



BACKGROUND NOTE

The Asian Development Bank's Green Finance Initiatives and Their Impacts

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Green finance is generally considered by the Asian Development Bank (ADB) and the Association of Southeast Asian Nations (ASEAN) Catalytic Green Finance Facility (ACGF), managed by the Innovation Hub of the Southeast Asia Department (SERD),¹ to encapsulate a larger sphere of activities than climate finance alone, with green finance being defined as denoting all financing instruments, investments, and mechanisms that contribute to a “climate plus” approach, impacting both climate and environmental sustainability goals. Green finance thus targets (i) a reduction in greenhouse gases and/or improved climate resilience; and (ii) improved environmental objectives such as air and water quality, ecosystems and biodiversity, and resource use efficiency.

Recognizing the need to accelerate the flow of green finance, especially from private capital sources, to meet the increasing financing gaps in the region, ADB has undertaken programmatic approaches to green finance (especially in Southeast Asia) that encompass a range of activities from knowledge and capacity building to innovative finance for projects, as well as standard green projects.

These approaches, which are outlined below, combine ADB technical assistance and loan products.

¹ For details on the SERD Innovation Hub, see <https://www.adb.org/publications/adb-southeast-asia-innovation-hub-green-finance>.

I. Programmatic Approaches: The ASEAN Catalytic Green Finance Facility

Launched. The ACGF was launched in April 2019 at the ASEAN Finance Ministers Meeting in Thailand by the ADB President and ASEAN Finance Ministers.²



Description. One of the only regionally owned catalytic vehicles in the world, the ACGF aims to leverage public sector funds to de-risk green projects and hence, attract multiples of capital from all private capital sources to scale up green financing for the ASEAN region. The ACGF aims to approve projects with the potential to reduce at least 150,000 tons of carbon dioxide (CO₂) equivalent per annum.

Green investment principles. The ACGF created a set of investment principles and eligibility criteria, one of the first in Asia, which links green indicators with financing as an incentive. These principles were developed specifically for the ASEAN region after extensive discussions between the ADB team managing the ACGF, European development partners, and ASEAN stakeholders.

Innovative finance approach. The ACGF uses an innovative loan product, two-step pricing, to create the impetus for private capital mobilization. Clear bankability criteria ensure well-prepared projects are attractive to private capital, along with green criteria tailored to the region. This approach is based on global best practices that link greater concessional financing to more advanced green projects.

Programmatic approach. To ensure the scaling-up of projects, the ACGF utilizes technical assistance funds and a project structuring team to build knowledge and capacity among government officials, develop and design projects, and help projects access financing from the public and private sectors.

² For details on the ACGF, see <https://www.adb.org/what-we-do/funds/asean-catalytic-green-finance-facility/overview>.

Finances. In addition to around \$75 million of equity from the ASEAN Infrastructure Fund (AIF), the ACGF has also attracted co-financing commitments totaling almost \$1.7 billion for eligible projects from the following development partners: KFW Entwicklungsbank (KFW Development Bank), European Investment Bank, Agence Française de Développement (French Development Agency), Government of Korea, European Union, ADB, and the Green Climate Fund.³

Projects and impacts. In the ACGF's first year of operation in 2020, its long list of over 15 projects included four projects approved by the AIF Board. These four projects—located in Cambodia, Indonesia, Myanmar, and the Philippines—together cost \$1.4 billion, and three of them have more than an 85% climate financing component. These latter three projects have very high projected greenhouse gas emission reductions of well over the targeted 150,000 tons of CO₂ equivalent per annum.

ADB role. ADB acts as administrator of the larger AIF as well as manager of the ACGF, which operates from ADB's headquarters in Manila. The development of the ACGF concept in 2019 was led by an ADB team before being approved by the AIF Board. ADB also provides technical assistance through the Green and Innovative Finance Initiative, which supports the ACGF across the entire Southeast Asia region.

II. Programmatic Approaches: ADB's Green Bond Program

The Green Bond Program enables ADB to support its developing member countries seeking to mitigate greenhouse gas emissions and adapt to the consequences of climate change, while delivering environmentally sustainable growth to help reduce poverty and improve lives.⁴ ADB's green bond issuances not only raise funds for eligible green projects in developing member countries, but they also serve as positive examples to encourage countries to pursue their own green bond issuances. In October 2019, ADB followed up its

³ For details on the GCF approval, see <https://www.adb.org/news/300-million-green-climate-fund-ADB-first-green-recovery-program-southeast-asia>

⁴ For details on the Green Bond Program, see <https://www.adb.org/work-with-us/investors/adb-green-bonds>.

inaugural euro-denominated green bond in 2018 with another issuance of €750 million (\$827 million equivalent). In the same month, ADB issued its first-ever green bond denominated in Norwegian kroner, with an issue size of Nkr1.0 billion (\$111 million equivalent).

