

Barriers and Gaps to Mobilising Investment in Low Carbon Energy Technology

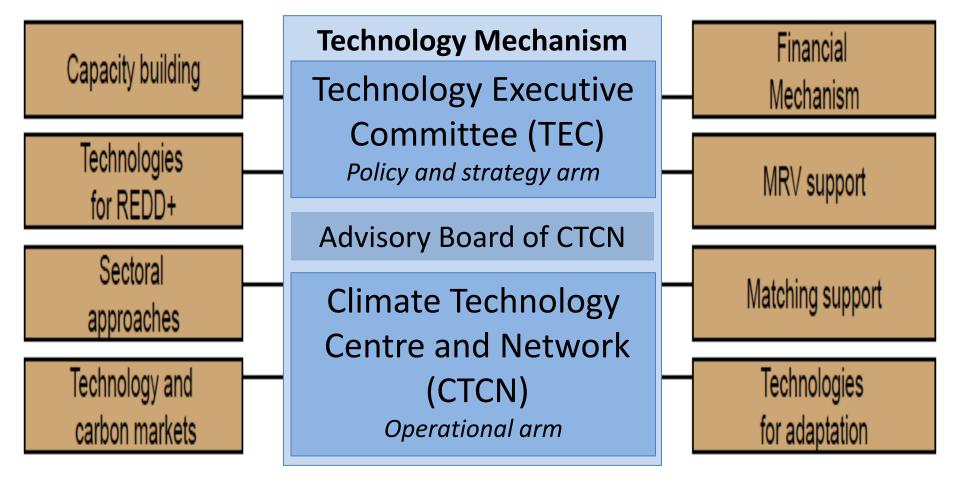
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IEA Workshop on Forging Intl Finance Collaboration
Stockholm, June 21, 2012

UNFCCC Technology Mechanism (TM)



















Establishment of the CTCN



COP17 (Durban) in 2011: guidelines to select the host of the CTC

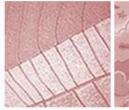
• 16 January 2012: call for proposals for host of CTC

■ 16 March-April 2012: evaluation of proposals

SBI 36 (Bonn) in May 2012: UNEP consortium ranked first

Next steps

- UNFCCC Secretariat in discussion with UNEP on host agreement
- COP 18 (Doha): agreement on CTC host and CTCN advisory board















CTCN responses to NDE requests



NDE Requests & CTCN Responses

- Assistance with TNA process
- Support for, technology assessments.
- Link to current TNA programmes for further support
- Technology needs assessments to define priorities

Monitoring,

learning and

adjustment

evaluation

- Advice on action plan development
 - Assistance with design of policies and R&D and deployment programmes;
- Technology Action plans for priorities
- Identify and link to donor and private sector funding sources

Country driven technology

- Advice on M&E process design,
- •Technical support for evaluations and adjustments in plans and projects.

Forums for sharing of experiences

transfer process

Domestic and collaborative technology actions

- Deliver capacity building for government, business, technical, academia etc:
- •Technical support for technology RD&D (including regional & global collaboration),
- Asist with policies, deployment programmes and project development;
- Mobilise public and private financing, link to other programmes







