

Introduction

Full Description

Call for Climate Action Through PPPs: Investing in Climate Mitigation, Adaptation and Resilience

The global impact of climate change has never been more present with devastation seen across the globe from melting polar ice to fires, floods, droughts, hurricanes, and beyond—loss of life and destruction seen in their wake. The Intergovernmental Panel on Climate Change (IPCC) report issued a dire warning this year with climate catastrophe looming unless we all act together to avert global warming beyond the 2 degrees target. The cascading impact on the global economy, affecting business productivity, development, and employment, will grow unless action is taken. Climate change—as a global phenomenon affecting all parts of the developed and developing world—requires immediate global coordination to limit its impacts. In response to this global imperative, the UN's Conference of the parties adopted in 2015 the Paris Agreement, which has been signed by 196 nations and whose goal is to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. The Paris Agreement is now complemented by several initiatives to include climate mitigation, adaptation, and resilience provisions in national and international policies. The World Bank Group (WBG) has stepped up its commitment this year with the new Climate Change Action Plan, including a commitment to Paris alignment reinforcing a focus on embedding climate action in infrastructure as described in Module 1.1 and in the Introductory Phase.

Joining Forces through Public-Private Investment in Infrastructure

Private sector participation in climate-smart solutions will be critical to fostering climate mitigation and adaptation by catalyzing mobilization of innovation, competition, and leveraging financing opportunities as well as mainstreaming these solutions. Within a rapidly evolving global landscape, private sector actors are themselves making bold new commitments to achieve net-zero emissions and build climate adaptations driven by their shareholders and new regulatory pressures. The COVID-19 green recovery and public sector fiscal constraints are also driving new opportunities and demands for the private sector to step in and provide solutions through public-private partnerships (PPPs). Building viable and bankable pipelines of climate-smart PPP solutions will be critical to ensuring the trillions of investments and finance needed to deliver on the Paris Agreement commitments. Hence, it is—now more than ever—to the mutual benefit of the public and the private sectors to work together on ambitious climatesmart infrastructure projects. Guidance on incentivizing private sector participation is provided in Phase 3.

The time to act is now: the need for mitigation

In order to meet the goals of the Paris Agreement and limit global warming, we will need to mitigate greenhouse gases (GHGs) and find new pathways to decarbonization. Governments will need to step up their commitments as part of the latest 5-year cycle of ramping up Paris Agreement Nationally Determined Contributions (NDCs) to prioritize mitigation. Translating their NDC commitments into pipelines of investments are critical next steps for achieving GHG emissions reduction in infrastructure and beyond. Climate-friendly construction, resource efficiencies, sustainable operation, and maintenance optimization using climate data analytics are among the mitigation aspects that should be considered in the preparation, planning, and contract drafting phases, as explained in Modules 1.2 and 2.1.

The time to act is now: the need for adaptation

Building adaptation and resilience into infrastructure investment will be critical to ensure that assets are resilient to climate impact and avoid the worst outcomes from total loss of investment and assets while maintaining operational performance. In light of increasing climatic hazards, infrastructure projects need to

be shielded against these potential impacts to ensure their integrity and ability to provide the level of service required for the local communities. Guidance on the identification and selection of climate adaptation options is provided in Modules 1.2 and 2.2.

Resilience of/through infrastructure

Given the unprecedented extreme climate-related events occurring now more frequently than ever, opting for infrastructure's ability to absorb, withstand, and recover from shocks—including sudden changes in demand—is the only viable strategy to ensure economic continuity for the community and economy. At the same time, infrastructure should not be treated independently from the broader context within which it operates and should rather be considered an intrinsic part of the systemic safeguards for community resilience to climate hazards, as explained in Module 1.2.

