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Accelerating Green Finance for Post COVID-19 Recovery in Southeast Asia

SERD Policy Network

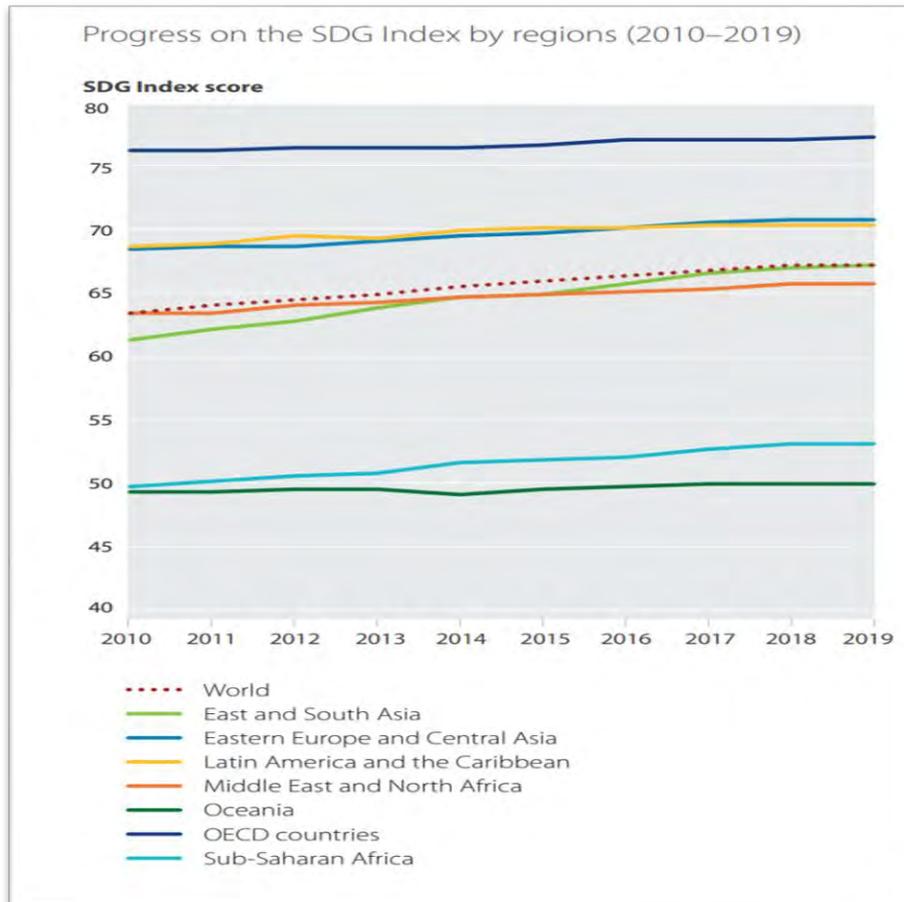
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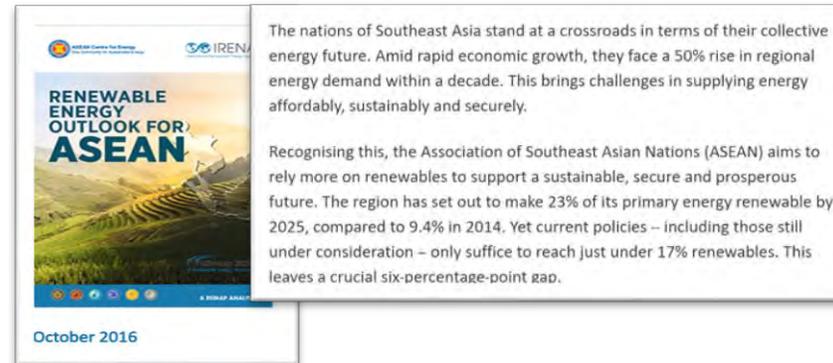
9 November 2020



The Good....Some progress in SDGs and Climate



Source: Refinitiv Sustainable Finance Review 1H 2020



The nations of Southeast Asia stand at a crossroads in terms of their collective energy future. Amid rapid economic growth, they face a 50% rise in regional energy demand within a decade. This brings challenges in supplying energy affordably, sustainably and securely.

Recognising this, the Association of Southeast Asian Nations (ASEAN) aims to rely more on renewables to support a sustainable, secure and prosperous future. The region has set out to make 23% of its primary energy renewable by 2025, compared to 9.4% in 2014. Yet current policies – including those still under consideration – only suffice to reach just under 17% renewables. This leaves a crucial six-percentage-point gap.



- Key ASEAN targets include

i. Energy transition:

- ASEAN has exceeded its energy efficiency target, reducing energy intensity by more than 21.9% compared to 2005 levels, well ahead of its 2020 target.
- ASEAN will continue to work towards the region's long-term target to reduce energy intensity by 30% by 2025.
- Additionally, ASEAN also set a target to increase the component of renewable energy mix by 23% by 2025.

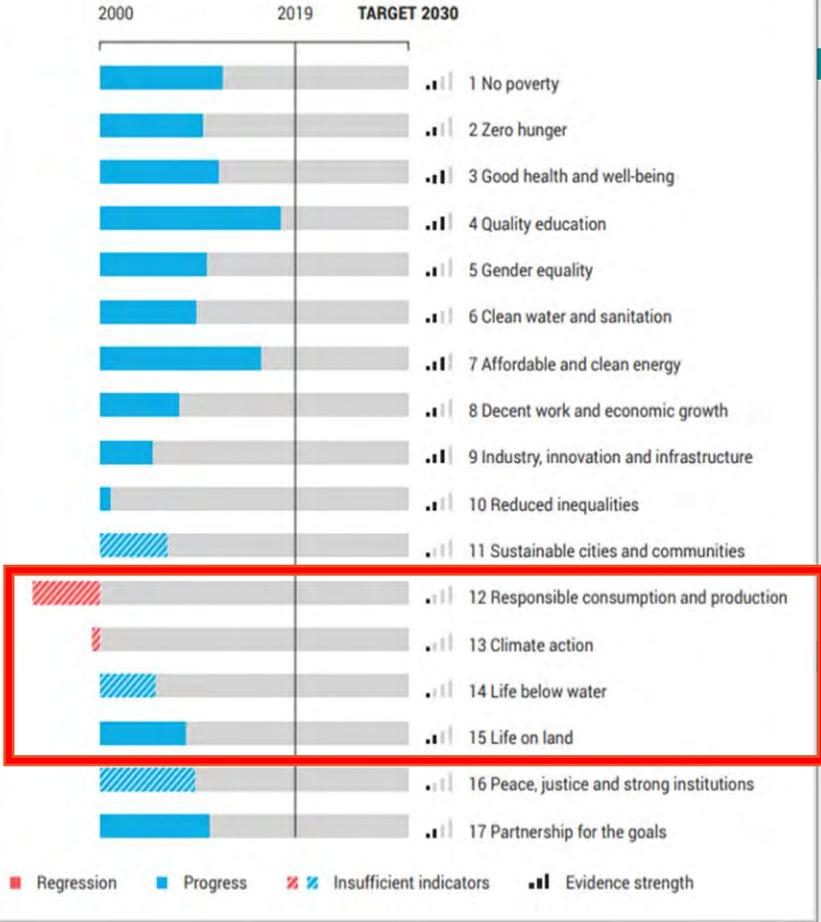
ii. Land transport:

- ASEAN aims to reduce the average fuel consumption per 100 km of new light-duty vehicles sold in ASEAN by 26% between 2015 and 2025.
- ASEAN will also (a) introduce and strengthen fiscal policy measures based on fuel economy or on CO₂ emissions at national level where applicable to incentivize consumers to purchase efficient vehicles; and (b) promote the adoption of national fuel consumption standards for light-duty vehicles in all markets, striving towards a regional standard in the long term.

