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Debt for Climate Swaps

Supporting a sustainable recovery

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Context

Context (1/2)

- The COVID-19 pandemic has worsened the debt vulnerabilities of many low- and medium-income sovereigns. Debt levels were already high for many even prior to COVID outbreak.¹
- This is exacerbated because government revenues have declined as a result of limited economic activity – while the timing and the quantum of debt servicing payments remain the same.
- In addition, exchange rate fluctuations can further increase the burden of debt servicing payments denominated in foreign currencies.
- The IMF estimates that the ratio of public debt service costs to government tax revenue will exceed 20% in a majority of low-income and emerging countries in 2021.²

Context (2/2)

- As a greater proportion of these governments (now reduced) revenues are now dedicated to servicing debt, spending towards reviving growth or achieving climate goals will likely take a backseat.
- In the absence of any intervention, the World Bank estimates that the COVID-19 pandemic will push an additional 100 million people into extreme poverty in 2020, with the total rising to as many as 150 million by 2021.³
- Depending on the fiscal situation of a nation, there's a need to provide fiscal headroom through either of the following routes:
 - a. Debt suspension
 - b. Debt forgiveness
 - c. Reorientation of debt so that service payments are utilized for a green recovery

Existing interventions to address sovereign debt

- While there are interventions focused on providing debt relief to Low Income Countries (LICs), no such interventions exist to support Middle Income Countries (MICs).
- Even if MICs do not face an imminent liquidity crisis, they still need support to ensure fiscal resources are available for economic stimulus and climate action.

Sovereign external debt holder	Income level of the debtor nation	Issue	Intervention
National governments	Low Income Countries (LICs)	Distressed debt/liquidity	DSSI (Debt Suspension Servicing Initiative) ⁴
National governments	Middle Income Countries (MICs)	High external sovereign debt – potentially leading to underspending on economic stimulus and climate finance	Missing

Why an intervention for Middle Income Countries (MICs) is needed

- **High proportion of outstanding debt:** More than 70% of non-developed world debt service due in 2021 is owed by Upper MICs.⁵ Most of the remainder is owed by Lower MICs. The Lower Income Countries (LICs) owe a small fraction of the debt service due.
- **MICs are not eligible for the DSSI program:** DSSI focuses on suspending sovereign debts of 73 most vulnerable countries for a period of six months, which was further extended by another six months through December 31, 2021.⁶
- **Inadequate fiscal/monetary stimulus:** The magnitude of policy stimulus measures in response to COVID-19 outbreak (% of GDP) is much smaller for developing countries compared to that for the developed – implying that these countries need assistance.⁷

