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Approach Paper

Evaluation of World Bank Group Support to Creating an Enabling Environment for Private Sector Participation in Climate Action, Fiscal Years 2013–22

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1. Background and Context

1.1 Climate change caused by the emission of heat-trapping greenhouse gases (GHGs) is among the most urgent challenges of our time, putting the Sustainable Development Goals (SDGs) further out of reach. On the world's current trajectory of GHG emissions, the global temperature will increase by up to 2.7°C by 2100. This is more than the previously envisaged 1.5°C, which had been considered a critical threshold for limiting the most severe effects of climate change (IPCC 2018; UN 2021b; UNEP 2021b). According to the Intergovernmental Panel on Climate Change's latest report on climate change impacts (IPCC 2022), this temperature rise will have devastating effects not only on ecosystems but also on human health and well-being, water, agriculture, cities, settlements, and infrastructure (Woetzel et al. 2020b).[1] Climate change also acts as a "risk multiplier"; that is, hardships induced by climate change (for example, lower agricultural yields because of droughts) can increase the risk of political instability and civil unrest, which can aggravate other climate effects even further.

1.2 It is therefore not surprising that the effects of climate change will imperil the achievement of many of the SDGs (UN 2022). Most notably, climate change will impede SDG 1 (ending poverty) and SDG 2 (ending hunger) as shifting weather patterns and severe weather events make growing seasons more unpredictable, reducing agricultural yields and increasing food insecurity. The poorest communities tend to be hit hardest by worsening conditions. Climate change will also complicate the achievement of SDG 3 (ensuring healthy life for all),[2] SDG 14 and SDG 15 (sustainably using marine and terrestrial ecosystems),[3] and SDG 7 (ensuring access to energy for all).[4] In light of the importance of climate change for the sustainable development agenda, the United Nations adopted "climate action"; that is, "taking action to combat climate change and its impacts," as an SDG itself (SDG 13; Mugambiwa and Tirivangasi 2017; Patrick 2021; UN 2022).

1.3 The private sector's economic activities are a main contributor to GHG emissions globally. The private sector contributes to emissions primarily through energy, industry, transportation, agriculture, forestry, and land use change. Collectively, private sector activities are responsible for the major share of GHG emissions, though emissions from

state-owned enterprises also play an important role in many emerging and developing countries. Historically, most private sector emissions came from industrial countries,[5] but the share of emissions from emerging and developing countries is increasing (Lamb et al. 2021).[6] However, globally poor people and those in low- and lower-middle-income countries often suffer the most from climate change impacts, and so these countries will have the greatest need for adaptation to grow in a climate resilient way.

1.4 The private sector is a critical stakeholder in fighting climate change. It can play a leading role in climate change mitigation by reducing the GHG emissions of its operations by adopting existing low- or zero-GHG-emitting processes and technologies. It can play an important role in innovating and developing new low- or zero-GHG-emitting products, services, and technologies for the private and public sectors. Likewise, the private sector can play a role in climate change adaptation by building climate resilience into its business plans and investments. Both large and small companies have a vital role to play in climate change adaptation. Regulations that require banks to assess their exposures to climate-related risks may lead the corporate sector to invest in resilient infrastructure. In addition, requirements for resilience embedded in contracts enabled by public-private partnership frameworks may help channel private sector resources into resilient public infrastructure in several sectors. Finally, the private sector can innovate and develop new climate adaptation infrastructure, processes, goods, and services and provide them to private and public actors. The private sector can also provide the finance to support investments in mitigation and adaptation; for example, through loans from the banking sector or through capital markets, including the issuance of green or climate bonds (World Bank Group 2021a).[7]

1.5 Investments in mitigation and adaptation need to increase by more than ten times by 2030 to reach US$5 trillion a year and need to flow increasingly into emerging economies and developing countries. To satisfy the global investment needs in mitigation and adaptation, recent assessments suggest that total climate finance flows need to reach at least US$5 trillion per year by 2030 and be sustained at this level through 2050 (IEA 2021; IPCC 2018; OECD 2017b; UNEP 2016, 2021a). According to the Climate Policy Initiative, total global climate finance flows reached only US$640 billion in 2020.[8] Therefore, global climate finance would need to increase nearly eightfold to reach US$5 trillion per year by 2030. According to the Intergovernmental Panel on Climate Change estimate, private sector finance is critical to meeting these trillions in investment needs, particularly given constraints on public sector financing in the context of the global pandemic. This increase in private investments will require scaling up by more than 10 times by 2030 because contributions from the private sector have been very low to date (US$340 billion in 2020; CPI 2021). Furthermore, private climate finance mainly reaches advanced

economies such as the United States (where 95 percent of climate finance comes from private sources and only 5 percent from public sources) or Western Europe (60 percent from private sources compared with 40 percent from public sources). Policies are therefore needed to enable private sector investments. This is increasingly also the case in emerging economies and developing countries that have had to source their climate investments primarily from public sources, with limited contributions from the private sector (36 percent on average).[9]

1.6 Despite efforts by national governments and the international development community, including the Bank Group, most countries lack a conducive enabling environment for the private sector to engage in climate mitigation and adaptation. The private sector operates in a context influenced by the public sector through policies, regulations, and incentives, and changes in these are necessary to catalyze and increase private sector participation in climate action. The current regulatory and legal frameworks of many countries fail to address the market failure that disincentivizes climate mitigation measures:[10] new technologies that emit lower levels of GHGs ("low-carbon" technologies) are competing with cheaper incumbent technologies that tend to produce higher GHG emissions ("high-carbon" technologies). Regulations that correct price externalities would address the market failure and signal to private investors that adopting low-carbon solutions would yield a sufficient return (BCG and GFMA 2020; Bhattacharya et al. 2020; Boehm et al. 2021; Kivimaa and Kern 2016; OECD 2017a; Rosenbloom, Meadowcroft, and Cashore 2019). This market failure can result in the perpetuated use of fossil fuels or other high-carbon technologies and prevent the emergence of low-carbon alternatives—a phenomenon referred to as "carbon lock-in" (Sato, Elliott, and Schumer 2021).[11] In terms of adaptation, the market failure that prevents private sector investors from engaging is that investors are not rewarded for the positive social externalities of many adaptation measures in financial terms (for example, enhanced resilience against the flooding of infrastructure), even though society does benefit. This results in low perceived or actual returns on investment for many adaptation measures, which often lack a ring-fenced cash flow. In addition to a lack of incentives, barriers to private sector adaptation include (i) a lack of information about climate risks and opportunities and (ii) policies that do not encourage adaptation or that even promote actions that increase climate change vulnerability (IFC 2013).

1.7 An enabling environment for private participation in climate action influences the private sector to undertake such action. This evaluation defines the private sector enabling environment for climate action as the set of policies (laws and regulations), incentives, standards, information, and institutions that encourage or facilitate the private sector to invest or behave in ways that reduce GHG emissions or adapt to the current or anticipated impacts of climate change. A private sector enabling environment

for climate action exists in the contexts of country macroeconomic conditions and broader private sector enabling environments, which may also constrain private investment in climate action.

1.8 An enabling environment for private participation in climate adaptation requires strong incentives, availability of climate risk and vulnerability data, and institutional capacity to guide investment decisions. Although ensuring that investments are climate resilient offers private returns to investors and makes projects more viable, many adaptation investments lack adequate returns for the private sector because they also provide public goods—for example, the fortification of physical infrastructure, such as utility networks, so they can withstand extreme weather events. Reaching sufficient adaptation investments, therefore, requires creating appropriate regulatory mechanisms or financial incentives such as blended finance, credit enhancement, and other targeted risk reduction or revenue boosting measures. Supporting adaptation also requires developing information services or platforms that provide localized climate risk and vulnerability data so they can be embedded in investment planning and guide investment decision-making. In addition, it necessitates effective institutional arrangements for multisector adaptation planning to identify where the private sector should focus its adaptation actions (World Bank Group 2021a).

1.9 The COVID-19 pandemic has made private sector action on climate change more important and urgent. Developing economies have suffered significant revenue losses during the COVID-19 pandemic, compounded by the fiscal drain of pandemic response measures, with knock-on effects on their fiscal and debt positions. The pandemic has also exacerbated the public debt pressures on many middle-income countries, leaving limited funding for climate mitigation and adaptation (Kharas and Dooley 2020; UNEP 2021a). Because public sector resources for climate change have decreased, involving the private sector has become even more essential and time sensitive.

1.10 Bank Group strategies and policies have long emphasized the need to fight climate change, including through private sector participation. Starting with the *World Development Report 2010: Development and Climate Change* and *Toward a Green, Clean, and Resilient World for All: A World Bank Group Environment Strategy 2012–2022*, the Bank Group recognized the important role of the private sector in finding low-emission paths to development and the need to mobilize additional sources of private finance for low-emission solutions and investments to build resilience to climate shocks. Subsequently, several sector strategies mainstreamed climate change issues. For example, the Bank Group energy and agriculture strategies explicitly recognized the importance of private sector action on climate. Following the Paris Agreement in 2015, the Bank Group adopted the Climate Change Action Plan 2016–20 (World Bank Group 2016) with an explicit commitment to increase private sector engagement in climate action and

implement the required enabling policies. The International Finance Corporation (IFC) Climate Implementation Plan (IFC 2016) committed IFC to increasing climate investments to reach 28 percent of the institution's annual financing by 2020 and catalyzing US$13 billion in private sector capital per year by 2020. The recently approved Climate Change Action Plan 2021–25 (known as the CCAP 2021; see World Bank Group 2021b) once more confirms the importance of private sector participation in climate mitigation and adaptation. (See appendix D for an overview of the Bank Group's emerging engagement in climate action and private sector participation.)

