

# Green Bond

## IMPACT REPORT

JUNE 2015





# World Bank Green Bond

eligible projects span the world and cover multiple sectors

Some IBRD project examples include:

## Energy Efficiency

Two energy efficiency projects in **China** that promote energy conservation in industry will collectively reduce 12.6 million tons of CO<sub>2</sub> eq. annually – equivalent to taking 2.7 million passenger vehicles off the road each year.<sup>1</sup>

## Water

A water management project in **Indonesia** that builds climate resilience by improving crop productivity and irrigation efficiency will benefit 500,000 farmer households.



## Climate Resilient Infrastructure

A project to address flood risks in climate-vulnerable **Belize** by rehabilitating roads and bridges will directly benefit 170,000 people – more than half of the country's total population of 350,000.<sup>2</sup>

## Renewable Energy

A concentrated solar power project in **Morocco** will add 410 MW representing 21% of Morocco's solar development commitment by 2020. The project avoids 522,000 tons per year - equivalent to taking over 110,000 passenger vehicles off the road each year.<sup>1</sup>

## Forestry

A project to improve forest management in **Mexico** will reduce deforestation and forest degradation in 1.6 million hectares of forest - slightly more than the size of Connecticut - and benefit 4,000 forest communities.

## Transport

A project that builds over 1,100 km of dedicated freight railway lines in **India**, will reduce 430,000 tons of CO<sub>2</sub> eq. annually – equivalent to taking 90,000 passenger vehicles off the road each year.<sup>1</sup>



1 Calculated using the Environmental Protection Agency (EPA) Greenhouse Gas Equivalency Calculator at <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>  
2 Source: IMF World Economic Outlook Database, April 2015 using actual data as of 2013 from the National Statistics Office.



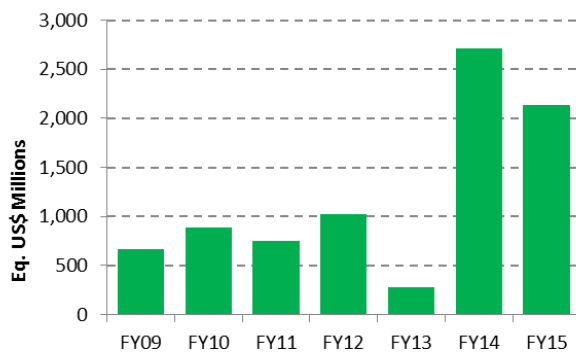
### Highlights:

- **Green Bonds:** 100 World Bank (IBRD) Green Bonds issued in 18 currencies totaling US\$8.4 billion, of which US\$6.5 billion was outstanding as of June 30, 2015.
- **Eligible Green Bond Projects:** 80 Green Bond eligible projects with commitments totaling US\$14.0 billion. Disbursements have commenced for 77 Green Bond eligible projects in 24 countries with commitments totaling US\$13.7 billion. A total of US\$5.4 billion in Green Bond proceeds is supporting the financing of disbursements to these projects.
- **Examples of Impact Results**
  - US\$1.5 billion commitments to nine renewable energy projects is expected to result in 2,284 MW of renewable energy capacity<sup>1</sup> – equivalent to the total installed capacity of Panama in 2010.<sup>2</sup>
  - US\$3.5 billion has been committed to improve public transportation in 30 cities in emerging countries. In China, seven of these projects totaling US\$1.1 billion increase ridership by 680,000 passengers per day.

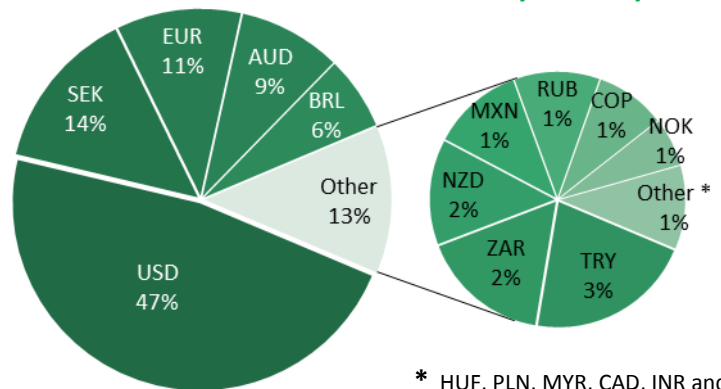
### Green Bond issuances

As of June 30, 2015, the World Bank (International Bank for Reconstruction and Development, IBRD) has issued 100 Green Bonds in 18 currencies raising the equivalent of US\$8.4 billion of funding supporting the transition to low-carbon and climate resilient growth. World Bank Green Bonds totaling US\$6.5 billion were outstanding as of June 30, 2015, with US\$1.2 billion maturing in the next quarter.

**World Bank Green Bond Issuance by Fiscal year**



**World Bank Green Bond Issuances by Currency**



\* HUF, PLN, MYR, CAD, INR and JPY

### Use of proceeds reporting

Currently, there are 77 Green Bond eligible projects supported by Green Bond proceeds. The total committed amount for these projects is US\$13.7 billion. By June 30, 2015, US\$5.6 billion had been disbursed to these projects and US\$0.1 billion has been subsequently repaid, leaving a total of US\$5.4 billion outstanding financing supported by Green Bond proceeds.

There are three additional projects with a total committed amount of US\$0.3 billion that have been identified as Green Bond eligible. Allocations will begin once these projects start disbursing.

The current pipeline of undisbursed commitments to Green Bond eligible projects is US\$8.3 billion.

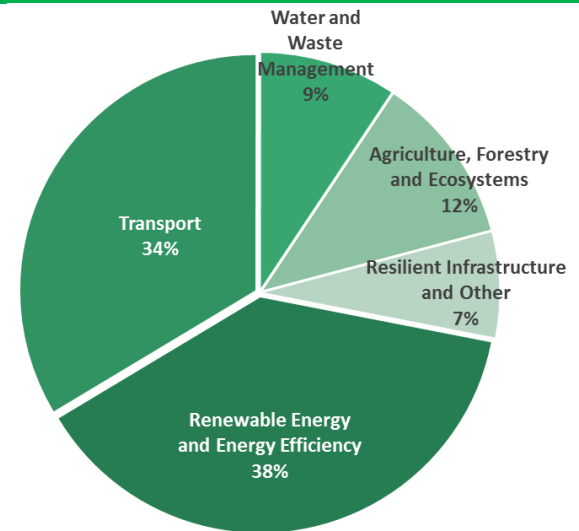
<sup>1</sup> This represents the expected total renewable energy capacity installed or rehabilitated from the nine projects supported by the World Bank. 1,138 MW is the pro rated share based on the percentage of total project cost that is financed by World Bank loans.

<sup>2</sup> Source: US. Energy Information Administration Agency – International Energy Statistics.

