



Contracts for Sustainable Infrastructure:

Ensuring the economic, social and environmental co-benefits of infrastructure investment projects

IISD REPORT



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Contracts for Sustainable Infrastructure: Ensuring the economic, social and environmental co-benefits of infrastructure investment projects

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1.0 Introduction

Infrastructure—including transportation, electricity, telecommunications, water and sanitation—is essential to sustainable development. Infrastructure constraints limit productivity and access to jobs, markets, healthcare and education, while quality infrastructure propels economic growth and social well-being. Sustainable Development Goal (SDG) 9—“*build resilient infrastructure, [emphasis added] promote inclusive and sustainable industrialization and foster innovation*”—expressly recognizes infrastructure as a key driver of sustainable development (United Nations, 2017). Infrastructure investment will also be needed to enable the achievement of SDGs 11 (make cities and human settlements inclusive, safe, resilient and sustainable), 13 (take urgent action to combat climate change and its impacts) and others (Casier, 2015). Both in mitigating greenhouse gas emissions and in adapting to the effects of climate change, the success of the Paris Agreement on Climate Change depends heavily on infrastructure investment (Garemo, Hjerpe, Mischke, Palter & Woetzel, 2016; New Climate Economy [NCE], 2016; Vaughan, 2017).

To achieve the SDGs and climate change objectives, the infrastructure to be upgraded and built must be *sustainable*—that is, it must be specifically designed to mitigate economic, social and environmental risks, and to generate economic, social and environmental co-benefits. Conventional project finance valuation methodologies ignore these long-term risks and co-benefits. Looking at elements such as higher upfront capital costs, they depict sustainable infrastructure as less financially attractive than business-as-usual alternatives and lead to underinvestment in sustainable infrastructure. However, modern life-cycle assessment methodologies—which appropriately identify and price the sustainability-related risks and impacts of non-sustainable infrastructure and the broader long-term co-benefits of sustainable infrastructure—make a convincing case that sustainable infrastructure not only is better for people and the environment, but also makes business sense (International Institute for Sustainable Development [IISD], 2017; International Finance Corporation [IFC], 2017; Global Infrastructure Basel [GIB] Foundation, 2017).

Traditional procurement and public–private partnerships (PPPs) are among the modes that government may adopt to structure infrastructure projects. In deciding between them, governments should routinely undertake rigorous assessments of procurement options and choose the option that creates the highest *value for money* for citizens. This choice would generate “what a government judges to be an optimal combination of quantity, quality, features and price (i.e., cost), expected (sometimes, but not always, calculated) over the whole of the project’s lifetime” (Burger & Hawkesworth, 2011, p. 2).

Where the procurement option test suggests that a PPP yields the highest value for money, public authorities and private entities work together in a medium- to long-term relationship by sharing expertise, finance, risks and rewards to deliver infrastructure projects (Jomo, Chowdhury, Sharma & Platz, 2016). The PPP contract forms a significant part of the normative framework governing this relationship, allocating responsibilities and risks between the public authority and the private entities. For PPPs to lead to the development of sustainable infrastructure, governments and private parties must ensure that sustainability criteria are embedded in the project from its inception and appropriately reflected in the PPP contract.

The 2017 edition of the World Bank Group’s *Guidance on PPP Contractual Provisions* (World Bank Group, 2017) presents sample contract language that governments may adopt for PPPs. However, as pointed out by the Summary Comments prepared by Foley Hoag LLP (2017), the guidance frequently offers advice that restrains government measures aimed at achieving the SDGs, and misses an opportunity to consider how infrastructure projects can contribute to sustainable development. Complementing the analysis by Foley Hoag LLP (2017), the goal of this paper is to seize the opportunity missed by the World Bank Group’s guidance.

The following section defines sustainable infrastructure and describes its expected characteristics and co-benefits, thus outlining elements that should be considered and can help ensure the sustainability of infrastructure projects. Section 3 reaches the core discussion of this paper—why governments must and how they can integrate sustainability into infrastructure contracts. Section 4 presents final remarks and recommendations.



2.0 Sustainable Infrastructure: Definition and Co-Benefits

2.1 Definition of Sustainable Infrastructure

Infrastructure is the underlying system of structures, facilities and services that are essential to the functioning of an economy, encompassing energy (including fuel) generation and distribution, transportation, telecommunications, and water and sanitation (including waste) (Bhattacharya, Meltzer, Oppenheim, Qureshi & Stern, 2016; Bielenberg, Kerlin, Oppenheim & Roberts, 2016). In addition to human-built infrastructure, the term can also be interpreted to include green infrastructure, recognizing that ecosystems can provide biodiversity and other essential goods and services—for example, through agriculture and forestry—that offer alternatives to those provided by human-built infrastructure (NCE, 2016; Silva & Wheeler, 2017). An even broader understanding of the term encompasses social infrastructure, which includes public-purpose buildings such as hospitals and schools and the services delivered by them (Colverson & Perera, 2011).

