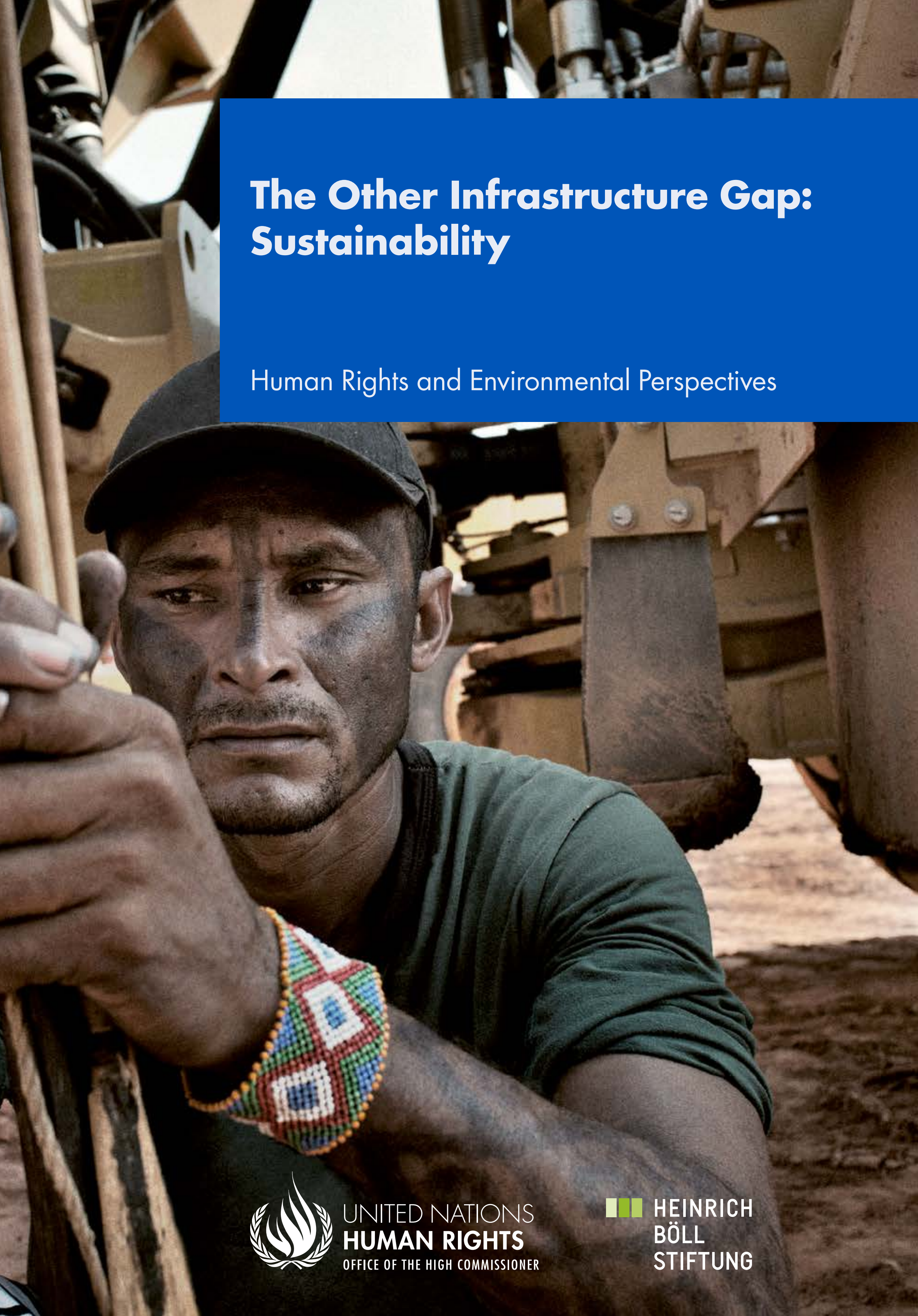

The Other Infrastructure Gap: Sustainability

Human Rights and Environmental Perspectives

UNITED NATIONS
HUMAN RIGHTS
OFFICE OF THE HIGH COMMISSIONER

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Co-published by the Office of the United Nations High Commissioner for Human Rights
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DEDICATION

Berta Cáceres sits on the banks of the Gualcarque River in the Rio Blanco region of western Honduras. The river is a source of water, food, medicine and spiritual identity for the indigenous Lenca people.

Shortly past midnight on the 3rd of March 2016, Berta Cáceres (pictured), leader of the Civic Council of Popular and Indigenous Organizations of Honduras (COPINH), was murdered by gunmen in the western province of Intibucá, Honduras. Berta Cáceres was a woman of rare courage and principle. She had led resistance against the Agua Zarca hydroelectric dam on the Gualcarque River, which was being constructed without the consent of indigenous communities and threatened to disrupt their livelihoods, access to water, cultural identity and heritage. She had received more than 30 death threats during her campaign, but continued nonetheless. Her murder sparked global outrage, yet killings and repression of human rights defenders around the world has increased since then.

Ms. Cáceres was awarded the Goldman Environmental Prize in 2015 for her work protecting her community and the environment. When accepting her award, Ms. Cáceres remarked that "Giving our lives in various ways for the protection of rivers is giving our lives for the well-being of humanity and of this planet." She urged us to "build societies that are able to coexist in a dignified way, in a way that protects life."

Human rights and environmental defenders like Berta Cáceres are often accused of being "anti-development," when in fact it is a particular *model* of development that communities object to: development that is non-consultative, destructive, shortsighted or unsustainable. As United Nations Special Rapporteur on Human Rights Defenders, Michel Forst, has argued, "those who act against human rights are actually those who are against progress and development."

This publication honours the memory of Ms. Cáceres, and is a tribute to her vision and to the countless individuals who struggle, and who have lost their lives, for their communities, for human rights and sustainable development.

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FOREWORD

Many of us have had the good fortune to grow up in a world of paved roads, reliable, affordable energy, safe water, functioning sewage systems and other essentials. But our access is determined largely by the accident of our birthplace. The vast majority of the world's population still lacks the basic infrastructure necessary for health, economic opportunity and a dignified life.

It is estimated that trillions of dollars will need to be invested in transportation, energy, water, information and communications technology and other kinds of infrastructure to achieve the Sustainable Development Goals. And as this publication notes, a great many funds and plans have been established at global, regional and national levels to pursue this worthy goal. But what vision of infrastructure lies behind these plans? What vision of development will they serve? How will these projects be financed, and how can their sustainability be secured?

This publication shows that, however well-intentioned, the dominant paradigm for infrastructure financing and investment – the "billions to trillions" agenda – carries significant risks for both human rights and the environment. Some risk factors, particularly those at the project level, have already been well-documented: these include those arising from poor stakeholder engagement and lack of transparency, gender-blind design, failure to meet environmental and greenhouse gas emissions standards, poor resettlement practices, and the ever-increasing threats faced by environmental and human rights defenders – including killings, as in the case of indigenous Lenca leader Berta Cáceres (d. 2016) to whom this publication is dedicated.

Other risk factors are latent or less well-recognized, beginning with the deeply contentious (yet rarely questioned) assumptions that drive the infrastructure "connectivity" agenda and the potentially destructive economic growth model to which it is harnessed. As this publication seeks to show, the infrastructure financing and investment agendas are laden with internal contradictions and highly optimistic assumptions about how contractual arrangements and incentives for private sector participation will translate into sustainable development outcomes. Investment law is tilted heavily in favour of private investors, to the nearly complete neglect of international human rights and environmental law. Laws and contracts governing public-private partnerships and investor-state dispute settlements may not only put essential services out of reach of the poorest; they may even, perversely, increase physical risks faced by environmental and human rights defenders. Unless this course is corrected, infrastructure financing and investment may unwittingly exacerbate inequalities, violate human rights and environmental agreements, and impede global progress toward the Sustainable Development Goals.

This publication offers a fresh – and we hope timely – analytical contribution for all those concerned about sustainable development and quality infrastructure. Drawing from the academic literature, evaluations and technical consultations, the publication analyses human rights and environmental impacts at project level, as well as on consumers, the macro-economy and society at large. The main arguments and recommendations are addressed principally to technical communities such as policy-makers and decision-makers in national ministries, global and regional development and financial institutions, investors and other relevant private sector actors. However, we hope that the very compelling narrative underlying the problems discussed herein, and their very palpable impacts on people's lives, will generate attention and action from a much wider audience.

Zeid Ra'ad Al Hussein
United Nations
High Commissioner for Human Rights

Barbara Unmüßig
President,
Heinrich Böll Foundation

LIST OF ABBREVIATIONS AND ACRONYMS

ADDIS AGENDA	Addis Ababa Action Agenda
ADB	Asian Development Bank
AFDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
BIT	Bilateral Investment Treaty
BRI	Belt and Road Initiative
CESCR	Committee on Economic, Social and Cultural Rights
COSIPLAN	South American Council on Infrastructure and Planning
CSO	Civil Society Organization
DFI	Development Finance Institution
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
FET	Fair and Equitable Treatment
FTA	Free Trade Agreement
GHG	Greenhouse Gas
HRDD	Human Rights Due Diligence
ICCPR	International Covenant on Civil and Political Rights
ICESR	International Covenant on Economic, Social and Cultural Rights
ICT	Information and Communications Technology
IDB	Inter-American Development Bank
IIA	International Investment Agreement
ILO	International Labour Organization
INDC	Intended Nationally Determined Contribution
ISDS	Investor-State Dispute Settlement
MDB	Multilateral Development Bank
MFD	Maximizing Finance for Development
MFN	Most Favoured Nation
NDB	New Development Bank
OHCHR	Office of the United Nations High Commissioner for Human Rights
PIDA	Programme for Infrastructure Development in Africa
PPP	Public-Private Partnership
REC	Regional Economic Community
SDGS	Sustainable Development Goals
SEZ	Special Economic Zone
SWF	Sovereign Wealth Fund
UDHR	Universal Declaration of Human Rights

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EXECUTIVE SUMMARY

Introduction

The Sustainable Development Goals (SDGs) and the 2030 Agenda for Sustainable Development embody a set of globally agreed priorities of vital importance to all countries, including sustainable, accessible, affordable and resilient quality infrastructure. Infrastructure financing needs have been estimated at US$ 90 trillion between now and the year 2030, with an annual financing gap in developing countries of up to US$ 1.5 trillion. To close this gap, the multilateral development banks (MDBs) are proposing to prioritize and maximize private finance, while G20 member countries are developing a roadmap for infrastructure as an asset class that would standardize infrastructure investment and attract institutional investors.

As countries hasten to plan and develop infrastructure, in some cases through massive regional infrastructure plans and mega-infrastructure projects, a number of questions arise: What kind of infrastructure is being developed and whose needs will it serve? Who may lose out in the process? How will it affect our development pathway? Is enough attention being given to the *environmental and human rights gaps*, in addition to the financing gap, in relation to mega-infrastructure project design, financing and investment decisions, bearing in mind countries' obligations under international human rights and environmental law?

This publication analyses the potential gains from integrating human rights and environmental dimensions of sustainability explicitly within mega-infrastructure plans and projects, as well as the cost of failing to do so, drawing from mega-infrastructure project experience in the energy, transportation and water sectors. It examines two key aspects of infrastructure development in relative detail: the legal framework governing international investment, and the shifting landscape of infrastructure finance. This publication uses the terms "mega-infrastructure" and "infrastructure" interchangeably; however, unless indicated otherwise, the focus of analysis is on mega-infrastructure and the risks associated with the design, construction and financing of such projects.

Mega-Infrastructure: Opportunities and Challenges

Our need for infrastructure is pressing, yet deciding on the type and quality of infrastructure is fraught with difficulty and potential trade-offs. How can we select the right infrastructure project, enhance the opportunities of infrastructure, minimize the risks, avoid political gridlock, and ensure that infrastructure serves the public interest and purposes of the 2030 Agenda for Sustainable Development?

Regional infrastructure plans and mega-infrastructure projects seek to facilitate trade, economic growth and job creation through connectivity of goods, services and people. But these benefits do not always materialize, and the social and environmental dimensions frequently fail to receive sufficient care and attention. People without access to energy and water often continue to be neglected in mega-infrastructure planning and development. At the same time, alternative visions of low-carbon and inclusive infrastructure development are often overlooked. This publication argues that each mega-infrastructure project presents an opportunity to systematically generate economic, environmental and social co-benefits, while managing environmental and human rights risks.

Regrettably, however, poor quality mega-infrastructure projects are commonplace. The reasons include: (1) the complicated political economy of infrastructure investment, (2) flawed design and process decisions, (3) difficulties in managing private sector participation, (4) fragmented regulatory frameworks and standards and (5) weak accountability mechanisms. To make matters worse, in addition to the problem of poor quality infrastructure, there may be a risk that infrastructure will not be built at all. In this challenging context, a robust national planning process informed by parliamentary debate and broad-based consultation can help to inform and frame difficult choices, improve project design and confidence in the planned infrastructure, and ensure that people's rights are prioritized over other competing interests. Effective and accessible grievance redress mechanisms are needed to anticipate and resolve conflicts arising from policy-making and project decisions and actions.

With these and other human rights prerequisites in place, and with proactive due diligence and management of risks, countries may more confidently make the necessary trade-offs while avoiding gridlock and delays, and make more sustainable progress toward the SDGs.

While numerous initiatives on sustainable infrastructure are underway, no universal set of standards is applied and enforced across all mega-infrastructure plans and projects. National laws in these areas are frequently incomplete and are not always consistent with international law. MDBs generally have disclosure, environmental and social safeguard policies, as well as accountability mechanisms, but these do not extend to the increasingly important private sources of long-term finance. One noteworthy initiative for improving the governance of infrastructure is the Ise-Shima Principles for Promoting Quality Infrastructure Investment, agreed at the Japanese G7 Summit in May 2016. The G20's leadership in quality infrastructure may offer an opportunity to consolidate the many fragmented initiatives on this topic and address some or all dimensions of quality infrastructure under the Addis Ababa Action Agenda ("sustainable, accessible, affordable and resilient quality infrastructure").

The Role of the Human Rights Framework

Human rights are a globally agreed and universally applicable legal and ethical framework protecting essential freedoms and the minimum requirements of a dignified life. All countries have ratified at least one of the nine core United Nations human rights treaties, along with the International Labour Organization's core conventions. Most countries have ratified several of these instruments, supplemented by domestic constitutional human rights protections and laws. This international human rights framework, together with international environmental law, are essential components of sustainability, and are relevant to infrastructure decision-making, investment and finance.

The international human rights framework provides a set of minimum standards governing the quality and inclusiveness of services and helps to delineate the allocation of risk between infrastructure investors, states and communities. Given their fundamental nature, human rights should be prioritized over other rights and interests protected in international investment agreements, national investment and procurement (including public-private partnership, or PPP) laws, and project contracts. While states are the primary duty-bearers under international law, international and regional organizations, investors and businesses should respect human rights and put due diligence processes in place through which human rights risks can be identified, managed, reported on, and remediated effectively.

Respecting and investing in human rights is intrinsically important, but it is also smart economics. Early attention to human rights risks in infrastructure projects can help to avoid social conflict and costly delays and overruns, improve project decision-making, design and benefits, and facilitate the social licence to operate. It has been estimated that workforce gender discrimination alone costs the global economy US$ 1.6 trillion annually. Similarly, respecting civil and political rights, ensuring universal access to water and sanitation, and promoting equality can have significant positive growth impacts. In these and other respects discussed below, the human rights framework provides guidelines as well as guardrails for infrastructure policy-making, reducing the arbitrariness of decision-making, and strengthening incentives for better performance and more inclusive and sustainable development.

Inequality is one of the most persistent human rights challenges of our time. One of the central purposes of human rights law, and the accountability mechanisms built around it, is to fight discrimination and promote equality. However, too many mega-infrastructure projects work in the opposite direction, leaving vulnerable segments of the society underserved or unserved, perpetuating exclusion, and exacerbating inequalities between population groups. The human rights framework helps us to understand inequality as a function of conflicting power relations, with a focus on disparities caused by discrimination. Human rights law directs our attention to the root causes of exclusion and requires legislative, budgetary, administrative and other measures to remove access barriers, with the ultimate aim of achieving substantive (de facto) equality.

Climate change is also a global human rights threat and a driver of inequality. According to the former United Nations High Commissioner for Human Rights, Zeid Ra'ad Al Hussein, "a continually warming world will be a graveyard for entire ecosystems, entire peoples – and potentially even entire nations". Climate change is inherently discriminatory in that it disproportionately affects those who are least responsible for carbon emissions, and who are also least able to adapt. The human rights framework takes these circumstances into account and recognizes that a safe, clean, healthy and sustainable environment is necessary for the full enjoyment of human rights.

The 2015 Paris Climate Agreement includes an explicit reference to human rights obligations. Almost all countries have ratified the Paris Agreement, the United Nations Framework Convention on Climate Change, and other environmental agreements relevant to infrastructure development, financing and investment policy.

Micro-, Meso- and Macro-Level Human Rights Impacts

To illustrate the complex interplay between mega-infrastructure projects and human rights and the environment, this publication classifies potential negative impacts into three levels: micro-, meso- and macro-levels. This taxonomy helps signal to decision-makers the wide-ranging and multilevel human rights and environmental impacts that infrastructure projects can bring about, and that impacts may extend well beyond the (mostly) micro-level impacts dealt with by MDBs' safeguard policies. It also underscores the fact that impacts that are not readily identified as human rights impacts, and those that may seem diffuse or abstract may nonetheless have explicit human rights underpinnings and accountability consequences.

At the micro-level, infrastructure projects can be associated with human rights impacts on communities, workers and the environment. The most serious problems often originate from acquisition of or access to land, rights of way and resources, resulting in denial of land and resource tenure, relocation, forced eviction and loss of adequate standard of living and livelihoods. Impacts on land may also cause biodiversity loss. Although physical impacts of this kind typically peak during construction and level off during operation, health, safety and security problems can persist for workers and communities, along with threats to biodiversity, natural resources and the climate. Sexual violence, intimidation of and reprisals against human rights defenders, and violence by security forces, are among the other common human rights impacts. Decommissioning of projects may also generate serious negative human rights impacts if not properly planned with adequate financial provisioning.

At the meso-level, access to and affordability of certain social services, including water, are explicitly protected by human rights law; yet potential consumers of infrastructure services are often denied physical or economic (affordable) access to infrastructure. Frequent or exorbitant rate increases or denial of service due to inability to pay may violate human rights law. Generally, the private sector lacks incentives to enhance affordability of services, and regulatory reforms to enable private sector participation can cut off vulnerable individuals and communities from informal services.

At the macro-level, the actions and omissions of states and other duty-bearers can affect taxpayers and the general population in various negative ways. Examples include poor design, process and planning decisions, the failure to carry out environmental and human rights impact assessments at the project, cumulative, transboundary and strategic levels, as well as fiscal and financial mismanagement of infrastructure projects, which may waste public resources and lead to fiscal burdens, over-indebtedness, austerity and withdrawal of public services. Procurement decisions may also trigger significant human rights and environmental concerns in the supply chain. The human rights impacts of investment policy and infrastructure financing are addressed in Chapters IV and V, respectively.

A number of procedural and substantive human rights are of fundamental importance across all three levels of impact. These include rights related to transparency, participation and accountability, the right to freedom of thought, opinion, assembly and association, the rights to access information and participate in public affairs and the right to a remedy. The latter (procedural) rights are also fundamental principles of international environmental law. In addition, indigenous peoples have a right to free, prior and informed consent (FPIC) for proposed projects.

Legal Frameworks Governing Infrastructure Investment

The impact of infrastructure investment on the lives and livelihoods of host-country populations depends not only on project design and implementation decisions, but also financing and investment decisions, and the allocation of rights and duties between investors, contracting authorities and the host-country population or segments of it.

The regulatory environment for cross-border infrastructure investment can be analysed at three levels: (1) international investment agreements (IIAs) as a branch of international law, (2) national law and (3) state-investor contracts. Human rights risks exist at each level. This three-level regime disproportionately benefits investors, allowing them to take almost any dispute with a host state directly to an international tribunal, with potentially damaging consequences for environmental and human rights protection.

IIAs typically offer investors lucrative inducements, guarantees and commitments by governments to "freeze" fiscal, environmental, social and other relevant laws (known as "stabilization") in order to protect investments over the potentially long life of a major infrastructure project. IIAs have yet to impose meaningful responsibility on investors or offer recourse to people adversely affected by an investor's conduct. Furthermore, investors can take disputes with host governments to be settled by tribunals outside the host country, side-stepping the domestic legal framework. This system of investor-state dispute settlement (ISDS) has been abused by investors to a point where it is seen by many as being beyond repair.

A recurring criticism of this system is that it impedes the state's right to regulate. From a human rights perspective, the state's *right* to regulate is also a *duty* to undertake legislative (and other) measures to realize rights. This right and duty can be compromised when investors challenge a state's regulatory actions in ISDS proceedings. Other human rights harms include the possibility of large arbitral awards seriously undermining states' fiscal space and ability to realize economic and social rights. Moreover, perverse incentives within the investment law regime and ISDS system may inadvertently trigger repression, victimization and criminalization of environmental and human rights defenders. States are starting to integrate human rights and environmental law into the adjudication of investment disputes. However, it will be difficult to generate a coherent jurisprudence within such a chaotic system. Clearly, fundamental reforms are needed, yet most IIA reform proposals advanced so far leave structural shortcomings and underlying asymmetries of power untouched.

National investment laws are not likely to afford individuals with legal protection or recourse for adverse impacts from the activities of investors. Such protection usually comes (if at all) from other sources of domestic law, such as human rights, health and safety, labour, environmental protection, anti-discrimination, administrative and disclosure laws. But rights protection is under pressure from two directions: On the one hand, IIAs or stabilization clauses in state-investor contracts may constrain host states from enacting such laws. On the other hand, national investment (or PPP or sector) laws can favour investors while creating pressures or incentives to dilute or remove safeguards for human rights and the environment.

State-investor contracts can also be a source of human rights harms. Stabilization clauses, for example, can freeze the host state's ability to enact new laws that protect the public. In addition, such contracts typically do not acknowledge the environmental and human rights obligations of parties and their potential to enhance the positive benefits of investment. Policy-makers wishing to promote model contracts to increase the flow of private investment in infrastructure should be aware of these shortcomings.

Infrastructure Finance: The Shifting Landscape

Expectations about the potential for private finance to help bridge the infrastructure financing gap are rising. The MDBs are proposing to maximize and prioritize private finance, while the G20 is pushing for a new roadmap toward infrastructure as an asset class that would standardize infrastructure investment. At the centre of global attention are institutional investors – pension funds, insurance companies and sovereign wealth funds – with up to US$ 70 trillion of assets. Although these institutional investors have very little exposure to infrastructure outside developed countries at this time, diverting just a small percentage of their assets may be enough to meet the infrastructure needs of emerging markets. However, when seeking to attract institutional investors, we should not overlook the sustainability gap, and in particular the potential negative environmental and human rights consequences of private finance flowing into infrastructure.

Over the years, as finance became globalized and began to dominate other sectors of the economy, it changed the way in which infrastructure services are financed and delivered. During the last three decades, private finance has begun to replace public provision of economic and social infrastructure in numerous countries and cities, thereby changing infrastructure from a physical and productive asset into a financial asset with an income stream. Infrastructure (despite its heterogenous nature) is also being developed into an asset class to facilitate investment. Complex financial products in infrastucture are already available, allowing easy trading. But this is a risky business. The corporate entities that receive investments are usually one or more steps removed from the underlying infrastructure assets, making it unclear (even to insiders) which underlying assets are being financed, which entity owns them, and who bears what risks. Standardized investment structures for infrastructure may conceal underlying problems and inadvertently generate negative human rights and environmental impacts. There is a need for a clearer, shared understanding of the potentially negative human rights impacts that may arise through standardizing infrastructure investments as an asset class.

The dominant influence of private finance may undermine the governance of infrastructure projects in ways that could impair the important role and functions of the state and impact negatively on the population at large. At an intermediate level, there may be negative impacts on service users, rate payers and beneficiaries of investment, such as workers participating in public pension funds. And there may be direct impacts on affected communities and individuals arising from inadequate transparency and weak social and environmental safeguards.

Whatever the world's legitimate infrastructure financing needs, private finance should not be seen as a panacea. Rather, we should understand that infrastructure finance is a shared responsibility of public and private actors. Public authorities should discharge their public governance responsibilities, which cannot be abrogated or delegated to private finance, while investors should accept that they are custodians of a public asset, and not mere private recipients of cash flow. This role requires a long-term outlook and active stewardship of investments, with responsibilities to ensure broad stakeholder engagement, robust and proactive disclosure of investments, the embedding of environmental and human rights considerations in investment and lending decisions, and monitoring and reporting. This approach should embrace both “doing no harm” (or risk management) and “doing good” (or enhancing the economic, environmental and social co-benefits).

Concluding Remarks and Recommendations

The international community should recognize that infrastructure policies and actions can cause, contribute to, or facilitate both positive and negative, multilevel, environmental and human rights impacts. The sustainability gap in infrastructure should be acknowledged and addressed explicitly and systematically in global economic and financial decision-making. The international human rights framework helps us understand the rights and responsibilities of all stakeholder groups involved in infrastructure, guides infrastructure policy-making and strengthens transparency and project sustainability. The publication's recommendations for policy-makers, infrastructure decision-makers and private sector actors include:

1. enhancing information disclosure, consultation, participation and accountability in infrastructure projects, including appropriate grievance redress mechanisms
2. ensuring that project selection is consistent with the host country's national development plan and international human rights and environmental commitments
3. integrating human rights criteria within universal standards for sustainable, accessible, affordable and resilient quality infrastructure
4. ensuring that all relevant public and private actors involved in infrastructure carry out human rights due diligence (HRDD) to inform and improve decision-making
5. addressing the environmental and human rights risks associated with international investment agreements, national investment laws and state-investor contracts
6. addressing the environmental and human rights risks associated with the efforts to attract private investment in infrastructure, and
7. integrating a gender perspective and collecting disaggregated data on key population groups most often affected by infrastructure, in line with international human rights law and the 2030 Agenda.

I. Setting the Scene

"Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly upon a level with those in the neighbourhood of the town. They are upon that account the greatest of all improvements."

Adam Smith, Wealth of Nations

In 2015, member countries of the United Nations unanimously adopted the 2030 Agenda for Sustainable Development (the 2030 Agenda),[1] including 17 Sustainable Development Goals (SDGs).[2] The 2030 Agenda aims to realize the human rights of all, combat inequalities and discrimination, and "leave no one behind". The SDGs and their corresponding targets offer a comprehensive and balanced paradigm for sustainable and equitable development. While the Goals are intended to be an integrated package, Goal 9 is of particular relevance for present purposes, committing states to "build resilient infrastructure, promote sustainable industrialization and foster innovation." Critically, the 2030 Agenda makes it clear that SDG 9 and other Goals should be implemented consistently with existing international law,[3] which includes human rights and environmental law.

The Addis Ababa Action Agenda (the Addis Agenda),[4] agreed at the Third International Conference on Financing for Development in July 2015, provides a forward-looking framework to finance sustainable development, including the SDGs. Under the Addis Agenda, "sustainable, accessible, affordable and resilient quality infrastructure"[5] is a key thematic area, since transportation, energy, water and sanitation are not only SDGs in their own right but are essential for achieving other SDGs. As with the 2030 Agenda, the Addis Agenda is explicitly grounded in human rights.

Later that year, the Paris Climate Agreement was adopted by consensus of 196 parties to the United Nations Framework Convention on Climate Change, embodying the commitment of states to respond to the global climate change threat by keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. It is the first multilateral environmental agreement that includes an explicit reference to human rights obligations in the context of climate change.

Without sustainable infrastructure, the objectives of the Addis Agenda, the 2030 Agenda, the 2015 Paris Agreement on Climate Change, and many internationally recognized human rights, will not be realized. Under both the 2030 and Addis Agendas, infrastructure investment is seen as playing a vital role in strengthening regional economic integration and "interconnectivity" between countries and peoples, and between consumers and producers.[6] The idea of "infrastructure connectivity" has an intellectual pedigree traceable to Adam Smith.[7] Connected infrastructure links multiple infrastructure assets and corridors to streamline the movement of goods, data and people, for commercial, economic and social benefit. Infrastructure also has a potentially equalizing force.

However, even Smith may have been surprised at the geographical expanse, scale, and complexity of the infrastructure master plans that have emerged over the last two decades or so, and their potential to fundamentally alter economic, social and political organization, as well as the physical landscape. Of these plans, the Programme for Infrastructure Development in Africa (PIDA), and the Infrastructure in South America Initiative that is part of the South American Council for Infrastructure and Planning (COSIPLAN-IIRSA), aspire to connect infrastructure within and across regions (see the Annex, which lists some of the more significant infrastructure plans launched over the last two decades). There are also many sub-regional plans in existence, such as the Master Plan on ASEAN Connectivity 2025.[8] Some large national plans can be just as ambitious, such as the Masterplan for Acceleration and Expansion of Indonesia's Economic Development (MP3EI) which includes six economic corridors. India's national plan has five huge economic corridors. India and Japan are collaborating on the Asia-Africa Growth Corridor, and these two countries and the United States of America have just announced the Indo-Pacific Infrastructure plan. China's Belt and Road Initiative (BRI), which aims to connect over one hundred countries in four continents through six economic corridors, is the most ambitious infrastructure vision in the world. This initiative would connect Asia, Europe, the Middle East and Africa with vast logistics and transportation networks as well as pipelines, transnational electric grids and fiber optic lines. In January 2018, China also invited the Community of Latin American and Caribbean States (CELAC) to join the Initiative.[9]

These are massive and complex undertakings. Each master plan includes multiple mega-projects (technically giga- or even tera-projects, costing billions or trillions, respectively[10]) such as linked highways, railways and ports, with multiple power generation and transmission assets leading to power production facilities. These are, or are likely to be, complemented by complex digital highway systems to support the information needs of commerce and cities, giving the concept of connectivity a virtual dimension. While the plans typically focus on traditional economic infrastructure, there are also variations on the theme – there are green regional plans, such as the Africa Renewable Energy Initiative (AREI),[11] and plans that include "smart cities". The Master Plan on ASEAN Connectivity 2025 has components dealing explicitly with cultural exchange and people-to-people connectivity.

The objectives of the regional, sub-regional and national master plans go beyond connecting physical infrastructure assets. A physical infrastructure corridor is also an economic corridor, a "corridor of growth" that facilitates trade and investment and helps cities and countries integrate and prosper economically. Many of the larger master plans are trade facilitation or economic integration arrangements of regional economic communities (RECs). For instance, COSIPLAN-IIRSA is supported by the twelve-member South American Union of Nations (UNASUR), a regional organization loosely modelled on the European Union. This is also the case with PIDA, backed by the African Union and the African RECs. Countries today, more than ever, see connectivity as extending their physical borders.

Economic justifications for the major infrastructure plans are often accompanied by geostrategic and political motives. Countries are locked in a fierce competition for increasingly scarce natural resources, and infrastructure plays a vital role in resource extraction and exportation. In some situations, the lure of enhanced physical and economic connectivity may be a prelude to regional integration. As an inducement, hard infrastructure proposals may be sweetened with diplomacy and soft aid. Some analysts call the BRI the "Chinese Marshall Plan".[12] However, China reportedly sees the BRI as much more: as an experiment in forging "win-win" economic, diplomatic and cultural relationships among countries, and a pathway toward alternative economic governance.[13]

The plans come with staggering financial requirements. PIDA's estimated cost is US$ 360 billion (between 2011 and 2040, with significant investments required by 2020),[14] while COSIPLAN-IIRSA's has invested more than US$ 199 billion in 562 projects since its inception in 2009.[15] And the BRI, if fully implemented, will easily outspend all others with a projected price tag of US$ 1 to 4 trillion.[16] Regional plans are typically matched with their own financing facility, and the financing mechanisms often have the support of one or more MDBs as a strategic partner, trustee, executing agency or co-financing partner. For example, PIDA is backed by the Africa 50 Infrastructure Fund established by the African Development Bank (AfDB). The ASEAN Infrastructure Fund[17] supports the Master Plan on ASEAN Connectivity 2025, and several MDBs support projects in COSIPLAN-IIRSA. The European Fund for Strategic Investments[18] was launched to mobilize private financing for strategic investments in the European Union.

The current demand in investments in infrastructure is often referred to as the "global infrastructure gap", or infrastructure financing gap. The magnitude of the gap varies from source to source. According to McKinsey Global Institute,[19] from 2016 through 2030, the world will need to invest about 3.8 percent of GDP in economic infrastructure, or an average of US$ 3.3 trillion a year, just to support expected rates of growth. Emerging economies account for some 60 percent of that need. But if the current trajectory of underinvestment continues, the world will fall short of funds by roughly 11 percent, or US$ 350 billion a year. The size of the gap triples to over US$ 1.1 trillion a year, if we consider the additional investment required to meet the SDGs.[20] By contrast, the OECD has estimated that US$ 6.3 trillion will be needed annually, between 2018 and 2030, to finance infrastructure investment, without considering additional costs of climate action. When the latter costs are factored in, the OECD's estimate increases to US$ 6.9 trillion annually over the same period.[21] This is more or less consistent with the estimate of the Global Commission on the Economy and Climate, an independent initiative to advise governments and businesses on growth and climate issues, which estimates infrastructure financing needs at US$ 90 trillion to the year 2030.[22]

Following the Addis Agenda and the 2030 Agenda, seven MDBs announced their aim to transform development finance from "'billions' in official development assistance to 'trillions' in investments of all kinds: public and private, national and global, in both capital and capacity."[23] A year later, at the G20 Leaders' Summit in China, 11 MDBs issued a joint declaration to support infrastructure investment with a minimum of US$ 350 billion between 2016 and 2018.[24] New multilateral financial actors, such as the China-led Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB), (the latter established by Brazil, Russia, India, China and South Africa), have joined the quest to finance large "transformational" projects.

In addition to providing capital, the MDBs help improve project design and structure in order to attract private capital. While most "hard" infrastructure in the transportation, energy and water sectors to date has been publicly financed, it is private sector financing that is hoped to make large-scale infrastructure investment feasible. Particular attention is being given to how to attract sources of long-term finance, such as private equity, hedge funds, insurance funds, pension funds and sovereign wealth funds. New financial instruments are being created to facilitate investment in infrastructure. Debt instruments will be bundled and securitized, and equity investments will be made through pooled funds to listed or unlisted infrastructure companies, enabling investors to own a slice of an infrastructure asset for potentially lucrative returns. At the time of writing, these were among the main topics planned for discussion at the November 2018 G20 summit in Argentina. The G20's "Roadmap to Infrastructure as an Asset Class"[25] calls upon the MDBs to help standardize approaches to project identification, preparation and contract design in order to facilitate the consolidation and sale of infrastructure-backed assets to institutional investors.

As urgent as infrastructure needs are in most parts of the world, especially in low-income countries, a disproportionate focus on the "financing gap" risks deflecting attention from a set of even more fundamental questions: What kind of infrastructure is being developed and whose needs does it serve? Who will lose out in the process? What direction will our development pathway take? Are we paying enough attention to the *environmental and human rights gaps* in mega-infrastructure projects? Are countries' obligations under international human rights and environmental law, which are the backbone of social and environmental sustainability, being recognized and reflected in planning, financing and investment decisions?

Investors and other stakeholders are increasingly focusing on environmental, social and governance (ESG) and, to a lesser extent, human rights criteria, to improve investment impacts and returns. However, in other quarters, non-financial considerations such as these are downplayed or dismissed entirely, perhaps out of a mistaken assumption that these are optional or purely ethical concerns, or are applicable in some countries but not others.[26] As this publication seeks to show, a failure to explicitly address the human rights and environmental dimensions of sustainability serves only to undermine project performance and transfer costs to those least able to bear them. Conversely, the greater the quality and rigour of due diligence and risk management, the lesser the risks, and the greater the likelihood that infrastructure will benefit society.

Human rights are embodied in a globally agreed and universally applicable legal and ethical framework. This framework is comprehensive and acknowledges the interconnected nature of climate change and human rights and the role of a safe, clean, healthy and sustainable environment for the full enjoyment of human rights. Respecting human rights is intrinsically important, but it is also smart economics. Workforce gender discrimination alone costs the global economy US$ 1.6 trillion annually, and the costs of excluding persons with disabilities have been estimated at between 5.3 and 6.9 percent of global GDP.[27] Serious human rights violations may undermine growth and cause or aggravate violent conflict.[28] Early attention to human rights risks in infrastructure projects can help avoid social conflict and costly delays and overruns, improve project design and benefits, and help projects earn and maintain a social licence to operate.

Human rights standards and principles can make vital contributions to the design and implementation of infrastructure projects, to investment decisions, and policy-making. The international human rights framework helps us unpack the rights and responsibilities of the parties involved in infrastructure, from contracting authorities, financiers, investors and private operators, to different segments of the public, including the affected communities, service users, taxpayers and the population at large. It provides a globally agreed and enforceable set of minimum standards governing the quality and inclusiveness of services and helps to delineate the allocation of risk between infrastructure investors, states and communities, weighing individual human rights against other rights and interests protected in international investment agreements, national investment and procurement (including public-private partnership, or PPP) laws. In these and other respects discussed below, the human rights framework provides guidelines as well as guardrails for infrastructure policy-making, reducing the arbitrariness of decision-making and strengthening incentives for better performance and more inclusive and sustainable development.

This publication analyses the potential gains from integrating human rights considerations explicitly within mega-infrastructure projects and plans in the energy, transportation and water sectors, as well as the costs of failing to do so. Given the grand scale of the plans and paucity of publicly disclosed information concerning their implementation, this publication does not comprehensively detail the actual impacts of the plans. Rather, it offers a suggested typology of impacts, based on existing mega-infrastructure project evaluations and supplemented by available information about the projects and plans under implementation. Unlike many other studies which focus exclusively on either the social or environmental dimensions of sustainability, this publication explores human rights and environmental impacts in an integrated fashion, consistent with the evolving state of international law on these issues, and taking into account how communities are affected by energy, transportation, water and other infrastructure projects in practice. While the ICT sector and the social infrastructure sectors (schools, hospitals, housing, prisons, etc.) can also give rise to problems of the kind discussed in this publication, sectoral specificities and the constraints of space preclude any detailed treatment of the latter sectors here.

The publication classifies and analyses impacts at three levels:

- **micro-level impacts**, which are potential impacts on people and the environment arising from the physical activities of implementing the plans,
- **meso-level impacts**, which are potential impacts on the consumers of infrastructure services arising from the operation of the relevant infrastructure assets, and
- **macro-level impacts**, which are impacts on the general population and society arising from government acts and omissions or broader financial, fiscal, macroeconomic or other public policy implications of infrastructure plans or projects.

When describing potential impacts, this publication, as far as possible, considers the differential impacts on women and other population groups who are discriminated against or may otherwise be in vulnerable situations. However, there is scant data on the distributional impacts of mega-infrastructure projects on key population groups in practice, notwithstanding the obligation of states to collect disaggregated data under international human rights law. While the data-collection and disaggregation commitments in the 2030 Agenda[29] may help to close the data gap over time, there will always be serious challenges in identifying and reaching those who are beyond the reach of official statistics (such as migrants, internally displaced persons and inhabitants of informal settlements) or who are excluded from social or political life deliberately. This publication recommends that this data gap be addressed urgently.

Chapter II of this publication sets the scene for the human rights analysis by reviewing a number of overarching opportunities and challenges that have arisen to date in relation to mega-infrastructure plans and projects. It focuses on the political economy of infrastructure investment, shortcomings in the design and process of carrying out infrastructure plans and projects, challenges involved in managing private sector participation, the lack of a coherent, harmonized legal framework or global standards for sustainable and quality infrastructure, and the lack of accountability. Chapter III then introduces the three-level taxonomy of human rights impacts that infrastructure projects may generate at micro-, meso- and macro-levels, and provides an illustrative outline of the most salient risks emerging from practice to date, in the energy, transportation and water sectors. Chapter IV discusses the international, national and contractual frameworks governing international investment and their implications for human rights, focusing on the state's right and duty to regulate in the public interest. Chapter V examines the potential human rights impacts of different infrastructure financing options and of moves to "financialize" infrastructure as an asset class. The publication concludes by calling on states as well as the international community, investors, development finance institutions (DFIs) and business entities to embrace their respective responsibilities in relation to mega-infrastructure investment, and offers a set of recommendations for the consideration of policy-makers.

Key Messages in Chapter I

- Regional infrastructure plans and mega-infrastructure projects are on the rise around the world. They are part of a global effort to enhance connectivity, trade and economic growth. They are also driven by geopolitical interests and competition for natural resources. Global economic and financial institutions, such as the G20 and multilateral development banks (MDBs), are mobilizing private finance to close the infrastructure financing gap.
- As urgent as infrastructure needs are in most parts of the world, especially in low-income countries, a disproportionate focus on the "financing gap" risks deflecting attention from the *environmental and human rights sustainability gap* in mega-infrastructure projects, and the role and contributions of international human rights and environmental law in minimizing adverse impacts and helping achieve the Sustainable Development Goals (SDGs).
- Human rights are embodied in a globally agreed and universally applicable legal and ethical framework. Legal requirements under human rights law set standards for service accessibility and affordability, and strengthen due diligence, social and environmental assessment, investment and public-private partnership (PPP) laws, contractual provisions and accountability mechanisms. Human rights law also recognizes that a safe, clean, healthy and sustainable environment is necessary for the enjoyment of human rights. In these and other respects, the human rights framework provides guidelines as well as guardrails for infrastructure policy-making, strengthening transparency and ensuring project sustainability.
- Respecting and investing in human rights is intrinsically important, but it is also smart economics. Workforce gender discrimination alone costs the global economy US$ 1.6 trillion annually, and the costs of excluding persons with disabilities have been estimated at between 5.3 and 6.9 percent of global GDP. Serious human rights violations may undermine growth and cause or aggravate violent conflict. Early attention to human rights risks in infrastructure projects can help avoid social conflict and costly delays and overruns, improve project design and benefits, and help projects earn and maintain a social licence to operate.


Aerial view of highway interchange in cityscape

II. Mega-Infrastructure: Opportunities and Challenges

"If you want to be rich, you must first build roads."
Chinese proverb[30]

"What kind of integration will it bring and who gets to define development?"
Derecho, Ambiente y Recursos Naturales[31]

1. Introduction

Whether conceived as an infrastructure financing gap or sustainability gap, infrastructure needs worldwide are enormous. But what kind of infrastructure is needed? At a personal level, we expect infrastructure assets to deliver useful public services, such as electricity, water, roads and public transportation, and telephone and internet connections, at a reasonable cost. However, the accessibility, quality and utility of infrastructure are determined by decisions taken by many actors including politicians, technocrats, financiers, investors, engineers, lawyers, and, ideally, communities themselves. The conflicting perspectives and interests of the many actors involved are not always easy to identify, let alone reconcile.

There are tensions and trade-offs between different infrastructure options, and different kinds of risks to be considered: One risk is that people will end up with poor quality or inappropriate infrastructure (for example, poor value for money, fiscal risks, shortfalls in public benefits, corruption or adverse environmental, social and human rights impacts), and another risk is that there will not be any infrastructure constructed at all. How can the opportunities of infrastructure be enhanced, and how can risks be minimized and political gridlock avoided, in order to ensure that infrastructure investment serves the public interest and purposes of the 2030 Agenda for Sustainable Development?

2. Opportunities

It goes without saying that, for those living in poverty, infrastructure provides an opportunity to access water, electricity, jobs, schools, health clinics, social networks, markets and other essential goods, services and pathways out of poverty. For all our undoubted progress at the global level in increasing primary education rates, reducing income poverty and malnutrition and fighting communicable diseases, it is a continuing mark of shame that 884 million people worldwide still do not have access to safe drinking water, and 2.6 billion people, or 40 percent of the world's population, lack access to basic sanitation.[32] Many others are denied access to affordable, clean energy sources, which impacts negatively on livelihoods and a wide range of human rights, and one-half of the world's population lacks access to the internet.[33] Across the board, gains are unevenly distributed, and in-country inequalities are rising. The right kinds of infrastructure investment could therefore make a major contribution to more equitable and sustainable societies.

Infrastructure investment is generally justified not only by reference to human needs, but also by its expected economic benefits through connectivity leading to increased trade. Infrastructure is typically associated with a socio-economic rate of return of around 20 percent, resulting from productivity gains, reduced travel time and costs, enhanced access to reliable electricity, broadband connectivity, and so forth.[34] The proponents of PIDA, for example, have estimated that US$ 172 billion is lost to African businesses annually due to infrastructure deficits in the transportation sector.[35]

Yet the correlation between infrastructure and economic growth is not as direct or consistent as is often made out. The interactions between infrastructure and growth, and, in particular, the effects of infrastructure on productivity, have not been settled conclusively.[36] New infrastructure in a mature economy does not necessarily, of itself, boost output in the region in the short- to-medium term.[37] In the case of mega-infrastructure, the link appears to be surprisingly tenuous. For example, when mega-infrastructure facilitates trade, it often heightens the dependency on one or a few buyers of goods (commodities) and services. Researchers have argued that, far from being an engine of economic growth, many infrastructure investments in China have failed to deliver a positive risk-adjusted return: "Investing in unproductive projects results initially in a boom, as long as construction is ongoing, followed by a bust, when forecast benefits fail to materialize and projects therefore become a drag on the economy."[38] Depending upon the sector and national characteristics, rapid infrastructure investment may actually lead to financial and macroeconomic crisis and a contraction of the economy, which is the exact opposite of what mega-projects are often claimed to do.

The relationship between infrastructure and jobs is equally complicated and to some extent contradictory. Infrastructure investment is frequently accompanied by short-term job increases. However, private sector involvement in infrastructure projects has often led to short-term job losses, although to the extent that infrastructure investment contributes to economic growth, there may be compensating effects. It is estimated that increasing infrastructure investment by one percentage point of GDP could generate an additional 3.4 million direct and indirect jobs in India, 1.5 million in the United States of America, 1.3 million in Brazil and 700,000 in Indonesia.[39] There is also evidence that infrastructure projects that address climate change and promote resource-efficient and low-carbon societies generate more and better green jobs.[40] On the other hand, in the case of renovation or brownfield infrastructure projects, there may be a net job loss and the quality of remaining jobs may diminish. Incoming managers and owners may cut back on wage bills, health insurance benefits, working conditions, unionization rights and other protections, although the evidence on this point is contested.[41] It is sometimes suggested that the increasing automation of work will diminish the contributions of infrastructure investment to employment. For this reason, Argentina has identified the "Future of Work" as one of the top three priorities of the November 2018 G20 Summit meeting, along with "Infrastructure for Development" (infrastructure as an asset class), and "A Sustainable Food Future."

A different way to appreciate infrastructure opportunities is to view each mega-infrastructure project as an occasion for the host country to systematically generate economic, social and environmental co-benefits, while taking all reasonable measures to manage economic, social and environmental risks.[42] Economic and social co-benefits include improved access to water and sanitation services for segments of the population, among other services, which can add up to 7 percent of GDP in some countries.[43] Consultation with, and participation of, all stakeholders, based on free and prior availability of relevant project information, helps to bring out a diverse range of viewpoints, inform and frame difficult choices, and improve project design and confidence in the planned infrastructure, ensuring in the process that people's rights are prioritized over other competing interests. Effective and accessible grievance redress mechanisms can help address human rights violations. These measures help countries make the necessary trade-offs while avoiding gridlock and delays. Guided by a more holistic vision of this kind, countries may fulfil multiple SDGs that are connected to infrastructure,[44] complementing and reinforcing the G20's traditional focus on economic growth.

