

THE WORLD BANK

Green Bond Impact Report

2019





Investor Relations

Capital Markets Department
The World Bank Treasury

1225 Connecticut Ave NW
Washington, DC 20036
USA

E debtsecurities@worldbank.org
T +1 (202) 477-2880
W treasury.worldbank.org/capitalmarkets

November 2019

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Acknowledgements

This report was prepared by the Investor Relations Team in the World Bank's Capital Markets Department, with key contributions from the Climate Change Advisory and Operations Team.

The report was designed by Jonelle Karinne Agurs.



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Capital market investors are increasingly integrating environmental, social and governance criteria in their investment decisions, and looking for ways to make a positive impact. Green bonds often serve as an entry point for issuers and investors interested in using their investments to overcome global challenges as highlighted by the 17 UN Sustainable Development Goals. Impact reporting increases transparency, a fundamental building block that helps investors make informed and sustainable choices. The World Bank's 2019 Green Bond Impact Report shows investors how we are working with our member countries to support their climate finance efforts and deliver results, on a project-by-project basis.

Jingdong Hua

Vice President & Treasurer
The World Bank



The World Bank is committed to address climate change which is threatening the lives and livelihoods of the world's poorest and most vulnerable populations. A cornerstone of our commitment has been our pioneering issuance of US\$13 billion in Green Bonds over more than a decade. This new instrument we helped create has revolutionized the way investors value sustainability in capital markets by bringing climate considerations to the heart of financial decisions. These investors have a critical role to play in realizing a low-carbon, climate-resilient future and innovative financing instruments such as Green Bonds are a powerful tool to help them contribute to our common climate goals.

Laura Tuck

Vice President for Sustainable Development
The World Bank

World Bank Group Commitment to Addressing Climate Change

- The World Bank (International Bank for Reconstruction and Development, IBRD) and the rest of the World Bank Group (WBG)¹ are committed to helping countries meet the climate challenge. We are actively working with countries to help them deliver on their commitments and targets, including through financing, technical assistance, and knowledge sharing.

The [WBG Climate Change Action Plan \(2016-2020\)](#) lays out ambitious targets to be met by 2020, including increasing the climate-related share of the WBG's lending to 28%, helping client countries add 30 gigawatts of renewable energy, put in place early warning systems for 100 million people, and develop climate-smart agriculture investment plans for at least 40 countries, among other priorities.

In December 2018, the WBG announced a new set of climate targets and commitments for 2021-2025, doubling its current five-year investments to around [US\\$200 billion](#) in support of countries to take ambitious climate action. The new targets build on the WBG's 2016 Climate Change Action Plan. In January 2019, the WBG launched a new [Action Plan on Climate Change Adaptation and Resilience](#). Under the plan, the WBG will ramp up adaptation related finance to reach US\$50 billion over FY21–25. This financing level – an average of US\$10 billion a year for adaptation – is more than double what was achieved during FY15-18. The Action Plan on Adaptation and Resilience forms part of the WBG's 2025 Targets.

More than 135 developing and middle-income countries have submitted national plans for climate action under the Paris Agreement – the [Nationally Determined Contributions \(NDCs\)](#). The WBG is

actively working with countries to help them deliver on and exceed their Paris Agreement ambitions, including through financing, technical assistance, and knowledge sharing.

The WBG is working together with the other multilateral development banks (MDBs) on common approaches to monitor and track their climate finance flows to client countries, as they increase their climate financing in mitigation and adaptation. The MDBs are continuing to align their financial flows with the global commitments to tackle climate change, supporting the implementation of the NDCs and facilitating activities that transition development towards low greenhouse gas emissions and climate resilient development.

The WBG has been introducing carbon pricing in the economic analysis of its investment activity. The shadow prices are based on the recommended pricing proposed by the Report of High Level Commission on Carbon Prices, with the objective to prevent temperatures from rising above 2 degrees Celsius.

Notes:

¹ For the purpose of this report and in the capital markets, "World Bank" refers to IBRD. The World Bank Group consists of five organizations: International Bank for Reconstruction and Development, International Development Association, International Finance Corporation, Multilateral Investment Guarantee Agency and International Centre for Settlement of Investment Disputes.

(bottom) Photo credit: © Heather Elliott/ World Bank



Environmental & Social Framework

- The [World Bank Environmental & Social Framework](#) sets out the World Bank's commitment to sustainable development, through a World Bank Policy and a set of Environmental and Social Standards that are designed to support borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

This Framework comprises:

- A Vision for Sustainable Development, which sets out the World Bank's aspirations regarding environmental and social sustainability;
- The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the World Bank; and
- The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the borrower and projects.

With this Framework, the World Bank is committed to supporting client countries in the development and implementation of projects that are environmentally and socially sustainable, and to enhancing the capacity of developing countries' environmental and social frameworks to assess and manage the environmental and social risks and impacts of projects.

World Bank Results

- In FY19, 31% of the World Bank financing had climate co-benefits – exceeding the 28% target set for 2020 for the second year in a row.* This amounts to US\$7.3 billion in climate-related finance delivered in FY19. This is the result of an institution-wide effort to mainstream climate considerations into all development projects.

- World Bank has more than doubled the share of projects with climate co-benefits over the last three years (from 37% in FY16 to 92% in FY19).
- The World Bank aims to deliver climate co-benefits averaging at least 30% over FY20-23 with the ambition to maintain or increase the share of co-benefits until FY30.



Energy

- The World Bank is one of the largest providers of finance for renewable energy in developing and middle-income countries.

- Between FY2014 and FY2018, the World Bank provided US\$5.3 billion in financing for work in these areas (including financing for renewable energy generation projects and for energy efficiency projects).



Transport

- Decarbonizing transport is crucial to achieving the objectives under the Paris Agreement.

- The sector presently contributes approximately 23% of global energy-related greenhouse gas emissions. Shifting the trend towards a greener, more sustainable transport sector will require transforming the world's mobility – including with innovative solutions such as electric mobility. A [World Bank report](#) launched at COP 24 reveals that developing countries stand to benefit significantly from electric mobility and lays out basic principles for eMobility programs that respond to the climate, economic, fiscal, technical, institutional, and policy circumstances of different countries.

*Please see the note on page 5, for the purpose of this report and in the capital markets, "World Bank" refers to IBRD.



- The World Bank is working to promote sustainable mobility around the world, focusing on four priority goals:

1. Improve the access of all to economic and social opportunities through greater mobility
2. Increase the efficiency of mobility solutions
3. Improve the safety of mobility—to support the achievement of SDG target 3.6 of halving the number of global deaths and injuries from road traffic accidents
4. Respond to the climate imperative—as set in the Paris Agreement—by reducing the carbon footprint of the sector (mitigation) and enhancing climate resilience (adaptation).

World Bank transport commitments in fiscal year 2019 amounted to US\$1.5 billion. Overall, at the end of FY19, there were 87 active projects with total net commitments of US\$22 billion.



Forests & Landscapes

- Since the adoption of the [Forest Action Plan](#) in 2016, World Bank's net commitments on the active forest portfolio have increased from US\$1.8 billion (FY16) to US\$3 billion (FY19).
- This focuses on two priority areas: investments in the sustainable forest management; and “forest-smart” interventions in which the World Bank takes a holistic look at forest landscapes, so that its work in sectors like agriculture, transport and energy does not erode forest capital but instead generates positive forest outcomes. The World Bank is increasingly supporting its country clients to implement such an integrated approach.



Cities

- The World Bank's work on urban development has been instrumental in advocating for addressing climate change issues during COP 21/22/23 and the [One Planet Summit](#).
- In recent years, the World Bank has worked in cities and towns across over 140 countries, investing US\$15.8 billion from FY12 to FY19 in disaster risk management.

Innovative Partnerships

- The World Bank is working on innovative solutions to help countries meet their climate commitments. Here are a few examples:

Coalition of Finance Ministers for Climate

includes finance ministries from 50 countries and aims at helping countries mobilize and align the finance needed to implement their national climate action plans, establishing best practices such as climate budgeting and strategies for green investment and procurement, and factoring climate risks and vulnerabilities into members' economic planning.

Innovate4Climate (I4C) convenes leaders from business, banking, finance, policy, and technology to think innovatively about how to leverage and direct investment toward low-carbon economies. The third edition of I4C was held in Singapore in June 2019. Building on previous editions in Barcelona (2017) and Frankfurt (2018), the event focused on [green finance](#), [sustainable cooling](#), [battery storage](#), [climate-smart urban design](#), and Asian climate markets.

Carbon Pricing Leadership Coalition (CPLC)

was officially launched at COP21 as a WBG initiative that helps convene leaders across national and subnational governments, the private sector, and civil society with the goal of putting effective carbon-pricing policies that maintain competitiveness, create jobs, encourage innovation and deliver meaningful emission reductions.

Partnership for Market Readiness (PMR)

has been a forum for collective innovation and action and a fund to support capacity building to scale up climate change mitigation since 2010. PMR Participants include 23 developing countries that account for 40% emissions and represent 54% of the global population.

The **Connect4Climate (C4C)** multi-donor trust fund aims to accelerate climate action by connecting over 500 partners through a global climate communications program. C4C engages diverse audiences, and young people especially, targeting influential industries such as film, fashion, music, and sport to popularize climate action.

2008

THE FIRST GREEN BOND

The World Bank issued the first labeled green bond for mainstream institutional investors.

2009

First World Bank Green Bond Investor Newsletter

NIKKO AM/World Bank Green Bond fund launched

 **IFC** International Finance Corporation
Inaugural Green Bond

 Climate Bonds

 Sustainable Stock Exchanges
SSE Initiative

2010

Concept of "Climate Finance" established under the UNFCCC

UN Green Climate Fund established



2011

G20, IMF, OECD all formally recognize potential of Green Bond market



 OECD

2012

OECD and IEA recommend governments to consider Green Bonds to finance climate change solutions



2013

World Bank Green Bond Symposium on green bond process and importance of impact reporting

First Corporate Green Bond

First Municipality Green Bond

2014

World Bank convenes IFI working group on impact reporting harmonization with AfDB, EIB and IFC














Green Bonds formally recognized as UN "Climate Action" under UNFCCC Nazca Platform



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Treasury | IBRD • IDA

2019

2015	2016	2017	2018		
<p>World Bank publishes first Green Bond Impact Report</p> 	<p>First Sovereign Green Bond</p>	<p>World Bank advises first Green Sukuk and First Sovereign Green Bond from Emerging Markets</p>	<p>World Bank Guide for Public Sector Issuers on Green Bond Proceeds Management & Reporting</p> 		<p>World Bank Sustainable Development Bonds displayed on the Luxembourg Green Exchange</p>
<p>First Green Covered Bond</p>	<p>First Green Schuldschein</p> 	<p>US\$100 billion of cumulative Green Bond Issuance</p>	<p>IFC Guidance for Green Sovereign issuers</p> 		<p>EU Technical Expert Group publishes reports on EU Taxonomy, Green Bond Standard, Climate Benchmarks and Climate-related Corporate Exposure</p>
<p>COP 21 Paris Agreement signed and UN Sustainable Development Goals launched</p> 	<p>China launches G20 Green Finance Study Group</p>	<p>First Green Sukuk</p>	<p>US\$500 billion of cumulative Green Bond issuance</p>	<p>Green Loan Principles</p> 	<p>NGFS publishes its Sustainable and Responsible Investment Guide for Central Banks' Portfolio Management</p>
	<p>Financial Stability Board launches Task Force on Climate-Related Financial Disclosures (TCFD), recommends Green Bonds</p> 	<p>First sovereign Green Bond from Emerging Markets</p>	<p>First Green Commercial Paper</p>	<p>European Commission launches Sustainable Finance Action Plan</p> 	<p>Bank for International Settlements launches Green Bond fund for central banks</p>
		<p>The Social Bond Principles</p> 			
		<p>The Sustainability Bond Guidelines</p> 			
		<p>NGFS</p> 			

Green Bond Impact Report Summary

- : The mission of the World Bank is to end extreme poverty and boost shared prosperity in a sustainable manner. Tackling climate change plays a critical role in achieving these goals.
- : Through World Bank Green Bonds, investors make an impact by supporting the financing of a wide range of projects across many sectors that address climate change.

By Sector: As of June 30, 2019, Renewable Energy & Energy Efficiency and Clean Transportation made up the largest portion in the Green Bond eligible projects portfolio. They comprise approximately 66% of all Green Bond commitments.