- Strong improvement in SE Asia
- Greater understanding of the climate change – all AMS have ratified the Paris Agreement and communicated their NDCs
- 23% RE Target being met
- Emerging projects in SE Asia

The Bad...A lot more is needed AND Faster

Progress on the SDGs in Asia and the Pacific



BUT

- 263 m still in extreme poverty
- Inequitable growth? "By 2030 richest will account for 4% of global population and 25% of consumption (Brookings)"

UNEP's annual *Global Environment Outlook* says that even if all current international commitments under the Paris Agreement are implemented, temperatures are expected to rise by 3.2°C, bringing even wider-ranging and more destructive climate impacts. Carbon emissions must increase more than fivefold over current levels to deliver that, and need to be cut over the next decade for the 1.5°C goal.

3.2°C

2020 is a critical year for climate action, with the UN climate change conference in Glasgow aiming to determine the future course of efforts to avert crisis, and countries expected to significantly step up their climate commitments.

26 NOV 2019 | PRESS RELEASE | CLIMATE CHANGE

Cut global emissions by 7.6 percent every year for next decade to meet 1.5°C Paris target - UN report

PLASTIC OCEANS

ABOUT FILMS PROJECTS TAKE ACTION RESOURCES BLOG DONATE

The Facts

"More than 8 million tons of plastic are dumped in our oceans every year."

WHO: 7 million people dying yearly from polluted air

Over 90 percent of people on Earth are breathing high levels of pollutants, according to a World Health Organization report. The UN body warned that toxins in the air can lead to strokes, heart attacks and lung cancer.

- Marine populations declined 49% in past 50 years
- 90% loss of coral reefs by 2052
- Ocean "dead zones" quadrupled since 1950
- Third of fish stocks overfished (**almost two-thirds in South East Asia**)
- 92% of AP population's air exceeds WHO small particulate matter (PM2.5) standard
- 6 of 10 countries with highest number of **deaths is in Asia**
- 369 m without **basic sanitation in AP**
- Economic costs of the air pollution on health in Asia was estimated at \$1.7 trillion (10% of GDP) in 2016.

Source: United Nations Economic and Social Commission on Asia and the Pacific. 2020. *Asia and the Pacific SDG Progress Report*. Bangkok.

Getting worse...COVID-19

GDP growth rate, % per year

	2019	2020			2021		
		April ADO 2020	June ADOS	September Update	April ADO 2020	June ADOS	September Update
Southeast Asia	4.4	1.0	-2.7	-3.8	4.7	5.2	5.5
Brunei Darussalam	3.9	2.0	1.4	1.4	3.0	3.0	3.0
Cambodia	7.1	2.3	-5.5	-4.0	5.7	5.9	5.9
Indonesia	5.0	2.5	-1.0	-1.0	5.0	5.3	5.3
Lao People's Democratic Republic	5.0	3.5	-0.5	-2.5	6.0	4.5	4.5
Malaysia	4.3	0.5	-4.0	-5.0	5.5	6.5	6.5
Myanmar	6.8	4.2	1.8	1.8	6.8	6.0	6.0
Philippines	6.0	2.0	-3.8	-7.3	6.5	6.5	6.5
Singapore	0.7	0.2	-6.0	-6.2	2.0	3.2	4.5
Thailand	2.4	-4.8	-6.5	-8.0	2.5	3.5	4.5
Timor-Leste	3.4	-2.0	-3.7	-6.3	4.0	4.0	3.3
Viet Nam	7.0	4.8	4.1	1.8	6.8	6.8	6.3



- COVID: Gains reversing?
 - 71 - 100 million people WW pushed into extreme poverty in 2020?
- COVID-19 will have severe negative impact on most SDGs
 - **2020: 0.7%** economic contraction in developing Asia, the first time in 6 decades – **3.8%** in SE Asia
 - Youth job losses possibly doubling post COVID-19: **10 - 15 million jobs** may be lost across 13 countries in Asia Pacific in 2020

The Challenge: Massive Financing gaps

Table 3: Estimated Infrastructure Investments and Gaps, 25 DMCs, 2016–2020
(\$ billion in 2015 prices)

	Estimated Current Investment (2015)	Baseline Estimates			Climate-adjusted Estimates		
		Annual Needs	Gap	Gap (% of GDP)	Annual Needs	Gap	Gap (% of GDP)
Total (25)	881	1,211	330	1.7	1,340	459	2.4
Total without PRC (24)	195	457	262	4.3	503	308	5.0
Selected Central Asia Countries (3)	6	11	5	2.3	12	7	3.1
Selected South Asia Countries (8)	134	294	160	4.7	329	195	5.7
Selected Southeast Asia Countries (7)	55	147	92	3.8	157	102	4.1
Selected Pacific Countries (5)	1	2	1	6.2	2	2	6.9
India	118	230	112	4.1	261	144	5.3
Indonesia	23	70	47	4.7	74	51	5.1
PRC	686	753	68	0.5	837	151	1.2

PRC = People's Republic of China.

Numbers in parentheses refer to the number of selected countries.

Note: The gap as a % of GDP is based on the annual average of projected GDP from 2016 to 2020. The 25 DMCs covered here are listed in Annex Table 2.

Source: ADB (2016a); Country sources; Investment and Capital Stock Dataset, 1960–2015, IMF; Private Participation in Infrastructure Database, World Bank; World Bank (2015a and 2015b); World Development Indicators; World Bank; ADB estimates.

- **UN Estimates:** \$3-\$5 trillion annually, globally for SDGs
- **ADB:** Developing Asia needs \$26 trillion investments in infrastructure from 2016 to 2030, or **\$1.7 trillion per year**, to maintain growth, eradicate poverty, and respond to climate change (climate-adjusted estimate)
- **The GAP:** Even before COVID-19, the region faced a substantial investment gap **\$459 billion per year** (\$907 billion p.a. if including social infrastructure)

Key Impact of worsening COVID Impacted budgets: Less to spend on SDGs and Climate

The Need: Attract Private Capital from ALL Sources...mitigate the constraints

US\$46.7 trillion (2019).....\$60 trillion + (2030)?

