GLOBAL GREEN GROWTH INSTITUTE

Climate Technology and Climate Finance: GGGI's Global Approach

How GGGI links technology planning, policy, and investment — from global funds and regional programs to a country pipeline in Pakistan

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GGGI at a Glance

A treaty-based intergovernmental organization founded in 2012 at Rio+20 — headquartered in Seoul, dedicated to green growth

The Global Green Growth Institute (GGGI) mission is to support its Member and partner countries in transitioning to a green growth model. This model aims to simultaneously achieve poverty reduction, social inclusion, environmental sustainability, and economic growth

55	Member States, with 30 more partners in accession — programs in 57+ countries
$18.5B	in green investment commitments mobilized ($10B private, $8.5B public)
303	green growth policies adopted; 1,032 policy advisory outputs delivered
2.8M	green jobs to be created; 540M tCO_2e to be reduced

Demand-driven and embedded in government: GGGI works inside ministries to develop green growth solutions, bankable projects, and financing.

How we work, the GGGI Value Chain — From Analysis to Investment

GGGI

One continuous model: diagnosis and planning are designed from the start to lead to financing and implementation

1. GREEN IMPACT ASSESSMENT

1. Development, economic growth & sustainability diagnosis →
2. Sectoral green impact assessment & prioritization →
3. Macroeconomic impact assessment

↓

2. SECTOR / SUB-SECTOR STRATEGY & PLANNING

4. Policy and institutions analysis →
5. Analysis of costs and investment requirements →
6. Development & selection of sectoral investment plans

↓

3. DESIGN, FINANCING & IMPLEMENTATION

7. Design: project and policy preparation →
8. Financing: identification of possible financial structure →
9. Implementation

This value chain shaped the Pakistan project: the NDC Technology Roadmap (assessment & planning) was co-financed alongside investment preparation from day one.

Korea Green New Deal Trust Fund (KGNDF)

Established 2022 by the Ministry of Economy and Finance, Republic of Korea, at GGGI — the fund that co-financed the Pakistan project with CTCN

WINDOW 1

Investment Projects

Large-scale bankable projects targeting a minimum of USD 50M investment

WINDOW 2

Climate Finance Facilities

Concept notes developed with facilities like the GCF, GEF, or equivalent

WINDOW 3

Policy Framework Development

Policies and enabling frameworks for investment-worthy projects

48

projects across Asia, Africa, LAC & the Pacific (2022–24)

$2.07B

in investment commitments mobilized

50.3M

tCO_2e expected to be reduced or avoided

65,100

green jobs to be created

Flagships: 600 MW floating solar in India ($366M mobilized) • Colombia's largest wind farm ($520M) • Africa Infrastructure Climate Resilience Fund ($254M, 19 countries) • and Pakistan's NDC Technology Roadmap.

Climate Technology Accelerator Fund (CTAF)

GGGI's first fund dedicated to global climate technology deployment — with Korea's Ministry of Science and ICT (MSIT), launched April 2026

How it works

- Matches Korea's advanced public climate technologies with the needs of GGGI member and partner countries
- Funds local demonstrations and pre-feasibility studies to bridge R&D and market entry
- Designed to link projects onward to large-scale finance such as the GCF
- KRW 21 billion committed over 2026–2032; at least 3 global projects supported annually

First portfolio — 10 projects (June 2026)

3 field demonstrations:

AI smart grid (Cambodia) • AI aquaponics smart farm (Jordan) • AI & satellite climate-risk and renewable-energy mapping (Paraguay)

7 pre-feasibility studies:

India, Kyrgyzstan, Mongolia, Philippines, Sri Lanka, Thailand, Vanuatu — from AI-MRV for heating to electric tuk-tuks and solar cold chains

A pipeline instrument for member countries: demonstration today, climate finance and private investment tomorrow.

Climate Technopreneurship Programme

CLIMATE TECHNOPRENEURSHIP PROGRAMME

Overview

Collaborative R&DB Programme for Promoting the Innovation of Climate Technopreneurship

Duration
Nov. 2025 - Oct. 2030

Countries
Lao PDR, Indonesia, Philippines, Vietnam, and Cambodia

Budget
USD 2.5 M
(Total grant: 20 M for all 5 countries)

Key Partners

GREEN CLIMATE FUND

KDB Bank

NH INVESTMENT & SECURITIES

NH ABSOLUTE RETURN PARTNERS

Source local companies

Nurture innovation ecosystem

Business & market acceleration

Source global climate-tech firms

Facilitate partnerships

Default approach: Formulation of a joint venture (JV) between local and global companies

Invest and Scale

Climate Technology Fund (CTF) will be established and equity investment will be considered

Climate Technopreneurship Components

CLIMATE TECHNOPRENEURSHIP PROGRAMME

01
Country Driven Acceleration Readiness

OUTPUT 1

Local JV candidates capacities in climate technology strengthened

02
Global Acceleration for Collaborative R&DB

OUTPUT 2

Climate Technology transfer between Global-ASEAN JVs with investment readiness

03
Climate Technopreneurship Fund (CTF)

OUTPUT 3

CTF with private capital Crowd-in

04
Capacity Building and Policy Advisory

OUTPUT 4

Strengthened ecosystem for climate technopreneurship

Who does what?