Debt for Climate (DFC) Swaps

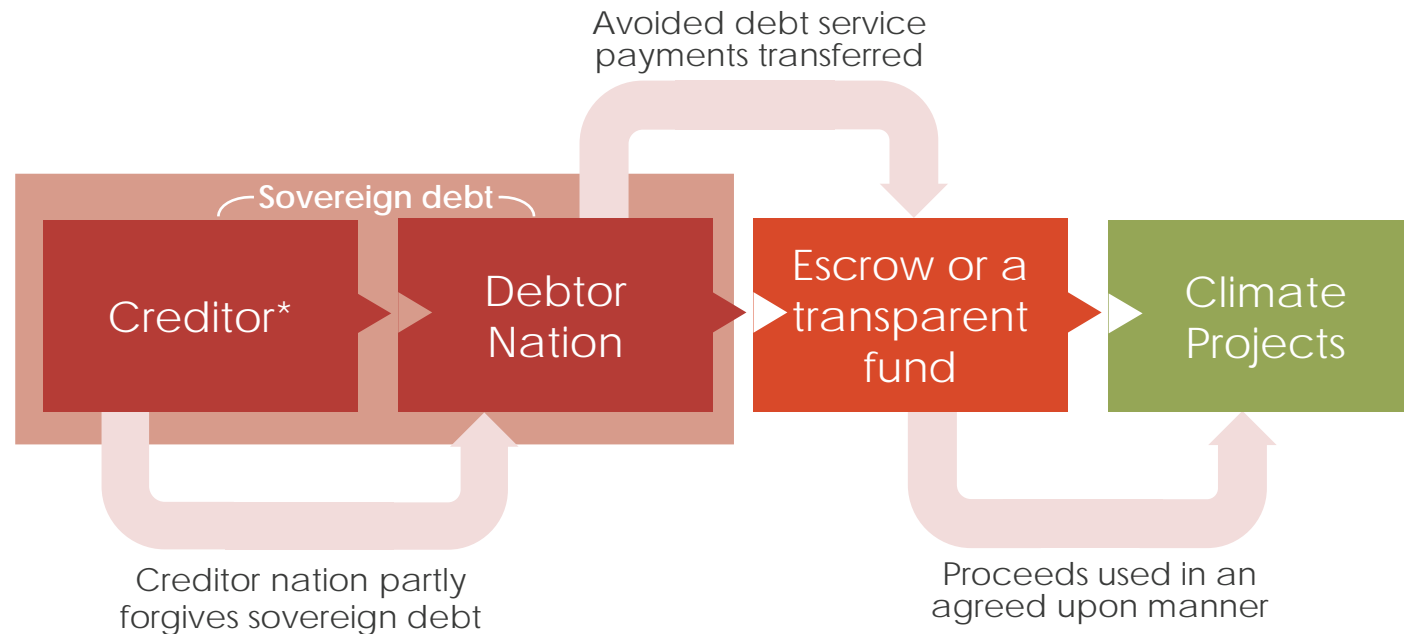
An introduction

What are Debt for Climate (DFC) Swaps?

- Debt for Climate (DFC) swaps are a type of debt swap in which the debtor nation, instead of continuing to make external debt payments in a foreign currency, makes payments in local currency to finance climate projects domestically on agreed upon terms.
- DFC swaps can reduce the level of indebtedness as well as free up fiscal resources to be spent on green investments.
- There are examples of Debt for Nature (DFN) swaps between creditor and debtor nations. However, there are differences between DFC and DFN swaps. These are discussed in a subsequent section.

Structure of DFC Swaps

While each transaction will vary, a generic structure of a DFC swap agreement is represented by the following instrument mechanics:



*Creditor is likely to be another sovereign, but private sector creditors are also encouraged to participate in a DFC swap.

Alternatively, new debt can be issued by a debtor nation to replace existing debt with a commitment to use proceeds to address climate change through mutually agreed performance-linked incentives such as lower interest rates, grants, carbon offsets to service interest, etc.

How DFC swaps can benefit MICs

DFC swaps would be used to generate the following outcomes:

- **Enhanced climate spending:** The avoided debt service payments should be used for climate friendly activities or to incentivize participation in climate friendly sectors.
- **Boosting economy recovery:** Given suppressed economic demand, the investments can stimulate private investment and assist in economic recovery, while incorporating climate resilience and protecting biodiversity.
- **Reduced external sovereign debt:** DFC swaps help highly-indebted nations (who are still servicing their debt) reduce debt service and free up cash flows for more productive investments.

Eligibility for DFCs

DFC swaps should be proposed for countries that meet the following criteria:

- **High level of public external debt held bilaterally by other sovereigns** (e.g., >USD 3 billion or >5% of GDP). While our focus is on debt issued by a federal government, debt owed by public sector entities are included as it can be part of DFC solutions. See Annex 1 for scope of debt considered for computation.
- **No imminent liquidity crisis** because DFC swaps as proposed here are for nations that are servicing their debt but underspending on climate finance given limited fiscal capacity and/or competing demands post-COVID. Therefore, we assume that eligible nations would not be part of DSSI.
- **Nation should ideally be a MIC** (Middle Income Country), as per World Bank [classification](#). However, LICs that are not part of DSSI can be considered.
- **The country should not be a major creditor nation** (e.g., China) or a part of a major creditor group (e.g., The Paris Club).
- **The country shouldn't be unstable** – politically (e.g., Syria) or economically (e.g., Venezuela), as measured by the [Fragile States Index](#).

(Optional) Conditionality for DFCs

Only those eligible nations that agree to the following conditions could be considered for DFC swaps:

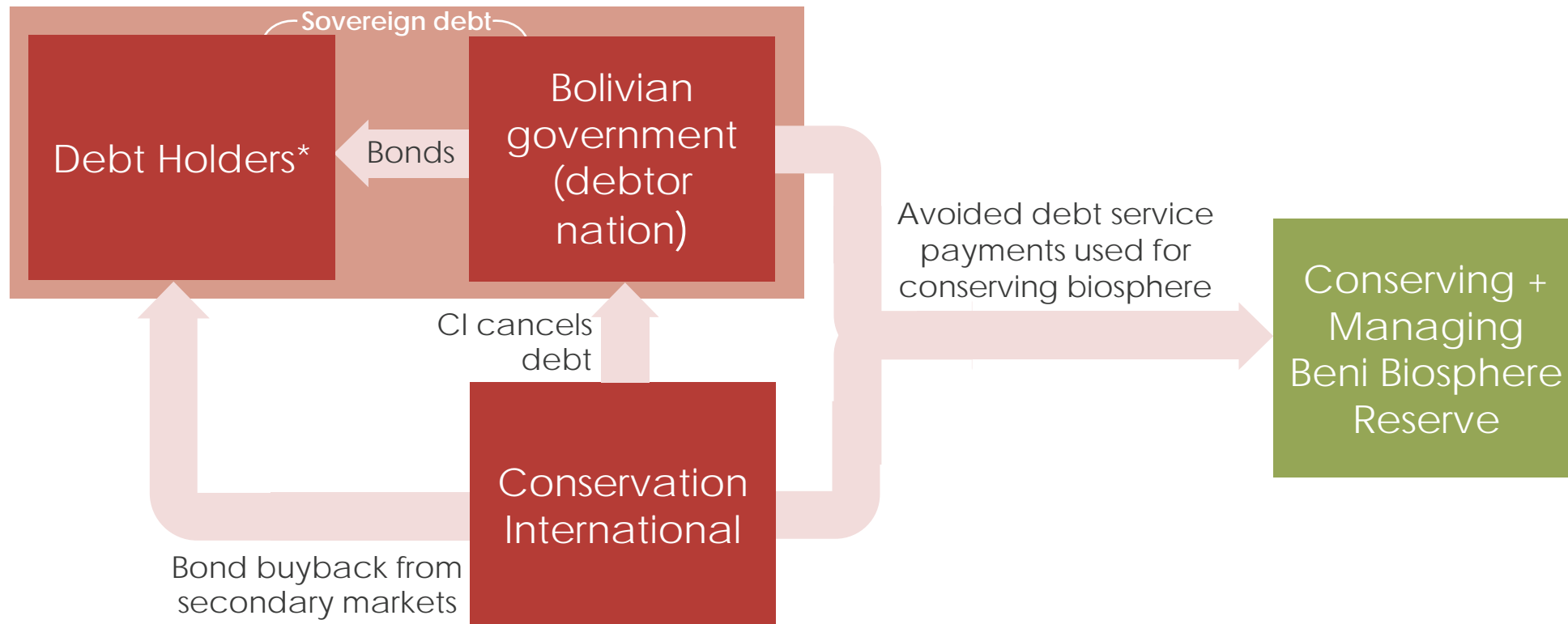
- **Higher transparency** in debt reporting and monitoring, akin to that for the DSSI Initiative.
- Recipient nations **pledge increased climate commitments** in their NDCs under the Paris Agreement.

Experience with Environment- focused Debt Swaps

Learnings from previous transactions

Debt for Nature (DFN) Swaps – Case Study #1 – Bolivia (1987) (1/2)

- Nature-focused debt swaps have taken place in several countries such as Bolivia, Ecuador, Indonesia, Seychelles, among others, since the 1980s.⁸



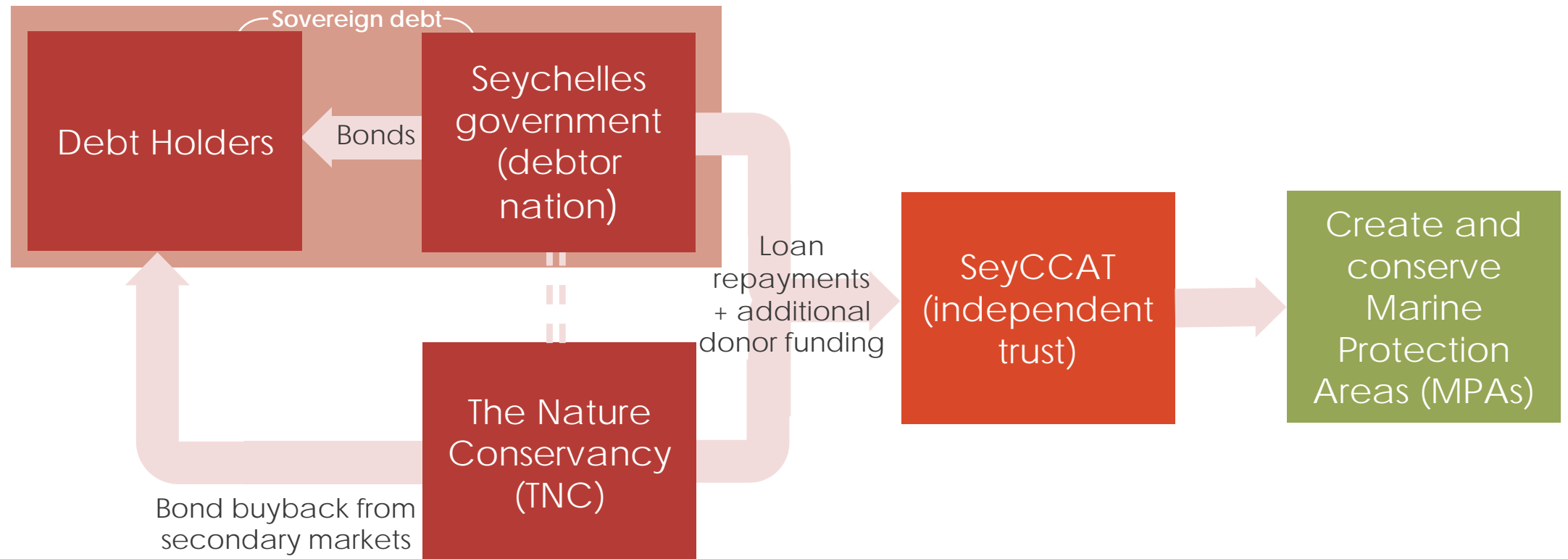
* Debt holders could be both private or public entities since bond buybacks are from the secondary market.