Building on the traditional three-pillar definition of sustainability, the term sustainable infrastructure refers to infrastructure projects that are economically, socially and environmentally sustainable (Bhattacharya et al., 2016; Bielenberg et al., 2016). Going beyond the three pillars, other definitions mention governance aspects (Egler & Frazao, 2016) (which in this paper are considered part the social pillar). Others include explicit climate change-related elements (part of the environmental pillar), such as having a low-carbon footprint and a climate-resilient design (Bielenberg et al., 2016). Definitions typically emphasize that sustainability must be embedded in all phases of infrastructure projects, which should be planned, built, operated and maintained in light of sustainability considerations and with a view to promoting sustainable development (Inter-American Development Bank, 2015; Egler & Frazao, 2016).

2.2 Co-Benefits of Sustainable Infrastructure

Although the characteristics that make an infrastructure project sustainable may vary depending on the specific type of project under consideration, among other factors, sustainable infrastructure is generally expected to generate economic, social and environmental co-benefits. Elaborating on the definition of sustainable infrastructure, this section examines these co-benefits (including with respect to governance and the achievement of climate change mitigation and adaptation goals), which are expected to be generated by sustainable infrastructure projects throughout their lifecycle.

Based on a review of the literature, the following subsections focus on each of these three types of co-benefits (Bhattacharya et al., 2016; Bielenberg et al., 2016; NCE, 2016; IISD, 2017; United Nations, 2017). We recognize that the creation of skilled jobs could be characterized as both an economic and a social co-benefit, and that there are other similar overlaps. The intention here is not to artificially compartmentalize the co-benefits of sustainable infrastructure, but to provide a categorization that can be useful to determine the sustainability considerations that can be integrated into infrastructure projects—and, ultimately, how infrastructure contracts can contribute to sustainability goals.

2.2.1 Economic Co-Benefits

Infrastructure that is economically sustainable is expected to:

- Optimize value for money economy-wide, for governments, investors, taxpayers and (where applicable) users.
- Create employment across skill and income levels.
- Help boost green economic development through the creation of core infrastructure needed by various economic sectors.
- Be affordable for governments, investors, taxpayers and (where applicable) users.



- Build the capabilities of and create opportunities for local suppliers and developers.
- Guarantee reasonable returns for investors across the lifecycle of the project.
- Promote research and development, and technological innovation and transfer, especially in green technologies, across domestic and international value chains.
- Increase real estate value for property owners in the vicinity of the project.
- Enhance capital and labour productivity.
- Crowd-in domestic investors and businesses, including small and medium-sized enterprises.
- Increase productive foreign direct investment (FDI) and domestic value added.

2.2.2 Social Co-Benefits

Infrastructure that is socially sustainable is expected to:

- Generate income, particularly for low-income households.
- Create jobs, including the generation of new specialization related to green jobs.
- Build skills and provide for mid-career up-skilling and re-skilling, especially in relation to improved productivity and green and clean technologies.
- Contribute to the reduction of poverty and socioeconomic inequality.
- Meet and exceed compliance with core labour standards and human rights, contributing to improvements in working conditions.
- Be inclusive, affordable and accessible to all economic strata in cities and rural areas.
- Engage all stakeholders positively or negatively affected by the infrastructure investment (particularly low-income households and other disadvantaged communities) in the decision-making process, including through free, prior and informed consent.
- Provide for accessible and inclusive grievance and dispute settlement mechanisms available to all stakeholders affected by the infrastructure project, free of intimidation or retribution.
- Foster transparency and accountability of businesses that build, operate and manage infrastructure projects.
- Provide for safeguards against bribery and corruption.
- Ensure gender equality in the building of and access to infrastructure.
- Promote increased access to basic services by low-income households.
- Enhance public health and well-being.
- Spur investment in education, capacity building and professional qualifications.

2.2.3 Environmental Co-Benefits

Infrastructure that is environmentally sustainable is expected to:

- Limit and lower air, water, soil and all other forms of pollution.
- Provide for the stewardship of ecosystems.
- Contribute to ecosystem and biodiversity management and conservation.
- Enhance ecosystem services provided by green infrastructure.
- Promote and use clean and environment-friendly technologies.
- Support the conservation and the sustainable and efficient use of natural resources, including water, energy and materials.



Particularly regarding climate change mitigation and adaptation goals, environmentally sustainable infrastructure is expected to:

- Mitigate greenhouse gas emissions, consistent with the climate change goal under the Paris Agreement (that is, holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels).
- Contribute to the transition to a low-carbon economy and to the decarbonization of the energy system (that is, moving away from fossil fuels and toward renewable energy: solar, wind, biomass and hydropower).
- Utilize and promote high energy-efficiency standards.
- Be resilient to and help protect against extreme weather events and other natural disasters (such as earthquakes, floods, droughts and extreme heat) as well as these and other climate change-related impacts (including sea level rise).
- Consider climate change risks in its design, maintenance and operation.
- Reduce vulnerability to climate change risks and impacts.



