volatile capital flows, ecological damage and weak public infrastructure systems.

In contrast, projects which have implemented active participation and even co-creation with local communities, integrated a gender-sensitive lens, and responded to local and national needs throughout their planning, design and financing, are more cost-effective and ecologically sustainable. They also contribute towards the long-term development plans of countries whilst simultaneously serving the interests of local communities.

Increasing urbanisation, migrating and/or displaced communities, and the ever-growing connectivity of the world are but a few infrastructure trends for the next decade. As all of these trends continue, it is important to ensure that infrastructure projects serve the public good and work to enable the enjoyment of human rights for all. Civil society has a key role to play in reclaiming sustainable infrastructure as a public good by calling on decision-makers and IFIs to shift course. We provide policy recommendations to advance this collective agenda, with actions that encompass the four interconnected pillars of our analysis.[52]

Policy recommendations

1. Scale up publicly financed infrastructure, particularly in social sectors. Public financing is often less costly, more financially sustainable, and more directly accountable to citizens than private financing. Moreover, public interventions are critical for social equity reasons or where social returns are much larger than private returns.

This requires:

a) Putting in place an ambitious plan at the international level to increase domestic resource mobilisation. Clamping down on losses of public resources through tax abuse; dealing with unsustainable debts through a new fair, democratic and transparent sovereign debt workout mechanism; challenging unfair trade agreements; increasing levels and quality of international concessional resources, including through meeting official development assistance (ODA) commitments; and creating new sources of public financing would all be key contributions to ensuring adequate fiscal and policy space to bridge the global infrastructure gap and thus achieve the SDGs.

b) Promoting industrial policies as an essential part of national development strategies for countries in the global south. These can enable countries to move away from commodity dependency and export-oriented strategies and move towards socioeconomic transformation through diversified, dynamic, inclusive and sustainable economies. The infrastructure systems needed for such economic diversification are very different from those involved in commodity export strategies, and industrial policies can support that transition.

2. Rethink the promotion of private finance for infrastructure. An infrastructure finance agenda focused on developing 'infrastructure as an asset class' and promoting PPPs risks undermining progress on meeting the SDGs. Private finance might be appropriate in some circumstances, but only when democratically owned development plans are followed, high quality and equitable public services are prioritised, and international standards of transparency and accountability are met. National governments should preserve their capacity to regulate in the public interest.

3. Improve the quality and sustainability of infrastructure, including its systemic considerations. Sustainable infrastructure is key to strategies for socioeconomic transformation and a resilient recovery. If governments and multilateral institutions are serious about this agenda, sustainable infrastructure and its financing mechanisms must be rooted in human rights and socioeconomic transformation, high standards of democratic accountability, and contribute to an intergenerational approach to climate adaptation. This includes:

   a) Prioritising measures aimed at democratising infrastructure governance. The governance of infrastructure concerns the prioritisation, planning, financing, regulating, contracting, and monitoring of the built assets and associated services that are essential for economic diversification and human development. Poor governance occurs when these processes are opaque, poorly managed and when they fail to prioritise the needs of people and the environment. Local/affected communities should be engaged in co-designing projects rather than engaged in tokenistic consultation processes. Transparency is key in this process and the highest international standards of transparency should apply.

   b) Integrating resilience into planning and delivery systems. New and existing infrastructure development must take a systemic perspective into consideration when planning for resiliency in a broad sense (social, economic, ecological). Infrastructure must be designed and adapted to withstand, respond to and recover rapidly from disruptions related to environmental hazards caused by climate change. This requires strengthening public institutions, improving design standards to integrate sustainable technologies and designs, and prioritising resource efficiency. Resilience also means supporting the development of infrastructure systems that enable countries' socioeconomic diversification and transformation, including community-led infrastructure and decentralised systems in addition to large-scale and centralised systems. It also requires considering the disproportionate impact of disruptions on the lives of girls, women and transgender people, due to existing inequalities and gender-based roles, and adopting measures to reduce and eventually eliminate inequalities.

   c) Promoting people-centred regional connectivity. Regional infrastructure connectivity should be planned and implemented with the goal of meeting peoples' needs as its highest priority. This includes creating decent jobs, stimulating local economic development, protecting the environment, reducing inequality, promoting gender equality and social inclusion, and building peace. Finance will be needed from MDBs and other sources, but they should work in genuine partnership with representative regional bodies, recipient countries and affected communities.

Endnotes

1 Food sovereignty, defined as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems", also depends on peoples' access to water, health, energy, and transport infrastructure.
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