Debt for Nature (DFN) Swaps – Case Study #1 – Bolivia (1987) (2/2)

- In 1987, Conservation International (CI) purchase USD 650,000 of Bolivia's debt on the secondary market, offered at a huge 85% discount.
- CI then canceled this debt in exchange for Bolivian government's agreement to raise legal protection on the Beni biosphere reserve to the maximum extent allowed by Bolivian law.
- In addition, the government established an endowment fund in the amount of USD 250,000 worth of local currency to cover operating costs of managing the reserve.

DFN Swaps – Case Study #2 – Seychelles (2018) (1/2)

- In 2018, the Seychelles became the first country to successfully undertake a DFC swap aimed at specifically protecting the world's oceans.⁹



DFN Swaps – Case Study #2 – Seychelles (2018) (2/2)

- The Nature Conservancy (TNC) acquired Seychelles' foreign external debt at a discounted price.
- In addition, TNC raised additional funding worth USD 5 million from private donors.
- In return, the government of Seychelles promised to repay the loans to TNC to a specially created Seychelles Conservation and Climate Adaptation Trust (SeyCCAT). The funds raised from private donors was also transferred to SeyCCAT.
- SeyCCAT would be used to fund and conserve 13 Marine Protected Areas (MPAs). These MPAs cover more than 85% of the nation's coral reefs and shallow waters.

Key learnings from the past and what needs to be different

Issue	Past Practice (DFN swaps)	Proposed Practice (DFC swaps)
Key objective	To address liquidity crisis and prevent sovereign default, while conserving the environment.	To promote economic recovery and enhance financing for climate-smart activities.
Mobilizing private investment	Did not have a mandate to mobilize downstream private investment.	Would mobilize private finance to leverage swap proceeds at the end-use level (separate from participation of private creditors).
Ticket size and climate ambition	Focused on smaller ticket sizes and did not generate significant climate impact. ¹⁰	DFC swaps are likely to be larger and contribute to debtor nation's climate commitments.
Transacting parties	Involved a neutral third-party that would buy out distressed debt from secondary markets.	DFC swaps are likely to be conducted directly between the sovereigns.

Key Issues for Structuring Debt for Climate Swaps

Participating entities and their roles

Who may need to participate

In addition to the willing debtor nation and at least one creditor nation, other parties will need to be either directly or indirectly engaged on structuring a swap transaction:

- **Other creditor nations** if it is a plurilateral swap. Given the outstanding sovereign debt held bilaterally by China, engaging China will be key to many swaps.
- **Private financial groups.** Experience shows that creditor nations are politically averse to allowing the private sector to get a “free pass”. While private financial groups holding debt may have good reasons to be reluctant, engaging them in structuring a swap will be important. They will likely need an incentive (and some argue perhaps also a stick).
- **Credit rating agencies** should be engaged to ensure there are no negative repercussions to the credit rating for debtor country. A “forced” restructuring should be avoided. It will be important to demonstrate that it is fully-serviced external debt that is being beneficially redirected to financing climate mitigation and adaptation domestically for benefit of all.

Who will need to guide and help

- **Engaging the IMF** will remain key in any large restructuring of sovereign debt and reprogramming debt service to increase climate-aligned capital formation. It is also developing a framework for 'green debt swaps' in conjunction with the World Bank.¹³
- **Relevant DFIs** – whether the World Bank, regional development banks, or bilateral agencies – will be key to providing technical assistance and helping build capacity across various ministries in the debtor nation.
- **DFC swaps can take many forms.** Rather than oversimplify and propose a generic swap structure, the rest of this paper focuses on how the proceeds from a mutually acceptable and well-structured swap – informed by all the considerations listed here – could potentially be utilized, while leveraging private finance for the end uses.

Debt for Climate Swaps - Proposed Use of Proceeds

Criteria for selection and suggested use-cases

Criteria for using proceeds

Given that the overall objective of DFC swap is to convert sovereign debt into enhanced spending on climate activities, the use of proceeds should abide by the following principles:

1. **Type of sectors:** The avoided debt service payments should be used for climate friendly activities whose outcomes are monitored and measured.
2. **Nature of projects:** Proceeds should be used for underspent activities that have (close to) commercial level risks/returns. There may be a portion allocated for technical assistance or capacity building.
3. **Mobilize private investment:** The proposed use cases should not crowd out private investment and, in fact, should leverage downstream private investment that otherwise may not have occurred.