3.0 Integrating Sustainability into Infrastructure Contracts

3.1 Why Sustainability Should Be Integrated Into Infrastructure Contracts

To enable and incentivize the amount of investment in sustainable infrastructure needed for the achievement of the SDGs, and to ensure and maximize the economic, social and environmental co-benefits of sustainable infrastructure, an enabling investment environment must be in place. A key element of an enabling environment is the legal framework governing investment generally and infrastructure investment specifically. This includes treaties governing foreign investment, and laws, regulations and investor–state contracts governing both domestic and foreign investments. Governments should design clear, transparent, balanced and coherent legal frameworks that inspire investor confidence and, more importantly, are grounded in public policy objectives. Accordingly, the onus falls on governments to embed sustainability criteria in the legal framework to ensure that they promote—and do not hinder—investment in sustainable infrastructure.

Much of the literature either rejects PPPs as an “expensive and inefficient way of financing infrastructure” (Hall, 2015, p. 3; Jomo et al., 2016) or indicates that several conditions—which can be particularly burdensome for developing countries—must be met for them to deliver the desired results (Independent Evaluation Group, 2015, pps. 6–7):

Success in PPPs is contingent on certain arrangements: (i) clear and stable market rules; (ii) sound and predictable legal and regulatory environments; and (iii) well-designed projects, including appropriate risk allocation. This implies that government authorities need to be sophisticated enough to develop sector reform policies, assess fiscal risks associated with PPPs, base their decision of public procurement versus PPP on comprehensive value for money assessments, and have impartial transaction advisory at hand to make PPP deals bankable and sustainable.

On the other hand, the literature also supports the potential of infrastructure contracting through PPPs to deliver on sustainable development, if—among other necessary conditions—sustainability principles are consistently integrated into contracts and contracting processes. While poor contracting designs lead to unsustainable and inefficient outcomes, well-structured and balanced legal frameworks help tap the sustainability benefits of PPPs (Colverson & Perera, 2011; NCE, 2016).

A recent McKinsey study illustrates the potential impact of PPPs that embed sustainability criteria. Interviews with experts from financial institutions identified actions by the international community, governments and the private sector that could facilitate financing for investment in sustainable infrastructure. Out of 19 actions identified, the study prioritized six based on feasibility (cost and complexity), limitations and possible impact (emissions and economic value). Encouraging the use of sustainability and cost criteria in procurement—including PPPs—ranked fourth among the sixth prioritized actions, and first among those recommended for governments to undertake. According to the study (Bielenberg et al., 2016, p. 48),

including sustainability as well as cost criteria in procurement [processes] would drastically change incentives for the private sector. Adopting a TCO [total cost of ownership] approach rather than a low-cost bid process could generate long-term savings and shift selection toward sustainable projects that are NPV [net present value]-positive but have higher up-front costs. For sustainable infrastructure that does not have a lower TCO in the current policy environment, sustainability criteria could be added to requests for proposals (RFPs). Appropriate criteria could include such measures as TCO, greenhouse gas emissions, water-use intensity, and climate-risk mitigation.

Including sustainability criteria in procurement would shift public financing toward sustainable infrastructure, indirectly influence the private sector by sending market signals that there is demand for sustainable infrastructure and setting the example, and increase the ability of the private sector to design, build and



operate sustainable infrastructure. The McKinsey study concludes that incorporating sustainability criteria in procurement for PPPs could shift between USD 150 billion and USD 255 billion of private sector investment to sustainable infrastructure over 15 years (2015–2030) (Bielenberg et al., 2016).

Recognizing that some governments already incorporate sustainability criteria at all stages of their procurement processes (Brauch, 2012), the McKinsey study indicates that some governments may be reluctant to adopt sustainability criteria, based on the assumption that this step would increase upfront costs of infrastructure projects (Bielenberg et al., 2016). Overcoming this resistance will depend, first, on a change of mindset—through the adoption of project valuation methodologies that capture risks and impacts of business-as-usual infrastructure and the long-term co-benefits of sustainable infrastructure. As a second step, this mindset must be reflected in infrastructure investment processes, by explicitly providing for sustainability in the applicable legal instruments.

In addition to incorporating sustainability criteria, it is important for governments to design all elements of the legal framework governing infrastructure investment (including treaties, laws, regulations and contracts) to achieve sustainable development, through safeguards aimed at protecting the environment obligations to promote social goals, etc. Each type of legal instrument has a potential role in regulating aspects of infrastructure investment, such as taxation, environmental and labour matters, and there may be regulatory overlaps—for example, climate-related provisions contained in treaties and domestic laws and policies. None of these instruments in isolation can ensure the desired sustainability outcomes if other instruments within the legal framework work against them.

The focus of this paper is on the role of public–private infrastructure contracts, a subset of the legal framework. Contracts are the most flexible and specific in the range of legal tools that can be used to incorporate sustainability into infrastructure investment. Even when subject to the use of certain standard form clauses, as is often the case, PPP contracts can be more easily adapted than treaties, laws or regulations, as contracts allow some margin for negotiation and adjustment. They can be drafted to govern a broad range of aspects of the relationship between the government and a specific investor throughout the lifecycle of an infrastructure project. The level of detail of the sustainability provisions in the contract can be adjusted depending on the range of sustainability aspects covered by other instruments within the applicable legal framework, particularly domestic laws and regulations on environmental, labour, taxation and other matters. Contracts can be tailored to project-specific circumstances, and respond to concerns that are specific to the local environment and the communities affected by the investment. Given their flexibility and specificity, contracts are particularly well-suited to serve as tools in which governments should embed requirements to ensure the desired sustainability outcomes of infrastructure investment.