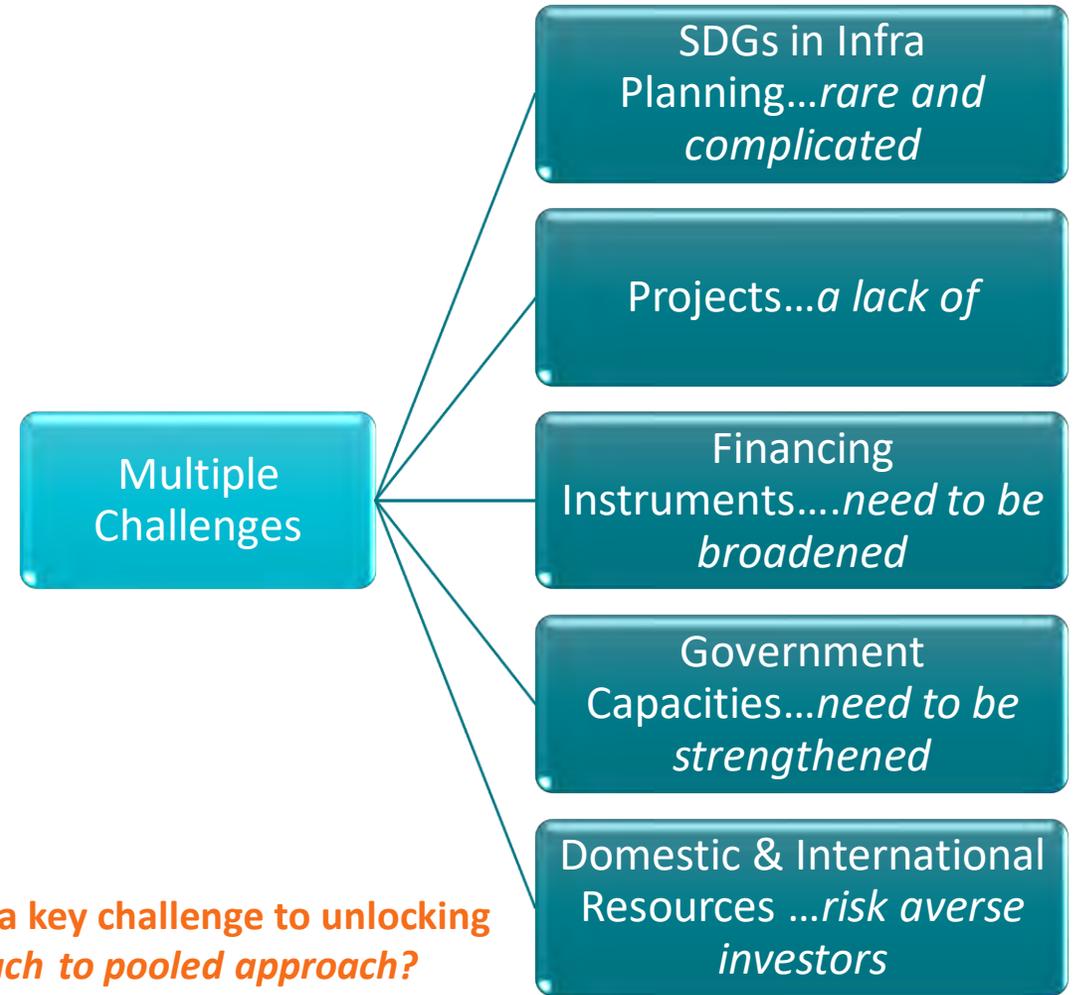
Global institutional pension fund assets (2019)

- **OECD:** Pension fund assets rose to \$32 trillion in OECD area and \$0.7 trillion in 29 other selected (non-OECD) reporting jurisdictions in 2019

But

- Key finance flows - scarce and slow growth for many ASEAN countries - constrains ability to achieve SDGs
- Low levels of domestic revenue mobilization (below \$ 600 per person versus \$15,000 in high income countries) - limits ability of governments to fund services and public investment

Stimulating sufficient quantities of quality private investment is a key challenge to unlocking private contributions toward the SDGs...from project approach to pooled approach?

