

Scaling up Technical Assistances

Valentin Rudloff
Climate Technology Expert
NDE Forum for Eastern Europe
8 September 2026



1

CTCN as a Catalytic Mechanism to de-risk Investment

The Gap a Technical Assistance has to cross

Capital does not stay away because projects are not relevant. It stays away because the risk is unpriced and the evidence base is missing.



A technically sound solution

NDC / TNA priority · proven technology ·
clear climate benefit



The missing link

Risk is unpriced · no track record ·
information is missing · lack of skills



An investable / financed project

MDBs · climate funds · private & blended
capital

Instruments of CTCN Technical Assistances



Regulatory development

Builds enabling policy, standards and mandates

Reduces policy & market risk



Feasibility studies

Validates the technical and commercial case

Reduces technical & commercial uncertainty



Technology piloting

Demonstrates performance in real conditions

Reduces performance / first-of-a-kind risk



Capacity building

Equips local actors to operate, maintain and scale

Reduces human-capital & institutional-absorption risk

2

Options for Scale-up: Stakeholders, modalities, finance

Four ways a Technical Assistance reaches Scale



Public-budget absorption

1

The output is folded into an institution's core budget as a permanent function.

e.g. an early-warning system taken on under a national DRR mandate



Business model / revenue

2

The product generates revenue and attracts private reinvestment.

e.g. a utility with return on energy savings



Replication via partnership

3

A proven model is copied to new sites or communities under an MoU.

e.g. a monitoring approach rolled out across comparable regions



Programme or concept note

4

Folded into a larger programme, or a concept note to a climate fund.

Who carries a Technical Assistance to Scale



National public actors

Line ministries, national climate funds, state utilities — the actors who can absorb a project into policy and budget.



MDBs & DFIs

EBRD, ADB, World Bank, KfW — scale capital for infrastructure and municipal projects.



Climate funds

GCF, GEF and the Adaptation Fund — concessional and grant finance for mitigation and adaptation public goods.



Private & blended capital

Utilities, impact funds and commercial banks — where a revenue model or de-risked return exists.

Financing the next phase: who provides what

Each stage of the capital spectrum has its own instruments — and its own providers.

Grant / TA	Concessional	Blended	Commercial
Grant / TA Grants · non-repayable Provided by CTCN (≤ USD 300k), GEF, Adaptation Fund, bilateral donors ROLE <i>Prepare · de-risk · pilot</i>	Concessional Below-market loans · first-loss Provided by GCF, EBRD, ADB, World Bank, KfW ROLE <i>Make early projects viable</i>	Blended Public de-risking + private Provided by MDBs + private co-investors; guarantees & first-loss layers ROLE <i>Crowd in private capital</i>	Commercial Market-rate debt & equity Provided by Commercial banks, private equity / impact funds, utilities ROLE <i>Scale · replicate</i>

Where Financing the next Phase still breaks



The missing middle

Once a project outgrows grants but still looks too risky for commercial lenders, little capital is designed for the in-between.

In practice

Viable projects stall between technical assistance and large commercial investment.



The direct-access gap

Few national entities are accredited to draw on climate funds directly, so finance is routed through international intermediaries.

In practice

Slower approvals, less national ownership, thinner pipelines.



Planning to pipeline

National plans (NDCs, NAPs, TNAs) rarely translate into structured, bankable, financier-ready projects.

In practice

Strong priorities, but few investment-ready proposals.

3

Climate Technology Demand in Eastern Europe



Design from the exit

- Name who finances the next phase before the TA begins
- Map the financial ecosystem at design stage, not at closure
- Bring MDBs, funds and private actors in at ideation
- Treat multi-stage and blended finance as the default



Anchor in the national system of innovation

Actors: strengthen national institutions and local skills that remain in-country

Institutional context: policy, standards and certification that let the market grow

Linkages: connect to hubs, incubators and finance networks; keep knowledge usable beyond the project

Example: Implementation via Partnership

CTCN technical assistance in Serbia, 2018–2019

Objective

Identification of technologies for Belgrade's district heating (DH) system

Type of assistance

Feasibility study

Total budget

100,000 USD

Beneficiary

City of Belgrade

Outputs

Status report and a high-level assessment of combined district-heating modernization and building-efficiency options.