Based on these criteria, we propose the following use cases...

DFC Swaps – Proposed Use Cases

- I. Mitigation
 - Accelerated Coal Power Retirement Mechanism (ACPRM)
 - Accelerated Energy Efficiency Adoption Mechanism (AEEAM)

- II. Adaptation/Nature-Based Solutions (NBS)

I. Proposed Use of Proceeds: Mitigation

DFC Swaps – Proposed Use Cases

I. Mitigation

- Accelerated Coal Power Retirement Mechanism (ACPRM)
- Accelerated Energy Efficiency Adoption Mechanism (AEEAM)

II. Adaptation/Nature-Based Solutions (NBS)

Accelerated Coal Power Retirement Mechanism (ACPRM) – Country Selection

- From the countries eligible for a DFC swap, the following criteria could be used to shortlist candidate countries for the ACPRM:
 - ✓ High dependence on imported coal (e.g., >25% of total coal consumption).¹¹
 - ✓ High proportion of power generated using coal (e.g., >40%).¹²
 - ✓ Preferably not a coal exporting country to avoid systemic conflicts of interest.

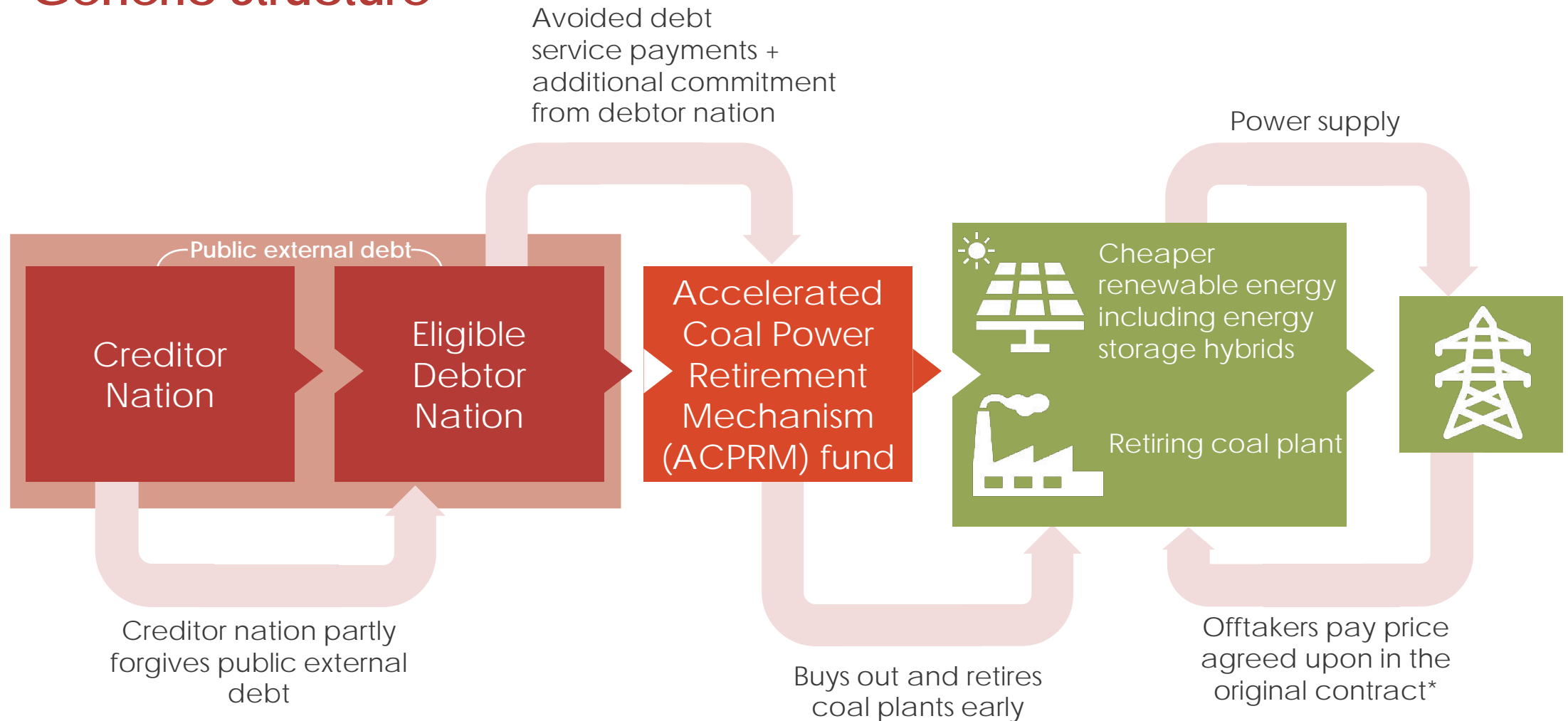
Accelerated Coal Power Retirement Mechanism (ACPRM) – Relevant Countries

- Based on our analysis, the following countries should be considered for ACPRM on a priority basis. Please note that the list is not a ranking, but a group of countries that meets both the eligibility and selection criteria.