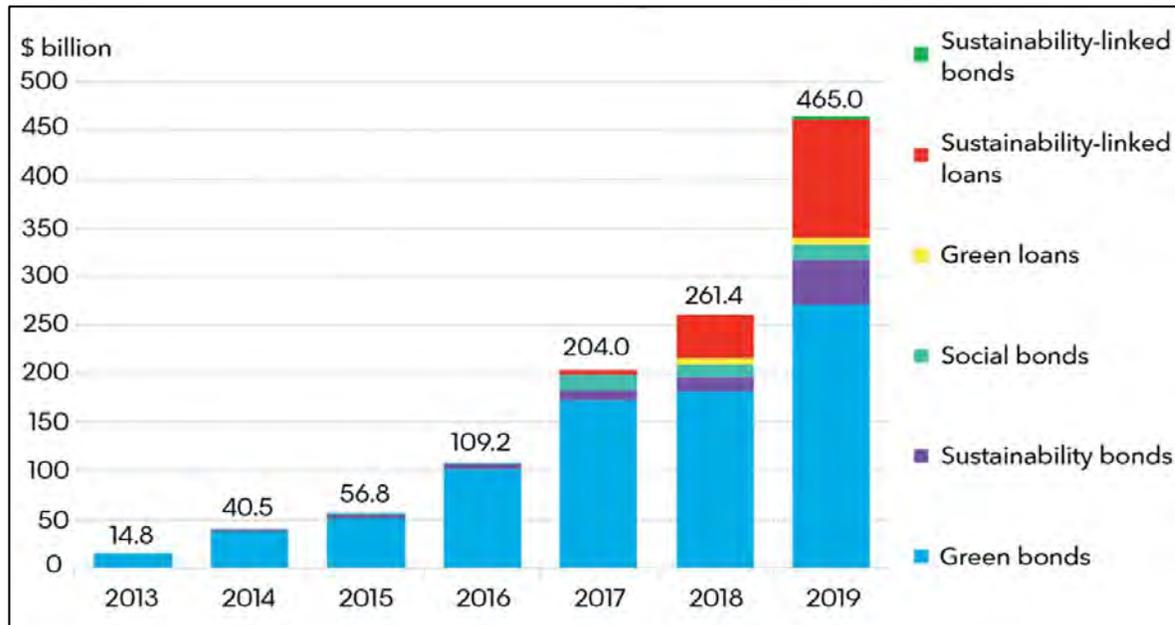


Green Finance for Post COVID Response: A Critical Way Forward

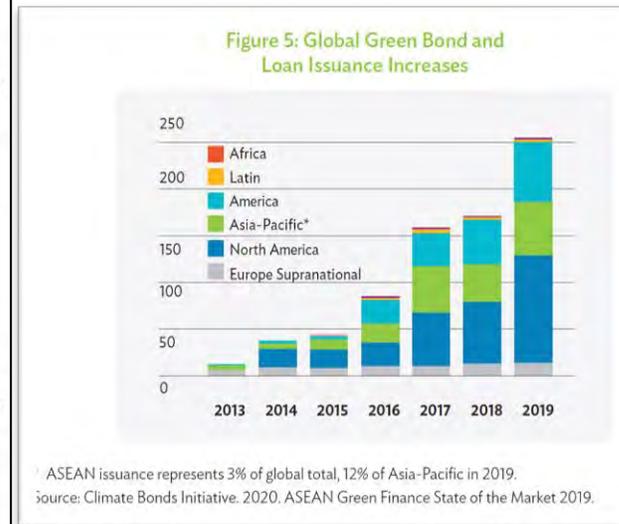
Green Finance: As a cross cutting theme across several SDGs, green finance provides a clear roadmap for countries to achieve their SDGs and Paris Agreement Goals.....AND green projects will attract private capital sources.

Green finance denotes all financing instruments, investments and mechanisms that contribute to a "climate plus" approach, impacting on both climate and environmental sustainability goals. Green finance promotes a reduction in greenhouse gases and improved climate resilience, air and water quality, ecosystems, biodiversity, and use of resources. **ACGF, 2020**

Growth of the Green Finance Market



Source: Climate Bonds Initiative. Forthcoming. Climate Bonds Initiative Market Summary H1 2020.



- **Green bonds** in Asia Pacific (incl Japan) in 2019 - record high of **\$47.6 billion**; China - majority - US\$22.9 billion in proceeds
- **ASEAN** Green bond market 2019 –ASEAN issuance doubled **\$7.8bn**; cumulative ASEAN issuance since 2016 at \$ 13.4bn; still small globally - 3% of global total and 16% of the Asia-Pacific

Green Finance Recoveries..already in progress

GREEN RECOVERY AFTER COVID-19: EMERGING RESPONSES

REGIONAL AND NATIONAL STIMULUS PACKAGES

EUROPEAN UNION €750 B (\$847 B) "Next Generation EU" recovery fund and "Just Transition Fund" for climate action	REPUBLIC OF KOREA ₩76 T (\$62 B) The Korean-version New Deal includes a "Green New Deal" to support the development of green infrastructure, energy efficiency improvement, and renewable energy expansion.
GERMANY €80 B (\$90.4 B) The recovery program targets innovation, sustainability and support for green recovery in municipalities	INDONESIA \$3 B COMMITMENTS for SDG Indonesia One, one of the first SDG platforms globally, aiming to provide blended finance solutions to promote infrastructure projects with impact on SDGs.
UNITED KINGDOM £40 M (\$50.54 M) Clean Growth Fund to support green start-ups develop low-carbon technologies and achieve UK Net Zero objective.	PHILIPPINES ₱2.5 B (\$50 M) Green Green Green Program to provide assistance to make 145 cities more liveable and sustainable.
NORWAY NOK 3.6 B (\$370 M) The package support projects implementing green technologies, including hydrogen, battery technology, offshore wind and low-emission shipping, areas in which Norway plays a leading role.	VIET NAM National Strategy on Green Growth to stem environmental degradation by promoting public and private investments into green and sustainable infrastructure projects.
LUXEMBOURG UP TO €30,000/HOUSEHOLD (\$33,800) AND €8,000/ELECTRIC CAR (\$9,017) The Government provides green subsidies for households willing to renovate their homes to make them more energy efficient, and for the purchase of electric vehicles.	

NOTE: ADB is not responsible for any information gathered here from publicly available sources and subject to change

ASEAN CATALYTIC GREEN FINANCE FACILITY

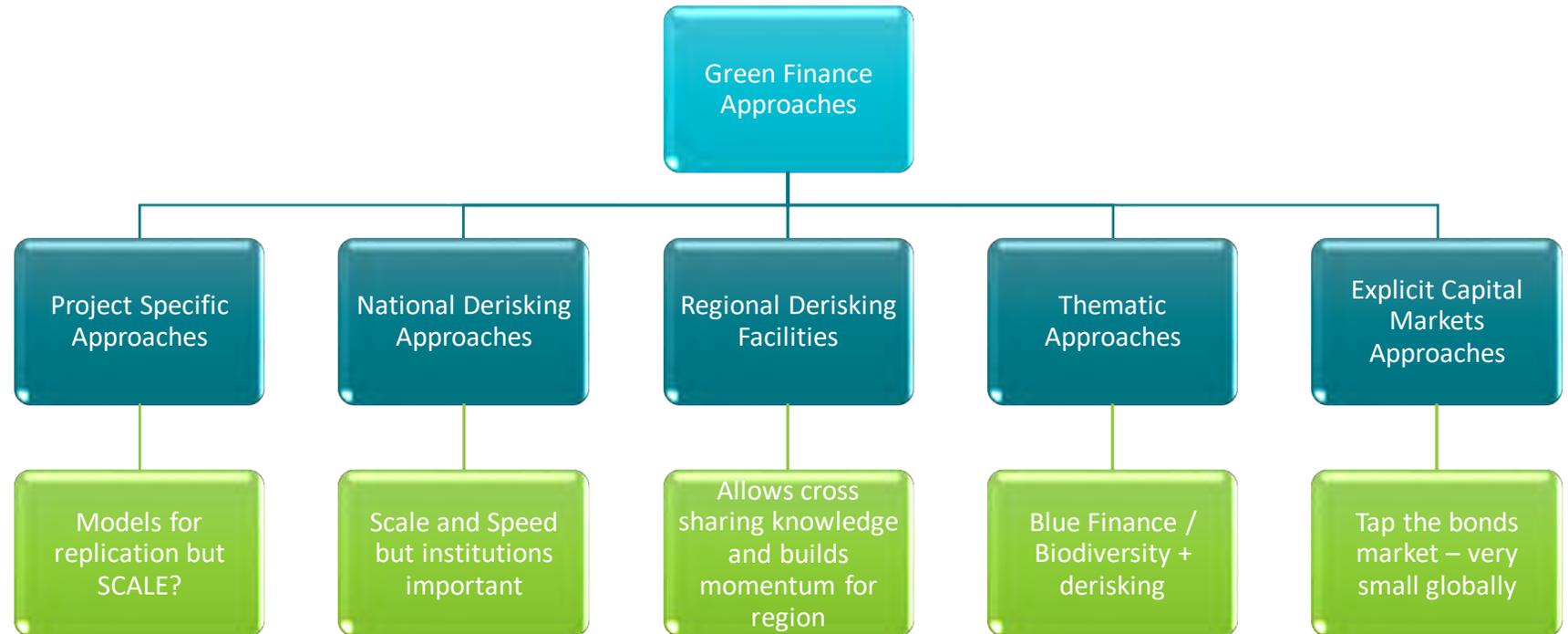
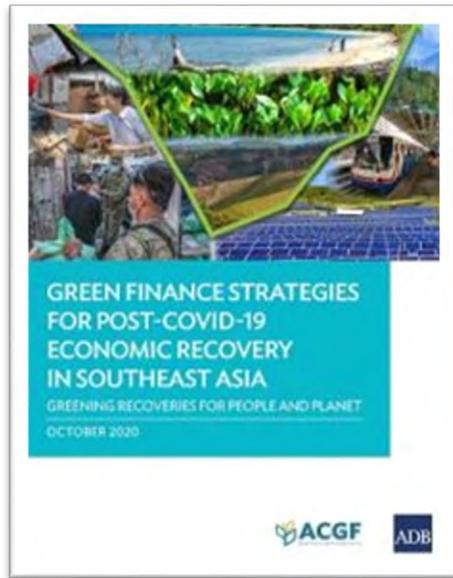
ASEAN Infrastructure Fund Limited