Republic of Korea support, 2021–2023

Implementation type

Partnership / cooperation

Financing

Pro-bono

Technology implementation

A cloud-based, IoT district heating monitoring system with real-time analytics via web & mobile apps. Plan to connect new renewable energy.

Status

Implemented

Impact

-9% monthly winter household heating energy and **≈ -1%** annual CO₂ — up to **~420,000 t CO₂ per year** if scaled nationwide.

CTCN technical assistance in Mauritius, 2021–2022

Objective

Feasibility study of anaerobic digestion of the organic fraction of solid wastes in Mauritius

Type of assistance	Total budget
Feasibility study	126,040 USD

Beneficiary

Solid Waste Management Division, Ministry of Environment, Solid Waste Management and Climate Change

Outputs

Technical & economic feasibility study: waste-flow and feedstock analysis, optimal technology and site, cost-revenue analysis, business model, and a draft PPP proposal.



Biogas plant implementation, tbd

Implementation type	Financing
Public-private partnership	tbd

Technology implementation

A biogas plant using anaerobic digestion of organic waste from households, hotels & markets of ~100 t/day (~30,000 t/yr), producing electricity plus compost & fertiliser.

Status

Feasibility complete; DBOT tender issued and moving into procurement — SWMD–Central Electricity Board agreement (20-year term) in place, construction to follow.

Impact

Once operational: ~1.5–2 MWh/day enough for 1,000–1,500 households; financially viable, indicative NPV ~USD 15 million over 20 years.

Example: Concept Note

PPF Concept Note development in Kenya, 2022

Objective

Development of a GCF concept note for MSMEs to access climate-smart technologies in Kenya

Type of assistance	Total budget
Concept note	75,000 USD

Beneficiary

Kenya Commercial Bank's private sector direct access entity

Outputs

Developed the initial concept note and conducted feasibility study

PPF MSMEs focusing on Climate-Smart Technologies (CST) in Kenya, 2024

Funding approved	Duration
USD 540,000	6 months

Organization

KCB Bank Kenya Limited

Aim

MSMEs, contributing 40% to the Kenyan GDP, to adopt climate-smart technologies to support the NDC objectives

FP 292: Scaling climate-smart solutions for hardest-to-reach MSMEs and farmers in Kenya

Funding approved	Duration
USD 96,900,000	5 years

Accredited Entity & Executing Entities

KCB Bank Kenya Limited

Impact

3.9m tonnes of Co2 equivalent avoided and 939K beneficiaries

Is this TA scale-ready? A good-practice Checklist

- ✓ Have we named who finances the next phase?
- ✓ Is there a business model or a public budget line to absorb it?
- ✓ Have we engaged an MDB, fund or private actor during the TA, not after?
- ✓ Does it strengthen national actors, policy and linkages that outlast the project?
- ✓ Can it be replicated, or folded into a larger programme or concept note?
- ✓ For public-good TAs with no revenue: is there an institutional home and mandate?



