



GGGI's Approaches on Climate Finance

Jaehyuk Choi

Head of Financial Collaboration, Outreach and Management
Investment and Policy Solutions Division

Contents



1. Climate Finance Context
2. GGGI Overview
3. GGGI Climate Finance Approaches
4. Korea Green Newdeal Trust Fund

1. Climate Finance Context

- 2009 Climate Finance Goal: 100B USD/year
 - Delayed achievement (2022) but significant increase from 2021 (30%)
 - Public finance 91B USD, Private finance 25B USD
 - Mitigation 60%, Adaptation 27%, cross-cutting 13%
 - But, Not need based, Inadequacy, loan proportion, data issue.....

- COP 29: NCQG
 - Align Paris agreement (NDCs), Meet growing financial needs, Address evolved needs, Improve quality and balance, Carbon Finance

2. GGGI INTRODUCTION



A treaty-based International Organization

HQ in Seoul, Rep. of Korea, GGGI works with 65 countries including 48 member countries

Our Vision



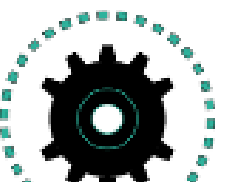
A LOW-CARBON,
RESILIENT WORLD
OF STRONG,
INCLUSIVE, AND
SUSTAINABLE
GROWTH

Our Mission



GGGI SUPPORTS ITS
MEMBERS IN THE
TRANSFORMATION OF
THEIR ECONOMIES TO
A GREEN GROWTH
ECONOMIC MODEL.

Our Position



A TRUSTED ADVISOR &
DEVELOPMENT
PARTNER EMBEDDED IN
MEMBER & PARTNER
GOVERNMENTS



GGGI PROGRAMMATIC SOLUTIONS



Catalyzing and accelerating access to climate finance/ green investments for Members' public and private sectors

Green Investments

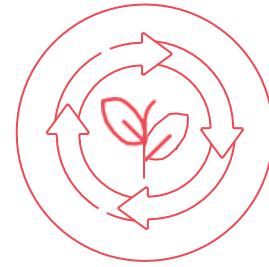
Green bankable projects, investment proposals, national financing vehicles, green and climate instruments, carbon-focused engagements.



Supporting our Members in strengthening policy, planning and regulatory frameworks, and institutional capacity to achieve green growth outcomes

Climate Actions

Inclusive green growth plans, LT-LEDS, NDC support, MRV system design, climate diplomacy.



Achieving a sustainable and circular bioeconomy while securing healthy natural systems

Climate Resilient Agriculture

Solar irrigations, renewable energy application in agri-value chain, resilient cropping practices, resource conservation

Sustainable Forests

REDD+, landscapes financing mechanisms, innovation of natural capital markets.

Coastal Resilience and Blue Economy

(1) Safeguard and strengthen coastal ecosystems resilience and biodiversity; (2) and promote a sustainable and innovative blue-economy.



Making cities and communities sustainable, livable, and resilient, supported through green jobs, services, and green infrastructure capital markets innovations

Circular Economy and Sustainable Waste Management

(1) Optimize resource use and product lifecycles, (2) promote industrial ecology and Extended Producer Responsibility, and (3) ensure sustainable waste management, value from waste, and address plastic pollution.

Sustainable Mobility

E-Mobility, Non-motorized transport

Green Buildings

Green urban infrastructure norms/ standards/ policies, energy efficiency in residential and commercial buildings

Enhance policies, regulations, and access to sustainable energy infrastructure for a just transition towards (1) renewable heating, cooling, and power systems, (2) more efficient energy systems, and (3) cleaner heat and power generation, reducing greenhouse gas-intensive fuels.

Green industrial parks, green supply chains, energy efficiency in SMEs, labelling and standards.



Accelerating progress in our country programs in poverty eradication and gender equality