2. Objectives and Audience

2.1 The objective of the evaluation is to derive lessons from Bank Group experience in improving the enabling environment for private sector participation in climate action. The evaluation will assess the relevance and effectiveness of Bank Group support to enabling private sector participation in climate action, including the drivers that led to positive results. It aims to identify lessons applicable to the World Bank, IFC, and the Multilateral Investment Guarantee Agency (MIGA) by obtaining evidence-based findings on what works, why, and for whom. Such lessons can inform the implementation of the CCAP 2021 and subsequent Bank Group activities. The focus on the enabling environment has been chosen because researchers, policy makers, and climate action practitioners realized that creating an enabling environment is a key priority for the private sector to engage in climate action (BCG and GFMA 2020; Bhattacharya et al. 2020; Boehm et al. 2021; OECD 2017a). The need to enhance the enabling environment for private sector participation in climate action is critical to meet the trillions in investment needed to address climate change and achieve the Paris Agreement goals.

2.2 The primary audiences for the evaluation are the Bank Group's Board of Executive Directors, management, and staff involved in delivering projects and programs that aim to create an enabling environment for private sector participation in climate action. Members of the Committee on Development Effectiveness and the Board of Executive Directors may use the evaluation to guide the Bank Group's efforts to increase private sector participation in climate action. Beyond staff in the Climate Change Group of the World Bank's Sustainable Development Practice Group, the IFC's Climate Business Department, and MIGA's climate analytics and climate oriented business units, the evaluation will also be of interest to those working in operational units engaging with climate action. In the World Bank, these include the Global Practices of the World Bank's Sustainable Development, Infrastructure, Economics, and Finance Practice Groups. In IFC these include the Infrastructure and Natural Resources, Manufacturing, Agribusiness, and Services, and Financial Institutions Group industry groups; the Cross-Cutting Solutions Vice Presidential Unit, in particular staff in Public-Private

Partnerships Transaction Advisory, Upstream, and Sustainability and Gender Solutions; and staff in country and regional units. Additional stakeholders include Bank Group client governments, multilateral and bilateral development banks and donors, civil society organizations, and the private sector as the ultimate beneficiary of policies that enable private participation in climate action.

3. Evaluation Framework, Questions, and Scope

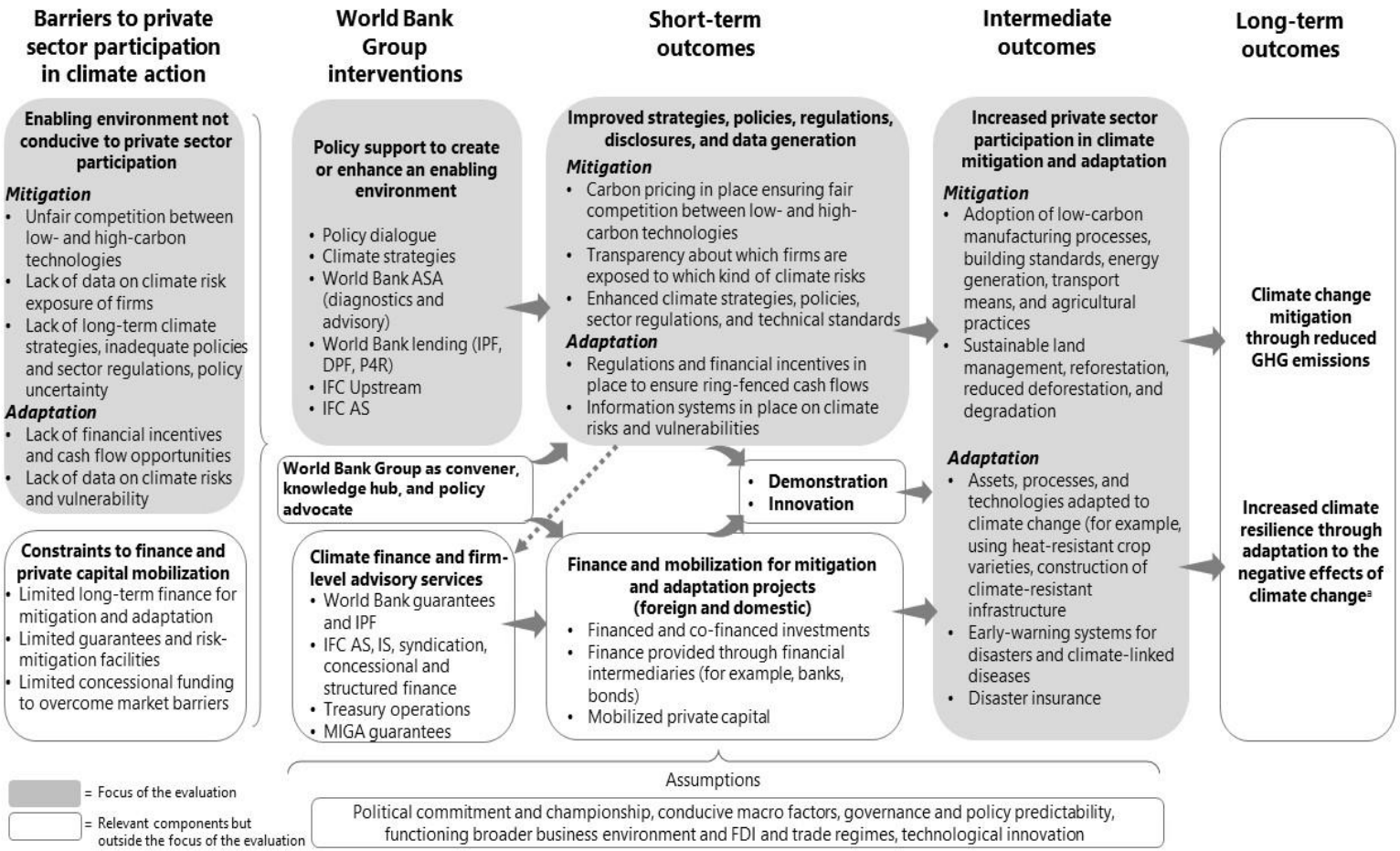
3.1 The conceptual framework for the evaluation (figure 3.1) articulates the transmission channels through which the Bank Group's upstream and downstream interventions address barriers to private sector participation in reducing GHG emissions and increasing resilience against climate change. The two barriers identified by this framework are (i) an enabling environment that is not sufficiently conducive to private sector participation in climate action and (ii) a lack of finance and private capital mobilization (left column of figure 3.1). To improve the enabling environment, the Bank Group engages with client governments through a range of upstream approaches and instruments, including policy dialogue. Some examples are support to design carbon pricing mechanisms, to achieve sector reforms such as introducing feed-in tariffs for renewable energy, to develop resilient building standards, or to diagnose main challenges for private sector participation. These are supported through World Bank lending projects (including investment project financing and development policy financing), World Bank advisory and assistance projects (including the recently introduced Country Climate and Development Reports or technical assistance under the Partnership for Market Readiness), and IFC advisory mandates (for example, to promote the adoption of more energy-efficient and resilient processes at the sector level). To address the lack of finance and private capital mobilization, the Bank Group also deploys downstream interventions. These include IFC investments, firm-level advisory services, MIGA guarantees, and World Bank lending to fund projects in climate mitigation and adaptation (for example, credit lines to support the adoption of low-GHG-emission technologies). Improvements in the enabling environment can help create the conditions that make these interventions viable (see dotted line in figure 3.1). Successful investments can have a demonstration effect; that is, they can signal to other investors that investments in renewable energy generation, for example, are feasible in certain emerging—and yet untested—markets, triggering subsequent foreign or domestic investments in these markets.

3.2 The Bank Group also acts as a convener on policy issues and engages in climate-related alliances and partnerships. These activities support both the upstream and downstream efforts of the Bank Group. For example, the Bank Group's engagement in the Carbon Pricing Leadership Coalition helps client countries build their institutional and human capacities to implement incentive systems for private sector participation

through carbon pricing instruments. Together, these measures result in intermediate outcomes, such as increased adoption of carbon-neutral manufacturing processes by private corporations (mitigation) or investments in firms' infrastructure to make it more resilient against extreme weather events (adaptation). Ultimately, these intermediate outcomes contribute to reducing GHG emissions and increasing climate resilience (long-term outcomes).

3.3 The conceptual framework relies on a range of assumptions that the team will use to derive working hypotheses to be tested during the evaluation. Before barriers to private sector participation in climate action are addressed by Bank Group interventions, country governments, for example, need to understand the severity of the threat that climate change poses to their country and generate the necessary political commitment. To turn Bank Group interventions and efforts to enhance the institutional capacity of a country into short-term and intermediate outcomes, the necessary bills need to be passed and national institutions need to be able to retain trained staff (Leiserowitz 2020; Nightingale 2017; Willis 2019). For increased private sector participation to happen, the broader business environment, including macro conditions, needs to be conducive to attract private investors.[12] A foreign direct investment regime that allows private investment in target sectors (such as energy generation) and a stable enough exchange rate are, for example, of vital importance for equity investments. Technological innovation needs to advance to make low-carbon solutions increasingly competitive. Figure 3.1 captures the most important assumptions (see the lower part of the figure), without trying to be comprehensive. The evaluation will use these (and other) hypotheses when testing the validity of the conceptual framework and use them to derive lessons to inform future Bank Group interventions. A particularly important assumption is the ability of domestic capital markets to raise sufficient financing to support the sizable investments required for reaching country climate change goals.[13] In its case studies, the evaluation will consider whether this is a main constraint on private sector investment for climate action.