The risks of infrastructure contracts that fail to incorporate sustainability are exemplified by the Summary Comments prepared by Foley Hoag LLP (2017) in response to the 2017 edition of the World Bank Group’s *Guidance on PPP Contractual Provisions* (World Bank Group, 2017). The guidance developed by the bank provides sample contract language and commentaries on legal options that governments may adopt, covering nine provisions:

1. Force Majeure
2. Material Adverse Government Action
3. Change in Law
4. Termination Payments
5. Refinancing
6. Lenders’ Step-In Rights
7. Confidentiality and Transparency
8. Governing Law and Dispute Resolution
9. Bond Financing and Corporate Financing



According to the overarching comments in the analysis by Foley Hoag LLP (2017), the World Bank's guidance prioritizes private sector preferences and requirements over public policy considerations and fails to achieve an appropriate balance between investors' rights and their obligations to governments and communities, as well as:

1. Places disproportionate risks and other burdensome financial obligations on governments, leading to the privatization of gains and socialization of losses.
2. Recommends language under which good-faith and non-discriminatory regulation in the public interest (for example, to address climate change or achieve other environmental and social goals) would trigger an obligation for the government to compensate the private investor.
3. Fails to address social, environmental, climate change and human rights concerns arising from infrastructure projects.
4. Misses an opportunity to highlight the potential of infrastructure to contribute to sustainable development, mentioning environmental and human rights considerations only in relation to risks of negative impacts.
5. Excludes the possibility of government participation in PPPs as one of the shareholders or partners of the project company, thus denying governments the potential social benefits of equity ownership.

The next section will explore approaches to PPP contracts that address the above problems and effectively ensure the desired economic, social and environmental co-benefits of infrastructure investment identified in Section 2.2.

While deliberately focusing on sustainable approaches to contracts, we acknowledge that sustainability considerations will not generate the desired outcomes if they appear in contract language only. As explained by Colverson and Perera (2011, p. 6),

PPPs should embed environmental and social safeguards [or, more broadly stated, sustainability considerations] in their goals, designs and specifications, along with tender evaluation, supplier selection, and monitoring and contracting functions. The focus needs to move away from conducting environmental impact assessments as purely a part of the licensing and construction permit requirements, and towards integrating sustainability across the PPP life cycle.

The key term in the above passage is “integrating sustainability across the PPP life cycle.” The literature suggests incorporating sustainability criteria into PPP requests for proposals (RFPs) and other bidding documents, guidance documents on evaluation of proposals, investment planning and project selection policies (Bhattacharya et al., 2016; Bielenberg et al., 2016; NCE, 2016). Contracts or any other legal instruments cannot remedy issues in ill-designed projects that were never intended to serve the public interest or contribute to sustainable development. In sum, sustainability elements must be provided for not only in the text of public-private contracts, but in all relevant documents applicable throughout the infrastructure contracting process. Furthermore, sustainability should be discussed from the outset of negotiations rather than added to the final contract language as an afterthought.

As a final note, since communities, user, employees and other stakeholders are typically not formal parties to infrastructure contracts (concluded between the investor and the state), they will be limited in their ability to enforce the sustainability-related obligations embedded in such contracts. They have a low likelihood of legal success on arguments based on their status as third-party beneficiaries of the contract. Accordingly, to enhance the role of communities and other stakeholders in ensuring investors' compliance with their sustainability obligations under the contract, governments should create enforcement rights for those stakeholders. This may be done most effectively in legal instruments other than the contract itself, such as domestic laws and regulations.



3.2 How Sustainability Can Be Integrated Into Infrastructure Contracts

This section provides an outline of approaches to infrastructure contracts aimed at phasing out business-as-usual infrastructure investment, incentivizing investment in sustainable infrastructure, and guaranteeing and maximizing the economic, social and environmental co-benefits of infrastructure projects. The approaches we consider are generally applicable to all types of infrastructure; while it would be possible to outline type- or project-specific approaches (for example, sustainability criteria specific to water, energy, sanitation etc. projects), this would go beyond the exploratory scope of this paper.

Rather than crafting specific legal language for each provision—effectively proposing a model contract—we refer to a wealth of existing approaches that governments can consider as they negotiate and draft sustainable infrastructure contracts. Beyond PPP contracts, these approaches could also be considered for short-term contracts and other types of public–private interface (PPI), defined more broadly as situations “where the public sector provides a legal, regulatory or contractual benefit, subsidy or concession to private sector entities with the intent of achieving sustainable development outcomes, human rights impact or other public objectives” (PPI Task Group, 2017, p. 2). The following documents guided the preparation of this section:

- *IISD Handbook on Mining Contract Negotiations for Developing Countries* (Mann, 2015)
- *United Nations (UN) Principles for Responsible Contracts* (Office of the United Nations High Commissioner for Human Rights [OHCHR], 2015)
- *IISD Guide to Negotiating Investment Contracts for Farmland and Water* (Smaller et al., 2014)
- *UN Guiding Principles on Business and Human Rights* (OHCHR, 2011)
- Organisation for Economic Co-operation Development (OECD) *Guidelines for Multinational Enterprises* (OECD, 2011)
- *Model Mine Development Agreement* (MMDA) (International Bar Association [IBA], 2011)
- *Investment Contracts and Sustainable Development: How to Make Contracts for Fairer and More Sustainable Natural Resource Investments* (Cotula, 2010)

1. Feasibility study and impact assessment: Conducting feasibility or pre-feasibility studies, assessing the socioeconomic and environmental risks and impacts, and establishing appropriate plans to address them are key to the sustainability performance of infrastructure projects. The contract should ensure that investors take these steps in close consultation with the affected communities and subject to government approval. Infrastructure contracts could, for example:

- a. Require technical feasibility studies (IBA, 2011; Smaller et al., 2014), including demand and revenue forecasts, assessing the suitability of the project to be delivered through a PPP and assessing the optimal manner to allocate risks between public and private counterparties.
- b. Require that assets be designed to optimize environmental and social co-benefits and therefore increase transparency and predictability on design, construction, technology and performance risks.
- c. Require social and environmental feasibility studies and human rights due diligence, with meaningful participation of the local government and affected communities, assessing expected impacts on the community and the environment, and how social, environmental and human rights risks may change over the lifetime of the project (OHCHR, 2011; Smaller et al., 2014; OHCHR, 2015).
- d. Require environmental and social impact assessment (ESIA), environmental management plans, and social action plans, including human rights impacts and measures (Cotula, 2010; IBA, 2011; Smaller et al., 2014; OHCHR, 2011; OHCHR, 2015), and ensure that the plans are contractual obligations enforceable by the government and communities.
- e. Refer expressly to the procedures for government agencies to review and accept (or reject) impact assessments, and management or action plans, as well as for mechanisms for their periodic review as needed (Cotula, 2010; IBA, 2011).
- f. Obligate the investor to obtain the necessary permits, licences or approvals before undertaking the activity (IBA, 2011).



2. Economic obligations: Governments should consider clauses aimed at ensuring that the infrastructure project leads to economic co-benefits beyond those directly generated by the infrastructure to be built. The contract can embed incentives for the investor to prioritize the purchase of local or national goods and services, obligations regarding technology transfer and requirements to guarantee that the infrastructure project will be developed in an economically responsible manner, contributing to broader economic development of the beneficiary community and country. Among the options that governments may consider are:

- a. Minimum capitalization or debt-to-equity ratio
 - i. Refer to domestic law on the minimum capitalization or debt-to-equity ratio (Cotula, 2010).
 - ii. Establish the company's minimum capitalization or debt-to-equity ratio (Cotula, 2010; IBA, 2011; Smaller et al., 2014;).
- b. Transfer pricing
 - i. Determine that fees for transactions between the investor and its affiliates must be negotiated in accordance with the OECD's Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (Smaller et al., 2014).
 - ii. Allow the government to contest prices in the transactions between the investor and its affiliates (Cotula, 2010).
- c. Taxation and custom duties
 - i. Refer to the applicability of domestic laws (Smaller et al., 2014).
 - ii. Include detailed provisions on the applicable taxation provisions (IBA, 2011).
- d. Local content and purchasing obligations
 - i. Require the investor to give priority to local goods and services if the cost, quality and time of delivery are comparable internationally (Cotula, 2010).
 - ii. Require investors to prioritize local suppliers even if this increases project costs; for example, requiring the investor to give preference to national suppliers if their costs are within a certain percentage of alternative suppliers available internationally (Cotula, 2010).
 - iii. Include specific percentage targets for local goods and services that the project must meet (Cotula, 2010).
- e. Require the investor to prepare a local business development plan to promote economic development and growth in the project area and to strengthen local business capacity (Cotula, 2010; IBA, 2011; Smaller et al., 2014).
- f. Include a provision on technology transfer obligations (Cotula, 2010).
- g. Set the conditions of the investor's access to existing infrastructure (IBA, 2011).
- h. Require the investor to obtain appropriate insurance with respect to the project, consistent with good industry practice (IBA, 2011).
- i. Refer to accounting records required by law, or list the required financial records and statements, and their period provision to the government (IBA, 2011; Smaller et al., 2014).

3. Social obligations: Infrastructure contracts should include clauses that clearly state the social benefits that the government expects the infrastructure project to attain, quantifying these benefits as objectively as possible by indicators amenable to monitoring and enforcement. Infrastructure investors can contribute to up-skilling of the local or national workforce; providing additional services to employees, families and communities; and advancing human rights. Options to consider include the following:

- a. Employment-related obligations
 - i. Require employment criteria including mandatory hiring of the local workforce for unskilled labour positions and preference to local workers for skilled labour positions (IBA, 2011; Smaller et al., 2014).