In this context, it is important to note that infrastructure projects that are specifically designed to help achieve a low-carbon economy (such as renewables) should also seek other environmental and social co-benefits, and should not be seen as exempt from environmental and social risk management requirements. Self-identified "green" projects are not necessarily inherently sustainable – forestry projects may still impact adversely on indigenous peoples, hydropower projects may result in forced evictions, and the use of corn and other food crops for biofuels may have serious negative impacts.[45]

3. Challenges

The opportunities and potential benefits of infrastructure investment are clear and compelling, though often difficult to realize in practice. At the same time, it is all too easy to point to poor-quality infrastructure projects in all regions of the world. While explanations for poor performance are to a large extent context-specific, a number of important factors can be drawn out from global experience to date:

(1) the (complicated) political economy of mega-infrastructure investment,
(2) flawed design and process decisions,
(3) difficulties in managing private sector participation,
(4) fragmented standards and regulatory frameworks and
(5) weak accountability mechanisms.

3.1. Political Economy of Infrastructure Investment

As indicated, the operational and regulatory environments for mega-infrastructure investment involve many actors with potentially conflicting perspectives, incentives and interests. Problems of under-investment or no investment in infrastructure, and of misconceived, inappropriate or poor-quality infrastructure, are often influenced by geopolitics, national and local politics, and economic and financial interests.

Geopolitical competition appears to be fuelling competition for infrastructure financing and construction, creating what some have called an "infrastructure arms race,"[46] potentially resulting in massive infrastructure projects that conflict with host countries' development plans and international human rights and environmental obligations. At the national level, politicians tend to favour larger, more expensive and ambitious initiatives, notwithstanding the fact that mega-projects are notorious for their cost overruns, delays and overstated benefits. Flyvbjerg has pointed out that nine out of ten megaprojects have cost overruns, that overruns of up to 50 percent in real terms are common, overruns over 50 percent are not uncommon, and that on average, 45 percent of dam projects are delayed. Furthermore, delays result not only in cost overruns, but also in shortfalls in benefits, such as diminished demand in the order of 50 percent or more.[47] Politicians frequently benefit from overly optimistic demand forecasts, leading to insufficient revenues, or payment mechanisms that allow excessive tariff increases and create affordability problems.[48]

Relatedly, it has been observed that, for all the talk of providing poorer people with access to clean water or electricity, infrastructure plans so far are primarily directed at reducing "economic distance" between natural resources and the "global consuming class."[49] Most regional plans focus on transportation projects to facilitate trade: Roads, railways and ports help the movement of goods for export ("from mine to port"), which helps to shorten the global supply chain, but may not improve the accessibility of services to those who are unserved. Although PIDA's focus is meant to include the water sector, PIDA's Progress Report 2017[50] features only one project (a hydro dam project in Lesotho) with irrigation and water distribution features. Moreover, the promoters of COSIPLAN-IIRSA have consistently highlighted the development benefits of economic integration from road projects, with the result that water and energy projects have been relegated to secondary importance.

The dominance of economic, commercial and financial considerations in infrastructure decision-making to date has meant that many of the externalities of mega-infrastructure projects (an external effect or consequence that is not reflected in the pricing of infrastructure services) have frequently been downplayed or disregarded entirely. These externalities potentially create environmental and human rights harms, as will be discussed in detail in Chapter III below. Moreover, as will be seen in Chapter V, there is an increasing tendency in infrastructure decision-making to prioritize private finance as the default financing option, which may bring significant risks, absent rigorous social and environmental safeguard processes and thorough analysis of sector and country conditions, and may not always generate the promised public benefits.

Poor public governance is often cited as a major reason why infrastructure projects fail to meet their timeframe, budget and service delivery objectives. The OECD has published a ten-point set of recommendations[51] to address these problems (as well as some of the other problems described below), including highlighting the critical importance of public participation. Unfortunately, however, there is no silver bullet to the governance challenge – the OECD's recommendations seem ambitious on their face, and yet in some respects they do not go far enough, especially in terms of clarifying the relationship between the public governance of infrastructure and governments' responsibilities to ensure social and environmental sustainability in infrastructure projects.

3.2. Flawed Design and Process Decisions

Poor conceptualization, project selection and design can have systemic, long-term adverse impacts. Many of the regional plans discussed in Chapter I are not based on national or regional development planning processes, but are driven by an outdated and potentially destructive model of industrialization based on export specialization and natural resource extraction. This "extract and export" model is exemplified in PIDA, where transportation corridors, pipelines and port facilities are designed to facilitate exports of oil, metals and minerals. In practice, what the plan does is to maintain a resource-based economic model which ensures continuing dependency of host countries on high commodity prices. In the case of COSIPLAN-IIRSA, over 50 percent of the plan's budget is said to be dedicated to highways (the remaining 25 percent to railways, bridges, seaports and waterways and 15 percent to energy projects, mostly hydroelectric dams).[52] This has prompted some to accuse COSIPLAN-IIRSA of taking the continent back to the beginning of the last century, when the region survived on shipping its natural resources overseas, with comparatively little attention to promoting domestic industries, alleviating poverty[53] and encouraging a shift to a lower carbon economy.

Moreover, the plans' proposed transportation and energy generation projects, which are predicated to a large extent on oil, gas or coal, and the way in which infrastructure assets are to be constructed and operated, appear to assume a business-as-usual emissions scenario. This may conflict with countries' nationally determined contributions under the Paris Agreement and foreclose potentially strategic economic opportunities that infrastructure plans should be seeking to promote in the first place. Research by the Chinese Academy of Sciences shows that under a business-as-usual scenario (which includes "infrastructure-as-usual"), the world will be 4°C warmer than preindustrial levels by the mid-2080s.[54] If a 2°C increase will be dangerous, a 4°C increase will be catastrophic.[55] Economic output under a 4°C scenario may be reduced by as much as 30 percent compared to a 2000–2010 baseline scenario. Conversely, limiting warming to 1.5°C may bring significant economic benefits.[56]

Mega-infrastructure plans and projects are rarely accompanied by adequate studies and analyses to inform project design and implementation at a sufficiently early stage in the process. Human rights impact assessment and climate impact assessments are a rarity, as are strategic environmental assessments. States often lack the capacity to commission, oversee, and fully benefit from such studies in the decision-making process. Even if studies are carried out, their quality is often poor, and the social aspects of such assessments frequently fall short of the environmental aspects, thereby opening up potentially crucial human rights gaps. Several ESIAs may have to be pieced together to cover an entire corridor, resulting in coverage gaps and a potentially poor assessment of cumulative impacts. Human rights due diligence (HRDD) is provided for only in one MDB's safeguards policies (those of the International Finance Corporation [IFC]), but then only in "limited high-risk circumstances" rather than as a standard feature of an effective risk management system.

In many countries, public consultation procedures are mandated by national environmental impact assessment laws. However, in practice, public consultations often take the form of information dissemination sessions, rather than a genuine exchange. People may be intimidated and prevented from expressing their views, in some cases, due to the presence of security personnel. Even where consultations of an acceptable standard are carried out, their impact upon design and implementation decisions has been uneven at best. The capacity to manage consultation processes in a rights-compatible manner is very limited in many if not most jurisdictions.

More fundamentally still, the timing of public consultation processes may effectively remove any positive benefits. By the time that an ESIA for an infrastructure project is concluding, the most important project decisions will typically already have been made. Decisions are often irreversible or too expensive to reverse, given the scale of the project, making consultations thereafter mostly moot. Hence, there is an urgent need to move interactions with people upstream in the project decision-making process. For example, the national development or national infrastructure planning process may present opportunities for civil society organizations (CSOs) and people to be involved at an early stage. National investment or PPP laws and guidance documents should be objects of public consultation. And formal studies that inform early decisions, such as cost-benefit analyses, should involve not only experts but also affected communities. There are many initiatives underway to address these kinds of challenges, including open government and e-government initiatives, although there are additional challenges in influencing REC decisions connected with regional plans. And upstream, as well as downstream, participation will mean nothing without minimum guarantees of freedom of information, expression, association and assembly, which are under threat in an increasing number of countries in the global North and South.

The mega-infrastructure project selection process itself often reveals other serious deficits in democratic processes. The right to freedom of information is an internationally recognized human right.[57] Freedom-of-information laws exist in around 100 countries, and the World Bank identified at least 11 jurisdictions with a disclosure framework for PPPs.[58] Notwithstanding these guarantees, populations have remained largely ignorant about the planning and project selection processes under regional plans.[59] The more the locus of decision-making moves from local and national governments to regional and global bodies, the worse the problem becomes. Governments often appear to have nominated whatever projects they wish to see implemented under master plans, including so-called "vanity projects", unfettered by public opinion, parliaments, national development planning processes or the country's international commitments. While the general public has largely been sidelined, investors' preferences and priorities, by contrast, have more often been taken seriously. See the description of the decision-making process of COSIPLAN-IIRSA in Box 1.

3.3. Difficulties in Managing Private Sector Participation

In the 1980s and 1990s, the United Kingdom and the United States of America experimented with different models to leverage limited public funds through the involvement of the private sector. Many countries, including in Latin America, followed suit. The techniques used ranged from leasing, management contracts, PPPs and concessions to the outright sale of infrastructure assets or privatization. The results, however, were mixed.

Private sector participation in infrastructure projects is intended to bring a range of benefits including the transfer of technology and expertise, efficiency gains and additional resources. Yet the relationship between growth and private sector participation in infrastructure appears far less straightforward than is often claimed. On the one hand, private sector participation in the electricity and water sectors has been shown to improve efficiency and service delivery in certain contexts.[60] Empirical evidence suggests a likely linkage between infrastructure and macroeconomic productivity, and private sector participation can result in net welfare benefits.[61] However, private sector participation can also lead to losses and harms; for example, private operators often cut jobs to raise efficiency and profitability (see further in Chapter V). At the microeconomic level, the experience from the water sector in Latin America in the 1990s suggests that private sector participation does not necessarily correlate with increased access to service or affordability, and that data on access for low-income groups is often unavailable or incomplete.[62]

BOX 1

How are Regional Plans and Projects Developed? The Case of COSIPLAN-IIRSA

The history of COSIPLAN-IIRSA, one of the older regional plans established in 2000, with its foundational ideas going back as far as the 1970s, provides valuable insights into the dynamics of the life of such plans and possibly lessons for newer plans. Back in 2000, the twelve-nation Union of the South American States (UNASUR) established IIRSA through a multilateral agreement. CSOs that observed the IIRSA formation process have alleged that there was no public consultation at the inception of the plan ("as the plan's purpose was economic integration, and not connectivity of people and social development").

In the early phase, the Corporación Andina de Fomento (CAF – Development Bank of Latin America), the Inter-American Development Bank (IDB) and the River Plata Basin Financial Development Fund (Fonplata) formed the technical coordination committee (CCT), providing technical and financial support to IIRSA activities. The IIRSA national coordinator in each country was responsible for following up on the priority projects in the agenda and coordinating with CCT. It is reported that in an early planning period between 2003 and 2004, all participating countries nominated desired projects (some countries were accused of dressing up old projects that never materialized and throwing them in the mix of IIRSA projects), and they eventually compiled an "Implementation Agenda based on Consensus 2005–2010." Notwithstanding these mechanisms for consensus-building and the coordination responsibilities at the IIRSA and national levels, it appears that Brazil, with its strong capacity for strategic planning and abundant liquidity at the time through its national development bank, BNDES, took the effective lead in the early planning process. There is anecdotal evidence that other countries refrained from objecting to projects favoured and prioritized by Brazil for fear of reprisals.

More than ten years after the launch, IIRSA was only 12 percent complete, with 60 percent of the projects still underway. Following a drop in commodity prices and economic downturn in Brazil, IIRSA was subjected to reforms. In 2011, the IIRSA initiative was incorporated into the South American Council for Infrastructure and Planning (COSIPLAN) – the political and strategic forum for planning and implementing the integration of South American states – as its technical forum. COSIPLAN is composed of the ministers responsible for infrastructure and planning of the UNASURE member states. Its presidential function is provided by the president of UNASUR. The COSIPLAN project portfolio has 581 integration projects, distributed throughout South America, organized into 47 project groups and nine integration and development hubs.

Today, the decision-making power of COSIPLAN – IIRSA has been transferred from technocrats to domestic politicians to enhance accountability. The countries appear to share decision-making power more evenly than was the case previously. COSIPLAN-IIRSA provides various checks and balances, but without any overriding powers to compel countries to take actions against their will. However, some stakeholders have questioned whether COSIPLAN-IIRSA carries the weight that it once did.

Source: COSIPLAN-IIRSA; DAR www.dar.org.pe; Friedman-Rudovsky (2012) "The Bully from Brazil" (see note 52); PIDA Financial Structuring Plan (2014) www.icafrica.org/fileadmin/documents/PIDA/PIDA-FIN-STCTRNG-PLAN-REPORT-ICA.pdf

PPPs, a form of private participation in infrastructure that is currently advocated by many, may appear attractive to governments when public budgets are constrained. If properly managed, PPPs may improve the efficiency of public services through efficiency gains and the technical expertise provided by the private sector. But, here again, the reality is complex. Although PPPs are expected to bring additional finance, contrary to intuition, PPPs generally do not provide additional resources to the public sector.[63] Moreover, projects with private sector participation, such as PPPs, are not necessarily cheaper than the public-sector option. For example, the public sector's borrowing cost is often lower than that of the private sector,[64] and in the case of European road projects, PPPs have reportedly been 24 percent more expensive than traditionally procured projects, on average.[65] Transaction costs associated with PPPs, such as legal and other professional fees, can lead to massive outlays if they are not carefully managed. Many PPPs may not achieve value for money over the course of the project cycle, even if they are publicly justified on that basis.[66]

Governments often grant upfront incentives to the private sector, such as subsidies or guaranteed fixed or minimum financial returns, as well as guarantees at the back end to private operators, without disclosing the contingent liabilities incurred.[67] Unsolicited bids, which are not uncommon, may eliminate the potential efficiencies from competition altogether. Moreover, once concluded, PPP contracts frequently involve further renegotiations, which may result in rate increases that negatively affect service users.[68] PPPs in the energy sector are associated with the highest number of investor-state dispute settlement cases, followed by the water sector (see Box 14).

These kinds of costs and inducements might be easier to understand if the public benefits of PPPs were clearer. However, the development impacts of PPPs are far from certain. For example, the World Bank's Independent Evaluation Group (IEG) observed that that pro-poor design considerations, including accessibility, have not been given sufficient attention, and service quality data has not been adequately collected.[69] Laws and regulations that encourage formal infrastructure (which is what attracts private sector investment) usually improve efficiency for the private operator, but can inadvertently result in the termination of informal services on which poorer population groups rely. Without strong pro-poor policy guidance from the state, and without public subsidies, private sector participation cannot always be counted on to produce equitable public benefits.

Even where PPPs are added to traditional public procurement processes, the public sector typically continues to shoulder a significant share of infrastructure investment; estimates of the public sector's share of infrastructure investment ranges from two-thirds to up to 90 percent in low-income countries.[70] And where private financing is available, it does not alter the fact that customers or taxpayers must ultimately pay for the investments. Cost-covering tariffs, charges and subsidies remain central to all infrastructure provision, public or private.[71] The dearth of bankable projects adds to the challenges faced by PPPs, particularly in low-income countries.

Nevertheless, private sector participation in infrastructure remains a priority for many countries, international organizations and sustainable development constituencies, driven by an expectation that this will promote economic growth and help countries achieve the SDGs. Private sector financing is the cornerstone of many regional plans. For example, 47 percent of the COSIPLAN-IIRSA investments have been reported as privately financed or structured as PPPs. It is also obvious from the 2017 PIDA Progress Report that private sector participation is the lynchpin of PIDA. Ironically, however, many countries that are most actively seeking private financing are among those least capable of managing additional resources for sustainable development purposes.

3.4. Fragmented Standards and Regulatory Frameworks

Good governance of infrastructure plans and projects helps ensure that the right infrastructure choices are made, and the right projects are implemented, in the best way possible. International human rights law and requirements for transparency, due diligence, public participation and accountability provide essential scaffolding for good governance, particularly in the high-risk field of mega-infrastructure projects. But there is no single formula or cookie-cutter approach applicable in all situations, and the available tools to support the effective governance of infrastructure projects are fragmented and incomplete.

In the case of cross-border infrastructure projects, the multiplication of regulatory frameworks and standards creates particular governance challenges. National policies, laws, standards and rules are rarely harmonized, resulting in a patchy, inconsistent and unpredictable regulatory landscape. Lack of harmonization among countries participating in a plan means individual national environmental, labour and social laws could be applied to different segments of regional and sub-regional plans, leading to conflicting project standards, or worse, a regulatory vacuum.

BOX 2

The Southern Gas Corridor Pipeline

The Southern Gas Corridor Pipeline consists of three connected pipeline segments originating in Azerbaijan and terminating in Italy, with a total length of 3,500 km and an estimated project cost of up to US$ 48 billion. When completed, it will be the one of the longest cross-border pipelines in the world, involving six transit countries and ten companies.

The legal regime and standards applicable to the project are set out in a complex web of legal agreements. Various states have taken up different responsibilities in agreements with other states (inter-governmental agreements or IGAs) and with investors (host-government agreements or HGAs).

The Energy Charter Treaty (https://energycharter.org) establishes principles for cross-border cooperation in the energy industry in Eurasia. Model agreements for IGAs and HGAs have been published in order to help regulate horizontal (state-to-state) and vertical (investor-to-state) relationships, respectively, in connection with cross-border oil and gas pipeline transactions. The charter envisages IGAs and HGAs working in tandem: while the IGAs help states coordinate and harmonize standards, the HGAs spell out the standards in detail. The reality of the project, however, does not conform to this vision.

The HGAs designate different legal regimes for the project, from the HGA itself (Azerbaijan and Georgia ratified the HGAs), various international and national laws, to EU laws, depending on the segment of the pipeline. The agreements also set out different international standards. For example, in the case of environmental and social standards, the agreements designate one or more of the applicable EU directives and World Bank, IFC, and European Bank for Reconstruction and Development (EBRD) standards. For the longest segment of the pipeline running through Turkey, the environmental and social standard setting and implementation responsibility is delegated to the investors.

The fact that the applicable standards are not predictable and consistent throughout is problematic, as is the uncertainty about states' willingness to take a proactive approach to the enforcement of standards when the standard-setting and implementation responsibilities are delegated to the private sector.

The most significant variation relates to country responsibility for the acquisition of land and compensation for resettlement. Whereas Azerbaijan is responsible for managing land-related issues, in the case of the segment running through Turkey through Italy, the responsibility rests with the investors, contrary to the provision of the model HGAs under the Energy Charter. Such an arrangement may create confusion and lack of trust, especially in weak-governance environments. For example, an Albanian resettlement being implemented by investors has reportedly generated confusion and resentment in project-affected communities, and alleged human rights violations.

Source: The Energy Charter: www.encharter.org; "Intergovernmental Agreements and Host Government Agreements on Oil and Gas Pipelines – A Comparison". Available at: https://energycharter.org/what-we-do/trade-and-transit/trade-and-transit-thematic-reports/intergovernmental-agreements-and-host-government-agreements-on-oil-and-gas-pipelines-a-comparison-2015; Mustafayev (2016) "The Southern Gas Corridor Pipeline: legal and regulatory developments in major gas transit projects", Journal of World Energy Law and Business 2016, 9, 370–387. Available at: https://academic.oup.com/jwelb/article-abstract/9/5/370/2222450/The-Southern-Gas-Corridor-legal-and-regulatory?redirectedFrom=fulltext; CEE BankWatch. Available at: https://bankwatch.org/our-work/projects/southern-gas-corridor-euro-caspian-mega-pipeline); Counter-Balance. Available at: (www.counter-balance.org/wp-content/uploads/2017/02/The-TAP-project_identified-non-compliance-with-the-Equator-Principles.pdf)

To respond to this lack of legal coherence, the World Trade Organization (WTO) has proposed a single legal regime for infrastructure plans and corridors to accelerate the movement of goods across borders.[72] In 2017, the United Nations Economic Commission for Africa (UNECA) helped develop the PIDA Model Law for Infrastructure Development.[73] It is also possible, at least in theory, to create a legal enclave through consistent provisions in intergovernmental (state-to-state) agreements and host-state agreements (state-to-investors), though complete consistency is difficult to achieve in practice, as the patchwork of agreements and imported external standards governing the implementation of the Southern Gas Corridor Pipeline project illustrates (see Box 2). It is not yet clear how these legal frameworks address human rights issues.

Beyond the problem of fragmentation and incoherence in national laws, there is currently no universally applicable set of sustainability principles or standards system dedicated to sustainable infrastructure per se. General social and environmental safeguard policies and performance standards are used in infrastructure finance, and standard-setting initiatives have emerged in relation to particular sectors or topics, but these are fragmented and are mostly not interoperable. There is a pressing need for tailored infrastructure sustainability principles and a standards system that can address economic, social, governance and environmental issues arising in the multiple phases of infrastructure plans and projects, in all key infrastructure sectors. MDBs or other international or regional bodies involved in the promotion or financing of infrastructure projects may suggest (or, through legally binding terms of financing agreements, impose) common safeguards or sustainability standards. However, the safeguards and access to information policies of MDBs are of varying scope and strength, and specific human rights protections are often weak or absent.

In any case, MDBs' and other financing institutions' safeguards cover mostly project footprint issues at the level of affected workers and communities and the environment, and do not address other complex infrastructure-related impacts at the level of users of infrastructure, or in relation to the population at large (these are discussed in Chapter III). Neither do they apply directly to the early phases of an infrastructure project cycle, such as the project selection and design phases. Moreover, no MDB has the capacity to finance an entire regional plan, and MDBs are not likely to stay involved in a project from start to finish. In many cases, their long-term involvement (if any) may be limited to a strategic advisory role without direct financial leverage. If a plan is implemented without the involvement of an MDB that has robust safeguards and access to information policies at the outset, it will be difficult for another MDB to later retrofit the plan with more robust standards.

While many international banks use the Equator Principles[74] for environmental and social risk management purposes, these banks have been less active in project finance in infrastructure since the 2008 financial crisis (though this may be changing). In their place, long-term private investors have been encouraged to invest in this sector, but, at the time of writing, few have the experience and capacities to apply the Equator Principles appropriately. The Equator Principles, in any case, are based upon the IFC Performance Standards, which call for HRDD only in exceptional circumstances,[75] rather than as a routine component of risk management and reporting systems. At this time, there are no principles on responsible finance that apply across insurers, pension funds and sovereign wealth funds, though large insurance companies and private equity firms may be guided by the Principles for Sustainable Insurance[76] and Principles of Responsible Investment (PRI),[77] respectively. The OECD Guidelines for Multinational Enterprises[78] (MNE Guidelines) are also referred to in infrastructure finance from time to time.

Beyond the MDBs, climate finance mechanisms, such as Green Climate Fund and Global Environmental Facility, cross-reference or rely on MDB safeguard policies to varying degrees. Climate Bonds Standard 2.1[79] is a tool to enable investors and governments to identify and prioritize climate and green bonds, ensuring that funds are directed to projects that deliver climate change solutions.

As of 2016, there were approximately 30 separate global and regional initiatives driving investment in sustainable infrastructure.[80] The initiatives are aimed at influencing policy, mobilizing finance and supporting implementation of sustainable infrastructure projects, and their proponents include the United Nations Economic Commission for Asia and the Pacific (UNESCAP), the World Bank Group, the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the Asian Development Bank (ADB), the Inter-American Development Bank (IDB)[81] (see Box 3), the International Association for Impact Assessment, World Wildlife Fund, McKinsey, the G20, Global Infrastructure Basel's SuRe standard, and the Envision rating system by Harvard's Zofnass Program for Sustainable Infrastructure). Several other initiatives relate to climate finance. Further coordination between these initiatives, beyond ad hoc informal exchanges, would be highly desirable.

BOX 3

IDB's Sustainable Infrastructure Framework

The IDB has identified four dimensions of sustainability for infrastructure projects: economic and financial, environmental, including climate resilience, social, and institutional. The social dimension includes service accessibility (including disability access standards), affordability, quality, gender-inclusive project design, final local community agreements based on free, prior, and informed consent, effective grievance management and accountability. It emphasizes that projects must be constructed according to good labour, health, and safety standards and that benefits generated by sustainable infrastructure services should be shared equitably and transparently, promoting gender equity, health, safety and diversity while complying with human and labour rights. It also addresses avoidance or minimization of involuntary and economic displacement.

Source: IDB and IDB Invest (March 2018) "What is Sustainable Infrastructure? A Framework to Guide Sustainability Across the Project Cycle", Technical Note IDB-TN-1388.

3.5. Weak Accountability Mechanisms

In public administration, the principle of accountability, which is grounded in international human rights law,[82] requires that responsibilities are clearly specified, duty-bearers are answerable for their actions and omissions, and that effective redress mechanisms be available and accessible to those who most need them. Accountability in the public governance of infrastructure implies a clearly articulated and publicly disclosed framework of responsibilities between relevant government agencies, as well as to those they govern. It also requires that there be consequences for any dereliction of duty, especially where human rights are at issue.

The complexity of the political economy and the governance arrangements for mega-infrastructure projects presents serious challenges for accountability. In theory, the main recourse for those whose rights and interests are threatened by infrastructure plans and projects should be through the ballot box. However, infrastructure decision-making can be a technically demanding exercise, and is often (wrongly) assumed to be technocratic, beyond the realms of public debate. The lack of transparency in the process makes it difficult at times to pursue the accountability of elected officials. These challenges are compounded by increasing authoritarianism, erosion of democratic norms, attacks on media freedom and the judiciary, and the shrinking of civil society space in many countries.

The formal justice sector in many countries can be weak and difficult to access, even for those with financial means, and their role is generally reactive, providing redress (if at all) after the damage has been done. Nevertheless, courts have played important roles in many contexts in providing a forum for the expression of grievances and remedying harmful effects of infrastructure projects.[83] Creative legal actions have been carried out recently in Pakistan, the Netherlands, the Philippines and the United States of America, seeking remedies under regional instruments or national law for climate-related human rights violations. In a notable recent development, the Inter-American Court of Human Rights has become the first international or regional judicial body to recognize an autonomous right to a healthy environment and nations' extraterritorial responsibility for environmental damages.[84] This opinion may well stimulate or support litigation for cross-boundary environmental or climate harms arising from infrastructure projects, a scenario that is plausible under COSIPLAN and other mega-infrastructure projects.

National human rights institutions or ombuds offices may also provide a feasible and effective venue for bringing complaints against the government or the private party, although their mandates may be limited and their capacities are frequently overstretched. Subject to constraints of this kind, these mechanisms can, among other functions, monitor adherence to human rights standards, independently review government performance, and recommend measures for remedy and redress in the event of noncompliance. States may also establish ad hoc arrangements dedicated to specific mega-infrastructure projects. These should comply with due process and human rights requirements and should not be compromised in the quest for quick implementation of projects.[85] Complaints mechanisms are increasingly available in connection with procurement processes, though they typically cater to the interests of business entities rather than the population at large.

In addition to these mechanisms, project-level grievance mechanisms should also be established by private sector entities, pursuant to Pillar III of the United Nations Guiding Principles on Business and Human Rights (UNGPs).[86] If an MDB, a bilateral financial institution or an OECD export credit agency is providing financing or support (and if the aggrieved party knows about their involvement), accountability mechanisms of these organizations can be accessed.[87] But these are not enough – other judicial, quasi-judicial, political and administrative mechanisms are necessary to address the human rights concerns of infrastructure users, taxpayers and other affected individuals, particularly those who are poor, marginalized or vulnerable. Transparency must be improved if any of these mechanisms is to be effective. As discussed above, transparency and disclosure regimes have often operated for the benefit of commercial stakeholders rather than the general public, in this context.[88]

4. Looking Ahead

One particularly noteworthy initiative for present purposes is the Ise-Shima Principles for Promoting Quality Infrastructure Investment (see Box 4), which were agreed by the G7 leaders at the Japanese G7 summit in May 2016. It is based on Japan's earlier initiative called the Partnership for Quality Infrastructure. The Principles list a number of prerequisites for sustainable infrastructure, in schematic form. Principle 3 mentions the importance of addressing environmental and social impacts. Following the G7 declaration of the Principles, Japan has announced several financing initiatives totaling US$ 200 billion over five years under the banner of its Partnership initiative.[89] However, no official announcement or endorsement of specific substantive criteria on quality infrastructure has been made to date.

BOX 4

Ise-Shima Principles for Promoting Quality Infrastructure Investment

a. Principle 1: ensuring effective governance, reliable operation and economic efficiency in view of life-cycle cost as well as safety and resilience against natural disaster, terrorism and cyber-attack risks
b. Principle 2: ensuring job creation, capacity building and transfer of expertise and know-how for local communities
c. Principle 3: addressing social and environmental impacts
d. Principle 4: ensuring alignment with economic and development strategies, including the aspects of climate change and environment at the national and regional levels
e. Principle 5: enhancing effective resource mobilization, including through PPPs

Available at: www.mofa.go.jp/files/000160272.pdf

At the time of writing, there was speculation that Japan would take up the Principles on the occasion of its G20 Presidency in 2019. G20 leadership on the issue of quality infrastructure could potentially help to consolidate the many fragmented initiatives on this topic. This would be a welcome development, provided that the G20 takes a broad and balanced view of all dimensions of quality infrastructure ("sustainable, accessible, affordable and resilient") consistent with the Addis Agenda. The latest version of the Principles addresses only a few aspects of quality infrastructure and not accessibility or affordability, while being silent on key human rights principles such as public consultation, participation, transparency and accountability. Future iterations of the Principles should include more comprehensive criteria for sustainable infrastructure, including the positive aspects of infrastructure that should support the fulfilment of the SDGs. It will also be equally important for the G20 to manage the consensus-building process in an open and transparent manner, ensuring that CSO voices are given equal weight to those of business.

Pipeline construction and foundation work is undertaken for a gas plant and oil terminal in Russia.

Key Messages in Chapter II

- Mega-infrastructure plans and projects seek to facilitate trade, economic growth and job creation through connectivity of goods, services and people. But these benefits do not always materialize, and the social and environmental dimensions frequently fail to receive sufficient care and attention. People without access to energy and water often continue to be neglected in mega-infrastructure planning and development. At the same time, alternative visions of low-carbon and inclusive infrastructure development are often overlooked.
- Countries should view each mega-infrastructure project as an opportunity to systematically generate economic, environmental and social co-benefits, while managing environmental and human rights risks. Improved access to water and sanitation services, for example, can add up to 7 percent GDP in some countries.
- The explanations for poor performance of mega-infrastructure projects are to a large extent context-specific, but typically include: (1) the complicated political economy of mega-infrastructure investment, (2) flawed design and process decisions, (3) difficulties in managing private sector participation, (4) fragmented standards and regulatory frameworks and (5) weak accountability mechanisms.
- A robust national planning process informed by parliamentary debate and broad-based consultation can help to inform and frame difficult choices, improve project design and confidence in the planned infrastructure, and ensure that people's rights are prioritized over other competing interests. Effective and accessible grievance redress mechanisms are needed to anticipate and resolve conflicts arising from policy-making and project decisions and actions. With these and other human rights prerequisites in place, and with proactive due diligence and management of risks, countries may more confidently make the necessary trade-offs while avoiding gridlock and delays, and make more sustainable progress toward the SDGs.
- While numerous initiatives on sustainable infrastructure are underway, no universal set of standards is applied and enforced across all mega-infrastructure plans and projects. National laws in these areas are frequently incomplete and are not always consistent with international law. MDBs generally have disclosure, environmental and social safeguard policies, as well as accountability mechanisms, but these are of varying strength and scope and do not extend to the increasingly important private sources of long-term finance.
- One noteworthy initiative for improving the governance of infrastructure is the Ise-Shima Principles for Promoting Quality Infrastructure Investment, agreed at the Japanese G7 summit in May 2016. The G20's leadership in quality infrastructure may offer an opportunity to consolidate the many fragmented initiatives on this topic and address some or all dimensions of quality infrastructure under the Addis Ababa Action Agenda (“sustainable, accessible, affordable and resilient quality infrastructure”).

III. The Human Rights and Environmental Impacts of Mega-Infrastructure

"It is time to re-imagine infrastructure as if people and the environment mattered."

Zeid Ra'ad Al Hussein,
United Nations High Commissioner for Human Rights (2015–2018)[90]

1. Introduction

Having surveyed the overarching context, opportunities and challenges confronting the design and successful implementation of mega-infrastructure projects to date, this chapter focuses more closely on human rights impacts of infrastructure policy-making and investment decisions. This chapter takes the potentially *positive* human rights impacts of infrastructure – on jobs, health, education and a wide range of other human rights – as self-evident, and focuses principally on potentially *negative* impacts and externalities that reflect the most significant empirical and analytical gaps in the literature.

The discussion first outlines the applicable international legal framework and sources and contours of states' and other relevant actors' responsibilities under international human rights law, as well as its relationship with environmental protection and climate change. It then introduces a three-level taxonomy for the analysis of human rights impacts of mega-infrastructure projects – micro-, meso- and macro-levels – and illustrates the kinds of negative impacts that have occurred in the energy, transportation and water sectors to date in order to improve policy-making and investment decisions in the future.

2. Relevance of International Human Rights Framework

On the surface, the relevance of the international human rights framework to infrastructure should be self-evident. All countries have ratified a number of the nine core United Nations human rights treaties and eight International Labour Organization conventions that regulate issues such as access to information, public participation, labour rights, resettlement, grievance redress, public health and security and a whole host of other matters upon which the design, financing and successful implementation of infrastructure projects depend.

Navi Pillay, former United Nations High Commissioner for Human Rights, emphasized that "the protection of human rights is an essential element of sustainable development".[91] The salience and importance of human rights for sustainable development (including but not limited to infrastructure development) was put beyond doubt in the 2030 Agenda and Addis Agenda. The 2030 Agenda aims to realize the human rights of all, combat inequalities and discrimination, and "leave no one behind." It is explicitly grounded in the United Nations Charter, the Universal Declaration of Human Rights, international human rights treaties and other instruments, including the 1986 Declaration on the Right to Development, and emphasizes the responsibilities of all states to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind (see Box 5).

BOX 5

International Human Rights Instruments

International human rights law has evolved into a large body of binding treaties covering a wide range of issues. They include:

- The **International Bill of Human Rights**[92] consisting of the Universal Declaration of Human Rights (UDHR), and the two binding international conventions that followed the UDHR: the International Covenant on Civil and Political Rights (ICCPR), and the International Covenant on Economic, Social and Cultural Rights (ICESCR). 172 states have signed the ICCPR.[93] 168 states are party to the ICESCR. Four states have signed but not ratified the ICESCR.[94]
- **Seven other core treaties**[95] cover: (i) the elimination of all forms of racial discrimination[96], (ii) the elimination of all forms of discrimination against women[97], (iii) the prohibition of torture and other cruel and inhuman or degrading treatment and punishment[98], (iv) the rights of the child[99], (v) the protection of the rights of migrant workers and their families[100], (vi) protection from enforced disappearance[101] and (vii) the rights of persons with disabilities.[102]
- **Regional human rights instruments** such as the European Convention on Human Rights, the American Convention on Human Rights, and the African Charter on Human and Peoples' Rights and other instruments that have been adopted at the regional level reflect the particular human rights concerns of their respective regions and provide for specific mechanisms of protection.[103]

The implementation of human rights at the country level is overseen by: (i) the United Nations Human Rights Council, a 47-member body of member states that reports to the United Nations General Assembly, which issues country-specific and thematic resolutions and, under its "Universal Periodic Review" (UPR) procedure, reviews the human rights situation in every United Nations member state every five years, (ii) 12- to 18-member independent expert bodies established under each human rights treaty ("human rights treaty bodies") and (iii) "Special Procedures" mandate holders, independent experts appointed by the United Nations Human Rights Council to investigate and report on particular topics (including freedoms of expression and association, violence against women, extreme poverty, the environment and foreign debt), population groups (including indigenous peoples, minorities and LGBTI people) or countries. Apart from reviewing country reports and (in several cases) dealing with individual complaints, human rights treaty bodies also issue authoritative interpretations on particular rights or issues, called "General Comments" or "General Recommendations". In 2017, the Committee on Economic, Social and Cultural Rights issued a General Comment on state obligations connected with business activities. The recommendations of all United Nations human rights mechanisms can inform and strengthen development plans and strategies, including with respect to infrastructure.[104]

There are also a number of other human rights instruments that include:

- The **ILO Declaration on Fundamental Principles and Rights at Work**[105] covers the four core labour rights (freedom of association and the effective recognition of the right to collective bargaining, the elimination of forced or compulsory labour, the abolition of child labour, and the elimination of discrimination in respect of employment and occupation) that apply to all ILO member states, whether or not they have signed the relevant conventions.
- A wide range of labour standards dealing with the **human rights of workers** has been developed through the ILO.[106]

Other universal human rights instruments[107] include the 1986 Declaration on the Right to Development, and the United Nations Guiding Principles on Business and Human Rights (UNGPs). Some are binding while others are non-binding.

The 2030 Agenda and SDGs contain a wide range of specific human rights commitments along with a baseline commitment to ensure that the Agenda is implemented consistently with existing international law (which includes human rights and environmental law).[108] As with the 2030 Agenda, the Addis Agenda is explicitly grounded in human rights and contains a range of specific commitments in this regard, including encouraging MDB safeguard policies on human rights and gender consistent with the UNGPs.[109] The Addis Agenda also states that "projects involving blended finance, including public private partnerships, should share risks and reward fairly, include clear accountability mechanisms and meet social and environmental standards."[110]

These are not pious aspirations, but the codification of common sense. Development processes that uphold justice and the rule of law, combat discrimination, and promote equal opportunities and governance that is transparent and serves *all* the people, are likely to be more successful, more effective, and generate enhanced prosperity in the medium and longer term.[111] Among the common causes of violent conflict are grievances grounded in exclusion from political participation and access to economic and social services and opportunities.[112] Research by the World Bank and others has shown that discrimination and stigmatization can exclude women, persons with disabilities, LGBTI people and others from the workforce and cost economies billions. Lost productivity from domestic violence has cost countries between 1 to 2 percent of GDP, and excluding persons with disabilities from the workforce can cost economies up to 6.9 percent GDP.[113]

Ignoring or downplaying human rights violations has also been a major causal factor in the failure of infrastructure projects, from the Narmada Dam disaster in the 1970s until the present day. A recent analysis conducted by the IDB of 200 infrastructure projects in the Latin American region found that 36 projects were cancelled because of conflicts, 162 projects faced delays, and 116 faced cost overruns.[114] The causes of conflict included social and environmental factors and poor governance, including bad planning and poor community consultation.[115] Lost productivity costs due to temporary shutdowns or delays in the mining sector, following failure to manage social conflict, can cost up to US$ 20 million per week in net value terms.[116]

Combatting inequality is a defining feature of both the 2030 Agenda and the international human rights framework. During the last few years, inequality has repeatedly been emphasized as one of the top priorities of world leaders at the World Economic Forum (WEF) in Davos, Switzerland.[117] Reflecting these concerns, G20 communiqués are liberally sprinkled with the phrases "inclusive growth" and "inclusive world economy". The 2015 Turkish G20 communiqué observed: "Rising inequalities in many countries may pose risks to social cohesion and the wellbeing of our citizens and can also have negative economic impact and hinder our objective to lift growth."[118] However, when one examines the G20's policy proposals, it seems that exclusion and inequality are considered to be predominantly economic problems suited to economic solutions. In order to address inequality, the Turkish G20 communiqué proposed job creation and training for women and youth, improving the state of small and medium-sized enterprises, and delivering more aid to developing countries. In the G20 Action Plan on the 2030 Agenda,[119] reduced Inequalities (Goal 10) is one of the three G20 priority areas. The G20 proposals to achieve this goal include more infrastructure investment and economic growth, without any clear or convincing plan to address the *quality* of growth.

Ignoring the noneconomic dimensions of inequality is self-defeating. Inequalities within countries have been shown to undermine the sustainability of growth.[120] Moreover, inequality in income and wealth threatens the realization of all other human rights.[121] The human rights framework helps us to understand inequality as a function of conflicting power relations, with a focus on opportunities, outcomes and disparities caused by discrimination. Human rights law also sets out procedural requirements such as transparency, accountability and active, free and meaningful participation. Human rights law directs our attention to the root causes of exclusion and requires legislative and active budgetary, administrative and other measures to remove access barriers, with the ultimate aim of achieving substantive (de facto) equality.[122] The 2030 agenda calls for data "disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts".[123] Disaggregation of data is required under human rights law: It exposes instances of discrimination and exclusion and can inform the selection and design of infrastructure projects and plans to promote inclusion and non-discrimination, thereby enhancing development impact.

The human rights framework establishes enforceable norms applicable to infrastructure service delivery and affirms the tangible, everyday rights of individuals, communities, consumers, taxpayers and the general population affected by infrastructure. Under international human rights law, states have the duty to respect, protect and fulfil human rights. The state duty to *respect* human rights means that states must refrain from interfering with or curtailing the enjoyment of human rights (which might occur, for example, when water or other basic services are disconnected and people are left without access). The state duty to *protect* human rights requires states to protect individuals and groups against human rights abuses committed by others, including private sector actors and financiers. This includes establishing, implementing and enforcing a regulatory framework for sustainable infrastructure projects, financing and investment. The obligation to *fulfil* human rights requires states to take positive action to facilitate the enjoyment of human rights (which would include directly funding basic infrastructure and services where required).[124] This conceptual structure applies particularly to economic and social rights.

Although the "right to economic infrastructure" under international law does not exist, there are many internationally recognized human rights that may be implicated in infrastructure projects and investment. Human rights inform the processes as well as outcomes of development. States should create the conditions for active, free and meaningful participation and consultation processes, based on comprehensive and proactive public disclosure of all information, subject only to clearly defined exceptions linked to specific potential harms arising from a legitimate interest. The right to participate, free from intimidation, coercion or reprisals, should be built upon respect for the rights to freedom of opinion and expression, including the right to hold opinions without interference and to seek, receive and impart information and ideas, and the freedoms of association and assembly. Infrastructure projects should respect the rights of population groups that may be marginalized or experience discrimination or require special measures of support or protection, which may include women, indigenous peoples, politically marginalized groups, migrants, persons with disabilities and ethnic minorities. The impacts of infrastructure projects and investment should be analysed in connection with all potentially relevant human rights, including the rights to health, housing, water and sanitation, freedom of movement, the right to work and just and favourable conditions of work, freedom of association and the right to form trade unions, and other relevant rights as appropriate. Any resettlement should be carried out in accordance with the right to adequate housing and related standards. The right to an effective remedy for any violations is a cross-cutting requirement.

Human rights law also has implications for the state in the management of its fiscal and financial affairs. Under Article 2 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) – and social rights generally, including Article 4 of the Convention on the Rights of the Child – states have the obligation to dedicate the "maximum extent of available resources" toward the progressive realization of economic and social rights. States have an immediate obligation "to take steps" that should be deliberate, concrete and targeted as clearly as possible, and use "all appropriate means, including particularly the adoption of legislative measures" toward meeting the obligations recognized in the ICESCR and other relevant conventions.[125] States have obligations to "respect and ensure" civil and political rights (CPR) under Article 2 of the International Covenant on Civil and Political Rights. While resources are required to respect and ensure many aspects of CPR, the lack of resources does not excuse noncompliance. This is different for many obligations under treaties dealing with economic and social rights, although some obligations (such as to "take steps" toward the full realization of a given right, to monitor progress and to eliminate discrimination) are immediate and not resource-dependent.

The human rights obligations of states relevant to infrastructure plans and investment may include: legislating to ensure that rights are recognized in law and that third parties (including corporations) do not infringe those rights, allocating budgetary and other resources, including through taxation and re-prioritization of public spending necessary for the realization of particular rights, ensuring that services are available, accessible and affordable, without discrimination on the grounds prohibited under human rights treaties, establishing data collection and statistical systems and collecting disaggregated data, institutionalizing human rights impact assessment and review processes of significant legislation and policy initiatives, raising awareness, training and building capacity, disseminating information on the rights guaranteed by the relevant convention, ensuring meaningful consultation with affected stakeholders and establishing judicial, quasi-judicial and administrative mechanisms to enforce human rights claims and provide effective remedies.[126] Moreover, as indicated above, the obligations to monitor the realization of human rights and to "take steps" toward the full realization of economic and social rights are unaffected by resource constraints. States must also discharge their duties without discrimination.[127] These human rights obligations help to define the scope of the state's duties (and right) to regulate infrastructure investment for legitimate public purposes.[128]

States are the primary duty bearer for human rights and they cannot abrogate this duty; they also cannot contract out of these obligations by delegating them to another party, such as the private sector. However, other actors can have responsibilities to support the realization of human rights, or at least avoid contributing to violations. RECs are increasingly active in infrastructure planning and development. RECs do not have the same direct human rights obligations as states under international law, but they should nevertheless consciously and deliberately support states to respect, protect and fulfil human rights, and ensure that they do not contribute to human rights violations. International financial institutions and other subjects of international law should, at a minimum, respect internationally recognized human rights, and exercise due diligence to ensure that their actions do not cause or contribute to human rights violations. In addition, businesses have the responsibility to respect human rights, which includes conducting due diligence to identify potential adverse human rights impacts of their operations and to manage them.

The UNGPs provide an authoritative global framework that describes how human rights apply to business. Endorsed by the Human Rights Council unanimously in 2011, the UNGPs outline the scope and content of the state's duty to protect people against human rights abuses, including those by business, the responsibilities of business enterprises to respect human rights and the requirement for judicial and non-judicial remedial measures. In terms of the state duty to protect, the UNGPs apply to a state's ownership or control of a company, such as state-owned enterprises, its contractual relationship with service providers, and its own commercial activities, including procurement. In addition, the duty includes an obligation to ensure policy coherence across government departments and when acting as members of MDBs and other international organizations, and to ensure that external agreements, including multilateral and bilateral investment treaties, are aligned with the state's human rights obligations.[129] In terms of business enterprises involved in infrastructure investment and finance, the UNGPs require that they respect human rights and enable access to remedy. The UNGPs thus lay a solid foundation to help public and private sector actors address a wide range of human rights challenges in the provision of infrastructure services, including through PPPs.

3. Human Rights and a Safe, Clean, Healthy and Sustainable Environment

In the initial decades following the 1948 Universal Declaration on Human Rights, international human rights and environmental law evolved in separate, parallel tracks.

However, it is now well-recognized that human rights and environmental protection are interdependent. The 1972 Stockholm Declaration on the Human Environment[130] laid an important foundation for the integration of environmental and human rights regimes, and later, the Rio+20 Outcome Document "The Future We Want" affirmed the need to respect all human rights. The United Nations Special Rapporteur on human rights and the environment has shown that a safe, clean, healthy and sustainable environment is necessary for the full enjoyment of human rights. These rights include the rights to life, to the highest attainable standard of physical and mental health, to an adequate standard of living, to adequate food, to safe drinking water and sanitation, to housing, to participation in cultural life, and to development. A free-standing right to a healthy environment itself is recognized in regional agreements and more than 100 national constitutions.[131]

The close relationship between human rights and climate change is now widely recognized, given the anthropogenic causes of climate change and the magnitude of harm it may inflict on people.[132] The former United Nations High Commissioner for Human Rights, Zeid Ra'ad Al Hussein, stated: "Climate change is a threat to us all and to future generations, and to the enjoyment of human rights now and in the years ahead. A continually warming world will be a graveyard for entire ecosystems, entire peoples – and potentially even entire nations."[133] Climate change is inherently discriminatory in that it disproportionately affects those who are least responsible for global carbon emissions and least able to adapt. Without urgent global and national climate action, Sub-Saharan Africa, South Asia and Latin America could see more than 140 million people being forcibly displaced within their countries' borders by the year 2050,[134] creating pressures on resources and essential services and raising risks of conflict with host communities. The World Health Organization has predicted that climate change is expected to cause approximately 250,000 additional deaths from malnutrition, malaria, diarrhoea and heat stress per year between 2030 and 2050.[135] Older persons will be particularly vulnerable to increased morbidity and mortality from hypothermia and hyperthermia.[136] Recognizing these linkages, the 2015 Paris Climate Agreement became the first multilateral environmental agreement to include an explicit reference to human rights obligations in the context of climate change. Low-carbon pathways and resilient, high-quality infrastructure are especially important if social, economic and ecological harms from climate change are to be contained and human rights protected and respected.