Operations Plan 2019-2021

October 2019

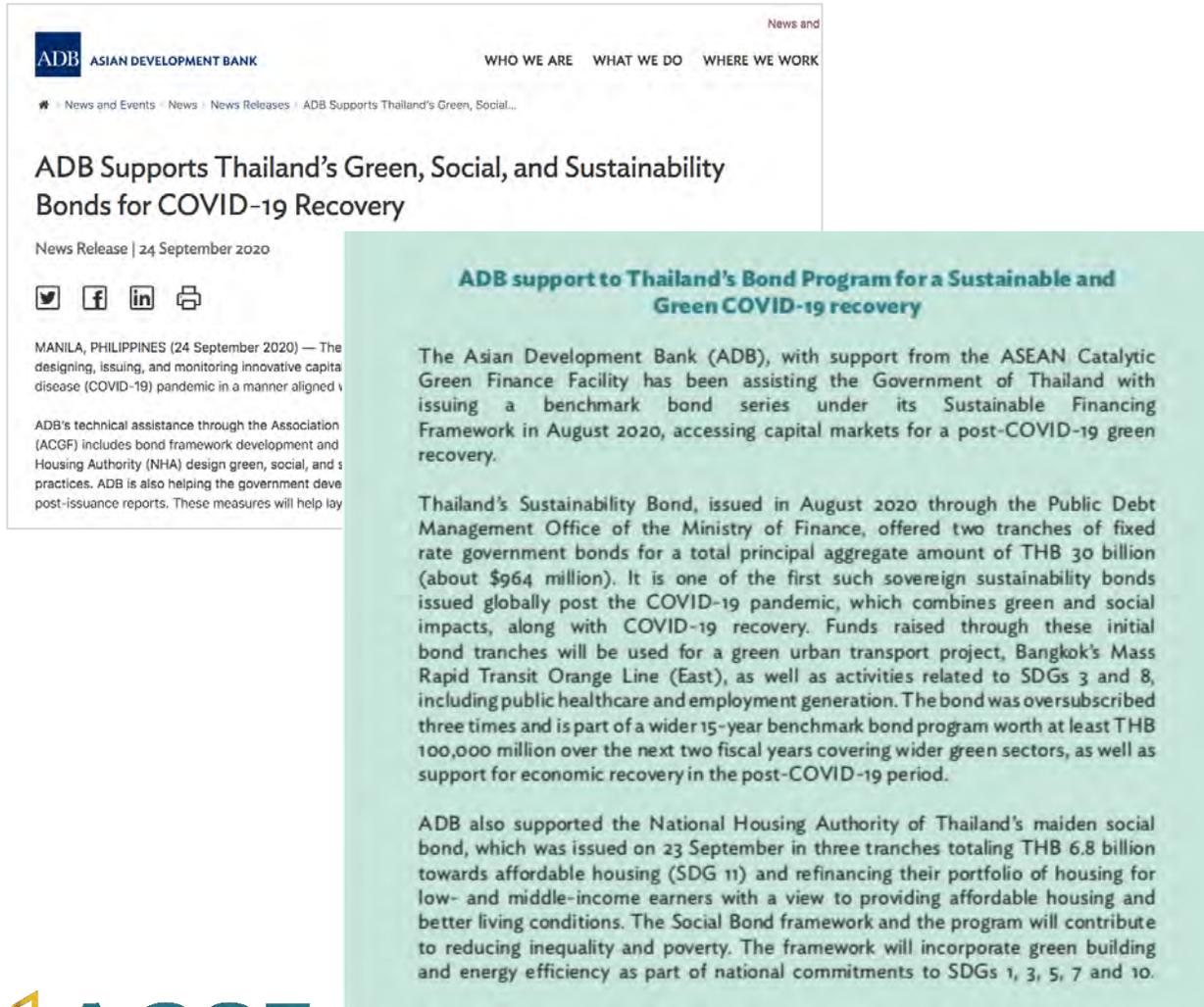
This is a preliminary draft prepared for information only for the 2nd/2019 Board of Directors Meeting of the ASEAN Infrastructure Fund, Paris, 1 November

Green Finance Approaches: Numerous Possible...but must be aligned with “1 to 3” principle



ADB Innovation Hub (SERD) TA and Team Are Helping Already

Emerging Examples: Green Bonds Post COVID-19



News and Events | News | News Releases | ADB Supports Thailand's Green, Social, and Sustainability Bonds for COVID-19 Recovery

News Release | 24 September 2020

MANILA, PHILIPPINES (24 September 2020) — The Asian Development Bank (ADB), with support from the ASEAN Catalytic Green Finance Facility (ACGF), has been assisting the Government of Thailand with issuing a benchmark bond series under its Sustainable Financing Framework in August 2020, accessing capital markets for a post-COVID-19 green recovery.

Thailand's Sustainability Bond, issued in August 2020 through the Public Debt Management Office of the Ministry of Finance, offered two tranches of fixed rate government bonds for a total principal aggregate amount of THB 30 billion (about \$964 million). It is one of the first such sovereign sustainability bonds issued globally post the COVID-19 pandemic, which combines green and social impacts, along with COVID-19 recovery. Funds raised through these initial bond tranches will be used for a green urban transport project, Bangkok's Mass Rapid Transit Orange Line (East), as well as activities related to SDGs 3 and 8, including public healthcare and employment generation. The bond was oversubscribed three times and is part of a wider 15-year benchmark bond program worth at least THB 100,000 million over the next two fiscal years covering wider green sectors, as well as support for economic recovery in the post-COVID-19 period.