- ii. Require that, all else being equal, priority be given to local nationals in recruitment, training opportunities and promotions (Cotula, 2010; IBA, 2011).
 - iii. Set specific percentage targets for positions reserved to local nationals (Cotula, 2010).
 - iv. Require training and skills development to build capacity of the local workforce, including through numeric goals for the provision of scholarships and minimum annual financial commitments (Cotula, 2010; OECD, 2011; Smaller et al., 2014).
 - v. Establish sliding scales, whereby the local employment percentage targets increase for the duration of the project (Cotula, 2010).
 - vi. Require compliance with domestic labour laws and International Labour Organization (ILO) agreements, as well as other relevant international standards, and in particular require the investor's contribution to the elimination of child and forced labour (Cotula, 2010; IBA, 2011; OECD, 2011; Smaller et al., 2014).
 - vii. Provide for health and safety obligations and safeguards, including references to International Finance Corporation (IFC) and other performance standards (IBA, 2011; Smaller et al., 2014).
 - viii. Require the provision of services for employees, including clean and safe drinking water, adequate housing, formal education, and hospital and medical services (Smaller et al., 2014).
- b. Human rights obligations
- i. Require the investor to protect and promote human rights, with references to international treaties and other relevant standards (IBA, 2011; OECD, 2011; OHCHR, 2011; OHCHR, 2015).
 - ii. Delineate who is responsible and accountable for mitigating the risks of adverse human rights impact, as well as for financing mitigation efforts (OHCHR, 2011; OHCHR, 2015).
 - iii. Require the investor to express its commitments to respecting human rights, applicable to all its personnel and business partners, through a statement of policy that is approved at the highest level of management, informed by relevant expertise, reflected in relevant operational policies and procedures, and publicly available and internally and externally communicated (OHCHR, 2011).
 - iv. Provide for legitimate processes for the prevention, mitigation and remediation of adverse human rights impacts which the investor potentially or effectively caused or contributed to (OHCHR, 2011).
 - v. Agree on a set of human rights baselines—measurements of the state of human rights enjoyment before a project begins—or agree how such baselines will be established before project work begins (OHCHR, 2015).
 - vi. Set up special financial mechanisms with independent or joint accountability structures to fund efforts to mitigate the risks of human rights impacts within the scope of the project; if included, determine how information about its existence and ongoing management will be shared with potential beneficiaries (OHCHR, 2015).
 - vii. Agree on plans to involve potentially affected individuals and communities in the assessment of the project's risks of adverse impact and in the development of prevention and mitigation plans (OHCHR, 2015), and ensure that those stakeholders have rights to enforce such plans.
 - viii. Negotiate protocols for the management and implementation of security services throughout the project that: (a) specify how to involve local law enforcement or other relevant public officials; (b) specify how to coordinate private and public security services; and (c) are in line with internationally recognized human rights law and humanitarian law (OHCHR, 2015).
- c. Additional infrastructure or services
- i. Require the investor to develop and maintain other infrastructure and services needed for the building of the infrastructure project, including schools, roads, water facilities and clinics (Cotula, 2010).



- ii. Require the investor to cooperate with the state in providing health education, medical treatment, care and attention at acceptable standards to all inhabitants of the communities affected by the project (IBA, 2011).
 - iii. Clearly set out the standards that will apply to the provision of additional goods or services (OHCHR, 2015).
 - iv. Require community engagement regarding the provision of additional goods and the creation and ongoing management of such additional services (OHCHR, 2015).
- d. Require the investor to comply with domestic laws and international anti-corruption and anti-bribery standards (IBA, 2011; OECD, 2011).
 - e. Ensure that the goods and services provided by the investor meet all agreed or legally required standards for consumer health and safety, including those pertaining to health warnings and safety information (OECD, 2011).
 - f. Require a community development agreement between the investor and the affected communities, to promote sustainable development and enhance the welfare and quality of life of inhabitants, as well as to recognize and respect the rights, customs, traditions and religion of the local communities, and to set up a community development fund (Cotula, 2010; IBA, 2011; Smaller et al., 2014).
 - g. Require investors to seek the free, prior and informed consent if the projects affect indigenous and tribal peoples, referring to the 1989 Convention Concerning Indigenous and Tribal Peoples in Independent Countries, adopted by the International Labour Organization (Cotula, 2010).
 - h. Require compliance with Performance Standard 5 of the International Finance Corporation (IFC), which calls for the minimization of involuntary resettlement, with preference to be given to negotiated settlements over compulsory expropriation, and for the improvement or restoration of livelihoods of the affected people to pre-project levels, through compensation at full replacement cost and additional assistance as required, and for suitable grievance mechanisms (Cotula, 2010).
 - i. Require compliance with IFC Performance Standards where the applicable laws and regulations on social impact assessment and management are less stringent than such standards (IBA, 2011).
- 4. Environmental obligations:** Governments should consider including environmental clauses in infrastructure contracts to specify, complement and strengthen the domestic environmental standards applicable to the investment, as well as to empower the regulatory and oversight powers of the government agencies responsible for environmental protection. They should consider clauses that:
- a. Require compliance with domestic environmental laws (Smaller et al., 2014).
 - b. Include a commitment to continuous improvement of production methods (Smaller et al., 2014).
 - c. Include a clause governing water-use permits and fees (Smaller et al., 2014).
 - d. Establish soil management standards and obligations (Smaller et al., 2014).
 - e. Establish pollution and chemical management standards and obligations (Smaller et al., 2014).
 - f. Require the investor to regularly monitor and report the environmental impact of the project and pay funds earmarked for specific government agencies, including an environmental protection agency (Cotula, 2010).
 - g. Require the investor to provide environmental information to help the government manage natural resources that may be affected by the project (Cotula, 2010).
 - h. Require compliance with IFC Performance Standards where the applicable law and regulations on environmental impact assessment and management, and pollution prevention are less stringent than such standards (IBA, 2011).