A human rights-based approach puts a human face on the discourse on the environment and climate change and provides a moral compass and legally binding framework for action. States should refrain from violating human rights by causing or allowing environmental harm, protect against harmful environmental interference from other sources, including business enterprises, other private actors and natural causes and take effective steps to ensure the conservation and sustainable use of the ecosystems and biological diversity on which the full enjoyment of human rights depends.[137] Heightened attention is necessary to those who are vulnerable to climate change effects, including women, children, older persons, indigenous peoples and migrants.

States also have duties under human rights law to assess the impacts of environmental policies and regulation on human rights, to make environmental information public, to facilitate participation in environmental decision-making and to provide effective remedies for human rights violations.[138] A host state's failure to implement the findings of an environmental and social impact assessment (ESIA),[139] or the failure to integrate human rights risks within the ESIA, may violate the state's duty to protect human rights. This includes assessing possible human rights risks arising from "green" or low-carbon infrastructure projects and other policy measures designed to facilitate the transition to a low-carbon economy, such as risks to jobs, livelihoods, adequate standard of living, health and education.

4. Three Levels of Human Rights Impacts

The normative framework described above helps to identify and critically examine human rights impacts produced by economic actors involved in the governance and implementation of mega-infrastructure plans and projects. While these impacts can be analysed and classified in various ways, such as by actor, infrastructure sector or specific human rights instrument, this publication classifies potential negative human rights impacts into three levels: micro-, meso- and macro-levels.

The larger the infrastructure project, the more likely it becomes that all three levels of impacts will be triggered. Smaller infrastructure projects typically generate impacts at micro- and meso-levels, and any macro-level impacts may appear at municipality rather than country level. Certain impacts appear at multiple levels; for example, gender-related impacts can surface at all three levels, affecting female workers and community members at the project site (micro-level), women as service users and ratepayers (meso-level), and women as taxpayers (macro-level). Process-related problems that pose particular problems in the context of mega-infrastructure plans, such as lack of transparency or participation, weak accountability and violations of rights to freedom of opinion, expression, association and assembly, may exist at all levels.

For decision-makers, this three-tiered classification helps signal the wide-ranging and multilevel human rights impacts that infrastructure projects can bring about, and the fact that impacts may extend well beyond those typically covered in MDB safeguard policies, which address mostly micro-level impacts. It also underscores the fact that impacts that are not readily identified as affecting human rights, and those that seem diffuse or abstract, will often, in fact, have explicit human rights underpinnings and accountability implications.

However, not every land acquisition, resettlement, fee hike, or other negative human rights impact discussed below will necessarily constitute a human rights violation. The human rights framework helps to inform and frame trade-offs involved in infrastructure investment, ensuring that interests protected by internationally recognized human rights are prioritized over other competing interests, that all relevant voices are heard in the process, that human rights criteria are explicitly incorporated within safeguard policies and risk management systems, and that effective and accessible grievance redress mechanisms are in place where human rights are violated. The risk of a potential human rights violation, particularly where negative impacts may be irremediable, should trigger strengthened due diligence by all relevant parties, taking into account all available country-specific or contextual information and sector- or project-relevant information and analysis from international and regional human rights bodies.

4.1. Micro-Level Impacts

Micro-level impacts refer to the potential impacts from physical activities that occur during the planning, construction, operations and decommissioning phases of mega-projects (also commonly referred to as the "project footprint"). These impacts tend to be direct and observable, affecting specific individuals, households, groups and communities, and are often readily identifiable as human rights issues. They are also usually well-recognized as environmental and social sustainability issues. Impacts on the environment, including natural resources and ecosystem services, also impact a range of human rights, such as the right to food and water, health, and adequate standards of living. Table 1 displays a table of some of the more common impacts for illustrative purposes.

Table 1: Potential Human Rights Impacts: Micro-Level

	Planning	Construction	Operation/ Decommissioning
Workers	· Retrenchment	· Core labour standards · Working conditions · Labour supply chain/ Local labour issues	· Core labour standards · Working conditions · Labour supply chain/ local labour issues · Closure issues
Communities	· Land grabs · Forced eviction · Loss of resources, shelter and livelihoods	In addition to land and resources related issues (left): · Community health and safety issues · Environmental health · Immigration/boomtown effects · Loss of economic opportunities · Abuses by security forces · Construction materials supply chain	· Safety of installations · Ongoing pollution · Use of security forces · Impoverishment from loss of access to land and resource and livelihoods · Closure issues

Environment	· Project siting on protected or sensitive areas	· Air, water and soil pollution · Construction materials supply chain · GHG emissions · Local climate impacts · Impacts on biodiversity and ecosystem services · Cumulative impacts	· Air, water and soil pollution · GHG emissions · Local climate impacts · Impacts on biodiversity, ecosystem services · Closure issues

Issues relevant throughout: Harassment and violence against environmental and human rights defenders; lack of proper assessments/management; violations of rights to freedom of thought, expression, assembly and association; no disclosure and consultation/accountability and redress mechanism

4.1.1. Planning Phase

The most common and significant human rights issues during the planning phase of mega-infrastructure projects arise from basic flaws in project planning and siting, land acquisition, resettlement plans, land grabs, failure to consult with affected populations and failure to seek the free, prior and informed consent of indigenous peoples. More specifically, common problems include:

- Inappropriate project siting that disregards existing land rights, including customary land and resource use, cultural rights, natural habitats and biodiversity-rich areas, and sites that provide ecological services, resulting in loss of land tenure, natural resources and ecosystem services. International legal obligations attached to these issues are often not widely known, particularly at the local community level, and national and local government authorities may not recognize certain rights or attach sufficient value to community land use and cultural sites.[140]
- Issues related to the process and modality of acquisition of a right-of-way or land, such as expropriation, land grabs, forced or premature sale of land under threats or intimidation, forced eviction and relocation (which could be on a very large scale, such as the relocation of slums in urban settings or in the context of large dams), loss of land tenure rights and losses due to lack of formal title (or lack of a cadastral system), loss of ownership or access to communal land, loss of cultural resources, natural resources, productive assets and shelter, as well as adverse impacts of relocation on livelihoods and living standards. Compensation paid for loss of land, productive assets, and shelter may be insufficient to maintain existing livelihoods and an adequate standard of living. These impacts may also affect the rights to work, health, education, adequate housing, water and sanitation, and access to social networks.
- Abridgements of the right to self-determination and the right to provide free, prior and informed consent. It has been estimated that there are 370 million indigenous peoples around the world, 70 percent of whom live in Asia.[141] Those bearing the burden of infrastructure projects, such as those who are forced to relocate or give up access to vital natural resources in order to make way for a major energy project that primarily serves industry and the export market, may not always enjoy the

project benefits. Furthermore, free, prior and informed consent, as provided in the United Nations Declaration on the Rights of Indigenous Peoples,[142] may not have been sought and obtained with respect to a proposed installation of infrastructure assets in indigenous peoples' ancestral land, or the acquisition of or restriction of access to such land.

4.1.2. Construction Phase

Generally, the construction phase and physical installation of the infrastructure asset generate the most immediately visible and wide-ranging environmental and human rights impacts, potentially affecting workers, communities and the environment.

- Labour Issues: Labour rights are codified in the ILO Declaration on Fundamental Principles and Rights at Work[143] and relevant ILO and United Nations conventions. Construction workers may experience violations of their rights in relation to wages, working conditions (including those covered by the four core labour standards), worker accommodation, retrenchment and labour impacts in the construction supply chain. Frequently, people who have been forced off their land to make way for a project have ended up working in conditions of near-slavery for the construction company.[144] Special Economic Zones (SEZs), a common feature of national infrastructure programmes, frequently lure investors with the promise of low labour standards and lax enforcement, leaving SEZ workers exposed to lower levels of protection.[145]

  An influx of foreign labour may affect the ability of the local labour force and SMEs along the corridors or in the specific investment area to benefit from infrastructure projects. If enterprises investing overseas bring their own workforce and procure their inputs from their home state, the livelihoods of communities and the viability of SMEs along the corridor may be negatively impacted.
- Communities: Health and safety impacts on communities during construction include problems arising from exposure to noise or dust, loss or damage to physical property, and the deterioration of environmental health or fatalities from construction accidents. Construction activities may attract many job seekers and service providers, which may create a boom-town effect that threatens public order, public health, safety and security, and may generate gender-based violence (see Box 6). If the construction site is protected by public or private security forces, the conduct of members of those forces can impact adversely on nearby communities. Community access to natural resources such as water, forests and fisheries, and to places of cultural significance, could temporarily or permanently be affected or lost due to land acquisition or other restrictions, pollution, or overuse of resources.
- Environment: Air, water and soil pollution from construction can seriously affect the natural environment. A list of common environmental impacts from the construction and operational phases of infrastructure can be found in the World Bank Group's Environmental, Health and Safety (EHS) Guidelines.

BOX 6

Sexual Violence and Other Human Rights Impacts during Construction

The Uganda Transport Sector Development Project involved the rehabilitation and upgrade of the 66km Kamwenge-Fort Portal road. Although the project involved 400 workers under the supervision of an overseas contractor, China Railways Seventh Group, the project's ESIA did not properly assess the potential impacts of such a large labour influx into the project area, or the capacity of the contractor or the national agency to manage social risks. Responding to complaints received in 2015, the World Bank's Inspection Panel found that the project involved "many cases of child sexual abuse and teenage pregnancies caused by road workers, an increased presence of sex workers, the spread of HIV/AIDS, sexual harassment of female employees, inadequate resettlement practices, inadequate road and occupational health and safety measures and negative construction impacts." In 2016, the World Bank's Executive Directors approved an action plan to address the panel's findings. Among other things, the bank mobilized funding to provide redress to the abuse victims, and committed to require contractor background checks and the use of environmental and social performance bonds. A recent Guidance Note on the management of labour influx, issued in the same year, informs staff of the risks involved with large labour forces and labour camps.

Source: World Bank (2016), "Uganda: Transport Sector Development Project – Additional Financing: Lessons Learned and Agenda for Action", available at: http://documents.worldbank.org/curated/en/948341479845064519/pdf/110455-BR-PUBLIC-LESSONS-LEARNT-IDA-SecM2016-0204.pdf; and World Bank (2016), "Managing the Risks of Adverse Impacts on Communities from Temporary Induced Labor Influx, available at: http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf

4.1.3. Operations and Decommissioning

During the operations phase, the adverse impacts that typically peak during the construction phase may merge with or give way to other kinds of impacts. Sometimes these may be comparatively moderate in nature and scope, but may also include potentially serious impacts upon the health and safety of workers and communities adjacent to the installations and the degradation of the natural environment. Failure to maintain infrastructure may pose significant safety threats to the surrounding communities. Following the end of an installation's useful life, decommissioning of the project can also create environmental and social impacts pertaining to the safety of assets, project site rehabilitation and loss of community livelihoods dependent on the project. These impacts will be exacerbated if the project lacks an adequate decommissioning plan and sufficient funding to address such issues.

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Protest against deforestation: Residents of Ta Tay Leu village take part in a tree ordination ceremony on land that was formerly primary forest, Cardamom mountains, Cambodia.

- Communities: Poorly designed railways, roads, tunnels and bridges without adequate safety features could result in accidents and fatalities of pedestrians who may not be users of the installation themselves, or cannot afford to pay for usage, but are still exposed to risk. In the year 2013 alone, 1.3 million people were killed and another 50 million were injured in road crashes across the world, with 90 percent of these deaths occurring in low- and middle-income countries.[146] Road projects may also inadvertently spread diseases such as HIV/AIDS, expose women and girls to sexual violence[147] and facilitate human trafficking.[148] Communities can also face catastrophic risks from damage or collapse of poorly designed or maintained infrastructure assets such as dams, tunnels and bridges (see Box 7).

BOX 7

Neglected Maintenance of Existing Infrastructure

In 2013, the United States of America's Federal Transit Administration estimated that there was a backlog of US$ 86 billion in deferred maintenance on that country's rail and bus lines. The American Society of Civil Engineers, which gave the United States of America's overall infrastructure a grade of D-plus, identified a US$ 2.0 trillion funding gap between the years 2016 and 2025 in order to raise infrastructure quality to acceptable levels.

Source: Surowiecki (2016) "System Overload", The New Yorker, 18 April. Available at: www.newyorker.com/magazine/2016/04/18/inside-americas-infrastructure-problem; American Society of Civil Engineeers, Infrastructure Report Card (2017). Available at www.infrastructurereportcard.org/solutions/investment.

Maintenance failure is in part a political issue: Governments tend to prefer building new infrastructure assets over maintaining existing ones. Maintenance is also a burden that tends to be placed on local rather than national governments, even though they may have less financial means. As a general rule, fixing existing infrastructure should be prioritized over building new facilities.

- Environment: Ongoing pollution from installations, such as air, water and soil pollution, or noise and dust, can affect the health, safety and living standards of nearby residents. For example, air pollution from coal-fired plants and coal ash can adversely affect the health of local people. Power plants that use cooling water could deprive the local community of drinking water, which may impact adversely on a number of human rights. Moreover, emissions of greenhouse gases from such installations could contribute to climate change, while poor landscape management techniques could affect the resilience of the project area and communities nearby to climate change impacts such as flooding, landslides and wildfires. These impacts affect the right to health and potentially even the right to life.

4.1.4. Issues Relevant Throughout the Life Cycle of Infrastructure

- Violations of many human rights can occur throughout the infrastructure project life cycle. Land rights and economic and social rights are relevant at any given point in a project. In addition, governments or private sector operators could deploy public or private security forces which use excessive force to protect installations, particularly those deemed to be sensitive or important to national security, during construction and operation. Government authorities or private operators can intimidate workers and community members, use force, including militarized force, at public gatherings and protests, or restrict or prohibit public protests against projects. Other problems have included restrictions on peaceful assembly, clampdowns on nongovernmental organizations, attacks on independent media, state censorship, abuse of anti-terror laws, state-sponsored vilification, criminalization of dissent, surveillance and digital attacks on civil society groups, arbitrary detention, torture and disappearances.

  Human rights defenders, union workers, environmental activists and community leaders are facing increasing threats around the globe, as documented by the United Nations Special Rapporteur on Human Rights Defenders.[149] Many governments have been showing increasingly authoritarian tendencies and intolerance toward those standing in the way of infrastructure projects. According to Front Line Defenders, 312 defenders in 27 countries were murdered while fighting for their community's rights in 2017. Eighty (80) percent of the killings took place in just four countries – Brazil, Colombia, Mexico and the Philippines. Of the recorded deaths, 67 percent were protecting land and environmental and indigenous peoples' rights, almost always in the context of mega-projects, extractive industry and big business.[150] Women, who are often the first to defend their homes and families, suffer disproportionately. In some countries, punitive laws and special law enforcement agencies have been created specifically to protect investors' interests.[151] Regional and national infrastructure plans are not only forfeiting public trust, but, in many instances, are causing or contributing to these kinds of serious and irremediable human rights violations.
- Access to information, consultation and participation: Proactive information disclosure and consultation with affected stakeholders should occur at multiple stages throughout the life cycle of an infrastructure project. However, in practice, workers and communities frequently do not have access to information or the opportunity to voice their preferences and concerns (see Box 8). PPP disclosure laws, where they exist, should in theory help workers and communities access information concerning the anticipated impacts of infrastructure planning, construction and operation.

However, many of these laws favour commercial stakeholders, such as those participating in project bidding, rather than individuals affected by projects. Disclosed information is frequently technical in nature and difficult for the public to understand. The failure to involve stakeholders in project selection, design and other phases of the project life cycle can lead to misalignment of development priorities at local, national and regional levels, social conflict and project failure.[152]

National disclosure requirements are often overridden on national security grounds. Infrastructure sectors (and mega-infrastructure projects particularly) are frequently deemed critical to national security interests and may be subject to laws that restrict unauthorized access, use and information disclosure.[153] (Such limitations may be permissible under international human rights law as long as the proposed restriction is objectively justifiable according to a specific interest protected under international law, proportionate to the threat perceived, and otherwise complies with applicable national legal procedures.) Disclosure requirements can also be waived under national law under specific circumstances, such as when proprietary information is included in unsolicited PPP bids. Waivers and limitations are often abused in practice, however.

The disclosure policy of an MDB, where the latter is financing a project, may help communities and workers access project information and key contracts, though MDB public information policies are inconsistent and unevenly applied.[154] Of the MDBs, only the IFC has a specific disclosure policy in relation to infrastructure, though the provision of information is voluntary (as opposed to mandatory disclosure of information on extractive projects).[155] The Public Information Policy of the Asian Infrastructure Investment Bank is particularly weak, providing for broadly-worded exceptions to disclosure without objective justifications of the kind found in many other MDBs' policies and in national laws.[156]

BOX 8

"Back to Development – A Call for What Development Could Be" by the International Accountability Project (IAP)

Around 2015, IAP surveyed 800 participants affected by development projects in the infrastructure and extractive sectors in eight countries around the world. According to the survey:

- 94 percent said that they had never been consulted about their development priorities for the country or region
- 88 percent said that they were not consulted during the planning phase of the project

- 85 percent of those consulted about the project did not think their ideas or opinions were incorporated into project plans
- 82 percent said that their development priorities were different from those of the government
- 78 percent said they did not feel that asking questions and expressing their opinions about projects would be safe
- 65 percent believed that projects could have been modified to achieve the same goals while causing less harm
- 64 percent said that they did not know where to find project information
- 14 percent believed that projects would benefit the people of their countries as a whole
- 10 percent believed that projects would benefit their communities
- In addition, participants consistently objected to the lender practice of consulting the government and corporations but not their communities

Source: International Accountability Project, Back to Development: A Call for What Development Could Be (2015) at pp.80–85. Available at https://accountabilityproject.org/wp-content/uploads/2017/09/IAP-Back-to-Development-Report.pdf

4.2. Meso-Level Impacts

Between micro-level and macro-level impacts are the human rights impacts on the users (and would-be users) of infrastructure services arising from the operation of the relevant infrastructure assets. Problems there can be just as tangible and direct as the micro-level, but they tend to be distributed across a wider segment of the population. As with other levels, meso-level impacts are felt most acutely by the more vulnerable segments of society, including those living in poverty or experiencing discrimination.

International human rights law explicitly sets out norms on the rights and obligations, including access and affordability, of many social services, such as housing, water, sanitation, health care, and education. The ICESCR, as interpreted by the Committee on Economic, Social and Cultural Rights (CESCR), sets forth minimum service characteristics applicable to certain types of infrastructure. In addition to international law, an increasing number of national constitutions contain consumer-rights protections, and some explicitly designate consumer rights as human rights. For example, under the European Charter of Fundamental Rights, which entered into force in 2009, consumer protection is set out as a human right. These laws elevate the priority to be given to consumer protection, backed by the application of important principles such as non-discrimination and disclosure of information,[157] and may further boost the future claims of users and consumers of infrastructure services.

In addition to the rights of users, Chapter V discusses the impacts of private finance on another stakeholder group at the meso-level: the beneficiaries of infrastructure-related investment vehicles such as public pension funds.

4.2.1. Accessibility and Affordability of Services

States have an obligation to ensure the provision of basic social services such as health, education, water and sanitation, whether services are delivered publicly, privately or both. The human rights to education and to the highest attainable standard of health are free-standing rights under the ICESCR and other instruments, whereas the rights to adequate housing, food, water and sanitation stem from the right to an adequate standard of living.

The CESCR has clarified[158] that the attributes of the right to water include availability, quality, accessibility (physical and economic, i.e., affordability) and non-discrimination. A similar conceptual structure governs the committee's interpretation of other economic and social rights, including health[159] and education.[160] National constitutions and laws frequently reflect these requirements. In terms of water and sanitation, physical accessibility means everyone has the right to water and sanitation services that are physically accessible within, or in the immediate vicinity of, their household, workplace and educational or health institutions.[161]

Water and sanitation facilities and services must be affordable for everyone, including the poorest. The former United Nations Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation offered the following definition of "affordability":

> Access to sanitation and water facilities and services must be accessible at a price that is affordable for all people. Paying for services, including construction, cleaning, emptying and maintenance of facilities, as well as treatment and disposal of faecal matter, must not limit people's capacity to acquire other basic goods and services, including food, housing, health and education guaranteed by other human rights. Accordingly, affordability can be estimated by considering the financial means that have to be reserved for the fulfilment of other basic needs and purposes and the means that are available to pay for water and sanitation services. Charges for services can vary according to type of connection and household income as long as they are affordable. Only for those who are genuinely unable to pay for sanitation and water through their own means, the State is obliged to ensure the provision of services free of charge (e.g. through social tariffs or cross-subsidies). When water disconnections due to inability to pay are carried out, it must be ensured that individuals still have at least access to minimum essential levels of water. Likewise, when water-borne sanitation is used, water disconnections must not result in denying access to sanitation.[162]

It should be noted that the government's discretion to raise user fees may be significantly constrained by the international treaties to which it is party. Whatever their commercial viability, unduly high fees may be discriminatory and retrogressive, putting the state in question in breach of its obligations under the ICESCR, the Convention on the Elimination of All Forms of Racial Discrimination, Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of the Child,[163] and potentially also national laws and constitutional guarantees. Furthermore, some jurisdictions may prohibit the practice of cutting off water supply for failure to pay rates, where that person proves, to the satisfaction of the relevant water services authority, that he or she is unable to pay for basic services.[164] If the public sector is operating the infrastructure, user fees should not be used as a substitute for taxation.

The implementation of the requirement to progressively achieve universal access to water, or other public services, can be a major challenge. Discrimination, whether overt or indirect, is often a key access barrier. Restrictions in access to services have occurred when the government authority or private sector operator excludes poorer households ("cherry-picking" or "cream-skimming") or entire neighbourhoods ("red-lining") from service areas, given their inability to pay. These practices are overtly discriminatory and prohibited under human rights law.

In a related example, in the United States of America in the 1960s, it has been reported that highway networks were constructed to transport commuters from suburbs to city centres, deliberately bypassing poor inner-city communities.

> "Planners frequently routed these highways through communities of color, and they not infrequently used infrastructure to reinforce boundaries between white and non-white communities. Communities of color paid the price for urban renewal and highway building in other ways, too. Scholars estimate that some four million people, two-thirds of them black or Hispanic, were displaced in the heyday of urban renewal. Communities adjacent to highways suffered environmental degradation, contributing to, among other things, strikingly higher asthma rates."[165]

It has been remarked that "improved access seldom takes place in a policy vacuum:"[166] a strong public sector presence, public awareness and regulatory and enforcement action are necessary to guard against discrimination in access. The most common policy measure to ensure that private operators commit to greater access is to specify a legally binding and enforceable universal service obligation.[167]

4.2.2. Privatization Failures

As indicated earlier, human rights law does not oblige states to deliver services directly. Private sector participation in infrastructure can enhance the efficiency of service delivery and may even contribute to macroeconomic productivity gains. Yet the private sector often has relatively weak incentives to enhance accessibility and affordability of services, and inducements to private sector participation can result in harm to the poor and others in vulnerable situations. States are required to establish a regulatory framework to ensure that private operators respect human rights and meet minimum service delivery obligations set out under international human rights law.

Latin America's experience with privatization of water services in the 1990s offers a cautionary tale in this regard. Following the example of the United Kingdom, which sold off all of its water assets to private companies in the 1980s, Latin America decided to make a break from its long-standing tradition of state-owned monopolies in infrastructure services. Faced with fiscal constraints and profound public dissatisfaction with poor services, countries introduced regulatory reforms and eventually attracted US$ 290 billion (private and linked government) investments in infrastructure, representing almost half of global private investments in infrastructure during the 1990s.[168] Investments poured into energy, water and sanitation, and telecommunication projects via management contracts, concessions, build-operate-transfer (BOT) contracts and privatization.

Many of the water projects from that era exposed problematic patterns of behaviour by water companies such as excessive connection charges, rate hikes, failure to provide connections to many households, contract renegotiations, project cancellations, litigation in PPP arrangements, and excessive profit-taking. Overall, 76 percent of water deals in Latin America were renegotiated within 1.6 years, and over 30 disputes involving water projects existed at the end of 2003 in Argentina alone.[169] In Buenos Aires in the 1990s, first-time users of new water and sewage services had to pay connection charges of between US$ 1,100 to 1,500. Many could not afford such exorbitant connection fees[170] and others became infuriated when they saw no improvement in services. The international media reported riots by Bolivian water users, which were violently suppressed.[171]

BOX 9

"We Own It" Campaign: The Rise of Remunicipalization of Water

We Own It is a British initiative that campaigns against the privatization of trains, water and energy services, care work, council services, and the National Health Service in the United Kingdom. Through polling the public, it has shown that people want transparency and accountability in infrastructure and believe that the best way to achieve this is through public-sector ownership of infrastructure. A similar We Own It movement in Canada has resulted in several municipalities taking back key infrastructure facilities. For example, the city council in Port Colborne, Ontario, passed a motion in March 2017 aimed at putting an end to the privatization of public services in the community.

According to The Guardian, quoting a report by the Transnational Institute (TNI), Public Services International Research Unit and the Multinational Observatory, "180 cities and communities in 35 countries, including Buenos Aires, Johannesburg, Paris, Accra, Berlin, La Paz, Maputo and Kuala Lumpur, have all 'remunicipalized' their water systems in the past decade. More than 100 of the 'returnees' were in the United States of America and France, 14 in Africa and 12 in Latin America. Those in developing countries tended to be bigger cities than those in richer countries." The same report indicates that municipalities increasingly share their experience with others in managing water infrastructure.

Such remunicipalization movements not only ensure public ownership of public infrastructure, but also affirm the state's (or the municipality's) right to regulate and uphold the rights of users and members of the public over the interests of private investors.

Source: https://weownit.org.uk/about-us; www.opendemocracy.net/ourkingdom/rachel-graham/we-own-it-new-campaign-against-uks-disastrous-privatisations; www.weownit.ca/port_colborne_says_no_to_privatization_of_public_services
Vidal (2015) "Water privatization: a worldwide failure?" *The Guardian*, 30 January. Available at: www.theguardian.com/global-development/2015/jan/30/water-privatisation-worldwide-failure-lagos-world-bank

More recent water projects have not seemed to fare much better. Critics of private sector participation in the water sector claim that water projects have a failure rate up to five times greater than projects in the transportation, energy or telecommunications sectors.[172] Some municipalities are starting to repurchase water facilities previously sold to or run by the private sector (see Box 9).

Affordability in the energy sector is also a serious concern. Electricity charges usually include generation charges, capacity charges (the cost incurred by the operator, generator and transmission owners in having the capacity ready to meet peak electricity demand), and the cost of capital. Fixed fees of these kinds have been doubling or even tripling in the United States of America, for example, due to concerns of electric utilities about diminishing returns from energy savings. These fees affect all users regardless of the actual usage of services, and affect the poor and smaller households disproportionately. Perversely, such fees can discourage smaller households and savers from using less electricity.[173]

There are additional risks faced by low-income communities when the private sector operates infrastructure. Legal reforms intended to attract private sector participation almost invariably ban access to water and electricity from informal or illegal sources, on which slum dwellers and remote villages often rely. Reforms may also involve the cessation of state subsidies to the poor for service use. These measures can potentially make the total outlay of user costs higher under the private sector scenario, with disproportionate adverse impacts on the poorest people, at least in the short term. Even if low-income communities express willingness to formalize services and their delivery relationship with service providers, as surveys have frequently shown, high user fees and other charges mean that they potentially have to choose between basic infrastructure services and other essential goods and services. Public policy interventions, including temporary subsidies, are often necessary to maintain reasonable user fees.

As infrastructure projects seek financing from institutional investors, and as complex investment instruments that bundle assets are made available for investors who do not wish to directly own infrastructure assets, investors will increasingly become distant from the direct source of revenue (user fees). This may further complicate accountability relationships and incentives for prudent investment in socially and environmentally sustainable infrastructure, as will be explored further in Chapter IV.

4.2.3. Meeting the Needs of Different Groups

Different groups of people have different needs and expectations with regard to infrastructure services. Women, young persons, older persons, persons with disabilities, indigenous peoples and poor or marginalized communities may use infrastructure differently than "mainstream" customers. Transportation designs often take into account men's commuting patterns (e.g., a radial design that takes men straight into city centres) without regard to women's travel patterns, which tend to be more complex and involve more stops than men, and are influenced by such factors as the needs of children and other family members, personal security risks and affordability.[174] As a result, women's needs are often not served by public transportation. Gender problems have also been identified in energy projects, including the dominance of men in decision-making throughout the project cycle, discrimination against women in connection with employment opportunities, the fact that compensation payments from energy projects usually are paid to the male heads of households, and the almost systematic failure of energy projects to identify, mitigate and monitor project impacts on women.[175]

Indigenous peoples' access to adequate healthcare may be severely affected by living conditions, income levels, language barriers, employment rates, access to safe water, sanitation, health services and food availability.[176] Indigenous people may also be excluded from using healthcare facilities due to discrimination, mistreatment and a lack of respect for cultural practices.[177] Indigenous women may experience particular challenges, as the CESCR has observed.[178]

Universal design is an important principle that benefits all users and not only those with disabilities, but is often ignored in infrastructure projects, and is rarely a visible part of the planning process. Retrofitting infrastructure projects for universal design is usually far more costly than incorporating it in project design from the outset. Persons with disabilities have a right to "reasonable accommodation" (necessary modifications or adjustments to infrastructure and other services) under international law, as well as to participate in relation to decisions that affect them. States should also ensure that privatization of services does not inadvertently entail reduced accountability to persons with disabilities and other service users.[179]

Potentially discriminatory impacts of project design on different groups can be ascertained through appropriate consumer analysis, cost-benefit analysis or other studies that disaggregate the different needs of various user groups. Participatory planning can also reveal the preferences and concerns of a range of population groups and ensure that the proposed infrastructure will be used (and paid for, if user fees are involved) by the intended user groups. Methodologies for disaggregation to support the human rights of different groups are readily available, but disaggregated data is often lacking and these methodologies are not yet widely utilized. The failure by a state to ensure that appropriate human rights impact assessments are carried out may violate its obligations under the ICESCR.[180]

4.2.4. Inadequate Disclosure, Consultation and Accountability

The World Bank Group's Independent Evaluation Group (IEG) reviewed 170 PPP projects supported by the World Bank Group institutions over the past decade and found that consultation with stakeholders received too little attention.[181] Users of infrastructure services should have access to effective mechanisms for the resolution of complaints. User associations and consumer watchdog or ombudsman organizations can potentially be used for this purpose in new infrastructure projects and plans. Existing judicial, quasi-judicial, political and administrative mechanisms should also be explored, guided by the effectiveness criteria in Principle 31 of the UNGPs. However, efforts must be made to reach out to all segments of the society, including to poor and marginalized groups, to ensure that they are aware of such services and that all access barriers are identified and addressed.

4.3. Macro-Level Impacts

This section describes potential human rights impacts that can be experienced by the general population through acts or omissions of the state in relation to infrastructure projects, or from the broader implications of infrastructure projects or plans. Such economy-wide impacts tend to be diffuse, widespread and non-specific, though they are likely to disproportionately affect vulnerable populations and those who are discriminated against. Most state acts or omissions in this category relate to fiscal management, public financial management, or public governance issues, which can create serious adverse human rights impacts. Private actors, including those who finance infrastructure projects, can also share responsibility for these impacts.

4.3.1. Poor Analytical, Consultation and Decision-Making Processes

Of the numerous process shortcomings that arise in practice, perhaps the most troubling is the way in which projects are selected without adequate public consultation or democratic participation, as discussed in Chapter II. Macro-level risks can be associated with, and to some extent caused by, deficiencies in information disclosure and public consultation. The diffuse causal mechanisms and multiple actors involved in mega-infrastructure projects present additional analytical and accountability challenges. Moreover, individuals who are not directly affected by the micro- or meso-level infrastructure impacts discussed above but may otherwise be concerned about a planned or operational infrastructure project may find that no appropriate venue is available to raise grievances. This conspicuous accountability gap at the macro-level presents serious theoretical and operational challenges when we attempt to link human rights with macroeconomic, fiscal and financial issues associated with infrastructure projects.

As noted above, mega-infrastructure projects are typically under-budgeted and over-optimistic in terms of expected financial, economic and socio-economic benefits. Flyvbjerg attributes this to the fact that, among other issues, mega-projects are typically based on poor-quality cost-benefit analysis and environmental and social assessments with too many errors and biases ("garbage in, garbage out").[182] This causes decision-makers to miss crucial opportunities to "right-size" or appropriately scale the infrastructure project to match realistic financial projections and the needs and priorities of the population.

Strategic assessments are intended to inform decision-makers and stakeholders about the overarching or contextual economic, environmental and social implications of their decisions, and are critical at the early stages of project planning. Cumulative impact assessment enhances the understanding of cumulative impacts of multiple existing and planned installations, and may be applied in cross-jurisdictional and multi-sectoral settings. These assessments can and should include human rights considerations.[183] However, government authorities frequently fail to undertake these assessments, and even where one is undertaken, human rights information relevant to the assessment is often not taken into account. Upfront information about a country's human rights track record, including treatment of human rights defenders,[184] gender-based violence or discrimination, the situation of indigenous peoples, quality of governance and patterns of social conflict may usefully inform project siting, design and risk management decisions and thus also contribute to improved project outcomes.

Cost-benefit analysis informs public authorities about the financial and economic costs and benefits of a proposed infrastructure project, relevant to project design and financing decisions. Most authorities, however, fail to carry out such analyses, or if they do, they do not take into account a sufficiently wide spectrum of socio-economic factors, let alone human rights factors. The most commonly used methodologies are predicated upon a utilitarian approach that fails to incorporate and cost social and environmental factors and externalities. A more integrated approach, explicitly reflecting the rights of stakeholders and infrastructure users, would greatly improve decision-making.

When developing regional or national infrastructure plans, decision-makers may fail to take sufficient account of existing infrastructure plans, nationally determined contributions under the Paris Agreement, national human rights action plans, sustainable development plans, and SDG action plans and commitments. The latter plans are, by definition, generated in order to fulfil a country's international commitments, and often come into being through a national consultative process. When a regional infrastructure plan fails to take national priorities into account, the proposed projects under the plan may end up contradicting the participating countries' international commitments, including those related to human rights and sustainable development.

Numerous other process deficiencies may also arise in practice. For example, the creation of a "one-stop shop" to simplify and speed up the permitting process for infrastructure projects can fail to properly sequence all regulatory approvals and licences based on proper underlying assessments and studies, such as ESIAs and human right impacts assessments. Environmental permits should only be granted after a proper ESIA is carried out, however the sequencing is frequently reversed, or in some cases the ESIA is waived or compromised (see Box 10). Moreover, there is often a lack of fiscal transparency of off-balance sheet liability for PPP projects incurred by governments, and a lack of accountability for fiscal mismanagement. PPPs have often been used by cash-strapped governments as a mechanism to keep expenditures off the public balance sheet. In order to attract private investment, governments have frequently offered generous guarantees to the private sector partner without disclosing contingent liabilities. According to OECD data, the practice of governments in this area still needs considerable improvement.[185] Countries are strongly encouraged to release such information as part of their fiscal accounting and transparency practice, but there is no universally accepted accounting methodology for this purpose.[186]

4.3.2. Fiscal and Financial Impacts from Poor Management of Infrastructure

Adverse fiscal and financial impacts can arise from a range of factors, including poor management of public budgets, spending and accounting; poor project planning, management, or oversight; and poor judgment by public authorities and lack of skills in negotiating with the private sector. Adverse macroeconomic impacts from such practices may include wasted public resources, unsustainable fiscal impacts on the economy and eventually on taxpayers, and adverse impacts on the population at large through austerity policies and reduced public spending and services. This may conflict with the state duty to dedicate maximum available resources to fulfil economic and social rights and exacerbate inequalities between population groups.

Ideally, infrastructure projects should ensure value for money through achieving benefits in the most cost-effective way. Projects with private sector participation, such as PPPs, are often claimed to be cheaper than the public-sector option. However, this is not always the case. For example, the public sector can borrow much more cheaply than the private sector,[187] and in the case of European road projects, PPPs have reportedly been 24 percent more expensive than traditionally procured projects.[188] Transaction costs associated with PPPs, such as legal and other professional fees, can lead to massive liabilities if they are not carefully managed.

A Na'vi indigenous activist obstructs construction of the Belo Monte hydroelectric plant on the Xingu River, a tributary of the Amazon in Brazil.

© Yuri Kozyrev/Noor – laif

In the case of PPPs, the project's benefits, risks and costs must be allocated appropriately and fairly between the public authority and private sector operator. Private sector inducements can be financial, such as subsidy, loans, equity stakes or guarantees, or non-financial, such as tax breaks, customs exemptions, waivers of competition laws, or ensuring that lenders can secure their loans.[189] The state must engage in a difficult balancing act: It must make private sector participation attractive by offering support without making the PPPs more expensive than would be the case under the public option. Even if the parties manage to strike a fair and appropriate risk allocation at the outset of a PPP contract, this may quickly change. According to one source, 55 percent of all PPPs end up being renegotiated, on average every two years. Of all PPPs renegotiated, 62 percent have led to an increase in tariffs; 59 percent have led to automatic pass-through of increased costs to tariffs; 69 percent have led to postponement and decrease in private sector obligations and 31 percent have ended up decreasing concession fees paid to the government.[190] Taxpayers invariably foot the bill when governments bail out failed private enterprises. These actions may conflict fundamentally and directly with the state's duty to dedicate the maximum extent of available resources toward the realization of economic and social rights.

Public resources may be wasted in many other ways. McKinsey has shown that it is possible to provide infrastructure services at a 40 percent cost saving by imposing up-to-date project management processes and standards on construction companies, which typically lag in innovation.[191] The Construction Sector Transparency Initiative (CoST) estimates that 10 to 30 percent of the total value of global construction output may currently be lost through corruption, and a similar amount may be lost through mismanagement and inefficiency. According to CoST, "this means that by 2030, unless measures are introduced that effectively improve this situation, close to US$ 6 trillion could be lost annually through corruption, mismanagement and inefficiency."[192]

The various ways in which the state (mis)manages infrastructure projects and subsidizes the private sector may lead not only to a one-time exorbitant tax bill for taxpayers, but potentially also to macroeconomic crises. Government budgets can become overcommitted due to overzealous PPP programmes and undisclosed contingent liabilities, creating serious debt sustainability issues. (See the example of Portugal's over-commitment in PPPs in Chapter V.) Sri Lanka, for example, was recently forced to grant China a 99-year lease and controlling equity stake in Hambantota Port, following its inability to meet debt obligations associated with the port's construction. According to the Center for Global Development, as of March 2018, eight other countries appeared to face increased risk of debt distress from BRI-related infrastructure financing: Pakistan, Djibouti, Maldives, Laos, Mongolia, Montenegro, Tajikistan and Kyrgyzstan.[193] Depending on the magnitude of financial liabilities, governments may be forced to take on additional public debt and may then face external pressures to implement heavy-handed austerity measures. These measures can affect women disproportionately, since they may be more vulnerable in the informal sector and hence more reliant upon public-sector employment opportunities; furthermore, they can undermine self-determination, economic growth, diminish public services and employment, and increase poverty and inequalities.

4.3.3. Reinforcing Inequalities

Infrastructure programmes, consciously or otherwise, have often reinforced existing patterns of discrimination and segregation, further marginalizing those who do not have access to infrastructure. For example, in the United States of America, certain federally funded infrastructure programmes have reportedly contributed to "metropolitan fragmentation that facilitated white flight and class stratification", leaving concentrated minority populations in inner-city high rises. Later, when urban renewal projects brought back the middle classes, the highway system reportedly connected downtown areas to outlying residential areas, "stitching together the affluent, white components of the fragmented metropolis."[194] If maintaining the status quo and keeping certain segments of the population segregated is an explicit or implicit objective of an infrastructure programmes, then no amount of social assessment and differentiated analysis of the population will help.

4.3.4. Cumulative and Transboundary Environmental Impacts

The environmental impacts from siting, building and operating multiple mega-projects, especially in areas crowded with existing projects and planned future installations, may result in significant cumulative environmental impacts such as increased pollution, accelerated natural resource extraction and destruction of biodiversity. Transboundary impacts may be caused by greenhouse gases and other airborne pollutants and natural resource loss (such as fresh water or fishery stocks), as well as serious public health incidents (such as the transmission of avian influenza). Strong leadership, enforcement and collaboration by the relevant national governments will be necessary to tackle these impacts. Quality cumulative impact assessment is vital, as the COSIPLAN-IIRSA experience demonstrates (see Box 10).

While many countries lack the capacity and resources to carry out such assessments, most MDBs' environmental and social safeguard policies require cumulative impact assessment,[195] which should be activated upon the involvement of the MDB. Ideally, however, such assessments should take place further upstream in the project planning process in order to inform project design and implementation decisions. Countries should initiate these processes themselves prior to MDBs' involvement.

BOX 10

ESIAs in COSIPLAN-IIRSA Projects

According to Derecho, Ambiente y Recursos Naturales (DAR) and other CSOs based in Latin America, no plan-wide provisioning for ESIAs was made during the design phase of IIRSA. The MDBs involved (CAF and IDB) led the process of strategic environmental and social assessment (SESA) for four projects; however, the SESAs were not fully strategic and failed to look at cumulative impacts. As a result, mitigation plans were fragmented and, subsequently, underfunded. Social impacts (including impacts on indigenous peoples' lives and culture) received less attention than environmental impacts. Variations in national legal requirements hampered efforts for consistent assessment across jurisdictions.

Plan-wide strategic or cumulative impact assessments, or an assessment covering the cumulative impacts of an entire corridor or an appropriate cluster of projects, should be compulsory. Where states' capacities and resources for such studies are limited, MDBs have an important role to play in carrying out these studies across jurisdictions.

Source: Interviews with DAR (Derecho, Ambiente y Recursos Naturales) and other CSOs.

4.3.5. Climate Change

Climate change affects the planet and its entire population, as well as physical infrastructure assets. It is estimated that transportation and energy projects are responsible for 63 percent of global greenhouse gas emissions.[196] Although such emissions are usually widely dispersed and will not likely have immediate localized effects, significant levels of emissions from installations can contribute to climate change and impose costs on the economy and society as a whole. Climate change risks should be addressed at the very outset of the infrastructure planning process, ideally at the mega-infrastructure plan level, and adapted to country-specific circumstances, consistent with the Paris Agreement.

Mega-infrastructure plans and projects should avoid or minimize the economic and societal costs of climate change by phasing out fossil fuels as much as possible. Many infrastructure assets are operational for decades, and in the case of private sector participation, are underpinned by long-term contracts that lock in technology choices, climate risk allocation, and dispute resolution methods. It is critically important that infrastructure projects incorporate the best available project design and technology to minimize fossil fuel consumption and greenhouse gas emissions and adapt to climate change. Coal-based projects should be ruled out altogether. Public authorities should not have to absorb losses from flooding and other extreme weather events, the occurrence of which is increasingly predictable. In addition, contracts should promote a flexible working relationship between the contracting authority and the private operator and facilitate the orderly and fair resolution of climate change disputes while ensuring availability of services to the public.

Climate change risks to projects must be assessed and managed so that the mega-infrastructure asset and its expected benefits will not be diminished or destroyed by extreme weather events or other climate impacts.[197] Conversely, poorly planned projects and poor landscape management techniques may compromise ecosystem services that regulate the climate or natural disasters and thereby undermine communities' resilience to climate change impacts.[198] Such events also have human rights consequences. Localized impact assessments are needed, even if uncertainties in climate forecasting remain.[199]

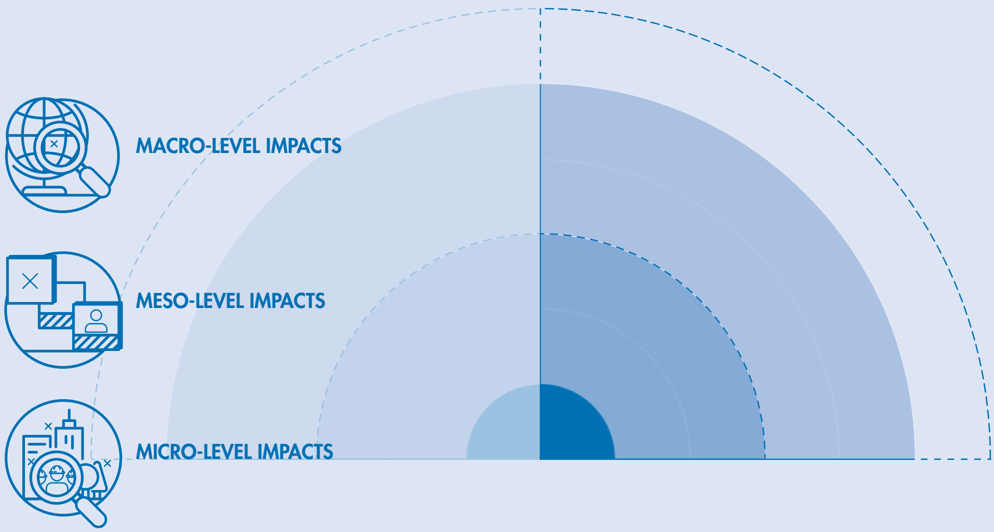
4.3.6. Adverse Impacts from Procurement

Procurement in infrastructure projects, whether by public or private actors, can give rise to significant sustainability risk factors. The building materials and inputs required by infrastructure projects can include concrete, wood, sand,[200] asphalt and steel, triggering potential risk factors such as environmental harms, child and forced labour, and human trafficking. Regardless of where procurement occurs, it will always have a global dimension; poor sustainability and human rights practices of suppliers can adversely affect workers and threaten communities and the environment anywhere the supplying activities take place. Procurement also presents an opportunity to support human rights through offering equal opportunity and economic empowerment of women and minority-owned businesses and encouraging supplier diversity.

4.3.7. Macro-Level Impacts from Investment and Financing Decisions

The right and duty of states to regulate to protect the population in relation to investments can be compromised under international investment agreements, as well as project contracts providing for privately financed infrastructure. The dominance and influence of private finance may affect the governance of infrastructure projects in ways that could impair the important role and functions of the state, bringing about diffuse and wide-spread human rights impacts that are experienced by the population at large. These risk factors are the subject of more detailed discussion in Chapters IV and V.