## Commitments by Sector

Amounts in Eq. US\$ billion  
(may not add up due to rounding)

	Committed <sup>1/</sup>			Allocated & Outstanding <sup>2/</sup>
	Mitigation	Adaptation	Total	
Renewable Energy and Energy Efficiency	5.2	0.0	5.2	2.7
Transport	4.6	0.0	4.6	1.1
Water, Wastewater, and Solid Waste Management	0.2	1.1	1.3	0.6
Agriculture, Land Use and Forestry	0.4	1.1	1.6	0.4
Resilient Infrastructure, Built Environment and Other	0.3	0.7	1.0	0.7
<b>Total</b>	<b>10.7</b>	<b>3.0</b>	<b>13.7</b>	<b>5.4</b>
	78%	22%	100%	



### Notes:

- 1/ Committed amount net of cancellations for eligible projects for which the loans are disbursing.
- 2/ Green Bond proceeds supporting financing for disbursements to eligible projects net of loan repayments. Amounts may not add up due to rounding



**Renewable energy** development amounts to 15% of projects eligible for support from the World Bank's Green Bonds. The energy sector contributes about 40% of global CO<sub>2</sub> emissions. Despite improvements in some countries, the global CO<sub>2</sub> emission factor for energy generation has hardly changed over the last 20 years, making the transition to a more sustainable energy mix is critical for climate change mitigation.<sup>3</sup>



**Energy efficiency** is the low cost option to reduce emissions and unnecessary expenditures. At the same time, a projected 2.4 billion people are expected to migrate to urban areas by midcentury and cities already account for two-thirds of global energy demand thus contributing to 70% of GHG emissions.<sup>4</sup> Harnessing the "hidden fuel" of energy efficiency offers many opportunities to help cities achieve energy security, energy savings, improved municipal services, increased competitiveness, and reduced costs and emissions.<sup>5</sup> 22% of World Bank Green Bond eligible projects is dedicated to energy efficiency improvements.



**Transport** contributes about 15% of global greenhouse gas emissions (IPCC). With motorization on the rise, that share is expected to grow dramatically, making this a critical sector to reform in order to address climate change.<sup>6</sup> Transport improvements that shift to low-emission modes also generate 'co-benefits' in terms of reducing congestion, local air pollution, oil dependency and transport safety risks.<sup>7</sup> 34% of the Green Bond eligible projects focuses on transportation efficiency and urban mass transit solutions.



**Water** stress is an increasing challenge facing the world, driven by population and economic growth, land use changes, increased climate variability and change, and declining groundwater supplies and water quality.<sup>8</sup> Improved water resources management and climate-smart water infrastructure help countries manage this risk. 9% of the World Bank's Green Bond eligible projects focuses on water, wastewater and waste management issues.



**Agriculture** is vulnerable to climate change and it is, with associated deforestation, the largest contributor to greenhouse gases. Climate smart agriculture has the potential to deliver a "triple win" of increased productivity, enhanced resilience, and carbon sequestration.<sup>9</sup> 12% of the World Bank's Green Bond eligible projects illustrate measures in livestock, agriculture, and land, forest and ecosystem management aimed at mitigating and/or adapting to climate change.

<sup>3</sup> <https://openknowledge.worldbank.org/handle/10986/17143>

<sup>4</sup> <http://www.worldbank.org/en/region/eap/publication/energizing-green-cities-in-southeast-asia>

<sup>5</sup> <http://www.worldbank.org/en/news/feature/2014/12/08/building-energy-efficient-cities-new-guidance-notes-for-mayors>

<sup>6</sup> <http://www.worldbank.org/en/topic/transport/overview#1>

<sup>7</sup> <http://siteresources.worldbank.org/INTTRANSPORT/Resources/336291-1227561426235/5611053-1229359963828/TP40-Final.pdf>

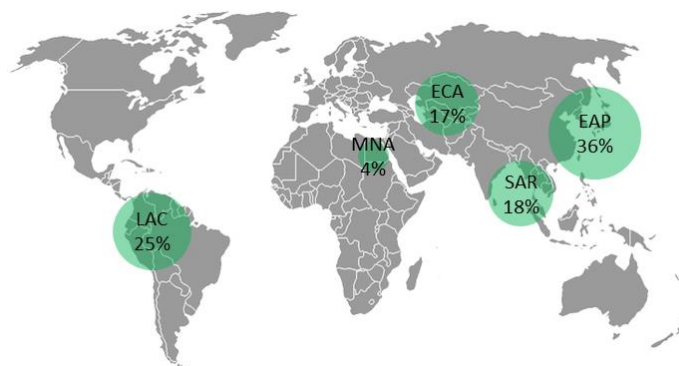
<sup>8</sup> <http://www.worldbank.org/en/topic/waterresourcesmanagement/overview#1>

<sup>9</sup> [http://www.worldbank.org/content/dam/Worldbank/document/CSA\\_Brochure\\_web\\_WB.pdf](http://www.worldbank.org/content/dam/Worldbank/document/CSA_Brochure_web_WB.pdf)

## Commitments by Region

Amounts in Eq. US\$ billion  
(may not add up due to rounding)

	Committed <sup>1/</sup>	Allocated & Outstanding <sup>2/</sup>
East Asia & Pacific (EAP)	4.9	1.7
Europe & Central Asia (ECA)	2.3	0.9
Latin America & Caribbean (LAC)	3.5	1.8
Middle East & North Africa (MNA)	0.5	0.2
South Asia (SAR)	2.5	0.9
<b>Total</b>	<b>13.7</b>	<b>5.4</b>



### Notes:

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

2/ Green Bond proceeds supporting financing for disbursements to eligible projects net of loan repayments.

Amounts may not add up due to rounding

## Green Bond eligible projects

All World Bank bonds support sustainable development, focusing on poverty reduction and inclusive growth. They fit well within all investor mandates, especially those investment strategies that incorporate Environmental, Social and Governance factors into the decision-making process. The World Bank's Green Bonds are a subset of its sustainable investment opportunities focused specifically on climate change issues that directly impact developing countries and address the global climate challenge.

Green Bond eligible projects promote the transition to low-carbon and carbon resilient growth in client countries targeting climate change mitigation and adaptation. The World Bank's eligibility criteria underwent an independent review by the Center for International Climate and Environmental Research at the University of Oslo (CICERO).

### Examples of climate change mitigation projects:

- Solar and wind installations
- Funding for new technologies that permit significant reductions in greenhouse gas emissions
- Rehabilitation of power plants and transmission facilities to reduce greenhouse gas emissions
- Greater efficiency in transportation, including fuel switching and mass transport
- Waste management (methane emission) and construction of energy-efficient buildings
- Carbon reduction through reforestation and avoided deforestation

### Examples of climate change adaptation projects:

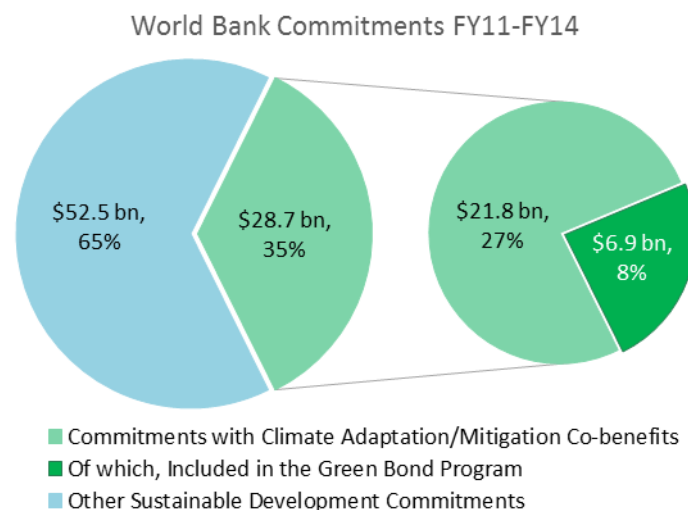
- Protection against flooding (including reforestation and watershed management)
- Food security improvement and implementing stress-resilient agricultural systems (which slow down deforestation)
- Sustainable forest management and avoided deforestation.

Green Bond eligible projects are identified through a two-stage process.

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 member countries.
2. Environmental specialists then screen approved World Bank projects to identify those that meet the World Bank's Green Bond eligibility criteria.

For more information about the World Bank Green Bond implementation guidelines and the eligibility criteria, see <http://treasury.worldbank.org/cmd/pdf/ImplementationGuidelines.pdf>.