III. Knowledge Building: Books and Partnerships

The need for building well-directed knowledge across countries that can lead directly to policy inputs and projects is especially critical in countries that are often uncertain about how to meet their Paris Agreement targets. ADB has created three extremely relevant green finance knowledge products, which are already being used to develop projects in member countries.

- *Green Finance Strategies for Post-COVID-19 Economic Recovery in Southeast Asia, 2020* was developed in tandem with ongoing green finance work in Thailand, leading to ADB support for the first post-COVID-19 sustainability bonds in the region.
- *Green, Sustainability, and Social Bonds Primer, 2021* also showcases post-COVID-19 recovery bonds already being developed by the ADB–ACGF team.
- *Catalyzing Green Finance, 2017* led to the Shandong Green Development project in the People’s Republic of China (already approved) and the Sustainable Development Goal (SDG) Indonesia One–Green Finance Facility (SIO–GFF) (currently being processed).



ADB, through the ACGF, also entered into a number of knowledge partnerships in 2019 to push the green finance agenda in developing member countries:

- Infrastructure Asia Singapore and ADB signed a memorandum of understanding to develop a knowledge program that could build green and innovative finance

projects across ASEAN members, including through a “Six Champions” capacity building program.

- The World Economic Forum and ADB signed a memorandum of understanding to accelerate the flow of sustainable infrastructure financing in Southeast Asia.

IV. Emerging Green Projects: Examples

1. Cambodia Solar Park Project, 2019

Description. This project is supporting Cambodia to build a 100-megawatt (MW) solar power park through a public–private partnership (PPP) approach in Kampong Chhnang Province.⁵ ADB support includes financing for transmission lines and park infrastructure, and PPP financing for power generation:

- ✓ PPP support to Electricité du Cambodge (EDC) for the bidding of 60 MW of solar photovoltaic capacity.
- ✓ Bankable project with a rate of return of 8.4% attracted private capital interest.
- ✓ Lowest ASEAN bid tariff achieved of \$0.39 cents per kilowatt hour by Prime Alternative Co. Ltd.

Cost and financing plan. The cost of the ADB project is \$26.7 million, which is being financed by an ADB loan of \$7.7 million, a \$11.0 million loan, and a \$3.0 million grant from the Strategic Climate Fund. EDC and the government are financing the remaining amount.

Green impact. The project has both climate adaptation and mitigation impacts, with ADB financing \$1.17 million and \$6.47 million of adaptation and mitigation costs, respectively, and a massive green impact contributing to the needed 150–300 MW of new photovoltaic capacity needed in 2020–2030 to help Cambodia meet its emission reduction commitments under the Paris Agreement.

⁵ For project details, see <https://www.adb.org/projects/51182-001/main#project-overview>.

2. Greater Malé Waste-to-Energy Project, 2020

Description. The project is supporting the Maldives to establish a sustainable solid waste treatment and disposal facility, including an electricity surplus energy recovery facility for the Greater Malé region and its neighboring outer islands, to manage the 836 tons per day of solid waste generated in the project area.⁶

Cost and financing plan. For this ADB project, \$151.13 million was financed by an ADB loan of \$73.39 million, a \$40.0 million loan from the Asian Infrastructure Investment Bank, and \$10.0 million loan grant from the Japan Fund for the Joint Crediting Mechanism. The remainder is being financed by the Government of the Maldives.

Green impact. The project is designed to reduce disaster risk and improve climate change resilience, while creating a cleaner environment and decreasing greenhouse gas emissions by about 28,000 tons of CO₂ equivalent per annum.

3. Shandong Green Development Fund, 2019

Description. The Green Development Fund in Shandong Province in the PRC will leverage public funds to accelerate a variety of climate subprojects and catalyze private capital to support these activities:⁷

- ✓ First ADB–PRC Catalytic Green Finance Facility using a financial intermediary modality.
- ✓ First Green Climate Fund (GCF)-approved project for the PRC.
- ✓ Directly builds resilience for at least 3 million people.

Cost and financing plan. The \$1.5 billion project is financed by an ADB loan of \$100 million, \$84.5 million from the French Development Agency, \$113.6 million from the KfW Development Bank, \$100 million from GCF, \$360 million from public sources, and \$740 million from private investors.

⁶ For project details, see <https://www.adb.org/projects/51077-003/main#project-overview>.

⁷ For project details, see <https://www.adb.org/publications/climate-finance-shandong-green-development-fund>.