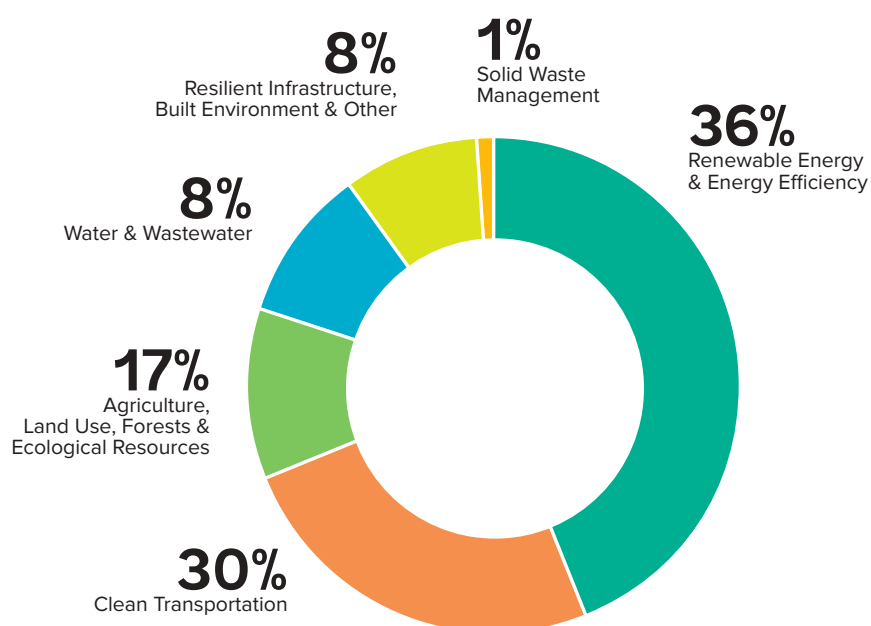
Amounts in Eq. US\$ billion	Committed ¹			Allocated & Outstanding ²
	Mitigation	Adaptation	Total	
Renewable Energy & Energy Efficiency	6.1	0.1	6.2	4.4
Clean Transportation	5.0	0.2	5.1	3.1
Water & Wastewater	0.1	1.3	1.3	0.8
Solid Waste Management	0.1	0.0	0.1	0.1
Agriculture, Land Use, Forests & Ecological Resources	0.5	2.4	2.9	1.3
Resilient Infrastructure, Built Environment & Other	1.0	0.4	1.4	0.8
Total	12.8	4.3	17.2	10.5
Percentage	75%	25%	100%	

Notes:

Amounts may not add up due to rounding.

¹ Committed amount net of cancellations for eligible projects for which the loans are disbursing.

² Green Bond proceeds allocated to support financing of disbursements to eligible projects net of loan repayments. Not adjusted for matured bonds that were not replaced with new green bonds.



Issuance In the past 11 years, the World Bank has issued 158 Green Bonds in 21 currencies for a total of over US\$13 billion in funding to support the transition to low-carbon and climate resilient growth. During FY19 (July 1, 2018 to June 30, 2019), the World Bank issued US\$2.7 billion equivalent in 24 transactions in 10 currencies.

Commitments & Disbursements In FY19, 16 new projects were added to the Green Bond eligible project portfolio bringing the number of eligible projects to 106 and the total commitments to US\$17.2 billion. Of these commitments, US\$11.9 billion in Green Bond proceeds were allocated and disbursed to support projects in 31 countries.

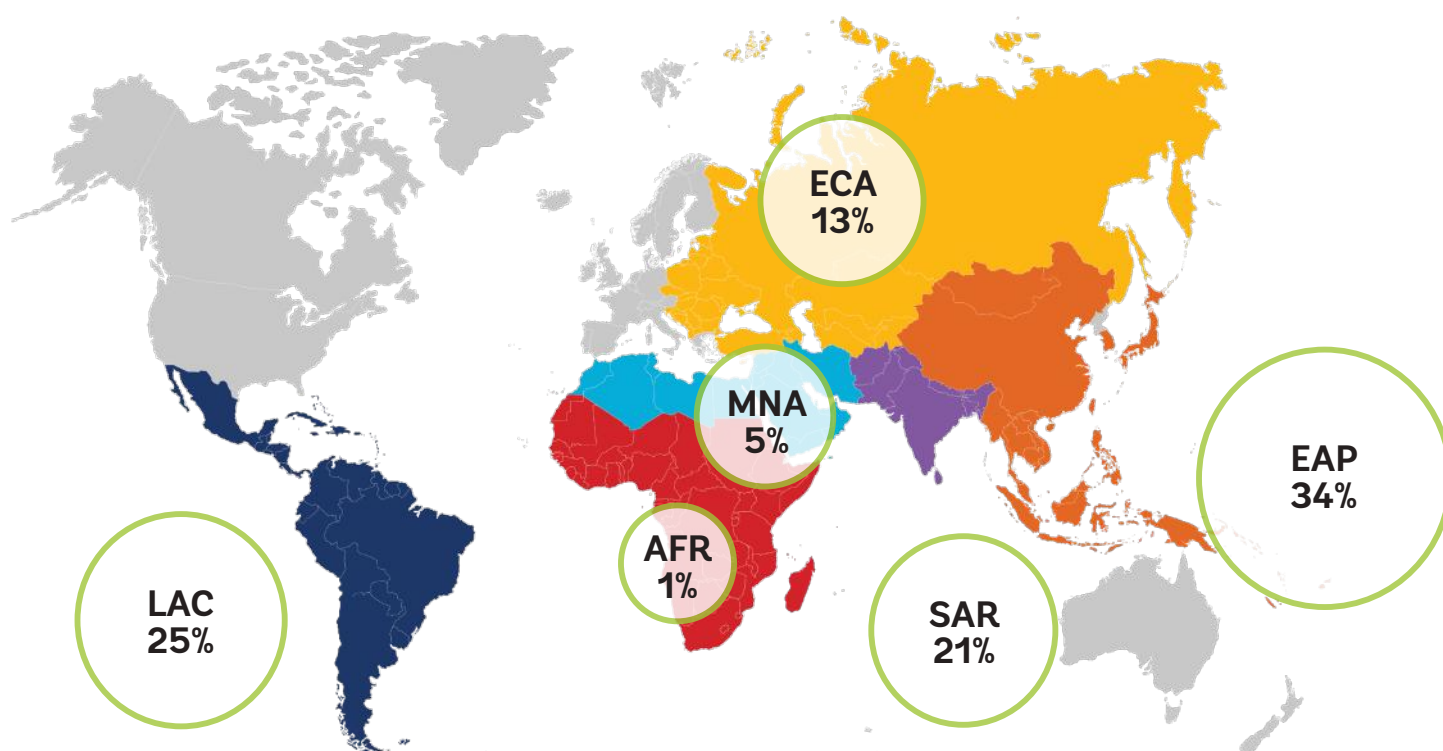
By Region: As of June 30, 2019, the East Asia & Pacific region made up the greatest portion of the Green Bond eligible projects and comprises approximately 34% of all Green Bond commitments. The region includes China, Indonesia, Philippines, Timor-Leste, and Vietnam.

Amounts in Eq. US\$ billion	Committed %	Committed ¹	Allocated & Outstanding ²
Africa (AFR)	1%	0.1	0.0
East Asia & Pacific (EAP)	34%	5.9	3.7
Europe & Central Asia (ECA)	13%	2.2	1.7
Latin America & Caribbean (LAC)	25%	4.4	3.0
Middle East & North Africa (MNA)	5%	0.9	0.5
South Asia (SAR)	21%	3.7	1.7
Total	100%	17.2	10.5

Notes:
Amounts may not add up due to rounding.

¹ Committed amount net of cancellations for eligible projects for which the loans are disbursing.

² Green Bond proceeds supporting financing of disbursements to eligible projects net of loan repayments. Not adjusted for matured bonds that were not replaced with new green bonds.



Project Impact Highlights

106 World Bank
Projects
Eligible for
Green Bond
Financing

16 Additional
Projects
Included in
FY19

16 Additional
Projects
Completed
in FY19

46 Total
Projects
Completed

20

Renewable Energy & Energy Efficiency Projects Completed (4 in FY19)

7 AFFORDABLE AND
CLEAN ENERGY



50,925 GWh
in annual energy savings

EQUIVALENT TO

About 37 million tons of CO₂ equivalent avoided*
7.6 million cars off the road for one year

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



7,204 GWh
annual energy produced from
renewable resources

EQUIVALENT TO

610,000 homes' energy use for
one year

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



2,240 MW
renewable capacity from solar, wind, and
hydro technologies

EQUIVALENT TO

CO₂ emissions from 866 tons of
burned coal avoided every year*

13 CLIMATE
ACTION



494,400 Rural Households
have access to cleaner energy sources in China, Mexico & Peru

10

Water, Wastewater & Solid Waste Management Projects Completed (2 in FY19)

6 CLEAN WATER
AND SANITATION



1,245,000 Hectares
with new, rehabilitated or restored irrigation services in
the Dominican Republic, Indonesia, India & Tunisia

764,000 Residents
benefitting from secured water supply
in China

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



4,800,000 Tons
of untreated wastewater prevented from flowing into
rivers annually in China

28 Waste Dumps
in Brazil & Morocco closed or
rehabilitated

11 SUSTAINABLE CITIES
AND COMMUNITIES



13 CLIMATE
ACTION



*Sources: US Environmental Protection Agency Greenhouse Gas Equivalencies Calculator, CIA World Factbook

9 Agriculture, Land Use, Forests, Ecological Resources, Resilient Infrastructure & Built Environment Projects Completed (5 in FY19)



790,600 Hectares of forest restored or reforested in China, Mexico & Tunisia

EQUIVALENT TO 1 million soccer fields



16,900,000 Tons of CO2 emissions reduced annually due to reforestation and other sustainable management activities in Mexico

EQUIVALENT TO 3.2 million cars off the road for one year*



6,600,000 People benefited from flood protection in China



7 Clean Transportation Projects Completed (5 in FY19)



Sustainable Urban Transport in Xi'an, China

+ 52,000 Bicycles

25% Decrease in travel time for 4 million public transportation passengers



Urban Transport Improvement Project in Xinjiang, China

+ Additional 60,000 People with access to quality urban transport services

40% Increase in annual passenger-trips



Sustainable Urban Transport in India

+ 312,000 Tons of CO2 equivalent emissions reduced annually

5,750 additional passengers per day



Urban Transport Transformation in Mexico

340,000 Tons of CO2 equivalent emissions reduced annually

Green Bond Process

Green Bond Eligible Projects

All World Bank bonds support sustainable development because the net proceeds from the sale of the bonds are used by the World Bank (IBRD) to support financing of sustainable development projects and programs in IBRD's member countries. They fit well within all investor mandates, especially investment strategies that incorporate environmental, social and governance factors.

The World Bank Green Bonds are a subset of its Sustainable Development Bond Program. Green Bond eligible projects promote the transition to low-carbon and/or climate resilient growth in World Bank client countries targeting climate change mitigation and adaptation. The World Bank's eligibility criteria were independently reviewed by the Center for International Climate and Environmental Research at the University of Oslo (CICERO).

Two-Stage Process to Identify Green Bond Eligible Projects

1. All projects supported by the World Bank go through a rigorous review and approval process to ensure that they meet countries' development priorities. The process includes: (i) early screening to identifying potential environmental or social impacts and designing policies and concrete actions to mitigate any such impacts; and (ii) approval by the Board of Executive Directors – a resident board with 25 chairs representing 189 member countries.
2. Environmental specialists then screen approved World Bank projects to identify those that meet the World Bank's Green Bond eligibility criteria.



Climate Change Project Examples:

Mitigation



Solar and wind installations



Greater efficiency in transportation, including fuel switching and mass transport



Funding for new technologies that permit significant reductions in greenhouse gas emissions



Waste management (methane emission) and construction of energy-efficient buildings



Rehabilitation of power plants and transmission facilities to reduce greenhouse gas emissions



Carbon reduction through reforestation and avoided deforestation

Adaptation



Protection against flooding (including reforestation and watershed management)



Food security improvement and implementing stress-resilient agricultural systems (which slow down deforestation)



Sustainable forest management and avoided deforestation

- For more information about the World Bank Green Bond implementation guidelines and the eligibility criteria, see <http://pubdocs.worldbank.org/en/217301525116707964/Green-Bond-Implementation-Guidelines.pdf>.

Impact Reporting

The World Bank is committed to transparent reporting of its green and climate-related financing, including the projects that are part of its Green Bond program. Detailed information for all World Bank financed projects is available on the World Bank website <http://projects.worldbank.org>. Project summaries and impact indicators for Green Bond eligible projects are summarized on the investor website at: <http://treasury.worldbank.org/en/about/unit/treasury/ibrd/ibrd-green-bonds>.

The following section lists the 106 World Bank eligible projects supported by the financing of World Bank Green Bonds as of June 30, 2019. The projects are organized by sector. Selected results indicators, World Bank loan amount, share of loan amount to total project costs, and the amount of Green Bond proceeds that have been allocated to support disbursements to each project are disclosed. Annex 1 describes the reporting approach and should be read in conjunction with this report.

Interpreting Reported Results

The intention of impact reporting is to help investors develop a more detailed understanding of the climate and environmental impacts that can be expected or projected to result from Green Bond eligible projects. Several key results indicators have been selected and where possible quantified, but it is important to appreciate the inherent limitations of data reported. The main considerations to adequately interpret results are:

Scope of Results Reporting is based on “ex-ante” estimates of climate and environmental impacts at the time of project appraisal and mostly for direct project effects, except as indicated where the results have been updated for actual results at the time of project completion.

Uncertainty An important consideration in estimating impact indicators and projecting results is that they are based on assumptions. While technical experts aim to make sound and conservative assumptions that are reasonable based on the information available at the time, the actual environmental impact of the projects generally diverge from initial projections. In general, behavioral changes or shifts in baseline conditions can cause deviations from projections.

Comparability Caution should be taken in comparing projects, sectors, or whole portfolios because baselines (and base years) and calculation methods may vary significantly. In addition, the cost structures between countries will also vary, so that developing cost-efficiency calculations (such as results per dollar invested) could, for example, place smaller countries with limited economies of scale at a disadvantage and will not take into consideration country-specific context

Omissions and Qualitative Results

Because the selected projects aim to provide social and developmental benefits as well as climate and environmental ones, they will have impacts across a much wider range of indicators than captured in the next section. Therefore, exclusively focusing on the reported indicators will leave out other important development impacts. Where quantitative data is unavailable, qualitative indicators have been included to illustrate other beneficial impacts.