Cross cutting

in all programmatic solutions

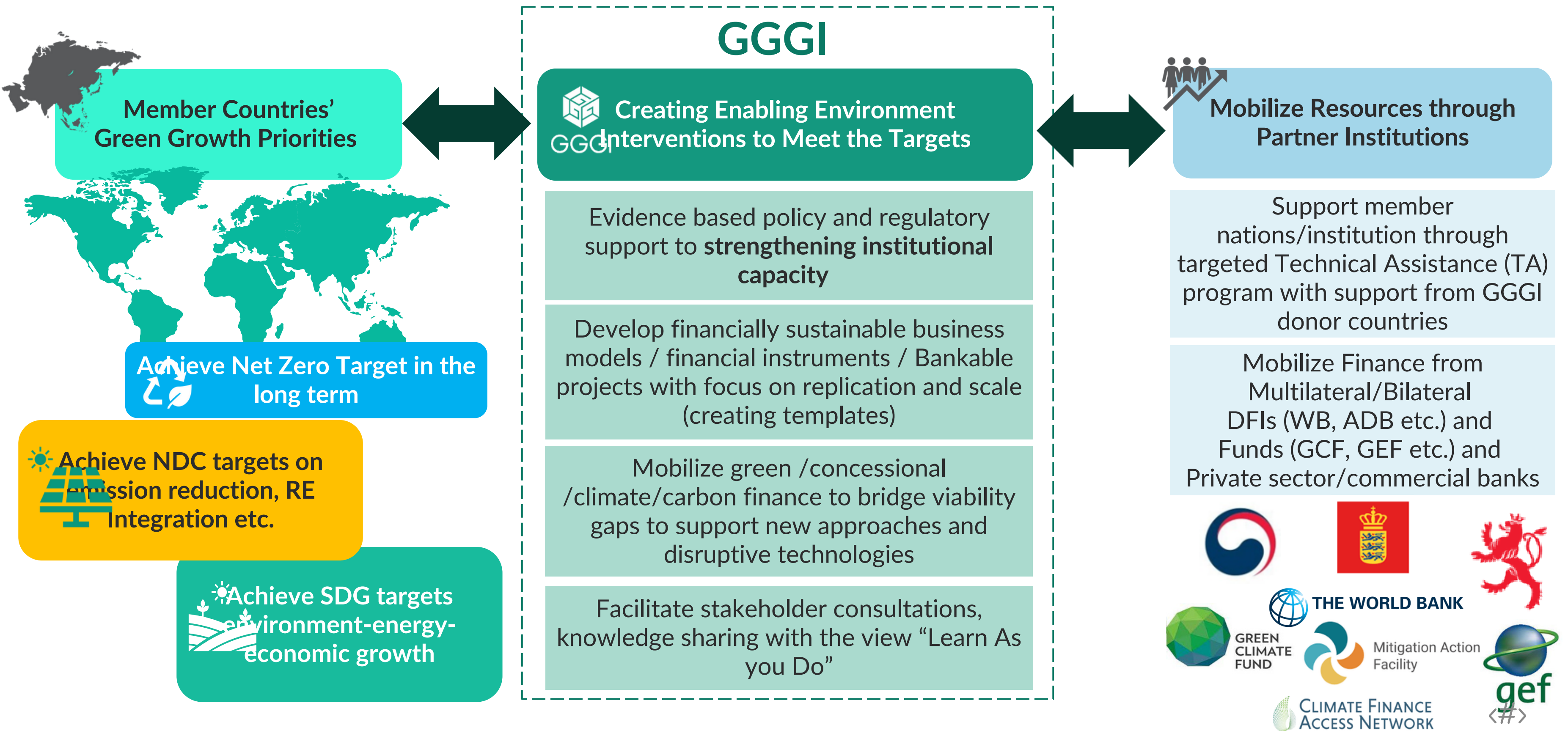


Carbon pricing

Article 6

Article 6 readiness, policy design, transactions and trading

GGGI PROGRAMMATIC INTERVENTION



3. GGGI Climate Finance Approaches: some key trends

(1) Green Infrastructure Project Finance



Infrastructure Finance (Cumulative 2025 Target: USD 6 Billion)

- Project origination, Transaction structuring and Finance syndication covering sectors i.e., Renewable Energy, Energy Efficiency, Waste to Energy, E-mobility, Green Hydrogen, Sustainable Agriculture, traditionally considered as “Bankable Projects”
- Project-Specific Risk Management Instruments/ De-risking: Guarantees, Structured Finance (Junior equity/debt, Mezz loan), Derivates

Standard Project Cycle for Infrastructure Projects

<p>Phase I: Concept</p>	<p>GGGI appointed as an advisor or received mandate from the government. Project at early stages of development. Scoping study or pre-feasibility analysis initiated or ongoing.</p>	<p>Project Idea Note (PIN)</p> <ul style="list-style-type: none"> • Project log-frame (w deliverables & timeline) 	<p>Scoping study Preliminary financial model</p>
<p>Phase II: Design</p>	<p>Feasibility study at an advanced stage or completed. Specific investment opportunity identified and the commercial viability well established. Design of the project implementation structure and key contracts under progress.</p>	<ul style="list-style-type: none"> • Information Memorandum (Info Memo) 	<p>Pre-feasibility study, market assessment Assessments of policies, regulations, etc. Detailed financial model Contractual, legal assessments (PPA, PPP, etc.) ESG</p>
<p>Phase III: Financing</p>	<p>Indicative terms of key project contracts agreed in principle with the main stakeholders. Comprehensive project information memorandum or funding proposal completed. Upon investors' initial commitment, in-depth project planning and engineering commences and progress towards firm investor commitments.</p>	<p>Letter of Intent (LoI), draft term sheets, Memorandum of Understanding (MOU), etc.</p>	<p>Investor brief/teaser Investor slide deck</p>

Floating Solar PV (FSPV)

The “third pillar of PV deployment and application”

Floating solar PV maximising the available surface area and complement the existing land-based and rooftop systems.



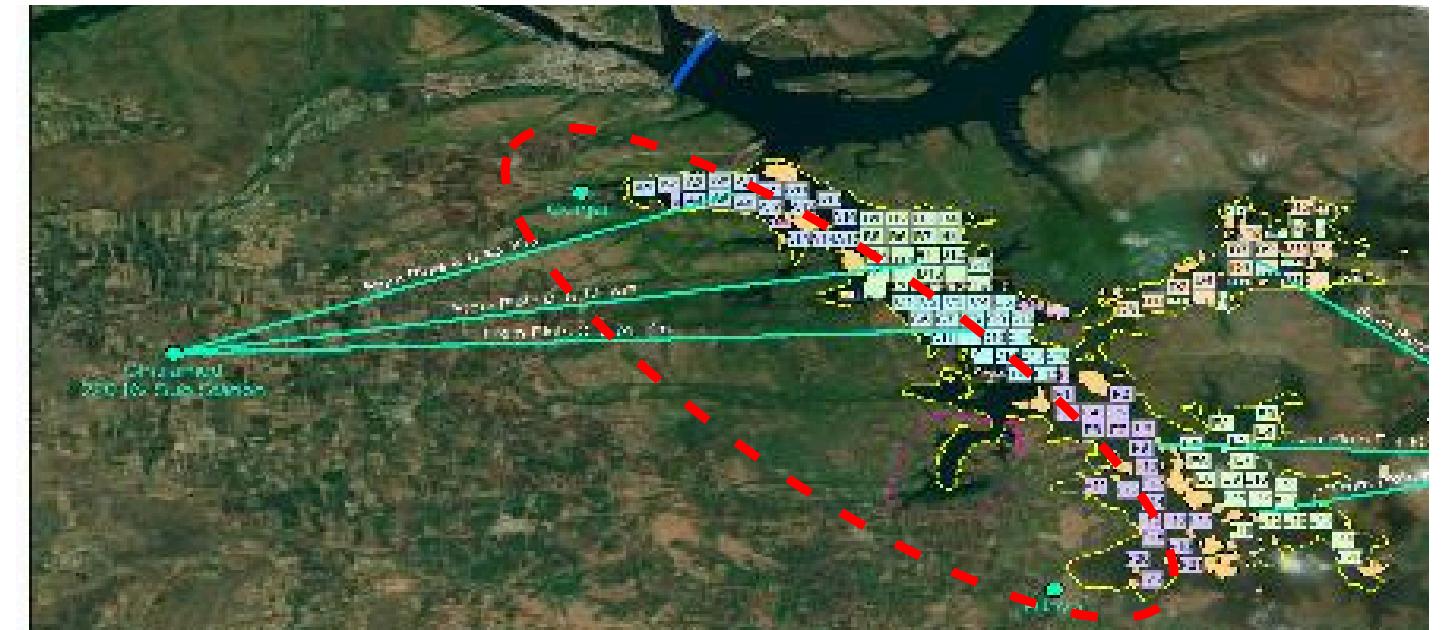
Benefits

- Solution for land scarcity
- Efficient operation
- Eliminates site preparation costs
- Environmental benefits (water conservation, reduced algae)
- Utilization of existing grid