It's worth noting that the World Bank's activities that help client countries mitigate and adapt to the effects of climate change are much broader than the subset of Green Bond eligible projects discussed herein. Since the World Bank began tracking commitments with climate change adaptation and mitigation co-benefits at a portfolio level in FY11, over one third of all World Bank commitments have included climate change co-benefits. Of these about one quarter (representing 8% of total commitments over the period) have been included in the World Bank's Green Bond program.



## Impact reporting

The World Bank is committed to transparent reporting of climate financing including reporting the impacts of the projects included in its Green Bond program. Detailed information for all World Bank financed projects is available on the main World Bank website <http://www.worldbank.org/projects>. In addition, project summaries and impact indicators for Green Bond eligible projects are summarized on the investor website at:

<http://treasury.worldbank.org/cmd/htm/MoreGreenProjects.html>.

The following section lists the 77 Green Bond eligible projects supported by Green Bonds as of June 30, 2015. The projects are organized by major 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 in more detail the reporting approach and should be read in conjunction with this report.

## Interpreting reported results







The intention of impact reporting is to help 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 therein. 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.
- **Uncertainty:** an important consideration in estimating impact indicators and projecting impacts 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 environmental ones, they will have impacts across a much wider range of indicators than captured below. 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 the type and direction of a few other beneficial impacts. To get a better understanding of the developmental impacts of projects and the broader country context, please view the full project documentation available on the World Bank website. <http://www.worldbank.org/projects>.

**List of World Bank Green Bond Eligible Projects by Main Sector  
Target Impacts and Committed and Allocated amounts**







**A. Renewable Energy and Energy Efficiency**







*Results should be read in conjunction with Annex 1 which describes the reporting approach.*



#	Link to more information	Project name (number   year/s loans approved) and description	A/M /a	Project life	Target results / <sup>b</sup>					Committed US\$ mil / <sup>d</sup>	IBRD share/ <sup>e</sup>	Allocated US\$ mil / <sup>f</sup>
					Annual energy savings/ <sup>c</sup> MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.	Other results			
1		<b>Belarus - Biomass District Heating (P146194   FY14):</b> increase energy efficiency in district heating systems and replace natural gas with wood biomass as a renewable energy source.	M	20	236,000	1,660,000	106	420,000	Cumulative over 5 years: ● 1,180,000 MWh energy savings from efficiency investments. ● 2,100,000 tons of CO <sub>2</sub> eq. emissions reduced.	90.0	100%	3.6
2		<b>China - Beijing Rooftop Solar Photovoltaic Scale-Up (Sunshine Schools) Project (P125022   FY13):</b> promote renewable energy in 1000 schools and other educational institutions.	M	20	na	100,000	100	89,590	● 10 to 15 % of the schools' annual power use provided by renewable sources. ● 650,000 students in 1,000 schools benefit.	120.0	50%	7.6
3		<b>China - Eco-Farming Project (P096556   FY09):</b> promote sustainable farming systems and reduce greenhouse gas emissions (from methane and burning coal and firewood) benefiting rural communities with biogas systems.	M	20	na	~	~	900,000	● 400,000 - 500,000 rural households benefit with cleaner biogas-based cooking and heating systems.	119.8	27%	119.8
4		<b>China - Energy Efficiency Financing (P084874   FY08, FY12):</b> promote energy conservation in China's industrial sector supporting intermediary loans for energy efficiency projects in medium and large-sized manufacturing companies.	M	20	21,807,900	na	na	6,490,000	● 2,666,000 tons of coal eq. (tce) annual energy savings (assuming 150 subprojects)	300.0	45%	253.8
5		<b>China - Energy Efficiency Financing II Project (P113766   FY10):</b> promote energy conservation in China's industrial sector through intermediary loans to energy efficiency projects.	M	20	20,200,000	na	na	6,100,000		100.0	66%	40.3
6		<b>China - Green Energy Schemes for Low-carbon City in Shanghai (P127035   FY13):</b> promote greener city development with energy efficiency and renewable energy installations in commercial and government buildings.	M	20	621,700	~	~	165,000		100.0	41%	3.6

#	Link to more information	Project name (number   year/s loans approved) and description	A/M /a	Project life	Target results / <sup>b</sup>					Committed US\$ mil / <sup>d</sup>	IBRD share/ <sup>e</sup>	Allocated US\$ mil / <sup>f</sup>
					Annual energy savings/ <sup>c</sup> MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.	Other results			
7		<b>China - Jiangxi Shihutang Navigation &amp; Hydropower (P101988   FY09):</b> maximize inland waterway transport capacity as a low-carbon alternative to land transport and generate hydropower.	Both	20	na	472,000	120	450,000	<ul style="list-style-type: none"> <li>4,400 hectares of crop land protected from flooding.</li> <li>RMB 26.6 million reduction in annual flood losses.</li> </ul>	100.0	31%	100.0
8		<b>China - Liaoning Third Medium Cities Infrastructure (P099224   FY08):</b> improve the energy efficiency and environmental performance of heating and gas services.	M	20	2,757,200	na	na	~	<ul style="list-style-type: none"> <li>8,935 tons of sulphur dioxide avoided per annum.</li> <li>11,659 tons of total suspended particles (local pollutant) avoided per annum.</li> </ul>	191.0	51%	89.0
9		<b>China - Shandong Energy Efficiency (P114069   FY11):</b> improve the energy efficiency and environmental performance of the industrial sector and finance renewable energy production from biomass (corn and wheat stalk).	M	15	3,247,500	165,000	30	~	<ul style="list-style-type: none"> <li>397,000 tce energy savings.</li> </ul>	150.0	47%	37.9
10		<b>China - Urumqi District Heating Project (P120664   FY11):</b> promote energy efficiency in district heating by replacing dispersed boilers in urban areas with an integrated district heating network.	M	20	1,229,400	na	na	415,500	<ul style="list-style-type: none"> <li>1,626 MW of inefficient coal-fired boilers replaced by combined heat and power district heating network.</li> </ul>	100.0	29%	71.6
11		<b>India - Power System Development Project IV (P101653   FY09):</b> expand transmission infrastructure resulting in decreased CO <sub>2</sub> emissions through efficiency gains and transferring surplus hydro energy to power deficit regions.	M	20	8,699,000	na	na	~	<ul style="list-style-type: none"> <li>Reduced transmission losses equivalent to between 526-993 MW.</li> <li>107,000 circuit kilometers of increased transmission capacity.</li> <li>68,000 GWh power exchange growth between regions.</li> </ul>	400.0	16%	400.0
12		<b>India - Rampur Hydropower Project (P095114   FY08):</b> scale-up access to renewable energy through construction of a run-of-the-river hydroelectric scheme.	M	30	na	1,770,000	412	1,407,700		400.0	60%	400.0
13		<b>Indonesia - Indonesia Geothermal Energy (P113078   FY12):</b> increase power generation from renewable geothermal resources.	M	30	na	1,210,000	150	1,100,000	<ul style="list-style-type: none"> <li>33,000,000 tons of CO<sub>2</sub> eq. cumulative emission reductions of over 30 years.</li> </ul>	175.0	30%	4.8