ADB also supported the National Housing Authority of Thailand's maiden social bond, which was issued on 23 September in three tranches totaling THB 6.8 billion towards affordable housing (SDG 11) and refinancing their portfolio of housing for low- and middle-income earners with a view to providing affordable housing and better living conditions. The Social Bond framework and the program will contribute to reducing inequality and poverty. The framework will incorporate green building and energy efficiency as part of national commitments to SDGs 1, 3, 5, 7 and 10.

- **Thailand PDMO Sustainability Bond, August 2020: First sustainability bond by a sovereign in Southeast Asia.**
 - Raised THB30 billion (about \$964 m)
 - Oversubscribed three times
 - To finance green infrastructure (Mass Rapid Transit Orange Line (East) Project) & social impact COVID-19 recovery projects (health, jobs, SMEs)
- **NHA Social Bond, September 2020: NHA's maiden social bond; one of the first by an SOE**
 - Raised THB6.8 billion
 - To finance affordable housing and promote sustainable communities
- ADB already being asked to develop 2 more green, sustainability, SDG bonds in Indonesia and Thailand

Emerging Examples: Demonstration Projects Leading to Programs

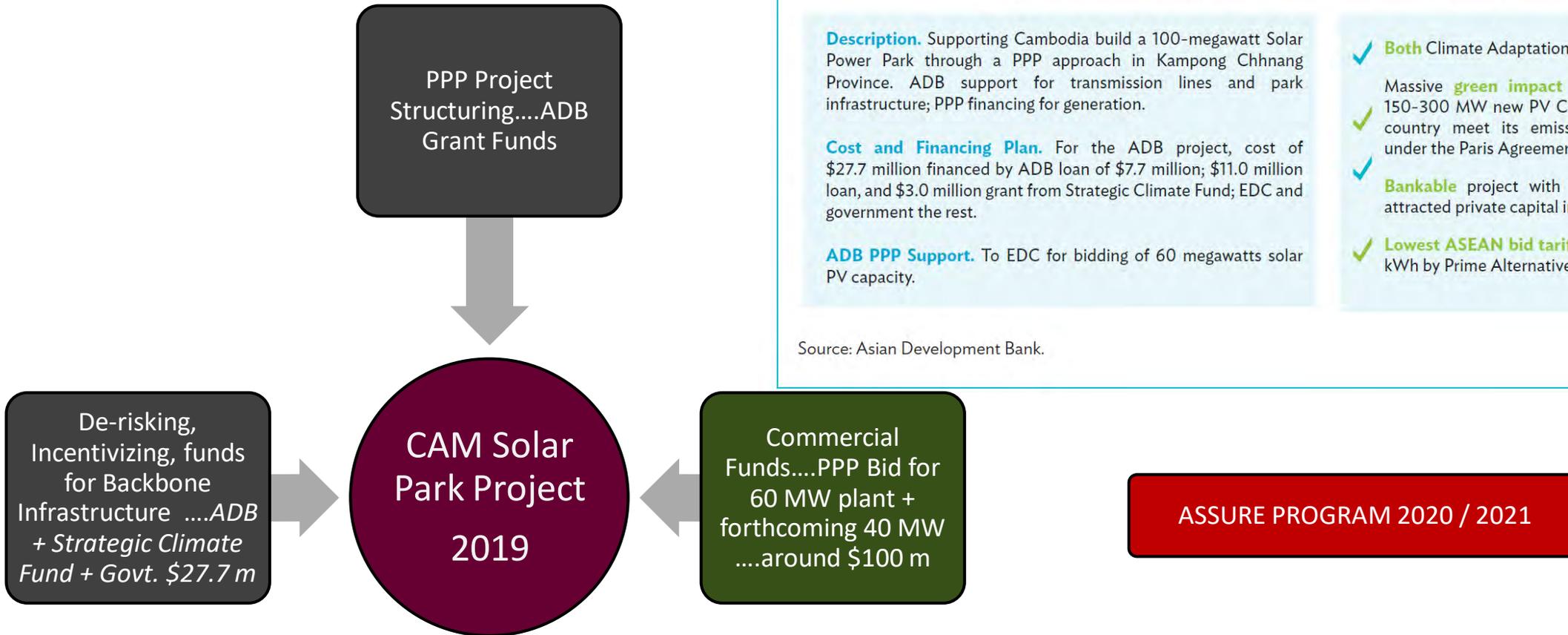


Figure 8: Case Study of the Cambodia Solar Park Project, 2019

Description. Supporting Cambodia build a 100-megawatt Solar Power Park through a PPP approach in Kampong Chhnang Province. ADB support for transmission lines and park infrastructure; PPP financing for generation.

Cost and Financing Plan. For the ADB project, cost of \$27.7 million financed by ADB loan of \$7.7 million; \$11.0 million loan, and \$3.0 million grant from Strategic Climate Fund; EDC and government the rest.

ADB PPP Support. To EDC for bidding of 60 megawatts solar PV capacity.

- ✓ **Both** Climate Adaptation and Mitigation impacts.
- ✓ Massive **green impact** contributing to the needed 150-300 MW new PV Capacity (2020-2030) to help country meet its emission reduction commitments under the Paris Agreement.
- ✓ **Bankable** project with a rate of return of 8.4% - attracted private capital interest.
- ✓ **Lowest ASEAN bid tariff** achieved of \$0.39 cents per kWh by Prime Alternative Co. Ltd.

Source: Asian Development Bank.

Emerging Examples: ASEAN Catalytic Green Finance Facility (ACGF) – Regional Derisking



- Launched in 2019, the ACGF pilots the Oceans Financing Initiative in Southeast Asia.
- **13 partners** and project financing commitments of **\$1.4 billion**.
- **Only regionally owned** green finance vehicle
- Combines innovative financial structuring with funding for de-risking projects to enhance bankability and attract private capital.
- Pipeline of **17 green projects** and helping Indonesia and Cambodia to develop blended **marine financing vehicles**.
- **Green Recovery Window** under development.

- A separate concessional (IFF) financing window for CAM, LAO, MYA

Emerging Examples: ASEAN Catalytic Green Finance Facility (ACGF) – Regional Derisking



ACGF
ASEAN CATALYTIC GREEN FINANCE FACILITY

Project Eligibility: Projects supported must

- **Be “Green”** ...per the ACGF Green Framework
- **Be “Bankable”** ACGF team will help structure
- **Have a roadmap for private capital flow...** ACGF will help structure
- **Have a sovereign guarantee** for ACGF Funds.