KDB Bank: GCF Accredited Entity

GGGI: Local sourcing, acceleration, ecosystem building

NH INVESTMENT & SECURITIES: Global sourcing, matchmaking, JV facilitation

NH ABSOLUTE RETURN PARTNERS: Fund manager of the CTF

Pakistan — NDC Climate Technology Roadmap Project at a Glance

One project, two mutually reinforcing pillars — technology planning and investment preparation

Pillar 1 — CTCN Technical Assistance

Targeted assessment of technology needs: the NDC Technology Roadmap for the water and waste sectors — prioritized technologies, readiness assessment, and a time-bound action plan.

Jun 2023 – Mar 2025

Pillar 2 — Korea MOEF Investment Preparation

Financed by the Ministry of Economy and Finance through its Korean Green New Deal Fund (KGNDF): preparation of project finance proposals building on roadmap priorities — four project concepts across the waste, agriculture, and water sectors.

Jun 2024 – Aug 2025

Partnership: MoCC&EC (NDE and national lead) • CTCN • Ministry of Economy and Finance, Republic of Korea (KGNDF) • GGGI (implementer)

Focus sectors: Water and waste — vital, highly climate-exposed, and under-resourced; the roadmap prioritized 10 technologies from a 50+ longlist through three government working groups.

From Roadmap to Investment Pipeline

GGGI

Following completion of the NDC Climate Technology Roadmap, four project concepts across the waste, agriculture, and water sectors — prepared under the Korea MOEF investment pillar (KGNDF)

Biochar Facility Development

Commercial-scale pyrolysis converting crop residues to biochar — cutting residue burning, sequestering carbon, improving soils. Partner: MoCC&EC; carbon-market finance.

Climate-Smart Agriculture Adoption & Investment

Efficient irrigation, CSA practices, and green credit lines for farmers. Now a GCF SAP concept note — $25M grant, $100M private leverage. → Spotlight next slide

AI-Integrated Water Information & Flood Management Systems

Real-time telemetry network with machine-learning flood forecasting, aligned with the National Flood Management Plan. Partner: MoWR; financing partners being sought.

Sustainable Waste Management & Methane Strategy

Pakistan's first national organic waste strategy: GHG inventory, methane mitigation measures, and feasibility studies for treatment options. Focal: MoCC&EC.

GGGI continues to support the Government of Pakistan to move these concepts forward and secure financing — working with Accredited Entities toward the GCF, Adaptation Fund, and carbon markets.

Concept Spotlight — Climate-Smart Agriculture & Green Financing

Financing: USD 25M GCF grant budget, targeting USD 100M in private sector leverage

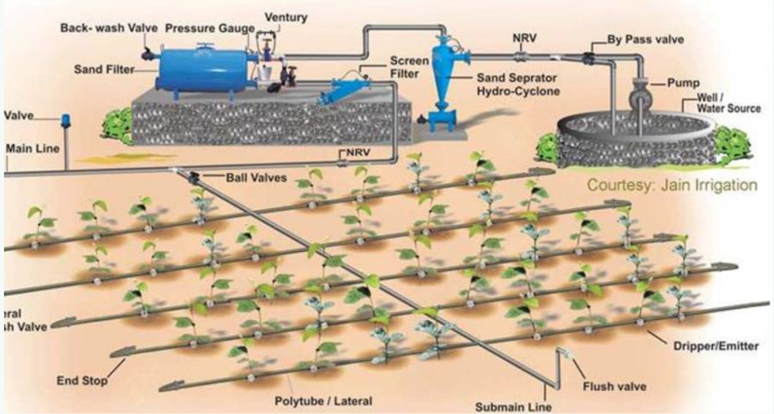
Target regions: Punjab & Sindh

What it delivers

- Adoption of efficient, climate-smart irrigation technologies
- Farmer training and proficiency in CSA practices
- Tailored credit lines with financial institutions to unlock private capital for smallholders

Status: Developed into a GCF Simplified Approval Process (SAP) concept note; to be presented to the MoCC&EC GCF Board / NDA this July for inclusion in the GCF pipeline

Technology focus



High-efficiency drip irrigation system — technical schematic from the project concept note

From roadmap priority to the GCF pipeline — pairing grant finance with private leverage so adoption doesn't stall.