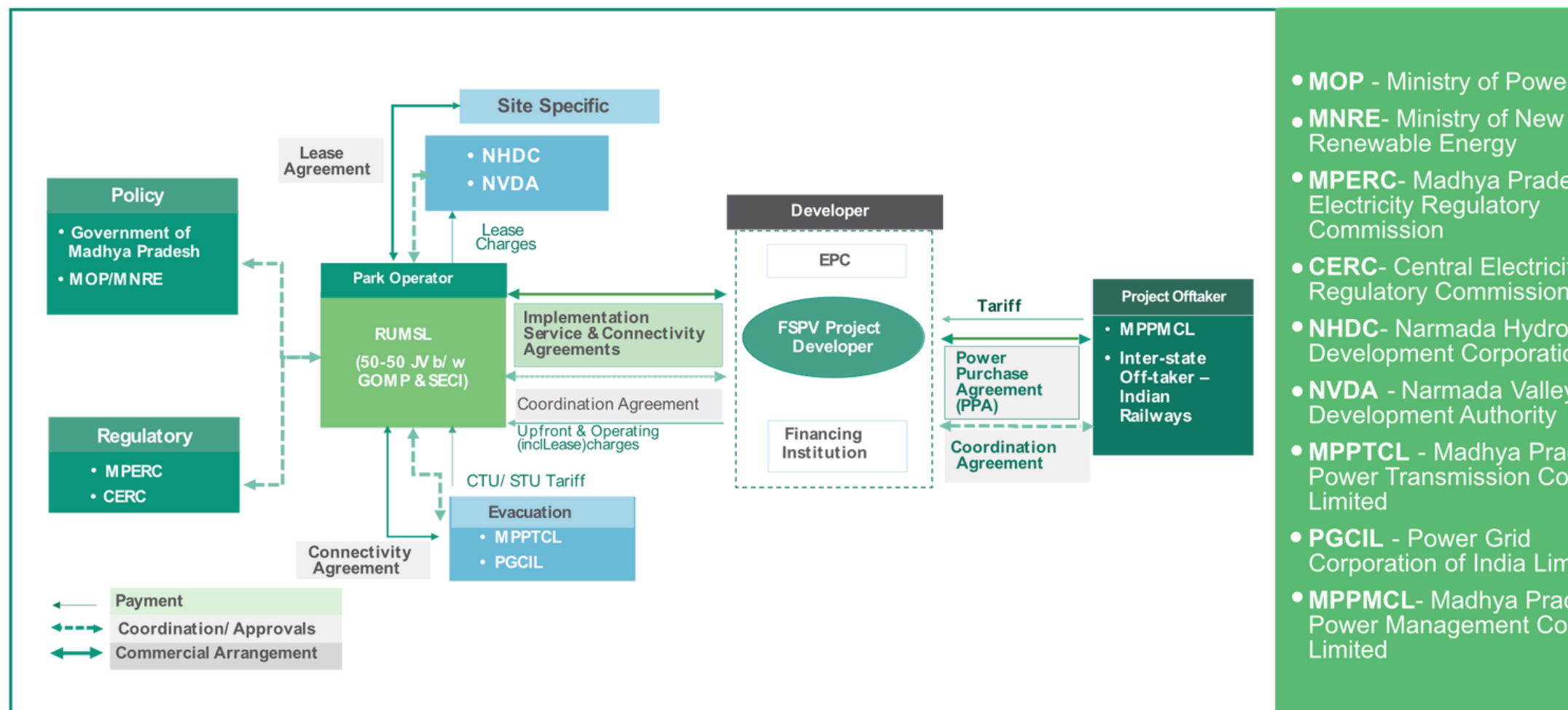
Challenges

- High CAPEX (floats are a significant cost component)
- Extensive bathymetry & hydrography study
- Water contamination risk
- Faster deterioration (due to moisture)

600 MW FSPV Project at Omkareshwar Dam, Madhya Pradesh, India



Transaction Structure



Project Development Model

- Floating solar project developed by the Private Sector - 6 Blocks of 100 MW each, selected through a tariff based reverse auction
- Solar park infrastructure development including Power Evacuation Infrastructure to the grid point to be developed by public sector (Govt. of Madhya Pradesh / Rewa Ultra Mega Solar Ltd. (RUMSL), designated Solar Park Developer, using Multilateral funding/GOI Grant)

Impacts

- ~1,314 Million Units generated per annum, sufficient to power 550,000 homes
- > 1.2 Mn tonnes of CO2 mitigated per annum
- 5,500 direct green jobs and thousands of indirect green jobs

7 AFFORDABLE AND CLEAN ENERGY

13 CLIMATE ACTION

1 NO POVERTY

GGGI Response: global programs



Green Hydrogen Program



BioCNG Program



Floating Solar Program



Green Buildings Program



Methane Flaring Optimization Program



Sustainable Transport



01

A set of multi-country and multi-year projects focused on iterative learning and a strong model to replicate successes both for policy and investment mobilization activities

02

Means to consolidate and streamline GGGI interventions in certain strategic solution-focused areas where GGGI has delivered successful projects, or where there exist a potential for developing and replicating impactful projects

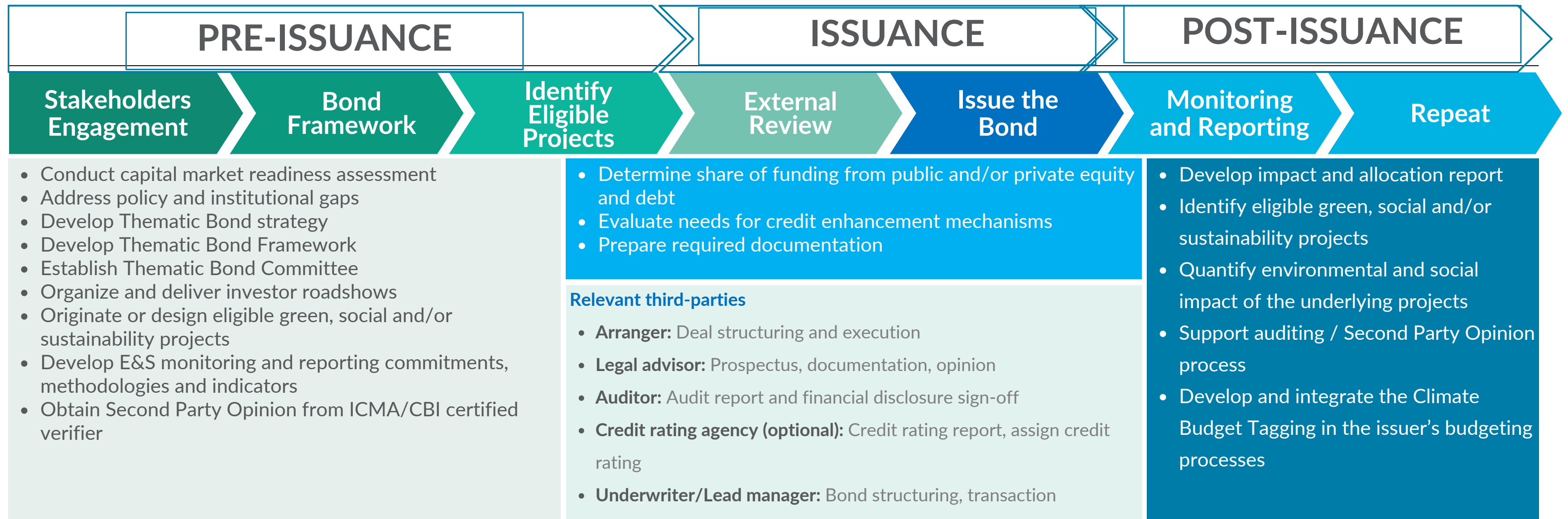
03

When developed in a specific region, due to donor focus with a similar political economic and geographical condition, are categorized as “Regional Programs”