Fig. 1: Mega-Infrastructure and the Three Levels of Potential Human Rights Impacts



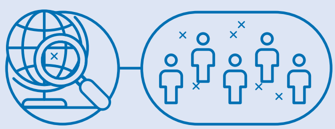
CROSS-CUTTING IMPACTS

Relevance at all three levels

- Lack of risk, impacts, assessments and/or management plans
- Lack of participation and consultation in project selection and design
- Violations of rights to freedom of thought, expression, assembly and association
- Gender discrimination and/or sexual violence
- Impacts on indigenous peoples, persons with disabilities and other vulnerable groups
- Lack of accountability and redress mechanism

MACRO-LEVEL IMPACTS

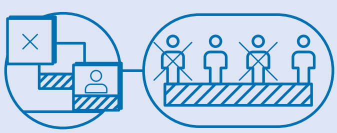
Impacts on population at large



- Poor process/assessments resulting in poor project choice, no consultation
- Fiscal mismanagement leading to macroeconomic problems
- Compromised right to regulate
- Infrastructure as asset class
- Climate change/cumulative enviromental impacts
- Poor procurement
- Reinforcing inequalities

MESO-LEVEL IMPACTS

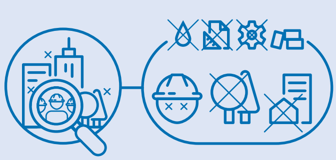
Impacts on infrastructure users



- Lack of accessibility
- Lack of affordability
- Poor service quality
- Discrimination
- Disregard for different user needs
- Privatized services

MICRO-LEVEL IMPACTS

Impacts on workers, communities and the enviroment – during project preparation, construction, operation and decommissioning



- Resettlement
- Loss of land and natural resources
- Poor labour conditions
- Air, water, soil pollution and climate change
- Construction impacts including health and safety
- Impacts in the construction materials supply chain
- Destruction of biodiversity
- Failure to maintain infrastructure

5. Looking Ahead

For the public and private actors involved in infrastructure planning, project development and implementation, identifying and addressing potential negative human rights impacts early in the process and throughout the project cycle will help to avoid or minimize the types of human rights impacts described in this chapter. Although different methodologies exist to achieve this objective, HRDD as defined in the UNGPs reflects existing international law and is well-suited for this purpose. The key steps in HRDD involve assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses and communicating how impacts are addressed.[201] The UNGPs guide the scoping and prioritization of risks, the allocation of responsiblities between the state, businesses and through business relationships, the exercise of leverage and effectiveness criteria for grievance mechanisms. HRDD not only helps to identify negative human rights impacts, but also potential opportunities for infrastructure to enhance environmental protection and human rights.

Business enterprises, especially investors, often resort to ESG due diligence rather than HRDD. The "S" or "social" dimension of ESG typically includes labour, health and safety, indigenous peoples and resettlement issues, overlapping with the subject matter of MDB safeguard policies and international human rights instruments. By contrast, effective HRDD (or full ESG due diligence) is informed by the entire international human rights legal framework. ESG due diligence that does not refer to this framework may not necessarily identify all material human rights risks, such as those related to land, privacy, accessibility and affordablity of services, or social exclusion resulting from particular forms of discrimination or multiple discrimination (for example, the situation of indigenous women). Contextual or country risks, including public governance and regulatory shortcomings, social conflict, threats to freedom of expression, assembly and association, and repression of and violence against human rights and environmental defenders, may also be less effectively addressed without an explicit human rights framework. For example, a recent survey of 152 major companies found that 77 percent of respondents that conducted (explicit, full) HRDD identified actual or potential human rights impacts in their operations through the process, and 72 per cent identified adverse impacts linked to the activities of their third-party relationships. By contrast, where companies carried out regular ESG (non-human rights) due diligence, only 19 percent identified human rights impacts and 29 percent identified adverse impacts linked to the activities of their third-party relationships.[202]

Through detailed stakeholder analysis, HRDD should disaggregate the affected stakeholder groups and focus especially on those who are poor, vulnerable, disadvantaged or discriminated against to help understand the potential adverse impacts on them. This analysis, and the active stakeholder engagement from which it is derived, is at the heart of HRDD, and will provide the basis for appropriate measures to avoid, minimize or manage adverse impacts and for ongoing feedback and engagement thereafter.

BOX 11

Human Rights Due Diligence as a Shield: Avoiding Complicity in Gross Human Rights Violations

On 25 August 2017, Myanmar's army launched a military operation against the Muslim minority Rohingya civilian population across northern Rakhine State after the Arakan Rohingya Salvation Army, an armed militant organization, attacked a number of security outposts. Rohingya villages were razed to the ground and an estimated 688,000 people were forced across the border to Bangladesh between August 2017 and February 2018. The campaign of mass killing, torture, sexual violence and forced disappearances has been characterized by the former United Nations High Commissioner for Human Rights as seeming to be "a textbook example of ethnic cleansing", possibly reflecting elements of the crime of genocide.

The Rohingya have long suffered discrimination and do not enjoy citizenship rights and other human rights on the same footing as other population groups. Poverty in northern Rakhine state is acute and infrastructure needs in the country are pressing. Only 20 percent of Myanmar's roads are paved and only 35 percent of the population is connected to the electricity grid. With the right investments, it has been estimated that, by 2030, the ICT sector could contribute US$ 6.4 billion to Myanmar's GDP and employ nearly a quarter of a million people.

However, infrastructure investment in these circumstances carries serious social risks. As of mid-2018, the preconditions for the safe and sustainable return of displaced Rohingya to their homes were nowhere in sight. Satellite imagery taken between January and February 2018 showed that scores of depopulated Rohingya villages (or what remained of them) had been bulldozed, which might frustrate future criminal investigations. Should reconstruction, extension of the electricity grid or other infrastructure developments have the effect of preventing the safe, dignified and sustainable return of displaced Rohingya populations (for example, should other ethnic groups repopulate Rohingya lands, or should returnees continue to be denied the civil, political, economic and other rights needed for them to access and use new infrastructure on the same footing as others), or should criminal investigations be obstructed, then those building, financing or investing in that infrastructure may be complicit in ethnic cleansing or genocide.

The circumstances described above are extreme, but not unique. This case underscores the need for all those financing and investing in infrastructure to have robust and ongoing HRDD procedures hard-wired into their risk management systems. HRDD should address all human rights – civil, political, economic, social and cultural, and should apply in all risk categories. While the main purpose of HRDD is preventative, to help anticipate problems and enhance project outcomes and sustainability, it can also help financiers and investors avoid complicity in gross human rights violations in extreme situations like Myanmar.

Source: Zeid Ra'ad Al Hussein (2018) "Opinion: Myanmar's infrastructure investors should commit to human rights", Devex, 20 March. Available at: www.devex.com/news/opinion-myanmar-s-infrastructure-investors-must-commit-to-human-rights-92371; http://globenewswire.com/news-release/2018/05/30/1514262/0/en/Chevron-shareholders-vote-on-cutting-business-ties-with-genocide-complicit-governments.html

HRDD can be proactive as well as reactive and should be used accordingly by business enterprises and states alike. Prior to an infrastructure planning process, proactive HRDD (including regulatory impact assessment and cost-benefit analyses with explicit human rights components) may usefully inform what states need to do to minimize human rights impacts arising from the plan. If there are unforeseen or new developments, states can also use HRDD reactively to inform the appropriate actions to be taken, such as treaty amendment, regulatory reform,[203] contract amendment, or responses to social or environmental harms.

In the broader context of infrastructure planning, HRDD readily complements strategic impact assessments, cumulative impacts assessments, as well as project-specific ESIAs and climate assessments. The more widespread application of HRDD by states, financing institutions, investors and other business entities would enhance project quality across the board. This is particularly vital in fragile and conflict-affected countries, where human rights risks may be much higher. HRDD is increasingly being mandated under national law[204] and encouraged in regulatory guidance and voluntary initiatives, including OECD's (excellent) Due Diligence Guidance for Responsible Business Conduct.[205] HRDD can also provide states and business entities with a legal defence where, despite best efforts, projects cause harm to people or the environment. In extreme situations, HRDD can also help states, financing institutions and investors avoid complicity in gross human rights violations or potential international crimes (see Box 11).

Key Messages in Chapter III

- Human rights are a globally agreed legal and ethical framework safeguarding essential freedoms and the minimum requirements of a dignified life. The human rights framework helps us to unpack the rights and responsibilities of the parties involved in infrastructure, from contracting authorities, private operators, financiers and investors, to segments of the public. This framework, which also acknowledges the role of a safe, clean, healthy and sustainable environment for the full enjoyment of human rights, can make a vital contribution to decision-making in infrastructure projects and policy-making that drives them.
- Inequality is one of the most persistent human rights and development challenges of our time. Mega-infrastructure projects can leave vulnerable segments of the society under- or unserved, perpetuating exclusion and discrimination, and exacerbating inequalities between population groups. The human rights framework focuses on opportunities, outcomes and disparities caused by discrimination, and sets out requirements for transparency, accountability and participation.
- The United Nations Guiding Principles on Business and Human Rights provide an authoritative global framework that explains how human rights apply to business. They provide the de facto global standard with regard to the state's duty to protect people against human rights abuses by business enterprises, which is of critical importance given the multiple roles that states play in mega-infrastructure projects. The United Nations Guiding Principles also outline the business enterprises' responsibility to respect human rights, and the duty of states and businesses to provide effective grievance redress mechanisms.
- The human rights impacts of mega-infrastructure projects can be analysed at three levels – micro-(project footprint), meso-(infrastructure users) and macro-levels. This classification helps signal to decision-makers the wide-ranging and multilevel human rights impacts that infrastructure projects can bring about, and that impacts may extend well beyond those typically covered in MDB safeguard policies. It also underscores the fact that impacts that are not readily identified as affecting human rights, and those that may seem diffuse or abstract, may nevertheless have explicit human rights underpinnings and accountability consequences.
- At the micro-level, infrastructure projects can be associated with human rights impacts on communities, workers and the environment. The most serious problems usually originate from acquisition of or access to project land, rights of way and resources, resulting in denial of land and resource tenure, relocation, forced eviction and loss of adequate standard of living and livelihoods. Although impacts usually peak during construction and level off during operation, health, safety and security issues can persist for workers and communities, along with threats to biodiversity, natural resources and the climate. Sexual violence, intimidation of and reprisals against human rights defenders, who are often women, and violence by security forces are among the common human rights impacts.

Decommissioning of projects may generate serious negative human rights impacts if not properly planned with adequate financial provisioning.

- At the meso-level, access to and affordability of certain social services, including water, are explicitly protected by human rights law, yet potential consumers of infrastructure services are often denied physical or economic (affordable) access to infrastructure. Generally, the private sector lacks incentives to enhance affordability of services, and regulatory reforms to enable private sector participation can harm vulnerable individuals and communities. Discriminatory intent, and potentially discriminatory outcomes, can be exposed through appropriate risk assessment, cost-benefit and other preliminary analysis.
- At the macro-level, the failure to consult the public throughout the project cycle, and failure to carry out appropriate cost-benefit analysis, feasibility studies and impact assessments, can result in poor decisions and irreversible harms to the general population. Poor planning and fiscal and financial management of infrastructure projects can waste public resources and trigger over-indebtedness, austerity and withdrawal of public services. Procurement for infrastructure projects, such as for infrastructure equipment and machinery, construction materials, and other inputs and the labour associated with them, can trigger significant sustainability and human rights concerns in the supply chain.
- Greenhouse-gas emissions constitute another macro-level impact which may be exacerbated by long-term infrastructure contracts that lock in poor technology and climate risk allocation choices. Coal projects should be ruled out entirely. Cumulative and transboundary environmental impacts of multiple mega-infrastructure projects should be properly assessed.
- A number of procedural and substantive human rights are of fundamental importance across all three levels of impact. These include rights related to transparency, participation and accountability, and the right to freedom of thought, opinion, assembly and association, the right to access information and participate in public affairs and the right to a remedy. In addition, indigenous peoples' right to free, prior and informed consent for proposed projects needs to be protected.
- Participation is not only a human right – it can also make for smoother project implementation and help deliver quality projects. Stakeholder engagement is indispensable for preventing cost overruns, delays and project failure.
- Public and private actors should identify and address potential negative human rights impacts early in the process and throughout the project cycle through human rights due diligence (HRDD). HRDD can be proactive as well as reactive and should inform regulatory impact assessment and cost-benefit analyses of proposed infrastructure projects, and any necessary treaty, regulatory or contract actions. "Explicit" HRDD is likely to be more effective in identifying and mitigating human rights risks than traditional environmental, social and governance (ESG) due diligence, and in addressing potential risks in business relationships and supply chains. HRDD can also provide states and business entities with a legal defence where, despite best efforts, projects cause harm to people or the environment.

Survivors of the collapse of the Xe-Pian Xe-Namnoy hydroelectric dam in Laos, July 2018. At least 35 people were reported to have died in the resulting flooding, and more than 6,000 have been displaced.

IV. Legal Frameworks Governing International Investment

"The current system of investment arbitration 'seems to be leaning toward separation of human rights and investor's rights like oil and water'."

Bruno Simma[206]

1. Introduction

The impact of infrastructure investment on host-country populations depends not only on design and implementation decisions at the project level, but also financing and investment decisions, and the allocation of rights and duties between investors (foreign and domestic), contracting authorities (the state), and the host-country population or segments of it. The framework that regulates cross-border infrastructure investment can be analysed at three levels: (1) international investment agreements (IIAs), (2) national law and (3) state-investor contracts governing the relationship between the investor and the contracting authority. IIAs exist within the sphere of international law, just as international human rights and environmental laws do; however, the interaction between the different branches of international law to date has been intermittent and incoherent.[207]

Countries enter into IIAs in the hope of attracting foreign investors by protecting them (host-country perspective) as well as protecting domestic investors that invest abroad (home-country perspective). Investors bring with them technology, know-how, efficiency and financing for complex undertakings such as infrastructure projects, to help host governments deliver public services. Investments can bring economic benefits and jobs to communities and can contribute to the fulfilment of a wide range of human rights. While the effectiveness of IIAs in encouraging investment is open to question, IIAs are intended to protect investors from expropriation without timely, adequate and effective compensation, and from arbitrary and discriminatory government conduct, by providing recourse against states for breaches of agreed standards of conduct.

However, infrastructure investment can also be associated with negative human rights impacts, as was discussed in Chapter III. In addition, IIAs for the most part impose no responsibility on investors, and they offer no recourse for people adversely affected by an investor's conduct. Investors may seek expensive inducements and unduly rigid regulatory "freezing" guarantees, such as stabilization clauses or change-in-law-provisions, in order to protect their investment over the potentially long life of a major infrastructure project. Furthermore, investors can bring disputes with host governments to tribunals outside the host country, side-stepping the domestic legal framework. This gives rise to several questions: Should foreign investors be afforded a level of protection greater than that available under national law, in a parallel legal system with privileged procedural and substantive rights? Should protections be available to affected people? Under what circumstances, and within what limits, should states compromise on their right to regulate in the public interest and duty to protect against human rights abuses in order to accommodate investors' wishes? Can the body of international economic law built around IIAs be interpreted and applied in light of other relevant bodies of international law, including environmental and human rights law, in order to help achieve a more equitable balance between the rights and duties of states, investors, and population groups in the host country? And if not, what system of investor protection would be more compatible with the protection and fulfilment of human rights?

Human rights risks are embedded in all three levels of this regulatory scheme, as we will see below. National investment laws, the second tier in the regulatory framework, have investment promotion and protection functions similar to those of IIAs, as well as investment facilitation objectives. State-investor contracts (the third tier) set out the detailed rights and obligations between the public- and private sector contracting parties. Commitments under IIAs have superiority over national investment laws. But national laws and contracts at times provide a greater level of investor protection than that afforded by IIAs. When investor protection comes at the expense of human rights or the environment, this may conflict with host countries' obligations under human rights and environmental law.

2. International Investment Agreements and Human Rights

2.1. Introduction to IIAs

IIAs sit at the apex of the regulatory framework governing infrastructure investment. They are generally expected to provide stability, clarity and predictability for investors as well as other stakeholders.[208] UNCTAD promotes IIAs as vehicles for inclusive growth and sustainable development.[209] However, the current IIA landscape is chaotic at best. Because there is no multilateral framework on investment, states have engaged in piecemeal and uncoordinated attempts to negotiate investment agreements at bilateral, plurilateral and regional levels, leading to a proliferation of IIAs. As of February 2018, up to 3,322 IIAs were in existence, consisting of bilateral investment treaties (BITs), treaties with investment provisions (TIPs, which also includes plurilateral and sector-specific agreements, such as the Energy Charter[210]), and free-trade agreements (FTAs).

Nevertheless, IIAs are valued and relied on by foreign investors, including investors in infrastructure projects. IIAs provide protection for both "investments" and "investors." Some investment treaties define investments as any or every kind of asset, while others cover specific types of investments or enterprises. Similarly, the term "investors" is also defined generously, in some cases allowing non-controlling minority shareholders and beneficial owners of shell companies to bring claims against the host state.[211] Investments in financial instruments may also qualify as protected investments under certain treaties (such as sovereign bonds purchased by retail investors in secondary markets, or oil hedging contracts[212]). This may be particularly relevant in the context of infrastructure investment.

IIAs typically contain the following requirements for the protection of investors:

- The requirement that foreign investors be treated no less favourably than domestic investors in the host state ("national treatment" or NT)
- The requirement for "most favoured nation" (MFN) treatment of foreign investors, so that an investor from a home state covered by a treaty is afforded treatment no less favourable than any other foreign investor in the host state
- Fair and equitable treatment (FET), the minimum international standard of treatment required of the host state, is a baseline level of treatment a host government must provide to foreign investors. This includes, in most cases, the protection of the "legitimate expectation" of the investor for predictability, and the stability of the investment space, and
- The prohibition against direct or indirect expropriation[213] without compensation.

Investors bring claims in relation to all phases of their investments. In the case of infrastructure investment, claims range from rejected bids, failed contract negotiations, the pre-establishment, establishment, acquisition and expansion phases of investments, the construction and operation of investment assets (including state liability for legal and regulatory changes, discussed below) and renegotiations of contracts to physical, legal or economic harm caused by third parties.[214]

IIAs can provide investors with multiple fora to pursue investor-state dispute settlement (ISDS) claims around the world, through international arbitration, leapfrogging domestic legal processes. As of April 2018, 855 ISDS cases had been brought;[215] in contrast, in the mid-1990's, there were fewer than 10 known investor-state arbitrations. About 80 percent of ISDS cases are based on alleged breaches of FET, often grounded in a claim that a "legitimate expectation" had been breached, followed by complaints alleging indirect expropriation (75 percent of cases).[216] Many of the disputes – up to 35 percent of cases heard by the International Centre for Settlement of Investment Disputes (ICSID), for example – arise out of infrastructure investments (in contrast, disputes in the extractive sector comprise about 30 percent of the ICSID cases).[217] (See Box 14.)

Large arbitral awards against states can create huge fiscal burdens for host countries. The pre-2000 stock of IIAs is particularly problematic in this regard, containing broad and vague provisions, such as the "legitimate expectation" of investors under the FET, and particularly strong investor protections. Older IIAs (and national arbitration laws) often include "umbrella clauses" which allow investors to elevate what are normally contractual disputes to treaty disputes, thereby bypassing any dispute requirements contained in the contract. Many umbrella clauses are broader than just contracts and include language that extends to "legal obligations". All of today's known ISDS cases are based on treaties concluded before the year 2010.[218]

Typically, only investors, not states, are entitled to bring claims under IIAs.[219] States may bring counterclaims in ISDS cases but this is not yet common practice, and may be limited by the specific language in IIAs, the applicable arbitration rules and other factors. Investors typically shop for the most advantageous IIAs and jurisdictions in which to make claims against states.[220] Although arbitral tribunals generally discourage this practice, their reactions are not always consistent. Once a favourable IIA jurisdiction has been identified, a company may incorporate and establish itself as an "investor" pursuant to a favoured IIA in order to initiate a claim under the IIA. States often face multiple complaints by multiple investors arising from the same cause of action, and because many investment treaties have wide definitions of "investor," it is possible that governments may face claims by a company as well as its direct and/or indirect shareholders for the same cause of action.[221] The mere filing of a claim against a state for an IIA violation can result in reduced inward foreign direct investment (FDI) flows, which may drop even further when the state loses an ISDS case.[222] The three most frequent respondent states so far have been Argentina, Venezuela and Spain, and the top three home countries of claimants have been the United States of America, the Netherlands and the United Kingdom.[223]

The ISDS process under IIAs is ad hoc in nature, with no coordinating body and no appellate or political oversight mechanisms such as those of the WTO. No appeal processes are available to rectify incorrect decisions; however, an annulment process is available. IIAs have also operated largely in isolation from national development plans, intended nationally determined contributions (INDCs) under the 2015 Climate Agreement[224] and other relevant policy frameworks. Moreover, while arbitral fora such as ICSID have made various disclosure improvements over the years,[225] and the United Nations Commission on International Trade Law (UNCITRAL) has passed Rules on Transparency in Treaty-based Investor-State Arbitration in 2014 and has amended the UNCITRAL Arbitration Rules,[226] arbitral processes still generally lack transparency. This is particularly problematic for those whose rights may be impacted by these proceedings but are unable to effectively access or understand the process.

Since ISDS cases are expensive – on average, investor-state claim costs were roughly US$ 8 million in 2012 and up to US$ 10 million in 2014 for a government to defend[227] – investors must have access to adequate capital to finance their claims. Financing is occasionally provided by third parties to enable ISDS claims, where this practice is legal. Hedge funds, for instance, have provided third-party financing in order to profit from monetary awards (see Box 12). Although this practice is illegal in many jurisdictions, Hong Kong, for example, recently removed third-party financing restrictions, allowing third-party financing of the plaintiff (investor) but not the defendant (state).[228] Other potential pitfalls of ISDS are discussed in Section 3 below.

BOX 12

Hedge Funds Muscle in to Finance ISDS

Two proposed gold mines, one in Colombia and another in Romania, had their mining permits denied by national courts. In the former case, this was on the basis that the mine would damage a legally protected ecosystem, and in the latter case, because of a UNESCO-listed settlement. Investors in both mines lodged ISDS cases to seek billions of dollars in compensation. In both cases, Tenor Capital Management, a Wall Street hedge fund, bankrolled the ISDS cases in return for a percentage of the expected monetary awards. In 2014, the hedge fund successfully bet that Venezuela would lose an ISDS case, and received a 35 percent cut of a US$ 1.4 billion award. The Sierra Club blog noted that "financiers already have created a sophisticated marketplace around ISDS cases", and insiders expect that Wall Street firms will soon be trading ISDS cases "on an industrial scale."

Source: www.sierraclub.org/compass/2016/12/when-you-thought-trade-deals-could-not-get-any-worse-enter-wall-street

Governments and other actors are responding to these threats in multiple ways. India,[229] Indonesia and South Africa are currently terminating or renegotiating their treaties with ISDS provisions, while Bolivia and Venezuela have already done so.[230] The Netherlands has introduced a new model BIT[231] for use outside the EU, which seems to strike at some of the more vexing issues in IIAs (at the time of writing, the model BIT was the subject of public consultation). UNCTAD is supporting countries to effect IIA reforms (see Box 13). Other initiatives are underway to reform the dispute resolution institutions themselves,[232] including improving the qualifications and capacity of arbitrators. There have occasionally been successful legal challenges to ISDS. As an example, in a recent preliminary ruling of the European Court of Justice,[233] a BIT arbitration clause was found to be incompatible with the Treaty on the Functioning of the European Union, on the basis that the set-up of arbitral proceedings between Slovakia and a Dutch investor, Achmea BV, prevented the proper functioning of European law. Although this ruling may not completely eliminate ISDS in Europe (the direct effects of this decision were confined to intra-EU BITs), it is nonetheless a landmark decision with obvious relevance to international human rights and environmental law.[234] However, notwithstanding progress in these and other areas, for many critics the international investment system appears broken in fundamental ways, perpetuating a parallel system which disproportionately benefits investors and in which structural shortcomings and underlying asymmetries of power are left virtually untouched.[235]

2.2. IIAs and the Right to Regulate

Whether or not infrastructure investment delivers on its economic, social and environmental objectives depends greatly upon how the legal framework for infrastructure investment interacts with relevant bodies of law in the social and environmental spheres. Although the international economic and investment legal regimes were not conceived in isolation from international human rights and environmental law, they have evolved in virtual isolation from the latter bodies of law.[236] Today, however, the potential scope of application of these laws is broadening and intersecting in obvious ways with international regimes governing human rights, finance, tax, labour, the environment and health and safety.

Under international law, where several sources of law bear upon a given issue, they should be interpreted, as far as possible, so as to give rise to a single set of compatible obligations.[237] Human rights law occupies particular importance in this context, given the fundamental (and third-party) nature of the rights protected by it, which, unlike most other international law regimes, do not depend on inter-state reciprocity.[238] Important groundwork on the intersection between investment and human rights law was laid by the mandate of the former United Nations Special Representative of the Secretary-General (SRSG) on Business and Human Rights,[239] which analysed

BOX 13

UNCTAD Reform – 10 IIA Modernization Options in UNCTAD's Reform Package for the International Investment Regime

Since 2013, UNCTAD has been launching several tools and policy documents to assist countries move toward a new generation of international investment policies. These include the Investment Policy Framework for Sustainable Development (2015), the Road Map for IIA Reform (2015), and its 10 Options for Phase 2 of IIA Reform, which are consolidated in UNCTAD's Reform Package for the International Investment Regime (2017). Efforts have been made to help countries incorporate investor-responsibility provisions and align IIAs with the UNGPs, the ILO Tripartite MNE Declaration, and the Universal Declaration on Human Rights, although human rights clauses currently in use tend to be broad and aspirational. In its most recent assessment in the World Investment Report 2018, UNCTAD noted that over 150 countries have taken steps since 2012 to formulate a new generation of sustainable development-oriented IIAs. Phase 3 in the reform process – the last phase – aims to make sure that national investment laws and other bodies of international law are coherent with IIA reform.

investor protections under IIAs and the state's "right to regulate" in the public interest. The concept of the right to regulate originates from the police powers of the state, which refers to the sovereign right of a government to promote order, safety, security, health, morals and general welfare within constitutional limits as an essential attribute of government.[240] Critically, from a human rights perspective, the state's *right* to regulate is also a *duty*, carried out on behalf of human beings as the subjects of rights. Under human rights treaties, states must undertake legislative (and other) measures to realize rights.[241] This requirement, together with the duty to protect (that is to say, to take legislative and other measures to ensure that human rights are not infringed by third parties, as discussed in Chapter III), can be seen as the corollary of the "right to regulate" in international investment law.

The debate on the state's right to regulate, and its relationship with investor protection, has evolved rapidly in recent years.[242] Defenders of investment treaties contend that the latter instruments protect investors from government misrule and can have a positive impact on the quality of government regulation.[243] Unsurprisingly, investors in the infrastructure sector, who may have their investments tied up in illiquid financial instruments for a decade or more, tend to be particularly insistent on regulatory certainty. Critics contend that IIAs are ineffective in promoting investment and undermine needed regulation in the environmental, health, safety and financial arenas.[244] However one approaches this question, one should bear in mind that the "right to regulate" debate has traditionally embraced only a limited range of human rights concerns: procedurally, individuals or affected communities do not have standing to bring claims against investors under IIAs, and – beyond the limited scope of counterclaims and few other exceptions – neither do states; and substantively, the police powers doctrine has been invoked in response to a fairly limited set of public health and safety concerns. Nevertheless, as we will shortly see, arbitral tribunals have begun to interpret the right (and duty) to regulate in light of the state's obligations under international human rights law. The main questions, however, are whether this practice is likely to be sustained, and whether a coherent and consistent body of jurisprudence can be expected to emerge, and most fundamentally of all, what good will come from jurisprudential advances when the international investment regime itself appears to be so fundamentally flawed.

2.3. The Obligation of States to Know and Address Human Rights Harms from IIAs

Many types of human rights harms can emerge from IIAs. Before entering into an IIA relationship, states should ascertain that the IIA does not impose obligations inconsistent with their pre-existing international treaty obligations, including in relation to human rights and the environment. IIAs and human rights treaties are often negotiated by the same government ministry, which makes it harder to explain why there is so little inter-connection between the two regimes in practice. Ex ante human rights impact assessments[245] would greatly help states understand the human rights consequences of IIAs and defend their policy space, for the benefit of policy coherence.

Perhaps the most significant risk of human rights harms in the international investment regime arises from ISDS and the potential abridgement of the state's right to regulate. States may fulfil their obligations under international human rights and environmental treaties by enacting laws to regulate the labour market (which might include raising the minimum wage, and enforcing the freedom of association and collective bargaining), promote full employment, promote equality and eliminate discrimination (which might include measures to close the gender pay gap, or to remedy past discrimination, such as the black economic empowerment programme of South Africa), and protect public health, safety and the environment. These are among the hallmarks of national sovereignty and government legitimacy. When corporations respect and abide by this body of laws, they are discharging their corporate responsibility to respect human rights.

Under IIAs, however, investors may claim that regulatory acts of these kinds constitute a breach of the state's FET obligation (and more specifically a breach of a legitimate expectation of an investor), or of an obligation not to expropriate an investment without timely, adequate and effective compensation. Under the doctrine of police powers, the main test of the legality of the regulatory act is whether the act in question constitutes a bona fide and non-discriminatory exercise of regulatory power in the public interest, whereas under economic and investment laws the question is whether there has been an economic impact of the regulation on the investor's business. This is exactly where the right to regulate and investor protection concepts collide (for illustration, see the *Azurix Corp v. Argentina* case – a case involving water concession – in Box 14). Whether the state has exercised its regulatory power in a bona fide and non-discriminatory manner is a question to be answered on a case-by-case basis. Beyond the scope of individual claims, however, the fear of large damages awards under ISDS may cause governments to refrain from undertaking legislative and policy measures in the public interest, which may breach the state's obligations under international human rights or environmental law.[246]

Human rights law does not yet appear to have had an appreciable impact on investment arbitrations to date, though trend analysis is made difficult by the non-transparent nature of arbitral proceedings and outcomes. Nevertheless, emerging case law suggests that respondents, and even claimants, are starting to refer to human rights law in ISDS proceedings, albeit in unpredictable and inconsistent ways. For example, in *Philip Morris Brands SARL and others v. Oriental Republic of Uruguay*,[247] an ICSID tribunal recognized that Uruguay's tobacco control measures were a valid exercise of its police powers for the protection of public health, taking into account the relevant provisions of Uruguay's constitution and the Framework Convention on Tobacco Control.[248] In doing so, the tribunal took into account jurisprudence of the European Court of Human Rights in determining the scope of police powers.[249] The tribunal affirmed that an interference with foreign property in the valid exercise of police powers is not considered expropriation and does not give rise to compensation. The claimants' FET claim was also rejected by the tribunal, which found that changes to general legislation (at least in the absence of a stabilization clause) are not prevented by the FET standard if they do not exceed the exercise of the host state's normal regulatory power in the pursuance of a public interest and do not modify the regulatory framework relied upon by the investor at the time of its investment "outside of the acceptable margin of change."[250]

The ICSID award in *Urbaser v. Argentina*[251] was the first to accept jurisdiction over a human rights counterclaim. In this case, involving a claim by a shareholder in a water concessionaire for financial loss under the Spain-Argentina Bilateral Investment Treaty (BIT), the tribunal accepted the proposition that corporations bear human rights obligations under Articles 29 and 30 of the UDHR, Article 5(1) of the ICESCR, and the ILO's Tripartite Declaration of Principles Concerning Multilateral Enterprises and Social Policy.[252] The tribunal noted that "international law accepts corporate social responsibility as a standard of crucial importance for companies operating in the field of international commerce. This standard includes commitments to comply with human rights in the framework of those entities' operations conducted in countries other than the country of their seat or incorporation."[253] The UNGPs were cited in this regard.[254] While the government of Argentina's counterclaim did not succeed,[255] and while certain aspects of the tribunal's human rights analysis may be questioned,[256] its decision supports the principle that investor protections should be balanced with and interpreted in light of applicable rights and duties under international human rights law. While jurisprudential developments are unpredictable in this field, this decision may well lay the ground for corporations to be held accountable under BITs similar to the Spain-Argentina treaty[257] in the future.

The potential negative human rights impacts of ISDS are not necessarily confined to the parties to a given claim. The fact, or threat, of ISDS may have a chilling effect in third countries. *Philip Morris v. Uruguay* and *Philip Morris v. Australia*[258] are among the cases where investors have allegedly sought to delay, prevent or otherwise influence government measures by threatening ISDS claims. A number of other governments that had planned similar health warnings regarding tobacco use reportedly delayed the needed regulatory actions pending the outcomes of the tribunals' decisions. The significance of this kind of threat should not be underestimated: delayed public warnings, in the context of tobacco use, can have major negative public health implications.

The foregoing examples demonstrate increasing awareness of the importance of human rights law in connection with IIAs and the adjudication of investment disputes. However, the record is inconsistent at best, and when human rights arguments have been accepted, it has often been at the instance of investors (alleging abridgements of their right to property, denial of justice, and so forth), with potentially weak anchoring in international human rights law.[259]

It is also important to note that large arbitral awards (the average amount claimed is US$ 1.35 billion and the average award is US$ 552 million)[260] may seriously undermine states' fiscal space and ability to realize human rights (particularly economic, social and cultural rights which, with certain exceptions, as discussed in Chapter III, are resource-dependent). In *Occidental v. Ecuador*,[261] for example, the original award rendered by the tribunal represented "almost nine percent of Ecuador's 2012 annual budget, 59 percent of the country's 2012 annual budget for education and 135 percent of the country's annual healthcare budget." (The award was ultimately reduced by 40 percent after an annulment proceeding initiated by Ecuador.)

While a causal relationship is difficult to prove, the existence or threat of ISDS may also increase repression in host countries and physical risks faced by human rights and environmental defenders. Where governments are faced with a choice between protecting the interests of investors and complying with their obligations to protect, respect and fulfil the rights of human rights defenders, governments may prioritize the former at the expense of the latter.[262] Human rights impact assessments, utilized at all phases of IIAs, can help to identify and address such risks. If a state's obligations under an IIA may be inconsistent with its obligations under other international legal instruments, states should, through subsequent agreement and subsequent practice, make clear that actions taken that may otherwise be inconsistent with their obligations under IIAs, but that are taken with the objective of protecting and realizing human rights (including those of human rights defenders), should not result in treaty violations. In future investment treaties, these clarifications should be provided directly in the text of the treaty. States should decline to renew, or should terminate, existing treaties when their obligations to investors conflict with their obligations toward human rights defenders.[263]

2.4. Harnessing the Positive Role of IIAs to Promote Human Rights

IIAs are widely seen as a means to promote investment and hence economic growth, job creation and sustainable development, although the evidence of IIAs' positive effects is contested.[264] To the extent that IIAs may help promote growth with equity, they may also contribute positively to the realization of human rights. There is also a growing recognition that investment promotion and protection must not be pursued at the expense of other key policy objectives, as UNCTAD has noted:

> One technique used in this respect is to provide for general treaty exceptions. They may cover a broad range of issues, including taxation, essential security interests and public order, protection of human health and natural resources, protection of culture and prudential measures for financial services. Other BITs have included positive language to underline the responsibilities of contracting parties to safeguard society's core values. A small number of agreements contain a clause prohibiting or discouraging a lowering of environmental or core labour standards in order to attract foreign investment.[265]

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Jintana Kaewkhaw stands on the coastline next to her village in northern Thailand, which was the proposed site for a coal-powered power plant. She successfully led protests and prevented the plant's construction despite four attempts on her life. She has since been forced to live under police protection (in background).

According to the OECD, more than three-quarters of recently concluded IIAs (mainly FTAs with investment protection provisions, concluded between 2008 and 2013) contain language on sustainable development or responsible business (as defined in the MNE Guidelines) and virtually all of the investment treaties concluded in 2012 and 2013 included such language. Forty-seven of the 54 countries covered by the survey included language of this kind in at least one of their treaties.[266] In just about all of these cases, however, the treaty language was either aspirational or limited by the caveat that the regulatory measure in question be "otherwise consistent with this treaty". This means the right to regulate for sustainable development or responsible business objectives may be recognized only to the extent consistent with the investment treaty provisions, which may render the former right pointless. Moreover, when the field was expanded to the entire stock of IIAs, only 12 percent of IIAs contained provisions addressing these issues. Environmental protection is the issue most often addressed (10 percent of IIAs), followed by labour standards (5.5 percent) and anti-corruption measures (1.5 percent). Human rights commitments only featured in 0.5 percent of IIAs.[267] In this context, the proposed Dutch model BIT stands out. Among other things, it contains an important instruction to arbitral tribunals: "Without prejudice to national administrative or criminal law procedures, a Tribunal may, in deciding on the amount of compensation, take into account noncompliance by the investor with its commitments under the United Nations Guiding Principles on Businesses and Human Rights, and the OECD Guidelines for Multinational Enterprises."[268]

Human rights commitments should be included more systematically in IIAs, grounded in a core commitment that the state should act consistently with its obligations under international human rights, labour and environmental agreements when promoting and protecting investment.[269] In addition, taking inspiration from recent ICSID jurisprudence,[270] IIAs should also affirm the responsibility of investors to respect human rights and deny treaty benefits if they do not. The UNGPs offer a conceptual and normative framework not only for the corporate responsibility to respect human rights, but also in terms of the state duty to protect human rights when states are "pursuing business-related policy objectives with other states or business enterprises, for instance through investment treaties or contracts".[271]

3. National Investment Laws and Human Rights

National investment laws set out national investment policy, promotion, protection, and in some cases investment facilitation measures,[272] working in tandem with commercial law, corporate law, sectoral laws and laws governing tax, finance, environmental protection, non-discrimination and information disclosure, as well as industrial policy,[273] among others. Broadly speaking, national investment laws set standards governing entry, registration and authorization of investment, allocation of rights and obligations, guarantees, investment promotion and facilitation and investor-state dispute settlement.

At least 108 countries have investment laws, principally for the purpose of regulating foreign investment, or both foreign and domestic investment, but their content and approaches vary significantly.[274] Sustainable development is not the main objective of investment laws: only a few jurisdictions mention the goal of sustainable or social development, and none explicitly mention human rights.

National investment laws can impose a range of obligations on investors, including in relation to compliance with domestic legislation (43 jurisdictions), public health protection (5), environmental protection (27), labour rights and standards (33), employment requirements (25) and corporate social responsibility (2). These laws need to be interpreted and applied together with national labour, health and safety and environmental laws.[275]

Most countries that have investment laws are developing countries or economies in transition. Many advanced economies do not have investment laws per se. Some are of the view that a specialized body of investment law may not be necessary, and that what matters most is whether the totality of domestic laws provide minimum regulatory requirements from investor and host-state perspectives. In any event, national investment law, if it exists, or a collection of laws relevant to investment, is the most immediate legal framework that binds investors, in addition to state-investor contracts.

Investment laws cover similar issues as IIAs, but there can be variations and conflicts between national and international frameworks. For example, more than half of the laws mention international arbitration.[276] This means that investors can claim the more favourable level of protection afforded under the IIAs or national law, or proceed under both, and if one claim is dismissed, the case can still proceed under the other. Investors may also have access to international arbitration under state-investor contracts – see Section D below.

Equally relevant in this context is the fact that 27 states currently offer stabilization of domestic laws in a wide variety of areas, from fiscal regimes to environmental law.[277] In Kosovo, for example, the law on foreign investment provides that any change to the investment law within five years of an investment is itself a compensable violation (Article 6).[278] This means that regulatory efforts to enact human rights or environmental laws could be subject to investor challenge in international arbitration.

Investment laws are not likely to offer protection or legal recourse for individuals in the host state who are adversely impacted by investment activities. Such protection usually comes (if at all) from other sources of domestic law, such as human rights, health and safety, labour, environmental, anti-discrimination and administrative and disclosure laws. But rights protection is under pressure from two directions: On the one hand, host states may be constrained from enacting such laws, by function of IIAs, or stabilization clauses in state-investor contracts as discussed below. On the other hand, national investment laws (or PPP or sector laws) may favour investors while suspending or reducing substantive or procedural safeguards for human rights and sustainability. For example, national investment or similar laws can offer unduly long tax holidays, set up special economic zones (SEZs) that waive national labour standards, effectively creating "one country, two systems",[279] weaken or waive ESIA requirements,[280] suspend procedural guarantees for disclosure or land acquisition,[281] establish dedicated law enforcement units to protect foreign infrastructure investments[282] or set up dedicated dispute resolution mechanisms for infrastructure plans (such as the idea of a "BRI court"[283]). Draft legislation ("Critical Infrastructure Protection Bills") in several jurisdictions of the United States of America, such as Louisiana (where pipelines will be added to an existing list of types of protected infrastructure), as well as in South Africa, make it a crime to protest at key infrastructure sites, punishable by fines and jail terms. A similar bill in Kenya has been proposed to protect information and communication technology infrastructure from vandalism.[284] The last few years have seen multiple national investment law reforms, sometimes promoted through MDBs' development policy loans or other instruments, which curtailed social or environmental safeguards in order to make the investment climate more attractive to private investors.[285] With heavy pressures on countries to attract investors, these practices may increase in the foreseeable future.

To complicate the situation further, approximately 147 jurisdictions worldwide have PPP and concession laws.[286] There is no internationally agreed model PPP law. The closest model appears to be UNCITRAL's Legislative Guide on Privately Financed Infrastructure Projects, which is more than 15 years old and is currently being updated. Although various aspects of these laws roughly correlate with the indicators for effective PPPs published by the Economist Intelligence Unit's Infrascope, a comprehensive comparative picture of the content of these laws and their interaction with IIAs and domestic investment laws is only now beginning to emerge. As with investment laws, it is important to understand what the material PPP provisions are, how they work, including how they interact with other pertinent laws such as investment laws, whether they are aligned with social or environmental safeguards or the Addis Agenda and whether they address all key issues. For example, PPP laws might permit or encourage unsolicited bids for PPPs, which could effectively suspend any PPP disclosure requirements, cost-benefit analysis or competitive bidding process.

There is an urgent need to enhance the coherence between domestic investment laws and IIAs, and areas of law that more directly serve the public interest, such as tax, competition, environmental, labour and human rights law. PPP laws may have a useful role to play within the national regulatory framework for infrastructure investment, as one among many procurement options. However, it is critically important that states resist the temptation for the "one country, two systems" approach from a human rights perspective, and do not abridge existing rights and safeguards for the public through national investment, PPPs or similar laws. Furthermore, people should have access to timely and effective redress (through judicial and non-judicial mechanisms) when adversely impacted by investment decisions. These challenges are largely beyond any bilateral or plurilateral efforts to reform IIAs, and should be effectively addressed at the national level.

4. State-Investor Contracts and Human Rights

A foreign investor formalizes its investment by signing a state-investor contract with the relevant agency of the host state. State-investor contracts are most often used for natural resource extraction (oil, gas, minerals and large-scale agriculture) and economic and social infrastructure projects. They may have different names, depending on the sector, such as host-government agreement, concession agreement and PPP contract, and they may last for two decades or more.

State-investor contracts contain the terms governing the business relationship between the state and investor, as well as standard legal provisions. If the host country's sectoral and investment strategy and relevant policies and laws are clear and well-crafted, in theory the state-investor contracts would only need to set out the project variables. But most host countries lack a sufficiently comprehensive, stable and reliable legal and policy framework. Hence, state-investor contracts have tended to err on the side of inclusion, containing extensive provisions concerning all possible business and legal aspects of the investment. These contracts are typically long, complex, costly to negotiate and take time to finalize.

Aside from being the repository for the business and legal terms of the investment, state-investor contracts provide an important opportunity for the host state to align investment plans with human rights and environmental obligations and objectives, enhance the economic, environmental and social co-benefits of investments (discussed in Chapter II above),[287] and set in place rigorous risk management procedures. The possibility for co-benefits may have been raised and agreed between the investor and the affected community or other stakeholder groups, but all too often the latter groups, as third-party beneficiaries, are excluded from state-investor contracts. Nevertheless, to the extent possible, such investor commitments should be included in the contract, and should be the subject of legally enforceable obligations against the investor, particularly when they form part of the investor's impact mitigation plan and part of the bargain with the state. Contracts should fairly balance the interests of the investor and the state, and should specify clearly which party or parties will manage environmental, social/human rights and climate risks, which may be complex and costly and require close collaboration between the contract parties.

There is no universally accepted contractual format for state-investor contracts though many formal and informal templates exist, by country,[288] sector,[289] institution, and so forth. Drafters also tend to consult recent contractual precedents, to the extent that these are publicly available, to speed up the drafting process and identify clauses that may make contracts "watertight" and "bankable." Despite the usefulness of these tools, for the most part, available templates rarely if ever address the environmental and social/human rights aspects of investments, perhaps on the erroneous assumption that local law takes care of these issues, or that they are not material to the investment. It is also likely that certain harmful provisions, such as stabilization clauses, discussed below, are repeated in templates and in contracts, without a proper analysis of their utility or of their sustainability and human rights implications, thereby potentially replicating harm from one project to the next.

When analyzing the state of play regarding investor-state contracts, some degree of guesswork is unavoidable. Unlike IIAs and national investment laws, state-investor contracts are normally confidential, and no central repository is available. Sometimes contracts are publicly disclosed, accidentally or otherwise,[290] and a range of initiatives have been launched to collect them. However, in contrast to the state-investor contracts in the extractive sectors, public disclosure and knowledge about the extent of problems in infrastructure contract drafting and provisions are limited. This is extremely worrying, given the prevalence and potentially harmful consequences of contract renegotiations and ISDS (Box 14), and other potentially negative impacts outlined below.

One type of clause in state-investor contracts that has attracted particular controversy is stabilization or change in law clauses, a standard risk management tool in many state-investor contracts, especially in developing countries. These clauses either freeze host-country laws for the duration of the state-investor contract or create a financial liability on the part of the host country to compensate the investor for the cost of compliance with any changed law. The use of stabilization clauses can vary from sector to sector and country to country; however, the unduly rigid application of such clauses may chill or hinder the implementation of environmental and human rights law over the life of a long-term project.[291]

The original rationale for stabilization provisions was to use legal mechanisms to address concerns relating to political instability, primarily in developing countries.[292] Proponents of stabilization clauses argue that state-investment contracts would be unaffordable for the host state without such provisions. For example, the World Bank's Guidance on PPP Contractual Provisions suggests that the host state consider bearing all the change in law risks in order to attract private sector investment.[293] It suggests that such risk allocation should enable the private party to offer a more competitive price without the need for contingency pricing. The Guidance also suggests that states not only compensate investors for changes in law but also excuse them from the performance of their obligations under the contract to the extent prevented by the change in law, and to terminate the contract and be entitled to termination payments.[294]

Critics argue that it is not fair or efficient to compensate private actors for any and all regulatory changes.[295] As reflected in Principle 4 of the Principles for Responsible Contracts (Box 15), a narrower scope of stabilization may help achieve a more equitable balance between the interests of the investor and the public interest represented by the state.[296] The core of the problem, however, is that investors and their lawyers and bankers have come to expect such clauses in state-investor contracts in developing countries, and ask for them without necessarily thinking through the consequences. Weaning investors off the regulatory freeze habit is not easy. If an initial state-investor contract in a host state in a given sector offers regulatory stabilization, it is almost certain that future investors in the same sector will demand it. This makes it all the more important for *all* states to be aware of the consequences of stabilization: not only developing countries, but also capital-exporting countries, which would surely reject stabilization at home.[297]

State-investor contracts also include provisions on who should bear the risk of strikes and labour unrest. It should be noted that including strikes and other labour actions within "force majeure" or "material adverse government action" and change in law provisions may, depending upon how risk is allocated, create incentives for suppression of the freedoms of association, assembly and expression, and the rights to collective bargaining and to form trade unions under international law. This is a particularly significant risk factor for mega-infrastructure PPPs, including energy and transportation PPPs affecting indigenous peoples' lands, culture and livelihoods. The year 2017 was the deadliest year to be an environmental or human rights defender, according to Global Witness. Adequate consideration should be given before such provisions are included in state-investor contracts.