UNFCCC_CTCN



UNFCCC.CTCN

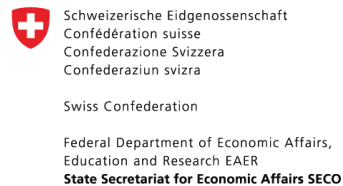


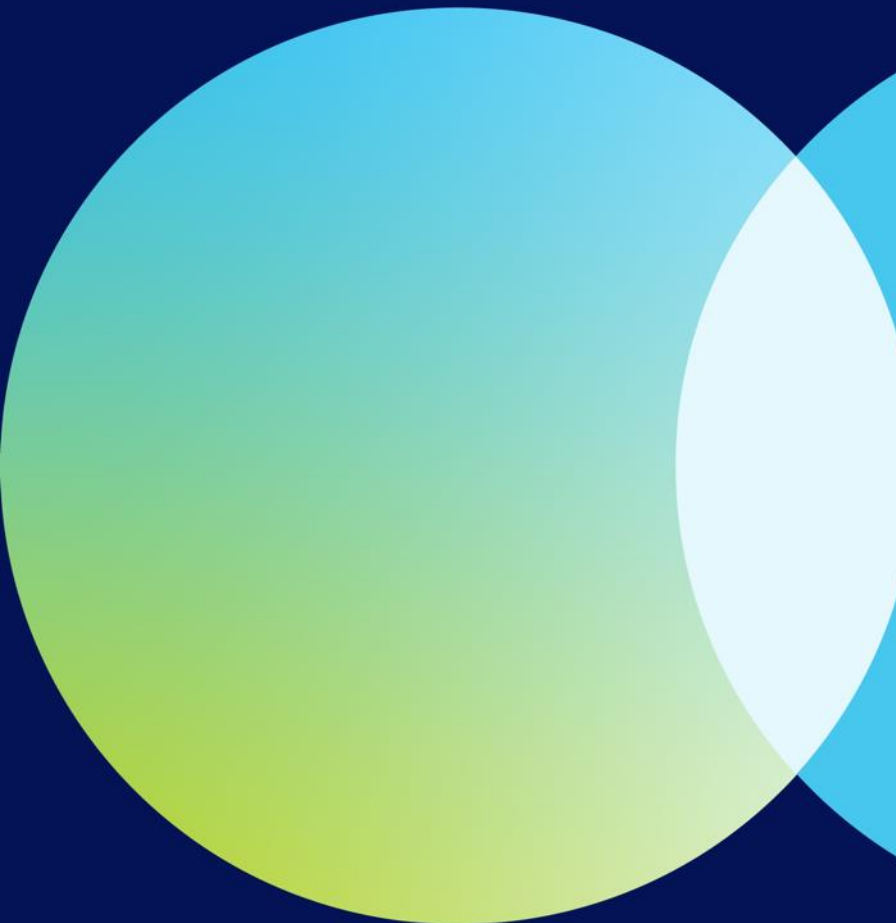
Climate Technology
Centre Network

CTCN Secretariat
UN City, Marmorvej 51
DK-2100 Copenhagen, Denmark

www.ctc-n.org
ctcn@un.org

Supported by:





Panel Discussion: Facilitating Climate Technology Implementation

Panel Discussion (60min)



**Patricia Marcos
Huidobro**
*Latin America Regional
Coordinator & Senior
Climate Change Specialist*
**Global Environment
Facility**



Andrew Hollander
*Climate Change
Analyst, Programming
and Innovation Unit*
Adaptation Fund



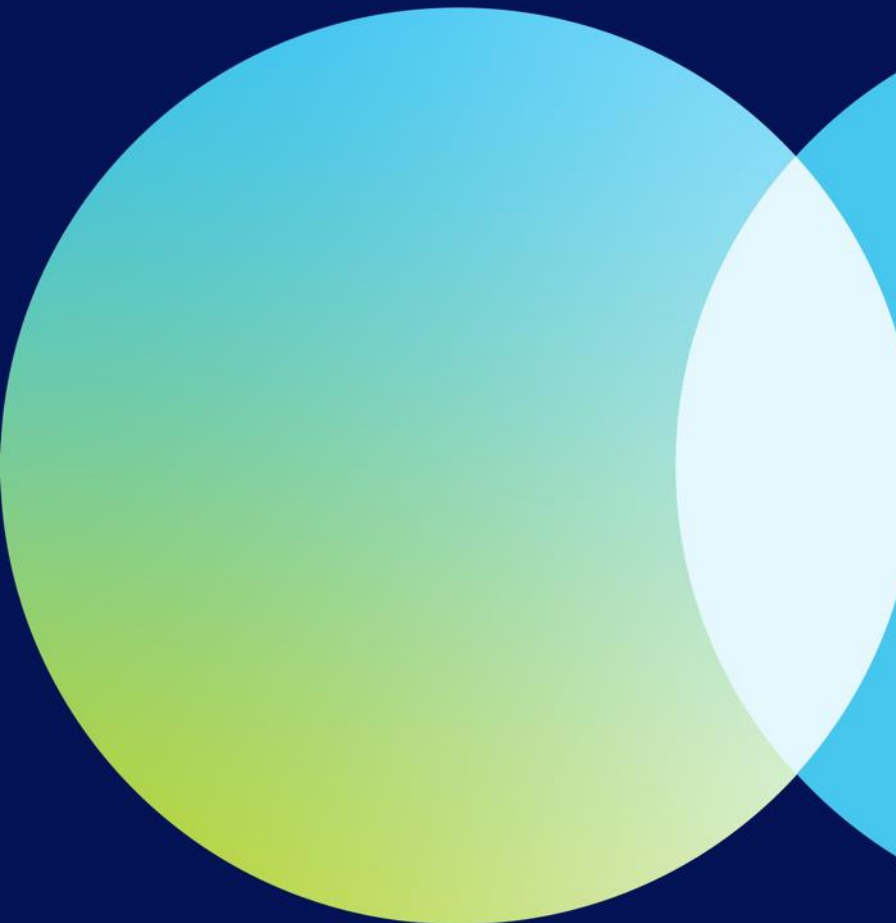
Ekaterine Mikadze
*Senior Climate
Change Officer,
Georgia Resident
Mission*
**Asian Development
Bank**