#	Link to more information	Project name (number   year/s loans approved) and description	A/M /a	Project life	Target results / <sup>b</sup>					Committed US\$ mil / <sup>d</sup>	IBRD share/ <sup>e</sup>	Allocated US\$ mil / <sup>f</sup>
					Annual energy savings/ <sup>c</sup> MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.	Other results			
14		<b>Jamaica - Energy Security and Efficiency Enhancement Project (P112780   FY11):</b> increase energy efficiency and security by promoting greater participation of renewable energy and gas-based generation in the energy mix.	M	na	na	~	~	~	<ul style="list-style-type: none"> <li>Gas and renewable energy use increased above its baseline of 42 MW of the total energy matrix (at project inception).</li> <li>\$9/MWh reduction (from \$21/MWh to \$12/MWh) in cost of electricity generation.</li> </ul>	15.0	100%	9.5
15		<b>Mexico - Efficient Lighting and Appliances Project (P106424   FY11):</b> promote the efficient use of energy and to mitigate climate change by increasing the use of energy efficient technologies in the residential sector.	M	5	2,000,000	na	na	664,000	<ul style="list-style-type: none"> <li>Cumulative over 5 years: <ul style="list-style-type: none"> <li>Exchange 45.8 million light bulbs and 1.9 million refrigerators and air conditioners.</li> <li>3.32 million tons of CO<sub>2</sub> eq. emissions reduced.</li> <li>50-60% electricity saved in residential households.</li> <li>10,000,000 MWh in cumulative energy savings.</li> </ul> </li> </ul>	250.6	35%	250.6
16		<b>Mexico - Integrated Energy Services (P088996   FY08):</b> increase energy access for poor communities using renewable energy (mainly solar and some wind generators) and to develop a sustainable market for providing energy services in remote rural areas.	M	20	na	5,800	6.2	241,000	<ul style="list-style-type: none"> <li>4,400 rural households receive electricity from renewable sources.</li> <li>Larger long-term national impact with replication throughout rural areas.</li> </ul>	15.0	18%	10.1
17		<b>Mexico - Sustainable Rural Development (and Add Financing) (P106261   FY09, FY13):</b> increase the use of energy efficient, waste management and renewable energy technologies in agribusiness.	M	10	20,493	32,130	~	283,900	<ul style="list-style-type: none"> <li>Cumulative over 7 years: <ul style="list-style-type: none"> <li>143,450 MWh saved from energy efficiency investments.</li> <li>224,908 MWh produced by renewable (biomass) energy.</li> <li>1,987,500 tons of CO<sub>2</sub> eq. emission avoided.</li> </ul> </li> </ul>	96.8	48%	55.3
18		<b>Montenegro - Energy Efficiency (and Additional Financing) (P107992   FY09, FY14):</b> improve energy efficiency and environmental quality in 27 buildings used for health and education services.	M	25	30,000	na	na	12,200	<ul style="list-style-type: none"> <li>Cumulative over 5 years and targeting 27 buildings: <ul style="list-style-type: none"> <li>150,000 MWh in lifetime energy savings.</li> <li>60,750 metric tons of CO<sub>2</sub> eq. lifetime emissions reduced.</li> </ul> </li> </ul>	12.9	100%	7.5
19		<b>Morocco – Noor Ouarzazate Concentrated Solar Power (P131256   FY12, FY15):</b> replace fossil fuel-based electricity with renewable energy using concentrated solar power technology.	M	30	na	1,638,000	410	522,000		342.7	15%	0.4

#	Link to more information	Project name (number   year/s loans approved) and description	A/M /a	Project life	Target results / <sup>b</sup>					Committed US\$ mil / <sup>d</sup>	IBRD share/ <sup>e</sup>	Allocated US\$ mil / <sup>f</sup>
					Annual energy savings/ <sup>c</sup> MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.	Other results			
20		<b>Peru - Second Rural Electrification (P117864   FY11):</b> provide electricity to remote communities by extending the conventional electricity grid and financing solar photovoltaic systems.	M	20	na	~	~	~	<ul style="list-style-type: none"> <li>42,500 rural households electrified, of which 20,000 served by solar photovoltaic systems from regulated electricity distribution companies.</li> <li>174,000 people benefited.</li> </ul>	50.0	60%	16.6
21		<b>Tunisia - Energy Efficiency (P104266   FY09):</b> support industrial energy efficiency and co-generation investments by providing financing through intermediaries.	M	20	580,000	na	na	126,000		34.5	91%	22.6
22		<b>Turkey - Private Sector Renewable Energy and Energy Efficiency Project (P112578   FY09, FY12):</b> enhance renewable energy access (small hydroelectric and geothermal) and energy efficiency in industries (iron and steel, cement, ceramics, chemicals and textiles).	M	20	4,065,000	3,451,000	950	3,507,000	<ul style="list-style-type: none"> <li>Reach 28% of country's total generation to be from renewable energy.</li> </ul>	920.5	61%	727.4
23		<b>Turkey - Renewable Energy Integration (P144534   FY14):</b> assist in meeting increased power demand by strengthening the transmission system and facilitating large-scale renewable energy generation.	M	20	na	na	na	690,000	<ul style="list-style-type: none"> <li>1,734,000 MWh per year of wind energy handled by the substations funded under project.</li> </ul>	243.4	63%	4.5
24		<b>Turkey - SME Energy Efficiency (P122178   FY13):</b> improve energy efficiency in small and medium enterprises in energy-intensive industries by scaling-up commercial bank lending for energy efficiency investments.	M	20	61,400	na	na	30,900	<p>Cumulative over 5 years:</p> <ul style="list-style-type: none"> <li>154,500 tons of CO<sub>2</sub> eq. emissions reduced annually for all SME loans.</li> <li>307,000 MWh in electricity savings by the end of project implementation.</li> </ul>	201.0	67%	45.2
25		<b>Ukraine - District Heating Energy Efficiency (P132741   FY14):</b> improve energy efficiency and quality of service of District Heating companies.	M	20	398,000	na	na	246,800	<ul style="list-style-type: none"> <li>1.96 million consumers served by the participating companies.</li> </ul>	332.0	87%	0.8

#	Link to more information	Project name (number   year/s loans approved) and description	A/M /a	Project life	Target results /b					Other results	Committed US\$ mil /d	IBRD share/e	Allocated US\$ mil /f	
					Annual energy savings/c MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.						
26		<b>Ukraine - Energy Efficiency (P096586   FY11):</b> improve energy efficiency in industrial, commercial and municipal sectors in order to meet energy intensity reduction targets, decrease dependence on imported gas, and decrease the cost of energy supply.	M	15	5,815,000	na	na	1,000,000		<ul style="list-style-type: none"> <li>• Create jobs directly and indirectly through increased cost competitiveness as a result of lower energy intensity.</li> </ul>	200.0	100%	89.5	
27		<b>Uzbekistan - Advanced Electricity Metering Project (P122773   FY12):</b> improve energy efficiency by measuring energy consumption and waste through advanced metering and billing systems.	M	na	na	na	na	~		<ul style="list-style-type: none"> <li>• 1.2 million advanced meters installed.</li> <li>• Improve billing and collection rates by 8% and 10%, respectively.</li> </ul>	180.0	73%	0.5	
<b>Subtotal for Renewable Energy and Energy Efficiency</b>											<b>5,240.1</b>		<b>2,772.4</b>	
												Cumulative loan repayments		(118.9)
												<b>Total allocated and outstanding for Renewable Energy and Energy Efficiency</b>		<b>2,653.5</b>

**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.

Refer to annex 1 for more information about the basis for reporting.

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 (see <http://www.worldbank.org/projects>). Results reported are based on the total project cost, with the percent shown next to the loan amount corresponding to the proportion of the total project cost 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.

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, 2015).



e The percentage shows the percentage of the total project cost that is financed 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, 2015).