For a broader country context on developmental impacts of projects, view the full project documentation available on the World Bank website at <http://projects.worldbank.org>.



Eligible Projects by Sector

Target Results & Committed and Allocated Amounts



Renewable Energy & Energy Efficiency



Clean Transportation



Water & Wastewater Management



Solid Waste Management



Agriculture, Land Use, Forests & Ecological Resources



Resilient Infrastructure, Built Environment & Other

Results should be read in conjunction with Annex 1 (page 49), which describes the reporting approach.



Renewable Energy & Energy Efficiency

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Annual Energy Savings ^{1c} MWh	Annual Energy Produced MWh
1		Eco-Farming Project (P096556 FY09): promote sustainable farming systems and reduce greenhouse gas emissions (from methane and burning coal and firewood) benefiting rural communities with biogas systems.	China	M	20	na	~
2		Energy Efficiency Financing (P084874 FY08, FY12): promote energy conservation in China's industrial sector supporting intermediary loans for energy efficiency projects in medium and large-sized manufacturing companies.	China	M	20	21,713,380	na
3		Energy Efficiency Financing II Project (P113766 FY10): promote energy conservation in China's industrial sector through intermediary loans to energy efficiency projects.	China	M	20	1,908*	na
4		Green Energy Schemes for Low-carbon City in Shanghai (P127035 FY13): promote greener city development with energy efficiency and renewable energy installations in commercial and government buildings.	China	M	20	635,712	~
5		Jiangxi Shihutang Navigation & Hydropower (P101988 FY09): maximize inland waterway transport capacity as a low-carbon alternative to land transport and generate hydropower.	China	Both	20	na	284,000
6		Liaoning Third Medium Cities Infrastructure (P099224 FY08): improve the energy efficiency and environmental performance of heating and gas services.	China	M	20	2,757,200	na
7		Shandong Energy Efficiency (P114069 FY11): improve the energy efficiency and environmental performance of the industrial sector and finance renewable energy production from biomass (corn and wheat stalk).	China	M	15	2,707,580	~
8		Urumqi District Heating Project (P120664 FY11): promote energy efficiency in district heating by replacing dispersed boilers in urban areas with an integrated district heating network.	China	M	20	1,229,400	na
9		Power System Development Project IV (P101653 FY09): expand transmission infrastructure resulting in decreased CO ₂ emissions through efficiency gains and transferring surplus hydro energy to power deficit regions.	India	M	20	8,699,000	na

- Project Completed
○ Project in Progress

Target Results ^b

Renewable Capacity Added MW	Annual GHG Emissions Avoided Tons of CO ₂ Eq. ^d	Other Results ^e	Committed US\$ mil ^f	IBRD share ^g	Allocated US\$ mil ^h
~	785,000	<ul style="list-style-type: none"> ● 470,000 rural households benefit from cleaner biogas-based cooking and heating systems. ● 344,346 clients who adopted an improved agricultural technology promoted by the project, 280,092 of which are female. ● 155,560 new water connections providing households clean water for improved hygiene and sanitary conditions Updated for actual results at project completion.	119.8	27%	119.8
na	6,510,000	<ul style="list-style-type: none"> ● 2,667,000 tce annual energy savings (assuming 150 subprojects). Updated for actual results at project completion.	300.0	45%	300.0
na	607,000*	Updated for actual results at project completion. *Annual Energy Savings and CO ₂ emissions reductions revised to correctly reflect project-specific conversion factors.	45.5	66%	45.5
~	189,946	<ul style="list-style-type: none"> ● 78,083 tons of coal equivalent of annual energy savings per annum. ● Innovative policies piloted under the Project in relation to green-energy retrofitting of buildings. Updated for actual results at project completion.	100.0	41%	100.0
120	220,000	<ul style="list-style-type: none"> ● 4,389 ha of crop land protected from flooding. ● RMB 26.6 million reduction in annual flood losses. ● Shortened travel distance benefitting 150,000 people. Updated for actual results at project completion.	100.0	31%	100.0
na	~	<ul style="list-style-type: none"> ● 8,935 tons of sulphur dioxide avoided per annum. ● 11,659 tons of total suspended particles (local pollutant) avoided per annum. ● Decrease by 31% of fuel consumption annually (from 199.5 kWh/m² to 137.9 kWh/m²). ● Decrease by 39% of electricity used for District Heating annually (from 4.4 kWh/m² to 2.7 kWh/m²). ● Decrease by 31.25% of make-up water annually (from 115.5 L/m² to 79.34 L/m²). Updated for actual results at project completion.	165.0	51%	165.0
~	~	<ul style="list-style-type: none"> ● 331,000 tce of energy savings annually. Updated for actual results at project completion.	110.1	47%	110.1
na	415,500	<ul style="list-style-type: none"> ● 1,626 MW of inefficient coal-fired boilers replaced by combined heat and power district heating network. Updated for actual results at project completion.	99.1	29%	99.1
na	~	<ul style="list-style-type: none"> ● Reduced transmission losses equivalent to between 526-993 MW. ● 1,400 MW of increased interregional power transmission capacity to National Grid. ● Transformation capacity increased by 146,523 MVA. ● 106,804 circuit km of transmission lines' increased capacity. ● 78,384 GWh power exchange growth between regions. Updated for actual results at project completion.	400.0	16%	400.0



Renewable Energy & Energy Efficiency

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Annual Energy Savings ^{1c} MWh	Annual Energy Produced MWh
10		Rampur Hydropower Project (P095114 FY08): scale-up access to renewable energy through construction of a run-of-the-river hydroelectric scheme.	India	M	30	na	1,957,000
11		Indonesia Geothermal Energy (P113078 FY12): increase power generation from renewable geothermal resources.	Indonesia	M	30	na	1,208,880 (generation projection July 2019)
12		Energy Security and Efficiency Enhancement Project (P112780 FY11): increase energy efficiency and security by promoting greater participation of renewable energy and gas-based generation in the energy mix.	Jamaica	M	N/A	na	~
13		Efficient Lighting and Appliances Project (P106424 FY11): promote the efficient use of energy and to mitigate climate change by increasing the use of energy efficient technologies in the residential sector.	Mexico	M	5	1,848,000	na
14		Integrated Energy Services (P088996 FY08): increase energy access for poor communities using renewable energy (mainly solar and some wind turbines) and to develop a sustainable market for providing energy services in remote rural areas.	Mexico	M	20	na	152
15		Sustainable Rural Development (and Additional Financing) (P106261 FY09, FY13): increase the use of energy efficient, waste management and renewable energy technologies in agribusiness.	Mexico	M	10	45	26,073
16		Energy Efficiency (and Additional Financing) (P107992 FY09, FY14): improve energy efficiency and environmental quality in 27 buildings used for health and education services.	Montenegro	M	15	7,925	na
17		Second Rural Electrification (P117864 FY11): provide electricity to remote communities by extending the conventional electricity grid and financing solar photovoltaic systems.	Peru	M	20	na	~
18		Energy Efficiency (P104266 FY09): support industrial energy efficiency and co-generation investments by providing financing through intermediaries.	Tunisia	M	20	580,000	na
19		Private Sector Renewable Energy and Energy Efficiency Project (P112578 FY09, FY12): enhance renewable energy access (small hydroelectric and geothermal) and energy efficiency in industries (iron and steel, cement, ceramics, chemicals and textiles).	Turkey	M	20	3,023,800	3,728,000











- Project Completed
- Project in Progress

Target Results ^b

Renewable Capacity Added MW	Annual GHG Emissions Avoided Tons of CO ₂ Eq. ^d	Other Results ^e	Committed US\$ mil ^f	IBRD share ^g	Allocated US\$ mil ^h
412	1,407,700	Updated for actual results at project completion.	400.0	60%	400.0
150	1,010,125	<ul style="list-style-type: none"> ● 30,303,750 tons of CO₂ eq. cumulative emission reduction over 30 years. ● 10,000 tons of avoided local air pollution (2,753 tons of NOx, 4,923 tons of SO₂, 2,324 tons of TSP) annually. Updated for actual results at project completion.	129.0	30%	129.0
623	~	<ul style="list-style-type: none"> ● New renewable electricity generated by three wind farms, two solar farms, and one hydro plant. ● 600 GWh from renewable resources annually. Updated for actual results at project completion.	14.5	100%	14.5
na	1,014,800	Cumulative over 5 years: <ul style="list-style-type: none"> ● Exchange 45.8 million light bulbs and 1.884 million appliances replaced over a five-year period. ● 5.07 million tons of CO₂ eq. emissions reduced. ● 50-60% electricity saved in residential households. ● 9,242 GWh in cumulative energy savings. Updated for actual results at project completion.	250.6	35%	250.6
2	139,000	<ul style="list-style-type: none"> ● 2,235 rural households receive electricity from renewable sources annually. ● 150 new social/productive activities and microbusiness developed. ● Larger long-term national impact with replication throughout rural areas. Updated for actual results at project completion.	12.0	18%	12.0
~	708,235	Cumulative over 8.5 years: <ul style="list-style-type: none"> ● 143,450 MWh saved from energy efficiency investments. ● 221,624 MWh produced by renewable (biomass) energy. ● 6.02 million tons of CO₂ eq. emission avoided over the course of the project. ● 1,842 agribusinesses adopted 2,286 environmentally sustainable technologies. Updated for actual results at project completion.	79.1	48%	79.1
na	2,766	Cumulative over project life and targeting 27 buildings: <ul style="list-style-type: none"> ● 118,880 MWh in lifetime energy savings. ● 41,504 metric tons of CO₂ eq. lifetime emissions reduced. Updated for actual results at project completion.	12.6	100%	12.6
~	~	<ul style="list-style-type: none"> ● 42,500 rural households electrified, of which 20,000 served by solar photovoltaic systems from regulated electricity distribution companies. ● 169,000 people benefited. Updated for actual results at project completion.	43.8	60%	43.8
na	205,840	Updated for actual results at project completion.	31.8	91%	31.8
933	3,214,000	<ul style="list-style-type: none"> ● Increase country's renewable energy capacity to 31%. Updated for actual results at project completion.	906.9	87%	906.9



Renewable Energy & Energy Efficiency

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Annual Energy Savings ^{1c} MWh	Annual Energy Produced MWh
20		Energy Efficiency (P096586 FY11): improve energy efficiency in order to meet energy intensity reduction targets, decrease dependence on imported gas, and decrease the cost of energy supply.	Ukraine	M	15	7,721,157	na
21		Biomass District Heating (P146194 FY14): increase energy efficiency in district heating systems and replace natural gas with wood biomass as a renewable energy source.	Belarus	M	20	236,000	1,660,000
22		Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project (P125022 FY13): promote renewable energy in 1,000 schools and other educational institutions.	China	M	20	na	100,000
23		Financing for Air Pollution Control (P154669 FY16): reduce air pollutants and carbon emissions through lending for energy efficiency and clean energy, with a focus on the Jing-Jin-Ji and neighboring regions.	China	M	20	1,628,200	na
24		Grid-Connected Rooftop Solar Program (P155007 FY15): increase solar rooftop capacity to the power grid and incentivize the market for rooftop solar power by way of low cost financing.	India	M	25	~	647,200
25		Shared Infrastructure for Solar Parks Project (P154283 FY17): increase solar generation capacity through the establishment of large-scale solar parks in the country.	India	M	25	~	~
26		Municipal Energy Efficiency Project (P149872 FY16): promote energy efficiency in street lighting, water use and buildings in 23 municipalities.	Mexico	M	8	127,590	5,800
27		District Heating Efficiency Improvement (P132443 FY15): improve quality and reliability of heating services by improving the operational efficiency and viability of a new district heating company.	Moldova	M	30	96,700	na
28		Montenegro Second Energy Efficiency Project (P165509 FY18): improve energy efficiency in health sector buildings, and develop and demonstrate a sustainable financing model.	Montenegro	M	15	3,981	~
29		Clean and Efficient Energy Project (P143689 FY15): develop the first utility sized photovoltaic plant to more reliably supply solar power to remote regions.	Morocco	M	25	na	~






- Project Completed
○ Project in Progress

Target Results ^{1b}

Renewable Capacity Added MW	Annual GHG Emissions Avoided Tons of CO ₂ Eq. ^{1d}	Other Results ^e	Committed US\$ mil ^f	IBRD share ^g	Allocated US\$ mil ^h
na	856,097	<ul style="list-style-type: none"> ● Create jobs directly and indirectly through increased cost competitiveness as a result of lower energy intensity. Updated for actual results at project completion.	200.0	100%	200.0
106	420,000	Cumulative over 5 years: <ul style="list-style-type: none"> ● 1,180,000 MWh energy savings from efficiency investments. ● 2,100,000 tons of CO₂ eq. emissions reduced. ● 78,760 direct beneficiaries. 	90.0	100%	62.4
100	89,590	<ul style="list-style-type: none"> ● 10 to 15% of the schools' annual power use provided by renewable sources. ● 650,000 students in 1,000 schools benefit. 	105.0	50%	39.0
na	492,200	<ul style="list-style-type: none"> ● 3,600 tons of particulate emissions (local air pollutants) reduced by EE and RE subprojects financed. 	523.6	100%	216.3
400	520,000	<ul style="list-style-type: none"> ● The 250 MW of capacity of rooftop solar photovoltaics expected to be grid-connected by 5 years with at least another 150 MW to be connected in subsequent years. ● 13 million tons CO₂ eq. in cumulative savings over the project's 25-year life. ● Market development for rooftop photovoltaic systems in different business models. 	500.0	55%	282.2
1,750	951,852	<ul style="list-style-type: none"> ● Increase in access roads, water supply and drainage, telecommunications, pooling station inside the solar parks. 	75.0	75%	8.5
6	7,241	<ul style="list-style-type: none"> ● 1,020,714 MWh projected lifetime savings. ● 28 sub-projects designed. 	100.0	64%	7.2
na	22,800	<ul style="list-style-type: none"> ● 34% reduction in heating system breakdowns by year 5. ● 109,000 people with access to more energy efficient cooking and heating. ● 320,109,612 MJ annual fuel savings. 	40.5	66%	34.9
na	37,333	<ul style="list-style-type: none"> ● 18 buildings retrofitted annually. ● 1,200,000 US\$ captured energy cost savings annually. ● 220,000 potential patients and 2,000 staff benefiting. 	6.8	82%	0.4
75	73,512	<ul style="list-style-type: none"> ● 412,000 people benefit from electricity and associated economic opportunities of which 50% are expected to be female. 	125.0	79%	74.9