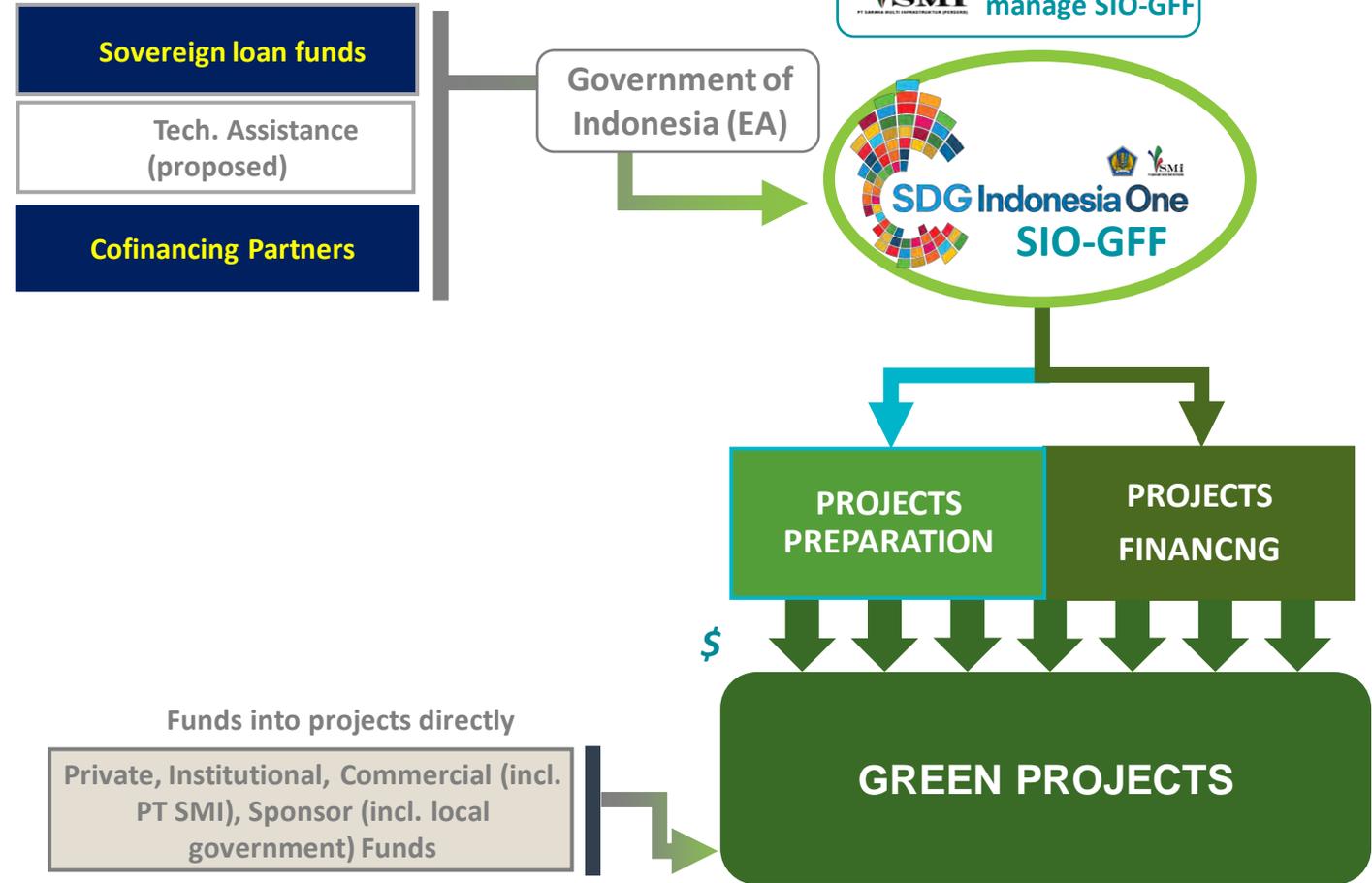
ACGF Funds Aim to Leverage each \$1 of public funds to attract at least \$3 of commercial funds to projects

ACGF Funds aims to Leverage each \$1 of public funds to attract at least \$3 of commercial funds to projects

2 Step Loan Pricing (ACGF Funds)	
6m \$ LIBOR for first 7 years	6m \$ LIBOR + 140bps from year 8-20
(Cofinancing from ACGF Partners can lower blended rate)	

Emerging Examples: National De-risking Facilities...SDG INDONESIA ONE GFF

One of the First SDG Focused De-risking And Enabling Facilities



Aim is for at least 3 x multiple or \$2.4 billion of projects

Emerging Concepts: Blue Credits; Green Securitisation...and more

Green Finance Strategies for Post-COVID-19 Economic Recovery in Southeast Asia

2. Oceans Financing and Blue Credits

Pandemics and oceans health. An increasing body of work links climate change, biodiversity loss, and ocean acidification with human health. Pandemics such as COVID-19 seem to be a result of blurring the lines between human livelihoods and the natural environment. A 2012 report noted the emergence of approximately one virus a year from an animal host due to changes in local ecosystems disturbing the balance between pathogens and principal host species, together with increasing urbanization and changes in human behavior.⁸⁰

The oceans, a term used to denote all water bodies, whether seas, lakes, or rivers, are critical as they absorb, together with the forests, around 50% of global carbon dioxide emissions. Rising ocean pollution is reducing their ability to act as carbon sinks, propelling us further toward global warming over the 2 degrees level. With ever warmer ocean currents and the melting of glaciers, there is expected to be an increase in viruses and future pandemics.

Further, with the massive rise in seawater acidity, estimated at 30% since the industrial revolution combined with pollutants such as 8 million tons of plastics ending up in the oceans each year, the threat to the many fishing communities and economies that depend on the oceans cannot be overstated. The oceans economy is equivalent to the seventh largest economy in the world measured by contribution to gross domestic product, with the value of goods and services from coastal and marine environments estimated at about \$2.5 trillion a year, extraction of marine resources worth \$6.9 trillion, and tourism and coastline industries amounting to \$7.8 trillion.⁸¹

The need for governments to specifically focus on reducing pollution and other negative impacts on their water resources is thus urgent. Caring for the oceans should be included in economic recovery strategies. Innovative financing approaches can help in this to scale up the financing available for oceans health projects.

Blue finance challenges. Therefore, there is a need for “blue finance” or “blue capital” to support ocean health projects whether in urban, coastal, or rural areas. Blue finance has gained interest from both conservationists and investors, underlining the connection between ocean protection and finance, given the growing awareness of their economic value (footnote 81).