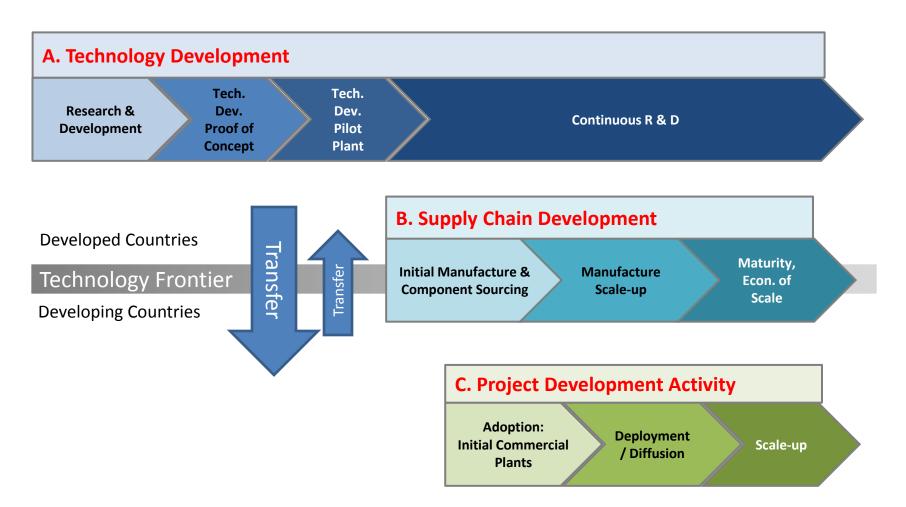






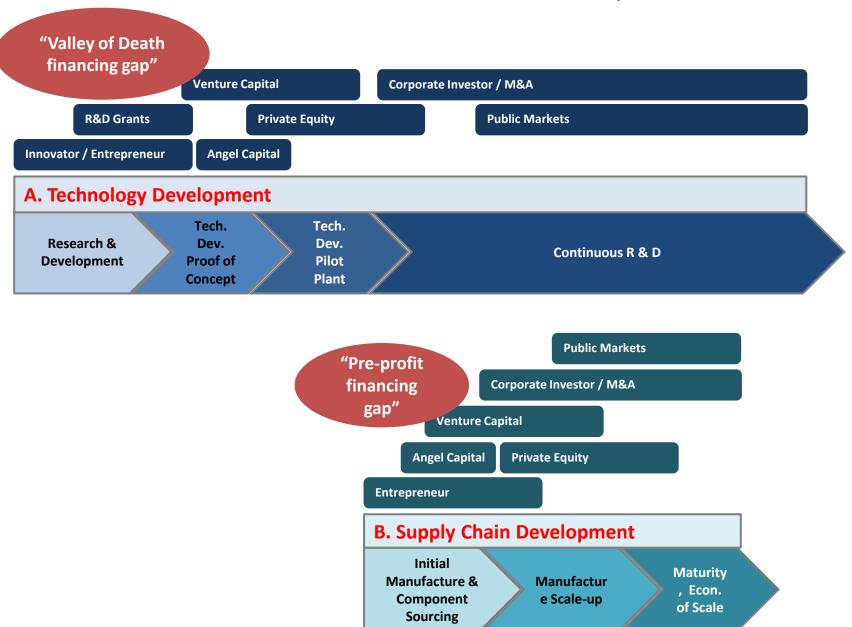


Technology Development, Manufacture & Deployment Processes



Source: UNEP, AEQUERO

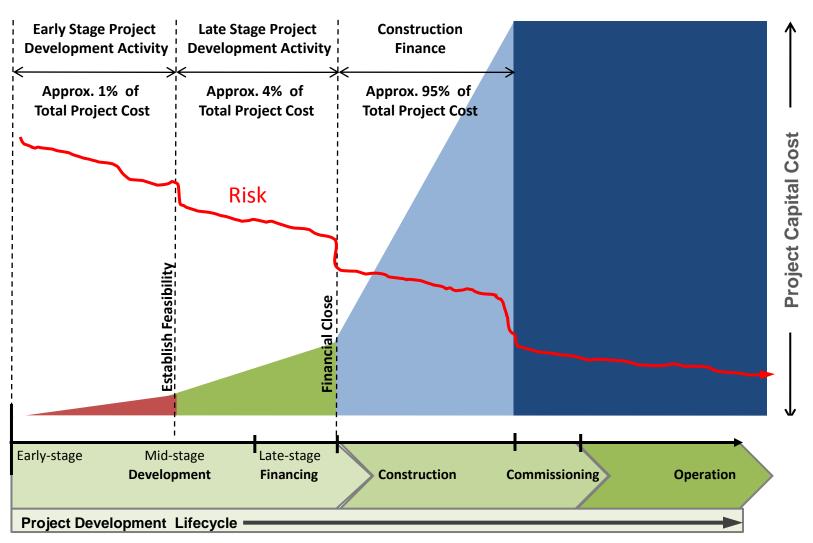
Financial Actors and the Gaps



6 Source: UNEP, AEQUERO



Project Development and Allocation of Project Capital Spend



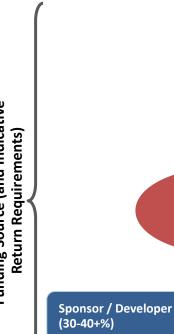




Source: Aequero, UNEP



Where are the financiers along the project cycle?



Early Stage

Financing Gap

• 'First mover' low carbon projects have higher development costs.

Why is it hard to get capital into this space?

- In addition to costs, development cycles are typically 2 – 3 times longer.
- Different risk/return paradigm is a mismatch with conventional developers.
- More of a VC risk profile than infrastructure development finance.