Renewable Energy & Energy Efficiency

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M/ ^a	Project Life	Annual Energy Savings ^{/c} MWh
30		Noor Ouarzazate Concentrated Solar Power (P131256 FY12, FY15): replace fossil fuel-based electricity with renewable energy using concentrated solar power technology.	Morocco	M	30	na
31		Renewable Energy Integration (P144534 FY14): assist in meeting increased power demand by strengthening the transmission system and facilitating large- scale renewable energy generation.	Turkey	M	20	na
32		SME Energy Efficiency (P122178 FY13): improve energy efficiency in small and medium enterprises in energy-intensive industries by scaling-up commercial bank lending for energy efficiency investments.	Turkey	M	20	86,500
33		District Heating Energy Efficiency (P132741 FY14): improve energy efficiency and quality of service of District Heating companies.	Ukraine	M	20	524,000
34		Energy Efficiency Facility for Industrial Enterprises, Phase 3 (P165054 FY18): improve energy efficiency in Industrial Enterprises (IEs) by designing and establishing a financing mechanism for energy saving investments.	Uzbekistan	M	25	122,600
Uzbekistan - Advanced Electricity Metering Project (P122773) has been removed from this report. The majority of its loan has been cancelled due to implementation issues.						

Notes:

na – Indicator is not applicable for this project.

~ – Indicator is not measured/reported for this project.

Amounts may not add up due to rounding.

/a Column indicates whether the project aims to mitigate climate change (“M”), help client countries adapt to the effects of climate change (“A”), or both.

/b Target results are expected impacts based on estimates developed at the time of project approval and materializing at the end of the project implementation period (5 years in most cases). The indicators shown are normally a subset of the development impacts contained in project documentation available in the World Bank project website (<http://www.worldbank.org/projects>). Results reported are based on the entire project, with the percent shown next to the loan amount corresponding to the proportion of the total financing that is financed by World Bank loans. Actual impacts may be different from these estimates and do not represent the actual results in a specific year. Quantitative estimates are intended to be indicative of the scale of impacts and qualitative results aim to inform about the nature of changes that will be achieved as a result of projects included in the Green Bond program once they are completed and at full capacity.

/c Annual energy savings include reduced energy use for both power and heat, where applicable and calculated by the project’s lifetime when possible (otherwise calculated based on the project’s implementation period).

/d Annual GHG Emissions avoided are calculated by the project’s lifetime when possible (otherwise calculated based on the project’s implementation period).

/e For closed projects, “Project Completed” refers to a closed project for which its *Implementation Completion Report (ICR)* is not available yet. “Updated for actual results at project completion” refers to a closed project where ICR is available, and target results are updated accordingly.

/f The committed amount is the Green Bond eligible portion of the World Bank loan net of cancellations reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

/g The percentage shows the share of the total financing that is provided by World Bank loans. When a project is co-financed, this share could be used to apportion total results to the World Bank.

/h The allocated amount is the amount of Green Bond proceeds allocated to support the financing of disbursements to the project reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

- Project Completed
 Project in Progress

Target Results ^{/b}

Annual Energy Produced MWh	Renewable Capacity Added MW	Annual GHG Emissions Avoided Tons of CO ₂ Eq. ^{/d}	Other Results ^e	Committed US\$ mil ^f	IBRD share ^g	Allocated US\$ mil ^{/h}
1,638,000	410	522,000	<ul style="list-style-type: none"> 1,100,000 direct project beneficiaries, 50% of which are expected to be female. 	346.9	15%	166.5
1,734,000	~	690,000	<ul style="list-style-type: none"> 52 km of transmissions lines constructed or rehabilitated. 	247.7	63%	202.6
na	na	44,000	Cumulative over 5 years of implementation: <ul style="list-style-type: none"> 154,500 tons of CO₂ eq. emissions reduced for all SME loans. 300,000 MWh in electricity savings. 	201.0	67%	191.0
na	na	261,800	<ul style="list-style-type: none"> 721,400 consumers served by the participating companies. 	160.0	87%	51.5
~	na	158,638	<ul style="list-style-type: none"> 70 beneficiary industrial enterprises. 50 industrial enterprises which adopted energy management system. 	200.0	62%	49.2
Total Allocated for Renewable Energy & Energy Efficiency				6,241.5		4,906.6
Cumulative Loan Repayments						(505.4)
Total Allocated and Outstanding for Renewable Energy and Energy Efficiency						4,401.3



Clean Transportation

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Pass/km and/or passengers
35		Changzhi Urban Transport (P124978 FY12): improve transport mobility and accessibility while reducing emissions in a safe, energy-saving, and efficient manner for all users.	China	M	25	~
36		Wuhan Second Urban Transport (P112838 FY10): improve efficiency, coverage and safety of public transport systems in an environmental, sustainable, integrated and safe way.	China	M	20	~
37		Xi'an Sustainable Urban Transport (P092631 FY08): improve transport accessibility and mobility and enhance airquality monitoring of the urban transport system.	China	M	25	52,000 public bicycles with 70 million users annually.
38		Xinjiang Yining Urban Transport Improvement Project (P126454 FY12): provide improved access, safety, and efficiency in public transportation in an environmentally sustainable manner.	China	M	30	<ul style="list-style-type: none"> • 105.5 million passenger-trip per year (40% increase). • 61,000 additional people with access to quality urban transport services.
39		Colombia Integrated Mass Transit Systems (P082466 FY10) : scale-up the National Urban Transport Project's physical scope through expanding trunk corridors and feeder routes to meet increased demand and improve associated infrastructure.	Colombia	M	24	~
40		Sustainable Urban Transport (P110371 FY10): improve government capacity to manage climate friendly urban transport solutions focusing on public and non-motorized transport.	India	M	30	5,750 additional passengers per day.
41		Urban Transport Transformation (P107159 FY10): reduce carbon emissions and transform public transportation efficiency.	Mexico	M	13	~
42		Greening Rio de Janeiro Urban Rail Transit – Additional Financing (P111996 FY12): provide a more efficient and cleaner suburban rail system.	Brazil	M	30	700,000 passengers per day (40% increase since 2009).
43		Sao Paulo State Sustainable Transport (P127723 FY13): improve transport efficiency and safety, increase share of waterway transport, and improve resilience to climate change and natural disasters.	Brazil	Both	20	50% reduction of road fatalities in the 100 most critical spots.







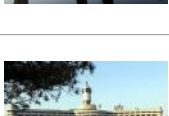


- Project Completed
- Project in Progress

Target Results ^{1b}

Ton/km and/or tons	GHG emissions reduced/ avoided ^{1c}	Other Results ^{1d}	Committed US\$ mil ^{1e}	IBRD share ^{1f}	Allocated US\$ mil ^{1g}
na	~	<ul style="list-style-type: none"> ● 10% reduction in fuel consumption per passenger-km on project corridors. ● 48% reduction in traffic fatalities. ● Reduced travel times during peak hours. ● 50 new electric buses in use. ● 25 km of roads (non-rural) rehabilitated. ● 25.5 km of bus priority lanes built. Updated for actual results at project completion.	91.5	50%	91.5
na	459,000	<ul style="list-style-type: none"> ● Establish facilities for pedestrians and cyclists. ● 33% modal share of public transportation on target corridors. ● An average of a 13 minute decrease in travel time at peak hours. Updated for actual results at project completion.	100.0	16%	100.0
na	~	<ul style="list-style-type: none"> ● Doubled area of bus terminals. ● 275% increase in average speed of public transportation from 12 to 45 km/hr. ● Air quality monitoring system/facility implemented. ● 31,000 vehicles with emissions tested. ● 320,214 m² of areas of bus terminals achieved. Updated for actual results at project completion.	150.0	36%	150.0
na	~	<ul style="list-style-type: none"> ● Reduced peak-hour travel times in two integrated corridors. ● Reduced traffic accident fatalities. ● 33.54 km of roads constructed in a new developing area. ● 30.4 km of urban roads improved. Updated for actual results at project completion.	90.9	48%	90.9
na	~	<ul style="list-style-type: none"> ● 81.5 km of segregated trunk-lines constructed. ● 95.5 km of pre-trunk and feeder lines constructed. ● 4 terminals/garages constructed. ● 125 stations constructed. Updated for actual results at project completion.	295.9	40%	295.9
na	312,000 tons of CO ₂ eq. emissions reduced annually over the first 10 years.	<ul style="list-style-type: none"> ● 68 new safe sidewalks and cycle tracks. ● 50% public transport trip mode share. Updated for actual results at project completion.	88.8	32%	88.8
na	340,000 tons of CO ₂ eq. emissions reduced annually.	<ul style="list-style-type: none"> ● 9.3 integrated mass transit corridors of 15 km each. ● 12 new light trains. Project completed.	52.0	6%	52.0
na	34,000 tons of CO ₂ eq. reduced annually	<ul style="list-style-type: none"> ● 100 new trains delivered and in operation. ● Upgraded infrastructure. ● Shorter travel and waiting times. ● Bicycle parking facilities in select stations. 	519.3	73%	420.0
<ul style="list-style-type: none"> ● 30% increase in exported biofuel transported by waterway ● 6 million tons/year freight in the Tiete-Parana waterway (400% increase). 	9,600 tons of net CO ₂ reduced annually	<ul style="list-style-type: none"> ● 750 km of roads rehabilitated. ● 40 new automatic stations to monitor climate risk. ● 39 additional municipalities with disaster risk mapping. 	300.0	70%	248.3



Clean Transportation









#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Pass/km and/or passengers
44		HaJia Railway (P117341 FY14): provide additional railway capacity and reduce transport time for passengers and freight.	China	M	30	3 million additional passengers per year.
45		Heilongjiang Cold Weather Smart Public Transportation System (P133114 FY14): upgrade the quality, safety and efficiency of public transport service.	China	M	20	38.8 million more bus rides annually due to increased efficiency of bus service.
46		Hubei Xiangyang Urban Transport (P119071 FY12): improve mobility, safety, and efficiency in urban transportation.	China	M	25	460,000 beneficiaries of reduced travel times and greater access to the city center.
47		Jiaozuo Green Transport and Safety Improvement (P132277 FY14): improve transport safety and efficiency along the selected transport corridors and promote non-motorized trips within the pilot green corridor.	China	M	30	<ul style="list-style-type: none"> • 241,500 non-motorized trips per year in the green corridor. • 32,400 additional bus passengers per year.
48		Nanchang Urban Rail (P132154 FY13): provide an effective urban mass rapid transit system for a rapidly expanding city to reduce pollution, traffic congestion, and commuting times.	China	M	30	200,000 passenger-trips per day.
49		Qinghai Xining Urban Transport Project (P127867 FY14): provide more efficient, safer and cleaner transportation.	China	M	30	264,000 additional passengers per day.
50		Tianjin Urban Transport Improvement Project (P148129 FY16): leverage the existing metro system and promote walking and biking in the urban core to make transport greener and safer.	China	M	20	<ul style="list-style-type: none"> • 85,000 new metro users per day. • 135,000 new non-motorized trips per day.
51		Urumqi Urban Transport Project II (P148527 FY16): improve mobility in selected transport corridors and reduce pollution from cars with a bus rapid transit (BRT) system.	China	M	30	645,000 people benefit from direct access to BRT corridors and greener/more efficient transport.
52		Yunnan Honghe Prefecture Diannan Center Urban Transport (P101525 FY14): improve the safety, accessibility, and efficiency of transportation in core urban areas by building new infrastructure, staff training and education campaigns.	China	M	25	<ul style="list-style-type: none"> • 742,000 people gaining access to urban transport service. • 38 million additional passenger trips annually.