Figure 3.1. Conceptual Framework



Source: Independent Evaluation Group.
Note: AS = advisory services; ASA = advisory services and analytics; CEA = Country Environmental Analysis; CPSD = Country Private Sector Diagnostic; DPF = development policy financing; FDI = foreign direct investment; GHG = greenhouse gas; IDB = Inter-American Development Bank; IFC = International Finance Corporation; IPF = investment project financing; IS = investment services; MIGA = Multilateral Investment Guarantee Agency; P4R = Program-for-Results.
a. Measured by *A Framework and Principles for Climate Resilience Metrics in Financing Operations* (IDB 2019), for example.

3.4 The evaluation will focus on addressing the enabling environment for private sector participation in climate action; that is, the area shaded in gray in figure 3.1. The team will assess short-term and, to the extent possible, intermediate outcomes resulting from Bank Group policy support that had the objective of creating (or enhancing) an enabling environment for private sector participation in climate action. For example, the team will assess the effectiveness of policy support for introducing regulations for feed-in tariffs intended to help client countries generate increasing shares of their energy needs using renewable energy sources such as solar power. The evaluation will consider selected macro factors and elements of the broader business environment only in case studies.

3.5 The evaluation will not focus on climate finance and mobilization issues; that is, the area shaded in white in figure 3.1. The evaluation will analyze the white areas of figure 3.1—climate finance, firm-level advisory support, and their outcomes—only to understand which enabling environment conditions contributed to project success. To this end, we will identify the enabling environment factors that enabled the financing and mobilization of private capital. For example, the evaluation will assess which regulatory provisions have contributed to IFC investments and MIGA guarantees in solar generation and whether these regulatory provisions contributed to investments from other partner institutions along with IFC and MIGA. To narrow its scope, the evaluation will not assess the Bank Group's efforts in climate finance and private capital mobilization.[14] In addition, the evaluation will not focus on downstream project interventions that might indirectly catalyze climate action through demonstration effects, by providing critical infrastructure, or by supporting new technologies. The evaluation will also not cover the long-term outcomes of Bank Group interventions. Finally, the evaluation will not directly assess the Bank Group's role in global partnership programs but will consider their manifestation in country engagements, such as specific technical assistance activities from the Partnership for Market Readiness.

3.6 The climate action portfolio that this evaluation will assess comprises interventions from the World Bank, IFC, and MIGA. Table 3.1 provides an overview of the preliminary Bank Group portfolio, which will be updated and screened further during the evaluation. To identify the relevant potential World Bank lending portfolio, the team selected projects that were either mapped to the Climate Change theme code (code 81) or had positive climate co-benefits (value > 0). Using the selected projects in the first step, the team conducted a text search for a taxonomy of keywords related to enabling environment for private sector participation in climate action. See appendix B for details on the portfolio identification. The preliminary portfolio comprises Bank Group policy support, climate finance interventions, and government-facing advisory services. The evaluation will focus on policy support, which has as an objective to create or enhance the enabling environment for private sector participation in climate action. The policy support portfolio includes 760 World Bank lending operations, 581 World Bank advisory

services and analytics, and 208 IFC advisory services. As mentioned earlier, the team will analyze climate finance interventions to understand which enabling environment conditions contribute to success.

Table 3.1. World Bank Group Preliminary Portfolio, Fiscal Years 2013–22: Enabling Environment for Private Sector Participation in Climate Action

Type of Intervention	Institution and Instrument	Projects (no.)
Upstream support interventions to create or enhance the enabling environment	World Bank lending	760
	World Bank ASA	581
	IFC AS	208
Downstream support interventions in climate finance that benefit from the enabling environment	IFC IS	899
	MIGA	115

Sources: Independent Evaluation Group preliminary calculations; International Finance Corporation; Multilateral Investment Guarantee Agency; World Bank.
Note: AS = advisory services; ASA = advisory services and analytics; IFC = International Finance Corporation; IS = investment services; MIGA = Multilateral Investment Guarantee Agency.

3.7 The Bank Group portfolio is concentrated on support for climate action in infrastructure. The World Bank, IFC, and MIGA portfolios focus on different regions. Infrastructure support (including for energy) is the most prominent type of intervention across all Bank Group institutions, followed by agriculture, financial markets, and manufacturing.[15] Regionally, World Bank lending support is concentrated in the Sub-Saharan Africa Region (36 percent). The IFC investment services portfolio focuses on Latin America and the Caribbean (22 percent), Europe and Central Asia (18 percent), and East Asia and Pacific (17 percent). MIGA's portfolio centers on Europe and Central Asia (30 percent of the gross amount issued), followed by Sub-Saharan Africa (26 percent of the gross amount issued). See appendixes A and B for more detailed information on the portfolio.

3.8 The evaluation seeks to answer the following overarching question: What lessons can the Bank Group draw from previous engagements to create an enabling environment for private sector participation in climate mitigation and adaptation? The evaluation will address this overarching question by answering the following questions focused on relevance and effectiveness:

1. How relevant has the Bank Group's support been to creating an enabling environment for private sector participation in climate mitigation and adaptation in client countries?

a. How relevant is the Bank Group's portfolio of interventions given the constraints limiting private sector participation in climate mitigation and adaptation?

b. To what extent has the Bank Group supported countries in creating an enabling environment in sectors that have the highest potential for private sector participation in climate mitigation and adaptation?

c. Are the Bank Group's core analytic tools—for example, Country Climate Development Reports, Country Private Sector Diagnostics, and infrastructure and financial sector assessments—helpful in identifying constraints on private sector participation in climate action at the country level? How well aligned were Bank Group programs with identified constraints at the country level?

2. How effectively has the Bank Group supported creating an enabling environment in client countries to allow the private sector to engage in climate mitigation and adaptation?

   a. To what extent have Bank Group interventions in support of creating an enabling environment for climate mitigation and adaptation achieved their immediate outcomes?

   b. What is the evidence that the created enabling environments have led to the intermediate outcomes of increased private sector participation in climate mitigation and adaptation?

   c. What can we learn from (i) the Bank Group's successful and unsuccessful experiences of enhancing private sector participation in climate mitigation and adaptation and (ii) IFC investments, IFC advisory services, MIGA guarantee projects, and World Bank lending operations about factors in the enabling environment that contributed to the successful or unsuccessful implementation of projects relevant to climate action?

4. Evaluation Design and Evaluability Assessment

4.1 The evaluation will use a mixed methods approach to assess the relevance and effectiveness of the Bank Group's engagements on private sector participation in climate action. The assessment will occur at two levels: global and country. The evaluation will apply a range of qualitative and quantitative methods at both levels, including a structured literature review (SLR), a portfolio review and analysis (PRA), case studies,[16] a systematic document review, semistructured interviews, and an analysis of secondary data. Table 4.1 provides an overview of the methods that the evaluation will apply to

address each evaluation question. The following paragraphs outline how the evaluation questions will be answered, describing the various methodological components. Appendix A includes a more detailed version of table 4.1.

Table 4.1. Proposed Approach—Overview

Evaluation Question	Level of Assessment	Methods
Question 1. How relevant has the World Bank Group's support been to creating an enabling environment for private sector participation in climate mitigation and adaptation in client countries?		
1.a How relevant is the Bank Group's portfolio of interventions given the constraints limiting private sector participation in climate mitigation and adaptation?	Global	• SLR to identify the prevailing constraints and enabling factors • PRA to identify which constraints were addressed in the Bank Group portfolio • Systematic portfolio mapping to assess alignment of Bank Group portfolio (based on PRA) with enabling constraints identified through SLR
1.b To what extent has the Bank Group supported countries in creating an enabling environment in sectors that have the highest potential for private sector participation in climate mitigation and adaptation?	Global	• SLR and global data analysis to identify which sectors or areas have the highest potential of private sector participation in climate action • Systematic portfolio mapping of data on sectors with highest potential for private sector participation in climate action with Bank Group portfolio data (from PRA)
1.c Are the Bank Group's core analytic tools—for example, Country Climate Development Reports, Country Private Sector Diagnostics, and infrastructure and financial sector assessments—helpful in identifying constraints on private sector participation in climate action at the country level? How well aligned were Bank Group programs with identified constraints at the country level?	Global Country	• Structured qualitative review of relevant analytic and diagnostic reports to assess whether they cover private sector agenda items in adequate depth and width, based on predefined criteria derived from SLR • Data collection and analysis and checking databases with country-level or sector-level specific information • Portfolio mapping and PRA within cases to assess the alignment between Bank Group country portfolio and country constraints
Question 2. How effectively has the Bank Group supported creating an enabling environment in client countries to allow the private sector to engage in climate mitigation and adaptation?		
2.a To what extent have Bank Group interventions in support of creating an enabling environment for climate mitigation and adaptation achieved their immediate outcomes?	Global corporate Country	• PRA and key performance indicator analysis to analyze the extent to which intended outcomes were actually achieved based on evaluative evidence • Case studies and country-level PRA to assess whether Bank Group interventions achieve their immediate outcomes at the country level
2.b What is the evidence that the created enabling environments have led to the intermediate outcomes of increased private sector participation in climate mitigation and adaptation?	Global corporate Country	• Portfolio-level difference-in-difference analysis (depending on availability of data)[a] comparing the changes in private sector participation over time among a cohort of countries supported by the Bank Group and a

Evaluation Question	Level of Assessment	Methods
		cohort of countries that did not receive Bank Group support • Portfolio-level before-and-after analysis comparing levels of private sector participation before and after Bank Group intervention • Case studies with contribution analysis to assess whether Bank Group interventions were followed by an increase in private sector participation in climate action, paired with an analysis of other contributing factors (support of other development partners, economic trends, and so on)
2.c What can we learn from (i) the Bank Group's successful and unsuccessful experiences of enhancing private sector participation in climate mitigation and adaptation and (ii) IFC investments, IFC advisory services, MIGA guarantee projects, and World Bank lending operations about factors in the enabling environment that contributed to the successful or unsuccessful implementation of projects relevant to climate action?	Global corporate	• Cross-case analysis and synthesis to derive factors that contribute to a successful experience of creating a conducive enabling environment and lessons learned • Correlation analysis based on PRA to assess internal and external success factors and their correlation with positive project outcomes

Source: Independent Evaluation Group.
Note: IFC = International Finance Corporation; MIGA = Multilateral Investment Guarantee Agency; PRA = portfolio review and analysis; SLR = structured literature review.
a. To adapt for data availability, this exercise could be done on specific sectors, for example renewable energies.