Green impact and criteria. The Shandong Green Development Fund will apply GCF’s Investment Framework and leverage transformational investments with strong climate benefits to reduce CO₂ emissions by 3.75 million tons per annum by 2027. The fund will invest 75% in climate mitigation projects and 25% in climate adaptation projects.

4. Sustainable Development Goal Indonesia One–Green Finance Facility

Description. This project, which is being processing for expected ADB Board approval in 2021, aims to establish an innovative transition financing mechanism that will link funds provision to subprojects with clear green, SDG, and financial bankability targets. Designed as a de-risking facility, SIO–GFF aims to leverage ADB and government funds to catalyze a multiple of green funds from private, institutional, and commercial sources.⁸

Cost and financing plan. A \$150 million financial intermediary ADB loan project (phase one of a total of \$600 million in loan support) aims to catalyze projects with total costs of \$500 million.

Green, SDG, and COVID-19 recovery impacts. SIO–GFF will design and operationalize a model (replicable for other SDGs) using innovative financing tools for project de-risking with clear green and SDG frameworks, and a pipeline of green infrastructure projects blending private, institutional, and commercial (PIC) and sovereign funds, with at least 250,000 tons of CO₂ emissions equivalent reduced per year reduced financed projects. SIO–GFF will also contribute to the country’s economic stimulus for a sustainable post-COVID-19 recovery, generate employment, and ensure an SDG focus in sectors—including infrastructure, health, and ecotourism—that have been adversely affected by the pandemic.

⁸ For project details, see <https://www.adb.org/projects/54152-001/main>.

V. ADB Support for Green Capital Markets

ADB's support for green capital markets consists of (i) ADB's theme bond issuances; (ii) support to sovereigns to issue green, sustainable, and social bonds; and (iii) private investment in green capital markets.

Part of this work can be found in two publications: *ADB Theme Bonds for Sustainable Development* and *Green, Sustainability, and Social Bonds for COVID-19 Recovery: A Thematic Bonds Primer*.⁹

This is in addition to a new concept for an SDG bond that the ACGF has developed in collaboration with the World Economic Forum and its Sustainable Development Investment Partnership ASEAN Hub, which will be published in the middle of 2021.

1. ADB's Theme Bonds Issuances for Sustainable Development: Gender, Health, and Water Bonds

ADB launched its first theme bond (water) for sustainable development in 2010 in response to growing demand among its investor base to highlight certain key initiatives. Since launching the water bond, ADB has expanded its theme bond offerings to include health and gender bonds (Table 1).

Table 1: Summary of Theme Bonds
(\$ million)

Item	Total Bond Issuances	Outstanding Bonds
Gender Bond	305.3	305.3
Health Bond	325.7	325.7
Water Bond	1589.1	68.0
Total	2,220.0	698.9

Note: Data as of 31 October 2020.
Source: Asian Development Bank.

⁹ For downloadable versions of these reports, see <https://www.adb.org/sites/default/files/publication/674546/adb-theme-bonds-sustainable-development.pdf>, and <https://www.adb.org/sites/default/files/publication/678191/green-sustainability-social-bonds-covid-19-recovery.pdf>.

- **Water bonds** support projects under the Water Financing Program and highlight ADB’s efforts to address water sanitation needs in Asia and the Pacific, such as Cambodia’s *Irrigated Agriculture Improvement Project* and the *Tamil Nadu Urban Flagship Investment Program—Tranche 2* in India.¹⁰
- **Health bonds** are used to finance ADB projects tackling health challenges in the region, such as *the Improving Access to Health Services for Disadvantaged Groups Investment Program* in Mongolia and the *COVID-19 Emergency Response Project* in the PRC.¹¹
- **Gender bonds** finance projects that promote gender equality and the empowerment of women, such as the *Guizhou Gui’an New District New Urbanization Smart Transport System Development Project* in the PRC and the *Second PRAN Agribusiness Project* in Bangladesh.¹²

2. ADB Sovereign Support for Green, Social, and Sustainability Bond Issuances

A. Thailand’s Sustainability Bonds for COVID-19 Recovery, August 2020

ADB, through the SERD-managed ACGF, provided technical assistance to support Thailand’s first sustainability bond, which was also the first of its kind by a sovereign in Southeast Asia.¹³ The bond was issued by Thailand’s Public Debt Management Office in two tranches totaling THB50 billion (\$1.67 billion) in the second half of 2020. The maiden issuance was oversubscribed three times, and its proceeds will be used for social projects for COVID-19 relief and to refinance green infrastructure through the Mass Rapid Transit Orange Line (East) Project. The Government of Thailand intends to issue further tranches to reach THB100 billion in total issuance. ADB is also providing post-issuance support for allocation and impact reporting, as well as selection criteria for future assets that will form part of the bond beyond the current asset pool.