Stage Investment

Corporate & Compliance Investors
(15-20%)

Early-stage Mid-stage Late-stage Development Financing Construction Commissioning Operation

Project Development Lifecycle

Source: UNEP, Aequero Development/Transaction Costs



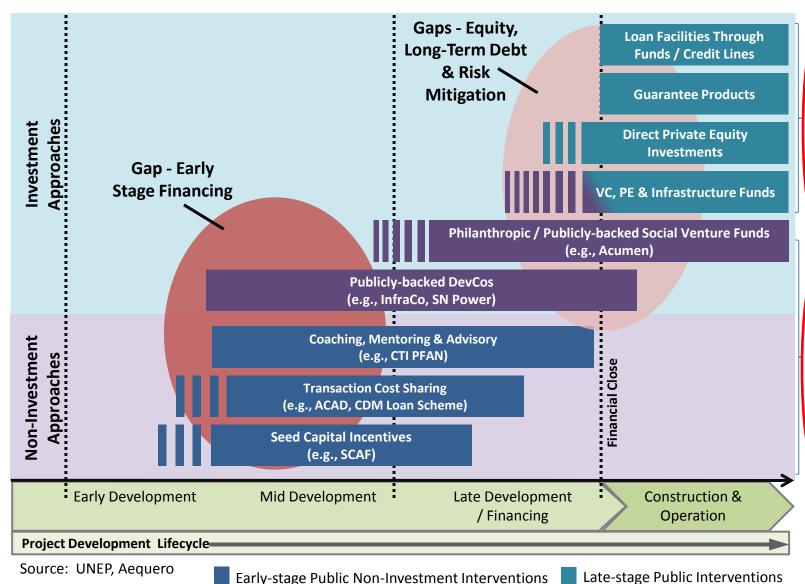




Catalysing Early

Stage Investment

Lesson 1 – Grant and Non-Grant Approaches are Needed to Address All Gaps Challenging to Address Early Stage Financing Gap with Only Non-Grant Approaches



Early-stage Public Investment Interventions











ABOUT US

PROPOSALS

FAQ's

RESOURCES

CONTACT



Mobilising early stage investment for clean energy project and enterprise developments.

Seed Capital Assistance Facility



CONCEPT

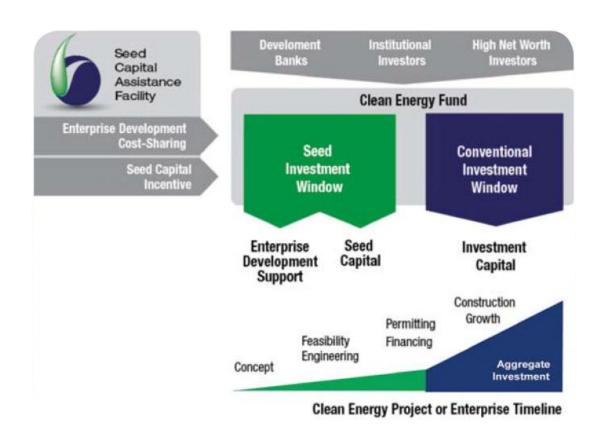








SCAF Cooperating Fund Agreement (CFA)





FUNDS











Asia

Contracted Fund Managers

Africa

PE Funds

Support Line 1 -Enterprise development

Support Line 2 -Seed Capital Cost Sharing

Support Line 1 -Enterprise development

Support Line 2 -Seed Capital Cost Sharing

Berkeley Energy

Renewable Energy Asia Fund

- Fund size of € 86.4 million
- Targets renewable energy projects and project developers to create sizeable operating portfolios
- Focus on wind and small hydro (in particular India and the Philippines)

- Deal sourcing and Identification of early stage opportunities
- Coaching and support for early stage projects and development teams
- 50/50 co-financing arrangement

Deal sourcing through

business plan competitions,

Enterprise Building with In-

Financing of pre-financial close activities including feasibility studies, design engineering, legal reviews, permitting, ESG analysis

 SCAF support provided pro rata. €1 for every €5 of seed capital invested by the fund

Frontier Investment Management ApS (Ltd)

DI Frontier Market Energy and Carbon Fund

- Targets equity and quasi-equity placement in renewable energy and carbon credit generating assets in Sub-Saharan Africa.
- Fund size of € 60 million with a € 5.25 million seed capital window
- Eligible Activities: Classroom training and seminars; On the job training
- Co-financing of preinvestment feasability studies
- 50/50 co-financing arrangement
- Support the development of minimum 7 early stage projects/ventures
- SCAF support provided pro rata, €1 for every €7 of seed capital invested by the fund.