4.2 The relevance analysis will assess the alignment of the Bank Group's activities on private sector enabling environments for climate action with global priorities and potentials. Evaluation question 1.a will be answered by performing an SLR to establish a reference list of the prevailing constraints that prevent private sector actors from engaging in climate action, followed by a PRA to identify which constraints Bank Group interventions help address. A systematic portfolio mapping will then be used to assess the level of alignment between the constraints identified through the SLR and Bank Group interventions. To answer evaluation question 1.b, the results of the SLR will be complemented by a global data identification and assessment to identify the sectors (such as energy, transportation, or agriculture) and application areas (such as energy efficiency) with the highest potential for private sector participation in climate action, along with their potential mitigation and adaptation effects. For example,preliminary assessment by the Independent Evaluation Group (IEG) identified a significant GHG reduction potential (that is, a climate mitigation effect) by private sector investments in improved building insulation (Guidehouse Insights 2022). A systematic portfolio mapping of sectors and areas with the highest potential for private sector participation in climate action with Bank Group portfolio data (from the PRA) will then help answer the questions regarding the extent to which the Bank Group has supported countries in

those sectors and application areas where the highest mitigation or adaptation outcomes can be expected. To answer evaluation question 1.c, a structured qualitative review of relevant analytic and diagnostic reports (for example, Country Climate and Development Reports, Country Private Sector Diagnostics and infrastructure and financial sector assessments) will be conducted. PRA and national data on country constraints will be used to assess the alignment of country programs with country-specific constraints (to be conducted for case studies only). All of these methodological elements will be corroborated, whenever possible, with evidence from the literature, impact evaluations, and previous IEG evaluations.

4.3 The effectiveness analysis will look at how effective the Bank Group was in creating or enhancing the enabling environment, drawing from portfolio-level outcome data and case studies. To answer evaluation question 2.a, IEG will systematically analyze evidence on project-level outcomes. Project-level evaluation documents (for example, Implementation Completion and Results Reports and their IEG validation reports) contain project-level information on whether Bank Group interventions achieved the anticipated short-term outcomes (for example, whether feed-in tariffs were implemented or energy subsidies abolished). This outcome information can come in the form of quantitative information as key performance indicators or qualitative information in the form of a verbal description in Implementation Completion and Results Reports. IEG will systematically analyze these key performance indicators and qualitative data through a PRA and assess the extent to which intended outcomes were achieved at the portfolio level, differentiated by the type of policy area or constraint and relevant country characteristics (for example, country income levels or GHG emission intensity levels). These findings will be corroborated by case studies that will also help assess whether Bank Group interventions achieve their short-term outcomes at the country level, using field or virtual missions; cases will be especially helpful to find out if positive results were maintained even after Bank Group support stopped. To assess to what extent improvements in the enabling environment supported by Bank Group interventions led to the intended intermediate outcomes, that is, an increase in private sector participation (evaluation question 2.b),[17] a portfolio-level difference-in-difference analysis will be implemented, provided that data are available for a sufficiently high number of countries. The difference-in-difference analysis will compare the changes in private sector participation over time among a cohort of countries supported by the Bank Group and a cohort of countries that did not receive Bank Group support. By using a counterfactual, this method will allow understanding of the extent to which the Bank Group contributed to outcome achievement. The team may also conduct this analysis in specific sectors, for example renewable energies. In case a difference-in-difference analysis is impossible (because of, for example, data issues), the team will perform a portfolio-level before-and-after analysis, comparing private sector participation before

and after Bank Group intervention across the incidents where the Bank Group has contributed to successfully create a conducive enabling environment (relying on data from the PRA). Case studies will complement this assessment with their contribution analyses; the latter will help identify other contributing factors (for example, similar interventions by other development partners), thus allowing the team to create a better understanding of the Bank Group's contribution to outcome achievement.[18]

4.4 To assess what we can learn from previous Bank Group experience—including from IFC investment and MIGA guarantee projects—a cross-case analysis will be conducted. This will help derive lessons and factors that contribute to successfully creating conducive enabling environments. To enhance the validity of the findings from the cross-case analysis beyond the cases, a portfolio-level correlation analysis will be conducted to assess success factors across the entire IFC and MIGA portfolio and how these factors correlate with positive project outcomes. This will be conducted on the basis of evaluated IFC and MIGA projects. The analysis of the success factors of IFC investments and MIGA guarantees will also include a sample of recently approved projects to allow for a forward-looking learning experience.

4.5 The evaluation will conduct up to 10 case studies of countries where the Bank Group has attempted to create or enhance the enabling environment for private sector participation in climate action. Case studies will focus on key sectors for climate change mitigation and adaptation, such as energy and agriculture. Case studies will analyze whether Bank Group support was relevant and effective in helping countries advance private sector participation in these two sectors. The unit of analysis of these case studies will be "a sector within a country." Case selection will be systematic; that is, it will be conducted based on predefined criteria outlined in appendix A, but selection will also be purposeful to allow selecting cases that offer the greatest learning.

4.6 A range of factors might constrain the evaluation approach, some of which the team can mitigate. World Bank advisory services and analytics are not systematically evaluated, meaning that PRA will not be able to assess their effectiveness. The majority of Bank Group interventions in climate action were approved after 2017, and many of are still under implementation ("active") and have therefore not been evaluated. Yet, the team could confirm during its preliminary evaluability assessment that to date 110 World Bank lending operations, 41 IFC advisory services, 70 IFC investment services, and 18 MIGA guarantees have been evaluated, which is collectively considered a sufficiently rich evaluative evidence base. Although the combination of PRA and case studies will make it possible to derive robust lessons, their generalizability will be limited. The team will try to mitigate this limitation by selecting cases typical of the Bank Group's pattern of engagement (for example, in terms of the type of sector and the elements of the enabling environment supported). Moreover, case studies do not allow

for rigorously establishing causal links between Bank Group interventions and outcomes. The team will try to mitigate this constraint by conducting a contribution analysis in the context of case studies. Data constraints will include, among others, limited or not available data on private sector participation for some countries and sectors, which may limit IEG's ability to assess the achievement of intermediate outcomes (level of private sector participation in climate action). The coding system for the Bank Group climate action portfolio (using climate co-benefits and climate theme codes) may also not be fully accurate, or project-level evaluation reports may not contain the anticipated results information on climate-relevant components, as identified in a preliminary evaluability assessment by IEG. The use of climate co-benefit values or climate change theme codes as criteria for portfolio inclusion could miss some actions that in principle may constitute climate action, but it is likely to capture the most important climate change aspects. Finally, the evaluation will likely still be constrained by travel restrictions imposed by COVID-19.

4.7 This evaluation will be closely coordinated with other parallel ongoing evaluations and build on the knowledge of several previous IEG evaluations on private sector participation in climate action–relevant sectors. This evaluation is part of IEG's ongoing work stream on climate change and environmental sustainability. Key aspects of Bank Group work on climate change not covered by this evaluation may be covered by future work. The private sector participation in climate evaluation team will coordinate with the team working on the IEG evaluations *International Finance Corporation Country Diagnostics and Strategies under IFC 3.0: An Early-Stage Assessment* and *World Bank Group Support to Energy Efficiency: An Independent Evaluation of Demand-Side Approaches*. The latter evaluation will assess, among other things, to what extent Country Private Sector Diagnostics and IFC Country Strategies have informed World Bank lending and advisory work for private sector development. As private sector participation in climate action is part of the Bank Group's broader private sector development work, the two evaluation teams will coordinate to ensure complementarity of their analytic efforts and of the reports. The evaluation also builds on 12 IEG evaluations over the past eight years that jointly covered four of the five key systems of the CCAP 2021—that is, energy, cities, transportation, and agriculture, food, water, and land use. Manufacturing, the fifth key system in the CCAP 2021, was not yet covered by an IEG evaluation. As sectoral evaluations, these reports did not focus on climate mitigation or adaptation, but they offer lessons on private sector participation summarized in detail in appendix C.