BOX 14

PPPs, Renegotiations and ISDS

Once finalized, state-investor contracts are prone to renegotiations and ISDS, both of which are prevalent in the infrastructure sectors. In one study of roughly 1,000 concession contracts awarded in the Latin America and Caribbean region between the mid-1980s and 2000, researchers found renegotiations occurred in 55 percent of transportation concessions and 74 percent of water and sanitation contracts. 57 percent of the transportation concession renegotiations were initiated by the investor alone (compared with 27 percent by the government alone and 16 percent by both the government and the operator). Even more startling, 66 percent of the water and sanitation contract renegotiations were initiated by the operator (compared with 24 percent by the government and 10 percent by both the government and the operator). Recent research findings suggest that 78 percent of all transport PPPs in Latin America have been renegotiated, with an average of four addenda per contract and a cost increase of US$ 30 million per addendum. The cost of a road linking Brazil and Peru rose from US$ 800 million to US$ 2.3 billion through 22 addenda. Such data prompts speculation that private firms secure contracts based on their commitments to provide a certain level of service to a certain number of users at a certain price, only to subsequently pursue renegotiation in order to reduce their obligations or increase the price charged to users. Contract changes can be fertile ground for corruption.

Despite repeated renegotiations, many PPPs end up in ISDS. A survey of ICSID cases shows that about 35 percent of cases are in the infrastructure sectors. According to UNCTAD, as at the end of 2016, electricity was the most common economic sector in terms of number of known ISDS cases (154) and share of PPPs giving rise to ISDS claims (90 percent), followed by water and sanitation (36 known ISDS cases, 80 percent PPP-related), construction (69 ISDS cases, 30 percent PPP-related), transportation (37 known ISDS cases, 60 percent PPP-related), and health.

The multiple ISDS cases lodged against Argentina in relation to water concession projects are well-known. The case of *Azurix Corp. v. The Argentine Republic* (ICSID Case No. ARB/01/12) illustrates the potentially problematic nature of certain investors' claims. In 2001, Azurix, an Enron subsidiary, brought a claim against Argentina under the United States of America-Argentina BIT over a dispute related to its water services contract from a water privatization deal to provide water and sewage treatment to 2.5 million people. When residents complained of foul odors coming from the water due to algae contamination of a reservoir, Azurix alleged the algae was the government's responsibility and demanded compensation for associated costs. The government argued that Azurix had a contractual responsibility to deliver clean drinking water. During the following year, residents experienced a series of water outages and were repeatedly over-billed by Azurix for water, resulting in government fines. Azurix withdrew from its contract in 2001, then launched its claim under the BIT, claiming that the government had expropriated its investment and denied the firm "fair and equitable treatment" by not allowing rate increases and not investing sufficient public funds in the water infrastructure. In its deliberations, the tribunal weighed whether public policies legitimately undertaken in the public interest could constitute BIT violations, but decided that "the issue is not so much whether the measure concerned is legitimate and serves a public purpose, but whether it is a measure that, being legitimate and serving a public purpose, should give rise to a compensation claim." The tribunal ruled that Argentina violated Azurix's right to "fair and equitable treatment," among other breaches, and ordered the government to pay US$ 165 million plus interest, in addition to covering almost all of the tribunal's costs.

For an illustration of an ISDS case in the energy sector, see *Vattenfall v. Germany* (note 211).

Source: Johnson, L (2018) "PPPs and ISDS: A Risky Combination", UNCTAD Investment Policy Hub blog, 24 May. Available at: http://investmentpolicyhub.unctad.org/Blog/Index/65, citing Guasch, J (2004) *Granting and Renegotiating Infrastructure Concessions: Doing it right*. The World Bank. Available at: http://documents.worldbank.org/curated/en/678041468765605224/Granting-and-renegotiating-infrastructure-concessions-doing-it-right. See also: Guasch, J, Laffont, J & Straub, S (2005) *Infrastructure Concessions in Latin America*, World Bank Policy Research Working Paper 3749. Available at: https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-3749 Bello (2017) "The Odebrecht scandal brings hope of reform", *The Economist*, 2 February. Available at: www.economist.com/the-americas/2017/02/02/the-odebrecht-scandal-brings-hope-of-reform UNCTAD Mapping of PPP-related ISDS cases, UNCTAD website. Available at: http://investmentpolicyhub.unctad.org/Pages/mapping-of-ppp-related-isds-cases Public Citizen (n.d.), "Case Studies: Investor-State Attacks on Public Interest Policies". Available at: www.citizen.org/sites/default/files/egregious-investor-state-attacks-case-studies_4.pdf

BOX 15

Principles for Responsible Contracts: Integrating the Management of Human Rights Risks into State-Investor Contract Negotiations – Guidance for Negotiators

The potentially harmful effects of stabilization clauses on human rights regulation led the former Special Representative of the Secretary General on Business and Human Rights, Professor John Ruggie, to propose a set of Principles on Responsible Contracts, which was submitted to the Human Rights Council in 2011 as a companion document to the UNGPs. The principles address the following issues:

1. Preparation and planning: The parties should be adequately prepared and have the capacity to properly address the human rights implications of projects during negotiations.
2. Managing potential adverse human rights impact: Responsibilities for preventing and mitigating human rights risks associated with the project and its activities should be clarified and agreed before the contract is finalized.
3. Project operating standards: The laws, regulations and standards governing the execution of the project should facilitate the prevention, mitigation and remedy of any negative human rights impact throughout the life cycle of the project.
4. Stabilization clauses: Contractual stabilization clauses, if used, should be carefully drafted so that any protections for investors against future changes in law do not interfere with the state's bona fide efforts to implement laws, regulations or policies, in a non-discriminatory manner, in order to meet its human rights obligations.
5. "Additional goods or service provision": If the contract envisages that investors will provide additional services beyond the scope of the project, this should be carried out in a manner compatible with the state's human rights obligations and the investor's human rights responsibilities.
6. Physical security for the project: Physical security for the project's facilities, installations or personnel should be provided in a manner consistent with human rights principles and standards.
7. Community engagement: The project should have an effective community engagement plan through its life cycle, starting at the earliest stages of the project.
8. Project monitoring and compliance: The state should be able to monitor the project's compliance with relevant standards to protect human rights, while providing the necessary assurances to business investors against arbitrary interference in the project.

9. Grievance mechanisms for harm to third parties: Individuals and communities that are affected by project activities, but not party to the contract, should have access to an effective non-judicial grievance mechanism.
10. Transparency/disclosure of contract terms: The contract's terms should be disclosed, and the scope and duration of exceptions to such disclosure should be based on compelling justifications.

Source: OHCHR, *Principles for Responsible Contracts: Integrating the Management of Human Rights Risks into State – Investor Contract Negotiations – Guide for Negotiators*, United Nations publication, Sales No. E.15.XIV.5.

5. Interactions between the Three Legal Regimes

So far, this chapter has explored the aspects of international, national and private or contractual regimes that cater to the rights of investors. Each regime suffers from varying degrees of lack of coordination and ad hoc rule making and administration. Each regime has its own shortcomings insofar as the recognition of human rights and environmental law are concerned. When the three regimes are taken together, investors have a multilevel playing field on which to pursue their interests and may take almost any dispute or disagreement with a host state (at local, regional, or national level) or branch of government directly to an international tribunal. This creates strong bargaining power vis-à-vis the host state and other stakeholders. Sustainability and human rights objectives, however, are often relegated to the sidelines.

The available evidence suggest that state-investor contracts are often used to enforce stabilization clauses, with potentially negative human rights impacts, and that the state's right to regulate in the public interest can be undermined by stabilization clauses.[298] IIAs and national investment laws often have a definition of "investor" that permits claims by direct or indirect shareholders, as discussed above, and this can lead to multiple parallel claims in ways that domestic legal systems rarely if ever permit. An investor may mount a claim under the relevant IIA and another under the state-investor contract, based on the same factual scenario,[299] thereby increasing its chance of winning.

States have been resisting these trends, pushing for interpretations of IIAs that protect their regulatory space. But even the most favourable decisions upholding the duty to protect and promote human rights could be reversed in the face of a stabilization clause. Improvements in the formulation or interpretation of IIAs, alone, will not be enough if national investment laws explicitly permit stabilization clauses for foreign investors, or the underlying project arrangement contains stabilization clauses. Ideally, stabilization clauses should not be used at all, and instead other instruments, such as political risk insurance,[300] should be considered.

As long as state-investor contracts remain confidential, a comprehensive analysis of their interactions with IIAs and domestic law will be impossible, and appropriate policy and legal reforms are more difficult to identify. For these reasons, and for the benefit of all stakeholders, state-investor contracts, especially those pertaining to the infrastructure sectors, should be made public, and the scope and duration of exceptions to disclosure should be based on compelling justifications.[301] States may also consider including provisions in IIAs that investors will not be protected by the IIA and may not bring ISDS cases to international tribunals without prior public disclosure of the state-investor contract on which the putative claim is based. A similar disclosure requirement should be enacted into national law, whether investment or PPP law or otherwise.

Whatever the challenges faced by many developing country governments in the present context, it is nothing compared to the potentially parlous situations of their populations. Governments represent their populations imperfectly, at best, and individuals have no rights under IIAs or national investment laws, and have no contractual relationship with investment projects. The realization of rights could be seriously and irreversibly compromised as a result of the operation of international, national and contractual investment regimes, at the same time as human rights and environmental protections are being weakened in the race to attract foreign investment. There is no recommendation more important, for the sake of the sustainability of infrastructure financing and investment, than that national human rights and environmental laws should be strengthened in line with the requirements of international law.

6. Looking Ahead

Even just a few years ago, piecemeal IIA reforms and incremental improvements of the ISDS regime seemed the only options available to address the negative aspects of IIAs described in this chapter. Today, the growing awareness of the fundamental shortcomings in the international investment regime appears to be generating new momentum for deeper structural changes. However, it is too early to predict the shape and likely timeframe of needed reforms. With the predicted new wave of institutional investment in infrastructure, more ISDS will be inevitable, including claims arising from interests in financial products relating to an underlying investment in physical infrastructure assets.[302] Under the current circumstances, while strongly supporting the case for fundamental change, this publication focuses in the short- to medium-term horizon on a number of practical human rights recommendations, which, if implemented, could help to address a number of critical risk factors and strengthen policy coherence and sustainability in conjunction with mega-infrastructure investment.

Firstly, national policy-makers, global and regional institutions and others promoting foreign investment in infrastructure should do so with a greater awareness of the human rights and environmental dimensions of sustainability and risk management. Legal and policy reforms should be driven by a deeper awareness of the potential risks of ISDS, including budgetary impacts of large damages awards, regulatory chill, and consequent costs in terms of human rights and sustainability. Increased policy coherence is needed among relevant global institutions as well as state agencies in charge of investment promotion, environmental protection, labour, and other relevant social sectors. Treaty-making (and amending) processes, regulatory impact assessment and cost-benefit analyses should explicitly take into account human rights risks, vulnerabilities and costs, and engage all relevant agencies, parliaments, CSOs and affected communities. By way of example, Australia's Productivity Commission, in its 2015 annual report on trade policy, recommended a number of improvements to cost-benefit analysis for trade agreements, including paying greater attention to regulatory chill and to future contingent liabilities from ISDS.[303]

Given the human rights and environmental risks associated with IIAs, states should ensure that investors' responsibility to respect human rights is consistently included in new and amended IIAs. The Nigeria-Morocco BIT (2016),[304] for example, states: "Investors and investments shall respect human rights in the host state." This responsibility should be without prejudice to, and should operate in parallel with, the state's duties to respect, protect and fulfil human rights. In this respect, states should be guided by the UNGPs, the Principles for Responsible Contracts (Box 15), and the United Nations' guiding principles on human rights impact assessments of trade and investment agreements. When human rights and environmental protections are included, these provisions should not be subject to the caveat "consistent with other provisions of this treaty". To the contrary, if investors do not comply with human rights, labour and environmental obligations, treaty protection should be denied. Similar provisions should be included in national investment laws and state-investor contracts.

Insofar as existing IIAs are concerned, states should consider clarifying, either unilaterally or, if possible, by issuing joint interpretations with treaty parties, that treaties are to be interpreted in a way that gives effect to human rights obligations and that the investor's legitimate expectations require that the investor understand a state's international and domestic legal and regulatory obligations as they evolve. Investors, as part of their continuous and ongoing HRDD, should take note of such state obligations, and understand the human rights implications of the state-investor (and related) contracts and draft appropriate human rights undertakings.[305] Other options for reform of existing IIAs, drawing from UNCTAD's work, are summarized above (Box 13).

State-investor contracts should maximize economic, environmental and social co-benefits of projects and reflect a fairer allocation of environmental, social/human and climate rights risk management responsibilities. Sustainability risks, especially climate change risks, are frequently complex and costly, and may need to be shared among parties. Contractual models should address the human rights risks, as well as opportunities, inherent in state-investor contracts. Stabilization clauses should be limited to fiscal laws only.

Finally, states should resist pressures to reform national investment laws to incentivize investors at the expense of the human rights of their populations. National laws should be strengthened in line with international human rights and environmental law, and MDBs should ensure that their financial support is not conditioned on abridging human rights and environmental protections in favour of improving the investment climate. Greater transparency of the international-national-contractual investment regime will be a critical enabler for sustainable infrastructure: States should mandate disclosure of all state-investor contracts, especially those pertaining to the infrastructure sectors, and should consider amending IIAs to provide that investors may not pursue claims under ISDS or otherwise without prior public disclosure of the state-investor contract on which the putative claim is based.

Key Messages in Chapter IV

- The impact of infrastructure investment on the lives and livelihoods of host-country populations depends not only on project design and implementation decisions, but also financing and investment decisions, and the allocation of rights and duties between investors, contracting authorities and the host-country population or segments of it. The regulatory environment for cross-border infrastructure investment can be analysed at three levels: (1) international investment agreements (IIAs) as a branch of international law; (2) national law and (3) state-investor contracts.
- The three levels of investor protection enable investors to take almost any dispute with a host state directly to an international tribunal with the prospect of large financial gains. The current regime is perpetuating a parallel system which disproportionately benefits investors, to the potential detriment of human rights and environmental protection.
- IIAs are deficient in numerous respects and offer no recourse for people adversely affected by investment activities. Stabilization clauses and investor-state dispute settlement (ISDS) have had serious negative human rights and environmental impacts in practice, and on the state's right (and duty) to regulate in the public interest. Most IIA reform proposals advanced so far leave structural shortcomings and underlying asymmetries of power untouched.
- State-investor contracts typically do not acknowledge the human rights obligations of parties and their potential to enhance the positive benefits of investment. States have been incentivized to weaken national social and environmental frameworks in order to attract investment. Perverse incentives within the investment law regime and ISDS system may inadvertently trigger repression, victimization and criminalization of environmental and human rights defenders.

- Whether the IIA regime is reformed or replaced, states should ensure that investment treaty-making (and amending) processes, national investment laws and investor-state contracts are informed by ex ante- and ex post-human rights impact assessments. The responsibility of investors to respect human rights should explicitly be reflected in investment treaties, laws and contracts. Stabilization clauses should be avoided as far as possible. If used, the latter clauses should be narrowly defined and should not undermine the state's duty and right to regulate in the public interest, nor investors' responsibilities to respect human rights. Alternatives to ISDS should be explored. Investor-state contracts should be publicly disclosed, subject to limited exceptions based on compelling justifications.

V. Infrastructure Finance: The Shifting Landscape

The goal of finance is "[...] to put resources to productive use, to transform maturity, thereby contributing to the good of economic stability and full employment – and ultimately to the well-being of people. In other words, [the true purpose of finance] is to enrich society."

Christine Lagarde, Managing Director of the International Monetary Fund[306]

1. Introduction

Having considered the human rights risk factors associated with the legal framework for international infrastructure investment, this chapter focuses on potential human rights impacts of infrastructure finance, with a particular focus on the much-anticipated transformation of infrastructure into an asset class. While aspirations for institutional investor participation in mega-infrastructure investment are often overstated, particularly in low-income countries, fragile states, and weak-governance environments, the consequences of poor financing decisions can nevertheless have systemic impacts on the economy and society.

This chapter first looks at the sources of global commitments to finance infrastructure, with a particular focus on the potential roles and influence of institutional investors and the MDBs. It then analyses the evolving trend toward private financing in the infrastructure sector and assesses likely human rights impacts at macro-, meso- and micro-levels. The chapter concludes by underscoring the imperative of avoiding and managing such impacts through HRDD by all financing actors.

2. International Commitments to Finance Infrastructure

The 2015 Financing for Development Conference in Addis Ababa set forth a comprehensive vision of finance and investment for sustainable development and included commitments for increased investment in infrastructure. According to the Addis Agenda, while domestic public resources will continue to be critical for national infrastructure development, they need to be complemented by stable private international capital flows. Foreign direct investment is often concentrated in just a few sectors, such as national resource extraction, and often bypasses countries most in need. Moreover, international capital flows are often oriented toward short-term returns. The Addis Agenda noted that both existing and new sources of financing would be needed to address this investment gap.

As noted in Chapter I, the global infrastructure financing gap is alarmingly large. Infrastructure financing needs have been estimated at US$ 90 trillion to the year 2030, with an annual financing gap in developing countries of up to US$ 1.5 trillion.[307]

States and regional and international organizations have devised a range of plans for increased infrastructure investment to help meet the SDGs. Can the world mobilize the financing needed to help meet the infrastructure needs of current and future generations while at the same time moving to more sustainable development pathways? The answer depends on the extent to which financing actors address the fiscal, economic, environmental and human rights risks inherent in finance, and pursue "sustainable, accessible, affordable and resilient quality infrastructure" as suggested in the Addis Agenda.

3. The Role of MDBs in Leveraging Private Finance

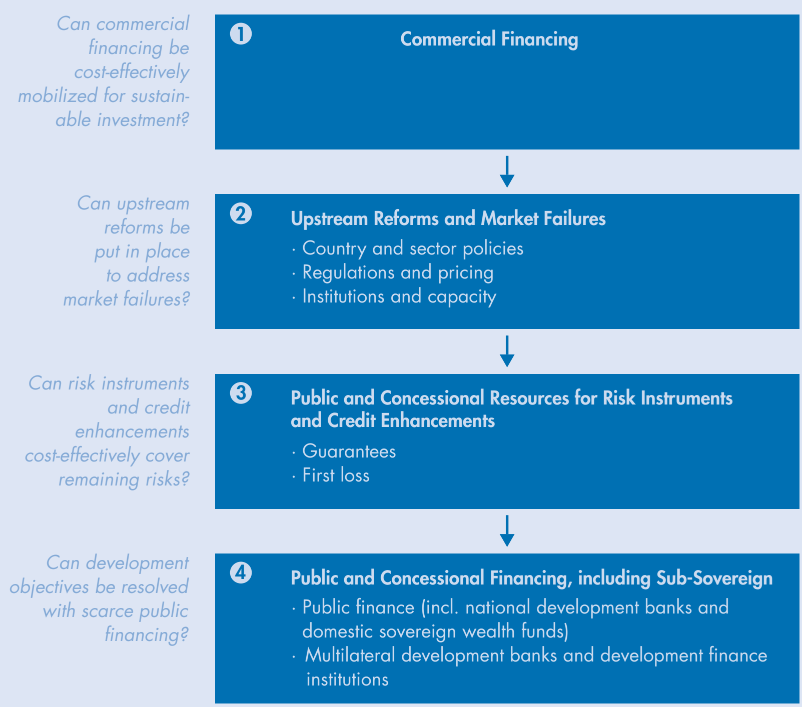
Private participation in infrastructure can take several forms. Broadly speaking, infrastructure can be developed with government funding that leverages the private sector (for example through design-build-operate schemes), corporate (or on-balance-sheet) financing, or project finance.[308] In the case of corporate finance, the infrastructure asset is built with the equity of the private operator, whereas project finance involves a mix of debt and equity (a commonly used debt-to-equity ratio is around 80:20, though the ratio varies from project to project and could be as low as 60:40 or as high as 90:10). Debt obligations are often secured with real assets and are discharged ahead of equity.

The 2008 global financial crisis led to tighter financial regulation under the Basel III Accord and corresponding national regulations, and to risk aversion in the banking sector. Consequently, the available pool of project finance money has shrunk and other sources of financing have been sought in order to fill the vacuum. Attention has shifted to large sources of long-term finance, including pension funds, insurance companies and sovereign wealth funds (SWFs, which are publicly owned but operate mostly on commercial, rather than political, basis) – collectively, institutional investors – which have an estimated total value of US$ 70 trillion.[309] Currently, institutional investors have very little exposure to infrastructure investment in emerging markets. However, according to the AIIB and IFC, diverting just a small percentage of institutional investor assets would be enough to meet the infrastructure needs of emerging markets.[310] Although institutional investors can mobilize both debt and equity investments, the ability to make valuable long-term equity investments in infrastructure sets them apart from banks.

International and regional development and financial organizations have been actively supporting infrastructure investment in recent years, as was discussed in Chapter II. The G20 is promoting infrastructure investment directly and through MDBs, and the Argentinian G20's Infrastructure Working Group had an explicit objective to promote infrastructure as an asset class: "We [the G20] will seek to develop infrastructure as an asset class by improving project preparation, addressing data gaps on their financial performance, improving the instruments designed to fund infrastructure projects, and seeking greater homogeneity among them."[311] The Chief Executive Officer of the Global Infrastructure Hub, a body established by the G20 to promote infrastructure investment, has characterized the rush to raise financing as an "infrastructure arms race."[312]

Under pressure from shareholders, in 2017, the MDBs launched the Maximizing Finance for Development (MFD) or "cascade" initiative, which aims to increase private finance by 25–35 percent within three years[313] (see Figure 2).

Fig. 2: Maximizing Finance for Development



Source: Adapted from Levy (2017). Catalyzing Private Investment in Infrastructure in Emerging Markets and Developing Economies. World Bank Group.

This initiative stems from the "billions to trillions" campaign, which moves the nature and scale of the global financing ambition from "'billions' in ODA (Official Development Assistance) to 'trillions' in investments of all kinds, public and private, national and global, in both capital and capacity, in order to help countries meet the SDGs."[314]

Under MFD, private investors are offered upstream improvements in the business environment, such as regulatory reform, and in the event that this is insufficient, various "derisking" instruments, such as credit enhancement (a way to reduce credit risk or default risk of a loan, such as guarantees, and first-loss coverage, where investors' loss up to a certain amount will be covered[315]), blended finance (defined by the OECD[316] as the strategic use of development finance for the mobilization of additional commercial finance toward the SDGs in developing countries) and political risk insurance. At the time of writing, however, it was not clear what kind of public interest, sustainability and human rights screening processes would be applied ex ante to determine whether private investment would help to fulfil the SDGs, while respecting countries' environmental and human rights obligations, or how SDG progress and environmental, social and human rights impacts would be measured. The MDB's environmental and social safeguard policies should apply to the underlying projects; however, these policies are of differing strength and scope and generally operate *downstream* in the project process; upstream interventions to reform the business environment may be exempt from safeguards, or subject to different rules.

The MFD campaign has captured the attention of policy-makers and raised expectations for new private financing of infrastructure. However, the logic and promise of the MFD approach are not entirely self-evident. While private finance is the default scenario and public finance is the last resort under MFD, the reverse logic (a "reverse cascade," with public finance as the default option) may well be more appropriate when country and sector characteristics are factored in. This may be the case, for example, when public finance can be obtained more cheaply (for example, through government bonds), when universal service obligations cannot otherwise be met, or when particular infrastructure, such as schools and hospitals, generate insufficient income streams. Further, and in any event, the maximization of private finance does not necessarily equate to the *optimization* of finance for development.[317]

To date, it is not clear how the MFD approach will be reconciled with the blended finance principles under the Addis Agenda, identified by the 2017 Inter-Agency Task Force for Financing for Development (see Box 16), or the new OECD Principles on blended financing.[318] At a more basic level, financing for infrastructure provides upfront capital, but it does not address the problem of where to find reliable and responsible sources of "funding" for infrastructure on an ongoing basis,[319] for such things as operating costs, capital improvements, repairs and maintenance, and debt interest and principal payments. Private financing, while providing investment capital at a price, does not change the fundamentals whereby customers must pay for the investments through tariffs and other charges, and taxpayers pay for the remaining balance by way of subsidies. While this is the case with both public and private provision of infrastructure, any additional costs from private provision of infrastructure must be shouldered by consumers and the general public.

Private financing may also raise sustainability questions. In order to attract investment, countries may suspend or weaken laws that protect people and the environment,

BOX 16

Principles for Blended Finance and Public-Private Partnerships Extracted from the Addis Ababa Action Agenda

- Careful consideration given to the structure and use of blended finance instruments (para. 48)
- Sharing risks and reward fairly (para. 48)
- Meeting social and environmental standards (para. 48)
- Alignment with sustainable development, to ensure sustainable, accessible, affordable and resilient quality infrastructure (para. 48)
- Ensuring clear accountability mechanisms (para. 48)
- Ensuring transparency, including in public procurement frameworks and contracts (paras. 30, 25 and 26)
- Ensuring participation, particularly of local communities in decisions affecting their communities (para. 34)
- Ensuring effective management, accounting, and budgeting for contingent liabilities and debt sustainability (paras. 95 and 48)
- Alignment with national priorities and relevant principles of effective development cooperation (para. 58)

sometimes encouraged by policy lending from MDBs (see discussion in Chapter IV). Moreover, as MDBs focus on facilitating private investment (rather than financing projects directly), their already small share in projects may decrease further, they may exit projects earlier, and their capital may revolve faster. These factors may reduce the leverage and impact of MDB social and environmental safeguard policies. Countries are responsible for safeguards (or the country systems that are meant to be the close equivalents to safeguards), yet they cannot always be expected to ensure safeguard compliance after the MDB's departure and during the operation of the project, which could last for decades. After an MDB exits the project, the accountability mechanisms of MDBs cannot respond to public complaints. The safeguard policies, public information policies and accountability mechanisms of newer MDBs appear to be weaker, in many respects, than those of the established MDBs.[320] And institutional investors may apply few or no safeguards whatsoever, or if they do, their implementation may be superficial.

Meanwhile, regions are also pursuing their own schemes to motivate institutional investors. Notable among these is Africa's 5% Agenda initiative by the NEPAD Agency Continental Business Network, launched five years after the African Union Summit announced PIDA. Declaring that Africa must take "leadership in financing its infrastructure projects," the initiative calls on institutional investors to increase their investment allocations in African infrastructure to five percent of their portfolios. The NEPAD leaders are conscious of the enormous regulatory and institutional challenges involved in this initiative; however, the full implications of this initiative are not yet clear, including whether existing regulations for safeguarding assets to fund people's future retirement might be affected and if so how.[321]

4. Infrastructure as an Asset Class for Institutional Investors

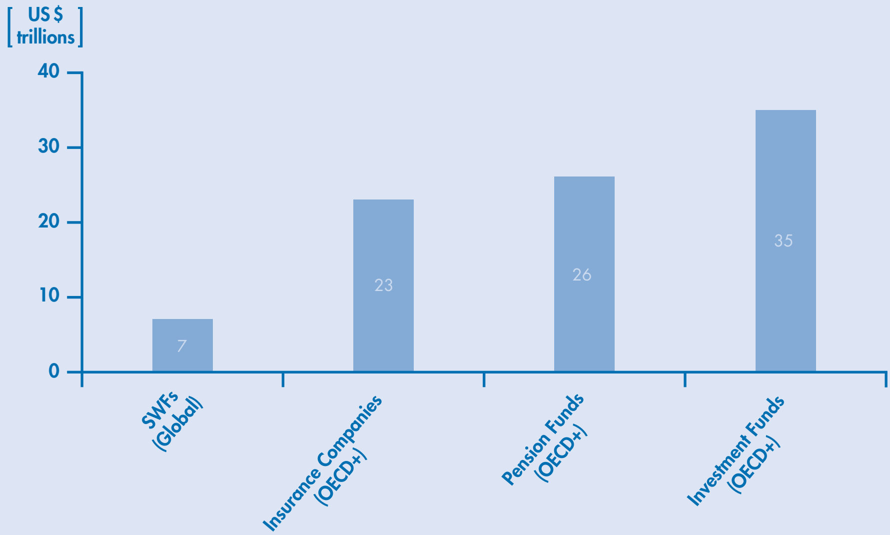
Institutional investors have significant assets that can be invested and generally retain their investments for long-term rewards. However, as discussed below, different types of institutional investors have different beneficiaries, liquidity needs, risk tolerances and regulatory restrictions. They may be managed by asset managers whose fee structures spur short-term investing. One thing institutional investors have in common is that they allocate their assets in various "asset classes." Each asset class is a group of assets that exhibits similar characteristics, behaves similarly in the marketplace, and is subject to the same laws and regulations. The main asset classes are equities, or stocks; fixed income, or bonds; and cash equivalents, or money market instruments, though other niche asset classes also exist.

In the 2000s, the dot com bubble led to serious funding and solvency problems for pension funds. The investment industry suggested different asset classes, including hedge funds, private equity, infrastructure investments and other niche products, which found receptivity among institutional investors.[322] The global financial crisis and European sovereign debt crisis between 2009 and 2012 led central banks to inject massive liquidity into the market, resulting in depressed interest rates, which generated further impetus for infrastructure as an asset class. Over the last several decades, the share of infrastructure-related enterprises held by these investors rose, though overall the share remains quite small. The G20 and MDBs are seeking to increase this share dramatically.

Institutional investors already have access to direct and indirect investment options in infrastructure through listed and unlisted funds (see Figure 3). Unlisted funds usually take the form of limited partnerships, some of which can be very large, in excess of US$ 1 billion. These may be closed-ended arrangements with a typical term of 10 years, meaning they are illiquid investments that cannot be cashed out until the end of the term. In contrast, open-ended funds, by definition, can last ad infinitum. Listed infrastructure funds can take complex forms, and they may own infrastructure assets or securities in other infrastructure assets or funds. Listed funds may own debt, equity or hybrid securities as well as derivatives. Each of these investment channels aims to allow quick and easy access to investments in infrastructure, marketed as a distinct asset class.

The term "infrastructure as an asset class" suggests a degree of uniformity in the underlying asset and a sense of consistency with regard to the establishment and operation of infrastructure-related enterprises. The very purpose of the G20 Roadmap

Fig. 3: Institutional Investors' Total Assets under Management



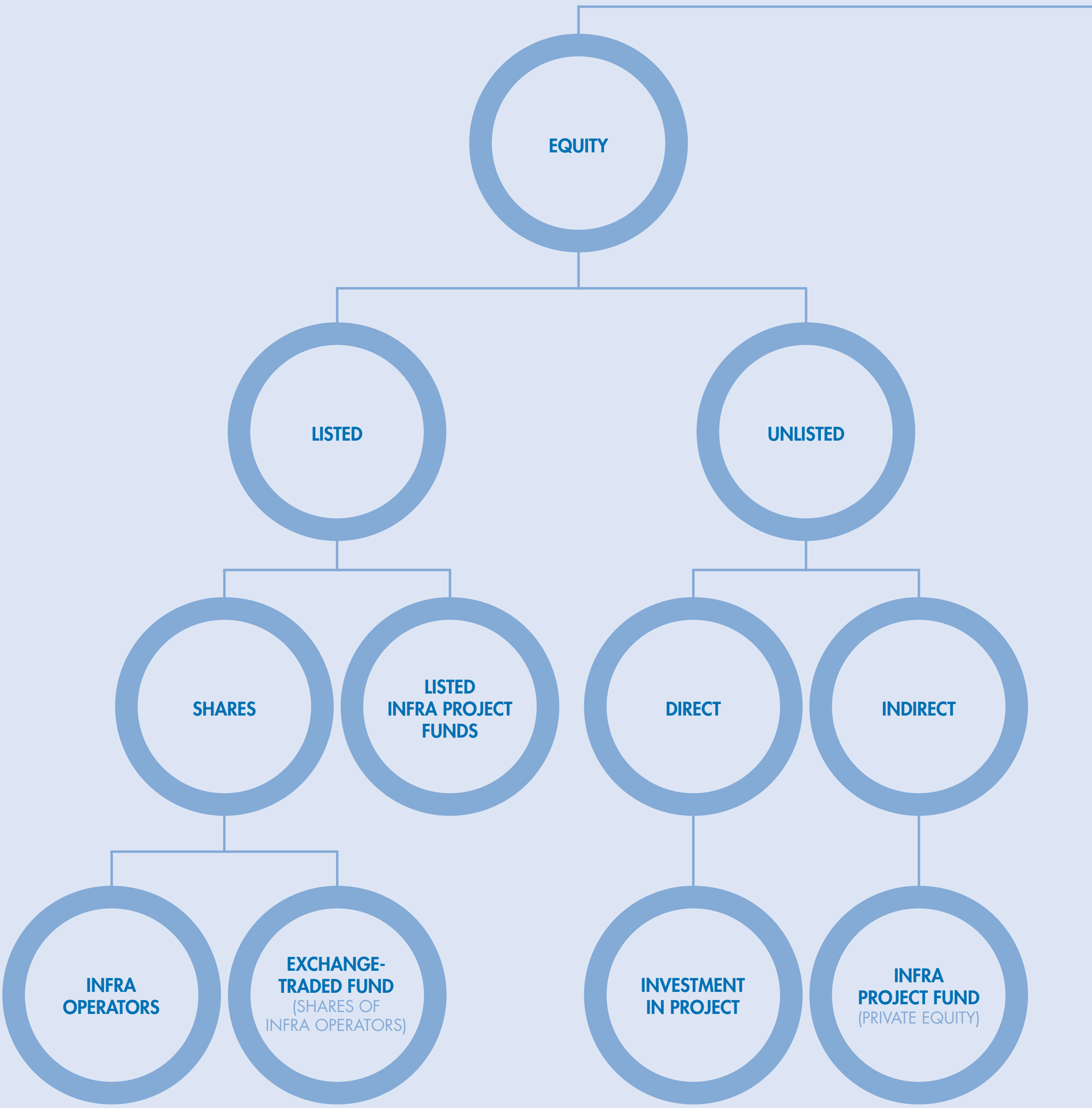
Source: Levy (2017).

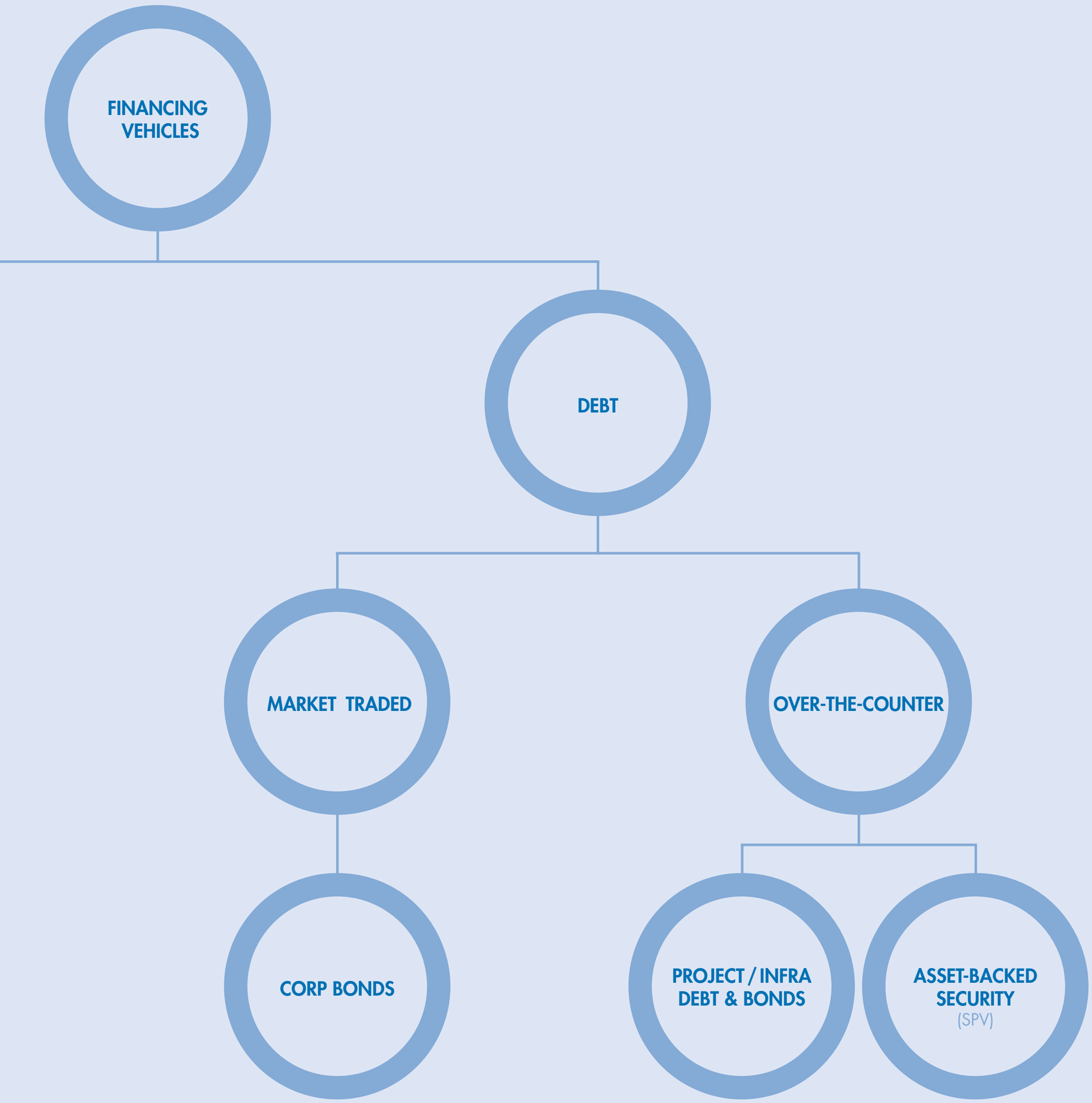
to Infrastructure as an Asset Class is to make investment in infrastructure as easy as possible by standardizing various aspects of infrastructure development and investment. However, in practice, infrastructure enterprises vary widely depending on the service that is delivered and how it is delivered. There is a risk that market expectations for a uniform asset class may condition or prescribe the way in which infrastructure products and services should be generated and delivered, regardless of sector specifics and actual practice. This also does not align with the idea that infrastructure assets are public assets that must confer public as well as private benefits, while avoiding harm to people and the environment, and that institutional investors holding infrastructure assets, directly or even indirectly, are custodians of such public assets.

Standardizing investment in infrastructure may have merit if it creates tangible benefits. Securitization, which is a technique used to bundle similar assets and sell portions of it as securities, may help encourage efficient use of capital, lower borrowing costs for both companies and consumers, and spread risks.[323] This type of investment may be intuitively attractive to many investors; however, bundled products can conceal multiple financial and non-financial risks. By definition, the entities in which these investment channels invest are one or more steps removed from the underlying infrastructure assets. It may not be clear (even to insiders) which underlying assets are being financed, which entity owns them, and who bears what risks, including who is responsible for environmental and social risks in the event of a default. Investors should exercise their own due

A woman installing solar panels on a roof in Bhutan

Fig. 4: Different Channels for Infrastructure Investment





Source: Raffaele Della Croce and Stefano Gatti (2014) "Financing infrastructure – International trends", 2014 OECD J. Financ. Mark. Trends, 123–138, 125–126.

diligence before investing in portions of inherently heterogeneous infrastructure assets, some of which may be riskier than others, including, with respect to human rights risks.

Some suggest that this kind of standardization could be scaled up to help "commoditize" infrastructure, that is, make tradable commodities out of infrastructure assets that could be sold off as homogeneous, generic, and indistinguishable from one another, which infrastructure is definitely not by nature. The CEO of the Global Infrastructure Hub has stated: "We want to commoditize infrastructure and make it an attractive asset class for the asset-hungry private sector. We know it can be done."[324] But the more important question, surely, is whether this *should* be done. While not a direct parallel, the large-scale commoditization of infrastructure brings to mind the collapse of mortgage-backed collateralized debt obligations in the United States of America that triggered the 2008 global financial crisis.

4.1. Pension Funds

A pension fund[325] is a retirement plan that requires an employer to make contributions into a pool of funds set aside for a worker's future benefit. The funds are invested on the employee's behalf, and the earnings on the investments generate income to pay the retired worker. This is known as a "defined benefit" or DB plan. Some pension plans may allow a worker to contribute part of wages into an account for his or her sole benefit to help fund retirement, and the employer may also match a portion of the worker's annual contributions up to a specific percentage or amount. This is known as a "defined contribution" or DC plan and is considered the plan of the future. Because DC plans give workers investment options – and responsibility to make basic investment choices – workers as investors may have a voice in future infrastructure investment, depending on available options. At the same time, DC plans shift the investment risk from the level of the collective to that of the individual. Considering the longer time horizon over which the shift toward DC plans will occur, this section's analysis is based on the DB model.

Pension funds are estimated to hold US$ 26 trillion of assets globally.[326] In 2016, the 300 largest pension funds collectively had US$ 15.7 trillion assets under management.[327] Some of the largest pension funds in the world are public-sector plans. With assets worth US$ 1.14 trillion, the world's largest pension fund is currently Japan's Government Pension Investment Fund (GPIF). Most pension funds around the world generate very low or negative returns, potentially threatening their ability to meet their obligations to pensioners.[328] In order to generate higher returns, many pension funds are redistributing their portfolios of assets across a broader range of countries and types of assets, including infrastructure. The establishment of a dedicated asset class in infrastructure is intended to facilitate this purpose.

Pension funds have been investing directly in infrastructure for some time.[329] For example, Australian pension funds allocate an average of five percent of portfolio assets to infrastructure, while certain Canadian pension plans have committed as much as 15 percent of total assets to infrastructure.[330] These organizations have relatively well-developed capacities to manage direct investments of this kind, but this is the exception to the rule. Most other pension funds invest indirectly through listed or unlisted funds. It has been estimated that less than one percent of pension funds worldwide are invested in infrastructure projects, excluding indirect investment in infrastructure via the equity of listed utility companies and infrastructure companies.[331] The barriers to investment are considerable, as we will shortly see.

Considering that pension funds represent the interests of multi-generational beneficiaries, and that their investment horizon is a long one, one might assume that core attributes of sustainability like job security, labour standards and working conditions, environmental health and conservation of natural resources would be taken into account in investment decisions. However, this is not always the case. For instance, in the United States of America, pension fund trustees' fiduciary duties are narrowly interpreted, so that maximizing return on investment is the principal criterion governing investment decisions. While the culture of pension fund managers seems to be shifting gradually, and ESG and human rights factors are being considered more frequently (many pension funds are signatories to the PRI, for example), as a legal matter, trustees in certain jurisdictions still have little leeway for making decisions based on social or environmental sustainability principles.

4.2. Insurance Companies

Insurance companies invest insurance premiums so they have funds to pay out claims. Insurance companies' funds under management amount to US$ 23 trillion globally.[332] The largest insurance company in the world is China's Ping An Insurance Group. It is estimated that insurance companies worldwide currently allocate (presumably directly) only two percent or so of their assets under management to infrastructure investments.[333] Prudential and accounting regulations are among the factors preventing insurance companies from taking up equity in infrastructure companies.[334]

The insurance sector covers many social and environmental risks, including with respect to climate change, extreme weather events and natural disasters, which directly serve the needs of society and protect human lives and livelihoods.[335] As a result, the sector is increasingly attuned to sustainability and effects of climate change. This sector's ability to harness data and take financial decisions could enable it to make a unique contribution to infrastructure financing. Some of the world's largest insurance companies are signatories to the UNEP FI's Principles for Sustainable Insurance initiative, which serves as evidence of the relatively strong concern for sustainability in this sector.[336]

4.3. Sovereign Wealth Funds

An SWF is a state-owned investment fund that is commonly established from balance of payment surpluses, official foreign currency operations, the proceeds of privatizations, government transfer payments, fiscal surpluses and/or receipts resulting from resource exports.[337] There are currently 65 of these funds, including state-level funds in the

United States of America.[338] Table 2 lists the world's top 10 SWFs. Some SWFs have an explicit mandate to help develop local economies and infrastructure investment.

In the aggregate, SWFs have about US$ 7 trillion under management.[339] The average portfolio size of SWFs is US$ 116 billion and the proportion of SWFs investing in infrastructure has increased steadily from 57 percent in 2014 to 62 percent in 2016,[340] some through direct holdings, while nearly half of them combine direct and unlisted fund investment.

Table 2: Sovereign Wealth Funds Investing in Infrastructure

Investor	Location	Assets under Management ($ mn)	Geographic Focus	Route(s) to Market
Abu Dhabi Investment Authority	United Arab Emirates	773,000	Global	Direct, Listed, Unlisted
China Investment Corporation	China	746,730	Global	Direct, Unlisted
State Administration of Foreign Exchance	China	599,510	Europe	Direct
Kuwait Investment Authority	Kuwait	592,000	Global	Direct, Listed, Unlisted
GIC	Singapore	344,000	Global	Direct, Listed, Unlisted
National Social Security Fund – China	China	274,595	Greater China	Direct, Unlisted
Qatar Investment Authority	Qatar	256,000	Global	Direct, Listed, Unlisted
Temasek Holdings	Singapore	189,797	Global	Direct, Listed, Unlisted
Abu Dhabi Investment Council	United Arab Emirates	110,000	Global	Direct, Unlisted
Future Fund	Australia	85,598	Global	Direct, Listed, Unlisted

Source: Adapted from Sovereign Wealth Fund Institute.

In response to concerns about investment decisions being driven by national (rather than commercial) interests, a number of SWFs have established the International Forum on Sovereign Wealth Funds and signed a set of voluntary guidelines called the Santiago Principles which, among other things, commits signatory funds to operate on a commercial basis.[341] The objectives of the principles are to maintain a stable global financial system and free flow of capital and investment, encourage compliance with regulatory and disclosure requirements, encourage investment on the basis of economic and financial risk and return-related considerations, and promote transparent and sound governance with adequate operational controls, risk management procedures and accountability. 33 of the 65 SWFs are signatories to the principles today. The principles are entirely silent on sustainable development, ESG due diligence and responsible business conduct, though they do mention that SWFs should publicly disclose the basis for excluding certain investments, including in response to legally binding international sanctions and social, ethical, or religious considerations (e.g., Kuwait, New Zealand, and Norway).[342] Given the public nature of SWFs, some look to SWFs to take a more active role in financing infrastructure, analogous to the role of MDBs, or as part of private finance.

4.4. Private Equity

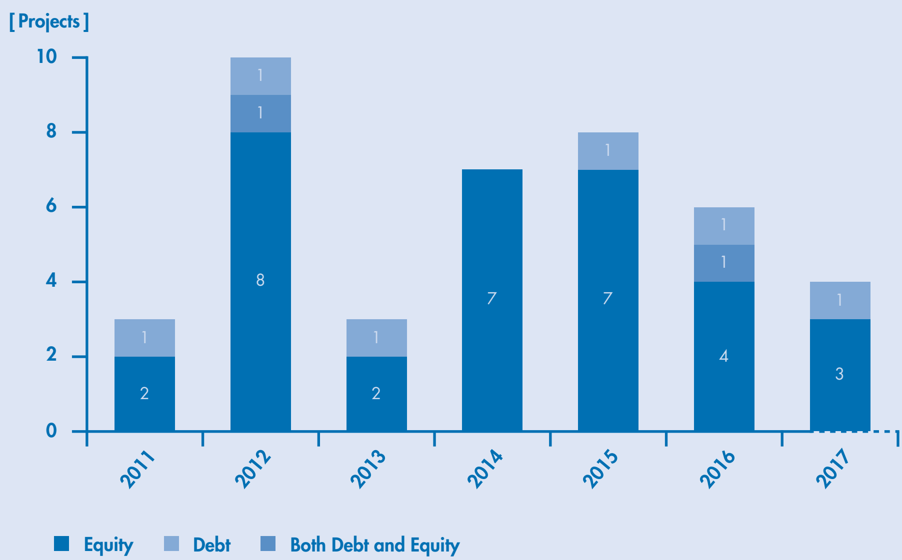
The term "private equity" (PE) refers to the equity of private companies (companies not listed on the public stock exchange) held by investors and funds. Generally, PE firms acquire companies with the stated aim of improving their financial performance and prospects, thereafter selling them or cashing out by taking the company public. These firms are not long-term institutional investors, but one of the arguments made in favour of PE ownership in infrastructure is that it enables a longer investment horizon (e.g., three to five years) than investment in a typical publicly listed company. And because institutional investors are increasingly investing in private equity funds, which in turn invest in infrastructure, they are a relevant source of financing for present purposes.

