

Green Bond

FIFTH ANNUAL INVESTOR UPDATE 2013

FAQs

Why did the World Bank create the green bond?

Investors concerned with the effects of climate change approached the World Bank asking how they could make a difference with their investments. Developing the green bond was an opportunity to create a triple-A rated fixed-income product for investors to support climate solutions and help mobilize private sector financing for low-carbon growth.

How did the World Bank come up with the criteria for eligible green bond projects?

The World Bank worked with investors and recommended key project types or criteria that would support low-carbon development. The criteria then underwent an independent third party review by the Center for International Climate and Environmental Research at the University of Oslo (CICERO). CICERO concurred that, combined with the governance structure of the World Bank and safeguards for its projects, the criteria provided a sound basis for selecting climate-friendly projects.

How often does the World Bank issue green bonds?

This depends on demand from investors, market developments, and pace of disbursements for eligible projects.

“Climate change is not just an environmental challenge. It is a fundamental threat to economic development and the fight against poverty.”

Jim Yong Kim
President, The World Bank Group

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New Developments

World Bank's Largest Transaction Brings Total Raised to US\$4 Billion

On August 9, 2013, the World Bank launched a USD 550 million 2-year fixed rate World Bank Green Bond which was placed with 17 investors, including **AP2, AP3, Blackrock, California State Treasurer's Office, CalSTRs, Everence, Nikko Asset Management, Pax World, SEB Wealth, SSgA, TIAA-CREF, and Trillium Asset Management**. The lead order for this transaction was from the California State Treasurer's Office.

Not only is this transaction a milestone because it is the largest World Bank Green Bond transaction issued to date, but it also brings the total amount raised in green bonds to US\$4 billion. **Morgan Stanley** and **SEB** are the joint-lead managers for this bond. Over the last year, other World Bank Green Bonds have also distributed by **Daiwa Securities, HSBC, JP Morgan, and SEB**.

See the full press release on this transaction at <http://treasury.worldbank.org/cmd/htm/USD550MillionGreenBonds.html>.

Other New Developments

Nikko Asset Management's World Bank Green Funds continue to raise institutional investors' interest and awareness of climate change challenges. Since inception in 2010, assets have been raised from a variety of investors, including those focusing on project financing and impact investing.

In the US, **Nikko AM's World Bank's Green Strategy** has attracted assets from various foundations including non-profits. Notable investors include **Silicon Valley Community Foundation, Alternative Bank Schweiz AG, and Rathbone Green Bank**.

World Bank Green Bonds have been included on the **Morgan Stanley Wealth Management Investing with Impact Platform** – a platform that promotes an investment approach designed to support specific social and environmental benefits without compromising financial performance potential.

The **Green Century Balanced Fund** is an actively managed fund comprised of stocks and bonds that supports well-managed companies that strive to maximize their environmental advantages and minimize their environmental risks. **Trillium Asset Management, LLC** purchased World Bank Green Bonds for this fund. The Green Century quarterly newsletter published an article in August 2013 entitled, "Green Bonds in a Changing Market," which provided an overview about the Green Century Balanced Fund, and highlighted World Bank Green Bonds that are part of the fund. View the article here: <http://greencentury.com/green-bonds-in-a-changing-market-world-bank/>. This article was picked up by other publications, including *Responsible Investor*.

World Bank Green Bonds Reflections Five Years On*

Heike Reichelt, Head of Investor Relations
The World Bank Treasury



As countries move toward a low-carbon, climate resilient future, the appetite for innovative climate finance is growing. One way to fill this financing need is through the capital markets. The World Bank's green bonds, first launched in 2008, have been recognized as a catalyst for the growing market of climate bonds. This market is on its way to becoming an important source of funding for economies to grow in a clean and sustainable manner.