- 5. Stabilization clause:** Investors often demand stabilization clauses aimed at freezing the domestic laws applicable to their projects at the time of signing of the contract, barring governments from enacting new laws or regulations that affect the investment or requiring them to compensate investors affected by legal or regulatory changes (Smaller et al., 2014). Given the detrimental effects of such clauses on their regulatory powers, governments should carefully consider whether to include them in infrastructure contracts and, if so, how to draft them. Governments can consider the following approaches:
- a. Not include a stabilization clause, to avoid a standstill in laws and regulations that could undermine efforts by government to regulate in the public interest (Smaller et al., 2014).
 - b. Determine that the investor will be bound by all non-discriminatory changes in the applicable law concerning health, safety, labour, the environment, and to address the human rights impacts of the project (IBA, 2011).
 - c. If a stabilization clause is included, negotiate time-bound and subject-bound provisions for fiscal matters, or protections against discriminatory and arbitrary measures by governments for non-fiscal matters, explicitly excluding public-purpose measures, for example, those relating to human rights, the environment and public health, from the scope of the clause (Cotula, 2010; Mann, 2015).
 - d. If a stabilization clause is included, ensure that it is consistent with the state's human rights obligations, meaning that it does not create obstacles to the state's bona fide efforts to introduce and implement laws, regulations or policies in a non-discriminatory manner to meet its human rights obligations (OHCHR, 2015); also ensure that the stabilization clause is consistent with other international obligations of the host state, for example, those relating to the environment and public health.
- 6. Periodic review and renegotiation:** Governments must carefully consider whether to include periodic review and renegotiation provisions in their contracts with private investors, as such provisions typically lead to increased benefits to investors and potential detriments to the government and the country's population. If, notwithstanding this, a government chooses to include such provisions in a contract with a private investor, the circumstances that may trigger a renegotiation of the infrastructure contract and a revision of its terms, or the possibility of a periodic review, should be carefully negotiated in advance and clearly set out. This is particularly important in contracts for long-term projects, during which changing economic, social or environmental conditions could make its terms unbalanced.
- a. Allow the government and the investor to review and amend the contract, if needed, as a result of changing economic, social or environmental conditions that could affect the ability of the parties to comply with their rights and obligations (Smaller et al., 2014), or when the changing conditions lead to excess profits (Cotula, 2010).
 - b. Establish a defined procedure to deal with irreconcilable disagreements (such as determination by an independent expert) (Cotula, 2010).
- 7. Grievance mechanisms and dispute settlement:** Infrastructure contracts should include state-based and non-state-based grievance mechanisms for the investor to address concerns expressed by affected individuals and communities, including employees and families, as well as mechanisms for the settlement of disputes between the investor and the government, with the possibility of community participation and with assurances against intimidation or retribution. Grievance mechanisms should be legitimate, accessible, predictable, equitable, transparent, rights-compatible, a source of continuous learning and based on engagement and dialogue (OHCHR, 2011). These mechanisms are key for individuals, communities and governments to express their sustainability concerns regarding the investment and to seek the enforcement of the investor's economic, social and environmental obligations.
- a. Grievance mechanisms
 - i. Determine that the investor establish, in consultation with the affected communities, an operational-level non-judicial grievance mechanism to receive and facilitate resolution of the affected communities' concerns and grievances about the investor's economic, environmental and social performance, including with respect to human rights (IBA, 2011; OHCHR, 2011; Smaller et al., 2014; OHCHR, 2015).



- ii. Require the investor to participate in industry, multistakeholder and other collaborative initiatives based on the respect for human rights standards to ensure the availability of effective grievance mechanisms (OHCHR, 2011).
 - iii. Determine that the investor establish, in consultation with employees and unions, a grievance mechanism to receive and facilitate resolution of employees and grievances about the investor's compliance with labour standards (Smaller et al., 2014).
- b. Dispute settlement
- i. Refer to the forum of choice for disputes arising between the investor and the state under the contract; preference should be given to domestic courts over arbitration (Smaller et al., 2014), and opportunities should be ensured for stakeholders that are not parties to the infrastructure contract to participate in the proceedings.
 - ii. Establish a specific dispute resolution mechanism.
 - iii. If arbitration is chosen, provide for procedural transparency and opportunities for public and non-party participation in dispute settlement provisions, including in open hearings and through *amicus curiae* submissions (Cotula, 2010). The United Nations Commission on International Trade Law (UNCITRAL) Rules on Transparency in Treaty-Based Investor-State Arbitration could be referred to as a minimum standard on transparency.