Investment funds in OECD countries are estimated to have about US$ 35 trillion worth of assets under management.[343] It is not clear what proportion of this investment is in infrastructure, though the proportion is clearly rising in developed countries. The specialist infrastructure funds reportedly have about US$ 418 billion of debt and equity invested in infrastructure in 2017.[344] With only a few direct owners with significant influence over the investee company, private equity financing can sometimes help to drive good ESG and human rights performance, as compared with a publicly listed company. But PE firms are also known to cut costs and retrench workers in acquired companies, and raise tariffs and other fees for services. Many large PE firms are signatories to the Principles for Responsible Investment (PRI) and have sought to incorporate responsible investment requirements into private equity fund terms,[345] though it is not clear what the actual state of practice is in that regard. PRI has a workstream on private debt and equity investment in infrastructure, both direct and via funds, and also carries out analysis on human rights aspects of private equity,[346] including how to embed HRDD in investee operations from acquisition through to exit. This approach not only helps with risk reduction, cost reduction (such as reducing workforce turnover), and creating value by enhancing the company brand, but it may also help to generate a significant premium upon exit.

4.5. Current State of Play

The demand and supply dynamics and the push and pull of the G20, international and regional organizations, development finance community and developing countries are expected to generate significant additional financing for infrastructure. But how much money will come in remains to be seen: Private investment in infrastructure has fallen away since the high-water mark of 2012 (see Figure 5a).[347] Moreover, according to the World Bank, institutional investors account for a mere 0.67 percent of total private participation in infrastructure investment in emerging and developing-country markets (both debt and equity).[348] After advocating for well over a decade for institutional investors to enter the infrastructure market, the OECD has come to realize that "despite increasing interest, total amounts of investment in infrastructure remain relatively limited, considering the large pool of available capital. This puzzle of under-investment in the face of capital availability suggests that other factors are likely holding investor returns low in many infrastructure markets."[349]

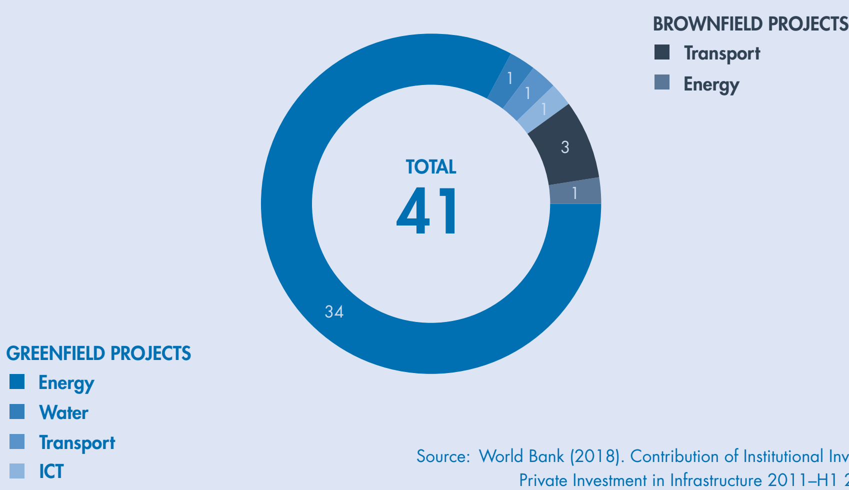
Fig. 5 a: Number of Projects with Private Participation in Emerging Markets and Developing Economies that Received Institutional Investor Contributions



Source: World Bank (2018). Contribution of Institutional Investors Private Investment in Infrastructure 2011–H1 2017.

Barriers and disincentives for institutional investors include: a heavier emphasis on equity by institutional investors in the face of a predominantly debt-based financing model in the infrastructure sectors, currency risks, under-developed national financial and capital markets, a lack of an explicit mandate at the pension fund level, lack of transparency of risks and returns, inadequate governance structures and expertise to support such investments, risk aversion and regulatory hurdles at the national level. Insurers and pension funds have investment limits and liquidity restrictions (in many cases, up to five percent of assets), and as mentioned earlier, insurance companies are often constrained by prudential and accounting regulations.[350] Pension funds have other major regulatory obstacles which limit their investment in infrastructure, as Table 3 shows.

Fig. 5 b: Number of Projects with Private Participation in Emerging Markets and Developing Economies that Received Institutional Investor Contributions



Source: World Bank (2018). Contribution of Institutional Investors Private Investment in Infrastructure 2011–H1 2017.

It has been suggested that the MDBs should carry out more "derisking" for infrastructure investment, in order to remove some of these obstacles. However, certain derisking tools, such as guarantees, have been available to MDBs for a long time, and yet they represent a very small part of the MDBs' portfolio.[351] Overall, it is not clear that more financial risk-taking by MDBs alone would fundamentally alter investor behaviour in this context.

Others suggest that financial regulations are acting as a barrier to investment. Some of these regulations are part of a package of post-2008 international financial standards designed to enhance the stability of financial institutions and systems. When the Basel III Accord (a set of prudential banking regulations) was initially proposed by the Basel Committee on Banking Supervision in the year 2010, questions were raised as to whether the tighter capital adequacy regulations would undermine the ability of banks to lend for sustainable development purposes,[352]

Table 3: Barriers to Pension Funds Investing in Infrastructure

Investment Categories	Barriers to Investment
1. The Investment Opportunities	· Lack of political commitment over the long term · Regulatory instability · Fragmentation of the market among different levels of government · No clarity on investment opportunities · High bidding costs · Infrastructure investment opportunities in the market are perceived as too risky
2. The Investor Capability	· Lack of expertise in the infrastructure sector · Problem of scale of pension funds · Misalignment of interests between infrastructure funds and pension funds · Regulatory barriers · Short termism of investors
3. The Conditions for Investment	· Negative perception of the infrastructure value · Lack of transparency in the infrastructure sector · Shortage of data on infrastructure projects

Source: Adapted from Della Croce (2011), "Pension Funds Investment in Infrastructure", *OECD Working Papers on Finance, Insurance and Private Pensions* No. 13.

act as a roadblock to climate finance and the implementation of the Paris Climate Agreement and the SDGs, or inadvertently cause negative impacts on human rights.[353] Notwithstanding these concerns, states, investors and international and regional financing institutions should exercise caution when evaluating regulatory barriers to private investment. Prudential regulations should not be weakened or removed without a proper assessment of the possible human rights and sustainability consequences, mitigation measures, and policy responses to counter potentially adverse impacts on people and the environment.

The complex constraints to investment will not easily be transformed by the MFD or initiatives to promote infrastructure as an asset class. As one observer has put it: "'Billions to trillions' is not happening anytime soon – at least not in a timeframe that is useful for the people in fragile, low-income countries without roads, power, and potable water. Billions to trillions is at best an aspiration, and aspirations are not strategy."[354] Strategic thinking and innovation are needed to address the diverse needs of developing countries and their populations. Strategy and innovation cannot be hurried and cannot be standardized for the convenience of investors.

5. What Does Private Infrastructure Finance Mean for People?

For centuries, the financial sector served the needs of the economy, providing the capital to enable the production of goods and services. It made societies wealthier and contributed to their resilience, stability, and to a degree of equality. Over half a century ago, a different era began – the financial sector started to dominate both the global economy and many countries' domestic economies. The growing dominance and profitability of the financial sector at the expense of the rest of the economy, and the shrinking regulation of its operations, is sometimes referred to as "financialization."[355]

Signs of the dominance of finance and financial influence are everywhere – from the workings of the macro-economy, public institutions and regulation, commerce (including commodities[356]), through to the household level. Financialization is sometimes associated with neoliberalism and is blamed for creating large gaps in income inequality. Naturally, financialization has also affected the ways in which infrastructure services have been financed and delivered.[357] Over the last three decades, private finance has replaced public provision of economic and social infrastructure, in whole or in part, in numerous sectors, countries and cities.

In the context of mega-infrastructure, however, it is difficult to distinguish between finance and financialization. Mega-infrastructure projects by definition involve finance that is financialized; that is, mega-infrastructure financing will almost always involve very large amounts of money, complex financing and tax structures, leverage and maximization of financial returns, multiple layers of intermediaries, complex fee structures, potential conflicts of interests, and access to secondary markets for further financial wealth extraction. The emergence of infrastructure as an asset class discussed above is another manifestation of financialization. In fact, financialized finance seems to be the norm for infrastructure finance, and it seems difficult to separate the negative consequences of financialization in infrastructure from the consequences of infrastructure finance. As a result, this publication simply refers to finance, rather than financialization, and considers the effects brought by the dominance and influence of private finance in particular, instead of debating the role of financialization on infrastructure.

In the discussion that follows, we will explore the relationship between some of the foregoing characteristics and their impacts on people's lives and livelihoods. Broadly speaking, the dominance and influence of private finance may affect the governance of infrastructure projects in ways that could impair the important role and functions of the state,[358] bringing about diffuse and widespread human rights impacts at the macro-level that are experienced by the population at large. At an intermediate level, there may be negative impacts on service users, rate payers and beneficiaries of investment, such as workers participating in public pension funds. There may also be direct impacts on affected communities and individuals arising from the lack of transparency and weak social and environmental safeguards.

Students drink fresh, clean water at a drinking fountain in School #2 in Artashat, Armenia.

Table 4: Illustrative Summary of How Infrastructure May be Transformed under the Dominance and Influence of Private Finance[359]

The Influence of Finance on Infrastructure
The Transformation of infrastructure: · From a physical and productive component of the built environment into a financial asset with an income stream · Into an engine for economic growth and tax base expansion
Growing involvement of financial actors or intermediaries
· Increase in public sector indebtedness and risk taking · Increase in use of financial technologies, such as securitization and swaps · Reliance on financial calculation to predict, model and speculate against the future
Increasing exposure of cities to and dependence on financial markets
Increasing control over infrastructure by yield-seeking surplus capital
Transformation of the purpose, function, values and objectives of government

5.1. Macro-Level Human Rights Impacts

At the macro-level, the excessive influence of finance on infrastructure may impact negatively on the functions and interests of the state in several important ways. Firstly, the government's infrastructure deal-making and opportunity to maximize financial gains from privatization may be undermined. Secondly, the excessive influence of finance may encourage risk-taking that results in financial losses or even economic crisis, leading, in turn, to austerity. It may also imply a transformation in the way that governments function, and the way in which the public understands the actors in infrastructure finance. Complex financial products and the use of offshore vehicles may undermine the transparency and traceability of investments. Each of these factors may have significant implications for the level of enjoyment of human rights, and in particular economic and social rights, in a given country, and for income inequality.

The following examples, many of which concern privatization and PPPs, seek to illustrate these human rights consequences. In addition, it is well-recognized that financial interests may sway government policy, rule-making and enforcement of laws and regulations, including those related to finance and the governance of infrastructure, in ways that may undermine human rights.

Example 1: Failure to maximize profits from privatization[360]

It is common practice for public-sector authorities to privatize or lease public infrastructure to the private sector for commercial gain. In doing so, governments tend to limit their asset valuations to traditional sources of an infrastructure asset's market value, such as toll rates, usage, and maintenance costs. By contrast, private sector operators typically deploy more sophisticated valuation techniques, and tend to value public infrastructure assets at a much higher rate, taking into account their ability to refinance transferred assets and rearrange cash flows.

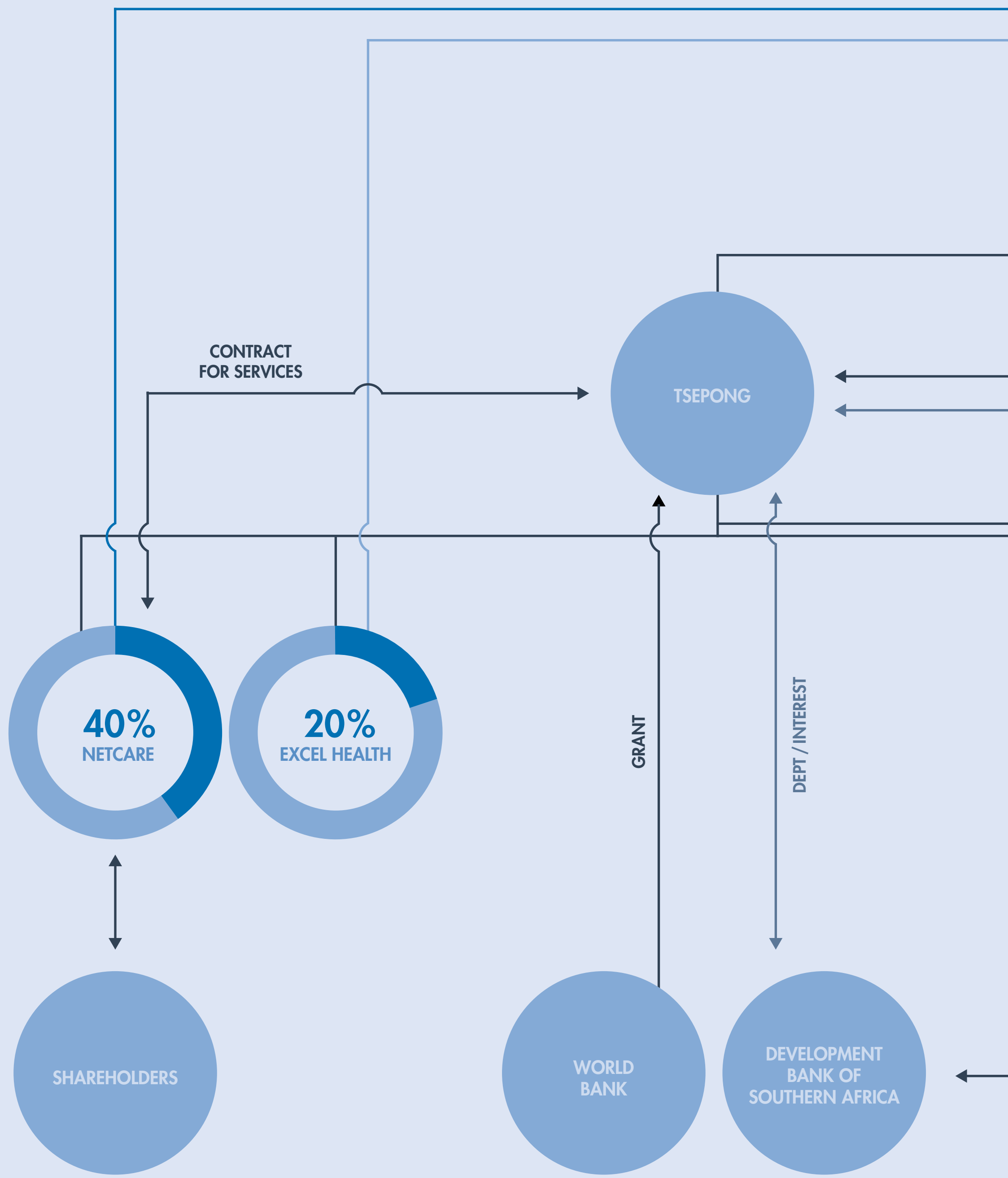
In a recent review of leases of public infrastructure assets to the private sector, it was found that even modest financial engineering (such as interest rate derivatives and swaps, or mark-to-market accounting practices[361]) increases the current value of future facility revenues far more than changes in lease length, tolls, or operating costs. This supports the conclusion that the public sector undercharges for its infrastructure when it ignores how private investors package and assess future revenue. By way of further example, a study was recently undertaken on the impact of financial techniques, such as interest rate swaps, on colleges and universities across the United States of America. The study examined 19 schools, from community colleges and public four-year universities to elite private schools, and found the swaps cost them a combined total of US$ 2.7 billion.[362] These examples indicate that governments frequently do not maximize benefits from deal-making, which in turn undermines their future cash flows and budgets. Governments also frequently grant private sector partners fee hikes and a greater measure of control over infrastructure assets, resulting in higher fees to consumers and potentially greater indebtedness for the investor, which in turn may expose the public sector to claims from creditors and counterparties if the investors default on their obligations.

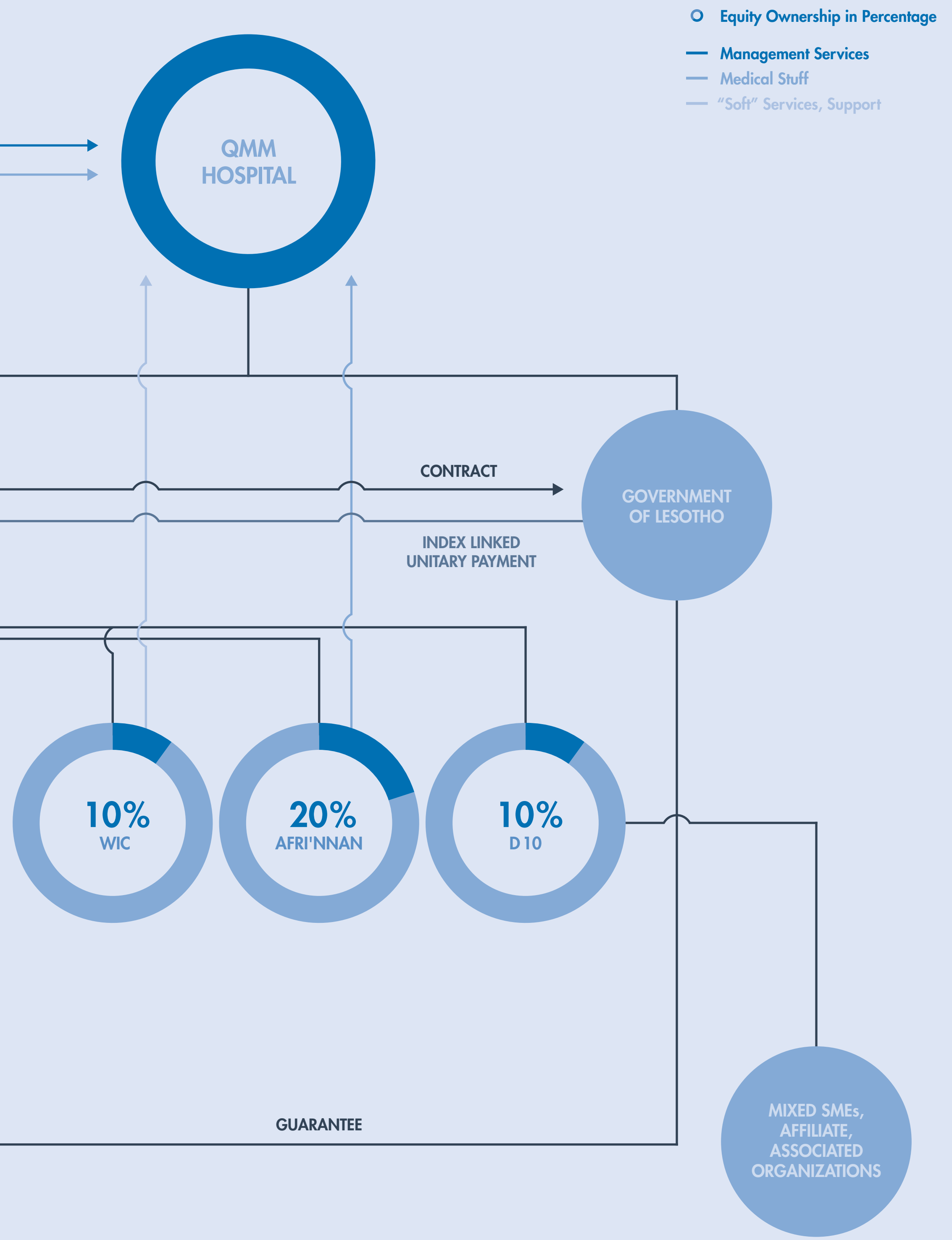
Example 2: Risky and costly PPPs, budget blowouts and social service cuts

Recent experience has shown that large payments associated with large-scale PPPs can impact negatively on public-sector budgets and potentially compromise the delivery of social services. Lesotho's first healthcare PPP, the Queen Mamohato Memorial Hospital, clearly illustrates this problem.[363] The project was built to replace Lesotho's old main public hospital – the first of its kind in a low-income African country. However, as events unfolded, the arrangement had the effect of locking the Ministry of Health into an extremely complex and expensive financing model (see Figure 6, below), structured with advice from the IFC, for 18 years. According to Oxfam, the PPP payments consumed 51 percent of the national health budget of Lesotho, while returning 25 percent a year on the investment in 2013–14. Oxfam also found that the project diverted urgently needed resources from primary and secondary healthcare in rural areas where mortality rates were rising and where three-quarters of the population lived. In 2017, the World Bank and UNICEF countered that 30 (not 51) percent of the national health budget was dedicated to the PPP payments, and made a series of recommendations to the government of Lesotho to improve efficiency of the healthcare system.[364]

In another striking example,[365] Portugal began to invest heavily in PPPs during the mid-1990s. Lured by abundant financing, Portugal signed about thirty PPP contracts, mostly for the construction of transportation infrastructure. One half of these PPPs were financed by the EIB. EIB records show that Portugal incurred EUR 4.482 billion in debt for 18 projects, all but two in the transportation sector (highways), between 1995 and 2010.[366] The concessionaires, however, reportedly used overly optimistic projections for traffic volumes, interest rates and profitability, which forced the state – and ultimately taxpayers – to pay unrealistic usage fees for several decades.

Fig. 6: Ownership and Financing Arrangements for QMM Hospital





Source: Adapted from Dena Kirpalani, with permission.

By the year 2010, it was estimated that "Portugal [would] have to pay some EUR 48 billion in PPP liabilities between [2010] and 2049 [...] almost twice the EUR 28 billion in liabilities recorded by the government."[367] These factors contributed to the economic upheaval that eventually forced Portugal to seek an international bailout. In May 2011, Portugal reached an agreement with the EU and IMF on a three-year EUR 78 billion bailout arrangement.[368] However, the IMF did not include Portugal's liabilities in connection with its state-owned enterprises and PPPs, which in 2011 were estimated to be around 10 percent of Portugal's GDP, as part of the country's public debt; as a result, Portugal's financing needs were underestimated in the calculation of the bailout, and the country required additional financing.[369] In 2012, Portugal reportedly succeeded in renegotiating lower payments under one of its many PPP contracts.[370] But the effects of the austerity measures imposed by the bailout weighed heavily on the general population. In 2013, hundreds of thousands of people took part in protests against government austerity measures, which included tax rises that for many workers amounted to a month's wages.[371]

Example 3: Distortion of the values, purposes and functions of government

PPP units are recommended by most international organizations for promotional and coordination purposes. While it does not have an explicit indicator on PPP units, the Economist Intelligence Unit's Infrascope states that "an important step for PPP policy is the development of a PPP unit as a dedicated resource to provide guidance and technical support for line agencies."[372] It is quite common for the PPP unit to be located within the national treasury, reflecting the common perception that the unit's purpose is ultimately financial in nature. In the United Kingdom, for example, PPPs were pushed by a special unit, staffed mostly by executives from the private sector and housed within the Treasury, which acted as a permanent centre within the government for the promotion of PPPs.[373] These units perform a variety of tasks, such as promotion of PPPs to investors, coordination among governmental agencies and programme management support.[374] In some cases, the PPP unit can combine multiple responsibilities, and even an oversight role, though the OECD suggests that in order to avoid conflicts of interest, PPP units should only provide PPP oversight when they do not have any hand in decision-making.[375] However, most discussions about PPP units fail to acknowledge their potential to perpetuate a bias in favour of PPPs,[376] undermine or circumvent freedom of information laws, enhance opportunities for corruption, weaken budgetary constraints and underestimate environmental and social risks.[377]

Example 4: Lack of transparency and traceability

As mentioned above, in addition to direct investments, institutional investors have access to many indirect investment options through funds, some of which enable quick ownership and transfer of slices of bundled infrastructure assets. Since these assets are held through a dedicated management structure, often incorporated offshore, it may not be clear (even to insiders) which underlying assets are being financed, which entity owns them, what systemic risks exist in the underlying assets, and who bears what risks. (This was the exact problem encountered by lawyers who had to sort out the underlying mortgage assets in the numerous collapsed collateralized debt obligations in the aftermath of the 2008 financial crisis). In addition, such financial products do not provide a ready answer to the question of who should take on ESG due diligence or HRDD, risk mitigation and disclosure obligations regarding the financing party and financed asset. Under these circumstances, it is very difficult to trace money to social and environmental impacts, compared to project finance that directly funds tangible physical assets. In view of these limitations, investors' ESG due diligence is often limited to an assessment of the track record and reputation of the relevant fund manager.

Example 5: Use of offshore financial structures and tax avoidance mechanisms
Those involved in financing mega-infrastructure projects frequently use offshore mechanisms in order to avoid paying taxes to the host or home jurisdictions of the investors involved. Tax evasion is illegal, and tax abuses have considerable negative impacts on the enjoyment of human rights, depriving governments of the resources required to realize human rights, particularly economic and social rights.[378] Examples of "tax-efficient" structures include the holding of assets in tax-exempt offshore funds, or transferring debt through intra-group loans that can be written down against taxable profits of a special-purpose vehicle that owns the physical asset.[379] These "efficiency gains" maximize returns for financial actors, but the gains are not usually shared with the public partner.

5.2. Meso-Level Human Rights Impacts on Service Users and Other Beneficiaries

55 percent of all PPPs are renegotiated, on average every two years.[380] On each occasion, service users can experience a fee increase or the imposition of new charges. These changes undermine the affordability of services and may endanger service users in other ways. When an infrastructure asset is privatized and transferred to a private equity firm, operational costs can be cut drastically to improve cost efficiency, which may in turn lead to job losses and weakened labour, occupational health and safety standards. Pension fund investments in infrastructure through private equity and hedge funds can create multiple moral hazards. Users and beneficiaries seeking to expose and remedy these practices may be hampered by a lack of transparency and traceability.

Example 1: Private ownership of infrastructure and impacts on service users
Following the 2008 financial crisis, many municipalities in the United States of America were no longer able to operate and maintain infrastructure. They sold infrastructure assets, such as municipal water facilities, to private equity firms. To recoup the cost of new facilities and refurbishments, the new owners increased water rates to a point where many users were no longer able to pay. A portion of the rates went to the operator as part of its guaranteed return on investment. In some cases, pledges to avoid fee increases were simply ignored from the outset.

Commuters wait at dawn for a rapid transit bus in Soweto, South Africa.

Failure to pay the hiked rates led to liens being placed on homes. If the liens were not paid off, homeowners lost their property to foreclosures.[381] In these instances, the denial of the right to water often led to the denial of the right to housing and negative impacts on a range of other related rights.

Example 2: Financialization in the health care sector and the impact on patients' right to health

Investors can extract wealth from infrastructure projects in various ways, including generating additional revenue from the operating portion of the contract by squeezing costs. In the context of healthcare, a major operating cost comes from wages. Private equity and hedge fund investors may benefit from cutting wages, working hours and positions. These cost reductions can lead to workforce turnover, undermining the quality of care given to patients, eroding staff morale and increasing occupational health and safety risks to workers. Problems of this nature have been thoroughly documented in nursing home chains,[382] for example.

Example 3: Increasing control over infrastructure by yield-seeking surplus capital: how pension fund participation in infrastructure impacts on workers

As noted earlier, pension funds are investing in an increasingly diverse range of financial products. Such practices raise several questions about the financial benefit of investments, the transparency of transactions, and the potential impacts on workers who are the beneficiaries of the pension fund. For example, Hildyard notes that pension funds are venturing into high-risk, high-return investments such as investment in private equity, and are incurring losses that may profoundly affect working people:

> "In countries where pension funds are already allowed to invest in riskier assets, workers have seen their retirement benefits slashed to make up for the massive shortfalls (over US$ 1 trillion in the United States of America) incurred through fund managers having chased high risk 'alpha' returns. In the United States of America, a study by Dean Baker of the Center for Economic and Policy Research reveals that public sector workers are some US$ 850 billion poorer today as a result of their pensions being invested in stocks and exposed to mortgage-backed securities than they would have been if fund managers had invested in safer Treasury bonds."[383]

In addition to losses of this kind, excessive professional fees may also undermine the return on investment. The more complex the deal, the more intermediaries are involved, and the greater the number of intermediaries, the more fees will be charged by various financial actors. For example, management fees may typically be in the range of one to two percent of funds managed, and so-called "incentive fees" (performance fees) can be in the range of 10 to 20 percent.[384] There may be many other fees and costs that pension funds incur in the course of infrastructure projects, such as acquisition fees, financial, legal and other advisory fees, finance arranger fees, fees for provision of funding, and project development fees. The amount of these fees can substantially affect the net returns to the pension fund, and hence the return on investment of workers' pensions. The large cast of characters involved and the complex relationships between them makes it difficult if not impossible for affected users, rate payers and beneficiaries to know who is the ultimate owner or financier of the infrastructure asset, and who is responsible for disseminating information about projects, mitigation of impacts, or redress for adverse human rights impacts.[385]

From an ethical standpoint, one might question the legitimacy of using public sector workers' money to invest in private equity funds or hedge funds that retrench workers in infrastructure-related and other investee companies in order to save costs, harming the economic interest of the very beneficiary group – workers – that the public-sector pension plans are supposed to benefit. One might also question whether cost-cutting measures of this kind undermine the financial performance of the pension fund itself, though there appears to be no conclusive evidence to this effect.[386]

5.3. Micro-Level Human Rights Impacts on Workers and Affected Communities

To the extent that the MDBs succeed in maximizing private investment in infrastructure projects, affected communities and workers may conceivably enjoy fewer or no environmental and social safeguards, less access to information and reduced availability of grievance redress mechanisms. As a result, any adverse environmental or human rights impacts of infrastructure projects could worsen. As with affected service users and investment beneficiaries, financial products that bundle infrastructure assets could undermine the ability of affected communities to trace investment proceeds and hold the financiers and ultimate owners of projects accountable for negative environmental and social impacts. Moreover, the flow of institutional investors' funds to infrastructure as an asset class may necessitate standardization of the underlying asset, which may result in similar types of infrastructure being bundled and sold off. This could inadvertently "standardize," accentuate and perpetuate certain types of environmental and human rights impacts (such as climate change) associated with particular infrastructure assets.

6. Looking Ahead

Infrastructure finance is a shared responsibility of public and private actors. Private finance is not a panacea for the infrastructure financing gap, and public finance will always play a significant role in infrastructure. Private finance does not relieve the public authorities of their public governance responsibilities or regulatory obligations under international human rights and environmental law, in parallel with private actors' own responsibilities.

Public authorities must ensure good public governance of infrastructure finance.[387] This responsibility includes, but is not limited to, responsible borrowing and provision of guarantees (for debt sustainability), integrity in procurement, ensuring public participation in decision-making and full, proactive transparency and disclosure (including disclosure of contingent liabilities, advocating financial disclosure laws, and establishing information disclosure platforms in order to enhance transparency and traceability in infrastructure financing, including transparency of beneficial ownership of infrastructure assets and PPPs), as well as ensuring the regulation and oversight of private parties. States also have a duty to dedicate the "maximum extent of available resources" toward the progressive realization of economic and social rights, and to ensure that a minimum core level of rights enjoyment is available to all, without discrimination.

Infrastructure investors should accept that they are custodians of a public asset and not mere private recipients of cash flow, and that they can have a tremendous impact on the lives and livelihoods of taxpayers, service consumers and investment beneficiaries who are workers, as well as affected communities. This custodian role requires a long-term outlook and active stewardship of investments, with responsibilities for broad stakeholder engagement, robust and proactive disclosure of investments, the embedding of environmental and human rights considerations in investment and lending decisions, and monitoring and public reporting. This entails both "doing no harm" (or risk management) and "doing good" (or enhancing the economic, environmental and social co-benefits) in infrastructure financing.

In order to assess and address human rights impacts arising from infrastructure financing, and given the responsibility of businesses to respect human rights under international law, private financial actors investing in infrastructure should undertake HRDD at an early stage and at strategic points throughout the life cycle of their investment. HRDD helps promote a clearer, shared understanding of the potentially adverse human rights impacts of standardizing infrastructure development and investment through "infrastructure as an asset class." States, financial institutions and other relevant actors should avoid actions that may inadvertently "standardize" and replicate negative human rights impacts of finance.

BOX 17

OECD's Guidance on Responsible Business Conduct for Institutional Investors

Although not a guide to HRDD specifically, the OECD's guidance on responsible business conduct for institutional investors is instructive. It lays out the scope and benefits of continuous and ongoing due diligence (against the MNE Guidelines, which explicitly reference the UNGPs) by institutional investors with respect to adverse impacts associated with investee companies. The guidance clarifies that investors can be directly linked to adverse human rights impacts through business relationships with companies in which they invest. This is consistent with the OHCHR's advice to the OECD on the application of the UNGPs to the financial sector.

Where appropriate, the OECD guidance distinguishes approaches that may be specifically relevant for asset owners and investment managers, as well as specific asset classes, including infrastructure. Recognizing that increasingly complex financial products tend to remove financial intermediaries farther away from physical assets and impacts, the guidance acknowledges the demanding context in which institutional investors operate and explains how leverage might be exercised.

Source: OECD (2017b) *Responsible business conduct for institutional investors: Key considerations for due diligence under the OECD Guidelines for Multinational Enterprises*. Available at: https://mneguidelines.oecd.org/RBC-for-Institutional-Investors.pdf
OHCHR letter to the OECD, dated 27 November 2013. Available at: www.ohchr.org/Documents/Issues/Business/LetterOECD.pdf

In addition, financial flows (including for infrastructure) should be consistent with a pathway toward low greenhouse gas emissions and climate-resilient development in compliance with Article 2.1 c) of the Paris Agreement. Article 2.1 a) of the agreement calls for limiting the global average temperature increase to well below 2°C and pursuing efforts to stay below 1.5°C above pre-industrial levels. Financial institutions and investor organizations should therefore put necessary pre-investment tests and associated monitoring and reporting procedures in place to demonstrate that infrastructure investments are complying with Article 2.1c) and are aligned with Article 2.1 a). Investors and public authorities should rule out certain infrastructure projects altogether, such as coal-fired power plants, due to climate and human rights risks. This will help ensure that infrastructure investments are viable for their foreseeable life cycles under such a temperature scenario, and that polluting projects are not shut down prematurely and left as stranded assets.

Recognizing the need for institutional investors to actively manage other people's money for the long term, rather than passively hold on to investments, much work has been done to address institutional investors' stewardship of investee companies. In this context, a debate has arisen on whether institutional investors' fiduciary duties include a responsibility to consider ESG and human rights issues. Some have argued that a failure to consider ESG and human rights issues as drivers of long-term investment value constitutes a breach of investors' fiduciary duties,[388] while others claim that ESG or human rights considerations are not necessarily prudent or economically relevant[389] (though this does not necessarily mean that they are unconcerned about non-financial value or normative matters).

Insurance companies typically have some degree of affinity for ESG issues, including human rights,[390] and generally have adequate capacity to undertake the type of due diligence recommended by the OECD (Box 17). While pension funds and SWFs are less advanced in the latter respects, both have potential for deeper engagement on environmental and human rights issues due to the beneficiaries they serve (in the case of pension funds) or their explicit mandate to help develop local economies and infrastructure investment and take environmental and human rights issues into account (in the case of some SWFs). The public nature of public pension funds and SWFs bolsters the case for their strengthened stewardship and public responsibilities in infrastructure investment. Until such time as we see a fundamental shift in this regard, regulatory reforms designed to relax the constraints of pension funds and insurance companies to invest in infrastructure should only proceed after a regulatory impact assessment that fully integrates the respective country's obligations under international human rights and environmental law, and following appropriate mitigation measures to guard against negative impacts.

As mentioned above, investors are increasingly concerned about the ESG and human rights performance of infrastructure projects and whether capital allocation decisions take ESG and human rights factors into account. The desire to understand the significance of ESG in infrastructure investment is beginning to drive data collection on these issues.[391] Available data strongly suggests that ESG performance and financial results of infrastructure projects are interconnected,[392] and certain regulators are already advising banking and asset management firms, insurance companies, pension funds and other financial firms on how to take ESG factors into account in sustainable finance.[393] The Financial Stability Board Task Force on Climate-Related Financial Disclosures has made it clear that climate risks need to be priced in to support informed, efficient capital-allocation decisions, and that accurate and timely disclosure of current and past operating and financial results is necessary for this purpose.[394] A better understanding is needed among institutional investors of how ESG criteria, including human rights, and transparency of information on infrastructure investment and operation, can help to achieve more sustainable and responsible asset allocation in infrastructure.

Finally, all financial actors should be encouraged to apply financial engineering techniques to stimulate innovation in new business models and new financial products that are consistent with, and will help realize, human rights and the SDGs. After all, financial engineering made forest bonds, vaccination bonds and social impact bonds possible. There is a renewed interest in impact investing to help financing actors help achieve SDGs. These trends may stimulate the development of alternatives to the PPP business model, focusing on environmental and human rights outcomes rather than outputs, and promoting the more equitable distribution of costs and benefits between public and private parties.[395]

Key Messages in Chapter V

- The global infrastructure financing gap has been estimated at around US$ 90 trillion until the year 2030. The MDBs are proposing to maximize and prioritize private finance, and the G20 is pushing for a new roadmap toward infrastructure as an asset class that would standardize infrastructure investment. However, more attention should be given to the sustainability gap, and in particular the potential negative environmental and human rights consequences of private finance flowing into infrastructure.
- At the centre of the infrastructure financing drive are institutional investors – pension funds, insurance companies and sovereign wealth funds – with up to US$ 70 trillion of assets. Institutional investors currently have very little exposure to infrastructure outside developed countries; however, diverting just a small percentage of their assets to a new infrastructure asset class may be enough to meet the needs of emerging markets.
- Over the years, as finance became globalized and dominated other sectors of the economy, it changed the way in which infrastructure services are financed and delivered. During the last three decades, private finance has begun to replace the public provision of economic and social infrastructure. This has begun to change infrastructure from a physical and productive asset into a financial asset with an income stream. The emergence of infrastructure as an asset class is another manifestation of the dominance and influence of private finance.
- Efforts are underway to develop financial products in infrastructure and market various infrastructure assets as a homogeneous, standardized asset class. This is a risky business as it may obscure which underlying assets are being financed, which entity owns them, and who bears what risks. When "standardized" infrastructure assets are bundled within a single putative asset class, this may inadvertently "standardize" and replicate negative human rights impacts on a large scale. A clearer understanding of these kinds of latent risks is needed, along with greater transparency of these kinds of financial products.
- The dominance and pervasive influence of private finance may undermine the governance of infrastructure projects, impair the role and functions of the state and impact negatively on the population at large. At an intermediate level, there may be negative impacts on service users, rate payers and beneficiaries of investment, such as workers participating in public pension funds. And there may also be direct impacts on affected communities and individuals arising from the lack of transparency and weak social and environmental safeguards.
- Private finance can play a much greater role in infrastructure financing, but it is not a panacea. Infrastructure finance is a shared responsibility of public and private actors. Public authorities should discharge their public governance responsibilities, and investors should accept that they are custodians of a public asset and not mere private recipients of cash flow.

- Infrastructure financing requires a long-term outlook and active stewardship of investments, with responsibilities for broad stakeholder engagement, robust and proactive disclosure of investments, the embedding of environmental and human rights considerations in investment and lending decisions, and monitoring and public reporting. This entails both "doing no harm" (or risk management) and "doing good" (or enhancing economic, environmental and social co-benefits).
- In order to assess and address human rights risks arising from infrastructure financing, including those arising from the standardization of infrastructure for investment purposes, and given the responsibility of businesses to respect human rights under international law, private financial actors investing in infrastructure should undertake human rights due diligence at an early stage and at strategic points throughout the life cycle of their investment. Financial actors should also put necessary pre-investment tests and associated monitoring and reporting procedures in place in order to ensure that infrastructure investments are aligned with the Paris Agreement.
- A better understanding is needed among institutional investors of how ESG criteria, including those relating to human rights and transparency of information on infrastructure investment and operation, can help to achieve more sustainable and responsible asset allocation in infrastructure.
- Policy-makers should ensure transparency and traceability in infrastructure financing through effective financial disclosure laws and PPP disclosure frameworks, and should create information disclosure platforms that are publicly and easily accessible and ensure transparency of beneficial ownership. These measures are indispensable for effective public participation and accountability in infrastructure decision-making.
- Policy-makers should (i) undertake ex ante regulatory impact assessments of proposed financial regulations against international environmental and human rights legal frameworks and avoid downgrading or eliminating financial regulations without such an assessment and adequate mitigation measures, (ii) reflect responsible finance requirements, including continuous and ongoing human rights due diligence, in any relevant regulatory reforms and (iii) undertake or encourage studies to collect evidence on the relationship between financial performance and ESG and human rights performance.

VI. Concluding Remarks and Summary of Recommendations

"Let us build societies that are able to coexist in a dignified way, in a way that protects life."

Berta Cáceres

1. Introduction

It is unclear how much of the "billions to trillions" infrastructure agenda will eventually be realized, and whether or how quickly infrastructure investment will migrate to more sustainable pathways. But this much is clear: without sustainable infrastructure, the objectives of the Addis Agenda, the 2030 Agenda and the 2015 Paris Agreement on Climate Change, and many internationally recognized human rights, will not be realized.

It is far from clear that governments and key global economic and financial decision-makers have internalized the significance of the challenges confronting the mega-infrastructure investment agenda. Infrastructure should promote economic growth, job creation, and economic, environmental and social co-benefits, yet too often the cost of infrastructure is shifted to those who can least bear it, thereby potentially exacerbating already widening inequalities in society. The parallel system of international investment agreements that disproportionately benefit investors and the increasing dominance of private finance contribute to this problem. If the present course is not corrected, there are real risks that regional infrastructure plans and financing strategies will generate perverse economic, human rights and environmental outcomes and unsustainable development.

The international community should recognize that infrastructure policies and actions can cause, contribute to, or facilitate multilevel negative environmental and human rights impacts. The sustainability gap in infrastructure should be acknowledged and addressed explicitly and systematically in global economic and financial decision-making. The international human rights framework helps us understand the rights and responsibilities of all stakeholder groups involved in infrastructure, guides infrastructure policy-making and strengthens transparency and project sustainability.

Although institutional investors are being invited to participate in infrastructure financing, it is likely that additional private finance will only come in fits and starts. This means that implementation will likely be slow and sporadic. In theory, there is still time for most mega-infrastructure plans and projects to be reoriented toward environmental and human rights requirements and the objectives of inclusivity, resilience and sustainable development, provided that there is the political will to do so.

This publication makes a number of recommendations for policy-makers, infrastructure decision-makers, and private sector actors to counter the potential negative effects of infrastructure investment and finance.

2. Recommendations

a) Enhance information disclosure, consultation, participation, and accountability in infrastructure projects, including appropriate grievance redress mechanisms

- Policy-makers should ensure that national laws and development finance institutions' public information policies aim for full, proactive disclosure of information in accessible languages and formats subject only to limited and well-defined exceptions where harm would be caused to a recognized interest, and that business confidentiality and national security considerations be interpreted restrictively, consistent with SDG 16.10 and global and regional human rights standards;
- States should guarantee, and all infrastructure decision-makers should ensure, active and meaningful participation of people, based on free and prior availability of project information in accessible languages and formats, as far upstream in the decision-making process as practicable and throughout the project life cycle. Deliberate, targeted support should be given to ensure that the participation of women, indigenous peoples, persons with disabilities, minorities and others in infrastructure project design, implementation and policy-making is meaningful and effective;
- States should immediately eliminate any constraints to the freedoms of opinion, expression, association and assembly, in line with SDG 16.10, international law, and the recommendations of United Nations and regional human rights bodies;
- Development financing institutions and investor organizations should put policies in place to help protect individuals from intimidation and reprisals, and should provide regular public reports on the implementation of those policies;
- States should ensure that state-investor contracts are disclosed publicly, subject only to limited exceptions based upon a compelling justification. Infrastructure decision-makers and private actors should proactively disclose state-investor contracts;
- Policy-makers should enact financial disclosure laws and establish information disclosure platforms in order to enhance transparency and traceability in infrastructure financing, including transparency of beneficial ownership of infrastructure assets and PPPs, and

- Effective judicial and non-judicial grievance mechanisms should be available to respond to grievances arising from micro-, meso- and macro-level impacts of infrastructure projects. The mechanisms should be aligned with the principles of grievance mechanisms in Principle 31 of the UNGPs ("legitimate, accessible, predictable, equitable, transparent, rights-respecting, and provide a source of continuous learning"), and non-judicial mechanisms should be based on engagement and dialogue.

b) *Ensure project selection and design are consistent with the host country's national development plan and international human rights and environmental commitments*

- Infrastructure decision-makers should ensure that project selection and design is consistent with the country's governance process, national development plan, the SDGs, and international human rights and environmental commitments, including its Intended Nationally Determined Contributions (INDCs), and
- Decision-makers should base project selection and design decisions on quality preliminary studies, such as strategic impact assessment, regulatory impact assessment, and cost-benefit analysis, referring to the international environmental and human rights framework as well as domestic law.

c) *Integrate human rights criteria within universal standards for sustainable, accessible, affordable and resilient quality infrastructure*

- In collaboration with all stakeholder groups, policy-makers should help create a broad consensus on the criteria for "sustainable, accessible, affordable, and resilient quality infrastructure," maximizing opportunities to realize the SDGs through infrastructure that promotes accessibility and affordability of services, transparency, social cohesion and inclusion, environmental protection and climate resilience, while respecting human rights;
- Such criteria should include appropriate measures for decision-makers and private actors to address the risks faced by human rights and environmental defenders in connection with infrastructure plans and projects.

d) *Ensure that all relevant public and private actors involved in infrastructure carry out human rights due diligence (HRDD) to inform and improve decision-making*

- Policy-makers should embed HRDD in the relevant public authorities' decision-making processes in relation to their activities on infrastructure development and finance, including activities related to international treaty making, domestic legislation, and state-investor contracts;

- Policy-makers should require continuous and ongoing HRDD by private investors and operators throughout the life cycle of the infrastructure project. Investors' initial HRDD should assess the human rights context of the host state, including the host state's environmental and human rights obligations, civil society space, and the human rights implications of the state-investor (and related) contracts;
- Policy-makers should ensure that development finance institutions integrate a requirement to respect international human rights and environmental law in their safeguard and sustainability policies, together with a requirement for HRDD in moderate and high risk projects, and
- In all cases, HRDD should be consistent with the UNGPs, either free-standing or part of a comprehensive ESG due diligence, and should complement other assessments, such as environmental, climate, regional, strategic or other thematic assessments.

e) *Address the environmental and human rights risks associated with the investor protection regime comprised of international investment agreements, national investment laws and state-investor contracts*

- Policy-makers should ensure that investors' responsibility to respect human rights (without prejudice to, and in parallel with, the state's duty to respect, protect and fulfil human rights) is consistently included in new and amended IIAs. If investors do not comply with their obligations, treaty protection should be denied;
- Policy-makers should ensure coherence between domestic investment law and international environmental and human rights framework. States should resist pressure to reform national laws to incentivize investment at the expense of human rights and environmental protection. States should instead strengthen national human rights and environmental laws, in line with the requirements of international law;
- Infrastructure decision-makers and private actors should ensure that state-investor contracts fairly balance the interests of investors and the state, and minimize the use of stabilization clauses. If used, the latter clauses should be narrowly defined and should not undermine the state's duty and right to regulate in the public interest and implement its human rights or environmental obligations, and investors' responsibilities to respect human rights.
- State-investor contractual models and contracts should maximize economic, environmental and social co-benefits of projects and explicitly, clearly and fairly allocate environmental, human rights and climate rights risk management responsibilities, taking into account states' obligations and the private actors' responsibilities under international human rights and environmental law; and
- Investors should take note of states' obligations under international human rights and environmental law, understand the human rights implications of state-investor (and related) contracts and draft appropriate human rights undertakings.

f) *Address the environmental and human rights risks associated with the efforts to attract private investment in infrastructure*

- Policy-makers should promote investment in "sustainable, accessible, affordable and resilient quality infrastructure" and standardize responsible finance in infrastructure, consistent with the Addis Agenda, including the principles on blended finance (that are applicable to PPPs);
- Policy-makers should ensure, through appropriate HRDD, that the standardization of infrastructure investment and financing does not unwittingly generate negative human rights and environmental impacts, and
- Private infrastructure investors should accept a long-term outlook and active stewardship of investments, with responsibilities for broad stakeholder engagement, robust and proactive disclosure of investments, HRDD and the embedding of environmental, social, governance and human rights considerations in decision-making, monitoring and public reporting. Their approach should embrace both "doing no harm" (or risk management) and "doing good" (or enhancing the economic, environmental and social co-benefits) in infrastructure financing.

g) *Integrate a gender perspective and address discrimination*

- A gender perspective should be integrated as early as possible within the conceptualization and design phases of all infrastructure projects, and should be closely monitored throughout the project cycle. A gender perspective should also be integrated within infrastructure financing and investment decision-making, and
- Policy-makers and infrastructure decision-makers should address the serious lack of data on the distributional impacts of mega-infrastructure projects on key population groups, consistent with the data-collection and disaggregation commitments in SDG 17. Special attention should be paid to the situation of women, children, persons with disabilities, minorities, indigenous peoples, migrants, internally displaced persons and inhabitants of informal settlements, those who are excluded from social or political life deliberately, and those experiencing discrimination on multiple grounds (for example, gender and ethnicity).