A sampling of expected project results – over 165,000 tons of carbon dioxide equivalent emission reduction benefits per year in Belarus, and 800,000 tons per year in China, reducing vulnerability to climate-related flooding and water scarcity flood events for about 500,000 farmer households in Indonesia, and producing 6MWhs of electricity out of a landfill in Jordan – highlights the crucial role green bonds and other innovative funding mechanisms could play in financing the fight against climate change.

More players in the market

We are seeing a growing number of issuers in the market and increasing bond sizes. For example, this year International Finance Corporation's US\$1 billion green bond and European Investment Bank's EUR 650 million climate awareness bond generated a lot of media attention. Others, including the African Development Bank, European Bank for Reconstruction and Development, and Nordic Investment Bank have also marketed green bonds. Government agencies like the Export Import Bank of Korea, and a few months ago, the first US municipality (State of Massachusetts) also issued green bonds modeled after World Bank green bonds. If you include structured project finance and securitization, then, according to the Climate Bond Initiative, more than a thousand bonds have been issued, generating hundreds of billions of dollars for climate finance.

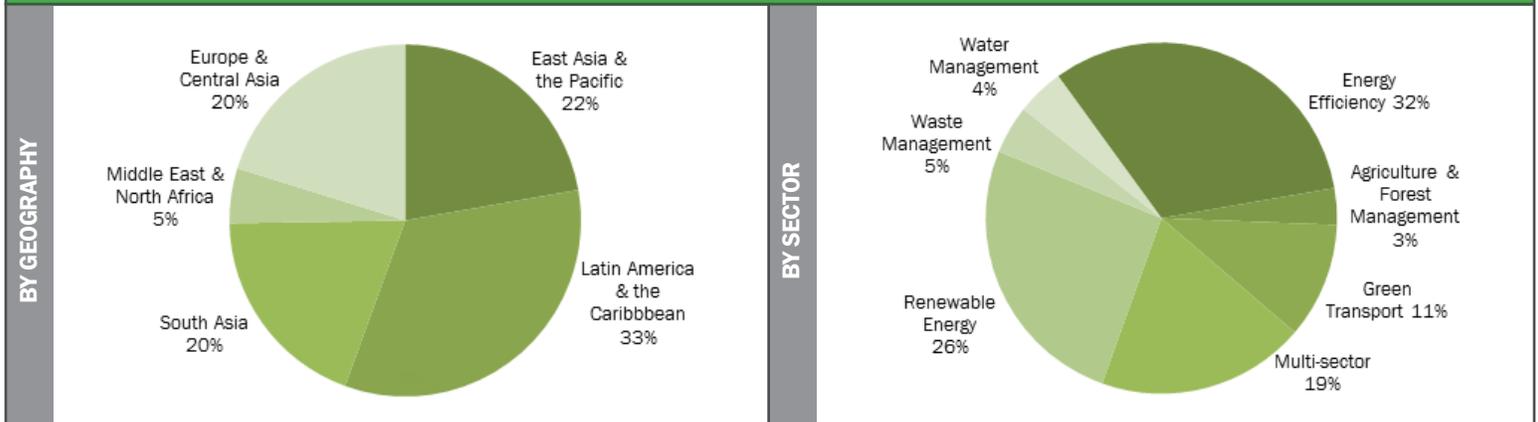
On the investor side, US pension funds like TIAA-Cref and large asset managers like Blackrock and Deutsche Asset and Wealth Management recently joined the market. Several intermediaries joined SEB to play a pioneering role including Bank of America Merrill Lynch, Citibank, Credit Agricole, Daiwa, HSBC, JP Morgan, Morgan Stanley, TD Securities, and Westpac.

Green bonds are an important step toward filling the financing gap and spurring additional private sector investment – especially as the market continues to grow and expand to different products.

*An excerpt taken from a blog article published on August 28, 2013, originally titled, "World Bank Green Bonds Surpass US\$4 Billion Mark – Reflections Five Years On." The full text can be found here: <https://blogs.worldbank.org/climatechange/world-bank-green-bonds-surpass-us4-billion-mark-reflections-five-years>.