Aloe Private Equity

Aloe Environment Funds / Green Investment Asia Sustainability Fund I

- Aggregate size of € 174 million
- Targets environmentally and socially sustainable companies, located or expanding in Asia
- Focus includes India, People's Republic of China (PRC) and Southeast Asia.
- - arrangement
- dian Institutes of Technology Oualified deals supported in 3 ways: Team strenghteanalysis ning, Business skills development, Feasability studies
- 50/50 co-financing
 - Eligible activities: deal sourcing; business development workshops iects/ventures / coaching; and feasibility
 - 50/50 co-financing arrangement

studies

- Financing of technical assessments, feasability studies, risk analysis, regulatory compliance, cost reviews or environmental
- SCAF support provided pro rata, €1 for every €7 of seed capital invested by the fund
- Support the development of 4 to 5 early stage pro-
- SCAF support provided pro rata, €1 for every €5 of seed capital invested by the fund

Inspired Evolution Investment Management Ptv (Ltd)

Evolution One Funds

- Targets equity and debt placement in clean energy projects in SADC countries
- Fund size of USD 90 million, of which USD 20 million outside South Africa including a USD 5 million seed capital
- Eligible activities: sourcing transactions; regulatory, policy, governance monitoring: and project developers mentoring & guidance
- 50/50 co-financing arrangement
- Support the development of 4-5 early stage projects/ ventures
- SCAF support provided pro rata, €1 for every €5 of seed capital invested by the fund

Armstrong Asset Management*

Armstrong S.E. Asian Clean Energy Fund

- Targets equity and equity-like investments in renewable energy and resource efficiency projects and supply chain in Southeast Asia.

Fund size of \$60 million, of which 2 WC/PE Hybrid Funds in early stage or greenfield projects.





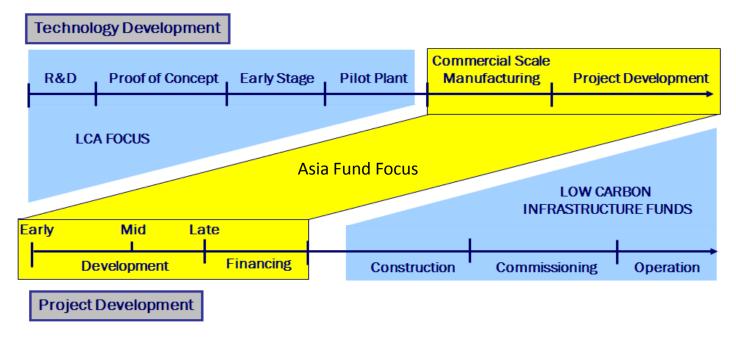






Armstrong Asset Management Investment Strategy

INNOVATION AND SUPPLY



DEMAND CREATION



SL2

SL1

PROJECTS









Africa

Asia

	Name, Country	Tech.	Size (MW)	Stage
	Kouga South Africa	Wind	80	Financial closing
	Mapembasi Tanzania	Small hydro	10	Financial closing
	Kinangop Kenya	Wind	50	Financial closing
	Akiira Kenya	Geo.	35	Feasibility
	Baringo Kenya	Biomass	12	Feasibility
	DSI Rwanda	PV	20	Feasibility
	Lubilia Uganda	Small hydro	5.4	Feasibility
	SITI I/II Uganda	Small hydro	22	Feasibility
	KVTC Tanzania	Biomass	4	Pre- feasibility

Name, Country	Tech.	Size (MW)	Stage
Philippines	Wind	48	Financial closing
Philippines	Small hydro	25	Financial closing
Philippines	Biomass	30	Feasibility
Philippines	Small hydro	24	Feasibility
India	Small hydro	13	Feasibility
India	Small hydro	48	Feasibility
India	Wind farm	230	Feasibility



PROJECTS











Example Seed Financed Projects

Name, Country	Tech.	Size (MW)	Stage	Financing		Co-finance Ratio; Leverage Ratio	CO ₂ (MT)
Kouga South Africa	Wind	80	Financial closing	- soit quasi equity investinent,	<i>00mn</i> debt equity	4x co-finance 50x fund; 600x total	6.1
Mapembasi Tanzania	Small hydro	10	Financial closing	Total: , uev.; \$8mn equity; \$19mn debt Fund: \$350K dev.(20%SCAF); \$3.5mn equity		4x co-finance 55x fund; 400x total	0.6

^{*} Figures in italics are still to be realised

\$70K of SCAF Support For:

- EIA and technical verification studies.
- covers max 50% of any activity



Thank You!