5. Quality Assurance Process

5.1 The evaluation will follow IEG's internal quality assurance and external quality review process. It will undergo review by IEG management and external reviewers. The external reviewers, who will provide guidance and quality assurance to IEG, are Shilpa

Patel, director at the ClimateWorks Foundation and former principal adviser to the Finance Center at the World Resources Institute; Sanjay Patnaik, director of the Center on Regulation and Markets, the Bernard L. Schwartz Chair in Economic Policy Development, and a fellow in Economic Studies at Brookings; and Barbara Buchner, global managing director of the Climate Policy Initiative.

6. Expected Outputs, Outreach, and Tracking

6.1 The primary output of the evaluation will be a report to the Committee on Development Effectiveness, which will contain the main findings and recommendations. The finished evaluation will be published and disseminated both internally and externally. IEG will develop working papers, presentations, blogs, videos, and other products as appropriate for internal and external audiences of the evaluation, including key stakeholders. Regular stakeholder interaction will be sought to enhance the evaluation process, including consultation while the evaluation is under way and dissemination and outreach once it is complete.

6.2 **Outreach strategy and tracking.** IEG will implement an outreach plan once the evaluation is completed. The efforts will target key stakeholders, including staff at headquarters and country offices, other multilateral development banks and donors, government authorities, civil society organizations, and counterpart officials. The tracking of the recommendations of the report will follow the standard Management Action Record process.

7. Staffing and Timeline

7.1 The skills mix required to complete the evaluation includes expertise in climate change, the private sector, evaluation, and IEG methods, including case study analysis and portfolio analysis, and familiarity with the policies, procedures, and operations of the World Bank, IFC, and MIGA. The Approach Paper was prepared under the leadership of Stefan Apfalter, senior evaluation officer. This evaluation will be task-managed by Stephen Hutton, senior evaluation officer, and Heinz Rudolph, senior evaluation officer, under the guidance of Marialisa Motta, manager of the Finance, Private Sector, Infrastructure, and Sustainable Development Unit, and Carmen Nonay, director of the Finance, Private Sector, and Sustainable Development Department. The evaluation will be prepared by a team comprising Anna Mortara, Julia de Mesquita, Joao Leal, John Pollner, Kaler Hurcan, Pablo Correa, Ridwan Bello, Samjhana Thapa, and others. The evaluation team will also work extensively with IEG's Methods Advisory Function team to ensure that the implementation of the design is fit for purpose. In addition, specific sector expertise from within IEG will be leveraged, and external consultants will be included as needed.

7.2 The evaluation will be submitted to the Committee on Development Effectiveness in May 2023.

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[1] For example, the projected sea-level rise of 1–2 meters by 2100 will threaten coastal urban settlements, jeopardizing infrastructure and buildings. Moreover, the sea-level rise will increase the risks from infectious diseases as it alters coastal wetlands (marshes and mangroves). Together with the temperature increase, these changes will put 8.4 billion people at risk from malaria and dengue (Colón-González et al. 2021; Horton et al. 2020; IPCC 2022). Longer and more frequent droughts will threaten agricultural production and, thus, the global food supply. Droughts and water shortages will threaten the safety of millions because there will be less clean drinking water and insufficient water for sanitation (Garthwaite 2019).

[2] The World Health Organization predicts that the direct health costs of climate change will amount to US$2–4 billion per year by 2030 and that between 2030 and 2050, global warming will cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhea, and heat stress.

[3] Increasing ocean temperatures have already led to widespread coral bleaching, the loss of fish breeding grounds, and mass migration of marine life. The oceans have also become more acidic than at any time in the past 2 million years, endangering plankton and other organisms at the base of marine food chains that ensure food security for the estimated 1 billion people who depend on fish for their primary source of protein. On land, meanwhile, climate change threatens to fundamentally alter ecosystems through such processes as mountain deglaciation, increased desertification, rainforest "die-back," wildfire damage, and thawing permafrost. That will compound other anthropogenic sources of biodiversity loss, such as the rampant degradation of landscapes and seascapes, overharvesting of wild species, pollution, and introduction of invasive species.

[4] Further links can be found to Sustainable Development Goal (SDG) 9 (building resilient infrastructure, promoting sustainable and inclusive industrialization, and fostering innovation), SDG 12 (sustainable consumption and production patterns), SDG 11 (sustainable cities and communities), and SDG 10 (reduction of inequality within and among countries).

[5] Although industrial countries have historically been the largest contributors to global emissions, emerging economies are joining the ranks of top greenhouse gas (GHG) emitters. For example, China recently became the global top emitter with 27 percent of global emissions. India (7 percent), Iran (2 percent), and Brazil, Indonesia, and Mexico (each about 1.3 percent) are also significant GHG emitters (World Economic Forum 2019).

[6] Although disaggregated data on the private sector's GHG emissions across sectors and regions are lacking, a recent assessment found that in Africa, Latin America, and South-East Asia, much of the recent growth in GHG emissions came from the energy, industry, and transportation sectors, in which the private sector plays a strong role. In absolute terms, the largest emitting sector in these regions is agriculture and forestry, largely because of deforestation (Lamb et al. 2021).

[7] Mitigation and adaptation investments rely on public and private finance, depending on the sector. For example, according to CPI (2019), 70 percent of the financing of investments in renewable energy for climate mitigation comes from private sources. In the case of investments in climate adaptation, the financing comes mostly from public sources, including state-owned banks.

[8] By comparison, the total global investment in fossil fuels was approximately US$726 billion in 2020 (IEA 2021).

[9] Outside the United States, Europe, and Australia, only 36 percent of climate finance comes from the private sector on average. In Sub-Saharan Africa, only 12 percent of climate finance comes from private sources, with the remaining 88 percent coming from public sources. Although this emphasizes the critical role of public finance in driving climate actions, it also points to the importance of mobilizing private funds for emerging economies and developing countries (Bhattacharya et al. 2020; Boehm et al. 2021; CPI 2019; IFC 2021).

[10] World Bank Group efforts in introducing carbon pricing mechanisms in client countries are duly acknowledged. Carbon pricing schemes (emission trading regimes, carbon taxes) have been implemented in several countries globally, but to date this has mainly been in high-income countries (for example, countries within the European Union, New Zealand, the United States, the Republic of Korea, Japan, Chile, and so on), with the exception of a few upper-middle-income countries (such as China, South Africa, and Mexico).

[11] A second market failure—that is, information asymmetry—can also lead to low adoption of low-carbon solutions. Users of low-carbon technologies are not always aware of the actual costs and potential cost savings, either because cost information is not adequately supplied (for example, because of a lack of adequate labelling of the energy consumption of household appliances) or because users are not basing their decisions on a life cycle assessment (for example, despite the increased purchase price of electric vehicles, their life cycle costs are lower than those of fuel-based vehicles because of lower maintenance costs).

[12] Of particular relevance are environmental protection laws and regulatory design, environmental risks, licenses, and clearances; overall investment policy regime; regulatory predictability and policy coherence; business entry and establishment; the incentive framework for investments, technology adoption and firm linkages; and institutional arrangements and capacity.

[13] According to the Bank Group, pursuing a combined resilient and net zero development pathway would require the domestic financial market of Vietnam to finance annual investments equivalent to 3.4 percent of gross domestic product (World Bank Group 2022).

[14] In 2020, the Independent Evaluation Group (IEG) concluded an evaluation on private capital mobilization (World Bank 2020d).

[15] Support for infrastructure dominates relevant International Finance Corporation investments and Multilateral Investment Guarantee Agency guarantees. Support for public-private partnerships—mainly support for structuring infrastructure public-private partnership transactions—is the largest business line in the climate action advisory services portfolio of the International Finance Corporation. The World Bank lending portfolio contains 157 projects in the

Agriculture and Food Global Practice, followed by 98 projects in the Energy and Extractives Global Practice. In addition, IEG's preliminary portfolio analysis found that many projects approved by other Global Practices (for example, Finance, Competitiveness, and Innovation and Macroeconomics, Trade, and Investment) contain components supporting the energy sector, such as abolishing energy subsidies. Therefore, infrastructure support (including for energy) is the most prominent type of intervention across all Bank Group institutions.

[16] Sector-country case studies will further include interviews and focus group discussions with key stakeholders, the Bank Group, and external stakeholders including ministries, sector and regulatory agencies, investors and academia, paired with site visits during in-person or virtual field missions.

[17] IEG is in the process of identifying global data sets that could be used to measure private sector participation, including data on investment flows, innovation, market development, and so on.

[18] See, for example, Budhwani and McDavid 2017 for more details on the value of contribution analysis.

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Appendix A. Evaluation Design and Design Matrix

This appendix provides an introduction to the evaluation design by (i) describing the most important methodological elements and (ii) providing an overview of how the various evaluation questions will be answered using these methodological elements. Table A.1 presents an evaluation design matrix that indicates the evaluation questions, the information required to answer them, and the data collection sources and analysis methods needed to provide this information.

A structured literature review (SLR) will be commissioned to inform the relevance and effectiveness assessment and to provide contextual information. The SLR will identify the prevailing constraints to private sector participation in climate action and enabling factors that help address these constraints. It will also provide insights into the key categories of constraints pertaining to predefined country characteristics (for example, country income levels, greenhouse gas emission levels, climate vulnerability levels) and offer an overview of the global trends in addressing these constraints, elaborating on the different policy and institutional arrangements being used, along with their effectiveness (for example, fiscal measures to establish a level playing field for carbon-efficient and carbon-intensive processes, and associated best practices in structuring such fiscal measures). The SLR will draw on the full range of relevant sources, including inputs from development agencies (for example, the United Nations Framework Convention on Climate Change, the Standing Committee on Finance, and so on) and relevant global think tanks, policy initiatives, consulting companies, and sector associations (for example, the Climate Policy Initiative, the World Resources Institute, Boston Consulting Group, and the Global Financial Markets Association). The SLR will serve as a basis for the relevance analysis and will help contextualize the evaluation findings and corroborate results on the effectiveness of World Bank Group interventions.