(2) Green Bond Issuance



Example of Project Cycle for Sustainable Finance: Thematic Bond



GGGI's Thematic Bond Highlights



GGGI has assisted the issuance of Selected Green, Social, Sustainability, and Sustainability-Linked Bond exceeding US\$ 5 billion

Selected Green, Social, Sustainability, and Sustainability-Linked Bonds experience

<p>Nov 2021 US\$3.2bn</p>  <p>Sustainable Bond Sustainability Structuring Agent</p>	<p>Nov 2021 US\$1bn</p>  <p>Social Bond Sustainability Structuring Agent</p>	<p>Oct 2021 US\$385mn</p>  <p>nacional financiera Banca de Desarrollo</p> <p>Sustainability Bond Sustainability Structuring Agent</p>	<p>Nov 2022 US\$150mn</p>  <p>Green Bond Sustainability Structuring Agent</p>	<p>Mar 2023 US\$200mn</p>  <p>FIRA FIDEICOMISOS INSTITUIDOS EN RELACION CON LA AGRICULTURA</p> <p>Resilience Bond Sustainability Structuring Agent</p>	<p>Jul 2022 US\$75mn</p>  <p>EVN FINANCE</p> <p>Green Bond Sustainability Structuring Agent</p>	<p>Feb 2022 US\$300mn</p>  <p>North American Development Bank</p> <p>Green Bond Sustainability Structuring Agent</p>
--	---	--	--	---	--	---

Peru

GGGI delivered technical assistance to the Government of Peru to develop the capacity and systems to issue the country's **first sovereign Sustainable Bond**, leading to multiple issuances for USD 3.2bn and EUR 1bn.

Mexico

GGGI's technical assistance to Nacional Financiera (NAFIN) led to the bank's **first Sustainable Bond issuance for approx. US\$ 370 million**, first ESG bond with digital focus in Mexico.

Vietnam

GGGI is implementing the **Viet Nam Green Bond Readiness Program** funded by the Government of Luxembourg to support development of the Green Bond Market.

Africa

GGGI is in early talks with Member countries in Africa, particularly **Rwanda, Senegal, Côte d'Ivoire** and **Uganda** who have shown keen interest for support in Green and Sustainability Bonds.

Donors & Funding Partners

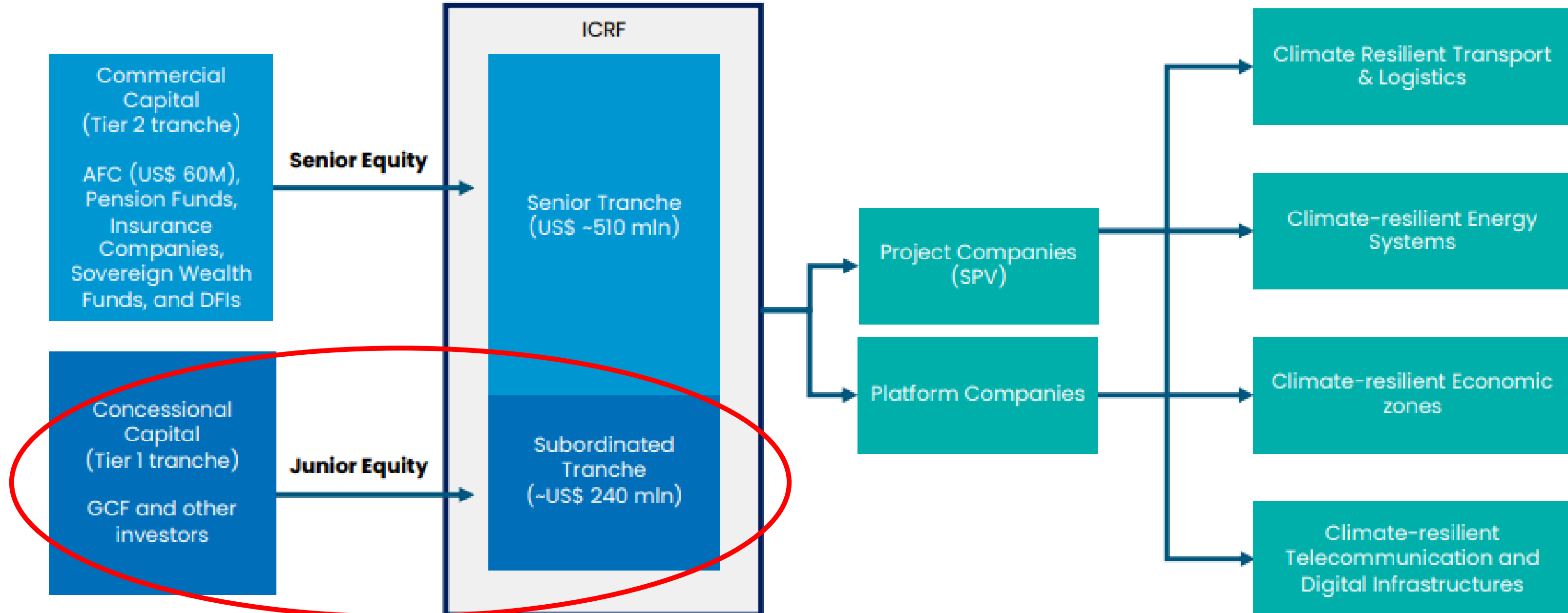


(3) Financial Instruments: Infrastructure Climate Resilient Fund

- In 2022, 110.4 million people were affected by climate induced disasters in Africa, accounting for 60% of the total affected populations globally, with 20% of disasters happening in Africa (WHO, 2023)
 - Climate adaptation finance required in Africa is estimated at USD 270 billion, with only USD30 billion reaching the investment needs. (AFDB, 2024)
 - Need to create more favorable market conditions for investors and project developers for large scale investments. This also includes financial vehicles tailor-made for unlocking private capital to the projects
 - The Infrastructure Climate Resilient Fund (ICRF) exemplifies a part of that solution
 - ICRF was established by AFC Capital Partners, a 100% subsidiary of the Africa Finance Corporation (AFC), which also serves as the fund manager of ICRF.
 - In 2022-23, GGGI worked with the AFC to mobilize concessional equity capital from the Green Climate Fund (GCF) to capitalize and operationalize the fund. GGGI was supported by the KGNDF grant of USD 300.000 (2022-23)
 - Result: USD 240 million committed by GCF in 2023
-