Country	Eligibility Criteria					Selection Criteria	
	Public external debt held bilaterally (% of GDP)	Public external debt held bilaterally (USD B)	Income Classification	A major creditor nation?	Part of DSSI Initiative	Coal import (% of total consumption)	% of power generated from coal
Vietnam	8.4%	22.0	MIC	No	No	50%	48%
Philippines	2.2%	8.3	MIC	No	No	81%	48%

- Data as of 2019, unless specifically mentioned*
- See Annex 2 for country-level external debt data*

Accelerated Coal Power Retirement Mechanism (ACPRM) – Generic Structure



* While the replacement renewable energy may be delivered at a lower cost than the coal power being replaced, it is likely that the economics of early retirement will need the original PPA to be honored for at least some time into the future.

Accelerated Coal Power Retirement Mechanism (ACPRM) – Key Features

- Portion of the foregone debt to be matched with anchor commitment from debtor nation and transferred to a “fund”.
- This fund would facilitate early retirement of plants incl purchase if needed.
- Foregone revenues will be compensated by supplying power to the end-user (who would pay a higher price/unit as prescribed by the PPA) from cheaper renewable.
- Optionally, beneficiaries of early closure of coal power plants through purchase etc. should reinvest proceeds in clean energy.
- A financial and skills package for labor and communities to just transition from coal to clean energy, or provision of an appropriate safety net for displaced labor.
- Debt (interest) service could partially be based on valuing carbon mitigated as a “jurisdictional no-coal credit” offset consistent with use for net zero activities globally.
- ACPRM takes cues from the coal retirement mechanism proposed by a Harvard Law-affiliated program¹⁴ and transition cost analysis for the South African power sector.¹⁵

DFC Swaps – Proposed Use Cases

- I. Mitigation
 - Accelerated Coal Power Retirement Mechanism (ACPRM)
 - Accelerated Energy Efficiency Adoption Mechanism (AEEAM)
- II. Adaptation (including Nature-Based Solutions)

Accelerated Energy Efficiency Adoption Mechanism (AEEAM) – Country Selection

- From the countries eligible for a DFC swap, the following criteria could be used to select countries for AEEAM:
 - ✓ Countries with high energy intensity, i.e., high energy use per unit of GDP, would be strong candidates for energy efficiency. (Energy intensity is used as a proxy measure of how energy efficient a nation is.)
 - ✓ Countries with high carbon intensity, i.e., high percentage of energy consumed is generated by fossil fuels (e.g., > 70%), would ensure that energy efficiency in these countries will contribute to climate change in a significant manner.
- For energy intensity, we use the Energy Intensity index from Enerdata.¹⁶ This index ranks countries based on energy consumed per unit of GDP.
- For carbon intensity, we use the World Bank database to identify countries where a high percentage of energy consumed is generated by fossil fuels.¹⁷