The portfolio identification, review, and analysis will provide the analytic underpinnings of the Bank Group portfolio data. In the preparation of this Approach Paper, the evaluation team has identified, in a preliminary manner, the relevant Bank Group lending, nonlending, investment, and guarantee portfolios using a combination of theme codes, climate co-benefit values, and text analytics, described in greater detail in appendix B. During the evaluation, the team, in collaboration with the Independent Evaluation Group's Methods Advisory Function team, will fine-tune this identification employing machine learning (through coding, NVivo keyword searches, and systematic checks). Once the identification process is completed, the portfolio review and analysis will be conducted and cover a descriptive analysis of trends, characteristics, and patterns of Bank Group projects (for example, by types of constraints addressed, policy instrument used, and so on) and associated results information contained in project-

level evaluation documents (for example, Implementation Completion and Results Reports). The portfolio review and analysis will form the basis for the subsequent relevance and effectiveness analysis.

The evaluation will conduct up to ten case studies of countries where the Bank Group has attempted to create or enhance the enabling environment for private sector participation in climate action. As the portfolio of World Bank lending interventions is concentrated in two sectors—that is, energy and agriculture (see appendix B, figure B.2)—case studies will focus on these two sectors. Case studies will analyze whether Bank Group support was relevant and effective in supporting countries advancing private sector participation specifically in these two sectors. Therefore, the unit of analysis will be "a sector within a country." Case studies will assess to what extent Bank Group programs address country-level constraints to private sector participation in climate action (evaluation question 1.c), how well Bank Group interventions achieved their immediate outcomes (evaluation question 2.a) and their intermediate outcomes of increased private sector participation (evaluation question 2.b), and what lessons can be learned from experience (evaluation question 2.c). Cases will be informed by the SLR, portfolio review and analysis, country-level data analysis, and semistructured interviews. Case selection will be systematic but purposeful, using external data to classify countries across climate action–relevant characteristics (for example, greenhouse gas emission or climate vulnerability data), factoring in the Bank Group's portfolio in support of the enabling environment for private sector participation in climate action, and consulting with Bank Group experts on the learning potential of prospective cases.

Structured qualitative review of analytic documents will inform the assessment of relevance and provide context for the effectiveness assessment. The team will review analytic reports (for example, Country Environmental Analyses) or sector assessments (Infrastructure Sector Assessment Programs, transportation sector assessments, and so on). As no Country Climate and Development Reports were completed before fiscal year 2021, the Independent Evaluation Group will not be able to assess these. In addition, the evaluation team will conduct a review of relevant Bank Group strategies and corporate documents, which will provide contextual information for the assessment of relevance and effectiveness.

The evaluation will identify and analyze external data from reputable sources for a variety of purposes. At the global level, data on the potential level of private sector participation across the various climate-relevant sectors (for example, energy, transportation, waste, and so on) will be analyzed and compared through a quantitative mapping with Bank Group portfolio data to understand whether the Bank Group has supported countries in areas and sectors that have the highest potential for private

sector participation in climate action (evaluation question 1.b). At the global and national levels, data on actual private sector participation in climate action will be analyzed to understand whether Bank Group efforts have led to increased private sector participation. Depending on the availability of data, this will be done in the form of a before-and-after analysis or as a difference-in-difference analysis.

Semistructured interviews will be another important data collection method. These interviews will be conducted with Bank Group staff and managers, Bank Group clients (investors and government ministries and agencies), external industry specialists, academics, and other stakeholders from think tanks, business consulting, and industry associations. Interviews will provide a range of information: among other things, they will help us to better understand business environment constraints at the global, country, and sector levels and associated policy measures to address them; to identify and corroborate data on the potential for private sector participation in climate action; and to corroborate findings on effectiveness.

Table A.1. Evaluation Design Matrix

Subordinate Evaluation Question	Information Required	Data Collection Methods	Proposed Analytic Approach
Question 1. How relevant has the World Bank Group's support been to creating an enabling environment for private sector participation in climate mitigation and adaptation in client countries?			
1.a How relevant is the Bank Group's portfolio of interventions given the constraints limiting private sector participation in climate mitigation and adaptation?	• Information on global and national constraints for private sector participation in climate action • Information on whether and how the Bank Group approaches these constraints • Information on which constraints Bank Group interventions address	• SLR to identify the prevailing constraints and enabling factors for private sector participation in climate action • Categorization of enabling business environment constraints identified in the SLR • PRA to identify which constraints for private sector participation in climate action were addressed in the Bank Group portfolio	• Systematic portfolio mapping to assess alignment of Bank Group portfolio with enabling constraints identified through the SLR and categorized by the Independent Evaluation Group • Triangulation of findings from the SLR, structured interviews
1.b To what extent has the Bank Group supported countries in creating an enabling environment in sectors that have the highest potential for private sector participation in climate mitigation and adaptation?	• Information on which sectors have the highest potential for private sector participation • Information on which sectors have the highest share of Bank Group support	• SLR and global data analysis to identify which sectors or areas have the highest potential of private sector participation in climate action, possible with associated mitigation and adaptation scenario data • PRA of Bank Group climate change enabling environment portfolio by sector	• Systematic portfolio mapping of data on sectors with highest potential for private sector participation in climate action with Bank Group portfolio data of actual support to assess the level of alignment with global potentials • Triangulation among SLR, data assessment, and semistructured interviews to match how Bank Group projects faced these sector-specific constraints for private sector participation in climate action and what may have led to cases of nonalignment

Subordinate Evaluation Question	Information Required	Data Collection Methods	Proposed Analytic Approach
1.c Are the Bank Group's analytic tools—for example, Country Climate Development Reports, Country Private Sector Diagnostics, and infrastructure and financial sector assessments—helpful in identifying constraints on private sector participation in climate action at the country level? How well aligned were Bank Group programs with identified constraints at the country level?	• Information on private sector participation coverages in climate action–relevant areas in Country Environmental Analyses, InfraSAPs, and Country Private Sector Diagnostics • Information on country-specific constraints for private sector participation in climate action	• SLR to identify key constraints for private sector participation in climate action • Data collection and analysis and checking databases with country-level or sector-level specific information • PRA of Bank Group climate change enabling environment portfolio by sector for case countries	• Structured qualitative review of relevant analytic and diagnostic reports, for example, CCDRs and CPSDs, or other sectoral assessment with climate action coverage, for example, InfraSAPs or FSAPs, to assess whether they cover private sector agenda items in adequate depth and width, based on predefined criteria derived from the SLR • Portfolio mapping and PRA within sector-country case studies to assess the alignment between Bank Group country portfolio and key constraints for private sector participation in climate action in respective countries • Triangulation of manual reviews of Country Private Sector Diagnostics, semistructured interviews, and Bank Group portfolio to check if the portfolio matches the key constraints for private sector participation in climate action identified by the data collection methods
Question 2. How effectively has the Bank Group supported creating an enabling environment in client countries to allow the private sector to engage in climate mitigation and adaptation?			
2.a To what extent have Bank Group interventions in support of creating an enabling environment for climate mitigation and adaptation achieved their immediate outcomes?	• Information on whether the Bank Group has succeeded in achieving its immediate outcomes • Information about the longevity of these outcomes after a project has ended	• KPI data collection of project's KPIs and manual review of project documents to find explicitly formulated component related to business environment constraints • PRA to collate data on outcome achievement	• PRA and KPI analysis to analyze the extent to which intended outcomes were actually achieved based on evaluative evidence in ICRRs (of World Bank lending) and Project Completion Reports (of IFC advisory services) • Case studies and country-level PRA to assess whether Bank Group interventions achieve their immediate outcomes at the country level, corroborated with mission observation and evidence from missions,

Subordinate Evaluation Question	Information Required	Data Collection Methods	Proposed Analytic Approach
			in particular on sustainability of results beyond closure of World Bank lending operation and IFC advisory services mandates
2.b What is the evidence that the created enabling environments have led to the intermediate outcomes of increased private sector participation in climate mitigation and adaptation?	• Information on Bank Group support to address constraints • Information on the level of private sector participation in climate action (for example, level of involvement in operation, investments, innovation, and so on) • Identification of whether this change was prompted by Bank Group action or by other observable factors (attribution)	• PRA to identify incidents where the Bank Group has successfully created an enabling environment for private sector participation in climate action • Data analysis of global and national data on private sector participation levels across sectors relevant to private sector participation in climate action (for example, energy, transportation, and so on) • SLR to identify trends on increased private sector participation in climate action	• Difference-in-difference analysis (depending on availability of data) comparing the changes in private sector participation over time among a cohort of countries supported by Bank Group interventions and a cohort of countries that did not receive support (this will provide more information on the contribution and attribution of the Bank Group interventions on corresponding outcomes) • Before-and-after analysis comparing private sector participation levels before and after Bank Group intervention across the incidents where the Bank Group has successfully created an enabling environment (acknowledging that this does not make it possible to establish attribution). These econometric analyses may focus on particular sectors, such as renewable energy • Case studies with contribution analysis to assess whether Bank Group interventions were followed by an increase in private sector participation in climate action, paired with an analysis of other contributing factors (other development partners, economic trends, and so on) • Triangulation with SLR and case study evidence

Subordinate Evaluation Question	Information Required	Data Collection Methods	Proposed Analytic Approach
2.c What can we learn from (i) the Bank Group's successful and unsuccessful experiences of enhancing private sector participation in climate mitigation and adaptation and (ii) IFC investments, IFC advisory services, MIGA guarantee projects, and World Bank lending operations about factors in the enabling environment that contributed to the successful or unsuccessful implementation of projects relevant to climate action?	• Information on key internal and external factors for easing replication of successful projects	• Case studies to derive factors that contribute to a successful experience of creating enabling environment and lessons learned • PRA to assess internal and external success factors	• Cross-case analysis and synthesis of results on the key factors that were identified in case studies • Portfolio-level correlation analysis to assess if the presence of key factors is correlated with positive project outcomes based on PRA • Triangulation of findings with structured interviews and SLR

Source: Independent Evaluation Group.
Note: CCDR = Country Climate and Development Report; CPSD = Country Private Sector Diagnostic; FSAP = Financial Sector Assessment Program; ICRR = Implementation Completion and Results Report Review; IFC = International Finance Corporation; InfraSAP = Infrastructure Sector Assessment Program; KPI = key performance indicator; MIGA = Multilateral Investment Guarantee Agency; PRA = portfolio review and analysis; SLR = structured literature review.