Highly de-risked fund structure for institutional investors

- Commercial equity: 510M (68% of target fund size)
- Concessional first loss equity: 240M (32% of target fund size)



Estimated impact

Reaching this target will impact:

- **Total Beneficiaries:** 195 million people
- **Direct Beneficiaries:** 50.4 million people
- **Indirect Beneficiaries:** 144.2 million people
- **Total % of Beneficiaries per Project sector :**
 - Transport and Logistics: 74%
 - Energy Systems: 19%
 - Economic zones: 2%
 - ITC: 5%

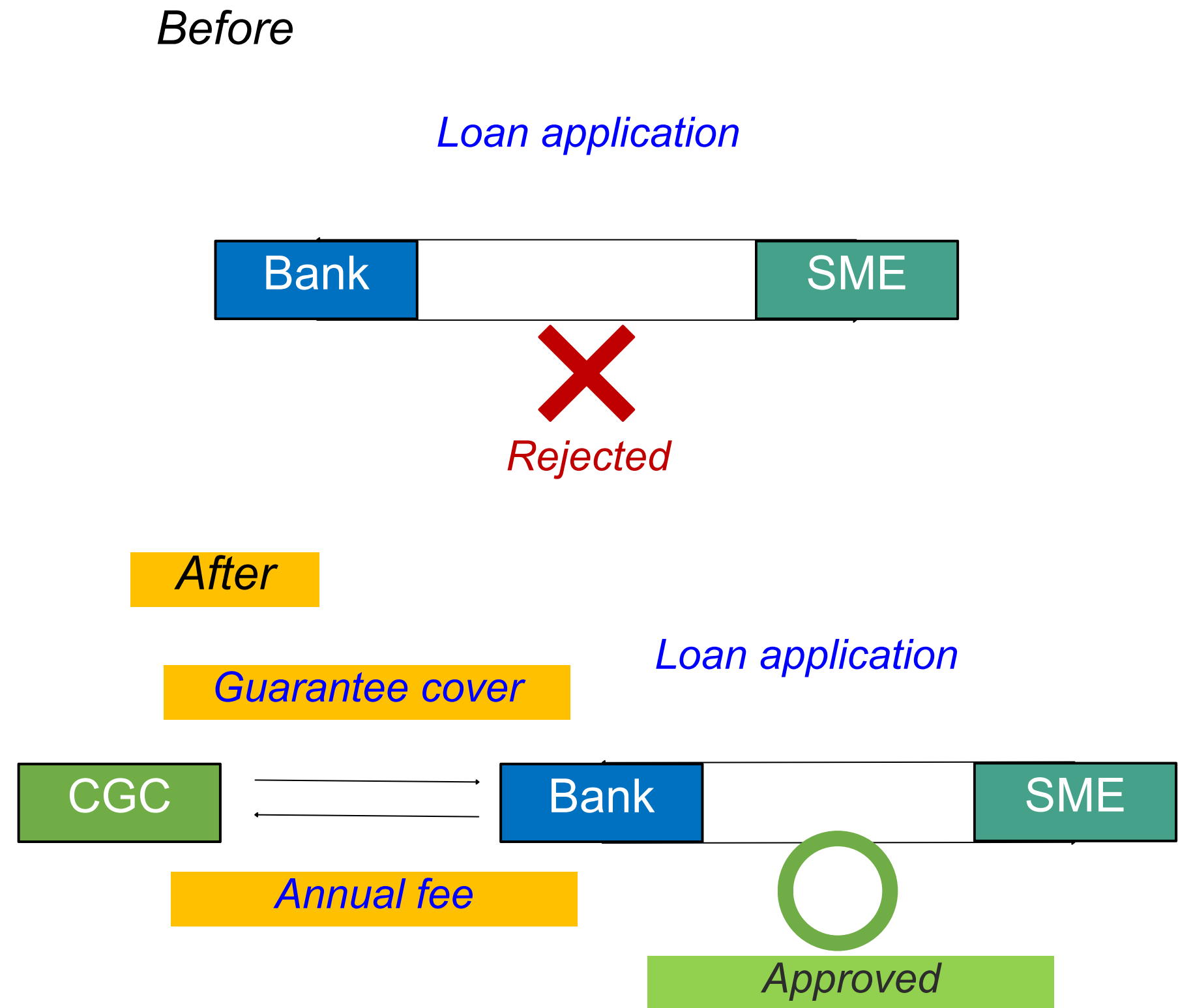


(4) NFV: PNG Credit Guarantee Corporation for SMEs



Project Highlights:

- PNG Credit Guarantee Corporation (CGC) aims to foster the growth and development of small and medium-sized enterprises by offering partial loan guarantees to local financial institutions.
- GGGI supported PNG's central bank – the entity leading the CGC's establishment – by assessing the loan need of SMEs (size, purpose, type, tenor) and risks to repayment.
- The CGC will accelerate low-carbon, climate-resilient development by improving access to credit for SMEs in green/clean sectors.
- CGC has approximately USD 15M as starting capital. Given the performance of CGCs in developing countries, it will likely have generated between USD 45M to 75M of additional loans (cumulative) to SMEs by Year 5 of its establishment.