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In Mforo village, Tanzania, a Solar Sister entrepreneur checks on her cows during the evening.

ANNEX

MAJOR INFRASTRUCTURE INITIATIVES

The infrastructure initiatives in this Annex are only illustrative, intended to convey the scale, diversity and level of ambition accompanying infrastructure plans. Four of the examples are regional plans, and one (the Belt and Road Initiative) embraces several geographic regions and is a vision as much as a plan.

Infrastructure Plan

Master Plan on ASEAN Connectivity 2025 (MPAC 2025)

The plan aims to increase physical, institutional, and people-to-people connectivity within the Association of Southeast Asian Nations (ASEAN). It has 5 focus areas: sustainable infrastructure, digital innovation, seamless logistics, regulation, and people mobility. MPAC 2010 consists of 125 initiatives out of which 39 were completed by May 2016. Remaining initiatives are part of MPAC 2025.

https://asean.org/wp-content/uploads/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf

Estimated Investment (in $ bn)

annually
110
(required)

Participating Countries

Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam

Time Period

2016–2025

Some Funding Sources

ASEAN Infrastructure Fund, Asian Development Bank, commitment to synergize with Belt and Road Initiative

Sub-Projects

- ASEAN Plan of Action for Energy Cooperation (APAEC) 2016–2025: supplementary action plan, focus on ASEAN Power Grid (APG) and Trans-ASEAN Gas Pipeline (TAGP)
- ASEAN Highway Network (AHN)
- Singapore Kunming Rail Link (SKRL)
- ASEAN Broadband Corridor (ABC)

Sources

- https://bit.ly/2PzFFDL
- www.adb.org/countries/subregional-programs/bimp-eaga

Infrastructure Plan

Mesoamerica Integration and Development Project (MIDP)

The MIDP has two main work streams – economic and social. The economic work stream, which is its main focus, is subdivided into transport, trade and competitiveness, energy and telecommunications.

www.proyectomesoamerica.org

Estimated Investment (in $ bn)

Transport **67.3%**

Energy **22.7%**

Health, Social & Environment **8.5%**

Trade & ICT **1.5%**

Time Period

Since **2008**

Successor to Plan Puebla Panama (2001–2008)

Some Funding Sources

Inter-American Development Bank, Central American Bank for Economic Integration, Development Bank of Latin America

Participating Countries

Belize, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama

Sub-Plan

INTERNATIONAL NETWORK OF MESOAMERICAN HIGHWAYS (RICAM)

4

4

Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua

Other Infrastructure Sub-Plans

- Electrical Interconnection System with Central American Countries (SIEPAC)
- Mesoamerican Information Highway (AIM)

Source

www.proyectomesoamerica.org/index.php

Infrastructure Plan

Programme for Infrastructure Development in Africa (PIDA)

PIDA is governed by three institutions: the African Union Commission, the African Development Bank, and the African Union Development Agency (AUDA).

www.au-pida.org

Estimated Investment (in $ bn)

(2012–2020)
68

annually
7.5

TOTAL
360
(until 2040)

Participating Countries

All African Union member countries

Time Period

Since
2012–2040

Some Funding Sources

African Development Bank, Africa50, NEPAD 5% Initiative

Number of Projects

51 Priority Programmes and Projects
412

54 Energy, 112 ITC, 237 Transport, 9 Water

Sources

- www.au-pida.org/download/pida-implementation-report-2018/?wpdmdl=4736&ind=1550658081333
- www.au-pida.org/download/pida-progress-report-2017
- www.africa50.com

Infrastucture Plan

South American Infrastructure and Planning Council (COSIPLAN)

COSIPLAN is South America's forum for discussions on infrastructure. Its current work is guided by the Strategic Action Plan 2012–2022 which aims to "develop infrastructure for regional integration", to "foster regional cooperation in planning and infrastructure", to "promote compatibility of existing normative frameworks governing […] infrastruture", and to "identify and leverage […] priority integration projects and evaluate funding alternatives".

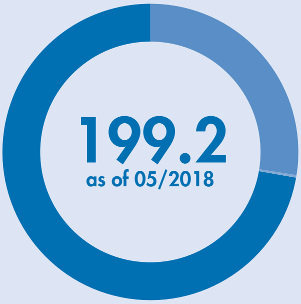
www.iirsa.org

Estimated Investment (in $ bn)

Transport
142.6

Energy
54.9

ICT
<0.1



Number of Projects

562

Time Period

Since
2009

Some Funding Sources

Inter-American Development Bank, Development Bank of Latin America, FONPLATA

Participating Countries

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

Sub-Projects

Priority Projects: currently 26 projects with an estimated investment of $23bn

Sources

- Plata Basin Financial Development Fund
- www.iirsa.org/proyectos/inicio.aspx
- https://bit.ly/32q8BS8

Infrastructure Plan

Belt and Road Initiative (BRI)

Estimated Investment (in $ bn)

annually
150

invested (in 2018)
210

Estimated Number of Projects

(in 2016)
900

Time Period

Since
2013

Some Funding Sources

Asian Infrastructure Investment Bank, Export-Import Bank of China, Silk Road Fund, China Development Bank

Estimated Participating Countries

Over
100

Infrastructure/Economic Corridors

21ST CENTURY MARITIME SILK ROAD

Silk Road Economic Belt
- New Eurasian Land Bridge
- China-Central Asia-West Asia Corridor
- China-Indochina Peninsula Corridor
- Bangladesh-China-India-Myanmar Economic Corridor
- China-Mongolia-Russia Corridor
- India-Nepal-China Corridor

Other initiatives
- The Polar-Silk Road
- Asian Power Grid

Sources

- https://bit.ly/2nJLiil
- https://bit.ly/2iEzr0J
- http://english.gov.cn/beltAndRoad
- https://econ.st/2pOiaWx
- https://bit.ly/2SfTVAf
- https://bit.ly/2XPnZnG

ENDNOTES

1 "Resolution adopted by the General Assembly on 25 September 2015", United Nations Doc. A/RES/70/1 (2015). Available at: www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E
2 United Nations "Sustainable Development Goals". Available at: www.un.org/sustainabledevelopment/sustainable-development-goals
3 Supra 1, para. 10.
4 United Nations (2015) "Addis Agenda of the Third International Conference on Financing for Development (Addis Agenda)". Available at: www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf
5 Ibid, para. 48.
6 2030 Agenda, paras. 15, 21, and 68; SDG 9.1; and Addis Ababa Agenda for Action, paras. 87 and 114.
7 Groff, SP (2013) "Regional Infrastructure Connectivity: What, How and When?" ADB blog, 23 October. Available at: www.adb.org/news/op-ed/regional-infrastructure-connectivity-what-how-and-when-stephen-p-groff
8 Available at: http://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf
9 Alexander, N (2018) "The Big Gamble: How Sustainable Are Global Efforts to Leverage Private Investment in Infrastructure?" Presentation to the International Studies Association, Heinrich Böll Foundation. Washington, DC.
10 According to Bent Flyvbjerg, the cost of a "mega-project" is in the order of millions, "giga-project" in the billions and "tera-project" in the trillions. See: Flyvbjerg, B (2014) "What You Should Know About Megaprojects, and Why: An Overview", Project Management Journal, vol. 45, no. 2, April–May, pp. 6–19, DOI: 10.1002/pmj.21409. Available at: https://arxiv.org/ftp/arxiv/papers/1409/1409.0003.pdf. However, for the purpose of this publication, "large" and "mega-projects" are used interchangeably to cover mega-, giga- and tera-projects. Smaller infrastructure projects do not necessarily equate to fewer or lesser impacts. However, this publication focuses on the larger mega-infrastructure projects, as well as the giga- and tera-level projects.
11 Available at: www.arei.org. In spite of the climate benefits that renewable energy projects bring, they are not free of negative environmental or human rights impacts. Effective environmental and human rights impact assessments should not be waived or overlooked in renewable projects.
12 Grieger, G (2016) "One Belt One Road: China's Regional Integration Initiative", European Parliamentary Research Service. Available at: www.europarl.europa.eu/RegData/etudes/BRIE/2016/586608/EPRS_BRI(2016)586608_EN.pdf
13 "Belt and Road initiative contributes to open, win-win new world", 2017, People's Daily, 15 May. Available at: http://en.people.cn/n3/2017/0515/c90000-9215573.html
14 PIDA (2017) PIDA Progress Report – 2017. Available at: www.au-pida.org/download/pida-progress-report-2017
15 UNASUR/COSIPLAN (2017) "Informe de la Cartera de Proyectos del COSIPLAN 2017". Available at: www.flipsnack.com/IIRSA/informe-de-la-cartera-de-proyectos-del-cosiplan-2017.html
16 Staats, J (2017) "The Risks of China's $4 Trillion 'Belt-and-Road' Plan", United States Institute of Peace blog, 12 May. Available at: www.usip.org/blog/2017/05/risks-chinas-4-trillion-belt-and-road-plan
17 Asian Development Bank (2018) "What is the ASEAN Infrastructure Fund?". Available at: www.adb.org/site/funds/funds/asean-infrastructure-fund
18 European Investment Bank (2018) "European Fund for Strategic Investments". Available at: www.europarl.europa.eu/RegData/etudes/BRIE/2016/586608/EPRS_BRI(2016)586608_EN.pdf
19 McKinsey Global Institute (2016) "Bridging the Infrastructure Gap". Available at: www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/bridging-global-infrastructure-gaps
20 Ibid, p. 7, quoting: UNCTAD (2014) *World investment report 2014: Investing in the SDGs: An action plan*. UNCTAD also states that in addition to the US$ 1.1 trillion needed annually for economic infrastructure,

some US$ 1.4 trillion annually might be needed in developing regions to meet SDGs for climate change and adaptation, health, education, food security, and biodiversity.

21 Mirabile, M, Marchal, V and Baron, R (2017) "Technical note on estimates of infrastructure investment needs", Background document to the report "Investing in Climate, Investing in Growth", OECD. Available at: www.oecd.org/env/cc/g20-climate/Technical-note-estimates-of-infrastructure-investment-needs.pdf. The US $ 6.9 trillion figure includes additional capital costs of 29 percent in the energy sector related to the decarbonization of the power sector and to the grid extension for the electrification of end-use sectors (e.g. transportation) and investment in energy efficiency in the transportation, industry and building sectors.

22 The Global Commission on the Economy and Climate (2017) "The Sustainable Infrastructure Imperative: Financing for Better Growth and Development". Available at: https://newclimateeconomy.report/2016/misc/downloads

23 Development Committee (2015) "From Billions to Trillions: Transforming Development Finance Post-2015 Financing for Development: Multilateral Development Finance". Available at: www.devcommittee.org/sites/www.devcommittee.org/files/download/Documentation/DC2015-0002%28E%29FinancingforDevelopment.pdf

24 "MDBs' Joint Declaration of Aspirations on Actions to Support Infrastructure Investment" (2016). Available at: www.g20.utoronto.ca/2016/mdbs-joint-declaration.pdf

25 G20 (2018) "Roadmap to Infrastructure as an Asset Class". Available at: www.oecd.org/g20/roadmap_to_infrastructure_as_an_asset_class_argentina_presidency_1_0.pdf

26 For a recent example see: LSE-Oxford Commission on State Fragility, Growth and Development (2018) "Escaping the Fragility Trip: Report of the Commission on State Fragility, Growth and Development"; pp. 34–35. Available at: www.theigc.org/wp-content/uploads/2018/04/Escaping-the-fragility-trap.pdf. The report includes the controversial recommendation that ESG and "ethical" concerns be excluded from consideration in fragile and conflict-affected states.

27 Metts, R (2004) "Disability and Development", background paper prepared for the Disability and Development Research Agenda Meeting, p. 9. World Bank, Washington DC.

28 United Nations and World Bank (2017) "Pathways to Peace: Inclusive Approaches to Preventing Violent Conflict", World Bank, Washington DC.

29 SDG 17, Target 18.

30 Brînză, A (2017) "AIIB Goes Global"; University of Nottingham Asia Research China Institute blog, 7 April. Available at: https://cpianalysis.org/2017/04/17/aiib-goes-global

31 Derecho, Ambiente y Recursos Naturales website. Available at: www.dar.org.pe

32 United Nations-Water Decade Programme on Advocacy and Communication and Water Supply and Sanitation Collaborative Council. "The Human Right to Water and Sanitation" media brief. Available at: www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_media_brief.pdf

33 ITU (2017) "ICT Facts and Figures"; ITU website. Available at: www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx

34 McKinsey Global Institute (2016).

35 PIDA Transport website. Available at: www.nepad.org/content/pida-transport

36 Estache, A, Foster, V and Wodon, Q (2002) "Accounting for poverty in infrastructure reform – learning from Latin America's experience", p. 9. The World Bank, Washington DC.

37 Fretz, S (2014) "Infrastructure and Economic Growth"; dissertation of the University of St. Gallen. Available at: www1.unisg.ch/www/edis.nsf/SysLkpByIdentifier/4350/$FILE/dis4350.pdf

38 Ansar, A et al. (2016) "Does infrastructure investment lead to economic growth or economic fragility? Evidence from China", *Oxford Review of Economic Policy*, Volume 32, Number 3, pp. 360–390. Available at: https://arxiv.org/ftp/arxiv/papers/1609/1609.00415.pdf

39 McKinsey Global Institute (2016). However, private sector involvement in an infrastructure project could lead to short-term job losses for many, which may be offset over the long-term by job increases brought about by economic growth: Estache, Foster and Wodon (2002).

40 For example, see: "The ILO's Green Jobs Programme". Available at: www.ilo.org/global/topics/green-jobs/WCMS_213842/lang–en/index.htm

41 Beeferman, L (2008) "Pension Fund Investment in Infrastructure: A Resource Paper", p. 33. *Pensions and Capital Stewardship Project Labor and Worklife Program, Harvard Law School*, No. 3. Available at: https://lwp.law.harvard.edu/files/lwp/files/occasionalpapers3.pdf

42 Brauch, M (2017) "Contracts for Sustainable Infrastructure: Ensuring the economic, social and environmental co-benefits of infrastructure investment projects", IISD. Available at: www.iisd.org/library/contracts-sustainable-infrastructure-ensuring-economic-social-and-environmental-co-benefits

43 World Bank (2008) "Water and Sanitation Program, Economic Impacts of Sanitation in Cambodia, A five-country study conducted in Cambodia, Indonesia, Lao PDR, the Philippines and Vietnam under the Economics of Sanitation Initiative (ESI)", p. 32. *World Bank Research Report*. Available at: www.wsp.org/sites/wsp.org/files/publications/ESI_Cambodia_full.pdf

44 For instance, fulfilment of SDG 9 can help with SDGs 1 through 7, 11, 12, 13 and 17. See: Casier, L (2015) "Why Infrastructure is Key to the Success of the SDGs", IISD blog. Available at: www.iisd.org/blog/why-infrastructure-key-success-sdgs. It should be kept in mind that progress on one goal should not undermine the ability to make progress on other goals.

45 Business and Human Rights Resources Centre, Transform Finance and Sonen Capital (2017) "Investor Briefing: Renewable Energy Impacts on Communities". Available at: https://static1.squarespace.com/static/54cfca5be4b06d2d0d7c0f1d/t/5900e25d6b8f5bc5bcbf4f4e/1493230189401/Investor+briefing+-+Renewable+energy+-+4.26.2017.pdf; also see: Bodansky, D, Brunnée, J and Rajamani, L (2017) *International Climate Change Law*, pp. 308–309. Oxford University Press.

46 Heathcote, C (2018a) "The Infrastructure Arms Race: Why is the United States losing, and what can be done about it?", Global Infrastructure Hub blog. Available at: www.gihub.org/news/the-global-infrastructure-arms-race

47 Flyvbjerg (2014).

48 Apfalter, S and Martinez, JC (2018) "Creating Markets: Are PPPs the Answer?", World Bank Group Independent Evaluations Group blog. Available at: http://ieg.worldbankgroup.org/blog/creating-markets-are-ppps-answer

49 Hildyard, N (2016) *Licensed Larceny. Infrastructure, financial extraction and the Global South*, p. 61. Manchester University Press.

50 PIDA (2017).

51 OECD (2017a) "Getting Infrastructure Right. The Ten Key Governance Challenges and Policy Options". Available at: www.oecd.org/publications/getting-infrastructure-right-9789264272453-en.htm

52 Friedman-Rudovsky, J (2012) "The Bully from Brazil", *Foreign Policy*, 20 July. Available at: http://foreignpolicy.com/2012/07/20/the-bully-from-brazil

53 Ibid.

54 Institute of Atmospheric Physics of the Chinese Academy of Sciences (2018) "Earth's climate to increase by 4 degrees by 2080", EurekAlert! Blog. Available at: www.eurekalert.org/pub_releases/2018-05/ioap-ect052318.php

55 World Bank (2014a) "Turn Down the Heat: Confronting the New Normal", Report No. 3, November. Available at: www.worldbank.org/en/topic/climatechange/publication/turn-down-the-heat

56 Burke, M, Davis, WM and Diffenbaugh, N (2018) "Large potential reduction in economic damages under UN mitigation targets", *Nature*, 23 May. Available at: www.nature.com/articles/s41586-018-0071-9

57 Article 19 of the International Covenant on Civil and Political Rights; Article 17 of the Convention on the Rights of the Child; Article 13 of the International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families; and Article 21 of the Convention on the Rights of Persons with Disabilities.

58 World Bank (2015) "A Framework for Disclosure in Public-Private Partnerships". Available at: http://pubdocs.worldbank.org/en/773541448296707678/Disclosure-in-PPPs-Framework.pdf

59 The Observatory for Sustainable Infrastructure, written communication to OHCHR and hbs on 9 May 2018.

60 For example, see Gassner, K et al. (2009) "Does Private Sector Participation Improve Performance in Electricity and Water Distribution?" World Bank, Washington DC. Also: Marin, P (2009) "Public-Private Partnerships for Urban Water Utilities: A Review of Experience in Developing Countries", World Bank/PPIAF, Washington DC.

61 Estache, Foster and Wodon (2002).

62 World Bank (2014b) "World Bank Group's Support to Public-Private Partnerships: Lessons from Experience in Client Countries", FY02-12, at 82. Available at: http://documents.worldbank.org/curated/en/

405891468334813110/World-Bank-Group-support-to-public-private-partnerships-lessons-from-experience-in-client-countries-FY2002-12

63 Ibid.

64 Romero, MJ (2016) "What lies beneath? A critical assessment of PPPs and their impact on sustainable development", Eurodad. Available at: http://eurodad.org/files/pdf/559e6c832c087.pdf. This report cites a 2015 finding of the United Kingdom's National Audit Office (NAO) that "the effective interest rate of all private finance deals (7–8 percent) is double that of all government borrowing (3–4 percent)."

65 The EIB, in a comparison of 227 new roads built in 15 European countries, 65 of which were PPPs, found that the "ex ante cost of a PPP road to be, on average, 24 percent more expensive than a traditionally procured road". See: Powell, J (2016) "PPPs and the SDGs: Don't believe the hype", p. 6. The University of Greenwich and Public Services International Research Unit. Available at: www.world-psi.org/sites/default/files/ppps_and_the_sdgs-dont_believe_the_hype_psiru.pdf

66 UNCTAD (2015) "Trade and Development Report, 2015", p. 163. Available at: https://unctad.org/en/PublicationsLibrary/tdr2015_en.pdf

67 Romero (2016).

68 Guasch, JL (2004) "Granting and renegotiating infrastructure concessions: doing it right", The World Bank. Washington DC. Available at: http://documents.worldbank.org/curated/en/678041468765605224/Granting-and-renegotiating-infrastructure-concessions-doing-it-right

69 World Bank (2014b).

70 UNCTAD (2015) p. 163.

71 Ibid.

72 Hildyard (2016) Box 5.3, p. 79.

73 UNECA (2017) "PIDA Model Law for infrastructure development in Africa endorsed at 2017 PIDA Week in Namibia", UNECA blog. Available at: www.uneca.org/stories/pida-model-law-infrastructure-development-africa-endorsed-2017-pida-week-namibia

74 Equator Principles. Available at: http://equator-principles.com

75 IFC (2012) "Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts", footnote 12.

76 The Principles for Sustainable Insurance is an initiative of the United Nations Environment Programme Finance Initiative (UNEP FI). According to the UNEP FI's website, 61 organizations have adopted the principles. Available at: www.unepfi.org/psi

77 "Principles for Responsible Investment" (n.d.), PRI website. Available at: www.unpri.org

78 OECD (2011) "OECD Guidelines for Multinational Enterprises". Available at: www.oecd.org/corporate/mne/48004323.pdf

79 Available at: www.climatebonds.net/standard/download

80 Mercer (2016) "Building a Bridge to Sustainable Infrastructure". Available at: www.mercer.com/our-thinking/building-a-bridge-to-sustainable-infrastructure.html

81 IDB (2018) "What is Sustainable Infrastructure? A Framework to Guide Sustainability Across the Project Cycle". Available at: https://publications.iadb.org/bitstream/handle/11319/8798/What-is-Sustainable-Infrastructure-A-Framework-to-Guide-Sustainability-Across-%20the-Project-Cycle.pdf?sequence=1&isAllowed=y

82 OHCHR/CESR (2013) "Who Will be Accountable? Human Rights and the Post-2015 Development Agenda". Available at: www.ohchr.org/Documents/Publications/WhoWillBeAccountable.pdf

83 For a recent example see: Gari, A (2018) "Fishermen win as state told to pay Sh 1.76 bn over Lapsset", The Star, 2 May. Available at: www.alleastafrica.com/2018/05/01/lamu-fishers-win-lapsset-case-to-get-sh1-7bn-from-the-state, where a Kenyan court ordered compensation for fishermen affected by construction of the Lamu Port-South Sudan-Ethiopia Transport Corridor project, for lost livelihoods, environmental harms, abridgements of cultural rights and the failure of the government to consult affected populations and carry out an environmental and social impact assessment.

84 Inter-American Court of Human Rights (2017) "Advisory Opinion OC-23/17 of 15 November 2017 requested by the Republic of Colombia". Available at: http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2017/20171115_OC-2317_opinion-1.pdf

85 Also see infra 284.

86 Also see infra 282.

87 For example, the World Bank's Inspection Panel, IFC's Compliance, Advisory and Ombudsman, or the Independent Complaints Mechanism shared by some European bilaterals. The OECD National Contact Points may also hear complaints about the OECD Guidelines on Multinational Enterprises. For an evaluation of accountability mechanisms of development finance institutions, see: Daniel, C, et.al (eds.) (2016) "Glass Half Full? The State of Accountability in Development Finance", SOMO.

88 Aizawa, M (2018) "A Scoping Study of PPP Guidelines", DESA Working Paper No. 154. Available at: www.un.org/esa/desa/papers/2018/wp154_2018.pdf

89 Ministry of Economy, Trade and Industry, Japan (2016),"The 'Expanded Partnership for Quality Infrastructure' initiative directed toward the G7 Ise-Shima Summit Meeting announced". Available at: www.meti.go.jp/english/press/2016/0523_01.html

90 Al Hussein, Z (2017) "Human rights trampled in push to build infrastructure", *Miami Herald*, 7 March. Available at: www.miamiherald.com/opinion/op-ed/article136884218.html

91 UNEP/CIEL (2014) "UNEP Compendium on Human Rights and the Environment", p. 9. Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/9943/UNEP_Compendium_HRE.pdf?sequence=1&isAllowed=y

92 See OHCHR *Fact Sheet No. 2 (Rev. 1), The International Bill of Human Rights*. Available at: www.ohchr.org/Documents/Publications/FactSheet2Rev.1en.pdf.

93 Available at: http://indicators.ohchr.org

94 The six states that have signed but not ratified the ICESCR are: Comoros, Cuba, Myanmar, Palau, São Tomé and Príncipe, and United States of America, http://indicators.ohchr.org.

95 Available at: www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx

96 International Convention on the Elimination of All Forms of Racial Discrimination (1965) entered into force 1969, G.A. Res. 2106 (XX). Available at: www.ohchr.org/EN/ProfessionalInterest/Pages/CoreInstruments.aspx.

97 Convention on the Elimination of All Forms of Discrimination against Women (1979) entered into force 1981, G.A Res. 34/180. Available at: www.ohchr.org/Documents/ProfessionalInterest/cedaw.pdf.

98 Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1984) entered into force 1987, G.A. Res. 39/46. Available at: www.ohchr.org/Documents/ProfessionalInterest/cat.pdf.

99 Convention on the Rights of the Child (1989) entered into force 1990, G.A Res. 45/25. Available at: www.ohchr.org/Documents/ProfessionalInterest/crc.pdf.

100 International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (1990) entered into force 2003, G.A Res. 45/158. Available at: www.ohchr.org/Documents/ProfessionalInterest/cmw.pdf.

101 International Convention for the Protection of All Persons from Enforced Disappearance (2006) entered into force 2010, G.A. Res. 61/448. Available at: https://treaties.un.org/doc/Publication/MTDSG/Volume%20I/Chapter%20IV/IV-16.en.pdf.

102 The Convention on the Rights of Persons with Disabilities (2006) entered into force 2008, G.A. Res. 61/106. Available at: www.ohchr.org/EN/HRBodies/CRPD/Pages/ConventionRightsPersonsWithDisabilities.aspx.

103 Available at: http://bangkok.ohchr.org/programme/other-regional-systems.aspx.

104 For example, see United Nations Development Group (2016) "Guidance Note on Human Rights for Resident Coordinators and United Nations Country Teams". Available at: https://undg.org/wp-content/uploads/2016/10/UNDG-Guidance-Note-on-Human-Rights-for-RCs-and-UNCTs-final.pdf.

105 Available at: www.ilo.org/declaration/lang–en/index.htm.

106 Available at: www.ilo.org/global/standards/lang–en/index.htm.

107 Available at: www.ohchr.org/EN/ProfessionalInterest/Pages/UniversalHumanRightsInstruments.aspx.

108 2030 Agenda, including Goals 5, 10 and 16. Para. 10 states that the agenda is grounded in human rights and should be guided by existing international law, and paras. 19 and 20 refer to the international human rights framework.

109 Addis Agenda, paras. 1, 5, 6, 18, 37 (referring specifically to the United Nations Guiding Principles on Business and Human Rights, the United Nations Convention on the Rights of the Child and ILO labour

standards); 41 (women's rights and gender equality); 75 (encouraging MDB safeguard policies on human rights and gender); 111 (human rights of migrants); 117 (indigenous peoples' cultural heritage); and 126 (encouraging data disaggregation in line with human rights instruments).

110 See p. 25.

111 Joint World Bank and United Nations Event on Human Rights and Development to Commemorate the 70th Anniversary of the Universal Declaration on Human Rights, World Bank, Washington DC, 17 April 2018; keynote address of the former United Nations High Commissioner for Human Rights, Zeid Ra'ad Al Hussein.

112 United Nations and World Bank (2017) pp. 3, 17, 28 and 32.

113 For evidence of the positive impacts of human rights on a range of issues and sectors in development, see the publications and reports of the World Bank's Nordic Trust Fund. Available at: www.worldbank.org/en/programs/nordic-trust-fund.

114 IDB (2017) "Lessons from Four Decades of Infrastructure Project-Related Conflicts in Latin America", p. 4. Available at: https://publications.iadb.org/handle/11319/8502.

115 Ibid. The report notes (at 4) that "even though in certain sectors firms have changed their approach and implemented good practices for anticipating and managing conflicts, the implementation of such practices in most infrastructure projects is still limited. Many firms choose to remain unresponsive to conflicts, or do not respond adequately and on time. In most cases, risk and conflict management systems are ignored while community engagement is regarded as a secondary requirement which needs to be fulfilled in order to comply with regulations. Their crucial function for preventing conflicts is often not seen."

116 Davis, R and Franks, D (2014) "Costs of Company-Community Conflict in the Extractive Sector". CSR Initiative at the Harvard Kennedy School. Available at: www.shiftproject.org/resources/publications/costs-company-community-conflict-extractive-sector; Stevens, P et.al (2013), "Conflict and Coexistence in the Extractive Industries", Chatham House Report. Available at: www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/chr_coc1113.pdf

117 Elliott, L (2017) "World's eight richest people have same wealth as poorest 50%", *The Guardian*, 15 January. Available at: www.theguardian.com/global-development/2017/jan/16/worlds-eight-richest-people-have-same-wealth-as-poorest-50

118 G20 (2015) Leaders' Communiqué. Available at: www.g20.utoronto.ca/2015/151116-communique.html

119 G20 (2016) Action Plan on the 2030 Agenda for Sustainable Development. Available at: www.b20germany.org/fileadmin/user_upload/G20_Action_Plan_on_the_2030_Agenda_for_Sustainable_Development.pdf

120 Ostry, J, Berg, A and Tsangarides, C (2014) "Redistribution, Inequality and Growth", IMF. Available at: www.imf.org/external/pubs/ft/sdn/2014/sdn1402.pdf

121 Balakrishnan, R and Heintz, D (2015) "How inequality threatens all human rights". Open Democracy Blog. Available at: www.opendemocracy.net/openglobalrights/radhika-balakrishnan-james-heintz/how-inequality-threatens-all-human-rights

122 This does not necessarily mean perfect equality of outcomes, but rather, that outcomes (in addition to opportunities) between population groups should be reduced over time. "Substantive equality" means judging opportunities and outcomes *substantively*, ensuring that appropriate laws, policies and public investments are instituted to identify and address the underlying causes of discrimination, exclusion and inter-generational inequalities. "Formal equality", by contrast, refers to the need to treat those who are similarly situated alike. Applying "formal" equality to those who are unequally situated can have perverse and unjust effects. The idea of "substantive equality", which is codified in international human rights law, complements and corrects "formal equality," in this sense.

123 Target 17.18 in the 2030 Agenda.

124 OHCHR, "International Human Rights Law". Available at: www.ohchr.org/EN/ProfessionalInterest/Pages/InternationalLaw.aspx

125 Committee on Economic, Social and Cultural Rights (1990), General Comment No. 3: The nature of States parties' obligations (article 2, para. 1), United Nations Doc. E/1991/23. Available at: www.ohchr.org/en/hrbodies/cescr/pages/cescrindex.aspx

126 Committee on the Rights of the Child, General Comment 5, United Nations Doc. CRC/CG/2003/5. Available at: https://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CRC%2fGC%2f2003%2f5&Lang=en; also see General Comments of the Committee on the Rights of the Child and general measures of implementation of the Convention. Available at: www.ohchr.org/EN/HRBodies/CRC/Pages/CRCIndex.aspx. Also see: UNICEF (2007) "Implementation Handbook for the Convention on the Rights of the Child". Available at: www.unicef.org/publications/files/Implementation_Handbook_for_the_Convention_on_the_Rights_of_the_Child_Part_1_of_3.pdf

127 CESCR (1990), General Comment 3.

128 OHCHR (2015) *Principles for Responsible Contracts: Integrating the Management of Human Rights Risks into State-Investor Contract Negotiations – Guidance for Negotiators*. United Nations publication. Sales No. E.15.XIV.5. Also see Box 15.

129 OHCHR (2014) *Frequently Asked Questions about the Guiding Principles on Business and Human Rights*. United Nations publication. Sales No. E.14.XIV.6. See also General Comment No. 24 of the Committee on Economic, Social and Cultural Rights (2017) United Nations Doc. E/C.12/GC/24.

130 Principle 1 of the Declaration reads: "Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated."

131 United Nations Human Rights Special Procedures (2018) "Framework Principles on Human Rights and the Environment". Available at: www.ohchr.org/Documents/Issues/Environment/SREnvironment/FrameworkPrinciplesUserFriendlyVersion.pdf

132 For example, see: Bodansky, Brunnée and Rajamani (2017); also Carlarne, C, Gray, K and Tarasofsky, R (eds.) (2015) "Human Rights Principles and Climate Change". *Oxford Handbook of International Climate Change Law*. Available at: www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRClimateChangeIndex.aspx; McInerney-Lankford, S, Darrow, M and Rajamani, L (2011) "Human Rights and Climate Change. A Review of the International Legal Dimensions". Available at: http://documents.worldbank.org/curated/en/903741468339577637/pdf/613080PUB0Huma158344B09780821387207.pdf.

133 Zeid, A (2016) "Zeid urges climate change ambition as Paris deal enters into force", OHCHR Blog, 3 November. Available at: www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=20822&LangID=E

134 Rigaud, K et. al (2018) "Groundswell: Preparing for Internal Climate Migration", The World Bank, Washington DC. Also see: *The Economist* (2018) "Why Climate Migrants Do Not Have Refugee Status"; *The Economist Blog*, 3 March. Available at: www.economist.com/the-economist-explains/2018/03/06/why-climate-migrants-do-not-have-refugee-status. The Economist notes that environmental migrants are not covered by the 1951 Geneva Convention Relating to the Status of Refugees, which is designed to protect those fleeing persecution, war or violence. The United Nations agencies most involved in refugee rights, the United Nations Refugee Agency (UNHCR) and the United Nations Development Programme, agree that the term "climate refugee" should not be used to describe those displaced for environmental reasons.

The UNHCR already struggles to provide adequate support for the world's 22.5 million refugees from war and persecution. During the Syrian refugee crisis, it admitted to being "stretched to the limit". If the UNHCR broadens its definition of "refugee" to support an entirely new category, it is unclear whether the political will exists to provide the necessary funding. See: Why Climate Migrants Do Not Have Refugee Status.

135 WHO (2016) "Climate Change and Health Fact Sheet".

136 Samet, J (2009) "Adapting to Climate Change – Public Health". Available at: www.rff.org/publications/reports/adapting-to-climate-change-public-health

137 United Nations Human Rights Special Procedures (2018).

138 Based on a lecture by John Knox: "Climate change – the greatest threat to human rights in the 21st century". Available at: https://vimeo.com/175398522

139 See supra 83 for a recent example of a court awarding damages to communities affected by an infrastructure project for the failure by a government to carry out an ESIA.

140 Lechner, A et al. (2017) "A Socio-Ecological Approach to GIS Least-Cost Modelling for Regional Mining Infrastructure Planning: A Case Study from South-East Sulawesi, Indonesia". Resources 2017. Available at: www.mdpi.com/2079-9276/6/1/7

141 United Nations Permanent Forum on Indigenous Issues "Factsheet". Available at: www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf

142 United Nations (2008) "United Nations Declaration on the Rights of Indigenous Peoples". Available at: www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

143 ILO (2010) "ILO Declaration on Fundamental Principles and Rights at Work and its Follow-Up". Available at: http://ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/publication/wcms_467653.pdf

144 Hildyard (2016).

145 The failure by a state to regulate SEZs may constitute a human rights violation: General Comment No. 24 of the Committee on Economic, Social and Cultural Rights (2017) United Nations Doc. E/C.12/GC/24, para. 18.

146 Schmurr, T (2014) "Mainstreaming Road Safety into Transport Projects", World Bank Blog, 13 March. Available at: www.worldbank.org/en/topic/transport/brief/road-safety-at-the-world-bank

147 World Bank (2010) "Mainstreaming Gender in Road Transport: Operational Guidance for World Bank Staff". Available at: http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053-1229359963828/tp-28-Gender.pdf

148 Grieger (2016) and World Bank (2010).

149 See the website of the United Nations Special Rapporteur on Human Rights Defenders. Available at: www.ohchr.org/EN/Issues/SRHRDefenders/Pages/SRHRDefendersIndex.aspx

150 Front Line Defenders (2017) "Annual Report on Human Rights Defenders at Risk in 2017". Available at: www.frontlinedefenders.org/sites/default/files/annual_report_digital.pdf

151 Al Hussein (2017).

152 Davis and Franks (2014); Stevens, Lahn and Lee (2013).

153 The United States of America designated 16 critical infrastructure sectors whose assets, systems and networks, whether physical or virtual, are considered so vital to the country that their incapacitation or destruction would have a debilitating effect on security, national economic security, or national public health or safety. The United States of America intends to strengthen the security and resilience of its critical infrastructure against both physical and cyber threats. Available at: www.dhs.gov/critical-infrastructure-sectors

154 For example, the Development Bank of Latin America or CAF does not have a disclosure policy. CAF actively supports infrastructure projects and plans in the region.

155 IFC Sustainability Policy (para. 53) states: "When IFC invests in projects involving the final delivery of essential services, such as the retail distribution of water, electricity, piped gas, and telecommunications, to the general public under monopoly conditions, IFC encourages the public disclosure of information relating to household tariffs and tariff adjustment mechanisms, service standards, investment obligations, and the form and extent of any ongoing government support. If IFC is financing the privatization of such distribution services, IFC also encourages the public disclosure of concession fees or privatization proceeds. Such disclosures may be made by the responsible government entity (such as the relevant regulatory authority) or by the client." Available at: www.ifc.org/wps/wcm/connect/7540778049a792dcb87efaa8c6a8312a/SP_English_2012.pdf?MOD=AJPERES

156 See AIIB "Public Information Policy", www.aiib.org/en/policies-strategies/public-information/policy/index.html, compared with OHCHR (2018) "Recommendations for AIIB Policy on Public Information", available at www.ohchr.org/Documents/Issues/Development/DFI/RecommendationsAIIBPolicy.pdf

157 Wachenfeld, M, Dowell-Jones, M and Aizawa, M (2016) "Human Rights and Sustainable Finance: Exploring the Relationship", UNEP. Available at: http://unepinquiry.org/publication/human-rights. A number of countries include consumer protection as a single protected value in their constitutions (e.g. Brazil, Lithuania, Serbia, Thailand) while others recognize particular consumer "rights" (e.g. Argentina, Portugal, Poland, Timor-Leste). See also: Devenney, J and Kenny, M (eds.) (2012), *European Consumer Protection*, Chapter 17. Cambridge University Press.

158 Committee on Economic, Social and Cultural Rights (2003) General Comment 15. The right to water. Available at: www2.ohchr.org/english/issues/water/docs/CESCR_GC_15.pdf

159 OHCHR and WHO (2008) *Fact Sheet No. 31, The Right to Health*. Available at: www.ohchr.org/Documents/Publications/Factsheet31.pdf

160 Committee on Economic, Social and Cultural Rights (1999) General Comment No. 13: The right to education (Article 13). Available at: www.ohchr.org/en/hrbodies/cescr/pages/cescrindex.aspx

161 United Nations-Water Decade Programme on Advocacy and Communication and Water Supply and Sanitation Collaborative Council. "The Human Right to Water and Sanitation. Media Brief". Available at: www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_media_brief.pdf

162 Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation. "'Good Practices' Related to Access to Safe Drinking Water and Sanitation". Available at: www2.ohchr.org/english/issues/water/iexpert/docs/questionnaires2010/BDA_Germany_Implementing_the_right_to_water_Kenya_GTZ.pdf

163 Articles 11 and 12 of CESCR; Article 5 of the Convention on the Elimination of All Forms of Racial Discrimination; Articles 2, 3, 12, 13, and 14(2)(h) of the Convention on the Elimination of All Forms of Discrimination Against Women; and Articles 6 and 24 of the Convention on the Rights of the Child.

164 For example, see Langford, M (2005) "The Right to Water in the South African Constitution", in Brand, D and Heyns, C (eds), Socio-Economic Rights in South Africa.

165 Williams, M (2017) "Would Trump's Infrastructure Plan Fix America's Cities?", *The Atlantic*, 7 January. Available at: www.theatlantic.com/politics/archive/2017/01/trump-infrastructure-cities/512432; also see two United Nations Special Rapporteurs' reports on the problem of water disconnection in Baltimore MD and Detroit MI, US, respectively, disproportionately affecting poor African-American households who could not afford to pay the water bills: Available at: https://spcommreports.ohchr.org/TMResultsBase/DownLoadPublicCommunicationFile?gId=19482 and https://spcommreports.ohchr.org/TMResultsBase/DownLoadPublicCommunicationFile?gId=21480. See also United Nations Special Rapporteur on extreme poverty and human rights, United Nations Doc. A/HRC/38/33/Add.1 (2018), paras. 59 and 69, on water affordability and access problems in certain states and for undocumented migrants.

166 Estache, Foster and Wodon (2002) pp. 31, 37.

167 Ibid.

168 Ibid.

169 Allaoui, M (2014). "Comment intégrer le contenu du droit humain à l'eau dans les accords PPP". Available at: www.waterlex.org/new/wp-content/uploads/2014/11/Droit-eau-PPP.pdf

170 Estache, Foster and Wodon (2002) p. 16.

171 Ibid.

172 Vidal, J (2015) "Water privatization: a worldwide failure?", *The Guardian*, 20 January. Available at: www.theguardian.com/global-development/2015/jan/30/water-privatisation-worldwide-failure-lagos-world-bank

173 Lehrman, CK and Baker-Branstetter, S (2016) "The Fees that Raise Your Electric Bill Even When You Use Less Energy", Consumer Reports Blog, 7 March. Available at: www.consumerreports.org/consumer-protection/fees-that-raise-your-electric-bill-even-when-you-use-less-energy

174 World Bank (2010).

175 The Economic Community of West African States (ECOWAS) has a draft directive that mandates gender assessments in energy infrastructure projects. It is in the process of being validated through stakeholder consultations. Available at: www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/ECOWAS_Policy_for_Gender_Mainstreaming_in_Energy_Access.pdf

176 UNDESA (2016) "State of the World's Indigenous Peoples. Indigenous Peoples Access to Health Services". Available at: www.un.org/esa/socdev/unpfii/documents/2016/Docs-updates/SOWIP_Health.pdf

177 Ijjasz-Vasques, E, Gill, M and Duchicela, LF (2017) "Three Reasons Why We Should Care About Indigenous Peoples", World Bank Blog. Available at: https://blogs.worldbank.org/voices/three-reasons-why-we-should-all-care-about-indigenous-peoples

178 General Comment No. 24 of the United Nations Committee on Economic, Social and Cultural Rights, United Nations Doc. E/C.12/GC/24 (2017), para. 9.

179 ICRPD (2017) Articles 2 and 3. See also General Comment No. 24 of the United Nations Committee on Economic, Social and Cultural Rights, United Nations Doc. E/C.12/GC/24, para. 22.

180 General Comment No. 24 of the United Nations Committee on Economic, Social and Cultural Rights, United Nations Doc. E/C.12/GC/24 (2017), paras 15–18.

181 World Bank (2014b).

182 Flyvbjerg (2014).

183 For example, see Sector-Wide Impact Assessments carried out by the Myanmar Centre for Responsible Business. Available at: https://www.myanmar-responsiblebusiness.org/swia. Also see NomoGaia's human rights impact assessment tools, available at: http://nomogaia.org/tools; and the human rights risk analysis tool by the Coalition for Human Rights in Development, available at: http://rightsindevelopment.org/our-work/hrdd

184 Civicus publishes "Enabling Environment National Assessment", a research tool that assesses the legal, regulatory and policy environment for civil society. Its 2016 assessment reviewed 19 countries. Available at: www.civicus.org/index.php/eena-country

185 OECD (2017a). Figure 3.9 indicates that of the 25 countries surveyed, 16 responded in relation to the question of whether the budget documentation or other published material contain an assessment with respect to contingent liabilities derived from PPPs and concessions. While 11 countries responded that contingent liabilities are listed and priced, four said they are listed but not priced, and one responded that they are not.

186 The IMF and the World Bank have created a PPP Fiscal Risk Framework Model (PFRAM) as a possible common methodology for accounting for public sector's contingent liabilities in PPPs. Available at: www.imf.org/external/np/fad/publicinvestment/pdf/PFRAMmanual.pdf. The International Public Sector Accounting Standards Board, Eurostat and the OECD have also issued guidance. However, it is not clear whether these initiatives are coordinated.

187 Romero (2016).

188 Powell (2016).

189 United Nations Economic Commission for Europe (2008) "Guidebook on Promoting Good Governance in Public-Private Partnerships". Available at: www.unece.org/index.php?id=2147

190 Queyranne, M (2014) "Managing Fiscal Risks from Public-Private Partnerships (PPPs)". Available at: www.imf.org/external/np/seminars/eng/2014/CMR/pdf/Queyranne_ENG.pdf

191 McKinsey Global Institute (2017) "Reinventing Construction. A route to higher productivity". Available at: www.mckinsey.com/~/media/McKinsey/Industries/Capital%20Projects%20and%20Infrastructure/Our%20Insights/Reinventing%20construction%20through%20a%20productivity%20revolution/MGI-Reinventing-Construction-Executive-summary.ashx

192 Matthews, P (2016) "This is why construction is so corrupt", World Economic Forum. Available at: www.weforum.org/agenda/2016/02/why-is-the-construction-industry-so-corrupt-and-what-can-we-do-about-it

193 Hurley, J, Morris, S and Portelance, G (2018) "Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective", CGD Policy Paper 121 (March). Available at: www.cgdev.org/sites/default/files/examining-debt-implications-belt-and-road-initiative-policy-perspective.pdf

194 Williams (2017).

195 For example, the World Bank's Environmental and Social Framework, ESS1, para. 23; IFC Performance Standard 1, Para. 8.

196 World Bank (2014c) "Understanding CO_2 Emissions from the Global Energy Sector", LiveWire. Available at: http://documents.worldbank.org/curated/en/873091468155720710/pdf/851260BRI0Live00Box382147B00PUBLIC0.pdf. Furthermore, even though the internet, geographic information systems (GIS), smartphones, satellite imaging, remote sensing and data analytics powered by the ICT sector are expected to help with greenhouse gas emissions reduction, the ICT sector itself has a significant greenhouse gas footprint. Data storage facilities consume significant amount of energy. As a result, greenhouse gas emissions are one of the top environmental impacts associated with the operation of certain ICT facilities. Available at: www.parliament.uk/documents/post/postpn319.pdf

197 For further detail on climate impacts on various infrastructure assets, see: World Bank (2016) "Emerging Trends in Mainstreaming Climate Resilience in Large Scale, Multi-sector Infrastructure PPPs". Available at: https://ppiaf.org/activity/global-emerging-trends-mainstreaming-climate-resilience-large-scale-multi-sector

198 For example, see paras. 8 and 9 of IFC Performance Standard 4 on Community Health, Safety and Security, and para. 25 of IFC Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources. Available at: www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES

199 A World Bank review of climate risks for infrastructure in Africa used scenario analysis and probabilistic analysis to value different investment options. See: Cervigni, R (ed.) (2015) "Enhancing the Climate Resilience of Africa's Infrastructure: The Power and Water Sectors". The World Bank. Washington DC.