Appendix B. Preliminary Portfolio Review

The World Bank Group supports an enabling environment for private sector participation in climate action through a combination of lending and nonlending projects. To identify the relevant potential World Bank lending portfolio, the evaluation team used a combination of theme codes, climate co-benefits values, and text analytics. First, the team identified climate change–related projects by selecting projects that were either mapped to the climate change theme code (code 81) or had a climate co-benefit value > 0. Next, the team conducted a text search for a taxonomy of keywords related to enabling environment for private sector participation. The team then augmented the resulting portfolio with relevant projects from two earlier evaluations that are closely aligned with climate change: the disaster risk reduction and energy efficiency evaluations.

A similar methodology was used to identify the relevant World Bank nonlending portfolio, except for the use of a binary climate change indicator rather than the continuous climate co-benefit metric. Unlike the lending portfolio, the nonlending portfolio also did not borrow from the portfolio of previous evaluations (table B.1). These potential portfolios will be manually screened to identify the actual portfolio during the evaluation.

Overall, the team identified 760 World Bank lending projects (453 active and 307 closed) and 581 World Bank nonlending projects (4 active and 577 closed) as potentially relevant for the period fiscal years (FY)13–22 (table B.2). This portfolio is young, as 63 percent of lending projects and 85 percent of nonlending projects were approved in the second half of the evaluation period (that is, between FY18 and FY22; figure B.1). In terms of regional spread, the top three regions with the largest shares of World Bank lending commitments are Eastern and Southern Africa (20 percent), South Asia (15 percent), and Latin America and the Caribbean (15 percent).

Table B.1. Data Sources and Filters Used to Identify Portfolios

Institutions	Data Sources	Filters Used
World Bank lending and nonlending	• World Bank Standard Reports Operations Policy and Country Services theme codes • World Bank climate co-benefits data • Portfolio data from Disaster Risk Reduction and Energy Efficiency evaluations	• Lending: approval FY; project status; climate co-benefits; theme code; PSPCA taxonomy • Nonlending: approval FY; product line; climate change indicator; theme code; PSPCA taxonomy
IFC	IFC iPortal	• Advisory services: AS implementation plan approval FY; project status; climate percentage; enabling environment percentage • Investment services: approval or commitment FY; project status; climate percentage
MIGA	MIGA data team	• Issued FY; climate finance percentage

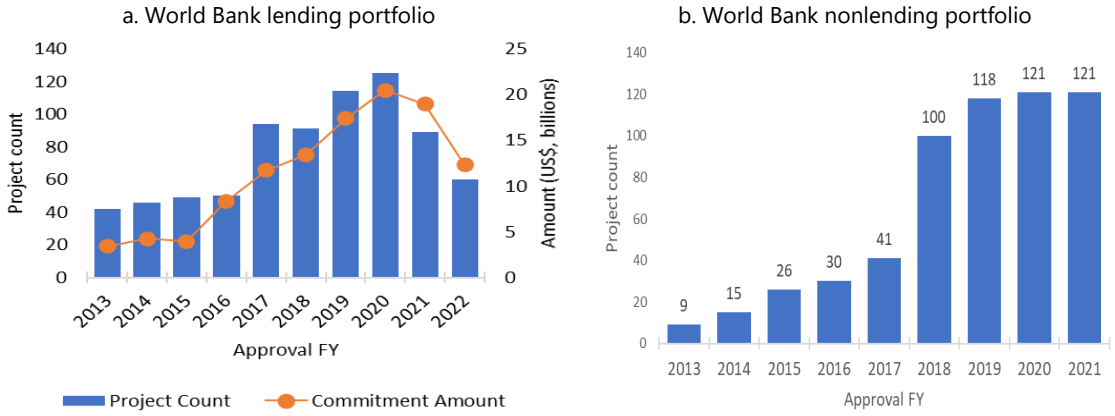
Source: Independent Evaluation Group
Note: AS = advisory services; FY = fiscal year; IFC = International Finance Corporation; MIGA = Multilateral Investment Guarantee Agency.

Table B.2. Preliminary World Bank Group Portfolio for Private Sector Participation Enabling Environment in Climate Action, Fiscal Years 2013–22

Institution	Project Type	Projects with CCB > 0 or CC Theme Code	Projects with CCB > 0 or CC Theme Code and Objective to Support Enabling Environment for PSP	Active	Closed
World Bank	Lending	953	760	453	307
	Nonlending	2046	581	4	577
IFC	Advisory[a]	425	208	109	99
	Investment[b]	899	—	665	234
MIGA	Guarantees[c]	115	—	115	0

Sources: Independent Evaluation Group preliminary calculations; International Finance Corporation; Multilateral Investment Guarantee Agency; World Bank.
Note: CC = climate change; CCB = climate co-benefit; IFC = International Finance Corporation; MIGA = Multilateral Investment Guarantee Agency; PSP = private sector participation; — = not available.
a. The preliminary IFC advisory services portfolio selects projects with implementation plan approval between fiscal year (FY)13 and FY22, project status active or closed, climate percentage > 0 and enabling environment percentage > 0.
b. The preliminary IFC advisory services portfolio selects projects with approval or commitment between FY13 and FY21, project status active or closed, climate percentage > 0.
c. The preliminary MIGA portfolio selects guarantees that were issued between FY13 and FY21 and have climate finance percentage > 0.

Figure B.1. Preliminary World Bank Lending and Nonlending Portfolio, by Approval Fiscal Year

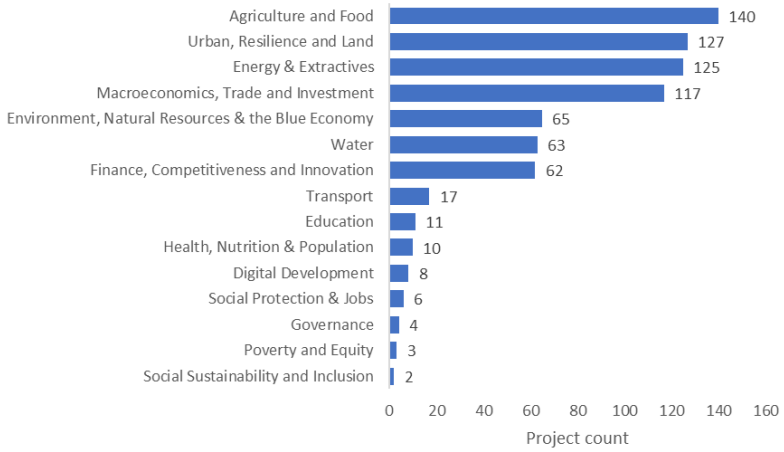


Sources: World Bank projects data and Independent Evaluation Group calculations.
Note: FY = fiscal year.

World Bank lending is dominated by the following three Global Practices: Agriculture and Food (140 operations, worth US$17.6 billion); Urban, Disaster Risk Management, Resilience, and Land (127 operations, worth US$12.9 billion); and Energy and Extractives (125 operations, worth US$21.2 billion; figure B.2). Together, these three Global Practices account for 50 percent of projects and 58 percent of lending commitments in the portfolio.

With respect to International Finance Corporation (IFC) operations, the team identified 208 IFC advisory services projects for the period FY13–22 that are government- or industry-facing and potentially have the objective of supporting an enabling environment for private sector participation in climate change. Nearly half of this IFC advisory services portfolio is concentrated in two regions: Africa (26 percent) and East Asia and Pacific (20 percent). The three dominant IFC business lines in this portfolio are Transaction Advisory (35 percent), Financial Institutions Group (13 percent), and Manufacturing, Agribusiness, and Services (11 percent).

Figure B.2. Preliminary World Bank Lending Portfolio, by Global Practices



Sources: World Bank projects data and Independent Evaluation Group calculations.