Photo: © Urvil Mehta/The World Bank

Green Project Portfolio Breakdown by Geography and Sector FY2013



Noteworthy Green Projects

World Bank Green Bonds have been supporting projects in 19 countries. A few select project stories in three countries are featured below. For a list with more projects, please see <http://treasury.worldbank.org/cmd/htm/MoreGreenProjects.html>.

Indonesia – Water Resources and Irrigation Management Program 2

IBRD Financing: US\$150 million

Water resources management and irrigation play an important role in Indonesia's water and food security (the bulk of grain crops are from irrigated areas). Though Indonesia is in general a water rich country, climate change is increasing spatial and seasonal variation of water availability. This, combined with high pressure on land and water resources from urbanization and economic development, is leading to more floods, landslides, and less water available during dry seasons. This project builds on the support of the first program approved in 2003 by developing capacity and infrastructure to improve river basin and irrigation management in selected areas of the country. The project is expected to benefit 500,000 farmer households from more reliable and efficient irrigation water helping them produce 15% more crops. Better water management is also expected in 12 river basins.

For details, go to <http://www.worldbank.org/projects> and search by project ID number **P114348**, or [click here](#).



Turkey – Update on Private Sector Renewable Energy and Energy Efficiency Project

IBRD Financing: US\$500 million

World Bank Green Bond Investor Update (2011) included a project designed to reduce greenhouse gas emissions by increasing privately owned and operated energy production from indigenous renewable sources and enhance energy efficiency investments in industries such as iron and steel.

As of May 2013, the investments have already reduced 1,480,000 tons of carbon dioxide per year through 29 energy efficient projects and 44 renewable energy projects including solar, geothermal, and small hydropower plants.

View a slideshow of Turkey's low-carbon investments, which include IBRD's contribution here: <http://www.worldbank.org/en/news/video/2013/05/30/turkey-renewable-energy-slideshow>

For details, go to <http://www.worldbank.org/projects> and search by project ID number **P112578**, or [click here](#).



China – Shandong Energy Efficiency

IBRD Financing: US\$150 million

China's goal is to reduce carbon dioxide intensity (CO₂ per unit of GDP) by 40-45% between 2005 and 2020. In addition to promoting non-fossil fuels, it has launched ambitious programs for energy conservation, which are being implemented by China's 30 provincial governments.

The project's purpose is to support Shandong Province – the second largest province in China with a population of 94 million – with energy efficiency programs focusing on leasing and performance contracting for the industrial sector, financing for biomass electricity (from corn and wheat stalk), and building a heat power plant.

The biomass based heat and power generation facility is expected to provide 165 GWh of renewable energy to the grid.

For details, go to <http://www.worldbank.org/projects> and search by project ID number **P114069**. For details, [click here](#).