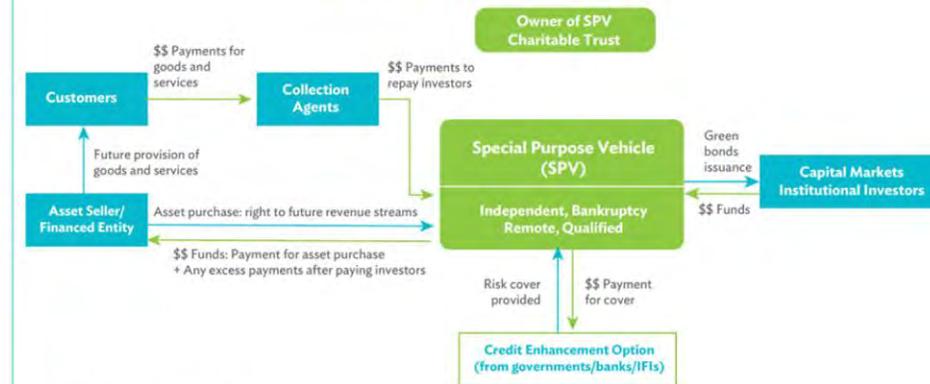
However, a lack of blue economy projects has been the major constraint, not a lack of capital or investor interest. A survey by Credit Suisse and Responsible Investor covering 328 respondents from 34 countries, analyzed factors such as interest, barriers, and opportunities in the blue economy and listed the lack of investment grade projects, internal expertise, and visibility as key barriers to mainstreaming blue finance (Figure 14).⁸²

In developing Asia especially, many blue economy projects are constrained by low tariff and revenue levels due to affordability considerations, or are pure cost projects with no revenue streams at all. Other risk factors from high cost technology needs in sectors such as plastic waste management, the environment and land acquisition have deterred private capital sources from these sectors leading to a growing demand-supply gap in needed infrastructure.

The blue credits mechanism. One mechanism that could be developed by countries in their green recovery strategies post-COVID-19, is to create a mechanism of “blue credits,” to specifically address the issue of a lack of

Green Finance Concepts to Stimulate Post-COVID-19 Recovery

Figure 11: Future Flow Securitization



IFI = international financial institution.
Source: Asian Development Bank.

Box 4: Future Flow Securitization for the Airline Industry—An Illustration

Taking the example of the airline industry, affected by losses from flight disruptions and loss of ticket sales, while its high costs—lease payments for aircrafts, buildings and infrastructure, and operational costs—continue, would require

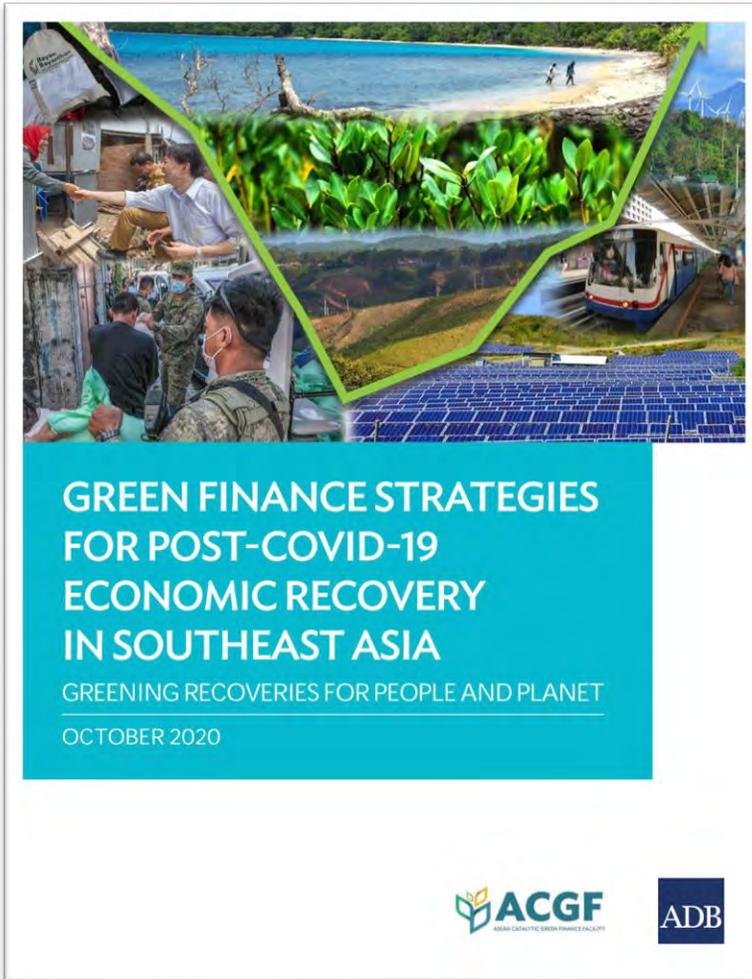
- short-term emergency funding to repay immediate operational costs to avoid defaulting and thus bankruptcy and
- long-term bridge financing until it can operate normally and generate enough revenues to refinance itself.

Assuming the airline can expect revenues from ticket sales, and sub-leasing its services to other smaller airlines, plus indirect revenues from onboard sales of goods, it could raise funds on the back of its anticipated future earnings. These could be denominated in dollars and local currency.

A special purpose vehicle (SPV) would need to be established for the transaction, with the airline company selling a portion of its revenues to the SPV under a revenue sharing sale agreement. This asset would be bought from proceeds of a bond issuance to capital market securitization investors backed by its right to receive the existing and future airline revenues.

Under the terms of the bond, there would be a grace period equal to the transition period for payment of principal and coupon, thereby allowing the airline time to recover. Green criteria such as reducing the airlines carbon footprint on the ground and in the air through fewer short haul flights, reduced long haul flights, use of greener fuel, and green infrastructure policies, would be a prerequisite for inclusion in the structure.

More is needed: Green Finance Strategies for Recovery Publication



- This publication **suggests green finance mechanisms that could be used by countries in ASEAN** but also wider afield to develop and accelerate green recovery strategies.
- The paper provides both examples of green finance mechanisms - such as **de-risking pooled facilities and green bonds** – as well as innovative concepts – such as **green securitization and COVID-19 recovery bonds**; that could be used by governments in their green finance strategies.
- The overall point of this mechanisms is to **leverage public funds to catalyse private capital to the largest extent possible**.



Thank You

www.adb.org/acgf

Financing Quality Infrastructure for Growth and Development: ASEAN Infrastructure Fund (AIF)

AIF IN NUMBERS

Total equity (million):

\$485.3

No. of shareholders

11

AIF commitments
(million):

\$497

Total project value
(billion):

\$3

- The only truly **regional and largest financing initiative** in Asia
 - Established: in 2011 by all ASEAN member economies & ADB
 - Aim: to promote regional infrastructure financing; to raise funds from domestic capital markets (long term)
 - Governance: Managed by a team in SERD reporting to a Board of shareholders semi-annually
 - Approach: leverages ADB systems for co-financing projects with ADB; pricing is Libor + 140 basis points
-
- **New Pathways:** In 2019 AIF's new Green and Inclusive Infrastructure Window was launched at the ASEAN Finance Ministers Meeting in Chiang Rai, Thailand.



Accelerating Green Infrastructure Across
Southeast Asia

**Inclusive Finance
Facility**

Supporting Critical Infrastructure in
Cambodia, Lao PDR, Myanmar