200 Global Witness (2010) "Shifting Sand: How Singapore's demand for Cambodian sand threatens ecosystems and undermines good governance". Available at: www.globalwitness.org/en/archive/shifting-sand-how-singapores-demand-cambodian-sand-threatens-ecosystems-and-undermines-good

201 See Principles 17–21 of the UNGPs for the key components of HRDD by business enterprises.

202 NortonRoseFulbright (2016) "Significant number of businesses neglect potential human rights risks". Available at: www.nortonrosefulbright.com/uk/news/143391/significant-number-of-businesses-neglect-potential-human-rights-risks

203 Although the Basel Committee of Banking Supervisors, the standard setting body that proposed Basel III Accord, did not carry out a regulatory impact assessment of Basel III with an explicit socio-economic lens, New Zealand and South Africa conducted such studies, each of them using a different methodology, for national financial regulatory purpose. For more details, see: Aizawa, M, Bradlow, D and Wachenfeld, M (2018) "International Financial Regulatory Standards and Human Rights: Connecting the Dots", *Manchester Journal of Economic Law*. Volume 15 Issue 1 (April).

204 For example, the United Kingdom Modern Slavery Act; 2017 French Due Diligence Law, under which large companies are expected to develop, implement, and publish their due diligence plans (though not specific to human rights), available at: www.assemblee-nationale.fr/14/ta/ta0924.asp. Also see Senegal's Mining Code (2016), which requires mining companies to respect, protect and implement human rights in the communities in areas affected by operations. For a commentary on this law, see: Finan, P and Fall, A (2017) "Senegal's New Mining Code Following Regional Trends", DLA Piper Blog, 24 March. Available at: www.dlapiper.com/en/africa/insights/publications/2017/03/senegals-new-mining-code

205 See: European Parliament (2016) "Study: Implementation of the United Nations Guiding Principles on Business and Human Rights". Available at: www.europarl.europa.eu/thinktank/en/document.html?reference=EXPO_STU(2017)578031; and OECD (2018) "Due Diligence Guidance for Responsible Business Conduct". Available at: www.oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm

206 Simma, B (2011) "Foreign Investment Arbitration: A Place for Human Rights?" I*nternational and Comparative Law Quarterly*, Vol. 60 (July) 573–596 at 1, quoting from Toral, M and Schultz, T (2010), "The State, a Perpetual Respondent in Investment Arbitration? Some Unorthodox Considerations", in Waibel, M et al (eds) (2010) "The Backlash Against Investment Arbitration: Perceptions and Reality", Kluwer Law, The Hague, 577–602.

207 Mann, H (2008) "International Investment Agreements, Business and Human Rights: Key Issues and Opportunities. International Institute for Sustainable Development", p. 9. IISD. Available at: www.iisd.org/pdf/2008/iia_business_human_rights.pdf; also see: UNCTAD (2018a) "World Investment Report 2018. Investment and New Industrial Policies", p. 111. Available at: https://worldinvestmentreport.unctad.org/world-investment-report-2018/chapter-4-investment-and-new-industrial-policies/#Investment-policies-need-to-evolve-with-industrial-policies

208 It is difficult to demonstrate the benefits (and costs) associated with IIAs with empirical evidence, in part because full data is not available. See: Pohl, J (2018) "Societal benefits and costs of International Investment Agreements. A critical review of aspects and available empirical evidence. OECD Working Paper on International Investment 2018/01". Others have pointed out that IIAs are not optimal to achieve any of the stated objectives (such as increasing investment, depoliticizing investment disputes, affirming rule of law or providing compensation to aggrieved investors). See: Johnson, L, Guven, B and Coleman, J (2017) "Investor-State Dispute Settlement: What Are We Trying to Achieve? Does ISDS Get us There?", CCSI Blog, 11 December. Available at: http://ccsi.columbia.edu/2017/12/11/investor-state-dispute-settlement-what-are-we-trying-to-achieve-does-isds-get-us-there

209 UNCTAD's Work Programme on International Investment Agreements. UNCTAD website. Available at: https://unctad.org/en/pages/publications/Intl-Investment-Agreements—Issues-Note.aspx.

210 Under the Energy Charter Treaty, Vattenfall mounted a EUR 4.7 billion claim against Germany relating to Germany's decision to accelerate the phase-out of nuclear power after the Fukushima nuclear plant disaster. See commentary on *Vattenfall v. Germany*, available at: www.iisd.org/project/vattenfall-v-germany

211 Johnson, L (2014) "The Impact of Investment Treaties on Governance of Private Investment in Infrastructure", Chapter III. Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS 2014/32. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2411575##

212 *Abaclat v. Argentina*, ICSID Case No. ARB/07/5, Consent Award, 29 December 2016. *Deutsche Bank AG v. Democratic Socialist Republic of Sri Lanka*, ICSID Case No. ARB/09/2, Award, Oct. 31, 2012. For analysis, see Johnson (2014) at 9–10.

213 "There are therefore two types of 'expropriation'. The first involves direct expropriation and is usually formalized in an expropriation decree or law. Expropriation of this type is undertaken against one or several investments. Expropriation, or nationalization, can also be against several investments in one economic sector. The second involves indirect expropriation. This type of expropriation may result from measures that a state takes to regulate economic activities within its territory, even where such regulation is not directly targeted at an investment. In this case, legal title to the investment is not affected." Nikièma, S (2012) "Best Practices Indirect Expropriation"; International Institute for Sustainable Development. IISD. Available at: www.iisd.org/pdf/2012/best_practice_indirect_expropriation.pdf

214 Johnson (2014) Chapter II.

215 Investment Disputes Navigator, UNCTAD Investment Policy Hub. Available at: https://investmentpolicyhubold.unctad.org/ISDS

216 UNCTAD (2017a) "Special Update on Investor-State Disputes Settlement: Facts and Figures", *IIA Issues Note*, Issue 3, November. Available at: https://unctad.org/en/PublicationsLibrary/diaepcb2017d7_en.pdf

217 Johnson (2014) p. 2.

218 UNCTAD (2017b) "UNCTAD's Reform Package for the International Investment Regime", p. 8. Available at: http://investmentpolicyhub.unctad.org/Upload/Documents/Reform_Package_web.pdf

219 Under the ICSID Convention, states may bring claims against investors; however, only one percent of ICSID claims were brought by states as of 2010. See: Laborde, G (2010). "The Case for Host State Claims in Investment Arbitration", *Journal of International Dispute Settlement*, Vol. 1, No. 1, pp. 97–122, at 100. States can also initiate ISDS claims against investors under state-investor agreements.

220 In addition, law firms actively counsel clients to structure investments to maximize treaty protections. See, for example: Carabine, N and Courtice, S (2018) "Belt and Road Practical Guide Outbound investment – Managing risks and exiting with grace", "Tip 4." Available at: www.kwm.com/~/media/library/Files/Knowledge/Downloads/hk/2018/02/06/kwm-belt-and-road-outbound-investment-managing-risks.ashx

221 Columbia Center on Sustainable Investment (2018) "Input to the United Nations Working Group on Business and Human Rights regarding guidance on human rights defenders and the role of business". Available at: http://ccsi.columbia.edu/files/2016/05/Input-regarding-guidance-on-human-rights-defenders-and-the-role-of-business-REV.pdf

222 Allee, T and Peinhardt, C (2011) "Contingent Credibility: The Impact of Investment Treaty Violations on Foreign Direct Investment", 65 *International Organization* 401.

223 UNCTAD (2017a).

224 See, for example: Boston University (2016) "Trade in the Balance: Reconciling Trade and Climate Policy", Chapter 6. Available at: http://ccsi.columbia.edu/files/2016/12/Trade-in-the-Balance-International-Investment-Agreements-Impacts-on-Climate-Change-Policies-in-India-China-and-Beyond-Nov-2016.pdf

225 Available at: https://icsid.worldbank.org/en/Pages/about/Amendment-of-ICSID-Rules-and-Regulations.aspx; however, ICSID does not mandate transparency in the same way that UNCITRAL does.

226 UNICTRAL (2018) "UNICTRAL Arbitration Rules". Available at: www.uncitral.org/uncitral/en/uncitral_texts/arbitration/2010Arbitration_rules.html

227 Commission, J (2016) "How Much Does an ICSID Arbitration Cost? A Snapshot of the Last Five Years", Kluwer Arbitration Blog, citing 2012 OECD data. Other data sources indicated slightly lower averages. Available at: http://kluwerarbitrationblog.com/2016/02/29/how-much-does-an-icsid-arbitration-cost-a-snapshot-of-the-last-five-years. Also Pohl (2018) citing Hodgson, M (2014) "Counting the costs of investment treaty arbitration", p. 4. *Global Arbitration Review*, 24 March.

228 However, other jurisdictions permit states to receive third-party funding. In the *Philip Morris v. Uruguay* cases referred to below, Uruguay received financing from Bloomberg's Tobacco Free Kids. Available at: www.tobaccofreekids.org/media/2016/uruguay_decision_2016_materials

229 Model Text for the Indian BIT refers to domestic courts as the first recourse and ISDS as the last option and provides for appeal/review mechanism, among other notable provisions. Available at: http://investmentpolicyhub.unctad.org/Download/TreatyFile/3560; in addition, Brazil has a mechanism that only permits state-state dispute resolution with a heavy focus on mediation. Available at: www.iisd.org/itn/2017/06/12/brazils-cooperation-facilitation-investment-agreements-cfia-recent-developments-jose-henrique-vieira-martins. For a review of very recent investor obligations in treaties see: Coleman, J et. al, "International Investment Agreements, 2015–2016: A Review of Trends and New Approaches" in Sachs, L and Johnson, L (eds.) (2018) *Yearbook on International Investment Law and Policy 2015–2016*, Oxford University Press; and Johnson, L, Sachs, L and Coleman, J (2016) "International Investment Agreements, 2014: A Review of Trends and New Approaches" in Bjorklund, A (ed.) 2016, Yearbook on International Investment Law and Policy 2014–2015, Oxford University Press.

230 See Public Citizen "Investor-State Dispute Settlement (ISDS): Extraordinary Corporate Power in 'Trade' Deals". Available at: www.citizen.org/our-work/globalization-and-trade/investor-state-system

231 Debrauw, Blackstone, Westbroek (2018) "New model treaty to replace 79 existing Dutch bilateral investment treaties", Debrauw, Blackstone, Westbroek Blog, 17 May. Available at: www.debrauw.com/newsletter/new-model-treaty-to-replace-79-existing-dutch-bilateral-investment-treaties

232 In September 2015, the European Commission proposed a new Investment Court System for its negotiations on the Transatlantic Trade and Investment Partnership (TTIP) and ongoing trade and investment agreement negotiations. The EU Trade Commissioner has described the ICS as a way to help "enshrine government's right to regulate". The Commission also announced that it will start work on a permanent International Investment Court, together with other countries. In November 2015, the EU released its proposed text for the investment chapter of TTIP including a standing investment court and appellate tribunal. In December 2015, the EU and Vietnam concluded negotiations on a free trade agreement that provides for a standing investment court and appellate tribunal. On 30 October 2016, Canada and the EU and its Member States signed the Comprehensive Economic and Trade Agreement (CETA) which also provides for a standing investment tribunal and appellate tribunal: Gaukrodger, D (2017) "The Balance between investor protection and the right to regulate in investment treaties: A scoping paper", OECD Working Papers on International Investment, No. 2017/02. Available at: www.oecd-ilibrary.org/finance-and-investment/the-balance-between-investor-protection-and-the-right-to-regulate-in-investment-treaties_82786801-en.

233 Court of Justice of the European Union Press Release No 26/18. Available at: https://curia.europa.eu/jcms/upload/docs/application/pdf/2018-03/cp180026en.pdf.

234 For a succinct summary of these initiatives, see Public Citizen's ISDS quote sheet, available at: www.citizen.org/wp-content/uploads/selected_statements_and_actions_against_isds_1.pdf as well as many other resources on their website.

235 For a strong critique of the ISDS system, see: Kahale III, G (2018) "Rethinking ISDS", *Transnational Dispute Management*, February. Available at: www.curtis.com/siteFiles/Publications/Rethinking%20ISDS.pdf; also see: Johnson, L et. al. (2018) "Costs and benefits of Investment Treaties: Practical Considerations for States", CCSI Policy Paper. Available at: http://ccsi.columbia.edu/files/2018/04/Cost-and-Benefits-of-Investment-Treaties-Practical-Considerations-for-States-ENG-mr.pdf

236 Mann (2008).

237 Vienna Convention on the Law of Treaties, art. 31(3)(c); Mclachlan, C (2005) "The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention", *International and Comparative Law Quarterly*, 54(2), 279–320. doi:10.1093/iclq/lei001; International Law Commission (2006) "Fragmentation of International Law: Difficulties Arising from the Diversification Expansion of International Law, Report on the Study Group of the International Law Commission" (prepared by Martti Koskenniemi), para. 37, United Nations Doc. A/CN.4/L.682 (13 Apr. 2006); Simma, B (2011) p. 584.

238 *Sawhoyamaxa Indigenous Community v. Paraguay*, Inter-American Ct. of Human Rights, Judgment of Mar. 29, 2006 (Merits, Reparations and Costs), Para. 140.

239 Such as Mann (2008). See also several other outputs of such inquiries listed on the investment page of Business and Human Rights Resources Center: www.business-humanrights.org/en/special-representative/un-secretary-generals-special-representative-on-business-human-rights/materials-by-topic/investment

240 Black's Law Dictionary.

241 See, for example, the Committee on Economic, Social and Cultural Rights, General Comment No. 3 (1990) "Nature of states parties' obligations under the Covenant".

242 Gaukrodger (2017).

243 Ibid., p. 4.

244 Ibid. quoting Stiglitz, J (2015) "The Secret Corporate Takeover", Project Syndicate Blog 13 May. Available at: www.project-syndicate.org/commentary/us-secret-corporate-takeover-by-joseph-e–stiglitz-2015-05?barrier=accesspaylog

245 For conceptual foundations and methodological guidance for HRIAs in this context, see Human Rights Council (2011) "Guiding principles on human rights impact assessments of trade and investment agreements", A/HRC/19/59/Add.5. Available at: https://undocs.org/A/HRC/19/59/Add.5; CESCR General Comment No. 24 reinforces those guiding principles (see Para. 13). Available at: www.ohchr.org/en/hrbodies/cescr/pages/cescrindex.aspx. The guiding principles can be supplemented by other guidance; for example, see a more practice-oriented (though trade-focused) guidance: UNECA and Friedrich-Ebert-Stiftung (2017) "The Continental Free Trade Area (CFTA) in Africa – A Human Rights Perspective". Available at: www.ohchr.org/Documents/Issues/Globalization/TheCFTA_A_HR_ImpactAssessment.pdf

246 See, for example, Van Harten, G and Scott, D (2015) "Investment Treaties and the Internal Vetting of Regulatory Proposals: A Case Study from Canada", *Osgoode Legal Studies Research Paper* No. 26/2016, where a change in an internal regulatory process for environmental regulation was attributed to the threat of ISDS. Available at: https://ssrn.com/abstract=2700238 or http://dx.doi.org/10.2139/ssrn.2700238

247 ICSID Case No. ARG/10/7.

248 Para. 304 noted that the Framework Convention on Tobacco Control was "one of the international conventions to which Uruguay is a party guaranteeing the human right to health."

249 But the tribunal wrongly asserted that Uruguay was party to the European Convention on Human Rights. For a critique and cautionary note on the incorporation of comparative (European) human rights law in investment arbitration, see Alvarez, J, "The Use (and Misuse) of European Human Rights Law in Investor-State Dispute Settlement", in Ferrari, F (ed.) (2017) *The Impact of EU Law on International Commercial Arbitration* (Jurisnet, LLC).

250 ICSID Case No. ARG/10/7, p. 123.

251 *Urbaser v. Argentina*, Id., para. 1162.

252 Article 29 of the UDHR provides that everyone has duties to the community. Article 30 UDHR provides that nothing in the declaration may be interpreted as implying for any state, group or person any right to engage in any activity or to perform any act aimed at the destruction of the rights and freedoms set forth herein. Article 5(1) of the ICESCR is to similar effect as Article 30 UDHR. Principle 8 of the ILO Tripartite Declaration asserts (perhaps optimistically) that the rules contained in the Universal Declaration of Human Rights and the corresponding International Covenant are applicable to multinational companies. For the tribunals discussion of these sources, see *Urbaser v. Argentina* at paras. 1193–1220. In the tribunal's view, corporations may have obligations to "abstain", or refrain from violating human rights, but not to "perform" (or fulfil) human rights (paras. 1209–10).

253 Id., at para. 1195.

254 Id., note 434.

255 While the respondent (Argentina) did not succeed on the merits of its counterclaim, partly due to its own delinquency in establishing an effective regulatory framework for the realization of the right to water, the respondent's human rights arguments influenced the tribunal's discretion to allocate costs evenly between the parties in relation to the merits phase of the proceedings (para. 1233).

256 Notably, the tribunal's interpretation of Article 5(1) ICESCR goes beyond the scope envisaged by the covenant's drafters, which was to prevent newly formed fascist groups from invoking human rights as a justification for their activities. See Saul, B, Kinley, D and Mowbray, J (2014) *The International Covenant on Economic, Social and Cultural Rights, Commentary, Cases and Materials*, p. 263. Oxford University Press. Moreover, the tribunal's suggested that the distinction between "performing" and "abstaining" may be an artificial one in practice.

257 In the *Urbaser* case, the tribunal examined the arbitration clause, the applicable law clause and Article VII (1) of the Spain-Argentina BIT, all of which accommodate recourse to external sources of law, including relevant treaties and general international law: *Urbaser v. Argentina*, paras. 1182, 1187 and 1192. In a more striking example still, the BIT between Nigeria and Morocco explicitly requires investors to respect human rights: "Investors and investments shall uphold human rights in the host state." *See* Reciprocal Investment Promotion and Protection Agreement between the Government of the Kingdom of Morocco and the Government of the Federal Republic of Nigeria, Dec. 3, 2016, Article 18(2), available at http://investmentpolicyhub.unctad.org/Download/TreatyFile/5409. *See also* Article 18(3): "Investors and investments shall act in accordance with core labour standards as required by the ILO Declaration on Fundamental Principles and Rights at Work 1998"; and Article 18(4): "Investors and investments shall not manage or operate the investments in a manner that circumvents international environmental, labour and human rights obligations to which the state and/or home state are Parties." Finally, Article 15(6) provides: "All parties shall ensure that their laws, policies and actions are consistent with the international human rights agreements to which they are a Party."

258 See Philip Morris Asia Limited v. The Commonwealth of Australia, UNICTRAL, PCA Case No. 2012-12. Available at: www.italaw.com/cases/851

259 It has been suggested that investment tribunals may be more open to human rights argumentation when advanced by investors compared to other actors (host states and third parties – including amici). See: Steininger, S (2018) "What's Human Rights Got To Do With It? An Empirical Analysis of Human Rights References in Investment Arbitration", *Leiden Journal of International Law*, Vol. 31, Issue 1. Available at: www.cambridge.org/core/journals/leiden-journal-of-international-law/article/whats-human rights-got-to-do-with-it-an-empirical-analysis-of-human-rights-references-in-investment-arbitration/CB773F-D593E8BB69AFDA4F98A770E6F4; and Kube, V and Petersmann, E-U (2016) "Human Rights Law in International Investment Arbitration", AJWH Vol. 11:1.

260 UNCTAD (2017a).

261 ICSID Case No. ARB/06/11, para. 25.

262 For instance, see *Copper Mesa Mining Corporation v Republic of Ecuador*, PCA Case No. 2012-2, Award (15 March 2016), a case where serious violence was perpetrated by private security forces against communities protesting against a mining installation, which the government did nothing to prevent or remedy.

263 For fuller arguments along these lines, see supra 221.

264 See, however, Pohl (2018).

265 UNCTAD (2006) "Bilateral Investment Treaties 1995–2006: Trend in Investment Rulemaking". Available at: http://unctad.org/en/docs/iteiia20065_en.pdf

266 Gordon, K, Pohl, J and Bouchard, M (2014) "Investment Treaty Law, Sustainable Development and Responsible Business Conduct: A Fact Finding Survey". OECD Working Paper on International Investments 2014/01. Available at: www.oecd.org/investment/investment-policy/WP-2014_01.pdf

267 Ibid.

268 Debrauw, Blackstone, Westbroek (2018).

269 As suggested in IISD's Model Investment Agreement on Investment for Sustainable Development: Article 21(e): All Parties shall ensure that their laws, policies and actions are consistent with the international human rights agreements to which they are a Party. Available at: http://ccsi.columbia.edu/2018/02/22/what-do-we-mean-by-investment-facilitation

270 For example, *Urbaser v. Argentina*. Also note that Gordon, Pohl and Boucher (2014) found no treaty-specific language on investor responsibility in the sample IIAs studied.

271 UNGPs, Principle 9.

272 Defined by UNCTAD as the set of policies and actions aimed at making it easier for investors to establish and expand their investments, as well as to conduct their day-to-day business in host countries. UNCTAD (2017c) "Global Action Menu for Investment Facilitation". Available at: http://investmentpolicyhub.unctad.org/Upload/Documents/Investment%20Facilitation%20Action%20Menu.pdf. However, the idea remains controversial and divisive. See, for example: Hees, F and Cavalcante, P (2017) "Focusing on Investment Facilitation. Is it that Difficult?", International Centre for Trade and Development Blog, 26 June. Available at: www.ictsd.org/opinion/focusing-on-investment-facilitation-is-it-that-difficult; also see: Coleman, J et. al (2018) "What Do We Mean by Investment Facilitation?", CCSI Blog. Available at: http://ccsi.columbia.edu/2018/02/22/what-do-we-mean-by-investment-facilitation

273 For an analysis of the relationship between industrial and investment policies, see: UNCTAD (2018a).

274 UNCTAD (2016) "Investment Laws: A Widespread Tool for the Promotion and Regulation of Foreign Investment", *Investment Policy Monitor*. Available at: https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1388

275 UNCTAD Investment Laws Navigator, UNCTAD website. Available at: https://investmentpolicyhubold.unctad.org

276 UNCTAD (2016).

277 Ibid.

278 Republic of Kosovo, Law on Foreign Investment. Available at: www.italaw.com/sites/default/files/laws/italaw7116.pdf

279 For example, see: IMF (2017) "One Country, Two Systems: Towards an African Shenzhen", IMF Country Report No. 17/1 for Senegal. Available at: www.imf.org/external/pubs/ft/scr/2017/cr1701.pdf. It contains a proposal for a new Senegalese special economic zone, complete with its own business-friendly regulatory framework, fiscal framework and an investment promotion apparatus. Separately, it is reported that the government of Senegal has made SEZs a pillar of its strategy to achieve structural transformation of its economy, and is planning 10 such SEZs. See: Diouf, A and Kai, G (2018) "Zoning in on Investment", ChinaAfrica Blog, 9 February. Available at: www.chinafrica.cn/Homepage/201802/t20180209_800117425.html

280 For example, the United States of America recently witnessed the revocation of an order for an environmental impact assessment that would have reviewed the impacts of the proposed Dakota Access Pipeline on the Standing Rock Sioux Tribe's land in the state of North Dakota. For details, see: Howard (2017) "History of the Dakota Access pipeline", *Chicago Tribune*, 24 January (events covered up to June 2017). Available at: www.chicagotribune.com/news/nationworld/ct-dakota-access-pipeline-timeline-dapl-20161219-htmlstory.html

281 For example, the Special Investment Region Act of the State of Gujarat, India, gives significant powers to the state to acquire land for building smart cities like Dholera, a part of India's Delhi-Mumbai Corridor presently under construction. Section 24 of the act gives the Regional Development Authority broad powers to deal with land and even evict people, bypassing the consent and compensation requirements of India's Land Acquisition Act. For details, see: Datta, A (2014) "India's smart city craze: big, green and doomed from the start?", *The Guardian*, 17 April. Available at: www.theguardian.com/cities/2014/apr/17/india-smart-city-dholera-flood-farmers-investors.

282 Al Hussein (2017).

283 Chandran, N (2018) "China's plans for creating new international courts are raising fears of bias", CNBC Blog, 1 February. Available at: www.cnbc.com/2018/02/01/china-to-create-international-courts-for-belt-and-road-disputes.html

284 Xinhua News (2018) "Kenya mulls laws to protect ICT infrastructure", 6 March. Available at: www.xinhuanet.com/english/2018-03/06/c_137020357.htm

285 For example, in Peru, it has been alleged that a World Bank supported land tenure reform (Law 30230, stipulated by a Development Policy Financing operation aimed at investment promotion) "significantly weakens environmental and social regulations, including inter alia expedited approval of environmental impact assessments, greatly reduced fines for environmental infractions, and deteriorates indigenous peoples' land tenure rights." DAR, Bank Information Center and 11.11.11 (2017) "Development Policy Finance and Climate Change: Is the World Bank Providing the Right Incentives for Low-Carbon Development in Peru?" (Jan.). Available at: www.dar.org.pe/wp-content/uploads/2017/01/009361-Ejecutivo-WB-DPF-ENG02.pdf

286 Public-Private Partnership Legal Resource Center of the World Bank Group. Available at: https://ppp.worldbank.org/public-private-partnership/legislation-regulation/laws/ppp-and-concession-laws#albania

287 Brauch (2017).

288 For example, see South Africa's guidance documents on PPPs: Standardized Public-Private Partnership Provisions, available at: https://ppp.worldbank.org/public-private-partnership/library/standardised-public-private-partnership-provisions

289 For example, the International Bar Association's Model Mining Development Agreement, available at: www.iisd.org/itn/2010/09/23/the-ibas-model-mining-development-agreement-a-new-paradigm-for-natural-resource-projects; also see IISD (2014) "The IISD Guide to Negotiating Investment Contracts for Farmland and Water". Available at: www.iisd.org/sites/default/files/publications/iisd-guide-negotiating-investment-contracts-farmland-water_1.pdf

290 For example, in an effort to attract private investment in Nigeria by demonstrating good governance and management of PPPs, the country's PPP Disclosure Portal displays 65 PPP contracts: http://ppp.icrc.gov.ng

291 IFC (2009) "Stabilization Clauses and Human Rights". Available at: www.ifc.org/wps/wcm/connect/9feb5b00488555eab8c4fa6a6515bb18/Stabilization%2BPaper.pdf?MOD=AJPERES. For further guidance on these issues, see: The E15Initiative (2016) "Strengthening the Global Trade and Investment System for Sustainable Development, A Turn to Responsible Contracting: Harnessing Human Rights to Transform Investment". Available at: www.ohchr.org/Documents/Issues/Globalization/E15-Investment-OHCHR.pdf.

292 Mann, H (2011) "Stabilization in investment contracts: Rethinking the context, reformulating the result", IISD Blog, 7 October. Available at: www.iisd.org/itn/2011/10/07/stabilization-in-investment-contracts-rethinking-the-context-reformulating-the-result

293 World Bank (2017) "Guidance on PPP Contractual Provisions", pp. 50, 54–56. Available at: https://ppp.worldbank.org/public-private-partnership/library/guidance-on-ppp-contractual-provisions-2017-edition. Other aspects of the guidance arguably reflect an inappropriate balancing of rights and responsibilities between the contractual parties; for example, it is suggested that PPP contracts should not be governed by the law of the host state, and that international arbitration should be favoured over national courts. For a legal critique of the guidance, see: Foley Hoag LLC (2017) "Summary Comments on the World Bank Group's 2017 Guidance on PPP Contractual Provisions". Available at: https://us.boell.org/2017/09/15/summary-comments-world-bank-groups-2017-guidance-ppp-contractual-provisions-0

294 Ibid, pp. 54–56.

295 Howse, R (2011) "Freezing government policy: Stabilization clauses in investment contracts", *Investment Treaty News*, Issue 3, Volume 1. Available at: www.iisd.org/itn/wp-content/uploads/2011/04/iisd_itn_april_2011_en.pdf. Citing Kaplow, L (1986) "An Economic Analysis of Legal Transitions", Harvard Law Review, 99 (3).

296 However, if the relevant foreign investor is the only presence in a particular sector in a host state, it will be difficult for the state to argue that a proposed sector law is non-discriminatory to the investor.

297 The draft Dutch Model BIT provides qualified support for the state's right to regulate in the public interest (Art 2(2)), though it does not recognize the state's duty to regulate under international human rights or environmental law. See International Institute for Sustainable Development, The 2018 Draft Dutch Model BIT: A critical assessment (July 30, 2018). Available at: www.iisd.org/itn/2018/07/30/the-2018-draft-dutch-model-bit-a-critical-assessment-bart-jaap-verbeek-and-roeline-knottnerus.

298 Mann (2008).

299 These contracts will often apply ISDS. This is arguably better than the broad national laws or international treaties because at least the state knows which investors benefit and has negotiated the provisions. But all the ISDS limitations discussed above still apply.

300 It appears that only one in ten cases of foreign direct investments resorts to political risk insurance. Investors seem to perceive that risk is manageable without such coverage, or that potential losses are limited. They also indicate that they are not adequately familiar with the product, or that IIAs provide broader coverage than political risk insurance. See Johnson (2014) at 1.

301 The freedom of information, as part of the freedom of expression, is guaranteed in numerous treaties, including the ICCPR (Article 19(2)), American Convention on Human Rights (Article 13) and the African Charter on Human and Peoples' Rights (Article 9), as well as national laws.

302 Supra 211.

303 Productivity Commission, Trade and Assistance Review 2013–14 (2015) quoted in Gaukrodger (2017).

304 See Investment Policy Hub. "Morocco – Nigeria BIT (2016)". Available at: https://investmentpolicyhubold.unctad.org

305 As suggested by the Global Reporting Initiative, GRI 412-3: "Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening." Available at: www.globalreporting.org/standards/gri-standards-download-center/gri-412-human-rights-assessment-2016

306 Lagarde, C (2014) "Economic Inclusion and Financial Integrity – an Address to the Conference on Inclusive Capitalism". Available at: www.imf.org/en/News/Articles/2015/09/28/04/53/sp052714

307 Available at: www.worldbank.org/en/topic/publicprivatepartnerships/brief/global-infrastructure-facility-backup

308 Additional explanation on the different financing options are available at: www.worldbank.org/en/topic/publicprivatepartnerships/brief/global-infrastructure-facility-backup

309 Levy, J (2017) "Catalyzing Private Investment in Infrastructure in Emerging Markets and Developing Economies", World Bank Group. Available at: http://brettonwoods.org/sites/default/files/documents/BWC%20-%20Catalyzing%20Private%20Investment%20in%20Infrastructure%20Presentation%20Joaquim%20Levy%20April%2019.pdf

310 Lauridsen, M and Wang, B (2017) "The art of laying bricks: infrastructure as an asset class", World Bank Infrastructure and Public-Private Partnership Blog, 3 May. Available at: https://blogs.worldbank.org/ppps/art-laying-bricks-infrastructure-asset-class

311 Supra 25.

312 Heathcote (2018a).

313 Development Committee (2017) "Maximizing Finance for Development: Leveraging the Private Sector for Growth and Sustainable Development". Available at: https://bit.ly/2NZuQLp

314 Development Committee (2015).

315 For example, the IFC recently announced a product designed to alleviate risks to insurers by agreeing to absorb a limited amount of the losses that co-investors may encounter. Available at: www.ft.com/content/fd749a72-26d9-11e8-b27e-cc62a39d57a0

316 OECD (2018) "OECD DAC Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals". Available at: www.oecd.org/dac/financing-sustainable-development/blended-finance-principles.

317 Cordella, T (2018) *Optimizing Finance for Development*. World Bank Group Policy Research Working Paper 8320. Available at: http://documents.worldbank.org/curated/en/859191517234026362/Optimizing-finance-for-development

318 Ibid.

319 Inderst, G (2017) "United Kingdom Infrastructure Investment and Finance from a European and Global Perspective", *Journal of Advanced Studies in Finance*, Volume VIII, Summer, 1(15): 30–64. Stable, longer-term funding usually comes from users/consumers or taxpayers via the state budget, or a combination of both; also see UNCTAD (2015) p. 162.

320 See for example OHCHR's submissions in relation to the AIIB's proposed Public Information Policy and Project-affected Peoples' Mechanism, March 2018, available at: www.ohchr.org/EN/Issues/Development/DFI/Pages/DFIIndex.aspx.

321 Available at: www.nepad.org/news/official-launch-nepad-agencys-5-agenda-initiative; also see: Sy, A (2017) "Pension Funds: Leveraging African Pension Funds for Financing Infrastructure Development", Brookings Africa Growth Initiative. Available at: www.un.org/en/africa/osaa/pdf/pubs/2017pension-funds.pdf

322 Inderst, G (2009) *Pension Fund Investment in Infrastructure*. OECD Working Papers on Insurance and Private Pensions No. 32. Available at: www.oecd.org/finance/private-pensions/42052208.pdf
323 *The Economist* (2007) "Securitization: When it goes wrong… " 20 September. Available at: www.economist.com/briefing/2007/09/20/when-it-goes-wrong
324 Heathcote (2018b). "Developing infrastructure as an asset class: The need for standardisation and improved data", Global Infrastructure Hub Blog. Available at: www.gihub.org/news/infrastructure-as-an-asset-class-standardisation-and-improved-data
325 The definition is derived from Investopia: www.investopedia.com/terms/p/pensionplan.asp
326 Levy (2017).
327 Willis Towers Watson (2017) "Pensions and Investments/Willis Towers Watson 300 analysis Year end 2016". Available at: www.willistowerswatson.com/-/media/WTW/PDF/Insights/2017/09/The-worlds-300-largest-pension-funds-year-ended-2016.pdf
328 Levy (2017).
329 According to Inderst (2009), 47 percent of active investors in the sector have a separate allocation specifically for infrastructure, while 43 percent include infrastructure funds in their private equity portfolio and 10 percent include it in their real assets allocation.
330 Beeferman (2008) p. 15.
331 Della Croce, R (2011) "Pension Funds Investment in Infrastructure: A Survey", p. 8. OECD Working Papers on Finance, Insurance and Private Pensions No. 13. Available at: www.oecd.org/sti/futures/infrastructure to2030/48634596.pdf
332 Levy (2017).
333 EY (2015) "Infrastructure investments. An attractive option to help deliver a prosperous and sustainable economy". Available at: www.ey.com/Publication/vwLUAssets/EY-infrastructure-investments-for-insurers/%24FILE/EY-infrastructure-investments-for-insurers.pdf
334 European Commission (2018) "Financing a Sustainable European Economy. Report of the High-Level Expert Group on Sustainable Finance", p. 57. Available at: https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report_en.pdf
335 Cambridge Institute for Sustainability Leadership (2015) "Insurance regulation for sustainable development – Protecting human rights against climate risk and natural hazards". Available at: www.cisl.cam.ac.uk/resources/publication-pdfs/insurance-regulation-report.pdf
336 Supra 76.
337 Sovereign Wealth Fund Institute, available at www.swfinstitute.org/sovereign-wealth-fund
338 Ibid.
339 Levy (2017).
340 McGee, J and Sy, S (2016) "Sovereign Wealth Funds Investing in Infrastructure", Preqin's Infrastructure Online, May. Available at: http://docs.preqin.com/newsletters/ra/Preqin-RASL-May-16-Feature-Article.pdf
341 International Working Group of Sovereign Wealth Funds (2008) "Sovereign Wealth Funds Generally Accepted Principles and Practices 'Santiago Principles'". Available at: www.ifswf.org/santiago-principles-landing/santiago-principles
342 Ibid, GAAP 19.1. Subprinciple. If investment decisions are subject to other than economic and financial considerations, these should be clearly set out in the investment policy and be publicly disclosed.
343 Levy (2017).
344 Preqin (2018) "2018 Preqin Global Infrastructure Report". Available at: https://docs.preqin.com/samples/2018-Preqin-Global-Infrastructure-Report-Sample-Pages.pdf
345 PRI (2017a) "Incorporating Responsible Investment Requirements into Private Equity Fund Terms". Available at: www.unpri.org/private-equity/incorporating-responsible-investment-requirements-into-private-equity-fund-terms/118.article
346 PRI (2017b) "Human rights in private equity: Discussion paper". Available at: www.unpri.org/private-equity/human-rights-in-private-equity/715.article
347 World Bank (2018) "Contribution of Institutional Investors Private Investment in Infrastructure 2011–H1 2017", Figure 1, p. 4. Available at: http://ppi.worldbank.org/~/media/GIAWB/PPI/Documents/Global-Notes/2017_Institutional_Investors_Update_PPI.pdf

348 Ibid, p. 5. However, a World Bank blog states that the 2017 annual update of the Private Participation in Infrastructure (PPI) database reported that investment in private infrastructure in developing countries increased by 37 percent over 2016, at US$ 93.3 billion across 304 projects. See: Carter, L (2018) "Infrastructure: Times Are a-Changin'", World Bank Group Infrastructure and Public-Private Partnership blog, 14 June. Available at: http://blogs.worldbank.org/ppps/infrastructure-times-are-changin

349 OECD (2017) "Breaking Silos: Actions to Develop Infrastructure as an Asset Class and Address the Information Gap – An Agenda for G20", p. 5. Available at: www.oecd.org/daf/fin/private-pensions/Breaking-Silos%20-Actions-to%20Develop-Infrastructure-as-an-Asset-Class-and-Address-the-Information-Gap.pdf

350 Ibid.

351 European Commission (2018).

352 For example, with respect to the African 5% Agenda initiative, Sy (2017) identifies rigid regulatory regimes as major obstacles to pension fund investment in infrastructure. These include regulatory and supervisory requirements, such as funding and solvency regimes, and accounting rules such as mark-to-market rules (i.e., a regulatory requirement for daily pricing of pension fund portfolios, which could discourage investment in illiquid instruments, such as equity investments infrastructure, similar to insurers). Restrictions on investments in infrastructure include limits on infrastructure assets (typically five percent); requirements to maintain statutory reserve fund(s); and liquidity limits.

353 Lee, N (2017) "Billions to Trillions? Issues on the Role of Development Banks in Mobilizing Private Finance", Center for Global Development. Available at: www.cgdev.org/sites/default/files/billions-trillions-issues-role-development-banks-mobilizing-private-finance.pdf

354 Perera, O (2012) "Basel III: To what extent will it promote sustainable development?" IISD. Available at: www.iisd.org/sites/default/files/publications/basell3.pdf

355 Aizawa, Bradlow and Wachenfeld (2018).

356 Moore, G (2018) "Rethinking the Infrastructure Gap in the Poorest Countries' – focusing on private money is not the answer to close the infra gap for the poorest countries", CGD web blog. Available at: www.cgdev.org/blog/rethinking-infrastructure-gap-poorest-countries?mkt_tok=eyJpIjoiWVRJeE9HUmtN-MkV4T1RSaCIsInQiOiIwa2FSRUgxOG9qNGhTVWNyRmc4dTRDU21lTGUrZVJVR1Fqd1FiK1Q0Q3pYT-G43UGc4WERsWVZMVEN3V29sV0JVQXlCWUdNRmcyeVhuRWlQWG5Lcm5EQzdrQ0o2XC9hb-W44TDBCQU12XC9lXC9tQUo1elNEQU9LUWZUcngwQjFlOThtaiJ9

357 Collins, M (2015) "Wall Street and the Financialization of the Economy", Forbes, 4 February. Available at: www.forbes.com/sites/mikecollins/2015/02/04/wall-street-and-the-financialization-of-the-economy/#54d66c6b5783

358 UNCTAD (2015).

359 Scholastic work on financialized infrastructure includes: Torrance, M (2008) "Forging Global Governance? Urban Infrastructure as Networked Financial Products", *International Journal of Urban and Regional Research* Volume 32.1; Ashton, P, Doussard, M and Weber, R (2012) "The Financial Engineering of Infrastructure Privatization", *The Journal of the American Planning Association*, Volume 78 – Issue 3, available at: www.tandfonline.com/doi/abs/10.1080/01944363.2012.715540; O'Brien, P and Pike, A (2015) "The financialisation and governance of infrastructure", iBUILD Working Paper No. 8, February, Centre for Urban and Regional Development Studies, Newcastle University, United Kingdom, available at https://research.ncl.ac.uk/media/sites/researchwebsites/ibuild/WP8.pdf; and ODG (2018) "Mega-Infrastructure as a mechanism of indebtedness: the risk of illegitimate, ecological and gender debt", available at: www.cadtm.org/spip.php?page=imprimer&id_article=16032

360 Nevertheless, perhaps counter-intuitively, the role of state can be reinforced rather than weakened by financialization, given the state's critical role in providing public services and its ability to bear risks that private actors typically will not. See O'Brien and Pike (2015).

361 Adapted from O'Brien and Pike (2015).

362 This example was derived in part from Ashton, Doussard and Weber (2012).

363 Mark-to-market accounting means accounting for the "fair value" of an asset or liability based on the current market price. It aims to provide a realistic appraisal of an institution's current financial situation.

364 Sloan, C and Forward, R (2016) "From Higher Education to Water Treatment, Financialization Is Harming Our Economy", Truth Out Blog, 23 October. Available at: www.truth-out.org/opinion/item/38098-from-higher-education-to-water-treatment-financialization-is-harming-our-economy

365 This example was derived in part from Oxfam (2014) "Dangerous Diversion", Oxfam Briefing Note, 7 April. Available at: www.oxfam.org/sites/www.oxfam.org/files/bn-dangerous-diversion-lesotho-health-ppp-070414-en.pdf; and Kirpalani, D (2017) "Financialization and Healthcare Infrastructure", Unpublished paper prepared for Open Society Foundation.

366 UNICEF and World Bank (2017) "Lesotho Public Health Sector Expenditure Review". Available at: https://openknowledge.worldbank.org/handle/10986/29344

367 This example was derived from: Independent Evaluation Office of the International Monetary Fund (2016) "The IMF and the Crises in Greece, Ireland, and Portugal: An Evaluation by the Independent Evaluation Office", available at: https://ieo.imf.org/~/media/IEO/Files/evaluations/completed/07-28-2016-the-imf-and-the-crises-in-greece-ireland-and-portugal/eac-bp-16-02-01-summary-of-views-of-a-high-level-advisory-panel.ashx; EPEC (2017) "PPPs financed by the European Investment Bank from 1990 to 2016", available at: www.economie.gouv.fr/files/files/directions_services/ppp/TdB/epec_ppp_financed_by_eib_1990_2016_en.pdf; CEE Bankwatch (2012) "What goes around, comes around: Portugal's debt boomerangs back on public-private partnerships", available at: https://bankwatch.org/blog/what-goes-around-comes-around-portugals-debt-boomerangs-back-on-public-private-partnerships; and BBC (2013) "Eurozone crisis: Portugal protests against austerity", 2 March, available at www.bbc.com/news/world-europe-21643853.

368 EPEC (2017).

369 CEE BankWatch (2012).

370 Wise, P (2011) "Portugal reaches deal on € 78 bn bail-out", *Financial Times* 3 May. Available at: www.ft.com/content/b8e251a8-75c7-11e0-82c6-00144feabdc0

371 Independent Evaluation Office of the International Monetary Fund (2016).

372 CEE BankWatch (2012).

373 BBC (2013).

374 The Economist Intelligence Unit (2014) "Evaluating the environment for public-private partnerships in Asia-Pacific". The 2014 Infrascope. Available at: www.adb.org/sites/default/files/publication/158409/2014-infrascope.pdf

375 Powell (2016).

376 Aizawa (2018).

377 Ibid.

378 The PPP Reference Guide of the ADB, IBRD and IDB (2014) acknowledges the problem of both anti-PPP and pro-PPP biases (at p. 25): "Sometimes PPP Units are specifically given the task of promoting the use of PPP. This can help overcome initial anti-PPP bias at the early stage of new PPP programs. However, it can also risk distorting the public investment planning process – pushing forward projects because they appear to be doable as PPPs, rather than because they are public investment priorities. Instituting a clear PPP process with appropriate approvals [...] helps overcome this risk."

379 Powell (2016).

380 International Bar Association (2013) "Tax Abuses, Poverty and Human Rights. A report of the International Bar Association's Human Rights Institute Task Force on Illicit Financial Flows, Poverty and Human Rights". Available at: www.ibanet.org/Article/NewDetail.aspx?ArticleUid=4A0CF930-A0D1-4784-8D09-F588DCDDFEA4

381 Kirpalani (2017).

382 Queyranne (2014).

383 Based on: Ivory, D, Protess, B and Palmer, G (2016) "In American Towns, Profits from Public Works", *The New York Times*, 24 December. Available at: www.nytimes.com/2016/12/24/business/dealbook/private-equity-water.html. Also Lehrman and Baker-Branstetter (2016).

384 Kirpalani (2017), quoting Burns, D et al. (2016) "Where does the money go? Financialised chains and the crisis in residential care". CRESC Public Interest Report. Available at: http://hummedia.manchester.ac.uk/institutes/cresc/research/WDTMG%20FINAL%20-01-3-2016.pdf

385 Hildyard (2016) p. 51.

386 Inderst (2009).

387 Ibid.

388 Beeferman (2008) p. 33.

389 Several principles and standards relevant to public governance in infrastructure finance are available. For example, see OECD (2017a), as well as Eurodad's "Responsible Finance Charter", available at: http://eurodad.org/files/const/responsible_finance.pdf

390 Wachenfeld, Dowell-Jones and Aizawa (2016) p. 43.

391 Cambridge Institute for Sustainability Leadership (2015).

392 For example, see the Long-Term Infrastructure Investors Association's "Environmental, Social and Governance Handbook for Long Term Investors in Infrastructure" (2017) 2nd Ed., which contains specific guidance on HRDD, in addition to ESG due diligence. A full Handbook is not publicly available but an excerpt is available at: www.ltiia.org/wp-content/uploads/2015/12/ESG-Handbook-Second-Edition-Excerpts.pdf

393 OECD (2017).

394 Financial Stability Board (FSB), "Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures" (June 2017), available at: www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf

395 Several examples are available from a discussion on "Public-Private Interface" as an alternative to PPPs. See PPI Task Group of the CSO for FfD Group (2017) "Public Private Interfaces in Development Financing. Issue Paper to inform the Financing for Development Process". Available at: www.un.org/esa/ffd/wp-content/uploads/2017/08/Draft-PPI-issue-paper-by-the-PPI-Task-Group_CSO-for-FfD-Group.pdf

The Other Infrastructure Gap: Sustainability
Human Rights and Environmental Perspectives

Mega-infrastructure plans and financing and investment policies to promote private investments in the energy, transport and water sectors are on the rise. This publication provides recommendations to policy-makers and decision-makers on how human rights and environmental benefits can be maximized and risks avoided or mitigated, for the sake of sustainable development. The recommendations call on States, relevant international organizations and private actors to understand the potential human rights and environmental impacts of their planning, financing and investment actions through appropriate human rights due diligence.

Those supporting mega-infrastructure projects should anticipate and address the potential impacts upstream in the project cycle, though sound policy and prudent project selection that balances the needs of people and the environment, and the host State's duties, with investors' interests. Recognizing the sustainable development opportunities inherent in infrastructure projects, the publication also highlights the positive economic and social benefits of human rights and environmental risk avoidance and mitigation, and of prioritizing the rights of women, indigenous peoples and other population groups who may lack access to affordable infrastructure services.

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