Appendix C. Previous Independent Evaluation Group Evaluations of Relevance

Lessons from previous Independent Evaluation Group (IEG) evaluations refer to three overarching themes. First, it is key to have adequate policies and regulations in place that address market failures (for example, negative externalities, lack of property rights, or information asymmetry), according to IEG's evaluations on renewable energy (World Bank 2020b), on transportation (World Bank 2017a), and on natural resource degradation (World Bank 2021). Such policies and regulations would create space for private sector participation, for example, allowing the private sector to engage in public-private partnerships in sustainable transportation schemes, and help align incentives, such as allowing private ownership of land incentivizing land preservation and investments in climate adaptation. Second, even with such policies in place, private sector actors may not be able to adopt a financially self-sustaining business model in certain sectors because tariffs do not allow for adequate cost recovery, for example, in waste management and water supply and sanitation, according to IEG's evaluations on waste management (World Bank 2020a), pollution management (World Bank 2017b), and climate change mitigation (World Bank 2010). Third, in addition to policies, institutional and technological capacities (in public sector agencies and in firms) are key to private sector participation, as underscored by the IEG evaluations on renewable energy, climate change mitigation, and creating markets (World Bank 2019). For more details, see table C.1.

Table C.1. What We Know from Previous Independent Evaluation Group Evaluations Related to Private Sector Participation

Sector	Evaluation and Findings	Knowledge Gaps
Energy generation	2020 Renewable energy • Systematic and integrated World Bank Group support creates better PSP enabling environments • Advancing sector reform will require focusing on renewable energy integration • Main barriers are (i) trade-offs between greenhouse gas reduction and access (including affordability), (ii) weak financial viability of electricity utilities and adequate policies and institutional capacities, and (iii) high investment risks	• Differentiated view on selected renewable energy sector: wind, solar, hydro, and among various off-grid solutions and distributed generation • Trade-offs between PSP in renewable energy and affordability and best practices for learning • Learn from cutting-edge assistance from funds, trust funds, and partnerships
Energy efficiency	2022 Energy efficiency (ongoing) • Evaluation focuses on buildings and heavy industry (areas with large energy efficiency gaps)	• Energy efficiency in other fields, for example, manufacturing light, textile, apparel, and circular economy aspects

Sector	Evaluation and Findings	Knowledge Gaps
Transmission, storage	2014 Electricity access • Provided general insights into PSP and access but did not differentiate among transmission, distribution, and storage	• Policies and investments that enable PSP in transmission and storage
Natural resources management	2021 Natural resource degradation and vulnerability • Land tenure is essential to enable sustainable private (communal) land management • Land degradation mitigation success factors: (i) adequate technology combined with high local institutional capacity and (ii) bylaws enforcement for governance of area closures combined with high local institutional capacity	• Elements of PSP in climate-smart agriculture (including adaptation)
Waste and water supply and sanitation	2022 Municipal solid waste management and 2018 water supply and sanitation • Barriers to increasing the currently low PSP are the lack of sound and enforced regulatory frameworks and credible sustainable revenue models • Sector reform is a prerequisite of PSP in both waste and water supply and sanitation, but on water, there is a limited climate relevance	• Specific sector reforms that create enabling conditions and incentives to allow for cost recovery in waste management to allow for PSP • Enabling conditions for PSP in climate action in waste on mitigation (building energy efficiency, energy and waste services, carbon-neutral transportation solutions) and adaptation (increasing infrastructure resilience)
Urban transport	2017 Urban transport • Enabling conditions are essential to mobilizing PSP and Bank Group collaboration • Fair risk allocation in project design is also essential	• Sector reform efforts coordinated across Bank Group institutions for sustainable transportation solutions • Bank Group experience of scaling up sustainable transportation solutions in low-income countries
Manufacturing	—	• Knowledge gaps across all sectors—in particular, energy efficiency in manufacturing light, textile, apparel, and circular economy aspects and climate-smart agriculture, including adaptation aspects
Green finance	2018 Carbon finance • The Bank Group was a first mover in the market through catalyzing and developing carbon markets, innovating (tools and methodologies), building capacity, and being a thought leader. Nevertheless, it lacked an exit strategy after crowding in PSP • PSP in climate action was enabled by guaranteed purchase for projects to secure financial closure	• What can we learn from Bank Group efforts to make the carbon finance market less fragmented (including targeted instruments and trust funds)? • How has the Bank Group role changed in the past four years?
Market creation, catalyzation	2018 Market creation • Important enablers for PSP are institutional capacity of both the public sector (policies and regulatory frameworks) and companies	• Sector reform and incentive systems to create specific enabling conditions for carbon-neutral solutions

Sector	Evaluation and Findings	Knowledge Gaps
	• Creating markets requires demonstration effects, enhancing competition, innovation, integration, and skills	
Capital mobilization	2020 Private capital mobilization • Climate-linked private capital mobilization volume has been growing steadily in the past 10 years, largely supported by World Bank's investment project financing paired with World Bank guarantees	• How to use development policy financing and policy-based guarantee for private capital mobilization; how to increase PSP in climate action
Concessional and blended finance	2019 Project Performance Assessment Report cluster review on blended finance includes general knowledge; no climate action–specific relevance	• Role of concessional and blended finance in mobilizing capital and creating markets for climate action • Complementarity of concessional and blended finance and sector reforms for climate action
PPP	2014 PPP evaluation and 2021 PPP Learning Engagement • Importance of creating enabling environment and sector reform (legal, regulatory) • There is room for improvement of strategic use of PPPs according to country context	• Sector reform to create enabling environment in sectors with low-cost recovery, for example, waste and water • Identify risks from weak government commitment and capacities before Bank Group engagement • Opportunities and challenges for client governments in selecting PPP financing approaches

Source: Independent Evaluation Group.
Note: PPP = public-private partnership; PSP = private sector participation; — = not available.

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Appendix D. World Bank Group's Emerging Engagement in Climate Action and Private Sector Participation

The World Bank Group had highlighted the need to fight climate change, including through private sector engagement, long before it approved its first Climate Change Action Plans. Starting with the *World Development Report 2010*: *Development and Climate Change*, the Bank Group has addressed climate change issues by pointing at the trade-offs between development needs and climate change (World Bank 2010). The 2012 flagship report *Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided* provided a wake-up call to the international development community by analyzing the likely impacts and risks that would be associated with a 4°C warming within this century (World Bank 2012). The Bank Group's *Toward a Green, Clean, and Resilient World for All: A World Bank Group Environment Strategy 2012–2022* outlined how the Bank Group would help countries find low-emission paths to development, with a particular emphasis on energy efficiency, renewables, climate-smart agriculture, and lower-carbon cities (World Bank Group 2012). Already at that time, the need to mobilize additional sources of private finance for low-emission solutions and investments to build resilience to climate shocks was recognized. Policy reforms, institution strengthening, and capacity building were considered essential for such mobilization efforts.

In parallel, climate change issues were mainstreamed in several sector strategies, recognizing the important role of the private sector. For example, the energy sector strategy outlined in 2013's *Toward a Sustainable Energy Future for All: Directions for the World Bank Group's Energy Sector* acknowledged the global challenge of balancing energy for development with its impact on climate change and promised to help client countries realize affordable alternatives to coal power (World Bank Group 2013b). The strategy foresaw the expansion of renewable energy and recognized the important role of the private sector, noting the need for a more conducive enabling environment for private sector participation (World Bank Group 2012). In addition, in agriculture, climate aspects were increasingly receiving attention. Although the 2013 Agricultural Action Plan still focused predominantly on raising agricultural productivity and resilience, climate-smart agriculture was given more emphasis compared with earlier action plans (World Bank Group 2013a).

Following the adoption of the Paris Agreement in 2015, the Bank Group adopted its first comprehensive Climate Change Action Plan with an explicit commitment to increase private sector engagement in climate action and to implement the required enabling policies. The Paris Agreement was adopted in 2015 by 196 parties as a legally binding international treaty with the ambition to limit global warming to below 2°C, preferably to 1.5°C. Subsequently, the Bank Group approved its first comprehensive Climate Change Action Plan 2016–20 (known as the CCAP 2016). The CCAP 2016 committed the

Bank Group to supporting private sector engagement by helping client countries create an enabling environment and by tapping private capital flow directly. Objective 1 of the CCAP 2016 was to support new enabling policies and institutional change in client countries "to integrate the development and climate agendas and redirect investment flow, including public and private as well as international and domestic capital." Objective 2 of the CCAP 2016 was to "facilitate large private capital flows toward resilient and low-carbon projects, facilitated through concessional resources" (World Bank Group 2016). In parallel, the 2016 Climate Implementation Plan (IFC 2016) of the International Finance Corporation (IFC) committed IFC to increasing climate investments to reach 28 percent of its annual financing by 2020 and catalyzing US$13 billion in private sector capital annually by 2020.

The recently approved Climate Change Action Plan 2021–25 reconfirms the Bank Group's support for the private sector in climate action, including through creating an enabling environment. The plan commits the Bank Group to a range of measures in support of scaling up private sector engagement (World Bank Group 2021). These measures fall broadly into the following five categories: (i) building a pipeline and identifying new private sector opportunities for climate business through newly introduced Country Climate and Development Reports, in conjunction with Country Private Sector Diagnostics; (ii) supporting such climate business opportunities through finance, financial intermediation, mobilization, and green and climate bonds; (iii) mobilizing additional finance through risk mitigation (or "de-risking") using concessional and blended finance; (iv) embedding climate objectives in the enabling environment policies and reforms to put in place the needed incentives for private sector investment; and (v) expanding private sector support to adaptation, which currently sees less than 2 percent of private capital flows. In addition, the Bank Group has committed itself to aligning its financing flows, including those of its private sector arms, IFC and the Multilateral Investment Guarantee Agency, with the objectives of the Paris Agreement by ensuring consistency of those operations with client countries' nationally determined contributions, long-term strategies, or other national or international climate commitments.

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