- Project Completed
- Project in Progress

Target Results ^{/b}					
Ton/km and/or tons	GHG emissions reduced/ avoided ^c	Other Results ^d	Committed US\$ mil ^e	IBRD share ^f	Allocated US\$ mil ^g
7 million additional freight volume per year.	~	<ul style="list-style-type: none"> ● Reduced passenger and freight travel time by respectively 254 and 210 minutes. ● 15 million people benefit including rural poor. ● Reduced pollution from shift to electric railways from road and air transport. 	300.0	5%	266.3
na	27,382 tons of CO ₂ reduced annually.	<ul style="list-style-type: none"> ● 20-30% reduction in fuel use. ● 22-25 km of improved transport corridors developed. ● 320 new cleaner-fuel vehicles procured. 	154.0	46%	50.9
na	~	<ul style="list-style-type: none"> ● 40 new and higher quality buses in operation. ● 30% reduction in fatalities and severe accidents. ● 100 new bus stops constructed or upgraded. 	100.0	47%	85.7
na	~	<ul style="list-style-type: none"> ● 490,000 beneficiaries of which 241,000 are women. ● Reduced traffic fatalities by 36%. ● 17 km in green corridors exclusively dedicated to pedestrians and cyclists. ● 35.3 km of corridor constructed or improved. 	100.0	50%	54.3
na	~	<ul style="list-style-type: none"> ● Reduced travel time on public transport by 25 minutes or more. ● 100% of stations to become wheelchair and sight-impaired accessible. ● 90% integration of facilities for bus/rail/bike transfer. ● 506,000 project beneficiaries. 	250.0	10%	173.1
na	~	<ul style="list-style-type: none"> ● 20% decrease in travel time. ● Improved accessibility to 189,400 jobs. ● Reduced vehicle pollution. ● 400,000 project beneficiaries. 	30.3	48%	12.5
na	260 tons of CO ₂ reduced annually.	<ul style="list-style-type: none"> ● 2.8 million trips benefit from improvements each day. ● 50 km of roads rehabilitated, 111 metro stations improved and 5 new bus terminals completed. 	100.0	45%	20.3
na	110,000 tons of CO ₂ reduced.	<ul style="list-style-type: none"> ● 51.7 km of BRT routes operated. ● 45% of commuters using smart cards. ● 450% increase in average passenger boardings per bus/km during peak hours. 	140.0	26%	52.5
na	~	<ul style="list-style-type: none"> ● Reduced average travel time for public transport users of 10.5-15 minutes. ● Reduced the number of transport related fatalities. ● 15.4 km of roads constructed and/or re-functioned. 	150.0	43%	40.5



Clean Transportation

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M/a	Project Life	Pass/km and/or passengers	Ton/km and/or tons
53		National Urban Transit Program (P117947 FY12): reduce carbon emissions and improve public transportation efficiency and safety.	Colombia	M	15	~	na
54		Manta Public Services Improvement Project (P143996 FY14): improve transport services and the quality and sustainability of water and sanitation.	Ecuador	M	30	<ul style="list-style-type: none"> • 505 average daily cyclist traffic (20% increase). • 3,150 average daily pedestrian traffic (25% increase). 	na
55		Quito Metro Line One (P144489 FY15): improve urban mobility and serve the growing demand for public transport.	Ecuador	M	30	Combined with P158756	na
56		Quito Metro Line One (Additional Financing) (P158756 FY18): improve urban mobility in the city of Quito serving the growing demand for public transport and reduce emissions of pollutants and GHG.	Ecuador	M	30	296,000 passengers per day.	na
57		Eastern Dedicated Freight Corridor - II (P131765 FY14): increase the capacity and quality of freight rail service.	India	M	22	na	22 tons of freight traffic annually.
58		Lima Metro Line 2 Project (P145610 FY15): Construction of a 35 km subway line and related infrastructure improving transportation in the east-west axis of the Lima-Callao Metropolitan area.	Peru	M	17	<ul style="list-style-type: none"> • 360,000 passengers per day. • 100,000 additional jobs reachable by public transportation within 60 minutes. 	na
59		Cebu Bus Rapid Transit (BRT) Project (P119343 FY15): improve the quality, safety, and environmental performance of urban public transportation.	Philippines	M	20	275,000 additional passengers using public transportation annually.	na
60		Metro Manila Bus Rapid Transit Line 1 (P132401 FY17): improve, in an environmentally sustainable manner, the efficiency, effectiveness and safety of the public transport system along the project corridor in Metro Manila.	Philippines	M	28	300,000 direct beneficiaries daily.	na

Notes:
Amounts may not add up due to rounding

/a Column indicates whether the project aims to mitigate climate change ("M"), help client countries adapt to the effects of climate change ("A"), or both.

/b Target results are expected impacts based on estimates developed at the time of project approval and materializing at the end of the project implementation period (5 years in most cases). The indicators shown are normally a subset of the development impacts contained in project documentation available in the World Bank project website (<http://www.worldbank.org/projects>). Results reported are based on the entire project, with the percent shown next to the loan amount corresponding to the proportion of the total financing that is financed by World Bank loans. Actual impacts may be different from these estimates and do not represent the actual results in a specific year. Quantitative estimates are intended to be indicative of the scale of impacts and qualitative results aim to inform about the nature of changes that will be achieved as a result of projects included in the Green Bond program once they are completed and at full capacity.

/c Annual GHG Emissions avoided are calculated by the project's lifetime when possible (otherwise calculated based on the project's implementation period).

/d For closed projects, "Project Completed" refers to a closed project for which its *Implementation Completion Report (ICR)* is not available yet. "Updated for actual results at project completion" refers to a closed project where ICR is available.

- Project Completed
- Project in Progress

Target Results ^b				
GHG emissions reduced/avoided ^c	Other Results ^d	Committed US\$ mil ^e	IBRD share ^f	Allocated US\$ mil ^g
10% reduction of PM10 concentration level.	<ul style="list-style-type: none"> ● Reduced average travel time for low income riders from 11.4 to 22.2 minutes. ● Reduced accidents and pollution (including greenhouse gases) associated with bus transport services. ● 25 km of rehabilitated pedestrian public space. <p>*In previous reports, results for this project were combined with those of the Colombia Integrated Mass Transit System (P082466), which has since closed.</p>	198.0	25%	141.0
~	<ul style="list-style-type: none"> ● 71,000 residents benefit from water connection investments. ● Improved mobility and accessibility of street network including pedestrian facilities and cycling paths. ● 24 hours of continuity of water supply service. ● 2,318 and 17,500 piped household water connections respectively constructed and rehabilitated. 	100.0	87%	93.8
Combined with P158756	<ul style="list-style-type: none"> ● US\$14 million in annual fuel savings. ● 40% reduction in average travel time. ● 1,800 jobs created. 	205.0	12%	201.8
82,285 tons of CO ₂ eq. emissions reduced annually.	<ul style="list-style-type: none"> ● 51% of jobs accessible in 60 minutes of travel time. ● Reporting mechanism for cases of violence against women and girls implemented. ● 20% of technical and professional staff, directly employed by the operator, that is female. <p>*This project represents the Additional Financing to Quito Metro Line One's parent project (P144489) and its target results coincide with those of the parent project.</p>	230.0	36%	124.3
400,000 tons of CO ₂ eq. emissions reduced annually.	<ul style="list-style-type: none"> ● 1,133 km of new freight-only rail. ● Axle-load limit raised from 23 to 25 tons increasing speeds. 	910.0	67%	295.7
46,120 tons of CO ₂ eq. emissions reduced annually.	<ul style="list-style-type: none"> ● 34% reduction in travel time per trip. ● Benefits 1.6 million people for improved access to jobs. 	300.0	5%	70.0
193,350 tons of CO ₂ eq. emissions avoided annually.	<ul style="list-style-type: none"> ● 22% reduction of annual accidents in city. 	116.0	51%	15.6
206,892 tons of GHG emission avoided annually.	<ul style="list-style-type: none"> ● Average travel time for public transports users reduced by 52%. ● Constructed 11.5 km of bus lane. ● Improved or upgraded 3,200 meters of pedestrian access facilities. ● Transport user accidents reduced by 94%. 	40.7	37%	0.1
Total Allocated for Clean Transportation		5,112.5		3,235.7
Cumulative Loan Repayments				(135.7)
Total Allocated and Outstanding for Clean Transportation				3,100.1


^e The committed amount is the Green Bond eligible portion of the World Bank loan net of cancellations reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

^f The percentage shows the share of the total financing that is provided by World Bank loans. When a project is co-financed, this share could be used to apportion total results to the World Bank.

^g The allocated amount is the amount of Green Bond proceeds allocated to support the financing of disbursements to the project reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).



Water & Wastewater Management

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Annual water savings	Annual amount of wastewater treated/reused/avoided
61		Federal Integrated Water Sector (P112073 FY12): improve water resource management including assessing how climate change impacts water availability, and improve coordination and capacity of key federal institutions in the water sector.	Brazil	A	30	~	~
62		Bengbu Integrated Environment Improvement (P096925 FY08): improve effectiveness and resilience of urban water supply, treatment services and flood prevention and control systems through improved infrastructure and watershed management.	China	A	25	~	Industrial Wastewater Treatment Plant (WWTP) of 20,000 m ³ /day and Water Treatment Plant (WTP) of 30,000 m ³ /day.
63		Water Conservation II (P114138 FY12): improve agriculture water management and increase agriculture water productivity.	China	A	30	<ul style="list-style-type: none"> • 22.67 million m³ reduction in water withdrawal. • 16.52 million m³ reduction in groundwater overdraft. • 5.80 million m³ reduction in groundwater withdrawal. 	na
64		Xining Flood and Watershed Mgmt (P101829 FY09): improve sustainable utilization of land and water resources by improved flood control management, wastewater collection and treatment, and watershed management.	China	A	30	~	4,825,000 tons of untreated wastewater flowing into rivers avoided annually.
65		Emergency Recovery and Disaster Risk Management (P109932 FY08, FY12): provide infrastructure recovery and strengthen risk management capacity in tropical storm affected areas.	Dominican Republic	A	30	~	~
66		Andhra Pradesh Water Sector Improvement (P100954 FY10): improve irrigation services on a sustainable basis and strengthen the State's institutional capacity for multisectoral development and of its water resources.	India	A	30	~	~
67		Water Resources and Irrigation Management Program 2 (P114348 FY11): improve infrastructure and government capacity for river basin water resource and irrigation management.	Indonesia	A	25	na	na






- Project Completed
○ Project in Progress

Target Results ^b

Annual amount of raw/untreated sewage sludge treated & disposed of	Annual amount of sludge that is reused	Other Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
~	~	<ul style="list-style-type: none"> • 14 water resources management institutions supported by the project. • Increased water use efficiency and proper management of solid waste. • Improved quality of water service in both urban and rural areas. Updated for actual results at project completion.	16.4	75%	16.4
~	~	<ul style="list-style-type: none"> • 85.5% flood protection of Bengbu's city land area (131.84 km of storm drainage networks built or upgraded). • Pollution reduction reached 13% • 3 months of water supply reserves. • 764,300 residents benefiting from secured water supply during dry season. • 6 storm water drainage pumping stations (with total capacity of 240 m³/s) built. • 9.2 km of sewer interceptors and secondary sewer collection network built. • 60 km of wastewater networks completed. • 2,690 tons per year of COD pollution reduction. • 90% of wastewater collected and treated increased. Updated for actual results at project completion.	99.9	45%	99.9
na	na	<ul style="list-style-type: none"> • 15% increase in main crop yields (507,850 metric tons of total yield of main food crops). • RMB 200 increase in per capita annual agricultural income. • Reverse the trend of declining water table in groundwater irrigated areas. • Increase by 0.40kg/m³ in agricultural water productivity. • 59,420 water users and 59,849 ha provided with new/improved irrigation and drainage services. Updated for actual results at project completion.	76.7	50%	76.7
na	na	<ul style="list-style-type: none"> • 1,127,000 tons of soil loss avoided annually. • 434,440 people benefit from reduced vulnerability to flood events. • 36.22 km² protected from flooding. • 87 km of wastewater collection networks built or upgraded. Updated for actual results at project completion.	100.0	53%	100.0
na	na	<ul style="list-style-type: none"> • 37,218 ha of damaged irrigation rebuilt. • 152 km transmission lines restored to "disaster-resistant" standards. • Santiago waste water operation restored. • 252 MW of damaged hydropower facilities restored and dam safety standards improved. Updated for actual results at project completion.	99.9	100%	99.9
~	~	<ul style="list-style-type: none"> • Improved irrigation service delivery on a sustainable basis. • Increased cropping intensity, crop diversity, and productivity of crops, livestock, and fish. • 788,459 ha provided with new irrigation or drainage services. • 425,992 water users provided with new/improved irrigation and drainage services. Updated for actual results at project completion.	399.2	46%	399.2
na	na	<ul style="list-style-type: none"> • Increased crop productivity by providing more efficient and reliable irrigation water. • 500,000 farmer households from provinces involving 12 river basins benefited. • 5.1 million people benefiting from the project. • 395,450 ha provided with new irrigation or drainage services. • 19,395,000 Rp of losses avoided per year from RIM (river improvement management) activities. Updated for actual results at project completion.	119.3	74%	119.3



Water & Wastewater Management

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life	Annual water savings	Annual amount of wastewater treated/reused/avoided
68		Second Water Sector Investment (P095847 FY09): promote better water management through efficiency improvements in irrigation and increased capacity for watershed management.	Tunisia	A	30	~	~
69		Emergency Water Security and Efficiency (FY17 P160911): to improve availability of water supply in drought vulnerable areas, increase the efficiency of Water Utilities Corporation, and strengthen wastewater management in selected systems.	Botswana	A	20	~	2,620 m ³ of additional wastewater treated per day (956,000 annual).
70		Espirito Santo Integrated Sustainable Water Management Project (P130682 FY14): improve sustainable water resources management and increase access to sanitation.	Brazil	Both	25	~	~
71		Lake Qaraoun Pollution Prevention (P147854 FY16): reduce the quantity of untreated municipal sewage discharged into the Litani River and address pollution around Qaraoun Lake.	Lebanon	A	14	~	30,000 m ³ of municipal wastewater collected and treated daily.
72		Can Tho Urban Development and Resilience (P152851 FY16): reduce flood risk in the urban core area, improve its connectivity to new urban growth areas, and improve the city's capacity to manage disaster risk.	Vietnam	A	29	na	na

Notes:

Amounts may not add up due to rounding.