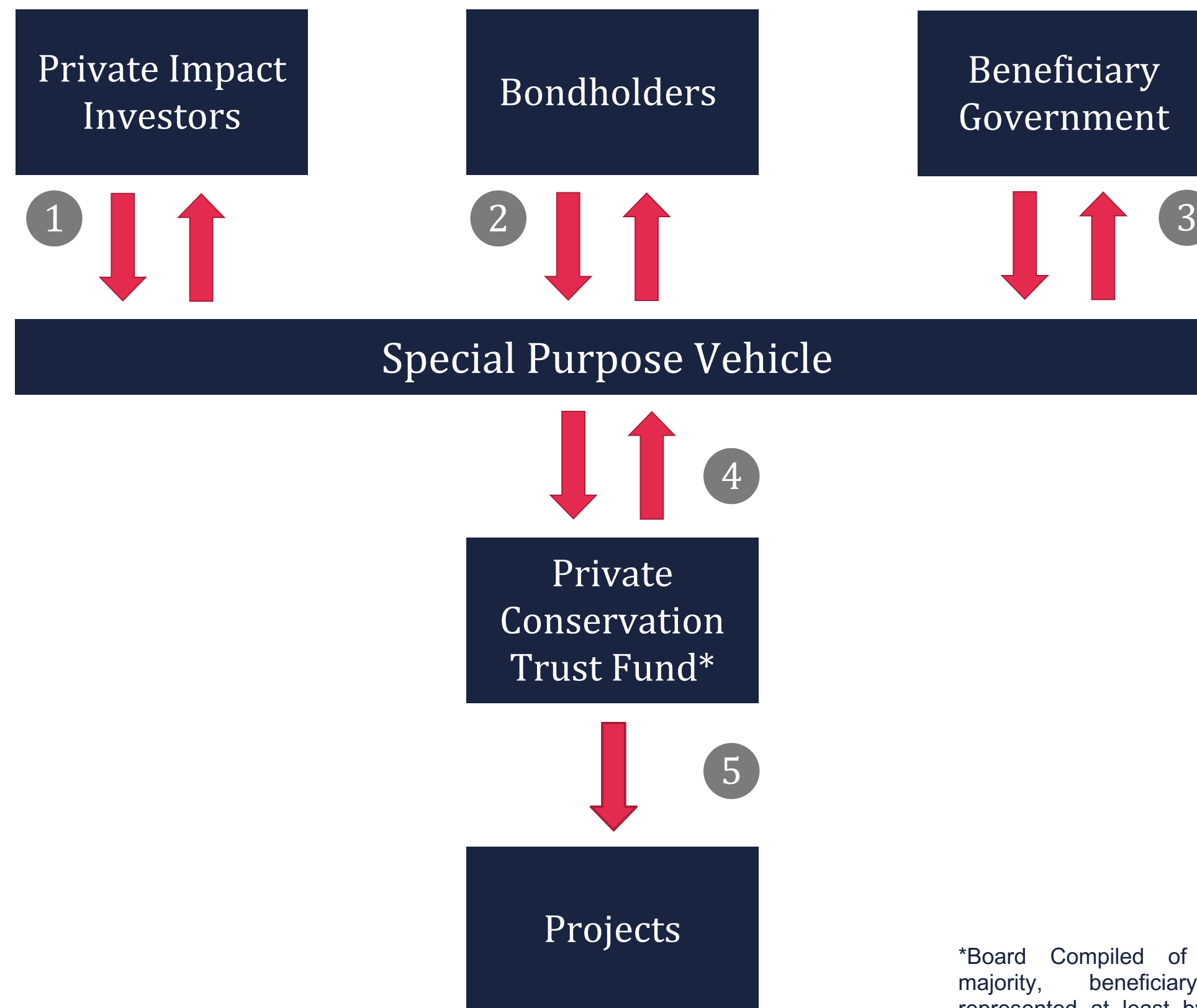
(5) Debt for Nature Swaps (DNS)



- A debt-for-nature swap is a financial mechanism that allows a portion of a developing country's foreign debt to be forgiven in exchange for commitments to invest in environmental conservation and protection efforts.
-
- Negotiate a series of sustainability commitments to be met by the beneficiary government that are tied to the impact loan, meaning that the non-achievement of the commitments can result in cross-default of the operation.
 - Allocate a portion of the fiscal savings generated for projects in nature conservation and climate change mitigation and adaptation that contribute towards the achievement of the sustainability commitments.

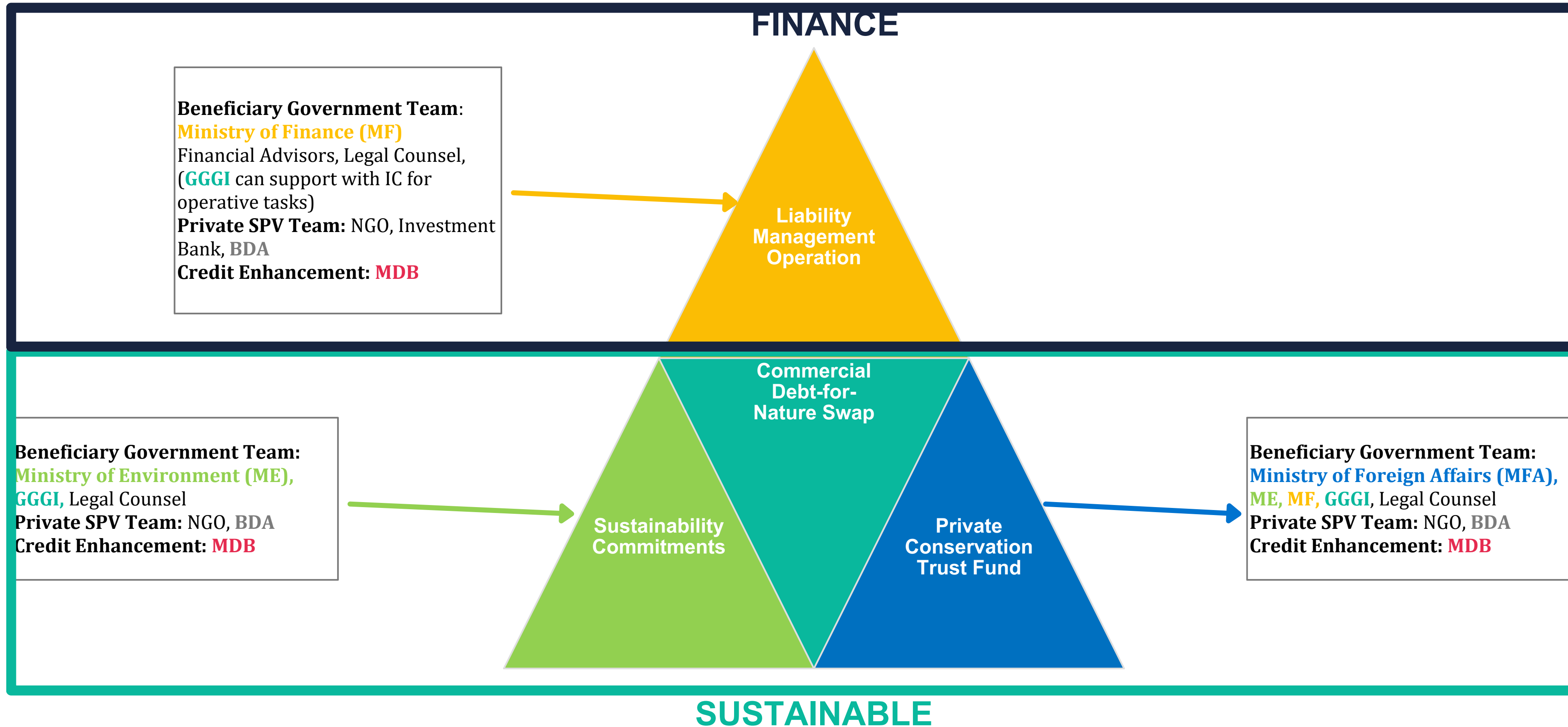
Commercial Debt for Nature Swap (Ecuador)