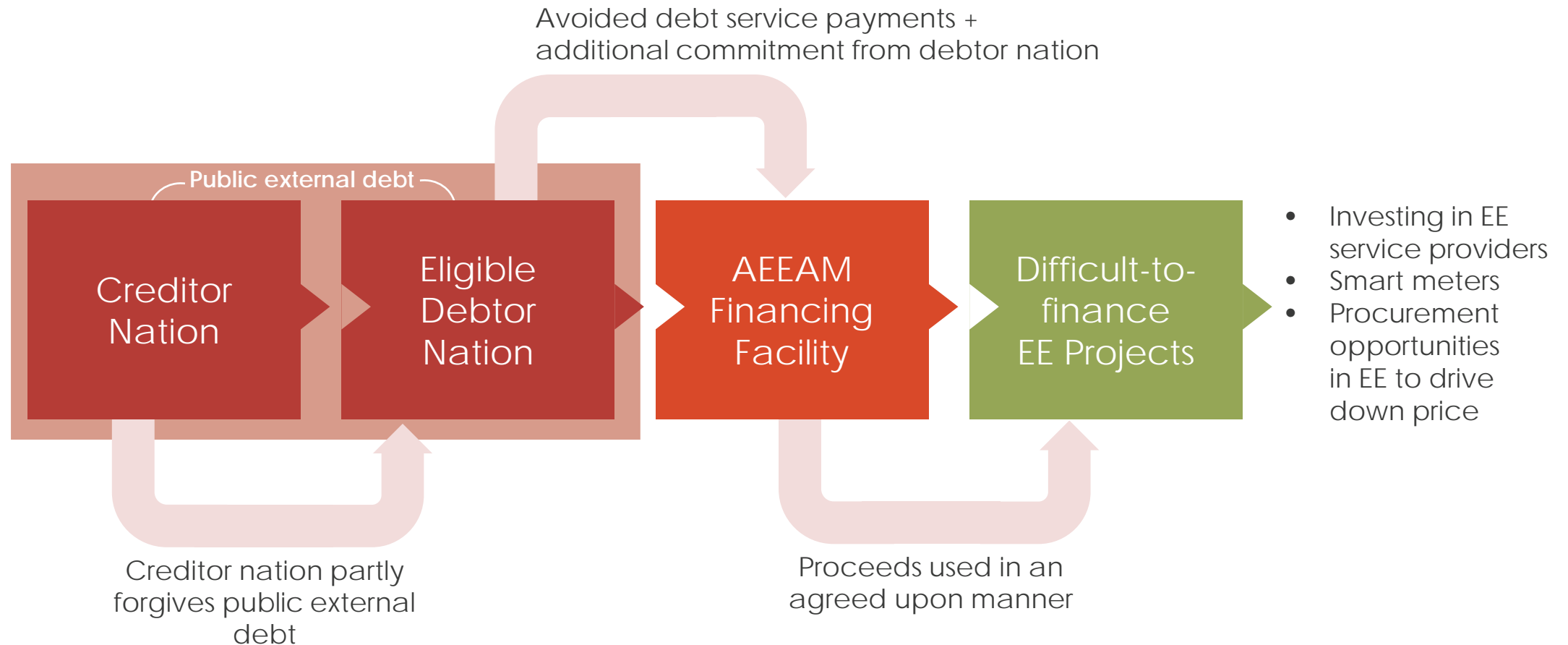
Accelerated Energy Efficiency Adoption Mechanism (AEEAM) – Relevant Countries

- Based on our analysis, the following countries should be considered for AEEAM. Please note that the list is not a ranking, but a group of countries that meets both the eligibility and selection criteria:

Country	Eligibility Criteria					Selection Criteria	
	Public external debt held bilaterally (% of GDP)	Public external debt held bilaterally (USD B)	Income Classification	A major creditor nation?	Part of DSSI Initiative	Coal import (% of total consumption)	% of power generated from coal
South Africa	0.9%	3.2	MIC	No	No	5	87%
Uzbekistan	7.8%	4.5	MIC	No	No	9	98%
Thailand	0.6%	3.5	MIC	No	No	16	80%

- * The latest available year is 2014
- Data as of 2019, unless specifically mentioned
- See Annex 2 for country-level data on external debt

Accelerated Energy Efficiency Adoption Mechanism (AEEAM) – Generic Structure



Accelerated Energy Efficiency Adoption Mechanism (AEEAM) – Key Features

- Use of proceeds from swap are used to capitalize an independently governed EE financing facility with transparent project selection and financing criteria.
- Preferably partially matched anchor commitment from the debtor nation.
- Would finance projects with high levels of readiness that are under-invested in.
- Small component for Technical Assistance (TA) that aids in project implementation, building market capacity and mobilizing private participation.
- Could include opportunities not targeted by traditional energy companies, such as smart meters, investing in EE service providers and other procurement opportunities that could bring down price through economies of scale.
- The AEEAM structure can be modeled on USD 250 million assistance package provided by ADB to India's state-run entity EESL.¹⁸

II. Proposed Use of Proceeds: Adaptation (including Nature- Based Solutions)

II. Adaptation (including NBS) – Country Selection

- Within adaptation, we have also included Nature-based Solutions (NBS), since [research](#) suggests that investing in nature (conservation, wetland restoration, enhancing diversity etc) can help local communities adapt to climate change.
- From the eligible countries, the following criterion can be used for selecting countries for adaptation (including NBS) solutions:
 - ✓ Nations most vulnerable to climate change
- For this, we use the ND-GAIN Index, which ranks a country's vulnerability to climate change relative to its readiness to improve resilience.¹⁹
- Countries with lower scores are more vulnerable to climate change.