/a Column indicates whether the project aims to mitigate climate change ("M"), help client countries adapt to the effects of climate change ("A"), or both.

/b Target results are expected impacts based on estimates developed at the time of project approval and materializing at the end of the project implementation period (5 years in most cases). The indicators shown are normally a subset of the development impacts contained in project documentation available in the World Bank project website (<http://www.worldbank.org/projects>). Results reported are based on the entire project, with the percent shown next to the loan amount corresponding to the proportion of the total financing that is financed by World Bank loans. Actual impacts may be different from these estimates and do not represent the actual results in a specific year. Quantitative estimates are intended to be indicative of the scale of impacts and qualitative results aim to inform about the nature of changes that will be achieved as a result of projects included in the Green Bond program once they are completed and at full capacity.

/c For closed projects, "Project Completed" refers to a closed project for which its *Implementation Completion Report (ICR)* is not available yet. "Updated for actual results at project completion" refers to a closed project where ICR is available.

/d The committed amount is the Green Bond eligible portion of the World Bank loan net of cancellations reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

/e The percentage shows the share of the total financing that is provided by World Bank loans. When a project is co-financed, this share could be used to apportion total results to the World Bank.

/f The allocated amount is the amount of Green Bond proceeds allocated to support the financing of disbursements to the project reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).



- Project Completed
 Project in Progress

Target Results ^{/b}

Annual amount of raw/untreated sewage sludge treated & disposed of	Annual amount of sludge that is reused	Other Results ^{/c}	Committed US\$ mil ^{/d}	IBRD share ^{/e}	Allocated US\$ mil ^{/f}
na	na	<ul style="list-style-type: none"> ● 24,436 ha rehabilitated with irrigation and drainage systems at closing. ● 21,128 households supplied with new drinking water. ● 21,602 ha provided with drainage systems. Updated for actual results at project completion.	16.6	19%	16.6
85% of average annual COD removal efficiency from wastewater at WWTP.	~	<ul style="list-style-type: none"> ● 580,000 direct project beneficiaries. ● 14,500 m³ of additional water made available per day. ● 39,500 m³ of water delivered to consumers per day. ● 75,000 piped household water connections that are benefiting from rehabilitation. 	145.5	91%	4.4
1,590 tons of BOD removed a year.	~	<ul style="list-style-type: none"> ● 2.6 million people benefit. ● 70% of State with disaster warning system. ● 32,897 new household sewer connections. ● 164,000 people with improved sanitation. ● 2,000 ha reforested. 	81.1	70%	10.7
1,250 m ³ of trash removed from river banks.	~	<ul style="list-style-type: none"> ● 50% reduction in pollutant load (nitrogen) to waterways. ● 344,000 of direct beneficiaries. ● 7,300 new household sewer connections. ● 200 km of sewer network constructed in the project area. 	55.0	92%	5.7
na	na	<ul style="list-style-type: none"> ● 2,675 ha in urban core land area protected from floods. ● 25-30% reduction in travel time between urban core and Cai Rang center. ● 420,000 people as direct beneficiaries in which 24,000 are from ethnic minorities and 216,000 are female. ● 12 km of new and upgraded sewers/pipe installed. 	125.0	39%	10.0
Total Allocated for Water, Wastewater, and Waste Management			1,334.6		958.9
Cumulative Loan Repayments					(112.7)
Total Allocated and Outstanding for Water and Wastewater Management					846.2



Solid Waste Management

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M/ ^a	Project Life	Waste prevented, minimized, reused or recycled
73		Integrated Solid Waste & Carbon Finance (P106702 FY11): improve treatment and final disposal of municipal solid waste and reduce methane emissions.	Brazil	M	19	9,000 tons per day of waste disposed in environmentally sustainable sanitary landfills.
74		Solid Waste Sector DPL (P104937 FY09): enhance the governance of the solid waste sector.	Morocco	M	26	na

Notes:

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/b Target results are expected impacts based on estimates developed at the time of project approval and materializing at the end of the project implementation period (5 years in most cases). The indicators shown are normally a subset of the development impacts contained in project documentation available in the World Bank project website (<http://www.worldbank.org/projects>). Results reported are based on the entire project, with the percent shown next to the loan amount corresponding to the proportion of the total financing that is financed by World Bank loans. Actual impacts may be different from these estimates and do not represent the actual results in a specific year. Quantitative estimates are intended to be indicative of the scale of impacts and qualitative results aim to inform about the nature of changes that will be achieved as a result of projects included in the Green Bond program once they are completed and at full capacity.

/c Annual GHG Emissions avoided are calculated by the project's lifetime when possible (otherwise calculated based on the project's implementation period).

/d For closed projects, "Project Completed" refers to a closed project for which its *Implementation Completion Report (ICR)* is not available yet. "Updated for actual results at project completion" refers to a closed project where ICR is available.

/e The committed amount is the Green Bond eligible portion of the World Bank loan net of cancellations reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

/f The percentage shows the share of the total financing that is provided by World Bank loans. When a project is co-financed, this share could be used to apportion total results to the World Bank.

/g The allocated amount is the amount of Green Bond proceeds allocated to support the financing of disbursements to the project reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

- Project Completed
- Project in Progress

Target Results^{/b}


Annual GHG emissions reduced ^{/c}	Other Results ^{/d}	Committed US\$ mil ^{/e}	IBRD share ^{/f}	Allocated US\$ mil ^{/g}
~	<ul style="list-style-type: none"> • 3 dumps closed. • 7 municipalities made investments to improve recycling and composting activities. Updated for actual results at project completion.	16.7	31%	16.7
na	<ul style="list-style-type: none"> • 24,436 ha rehabilitated with irrigation and drainage systems. • 21,128 households supplied with new drinking water. Updated for actual results at project completion.	113.8	100%	113.8
	Total Allocated for Solid Waste Management	130.6		130.6
				(19.1)
	Total Allocated and Outstanding for Solid Waste Management			111.4



Agriculture, Land Use, Forests & Ecological Resources

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life
75		Integrated Forestry Development (P105872 FY11): increase forest cover to create wind breaks, farmland shelter belts, and conservation schemes, and to train farmers in forest and environmental management.	China	Both	25
76		Hunan Forest Restoration and Development (P125021 FY13): increase resilience of forests.	China	Both	26
77		Forests and Climate Change (P123760 FY12): support rural communities' sustainable management of forests, and generate additional income from forest products and services and to reduce emissions from deforestation and forest degradation.	Mexico	Both	13
78		Forest Fire Response (P123923 FY13): improve forest fire prevention and management and to enhance sustainable forest management.	Russian Federation	Both	18
79		Fourth Northwest Mountainous and Forested Areas Development (P119140 FY11): better protect and manage natural resources through conservation of soil and water resulting from improved agriculture and pasture practices and to improve access to potable water for rural communities.	Tunisia	A	21
80		Second Community Agriculture Resource Management and Competitiveness Project (P133705 FY14): improve pasture-based livestock management in targeted alpine grasslands areas.	Armenia	A	25
81		Belarus Forestry Development Project - Additional Financing (P165121 FY18): enhance silvicultural management and reforestation and afforestation, increase the use of felling residues and improve the public good contribution from forests in targeted forest areas.	Belarus	A	30
82		Guangdong Agricultural Pollution Control (P127775 FY14): promote waste management in livestock and crop production (including methane capture and use) and improve soil nutrient, fertilizer, and pesticide use.	China	M	25
83		Hebei Rural Renewable Energy Development Project (P132873 FY15): demonstrate sustainable biogas production and utilization to reduce environmental pollution and supply clean energy.	China	M	25

 Project Completed

 Project in Progress

Target Results^b

Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
<ul style="list-style-type: none"> 132,600 ha of forests restored or re/afforested: 93,840 ha of new multifaction plantations and 38,450 ha of improved existed plantations. 40% increase in vegetative cover plus improved species diversity in degraded forests rehabilitated. 324,000 farmers trained in forest management. Updated for actual results at project completion.	99.1	50%	99.1
<ul style="list-style-type: none"> 58,900 ha of ecological forest plantation areas reforested and rehabilitated. 26,130 households benefited. Project completed.	80.0	69%	80.0
<ul style="list-style-type: none"> 92% increase in areas under improved forest management (equivalent to 3,935,984 additional ha). Support 2 pilot areas to reduce carbon emissions from deforestation and forest degradation. 2,622 communities applied for sustainable management and conservation schemes (not cumulative but reflecting yearly results and this figure reflects what has been achieved at project's completion). 265,632 project beneficiaries. 10,907,000 tons of CO₂ eq. per year of average reduction from deforestation and forest degradation. Updated for actual results at project completion.	291.6	45%	291.6
<ul style="list-style-type: none"> Improve forest fire detection and suppression systems. Improve capabilities of fire brigades. Avoid 75,500,000 tons of CO₂ eq. emissions over 25 years. Raise public awareness and education standards in forestry issues in general. Project completed.	16.2	33%	16.2
<ul style="list-style-type: none"> Reduce erosion and forest degradation: 10,517 ha of erosion-sensitive land protected with soil and water conservation works and infrastructure. Build climate change awareness and disseminate climate-appropriate practices to reinforce livelihood and agro-system resilience: 39,500 ha of additional land under sustainable land and water management (at farm level), 12,927 ha of pasture upgraded and sustainably managed and 15,994 ha of trees planted. 371 water points constructed and rehabilitated benefitting more than 2,000 households. 181 km of newly constructed feeder roads and 815 km of rehabilitated roads. 318,000 people benefit. Updated for actual results at project completion.	30.1	73%	30.1
<ul style="list-style-type: none"> At least 10,000 pasture users benefit through their membership in Pasture Users' Cooperatives. 110,000 ha of land managed with sustainable practices. 	23.0	54%	10.3
<ul style="list-style-type: none"> Increase by 262,281 metric tons of CO₂ eq. avoided annually, based on project's lifetime. 6 nursery lines for container grown seedlings of native tree species established with a production of 23.7 million seedlings per year. 757 people trained. 35,500 direct project beneficiaries. 3,273,300 ha of new areas managed as biodiversity-friendly. 	13.7	25%	0.7
<ul style="list-style-type: none"> 45,000 tons of annual pollution load to waterways reduced. 5,000 tons of annual nutrient load to waterways reduced. 28,000 ha with improved soil nutrient, fertilizer and pesticide use. 100 tons of total pesticide consumption reduced annually. 15,000 clients adopting an improved agricultural technology. 	100.0	48%	56.6
By 2020: <ul style="list-style-type: none"> 42,000,000 m³ of biogas used annually. 58,780 tons of CO₂ emissions reduced annually. 96,100 rural resident households with access to biogas supply. Additional biogas used as fuel for public transportation. 221,700 tons and 241,600 tons of, respectively, crop residues and livestock manure treated by the project each year. 	71.5	47%	36.3



Agriculture, Land Use, Forests & Ecological Resources





#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M/ ^a	Project Life
84		Integrated Modern Agriculture Development (P125496 FY14): develop sustainable and climate resilient agricultural production systems by investing in improved irrigation and drainage systems and practices that address climate risk.	China	A	25
85		Ningxia Desertification Control and Ecological Protection (P121289 FY12): control desertification and land degradation by stabilizing moving sands, re-vegetating degraded steppe lands and planting shelter belts.	China	Both	30
86		Maharashtra Project on Climate Resilient Agriculture (P160408 FY18): enhance climate resilience and profitability of smallholder farming systems in selected districts of Maharashtra.	India	A	20
87		Meghalaya Community-led Landscapes Management Project (P157836 FY18): strengthen community-led landscapes management in selected landscapes in the state of Meghalaya.	India	A	10
88		Tamil Nadu Irrigated Agriculture Modernization Project (P158522 FY18): enhance productivity and climate resilience of irrigated agriculture, improve water management, and increase market opportunities for farmers and agro-entrepreneurs in selected sub-basin areas of Tamil Nadu.	India	A	20
89		Coral Reef Rehabilitation and Management Program-Coral Triangle Initiative (P127813 FY14): protect and sustainably manage unique coral ecosystems in selected districts and provinces.	Indonesia	A	20
90		Strategic Irrigation Modernization and Urgent Rehabilitation Project (P157585 FY18): improve irrigation services and strengthen accountability of irrigation schemes management in selected areas.	Indonesia	A	30
91		Large Scale Irrigation Modernization (P150930 FY16): expand agriculture through the adoption of irrigation techniques that make more efficient use of water resources, while building better ties between farmers and markets.	Morocco	A	25
92		Additional Financing for Punjab Irrigated Agriculture Productivity Program Project (P157736 FY18): improve the productivity of water use in irrigated agriculture through scaling up of key activities, and finance a new activity on postharvest processing and value addition.	Pakistan	A	20
93		Peru National Agriculture Innovation Program (P131013 FY14): strengthen the national agricultural innovation system and integrate climate change criteria into project such as adaptive research, seed improvements and skills development, among others.	Peru	A	10