- 1 Fundraising for SPV liquidity
- 2 SPV Purchase of distressed government debt at a discount or at the secondary market price
- 3 Conversion: outstanding bonds x **Impact Loan tied to Sustainability Commitments**
- 4 SPV donation of part of the debt service of the impact loan; providing liquidity for the **Private CTF** Operation and Endowment
- 5 Conservation Cash Flow in Perpetuity for projects that support the achievement of the sustainability commitments



*Board Compiled of private sector majority, beneficiary government represented at least by foreign affairs and the ministries who signed SCA

GGGI's Position as a key advisor for Commercial DNS



(5) Ecuador Debt for Nature Swaps (DNS)



1. Size and scope: Ecuador exchanged approximately \$1.63 billion of existing debt for a new loan of \$656 million.
2. This is considered the largest debt-for-nature swap in history.
3. Financial structure: The new loan is backed by insurance from the Development Finance Corporation.
4. It also has a guarantee from the Inter-American Development Bank.
5. Credit Suisse provided structuring and technical advice for the financial implementation.
6. Conservation commitment: About \$450 million, previously allocated to debt service payments, will be directed to the Galapagos Life Fund.
7. This fund will finance conservation projects in the Galapagos Marine Reserve and the Hermandad Marine Reserve, totaling 198,000 square kilometers of protected area.

4. GGGI Korean Green New Deal Trust Fund role in Climate Finance

KGNDF is established at GGGI with financial support from the Ministry of Economy and Finance

Mandate : carbon neutrality, green growth, and climate adaptation

01 Introduction

- Duration: 5 years (2022-2026)
- Total: Approximately USD 23 Million

02 Scope



Window 1

Investment Project Large Scale Bankable Project

- ① USD 50M mobilization target
- ② LOIs from government/stakeholders
- ③ Request budget: Max. USD 400k

Window 2

Climate Finance from Financing Facilities GCF, GEF, Adaptation Fund, or equivalent facilities

- ① Government's LOI and/or NOL
- ② Concept Notes consulted with corresponding facilities
- ③ Request budget: Max. USD 150k

Window 3

Policy Framework Development Leads to investment-worthy project

- ① Government's LOI
- ② Request budget: Max. USD 200K

KGNDF Progress Overview (as of Q1 of 2024)

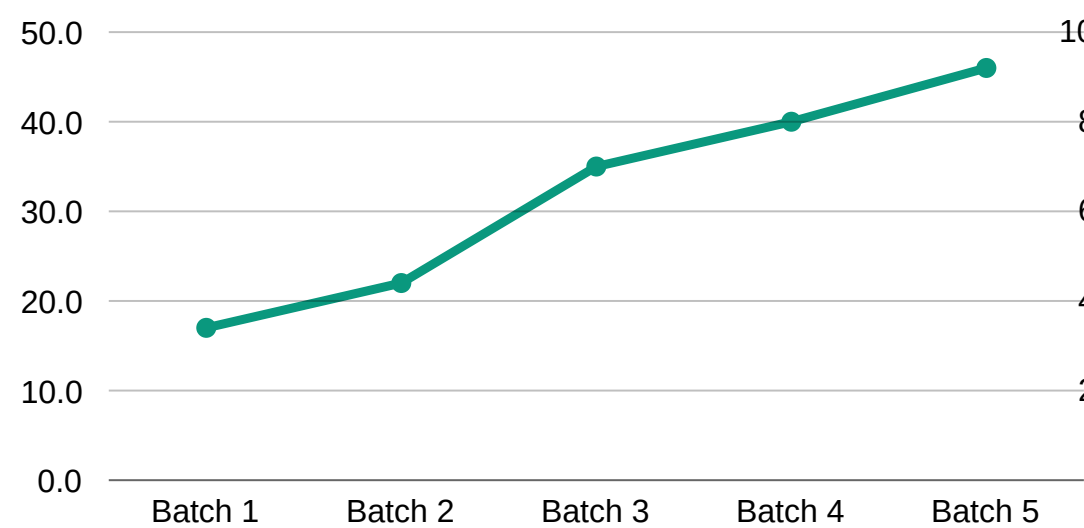


Time 1 or 2 times per year

Process Call for proposal – (GGGI) Secretariat-MT – (MOEF) Experts Review – manager -

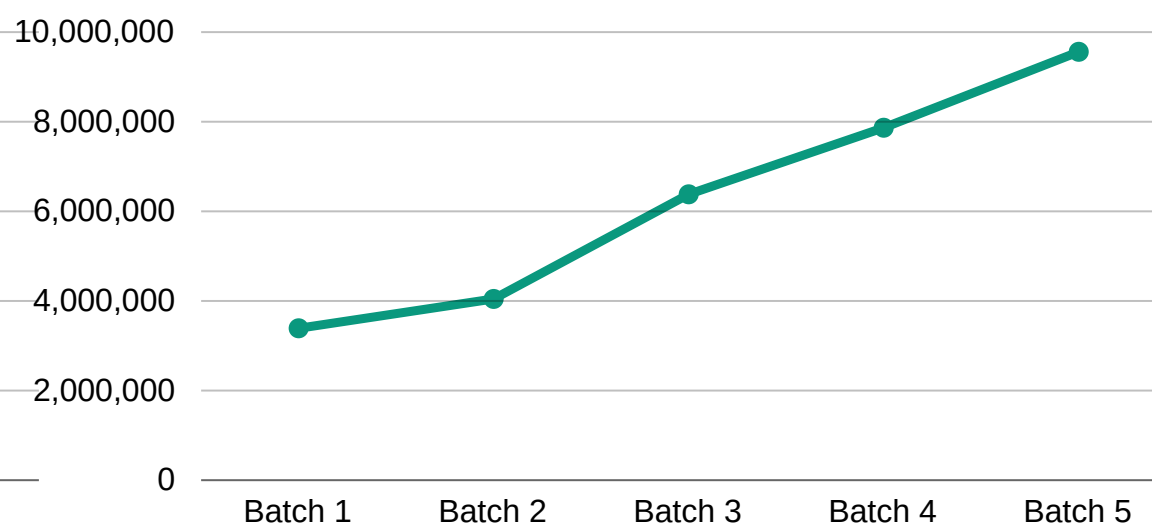
Projects and Board budget 46 projects / USD 9,560,677 approved