## B. Transport






#	Link to more information	Project name (number   year/s loans approved) and description	A/M	Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
28		<b>Brazil - Greening Rio de Janeiro Urban Rail Transit – Additional Financing (P111996   FY12):</b> provide a more efficient and cleaner suburban rail transportation system.	M	<ul style="list-style-type: none"> <li>● 60 new trains and upgraded infrastructure to shorten travel times.</li> <li>● Bicycle and parking facilities in select stations.</li> <li>● 70,200 additional passengers served per day.</li> <li>● 34,000 tons of CO2 eq. reduced annually by project end.</li> </ul>	600.0	73%	205.4
29		<b>Brazil - Sao Paulo State Sustainable Transport (P127723   FY13):</b> improve transport efficiency and safety, increase the share of waterway transport, and improve resilience to climate change and natural disasters.	Both	<ul style="list-style-type: none"> <li>● 50% reduction of road fatalities in the 100 most critical spots.</li> <li>● Increase waterway transportation.</li> <li>● Expanded automatic station network to monitor climate risk.</li> <li>● Increased number of municipalities with disaster risk mapping.</li> </ul>	300.0	70%	179.4
30		<b>China - Changzhi Urban Transport (P124978   FY12):</b> improve transport mobility and accessibility while reducing emissions.	M	<ul style="list-style-type: none"> <li>● 5% reduction in fuel consumed per kilometer traveled in the project corridors.</li> <li>● Reduced number of traffic accidents.</li> <li>● Reduced travel times during peak-hours.</li> </ul>	100.0	50%	20.7
31		<b>China - Hajia Railway (P117341   FY14):</b> provide additional railway capacity and reduce transport time for passengers and freight.	M	<ul style="list-style-type: none"> <li>● 3 million additional passengers per year.</li> <li>● Reduced passenger travel time.</li> <li>● 15 million people benefit including rural poor.</li> <li>● Reduced pollution from railways.</li> </ul>	300.0	5%	0.8
32		<b>China - Heilongjiang Cold Weather Smart Public Transportation System (P133114   FY14):</b> upgrade the quality, safety and efficiency of public transport service.	M	<ul style="list-style-type: none"> <li>● 38.8 million more bus rides annually due to increased efficiency of bus service.</li> <li>● 20 - 30% reduction in fuel use.</li> <li>● 22 - 25 km of improved transport corridors developed.</li> </ul>	154.0	46%	0.4
33		<b>China - Hubei Xiangyang Urban Transport (P119071   FY12):</b> improve mobility, safety, and efficiency in urban transportation.	M	<ul style="list-style-type: none"> <li>● 460,000 people to benefit from reduced travel times and greater access to the city center.</li> <li>● 30% reduction in fatalities and severe accidents.</li> </ul>	100.0	47%	38.9
34		<b>China - Jiaozuo Green Transport and Safety Improvement (P132277   FY14):</b> improve transport safety and efficiency along the selected transport corridors and promote non-motorized trips within the pilot green corridor.	M	<ul style="list-style-type: none"> <li>● 490,000 residents benefited.</li> <li>● Reduced traffic fatalities.</li> <li>● 17 km in green corridors exclusively dedicated to pedestrians and cyclists.</li> <li>● 241,000 non-motorized trips per year in the green corridors.</li> <li>● 32,400 additional bus passengers per year.</li> </ul>	100.0	50%	0.3
35		<b>China - Nanchang Urban Rail (P132154   FY13):</b> provide an effective urban mass rapid transit system for a rapidly expanding city to reduce pollution, traffic congestion, and commuting times.	M	<ul style="list-style-type: none"> <li>● Reduced travel time on public transport by 25 minutes or more.</li> <li>● Increase ridership by 200,000 people per year.</li> <li>● 100% of stations to become wheelchair and sight impaired accessible.</li> <li>● 506,000 people benefit.</li> </ul>	250.0	10%	35.4



#	Link to more information	Project name (number   year/s loans approved) and description	A/M	Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
36		<b>China - Qinghai Xining Urban Transport Project (P127867   FY14):</b> provide more efficient, safer and cleaner transportation.	M	<ul style="list-style-type: none"> <li>● 20% decreased travel time.</li> <li>● 264,000 additional passengers daily.</li> <li>● Improved accessibility to 190,000 jobs.</li> <li>● Reduced vehicle pollution.</li> </ul>	30.3	48%	2.6
37		<b>China - Wuhan Second Urban Transport (P112838   FY10):</b> improve efficiency, coverage and safety of public transport systems in an environmentally friendly way.	M	<ul style="list-style-type: none"> <li>● 459,000 tons of CO2 eq. emissions reduced annually.</li> <li>● Establish facilities for pedestrians and cyclists.</li> <li>● Improved air quality.</li> <li>● 4% increase in share of public transportation.</li> </ul>	100.0	16%	52.0
38		<b>China - Xi'an Sustainable Urban Transport (P092631   FY08):</b> protect health and cultural relics by reducing pollution from transportation and increase transport accessibility and mobility.	M	<ul style="list-style-type: none"> <li>● Double area of bus terminals.</li> <li>● Nearly 50% increase in average speed of public transportation.</li> <li>● 26.7 km of new bicycle routes.</li> <li>● Adopt a motor vehicle emissions control plan.</li> <li>● Implement air quality monitoring.</li> </ul>	150.0	36%	130.9
39		<b>China - Xinjiang Yining Urban Transport Improvement Project (P126454   FY12):</b> provide improved access, safety, and efficiency in public transportation in an environmentally sustainable manner.	M	<ul style="list-style-type: none"> <li>● Reduced peak-hour travel times in two integrated corridors.</li> <li>● 25% increased bus ridership to reach 263,000 passengers per day and 60,000 additional people with access in selected new development areas</li> <li>● Reduced traffic accident fatalities.</li> </ul>	100.0	48%	49.6
40		<b>China - Yunnan Honghe Prefecture Diannan Center Urban Transport (P101525   FY14):</b> improve the safety, accessibility, and efficiency of transportation in core urban areas by building new infrastructure, staff training and education campaigns.	M	<ul style="list-style-type: none"> <li>● Reduced average travel time for public transport users.</li> <li>● Double access to transport services to reach 742,000 people.</li> <li>● Increased ridership to 153,400 trips per day.</li> <li>● Reduced the number of transport related fatalities.</li> </ul>	150.0	43%	0.4
41		<b>Colombia - National Urban Transit Program (P117947   FY10, FY12):</b> reduce carbon emissions and improve public transportation efficiency and safety.	M	<ul style="list-style-type: none"> <li>● Reduced average travel time for low income riders.</li> <li>● Reduced accidents and pollution (including greenhouse gases) associated with bus transport services.</li> <li>● Increased access to the disabled and other commuters with special needs.</li> </ul>	587.9	47%	304.0
42		<b>Ecuador - Manta Public Services Improvement Project (P143996   FY14):</b> improve transport services and the quality and sustainability of water and sanitation.	M	<ul style="list-style-type: none"> <li>● 71,000 residents benefit from water investments.</li> <li>● Improved mobility and accessibility of street network including pedestrian facilities and cycling paths.</li> </ul>	100.0	87%	5.0
43		<b>India - Eastern Dedicated Freight Corridor - II (P131765   FY14):</b> increase the capacity and quality of freight rail service.	M	<ul style="list-style-type: none"> <li>● 1,133 kms of new freight-only rail.</li> <li>● Axle-load limit raised from 23 to 25 tons increasing speeds.</li> <li>● 12.8 million tons of CO2 eq. emissions reduced over a 30 year period.</li> </ul>	1,100.0	67%	0.3
44		<b>India - Sustainable Urban Transport (P110371   FY10):</b> improve government capacity to manage climate friendly urban transport solutions focusing on public and non-motorized transport.	M	<ul style="list-style-type: none"> <li>● 12,800 tons of CO2 eq. emissions reduced annually over 10 years.</li> </ul>	105.2	32%	38.0