8. Transparency, reporting and public engagement and scrutiny: Transparency in the operation of the investment and meaningful opportunities for public participation are key elements for governments, individuals and communities. They are necessary to monitor the sustainability performance of an infrastructure investment and require the investor's compliance with the sustainability commitments undertaken under the contract. Those meant to benefit from the sustainability co-benefits of infrastructure—employees, users and communities—can use these transparency and participation tools embedded in the contract to ensure that the co-benefits effectively reach them. Given that these stakeholders are typically not formal parties to the contract (normally concluded between the state and the investor), enforcement rights should be granted to those stakeholders in legal instruments other than the contract, as noted above.

- a. Require investors to disclose key project documents, including the contract itself (Cotula, 2010; IBA, 2011; Smaller et al., 2014; OHCHR, 2015).
- b. Include clear reporting requirements for the investor to demonstrate compliance with contractual obligations, based on appropriate quantitative and qualitative indicators, and drawing on feedback from internal and external sources, including affected stakeholders (Cotula, 2010; OECD, 2011; OHCHR, 2011; OHCHR, 2015).
- c. Allow the government to inspect the investor's books, records and information, and to determine independent audits (IBA, 2011).
- d. Require parliamentary approval of contracts negotiated by the government, based on certain criteria, to increase public scrutiny (Cotula, 2010).
- e. Establish mechanisms to provide employee and community access to information, meaningful opportunities for public participation in decision making without intimidation or retribution, and the ability to seek judicial review of adverse decisions (Cotula, 2010; OECD, 2011; OHCHR, 2011; OHCHR, 2015).
- f. If the project involves sharing sensitive information, include a confidentiality clause to protect specific aspects, defining what type of information is confidential and protected, and requiring the investor to prove on a case-by-case basis that a piece of information falls within that category (Cotula, 2010; OHCHR, 2015).
- g. Limit the protection of confidential information to those areas required by law (including stock exchange regulation and freedom of information legislation), or involving confidential trade or other intellectual property rights of the investor, or to protect health, safety and the environment, particularly in emergency situations (Cotula, 2010).



9. Penalties and termination: Penalties can serve as an incentive for investors to comply with their obligations regarding the sustainability of their infrastructure investment and a way to remediate the consequences of non-compliance, including the termination of the contract in the most serious cases. The contract can also outline the parties' "exit strategy" in case the infrastructure project fails (Smaller et al., 2014).

- a. Set credible financial and other penalties in case of investor non-compliance (Cotula, 2010).
- b. Define sustainability-related grounds for material breaches throughout the contract and, in the termination provision, allow the state to terminate the contract on the investor's material breach (IBA, 2011; Smaller et al., 2014).
- c. Provide for obligations to prevent environmental damage, including through compliance with environmental laws, in the event of termination of the contract (IBA, 2011).



4.0 Conclusion

Without a decisive shift to investment in sustainable infrastructure, local and national aspirations for development, including universal infrastructure services, cannot be met. Nor can national commitments to climate change mitigation and adaptation (in the context of the Paris Agreement), the promotion and protection of human rights and the achievement of other SDGs. As project finance valuation methodologies are developed and modernized to account for life-cycle assessments of infrastructure projects, the business case for sustainable infrastructure has been progressively mainstreamed. At the same time, studies demonstrate that integrating sustainability criteria in PPP processes and contracts can effectively channel significant amounts of private sector investment to sustainable infrastructure. Several approaches have been advanced to incorporate sustainability principles into infrastructure contracting to maximize its economic, social and environmental co-benefits.

Furthermore, the World Bank Group's revised Procurement Framework recognizes value for money as a core procurement principle (World Bank Group, 2016a). It also explicitly acknowledges the importance of embedding sustainability in contracts: "Where sustainability is a priority, the sustainability commitments, standards and measures ought to be written into the contract to ensure that the supplier is contractually bound to deliver them" (World Bank Group, 2016b, p. 27).

In light of the World Bank's professed commitment to sustainable development, it is regrettable that the *Guidance on PPP Contractual Provisions* (World Bank Group, 2017) misses an opportunity to provide governments with tools to enable and encourage the shift to sustainable infrastructure. The guidance falls far short on two fronts. First, it largely fails to offer advice to governments on how performance on economic, social and environmental sustainability can be included in and ensured through PPP contracts. Second, the advice that it does offer would deepen the imbalance between investors' rights and their obligations to governments and communities, and hinder government regulation aimed at achieving climate, human rights and other sustainability goals (Foley Hoag LLP, 2017; Aizawa, 2017).

The much-needed shift to sustainable infrastructure will not happen by accident. It will only occur by intentional design. If governments use PPP contractual provisions that encourage business-as-usual infrastructure models and ignore their sustainability impacts and co-benefits, they will be unable to deliver on sustainable development. Over time, a failure to achieve sustainable development translates into unprofitable and failed projects. That is, sustainable development is not something accomplished "over and above" the requirements for an acceptable return on investment, but something embedded in it.

The descriptive outline of approaches to infrastructure contracts presented in this paper can serve as a starting point for governments that wish to ensure and maximize the contribution of their PPP contracts to sustainable development.



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