KGNDF Projects by Batches



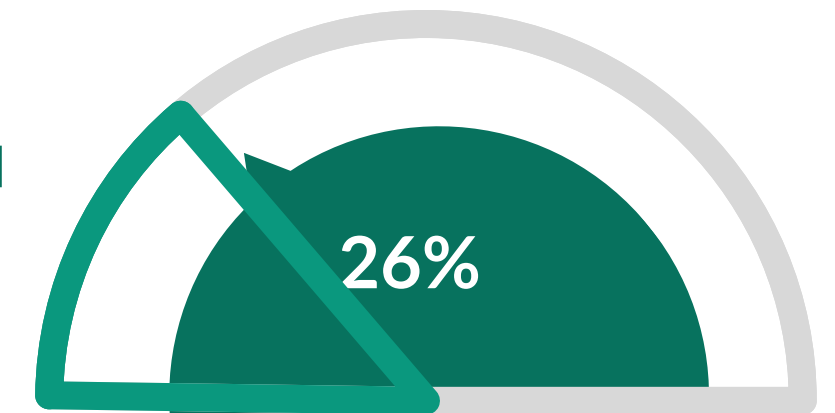
Total 46 Projects Approved

KGNDF Approved Budget (USD)



Total 9.6M USD Approved

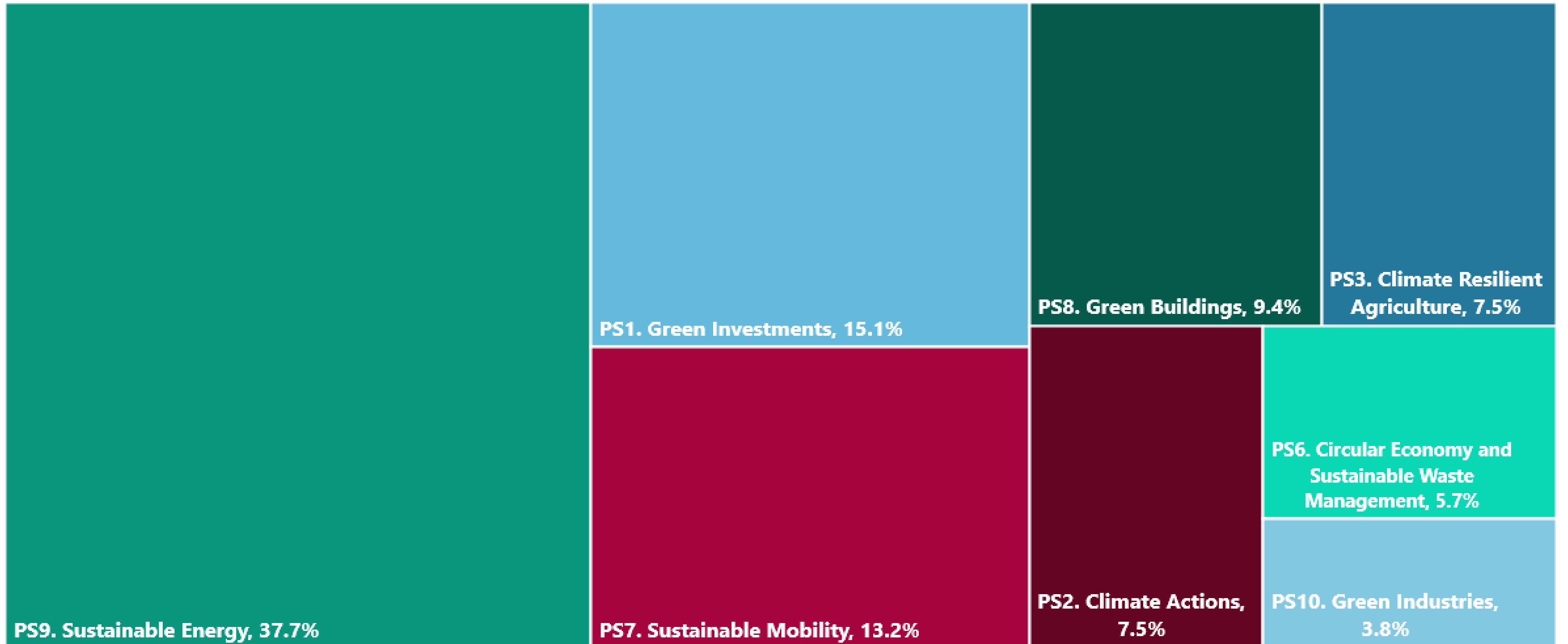
12 out of 46 projects have been completed



Completed Projects

KGNDF overview

Project Distributions by Programmatic Solutions



KGDNF's Achievements: 2) Investment Mobilization



Alignment with GGGI's Strategic Outcomes

- 600MW Floating Solar (India)
- Power Sector Reform (India)
- NAFIN Sustainable Bond (Mexico)
- ICRF (Africa Region)
- Scaling up of Investments through ESCO Mechanism (India)
- G-TAP (Indonesia)
- E-bus fleet acquisition (Mexico)

**(SO 1.1) Reducing
28.4M tCO₂-eq**



**(SO 1.2) Adaptation to
Climate change
47m Individuals**



- NAFIN Sustainable Bond (Mexico)
- ICRF (Africa Region)

**(SO 3) Increasing
Access to sustainable
Service
260k Individuals**



(SO 2) 58K Green Jobs



- G-TAP (Indonesia)
- E-bus fleet acquisition (Mexico)

- 600MW Floating Solar (India)
- Scaling up of Investments through ESCO Mechanism (India)
- G-TAP (Indonesia)

KGDNF's Achievement: 4) Partnership & New Initiative



Partnership Enhancement



Loan contribution in India Power Sector Reform Project



Equity and grant contribution in Africa (AFC – ICRF project)



Co-funding in Rwanda e-mobility, Nepal non-fired bricks and Philippines bioplastic project



Co-funding in Pakistan NDC implementation support project



Co-funding in Fiji solar mini-grid project



Co-research in Employment assessment of CSA practices

New Initiatives



Green Hydrogen



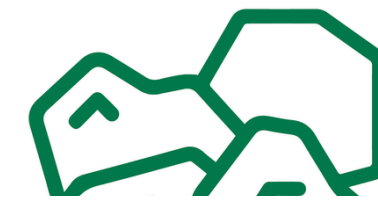
Sustainable Finance



Methane Pledge Initiatives



Bio-degradable Plastic



Biochar



District Cooling

Thank you