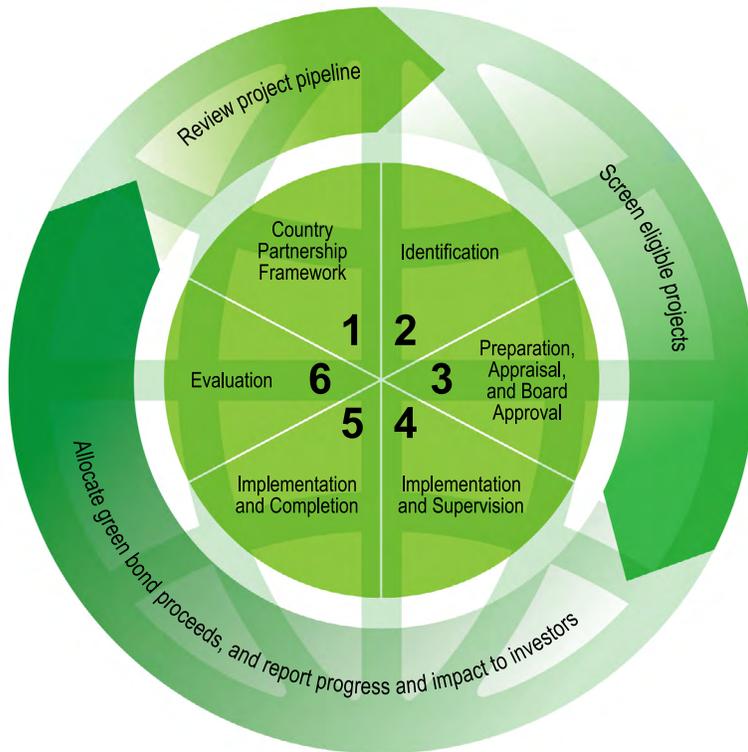


Understanding the Green Bond Project Cycle

The lifecycle of a project financed by the World Bank (IBRD) follows six stages as shown below. World Bank-financed projects that meet the green bond criteria follow the same stages, including the due diligence and monitoring process as other World Bank-financed projects. The green bond cycle includes additional steps as shown in the outer circle of the graph below. Early on, environmental specialists review the project pipeline as reflected in the country partnership framework described in documents guiding IBRD's work with a member country.

The Project Selection Criteria (see box on the right) are applied to screen projects resulting in a list of eligible mitigation and adaptation projects. Once approved, these projects disburse over several years during the implementation stage. Corresponding amounts are deducted on a quarterly basis from the account created to support the allocation of World Bank Green Bond proceeds to eligible projects.

Go to <http://www.worldbank.org/projectcycle> for more information on the World Bank project cycle.



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About the World Bank: The World Bank (International Bank for Reconstruction and Development, IBRD), rated Aaa/AAA (Moody's/S&P), operates as a global development cooperative owned by 188 member countries. It provides its members with financing, expertise, and coordination services so they can achieve equitable and sustainable economic growth in their national economies and find effective solutions to pressing regional and global economic and environmental problems.

World Bank Green Bond Project Selection Criteria

Examples of Eligible Mitigation Projects:

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

Examples of Eligible 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.

What Investors Said

"The World Bank has established industry leading practices that provide a foundation for this important and evolving market. Competitive pricing and coupon rates, USD benchmark size issuances, ring-fencing of the proceeds, project transparency, impact reporting, and a third party opinion are the types of practices that make the World Bank Green Bonds attractive for our clients."

Chad Spitzer
Global Chief Operating Officer for the Corporate Governance & Responsible Investment Team at **Blackrock**

"We invested in World Bank Green Bonds for our socially responsible total return mandates because we believe they offer attractive relative value along with direct and measureable social impact – and are an excellent example of the 'double-bottom line' our investors are looking for. The liquidity and high quality of the bonds were important factors to us in deciding to participate."

Stephen M. Liberatore, CFA
Managing Director and Fixed-Income Portfolio Manager for **TIAA-CREF**

More World Bank Green Bond Investors

- Adlerbert Research Foundation
- AP2 - Second Swedish National Pension Fund
- AP3 - Third Swedish National Pension Fund
- Blackrock
- California State Treasurer's Office
- CalSTRS
- Calvert Investments
- Church of Sweden
- Deutsche Asset & Wealth Management
- Everence Financial
- FMO (Netherlands Development Finance Co.)
- LF Liv
- MISTRA
- New York Common Retirement Fund
- Nikko Asset Management
- Pax World Balanced Fund
- Rathbone Greenbank
- Sarasin
- SEB Ethos rantefund
- SEB Fonden
- SEB Tryggliv
- Skandia Liv
- Sonen
- State Street Global Advisors
- TIAA-CREF
- Trillium Asset Management, LLC
- UN Joint Staff Pension Fund
- WWF-Sweden (Världsnaturfonden)
- ZKB (Zürcher Kantonalbank)

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