Case Study: Enabling Climate Finance for CSA in Uzbekistan

SQB-Sustainable Finance:

$575m mobilized for sustainable & green investment through sustainable bond issuance in partnership with SQB Bank

14 use of proceeds, 10 green and 4 social

5 GENDER EQUALITY; 7 AFFORDABLE AND CLEAN ENERGY; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 10 REDUCED INEQUALITIES; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION; 13 CLIMATE ACTION; 14 LIFE BELOW WATER; 15 LIFE ON LAND

Agrobank Green Finance:

$455m green investment through green bond issuance in partnership with Agrobank

3 use of proceeds, Renewable Energy, Clean Transportation and Climate Change Adaptation

80% of the bond targeting Climate Smart Agriculture activities in Uzbekistan

7 AFFORDABLE AND CLEAN ENERGY; 11 SUSTAINABLE CITIES AND COMMUNITIES; 13 CLIMATE ACTION

SQB - CSA Financing Facility

$28.75m committed by SQB in establishing the Green Financing Facility supporting Climate-Smart Agriculture

3 types of loan products specifically tailored for MSMEs in the agricultural sector
- Investment fixed assets: CSA equipment
- Working capital: seeds, fertilizers, etc.
- Non-targeted: aligned with CSA

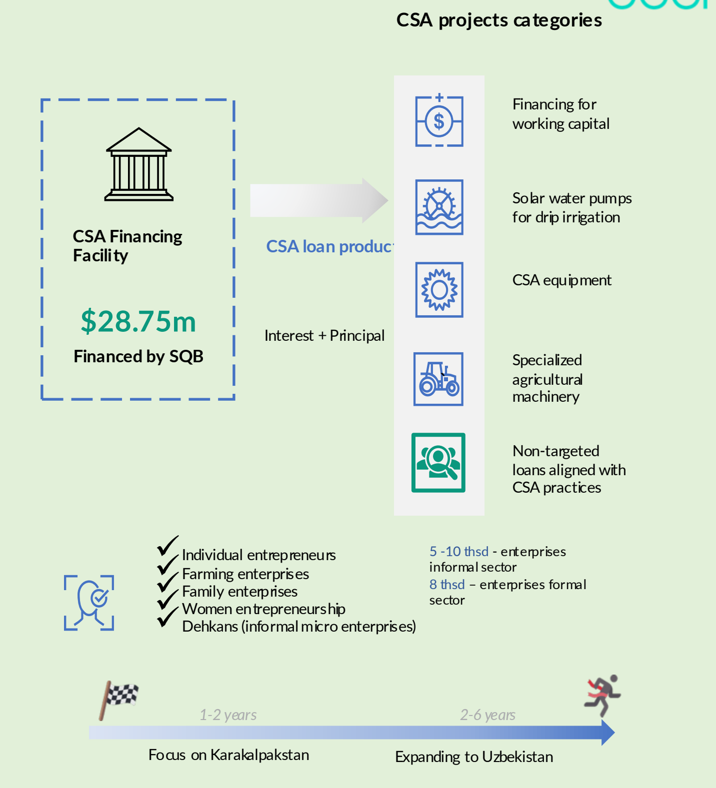
Potential co-financing partners: ADB, EBRD, BDB EDC

15 financial institutions supported via capacity-building.

- Green taxonomy
- Climate Change Risks and Financial Inclusion
- ESG framework
- Environmental and Social Management Risk System
- Green Finance
- Climate Smart Agriculture

$974 Million Grant & Investment Project Pipeline development

Technical Assistance for Sustainable Finance for SQB Bank and Agrobank, and for Green Investment to the Ministry of Agriculture



Engaging Pakistan's Financial Sector

Understanding how to work with banks to expand finance for climate technologies

10+

banks covered by a full technical financial assessment

- Microfinance
- Agricultural investment
- Digital finance
- Insurance
- Other banking & investment formats

Vehicles explored: sustainable finance, microfinance, green bonds

Direct engagement with six institutions

Institution	Type	Engagement focus
Khushhali Microfinance Bank (KMBL)	Microfinance bank	Smallholder & rural finance — CSA, irrigation, and solar tubewell lending
JS Bank	Commercial bank / GCF DAE	Green finance & SME/agriculture lending; blended finance pilots
National Rural Support Programme (NRSP) / CRCC	Rural support & microfinance platform	Women-inclusive finance; operational biochar pilot in Punjab
Ministry of Finance	Government finance policy institution	Green bond issuance and sustainable finance policy coordination
Bank of Punjab (BoP)	Commercial bank	Blended finance, concessional on-lending, guarantees, agri value chains
Habib Bank Limited (HBL)	Commercial bank	Solar irrigation, water management, thematic bonds, CSA & biochar interest

The GCF SAP concept's USD 100M private-leverage target builds directly on these relationships.

Pakistan on the GGGI Value Chain

The country project is the global model in miniature — every stage of the value chain, backed by dedicated vehicles

Green Impact Assessment	Sector baselines for water & waste; 50+ technologies longlisted and screened through expert technical and economic assessment
Strategy & Planning	Validated NDC Technology Roadmap with 10 prioritized technologies, readiness heat maps, and a time-bound action plan — built with three government working groups
Design, Financing & Implementation	Four investment concepts; a GCF SAP concept note ($25M grant / $100M private leverage) entering the NDA pipeline; financial sector engaged; implementation ahead

Backed by dedicated vehicles: KGNDF (MOEF) co-financed this project with CTCN — while CTAF (MSIT) and the KDB–GCF Technopreneurship program offer onward channels for climate technology deployment across the region.

Thank You

Questions & Discussion

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