#	Link to more information	Project name (number   year/s loans approved) and description	A/M	Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
45		<b>Mexico - Urban Transport Transformation (P107159   FY10):</b> reduce carbon emissions and transform public transportation efficiency.	M	<ul style="list-style-type: none"> <li>● 1,960,000 tons of CO2 eq. emissions reduced annually when city subprojects are fully operational.</li> <li>● 18 integrated mass transit corridors of 15km each.</li> <li>● 222,000 passengers per day.</li> </ul>	150.0	6%	22.3
46		<b>Philippines - Cebu Bus Rapid Transit (BRT) Project (P119343   FY15):</b> improve the quality, safety, and environmental performance of urban public transportation.	M	<ul style="list-style-type: none"> <li>● 200,000 more commuters using public transportation.</li> <li>● 115,000 tons of CO2 eq. reduced annually by 2020, increasing to 192,000 tons of CO2 eq. reduced annually by 2025.</li> </ul>	116.0	51%	5.3
<b>Subtotal for Transport</b>					<b>4,593.4</b>		<b>1,091.5</b>
Cumulative loan repayments							(2.7)
<b>Total allocated and outstanding for Transport</b>							<b>1,088.7</b>

Amounts may not add up due to rounding.

### C. Water, Wastewater and Waste Management



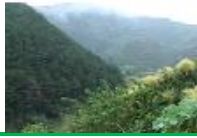





#	Link to more information	Project name (number   year/s loans approved) and description	A/M Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
47		<b>Brazil - Federal Integrated Water Sector (P112073   FY12):</b> improve water resource management including assessing how climate change impacts water availability, and improve coordination and capacity of key federal institutions in the water sector.	A <ul style="list-style-type: none"> <li>● 13 state water agencies and 4 federal river basin water agencies trained to increase management capacity.</li> <li>● Increased water use efficiency and proper management of solid waste.</li> <li>● Improved quality of water service in both urban and rural areas.</li> </ul>	107.3	75%	7.1
48		<b>Brazil - Integrated Solid Waste &amp; Carbon Finance (P106702   FY11):</b> improve treatment and final disposal of municipal solid waste and reduce methane emissions.	M <ul style="list-style-type: none"> <li>● Total project results dependent on final number of landfills financed. Three dumps closed and 1 new landfill constructed resulting in:</li> <li>● 795,000 tons of CO2 eq. emissions reduced annually.</li> </ul>	50.0	31%	14.9
49		<b>China - Bengbu Integrated Environment Improvement (P096925   FY08):</b> improve effectiveness and resilience of urban water supply, treatment services and flood prevention and control systems through improved infrastructure and watershed management.	A <ul style="list-style-type: none"> <li>● 95% flood protection of Bengbu's city land area.</li> <li>● 11% pollution discharge reduction.</li> <li>● 3 months of water supply reserves.</li> </ul>	100.0	45%	92.8
50		<b>China - Water Conservation II (P114138   FY12):</b> improve agriculture water management and increase agriculture water productivity.	A <ul style="list-style-type: none"> <li>● 15% increase in main crop yields.</li> <li>● RMB 200 increase in per capita annual agricultural income.</li> <li>● Reverse the trend of declining water table in groundwater irrigated areas.</li> </ul>	80.0	50%	36.1
51		<b>China - Xining Flood and Watershed Mgmt (P101829   FY09):</b> improve sustainable utilization of land and water resources by improved flood control management, wastewater collection and treatment, and watershed management.	A <ul style="list-style-type: none"> <li>● 2,000,000 tons of untreated wastewater flowing into rivers avoided annually.</li> <li>● 900,000 tons of soil loss avoided annually.</li> <li>● 400,000 people benefit from reduced vulnerability to flood events.</li> </ul>	100.0	53%	83.7
52		<b>Dominican Republic - Emergency Recovery and Disaster Risk Management (P109932   FY08, FY12):</b> provide infrastructure recovery and strengthen risk management capacity in tropical storm affected areas.	A <ul style="list-style-type: none"> <li>● 11,577 hectares of damaged irrigation rebuilt.</li> <li>● 152 km transmission lines restored to "disaster-resistant" standards.</li> <li>● Santiago waste water operation restored.</li> <li>● 200MW of damaged hydropower facilities restored and dam safety standards improved.</li> </ul>	100.0	100%	87.3
53		<b>India - Andhra Pradesh Water Sector Improvement (P100954   FY10):</b> improve irrigation services on a sustainable basis and strengthen the State's institutional capacity for multi-sectoral development and of its water resources.	A <ul style="list-style-type: none"> <li>● Improved irrigation service delivery on a sustainable basis.</li> <li>● Increased cropping intensity, crop diversity, and productivity of crops, livestock, and fish.</li> </ul>	450.6	46%	156.6
54		<b>Indonesia - Water Resources and Irrigation Management Program 2 (P114348   FY11):</b> improve infrastructure and government capacity for river basin water resource and irrigation management.	A <ul style="list-style-type: none"> <li>● Increased crop productivity by providing more efficient and reliable irrigation water.</li> <li>● 500,000 farmer households from provinces involving 12 river basins benefited.</li> </ul>	150.0	74%	52.6






#	Link to more information	Project name (number   year/s loans approved) and description	A/M Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
55		<b>Morocco - Solid Waste Sector DPL (P104937   FY09):</b> enhance the governance of the solid waste sector.	M <ul style="list-style-type: none"> <li>● Regulatory reforms leading to solid waste management programs in 11 municipalities.</li> <li>● 735,000 tons of CO2 eq. emissions reduced annually (methane gas capture).</li> <li>● 30% of waste disposed in sanitary landfills and 21 dumpsites closed or rehabilitated.</li> </ul>	111.8	100%	111.8
56		<b>Tunisia - Second Water Sector Investment (P095847   FY09):</b> promote better water management through efficiency improvements in irrigation and increased capacity for watershed management.	A <ul style="list-style-type: none"> <li>● 25,000 hectares rehabilitated with irrigation and drainage systems.</li> <li>● 10,000 households supplied with new drinking water.</li> </ul>	25.6	19%	19.0
<b>Subtotal for Water, Wastewater and Waste Management</b>				<b>1,275.3</b>		<b>661.9</b>
				Cumulative loan repayments		(15.0)
<b>Total allocated and outstanding for Water, Wastewater and Waste Management</b>						<b>646.9</b>

Amounts may not add up due to rounding.