¹⁰ For projects details, see <https://www.adb.org/projects/51159-002/main> and <https://www.adb.org/projects/49107-005/main>

¹¹ For projects details, see <https://www.adb.org/projects/49173-003/main> and <https://www.adb.org/projects/54077-001/main>

¹² For projects details, see <https://www.adb.org/projects/51366-001/main> and <https://www.adb.org/projects/51152-001/main>

¹³ For project details, see <https://www.adb.org/news/adb-supports-thailand-green-social-and-sustainability-bonds-covid-19-recovery>.

B. Thailand's Social Bonds for COVID-19 Recovery, September 2020

ADB, through the SERD-managed ACGF, also supported Thailand's National Housing Authority (NHA) in issuing its first social bond worth THB6.8 billion in September 2020. The bond will finance affordable housing and promote sustainable communities. The ACGF assisted with bond framework development and external reviews to help NHA design thematic bonds based on global standards. This is one of the first social bonds issued by a state-owned enterprise in Southeast Asia. NHA is currently planning its second tranche and looking to upgrade its bond program beyond social bonds to include a sustainable bond incorporating green elements.

C. Thailand's Government Saving Bank Social Bonds (under development)

The Government Savings Bank is in the process of finalizing its Social Bond Framework with a view to issuing a social bond for financing projects with social or SDG impacts. ADB will be supporting the Government Savings Bank in this bond development and issuance process with an external review and alignment to international standards.

D. Perusahaan Listrik Negara's Energy Transition Bonds in Indonesia (under development)

ADB, through the SERD-managed ACGF, has been supporting Perusahaan Listrik Negara (PLN), Indonesia's state-owned power utility, to develop and implement its Sustainable Finance Framework, launched in September 2020. ADB participated in the launch and continues to support PLN to use the framework for embarking on a maiden sustainable or transition benchmark bond issuance in 2021. ADB will be providing ongoing support to PLN in project selection, external review, and going to market.

E. Philippines Blue Bond (under development)

ACGF is working with ADB's Sustainable Development and Climate Change Department and the World Wildlife Fund Sustainable Finance team on a feasibility study to assess the funding needs of a Blue Bond to develop a sustainable fisheries value chain. ADB is discussing potential support to the Fisheries Bureau for a feasibility study for a bond to

finance some of the key assets and systems in the Coral Triangle under the sponsorship of the Government of the Philippines.

3. ADB's Private Sector Operations Department Support for Green Finance Development

A. Investment in Georgia Green Bonds, July 2020

ADB's Private Sector Operations Department announced an investment of up to \$20 million in green bonds to be issued by Georgia Global Utilities JSC, Georgia's first-ever green bond issuance. The proceeds will be used to upgrade water supply and sanitation in Tbilisi and nearby municipalities, and to refinance the debt of renewable energy and water operations.¹⁴ ADB will also administer an additional investment of up to \$20 million in this initiative from Leading Asia's Private Infrastructure Fund.

B. Investment in Thailand, February 2018 and October 2019

ADB's Private Sector Operations Department is supporting the green finance development in Thailand through the following bond purchases:

- THB5 billion (\$155 million) purchase of Thailand's B. Grimm Power Public Company Limited's maiden 5-year and 7-year green bonds in 2018. These were the first certified climate bonds to be issued in Thailand, and proceeds will help develop and enhance renewable energy capacity in ASEAN member countries.¹⁵
- THB3 billion (\$100 million) purchase of a tranche of Energy Absolute's maiden green bond issuance of THB10 billion (\$330 million) to support the long-term financing of the company's 260 MW Hanuman wind farm in Thailand.¹⁶

¹⁴ For project details, see <https://www.adb.org/news/adb-invest-40-million-ggu-green-bonds-upgrade-water-sanitation-georgia>.

¹⁵ For project details, see <https://www.adb.org/news/adb-bgrimm-power-expand-support-renewable-energy-asean>.

¹⁶ For project details, see <https://www.adb.org/news/adb-invests-3-billion-thai-baht-energy-absolutes-green-bond-wind-farm-development>.

4. Proposed ADB Publication: ‘Accelerating Sustainable Development after COVID-19: The Role of SDG Bonds’ (for publication by mid of 2021)

Development that provides for equitable economic growth and sustainable use of the planet’s natural resources has become increasingly important amid COVID-19. The pandemic has emphasized the need for a renewed focus on achieving the 17 SDGs as the global blueprint to end poverty, protect our planet, and ensure prosperity. This forthcoming publication will provide an overview of SDG bonds that can be used to raise the huge amount of financing needed to meet the SDGs in developing Asia. It will also propose an innovative type of bond to boost momentum toward achievement of the SDGs.