II. Adaptation (including NBS) – Relevant Countries

- The following countries should be considered for Adaptation Solutions. Please note that the list is not a ranking, but a group of countries that meets both the eligibility and selection criteria:

Country	Eligibility Criteria					Selection Criterion
	Public external debt held bilaterally (% of GDP)	Public external debt held bilaterally (USD B)	Income Classification	A major creditor nation?	Part of DSSI Initiative	ND-GAIN Index Rank (2018)
Zimbabwe	12.8%	2.7	MIC	No	No	10
Bangladesh	4.6%	13.4	MIC	No	No	20
Laos	36.8%	6.5	MIC	No	No	39
Cambodia	20.1%	5.4	MIC	No	No	42

- Data as of 2019, unless specifically mentioned*
- See Annex 2 for country-level data on external debt*

II. Adaptation (including NBS) – Business Models (1/3)

Most projects and business models within NBS can broadly be categorized into the following two categories:

- i. Business models that are typically not commercially viable
- ii. Business models that show promise to be commercially viable – but lack demonstrative precedents to establish viability.

We provide more information in the subsequent slides. Depending on the needs and preferences of the creditor and the debtor nations, the DFC swap can include either of these.

II. Adaptation (including NBS) – Business Models (2/3)

i. Business models that are typically not commercially viable

- The rationale for undertaking such projects is that their benefits, such as carbon capture, improved health of citizens, higher water tables, enhanced biodiversity, jobs created etc. far outweigh the costs.
- However, at a project level, the cash flows are not commercially viable, since the accrued economic benefits cannot be attributed to a single entity.
- Examples of such projects and business models include:
 - ✓ [Great Green Wall Initiative](#)
 - ✓ [Grain for Green Program](#)
 - ✓ [Mangrove Restoration](#)

II. Adaptation (including NBS) – Business Models (3/3)

ii. Business models that show promise to be commercially viable – but lack demonstrative precedents

- There are several projects and business models that show promise to be commercially viable – depending on how they are structured.
- Such business models are innovative and may have limited or no precedents that can establish their commercial viability. Thus, the total risk of such projects remains unknown – which deters commercial investors.
- Examples of such projects and business models include:
 - ✓ [Forest Resilience Bond](#)
 - ✓ [Sustainable Coastal Fisheries](#)
 - ✓ [Blended Blue Finance Facility](#) for management of Marine Protected Areas
 - ✓ [LEAF initiative](#) that can compensate countries for carbon capture through avoided deforestation, restoration or afforestation.

Summary

- The COVID-19 pandemic has exacerbated the debt vulnerabilities of developing countries.
- In the case of LICs, this may manifest in the form of liquidity crunch, which could lead to a potential default.
- However, MICs face other issues. A number of MICs do not face liquidity crisis – they have capacity to payback upcoming debt servicing payments, but due to limited government revenue collections (as a result of pandemic), a greater proportion of fiscal resources is now dedicated towards servicing debt payments.
- This leaves very little headroom to spend on climate projects and stimulus measures aimed at economic recovery.
- DFC Swaps may emerge as a viable option that can generate the much-needed fiscal space for MICs to focus on climate ambitions and economic recovery, while reducing their overall debt burdens.

Annexes

Annex 1: Debt considered for analysis

For our analysis, we considered the public external debt held bilaterally, as illustrated below:

Creditor	Domestic Debt	External Debt
	Debtor	
Private	Government	Government
	Public Sector Enterprises	Public Sector Enterprises
	Private	Private
Multilateral Development Banks (MDBs)	Government	Government
	Public Sector Enterprises	Public Sector Enterprises
	Private	Private
Bilateral	Government	Government
	Public Sector Enterprises	Public Sector Enterprises
	Private	Private

Annex 2: Economic and External Public Data of Select Countries

Data on external debt for countries identified as eligible and highlighted for DFC swaps^{20,21}

Public External debt (USD B)	Public External Debt (% of GDP)	Public External Debt Held Bilaterally (USD B)	Public External Debt Held Bilaterally (% of GDP)	Government (Sovereign) External Debt Held Bilaterally (USD B)	Government (Sovereign) External Debt Held Bilaterally (% of GDP)	Public External debt (USD B)	Public External Debt (% of GDP)
Vietnam	261.9	117.3	44.8%	22.0	8.4%	18.6	7.1%
Philippines	376.8	83.7	22.2%	8.3	2.2%	6.4	1.7%
South Africa	351.4	187.7	53.4%	3.2	0.9%	0	0
Uzbekistan	57.9	21.7	37.5%	4.5	7.8%	2.1	3.6%
Thailand	543.5	180.2	33.2%	3.5	0.6%	1.8	0.3%
Zimbabwe	21.4	12.3	57.2%	2.7	12.8%	2.4	11.2%
Bangladesh	302.6	57.1	18.9%	13.9	4.6%	13.4	4.4%
Laos	18.2	16.7	91.9%	6.7	36.8%	6.5	36.0%
Cambodia	27.1	15.3	56.5%	5.4	20.1%	5.4	20.1%

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