- Project Completed
 Project in Progress

Target Results ^b			
Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
<ul style="list-style-type: none"> Reduced water use per ton of rice, wheat and maize produced in target regions. 94,000 ha of farmland served with improved irrigation and drainage services. 38,500 ha of leveled land and improved soil conditions. 380,000 farm households beneficiaries in 33 counties/districts. 	200.0	64%	153.2
<ul style="list-style-type: none"> 30,000 ha restored or re/ afforested. 	80.0	70%	52.7
<ul style="list-style-type: none"> 20% increase in water productivity at farm level: from 0.23 to 0.276 kg per m³. Annual reduction of 5,661,644 tCO₂eq. 1,320,000 farmers reached with agricultural assets or services. 624,000 ha provided with new/improved irrigation or drainage services. Improved availability for 83,900,000 m³ of surface water storage capacity for agriculture. 	420.0	70%	4.2
<ul style="list-style-type: none"> 31,510 ha of land area under sustainable management practices. 12,585 ha of forest area brought under management plans. 400 villages provided with capacity-building package to support community-led natural resource management. At least 100,000 ultimate project beneficiaries. 175,419 net sequestration of CO₂ annually, based on the project economic life. 	48.0	80%	0.3
<ul style="list-style-type: none"> 160,000 ha provided with improved irrigation or drainage services. Climate-resilient technologies promoted on 75,000 ha. 500,000 project beneficiaries. 100,000 ha under improved agronomic practises and 25,100 ha under improved fish production. Modernized 4,741 tank irrigation systems. 284,000 tCO₂eq. avoided annually. 	318.0	70%	48.9
<ul style="list-style-type: none"> Reduce destructive fishing in selected areas. 1,140 direct beneficiaries in fishing communities. 1.4 million ha of marine areas brought under biodiversity protection. 	3.8	89%	2.0
<ul style="list-style-type: none"> 276,000 area provided with new/improved irrigation or drainage services. Reduced net annual average emissions by 439,743 tons of CO₂ eq. Increase by 20% crop intensity. 300,000 farmer households provided with improved irrigation services. 	250.0	43%	6.0
<ul style="list-style-type: none"> 9,274 farmers benefit. 100% of area with access to water on demand in peak period. 20,700 ha with improved irrigation technologies. 	150.0	80%	63.6
<ul style="list-style-type: none"> 45% reduction in water losses for 11,550 watercourses improved and 120,000 acres covered by High Efficiency Irrigation System. Increased by 100% of improved agricultural practices. Avoided 381,377 tons of CO₂ eq. emissions annually. Increased by 30% in women benefitting. 	130.0	63%	28.8
<ul style="list-style-type: none"> 20,000 small and medium farmers adopting new technologies. 61 new technologies demonstrated on farms. 450,000 potential farmers beneficiaries. 	13.0	31%	11.7



Agriculture, Land Use, Forests & Ecological Resources

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M/ ^a	Project Life
94		Rural Development (P132317 FY15): improve the resilience of small-scale farmers and fishermen to climate change by helping them recover and increase income-generating activities and strengthening the conservation of coastal and marine resources.	Philippines	A	30
95		Third South West Indian Ocean Fisheries Governance and Shared Growth Project (SWIOFish3) (FY18 P155642): to improve management of marine areas and fisheries in targeted zones and strengthen fisheries value chains in the Seychelles.	Seychelles	A	20
96		Sustainable Management of Natural Resources and Climate Change (P124181 FY12): improve farm environmental management and reduce greenhouse gas emissions by promoting improved agriculture and livestock management.	Uruguay	Both	21
97		Sustainable Management of Natural Resources and Climate Change (Additional Financing) (P163444 FY18): to support Uruguay's efforts to promote farmer adoption of climate smart agricultural and livestock practices and improved natural resource management practices in the project area.	Uruguay	Both	21

Notes:

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- Project Completed
 Project in Progress

Target Results^b

Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
<ul style="list-style-type: none"> ● Increase incomes of about 1.9 million farmers and fishermen and the value of their products. ● Average travel time from farm to markets reduced by 30% through 1,265 km of new roads. 	501.3	75%	301.0
<ul style="list-style-type: none"> ● 5,000,000 ha of sustainable-use marine protected areas. ● 44% increase in key demersal indicator species stable or rebuilding in the Mahé Plateau fisheries. ● 40% increase in by-catch landed and sold in the Seychelles resulting in expansion of value chains, job creation and increased revenues in the country. 	4.3	43%	1.1
<ul style="list-style-type: none"> ● Improve water use in irrigation and livestock production systems. ● Improve pasture management and other productivity measures. ● 4,000 family and medium-sized farmers benefitting from the project and 7,500 additional farmers provided with training. 	49.0	89%	48.4
<ul style="list-style-type: none"> ● 8,000 people trained under the project, 2,000 of which are women. ● 7,000 farmers adopting innovative agricultural technology. ● 3,600,000 ha under sustainable landscape management practices. ● 3,500 ha provided with new/improved irrigation or drainage services. 	42.0	89%	5.0
Total Allocated for Agriculture, Land Use, Forests, & Ecological Resources	2,934.4		1,347.6
Cumulative Loan Repayments			(15.4)
Total Allocated and Outstanding for Agriculture, Land Use, Forests and Ecological Resources			1,332.3



Resilient Infrastructure, Built Environment, and Other

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life
98		Huai River Basin Flood Management and Drainage Improvement (P098078 FY11): increase resilience of communities to the impacts of climate change, particularly flooding.	China	A	25
99		Second Sustainable Development and Green Growth DPL (P161642 FY18): support green growth in transport, energy, environmental health and natural resources to improve environmental quality through reducing PM 2.5 in the air, strengthening regulations for sanitation, increasing capacity to reuse and disposing solid waste.	Colombia	M	24
100		South East Europe and Caucasus Catastrophe Risk Insurance Facility (P110910 FY11): increase access to catastrophe risk insurance through facilitating the growth of insurance markets.	North Macedonia & Serbia	A	22
101		Climate Change Development Policy Loan (P110849 FY08): mainstream climate change considerations into public policy.	Mexico	Both	10
102		Climate Resilient Infrastructure (P127338 FY15): enhance the resilience of road infrastructure against flood risks and the impacts of climate change.	Belize	A	25
103		Fujian Fishing Ports Project (P129791 FY14): reduce the vulnerability of fishing communities to extreme weather events.	China	A	27

Project Completed




Project in Progress

Target Results^b

Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
<ul style="list-style-type: none"> ● 9,682 km² of flood protection (in rural and urban areas). ● 7,430,000 people benefited. ● RMB 798 million of reduced economic losses (in rural and urban areas). ● 444 km of dike strengthened. ● 1,023 km of river improvements. Updated for actual results at project completion.	200.0	33%	200.0
<ul style="list-style-type: none"> ● 6% increase in passenger journeys done in public and non-motorized transport in 8 cities. ● 5% reduction in the mean annual concentration of PM 2.5 in 7 monitoring stations. ● 20% increase in the rate of treated wastewater from the hydrocarbon sector for reuse in agricultural activities. ● 580,000 additional people provided with access to improved water sources. ● Treated wastewater increased by 215,000 m³/year. Project completed.	500.0	100%	500.0
<ul style="list-style-type: none"> ● Increased catastrophe insurance coverage from 2% to 10% for homeowners, farmers, enterprises, and government entities holding catastrophe insurance policies. ● 6-7 different types of highly affordable catastrophic insurance products provided by local insurance companies to homeowners, farmers and local governments. Updated for actual results at project completion.	10.0	100%	10.0
<ul style="list-style-type: none"> ● 642,000 ha reforested. ● 6,000,000 tons of CO₂ eq. emissions reduced annually due to reforestation. ● Domestic carbon pricing strategy developed. ● 10 cities and 5 states climate action plans developed. Updated for actual results at project completion.	501.3	100%	501.3
<ul style="list-style-type: none"> ● 30 km of roads rehabilitated and 12 bridges and culverts improved. ● 50% reduction in road interruption due to flooding. ● 170,000 people living near the road networks directly benefit. 	30.0	100%	6.9
<ul style="list-style-type: none"> ● 11,000 fishermen and their families (total 64,000 people) benefit. ● 3,000 fishing vessels protected in ports. ● Improved effectiveness of early warning and emergency systems. 	60.0	58%	7.2



Resilient Infrastructure, Built Environment, and Other

#	Link to More Information	Project Name (Number Year/s Loans Approved) and Description	Country	A/M ^a	Project Life
104		Disaster Vulnerability Reduction (P146965 FY16): enhance the country's resilience to disaster and climate risk.	Jamaica	A	29
105		Hydrometeorological Services Modernization (P127676 FY14): enhance capacity to deliver reliable and timely weather, hydrological and climate information.	Russian Federation	A	18
106		Road Climate Resilience Project (P130975 FY14): rehabilitate and improve the climate resilience of a road corridor.	Timor-Leste	A	28

Notes:

Amounts may not add up due to rounding.

/a Column indicates whether the project aims to mitigate climate change ("M"), help client countries adapt to the effects of climate change ("A"), or both.

/b Target results are expected impacts based on estimates developed at the time of project approval and materializing at the end of the project implementation period (5 years in most cases). The indicators shown are normally a subset of the development impacts contained in project documentation available in the World Bank project website (<http://www.worldbank.org/projects>). Results reported are based on the entire project, with the percent shown next to the loan amount corresponding to the proportion of the total financing that is financed by World Bank loans. Actual impacts may be different from these estimates and do not represent the actual results in a specific year. Quantitative estimates are intended to be indicative of the scale of impacts and qualitative results aim to inform about the nature of changes that will be achieved as a result of projects included in the Green Bond program once they are completed and at full capacity.

/c For closed projects, "Project Completed" refers to a closed project for which its *Implementation Completion Report (ICR)* is not available yet. "Updated for actual results at project completion" refers to a closed project where ICR is available.

/d The committed amount is the Green Bond eligible portion of the World Bank loan net of cancellations reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

/e The percentage shows the share of the total financing that is provided by World Bank loans. When a project is co-financed, this share could be used to apportion total results to the World Bank.

/f The allocated amount is the amount of Green Bond proceeds allocated to support the financing of disbursements to the project reported in equivalent US\$ millions. Loans denominated in other currencies are converted to US\$ equivalents using the spot exchange rate on the report date (June 30, 2019).

- Project Completed
 Project in Progress

Target Results^b

Results ^c	Committed US\$ mil ^d	IBRD share ^e	Allocated US\$ mil ^f
<ul style="list-style-type: none"> ● Protection of infrastructure (e.g., bridges, storm drains, roads) from floods directly benefitting about 247,000 people. ● Increase the government's capacity to better prepare for and respond to natural disasters. ● Reduced to 0 the number of days of interrupted traffic due to flooding. ● 8,350 storm drains retrofitted/constructed and 140 bridges retrofitted. ● 313,000 direct project beneficiaries. 	30.0	100%	6.2
<ul style="list-style-type: none"> ● >70% accuracy of forecasts for the main administrative centers of Russia. ● > 85-90% accuracy of seasonal river flow forecasts in Volga river basin reservoirs. ● Increased number of sectoral data users data. 	60.0	43%	35.8
<ul style="list-style-type: none"> ● Improved drainage conditions along 110 km road corridor. ● 30% reduction in major road damage events. 	15.0	16%	9.6
Total Allocated for Resilient Infrastructure, Built Environment, and Other	1,406.3		1,276.9
Cumulative Loan Repayments			(521.2)
Total Allocated and Outstanding for Resilient Infrastructure, Built Environment and Other			755.7



Annex 1: Impact Reporting Approach

When the World Bank issued its first Green Bond Impact Report in 2015, the initial reporting template and set of indicators presented were the product of engagement with investors, which benefitted from the efforts of multilateral development banks to harmonize metrics for GHG accounting and reporting on climate finance activities. The World Bank led a collaborative initiative with other issuers to create the first harmonized template with core indicators for the Renewable Energy and Energy Efficiency sectors that was published in March 2015. It has since evolved and been adopted by many other issuers. This consultative process of developing harmonized impact reporting templates has advanced under the auspices of the Green Bond Principles and its working groups and continues to evolve to cover other indicators and relevant sectors.

The indicators for this report have been selected among other expected development results and are intended to illustrate the type and scale of expected results in a variety of sectors and country contexts. To better reflect individual country challenges, demands, and resources, the report focuses on presenting a diverse set of countries, projects and sectors rather than cumulative impacts. Because of the limited comparability between projects, sectors and countries (see “Interpreting Reported Results” in “World Bank Green Bond Process” section and “No aggregation of GHG estimates” on the adjacent page), impact results are aggregated only with regards to “annual energy savings”, “annual energy produced” and “renewable energy capacity added”, which are deemed to be broadly comparable.

World Bank Green Bond Eligible Projects: Six (6) Sectors

- This impact report is organized according to the six sectors represented in the World Bank’s Green Bond eligible projects portfolio. Where projects cover multiple sectors, the project is included in the main sector only, but target results will include all components of the project.



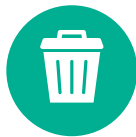
Renewable Energy &
Energy Efficiency



Clean
Transportation



Water &
Wastewater



Solid Waste
Management



Agriculture, Land Use,
Forests & Ecological
Resources



Resilient Infrastructure,
Built Environment
& Other

The reporting framework adopted identifies core indicators for the following sectors: (1) Renewable Energy & Energy Efficiency; (2) Clean Transportation; (3) Water & Wastewater; (4) Solid Waste Management. Where information covering the proposed core indicators is publicly available, it is included¹. However, for some projects quantitative estimates for these indicators are either not available or not applicable. A few other indicators that are considered relevant for Green Bond investors are also provided.