## D. Agriculture, Land Use, Forests and Ecological Resources

#	Link to more information	Project name (number   year/s loans approved) and description	A/M	Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
57		<b>Armenia - Second Community Agriculture Resource Management and Competitiveness Project (P133705   FY14):</b> improve pasture-based livestock management in targeted alpine grasslands areas.	A	<ul style="list-style-type: none"> <li>● At least 10,000 pasture users benefit through their membership in Pasture Users' Cooperatives.</li> <li>● 110,000 hectares of land managed with sustainable practices.</li> </ul>	23.0	54%	0.1
58		<b>China - Guangdong Agricultural Pollution Control (P127775   FY14):</b> promote waste management in livestock and crop production (including methane capture and use) and improve soil nutrient, fertilizer, and pesticide use.	M	<ul style="list-style-type: none"> <li>● 45,000 tons of annual pollution load to waterways reduced.</li> <li>● 500 tons of annual nutrient load to waterways reduced.</li> <li>● 18,800 hectares with improved soil nutrient, fertilizer and pesticide use.</li> </ul>	100.0	48%	5.3
59		<b>China - Hunan Forest Restoration and Development (P125021   FY13):</b> increase resilience of forests.	Both	<ul style="list-style-type: none"> <li>● 58,900 hectares of ecological forest plantation areas reforested and rehabilitated.</li> <li>● 26,130 households benefited.</li> </ul>	80.0	69%	42.0
60		<b>China - Integrated Forestry Development (P105872   FY11):</b> increase forest cover to create wind breaks, farmland shelter belts, and conservation schemes, and to train farmers in forest and environmental management.	Both	<ul style="list-style-type: none"> <li>● 93,000 hectares of multifunction forests expanded.</li> <li>● 10% increase in vegetative cover over 39,000 hectares in degraded forests rehabilitated.</li> <li>● 216,000 farmers trained in forest management.</li> </ul>	100.0	50%	96.1
61		<b>China - Integrated Modern Agriculture Development (P125496   FY14):</b> develop sustainable and climate resilient agricultural production systems by investing in improved irrigation and drainage systems and practices that address climate risk.	A	<ul style="list-style-type: none"> <li>● Reduced water use per ton of rice, wheat and maize produced in target regions.</li> <li>● 94,000 hectares of farmland served with improved irrigation and drainage services.</li> <li>● 38,500 hectares of leveled land and improved soil conditions.</li> </ul>	200.0	64%	10.3
62		<b>China - Ningxia Desertification Control and Ecological Protection (P121289   FY12):</b> control desertification and land degradation by stabilizing moving sands, re-vegetating degraded steppe lands and planting shelter belts.	Both	<ul style="list-style-type: none"> <li>● 30,000 hectares restored or re/afforested.</li> </ul>	80.0	70%	9.7
63		<b>Indonesia - Coral Reef Rehabilitation and Management Program- Coral Triangle Initiative (P127813   FY14):</b> protect and sustainably manage unique coral ecosystems in selected districts and provinces.	A	<ul style="list-style-type: none"> <li>● Reduce destructive fishing in selected areas.</li> <li>● 1,140 direct beneficiaries in fishing communities.</li> <li>● 1.4 million hectares of marine areas brought under biodiversity protection.</li> </ul>	3.8	89%	0.5
64		<b>Mexico - Forests and Climate Change (P123760   FY12):</b> support rural communities' sustainable management of forests, build social organization, and generate additional income from forest products and services and to reduce emissions from deforestation and forest degradation.	Both	<ul style="list-style-type: none"> <li>● 10% increase in areas under improved forest management (equivalent to 1,630,000 additional hectares).</li> <li>● Support 2 pilot areas to reduce carbon emissions from deforestation and forest degradation.</li> <li>● 4,000 forest communities benefited.</li> </ul>	350.0	45%	140.1

#	Link to more information	Project name (number   year/s loans approved) and description	A/M	Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
65		<b>Peru - Peru National Agriculture Innovation Program (P131013   FY14):</b> strengthen the national agricultural innovation system and integrate climate change criteria into project selection in innovations such as adaptive research, seed improvements and skills development, among others.	A	<ul style="list-style-type: none"> <li>● 20,000 small and medium farmers adopting new technologies.</li> <li>● 61 new technologies demonstrated on farms.</li> </ul>	13.0	31%	0.1
66		<b>Philippines - Rural Development (P132317   FY15):</b> 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.	A	<ul style="list-style-type: none"> <li>● Increase incomes of about 1.9 million farmers and fishermen and the value of their products.</li> </ul>	501.3	75%	45.1
67		<b>Russian Federation - Forest Fire Response (P123923   FY13):</b> improve forest fire prevention and management and to enhance sustainable forest management.	Both	<ul style="list-style-type: none"> <li>● Improved forest fire detection and suppression systems.</li> <li>● Improved capabilities of fire brigades.</li> <li>● 75,500,000 tons of CO2 eq. emissions avoided over 25 years.</li> <li>● Raise public awareness and education standards in forestry issues in general.</li> </ul>	40.0	33%	4.8
68		<b>Tunisia - Fourth Northwest Mountainous and Forested Areas Development (P119140   FY11):</b> 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.	A	<ul style="list-style-type: none"> <li>● Reduced erosion and forest degradation.</li> <li>● Build climate change awareness and disseminate climate-appropriate practices to reinforce livelihood and agro-system resilience.</li> <li>● 318,000 people benefited.</li> </ul>	33.7	73%	16.1
69		<b>Uruguay - Sustainable Management of Natural Resources and Climate Change (P124181   FY12):</b> improve farm environmental management and reduce greenhouse gas emissions by promoting improved agriculture and livestock management.	Both	<ul style="list-style-type: none"> <li>● 2,700 hectares of agricultural land with reduced methane emissions.</li> <li>● Improved water use in irrigation and livestock production systems.</li> <li>● Improved pasture management and other productivity measures.</li> </ul>	49.0	89%	19.5
<b>Subtotal for Agriculture, Land Use, Forests and Ecological Resources</b>					<b>1,573.7</b>		<b>389.7</b>
Cumulative loan repayments							-
<b>Total allocated and outstanding for all sectors</b>							<b>389.7</b>

Amounts may not add up due to rounding.

## E. Resilient Infrastructure, Built Environment and Other

#	Link to more information	Project name (number   year/s loans approved) and description	A/M Target results	Committed US\$ mil	IBRD share	Allocated US\$ mil
70		<b>Belize - Climate Resilient Infrastructure (P127338   FY15):</b> enhance the resilience of road infrastructure against flood risks and the impacts of climate change.	A <ul style="list-style-type: none"> <li>● 30 km of roads rehabilitated and 12 bridges and culverts improved.</li> <li>● 50% reduction in road interruption due to flooding.</li> <li>● 170,000 people living near the road networks directly benefit.</li> </ul>	30.0	100%	0.6
71		<b>China - Fujian Fishing Ports Project (P129791   FY14):</b> reduce the vulnerability of fishing communities to extreme weather events.	A <ul style="list-style-type: none"> <li>● 11,000 fishermen and their families (total 64,000 people) benefit.</li> <li>● 3,000 fishing vessels protected in ports.</li> <li>● Improved effectiveness of early warning and emergency systems.</li> </ul>	60.0	58%	0.2
72		<b>China - Huai River Basin Flood Management and Drainage Improvement (P098078   FY11):</b> increase resilience of communities to the impacts of climate change, particularly flooding.	A <ul style="list-style-type: none"> <li>● 9,500 km<sup>2</sup> of flood protection (in rural and urban areas).</li> <li>● 6,600,000 people benefited.</li> </ul>	200.0	33%	151.3
73		<b>Macedonia &amp; Serbia - South East Europe and Caucasus Catastrophe Risk Insurance Facility (P110910   FY11):</b> increase access to catastrophe risk insurance through facilitating the growth of insurance markets.	A <ul style="list-style-type: none"> <li>● Increased catastrophe insurance coverage from 2% to 15% for homeowners, farmers, enterprises, and government entities holding catastrophe insurance policies.</li> </ul>	10.0	100%	10.0
74		<b>Mexico - Climate Change Development Policy Loan (P110849   FY08):</b> mainstream climate change considerations into public policy.	Both <ul style="list-style-type: none"> <li>Climate-informed public policies, including: <ul style="list-style-type: none"> <li>● 642,000 hectares reforested.</li> <li>● 6,000,000 tons of CO<sub>2</sub> eq. emissions reduced annually due to reforestation.</li> <li>● Domestic carbon pricing strategy developed.</li> <li>● City and state climate action plans developed.</li> </ul> </li> </ul>	501.3	100%	501.3
75		<b>Mexico - Modernization of the National Meteorological Service for Improved Climate Adaptation (P126487   FY12):</b> strengthen meteorological services through improved information to reduce vulnerability.	A <ul style="list-style-type: none"> <li>● Increased accuracy of severe weather warnings to 80%.</li> <li>● Improved provision of timely and accurate weather and climate information to better manage water resources and risks of disasters in the face of climate change and climate variability.</li> </ul>	105.3	61%	3.4
76		<b>Russian Federation - Hydrometeorological Services Modernization (P127676   FY14):</b> enhance capacity to deliver reliable and timely weather, hydrological and climate information.	A <ul style="list-style-type: none"> <li>● &gt;70% accuracy of forecasts for the main administrative centers of Russia.</li> <li>● &gt; 85-90% accuracy of seasonal river flow forecasts in Volga river basin reservoirs.</li> <li>● Increased number of sectoral data users data.</li> </ul>	60.0	43%	0.3
77		<b>Timor-Leste - Road Climate Resilience Project (P125032   FY14):</b> rehabilitate and improve the climate resilience of a road corridor.	A <ul style="list-style-type: none"> <li>● Improved drainage conditions along 110 km road corridor.</li> <li>● 30% reduction in major road damage events.</li> </ul>	15.0	16%	0.0
<b>Subtotal for Resilient Infrastructure, Built Environment and Other</b>				<b>981.5</b>		<b>667.1</b>
Cumulative loan repayments						(0.6)
<b>Total allocated and outstanding for Resilient Infrastructure, Built Environment and Other</b>						<b>666.5</b>