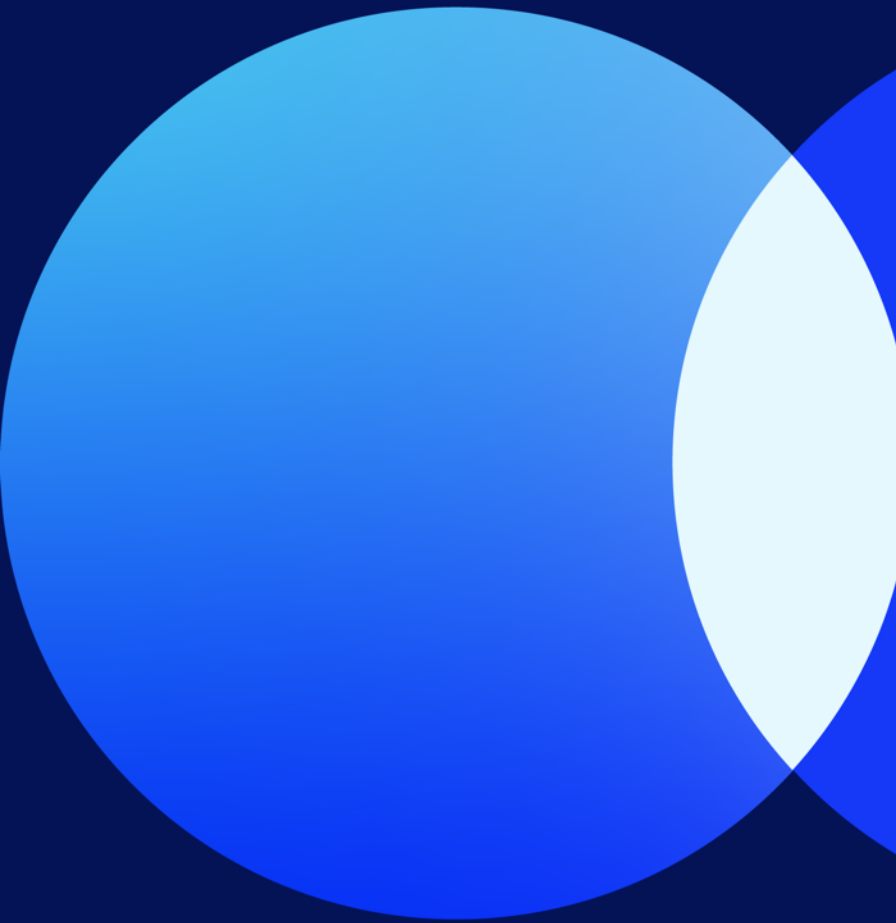
Alexander Gareev
*Regional Manager,
Eastern Europe and
Central Asia*
Green Climate Fund



Sarah Duff
*Principal, Climate
Strategy and Delivery*
**European Bank for
Reconstruction and
Development**



Roundtable Discussion: Facilitating Climate Technology Implementation



Roundtable Discussion: Facilitating Climate Technology Implementation