Projects categorized in the remaining sectors are more heterogeneous. The report provides project specific indicators based on available information on the scale of results.

Notes:

¹ This impact report has been prepared following the approach developed in collaboration with other international financial institutions to encourage greater [harmonization in impact reporting](http://documents.worldbank.org/curated/en/247461561449155666/pdf/Join-Report-on-Multilateral-Development-Banks-Climate-Finance-2018.pdf). See also the 2018 Joint Report on Multilateral Development Banks’ Climate Finance at <http://documents.worldbank.org/curated/en/247461561449155666/pdf/Join-Report-on-Multilateral-Development-Banks-Climate-Finance-2018.pdf>

Key Assumptions & Approach

- The following key assumptions and approach were used in preparing this report:

Ex-ante Projections Quantitative estimates for target results represent ex-ante projections developed during project design mostly for direct project impacts once projects are at normal operating capacity. The target results include expected results for projects approved by the Board but still in the implementation phase. The impact report thus serves as an illustration of expected results made possible through Green Bond eligible projects, but it is not intended to and does not provide actual results achieved in a specific year or reporting period. Target results have been updated with actual results at project completion. Where the amounts are based on actual results this is noted in the preceding tables.

Period of Inclusion in Report Impact reporting will be provided for projects for so long as they are part of the World Bank Green Bond program. This means that projects are added to the impact report once Green Bond proceeds have been allocated to support the financing of disbursements to the project and removed once the client has repaid the respective loan. Projects may also be removed from future reports if the World Bank decides to remove a project from its Green Bond program². If a project is removed from the Green Bond program, any Green Bond proceeds previously allocated to support the financing of disbursements to that project will be credited back to the Special Account for Green Bond proceeds and allocated to support the financing of disbursements to other Green Bond eligible projects as part of the routine allocation process.

Reporting for Co-financed Projects The World Bank often co-finances projects with the client country and/or other lenders. The results for the individual project are based on the total project including all financiers. The World Bank's share of the total financing is included for each project.

Partial Project Eligibility In cases where a project is only partially Green Bond eligible, the committed amount reported reflects only that portion that is Green Bond eligible. Allocations to support disbursements to such projects are made on a pro rata basis.

Aggregation of GHG Estimates When reported in the "Project Appraisal", "Implementation Status and Results", and/or "Implementation Completion and Results" reports, the GHG emission reductions for projects are reported in tons of CO₂ equivalent. The World Bank, in conjunction with other International Finance Institutions, developed a harmonized approach for GHG accounting³. At the same time, the World Bank developed internally consistent GHG accounting methodologies in order to track ex-ante gross and net emissions in investment projects across relevant sectors and over their economic lifetime. Starting in FY19, the WBG is reporting aggregated annual net GHG emissions reductions in the 2019 Corporate Scorecard⁴. Given these recent developments in GHG accounting, the basis for estimating CO₂ equivalent emission reductions for projects approved prior to FY19 may vary.

All Reported Results are From Publicly Available Sources Reporting is based on publicly available impacts for the projects disclosed in "Project Appraisal", "Implementation Status and Results", and "Implementation Completion and Results" reports. To facilitate comparability of the reported results, the reporting units have been converted where such conversion is based on a standard conversion factor.

Notes:

^{/2} As part of the World Bank's due diligence in monitoring projects included in its Green Bond program, it may elect to remove a project. Possible reasons for removing a project from a Green Bond program include, but are not limited to, cancellation of the project or significant implementation delays.

^{/3} For more information on the harmonization framework, see https://www.worldbank.org/content/dam/Worldbank/document/IFI_Framework_for_Harmonized_Approach%20to_Greenhouse_Gas_Accounting.pdf

^{/4} <https://scorecard.worldbank.org/tier1-development-context>

Annex 2:

World Bank Exclusion List

• The World Bank does not support the financing of operations that involve:

- Alcoholic beverages
- Tobacco or tobacco processing machinery
- Unworked or worked pearls, precious and semiprecious stones
- Jewelry made of gold, silver or platinum group metals (except watches and watch cases) and goldsmiths' or silversmiths' wares (including set gems)
- Gold, non-monetary (excluding gold ores and concentrates)
- Radioactive and associated materials
- Nuclear reactors, and parts thereof; fuel elements (cartridges), non-irradiated, for nuclear reactors

Other excluded areas include:

- Goods intended for a military or paramilitary purpose or for luxury consumption
- Environmentally hazardous goods, whose manufacture, use, or import is prohibited under the laws of the member country or international agreements to which the borrower government is a party; or any other goods designated as environmentally hazardous by agreement between the member country and the World Bank.

- Any payment prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the United Nations, with respect to which the World Bank determines that corrupt, fraudulent, collusive, or coercive practices were engaged in by representatives of the member country or other recipient of the financing made available by the World Bank, without the member country (or other such recipient) having taken timely and appropriate action satisfactory to the World Bank to address such practices when they occur.

Fossil fuels:

The World Bank has not financed a new coal-fired power plant since 2010. It will support countries transitioning away from coal by helping close coal mines and ensure a just transition for affected communities. In 2017, the World Bank announced it will no longer finance upstream oil and gas after 2019, with consideration only in exceptional circumstances. The World Bank will continue to provide technical assistance to help countries strengthen the transparency, governance, institutional capacity, and regulatory environment of their energy sectors – including in oil and gas.



Annex 3:

World Bank Project Cycle

- : The World Bank project cycle (see diagram 1) consists of six stages: Identification, Preparation, Appraisal, Negotiation/Approval, Implementation/Support, and Completion/Evaluation (see below for the detailed descriptions). Projects that are reviewed for eligibility under the World Bank Green Bond program are selected from among all projects approved by the World Bank Board of Directors (see diagram 2). They therefore represent a subset of the World Bank's lending portfolio. As of June 30, 2019, there were 106 projects in the Green Bond program.

- 1 Project Identification** The World Bank works with a borrowing country's government on a *Country Partnership Framework* that identifies the country's priorities for reducing poverty and improving living standards. Within those priorities, the World Bank and the government agree on a project concept, which is outlined in a *Project Concept Note*. The *Project Information Document* outlines the project's scope, and the *Integrated Safeguards Data Sheet* identifies potential environmental and social issues.
- 2 Project Preparation** The borrower leads project preparation, with the World Bank generally taking an advisory role. If necessary, the borrower prepares an *Environmental Assessment Report* that describes the project's likely environmental impact and steps to mitigate possible harm. If there are major issues, the borrower prepares an *Environmental Action Plan*. An analysis of a project's potentially adverse effects on indigenous peoples may also be undertaken, and any issues are addressed in the *Indigenous Peoples Plan*.
- 3 Project Appraisal** The government and the World Bank review the identification and preparation documents and confirm the expected project outcomes, intended beneficiaries and evaluation tools, as well as the project's readiness for implementation. The *Project Information Document* is updated and released when the project is approved for funding.
- 4 Project Approval** The project team prepares the *Project Appraisal Document* (for investment project financing) or the *Program Document* (for development policy financing), along with other financial and legal documents, for submission to the World Bank's Board of Executive Directors for approval. When approval is obtained and the legal documents are signed, the implementation phase begins.
- 5 Project Implementation** The borrower implements the project with technical assistance and support from the World Bank as needed. Twice a year, the government and the World Bank prepare a review of project progress, the *Implementation Status and Results Report*.
- 6 Project Completion and Evaluation** When a project is completed and closed, a World Bank operations team prepares an *Implementation Completion and Results Report*. The final outcomes are compared to expected results. The team also assesses how well the project complied with the World Bank's operations policies, and accounts for the use of World Bank resources. The World Bank's Independent Evaluation Group (IEG) assesses the performance of roughly one project out of four projects a year, measuring outcomes against the original objectives, sustainability of results and institutional development impact. IEG may produce *Impact Evaluation Reports* to assess the economic worth of projects and the long-term effects on people and the environment.

Diagram 1:
World Bank Project Cycle

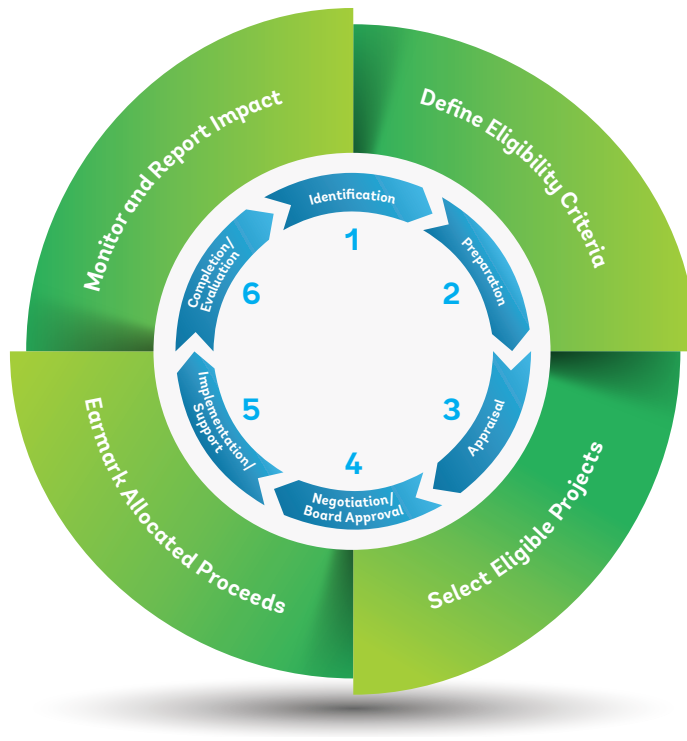
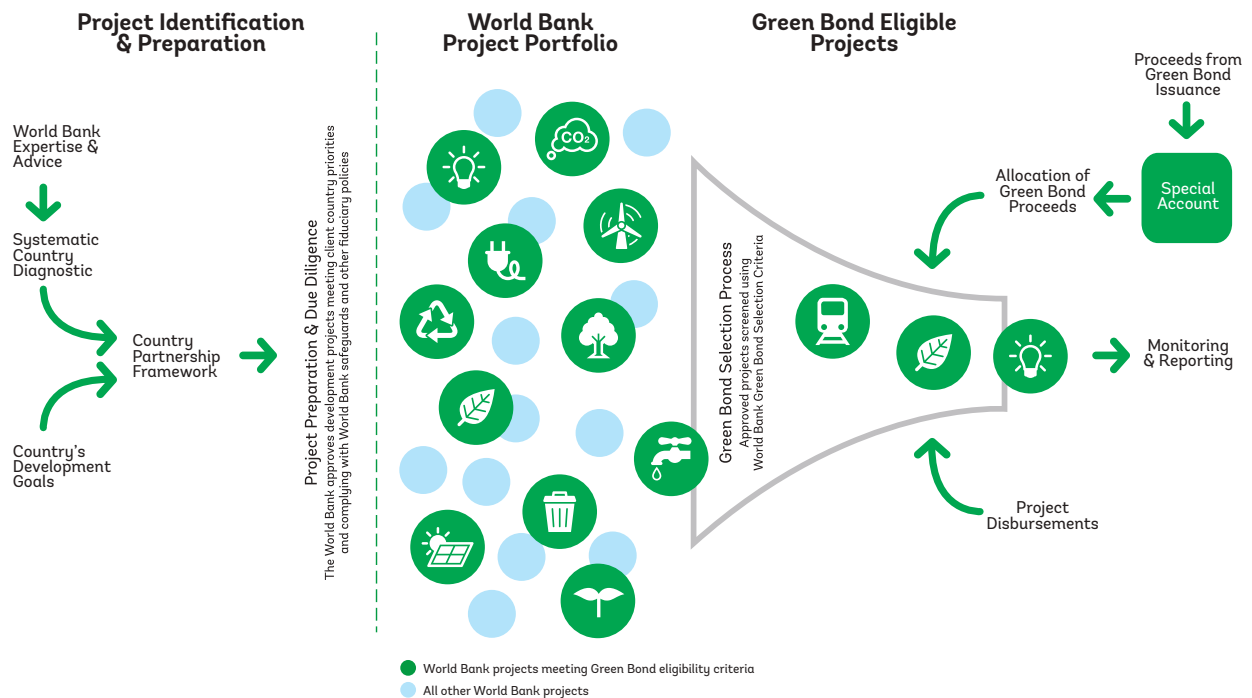


Diagram 2:
World Bank Green Bond Selection Process



Annex 4:

List of Abbreviations

BOD	Biochemical oxygen demand
CO ₂	Carbon dioxide
COD	Chemical oxygen demand
eq.	Equivalent
GHG	Greenhouse gas
GWh	Gigawatt hours (equal to 1,000 MWh or 1,000,000 kWh)
ha	Hectares
hr	Hour
IBRD	World Bank (International Bank for Reconstruction and Development)
km	Kilometers
km ²	Square kilometers
kWh	Kilowatt hours
L	Liter
m ²	Square meters
m ³	Cubic meters
MJ	Megajoules
MVA	Megavolt amperes
MW	Megawatts
MWh	Megawatt hours
NO _x	Nitrogen dioxide
PM	Particulate matter
RMB	Chinese renminbi
SME	Small and medium sized enterprises
SO ₂	Sulfur dioxide
tce	Tons of coal equivalent
TSP	Total suspended particles

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Investor Relations

Capital Markets Department
The World Bank Treasury

1225 Connecticut Ave NW
Washington, DC 20036
USA

E debtsecurities@worldbank.org
T +1 (202) 477-2880
W treasury.worldbank.org/capitalmarkets