Amounts may not add up due to rounding.

## Annex 1 – Reporting Approach

Detailed information is available for every project on the World Bank website (<http://www.worldbank.org/projects>).

The impact indicators summarized in this report focus on results considered by the World Bank’s investor relations team to be of interest to Green Bond investors, based on dialogue with investors. They were selected from among other development results expected from the eligible projects. The indicators 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 diversity of countries, projects and sectors rather than cumulative impacts. Because of the limited comparability between projects, sectors and countries (see “Interpreting reported results” on page 6 and “No aggregation of GHG estimates” below), impact results are not aggregated, with the exception of renewable energy capacity added which is deemed to be broadly comparable.

This impact report is split between the five main sectors represented in the World Bank’s Green Bond eligible projects. Where projects cover multiple sectors, the project is included in the main sector only, but target results will include all components of the project.

<b>1. Renewable energy and energy efficiency:</b>	Many World Bank projects in this category include both a renewable energy and energy efficiency component, so combining the sectors avoids redundancy. The reporting framework adopted identifies four core indicators for energy efficiency and renewable energy projects; where information covering the proposed core indicators is publically available, this is included. <sup>10</sup> 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.
<b>2. Transport</b> <b>3. Water, wastewater and solid waste management</b> <b>4. Agriculture, land use and forestry</b> <b>5. Resilient infrastructure, built environment and other</b>	Projects categorized in the remaining sectors are more heterogeneous. The report provides project specific indicators based on available information that provides an indication of the scale of results.

The following summarizes key assumptions and approaches 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 still in the preparation, construction and/or 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.
- **Length of time projects are on report:** Impact reporting will be provided for projects for so long as they are part of the 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

<sup>10</sup> This impact report has been prepared following an approach developed in collaboration with three other Multilateral Development Banks to encourage greater harmonization in impact reporting. Core indicators for other sectors have not been recommended as part of initial efforts to work towards a harmonized approach for impact reporting. See “Working Towards a Harmonized Framework for Impact Reporting,” March 2015. <http://treasury.worldbank.org/cmd/pdf/InformationonImpactReporting.pdf>

decides to remove a project from its Green Bond program.<sup>11</sup> 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. Where results are aggregated (for example total renewable energy capacity installed), the pro-rated share based on the World Bank's share of financing the total project cost is also included.
- **Partial project eligibility:** Some projects may have portions that are Green Bond eligible while others are not. In cases where a project is 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.
- **No aggregation of GHG estimates:** When reported in the World Bank Project Appraisal Reports and/or Implementation Status Reports, the GHG emission reductions for projects are reported in tons of CO<sub>2</sub> equivalent. The World Bank is undertaking an effort in conjunction with other International Finance Institutions to harmonize the approaches for GHG accounting.<sup>12</sup> At the same time, it is working to develop internally consistent GHG accounting methodologies for investment projects across relevant sectors. Given these on-going developments in GHG accounting, the basis for estimating CO<sub>2</sub> equivalent emission reductions may vary between World Bank projects. Therefore, the World Bank does not recommend aggregating the results of different projects in its portfolio.
- **All reported results are from publically available sources:** Reporting is based on publically available impacts for the projects disclosed in Project Appraisal Reports and Implementation Status Reports. In order to facilitate comparability of the reported results, the reporting units have been converted where such conversion is based on a standard conversion factor.

---

<sup>11</sup> 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.

<sup>12</sup> For more information on the harmonization framework see [http://www.worldbank.org/content/dam/Worldbank/document/IFI\\_Framework\\_for\\_Harmonized\\_Approach%20to\\_Greenhouse\\_Gas\\_Accounting.pdf](http://www.worldbank.org/content/dam/Worldbank/document/IFI_Framework_for_Harmonized_Approach%20to_Greenhouse_Gas_Accounting.pdf).

## Annex 2 – List of Abbreviations

AUD	Australian Dollars
BRL	Brazilian Real
CAD	Canadian Dollars
CICERO	Center for International Climate and Environmental Research at the University of Oslo
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> eq.	Carbon dioxide equivalent
COP	Colombian Pesos
ECA	Europe and Central Asia region
EAP	East Asia and Pacific region
EUR	Euro
FY	Fiscal year running from July 1 <sup>st</sup> to Jun 30 <sup>th</sup>
GHG	Greenhouse gas
GWh	Gigawatt hours (equal to 1,000 MWh or 1,000,000 KWh)
HUF	Hungarian Forints
IBRD	World Bank (International Bank for Reconstruction and Development)
INR	Indian Rupees
JPY	Japanese Yen
km	kilometers
km <sup>2</sup>	Square kilometers
KWh	Kilowatt hours
LAC	Latin America and Caribbean region
MNA	Middle East and North Africa region
MW	Megawatts
MWh	Megawatt hours
MXN	Mexican Peso
MYR	Malaysian Ringgits
NOK	Norwegian Kroner
NZD	New Zealand Dollars
PLN	Polish Zloty
RMB	Chinese Renminbi
RUB	Russian Ruble
SAR	South Asia region
SEK	Swedish Kronor
SME	Small and medium sized enterprises
tce	Tons of coal equivalent
TRY	Turkish Lira
USD	United States Dollars
ZAR	South African Rand

## Acknowledgements and Disclaimers

This document has been prepared by the World Bank (International Bank for Reconstruction and Development, IBRD) for information purposes only, and the World Bank makes no representation, warranty or assurance of any kind, express or implied, as to the accuracy or completeness of any of the information contained herein. It is prepared by staff based on reviews of the underlying project documentation. In the event of a discrepancy between the report and the underlying source (project or bond documentation, or other source) the latter prevails.

**No Offer or Solicitation Regarding Securities.** This document may include information relating to certain World Bank securities. Any such information is provided only for general informational purposes and does not constitute an offer to sell or a solicitation of an offer to buy any World Bank securities. All information relating to securities should be read in conjunction with the appropriate prospectus and any applicable supplement and Final Terms thereto, including the description of the risks with respect to an investment in such securities, which may be substantial and include the loss of principal. The securities mentioned herein may not be eligible for sale in certain jurisdictions or to certain persons.

Each recipient of this report is deemed to acknowledge that this is a proprietary document of the World Bank and by receipt hereof agrees not to disclose it, or permit disclosure of it, to third parties without attributing the source or the prior written consent of the World Bank. All content are the property of the World Bank.

All photos, graphics and content © World Bank.