Climate vs affordability

The challenge of evaluating cost and savings in PPP investments with climate mitigation and resilience will need to be managed. Government and other stakeholders may question the choice of investing in climate action as being too risky for the projects' affordability due to the potential for increased costs, without fully understanding potential savings and implications for total asset loss without including climate considerations. The reality is that infrastructure is based on long-term assets, which are highly likely to be exposed to the effects of climate change over that life. In an era of continued urbanization, communities cannot afford infrastructure failures and losses due to climate change. Moreover, a failure to address climate resilience in PPPs may make these projects non-bankable, as regulators and financiers scrutinize these risks more closely in their decision-making. Guidance on calculating the benefits of climate action over the whole life-cycle of PPP projects, duly accounting for non-monetary benefits, is provided in Modules 1.3 and 2.3.

Green financing: an opportunity to accelerate climate action

As the world is rapidly shifting towards sustainable infrastructure, institutions and authorities at an international level and even local level are developing new instruments in the form of green financing opportunities to support the climate transition. There is a rapidly growing new market for climate and sustainable finance. Green and sustainable linked bonds and loans, climate derivatives, and other instruments are being developed and offered by banks, multilateral development banks (MDBs), governments, and development agencies to accelerate the uptake of sustainable climate action. Guidance on eligibility criteria and on preparing projects to tap into such liquidity pools is provided in Module 3.2.

From theory to application: including climate action in tendering/contracts

Building the new generation of PPP infrastructure to last should include clear messaging in all phases of the tender and award process. Procuring agencies need to bolster climate action by including relevant provisions in tender documents (requests for proposals (RFPs), requests for quotes (RFQs)) and key performance indicators (KPIs) and ensure these are enforced through the proper supervision process. Additionally, market sounding early on PPP advisory is expected to assist in producing the proper terms of reference and attracting high-quality bidders. Guidance on sustainability indicators and performance criteria for the construction and operation of PPP infrastructure projects is provided in Modules 3.3 and 4.1, while specific KPIs and provisions for bidders are available in the sector-specific toolkits.

New Questions and Untested Approaches are Evolving - Its a Work in Progress

Dealing with climate uncertainty

One of the major challenges in structuring PPPs and designing projects for climate change is our inability to predict the actual evolution of climate stressors. Decision-makers will often find themselves swinging

between the lower-cost optimistic scenarios and their costlier, higher-risk counterparts, which call for adopting more adverse climatic projections. In the absence of reliable data, decision making under deep uncertainty (DMDU) may need to be promoted to enable the assessment of several scenarios along with their costs and benefits. Guidance on incorporating DMDU in the decision-making during project preparation is provided in Modules 2.1 and 2.2.

Adaptive planning as an alternative to high up-front adaptation costs

Responding to climate uncertainty considerations, the scientific community has proposed the concept of adaptive planning for the design and construction of long-lifespan assets. The concept calls for designing the projects for a mild scenario at the present time to minimize upfront costs, while allowing for adaptation to more adverse scenarios based on relevant indicators that may appear in the future. What is more, adaptive planning may lay the ground for incentivizing all stakeholders to maintain an active role in the full lifecycle of projects. Guidance on applying adaptive planning in the preparation of PPP investments is provided in Modules 2.2 and 2.3.

The need for contract flexibility to accommodate uncertainty

Unavoidably, inclusion of uncertainty and adaptive planning into the equation will negatively impact the long-term visibility required by investors. To reestablish equilibrium, the tender and award processes will need to allow for proper stakeholder engagement and dialogue as well as objective indicators and appropriate guarantees that will allow for flexible terms in contracts without compromising investors' appetite. Guidance on forming flexible contracts to promote climate action is described in Module 3.2.

Flexible contracts will necessitate innovative financial structures

As defined above, funding and financing of adaptive planning may challenge investors and impact bankability unless proper schemes are designed. Public and private stakeholders together may be encouraged to consider new innovative approaches such as reserve accounts—possibly in the form of a climate contingency account (CCA)—that will be used to finance adaptive works in the future in case these are required or to repay shareholders if not. Guidance on setting up a CCA and its associated benefits and challenges is provided in Module 2.3 and 3.1.

Unexpected events: Force majeure and blending insurance with financial tools

Climate change may be associated with the risks of more frequent service disruptions or failure due to extreme events. As with all risks, these will need to be properly assessed and allocated to the party more suitable to bear them. However, as awareness regarding the magnitude of potential losses increases, insurance availability may become scarce while guarantee requirements may rise. Conventional force majeure (FM) provisions may be revisited in order to structure potential new FM approaches, which will simultaneously incentivize adaptation and resilience. In such approaches, FM may be triggered only when a hazard exceeds a certain level, with the private party assuming potential risks below that threshold level. In this context, climate-smart PPPs should devise and benefit from novel risk transfer solutions such as blending insurance with contingent financing tools. Guidance on force majeure and potential blended schemes and insights on mobilizing insurance is provided in Module 3.1.

The need for modern, greener solutions with respect to biodiversity

Modern infrastructure is expected to fulfill environmental sustainability criteria, including the protection of biodiversity and pollution reduction. Sustainable infrastructure should also promote nature-based solutions (NBS) and ecosystem-based adaptation. NBS solutions may form part of the critical pathways for building climate resilience and provide cost-effective solutions. The use of recyclable, repairable, reusable, and recoverable materials in construction will reduce CO₂ emissions during their operations and contribute to

saving natural resources during the production of raw materials, helping to build a circular economy. Applications of NBS and green solutions in infrastructure projects are described in Modules 1.1 and 1.2.

Fostering Awareness in a Rapidly Changing World with Climate Change

Ownership of simple solutions

The role of public sector procuring authorities in enforcing climate action is crucial. As part of their role as coordinators of the preparation, appraisal, and tender process, PPP units and other public sector entities need to possess an understanding of climate policies, risks, and opportunities, and all respective funding, financing, and risk-sharing mechanisms. The present toolkit is intended to support this process and provide the means for non-experts to conduct a highlevel screening of the climate impact for project planning, including climate mitigation for GHG emissions and hazard and risk mapping to build resilience. This is fundamental for the preliminary identification of the necessary adaptation and mitigation measures and, ultimately, allows PPP units to take ownership over climate considerations, resulting in better and deeper engagement. Detailed guidance on this process is provided in the accompanying sector-specific toolkits, while high-level guidance is also offered in Phase 1 of the high-level toolkit.

Understanding shifting scenarios and context

As with every change, transition to the new era of climate-smart infrastructure through PPPs needs to overcome the hurdles of well-established practices. Climate action requires an in-depth understanding of the implications of climate change and the threats it may impose on infrastructure, including indirect impacts due to externalities (i.e., revenue loss posed by the failure of interconnected infrastructure or loss of users due to climate-induced migration). As climate change is rapidly changing, threats that do not exist at present could become catastrophic in the future. The benefits of mitigation and adaptation will need to be assessed during the life-cycle of the process. Guidance on how to recognize interconnections and evaluate adaptation and mitigation measures is provided in Modules 2.1 and 2.2.

Tackling climate change through early engagement

Climate change mitigation and adaptation is not an add-on to existing practices or a compliance checklist. It requires knowledge of the global and national landscape and consideration of all requirements at a very upstream stage to ensure that the climate-related aspects of the project are identified and properly accounted for in subsequent stages. This will include the project's alignment with the Paris Agreement and NDCs together with a growing body of international standards or taxonomies. At a community level, procurers will need to secure stakeholder engagement, identify user satisfaction criteria, and optimize social/gender inclusion practices. Guidance on crucial early actions is provided in Modules 3.3 and 4.1.

Bringing together the proper team

Technical, financial, and legal consultants advising on the structuring of climate-smart PPPs will need to coordinate their efforts to integrate novel mitigation and adaptation solutions that do not risk the bankability of projects, and use the ideal mix of adaptation works and financing tools to optimize the allocation of climatechange-induced risks. Market sounding is essential for testing the waters and primary mapping of the private sector investor and financing appetite. Guidance on identifying the necessary advisory services is provided in the sector-specific toolkits.