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# ***UNEP Finance Activities for Clean Energy SMEs***

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# **AGENDA**

- The Clean Energy Financing Challenge***
- UNEP Energy Finance Activities***



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# **AGENDA**

**1**

***The Clean Energy Financing Challenge***

**2**

***UNEP Energy Finance Activities***



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# ***The Clean Energy Financing Challenge***

- ***Huge capital investments required in the coming decades to meet the energy needs of developing countries.***
  - ***Finance industry will play crucial role.***
- ⇒ ***UNEP's Energy Sector response...***
- ***Partnering w/ first movers*** to develop and implement new products, commercial strategies and investment approaches.
  - ***Working through industry platforms*** to share information and build capacities.
  - ***Maximising leverage*** of public funds w/ private capital.



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# ***Clean Energy Challenge – SMEs vs. Traditional Utilities***

## **Traditional Utility Approach:**

- 1. Create energy infrastructure***
- 2. Infrastructure will foster enterprise***

- Central utility not familiar with needs of rural populations.
- Too slow to reach rural Africa within the next decade.
- Too slow to capitalise on technological progress.

## **Energy Enterprise Approach:**

- 1. Create energy enterprises***
- 2. Energy entrepreneurs will create infrastructure***

- Local SMEs know their markets and are more reactive to their needs.
- SMEs will always use the most efficient technology option available.
- ***BUT: SMEs need financial services to develop.***

***Financing Energy SMEs – A sensible thing to do while waiting for capacity additions and rural electrification.***



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# **Common Barriers to SME Finance (I)**

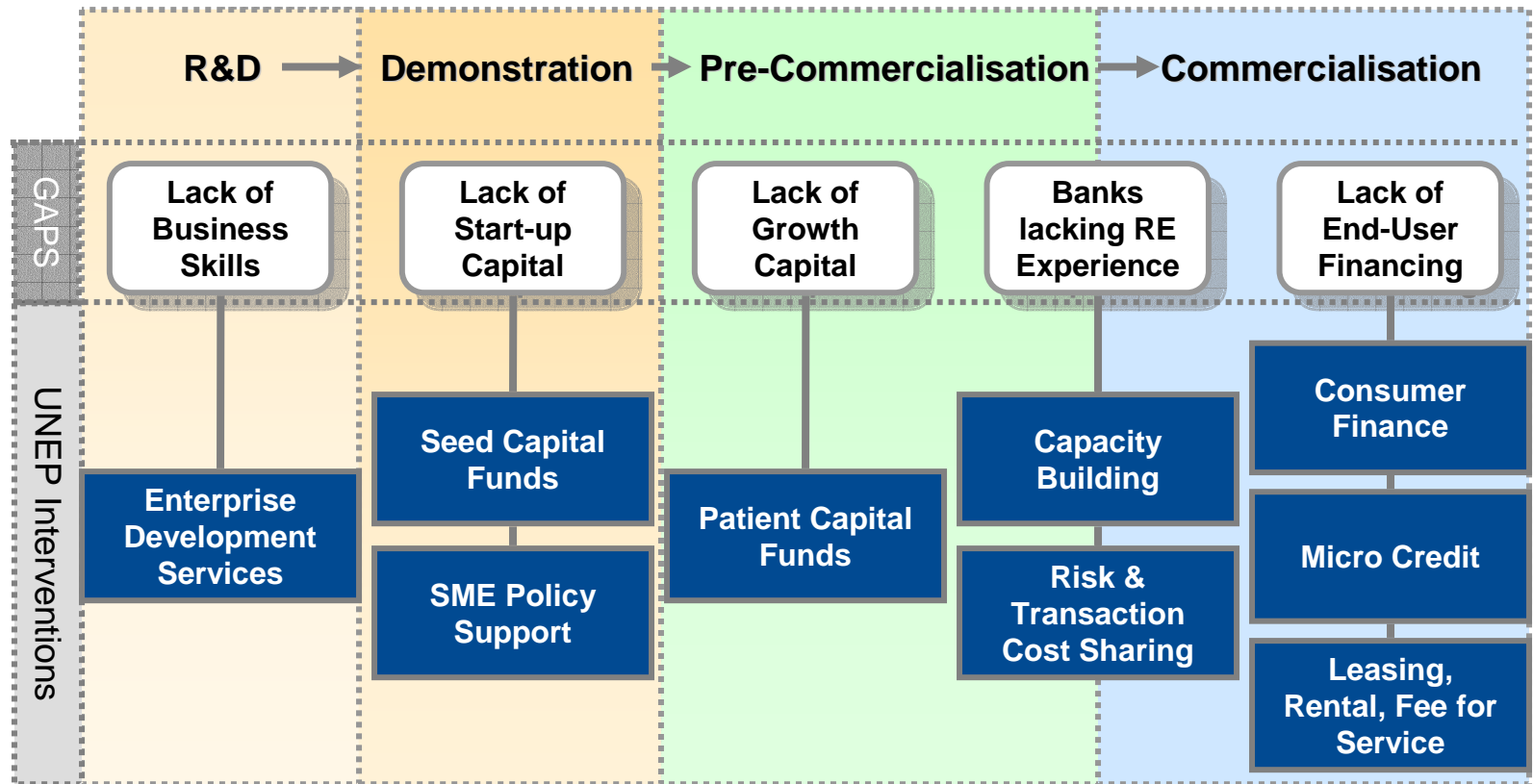
- ⇒ ***Small projects/companies***
- ⇒ ***Higher real and/or perceived risk***
- ⇒ ***Absence of sound historical data***
- ⇒ ***Limited access to reliable technical information***
- ⇒ ***Lack of in-house banker skills to evaluate projects***
- ⇒ ***Increased transaction costs with initial investments***
- ⇒ ***Lack of internal rewards or incentives***

***Information/transaction cost barriers at the core...***



# Common Barriers to SME Finance (II)

## SME Finance “Continuum”



**Working to build a continuum of financial services to foster new technologies and business models.**



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# **UNEP Clean Energy Finance – 4 Key Activity Areas**

- 1) Enterprise Development and Seed Capital**
  - African Rural Energy Enterprise Development (AREED)
  - Seed Capital Access Facility (SCAF)
  
- 2) End-User Lending to Small Scale RETs**
  - India/Indonesia Solar Loan Programme
  - Mediterranean Solar Water Heater Programme
  
- 3) Smart Subsidies and Public Finance Instruments**
  - Mediterranean RE Programme (MEDREP)
  - GreenVillage Credit (China)
  
- 4) Scaling up the CDM**
  - SME capacity building
  - Sharing the cost of project development

***Addressing the key challenges of clean energy SMEs  
in emerging economies.***



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## Implementation Example: Rural Energy Enterprise Development (REED)

- Enterprise development and seed financing to clean energy entrepreneurs in developing countries
- Operating in five countries of West and Southern Africa (**AREED**), Northeast Brazil (**B-REED**) and China's Yunnan Province (**CREED**)
- Training, hands-on **business development assistance** and **early-stage investment** for energy enterprises
- **Helping** young enterprises **attract commercial capital**

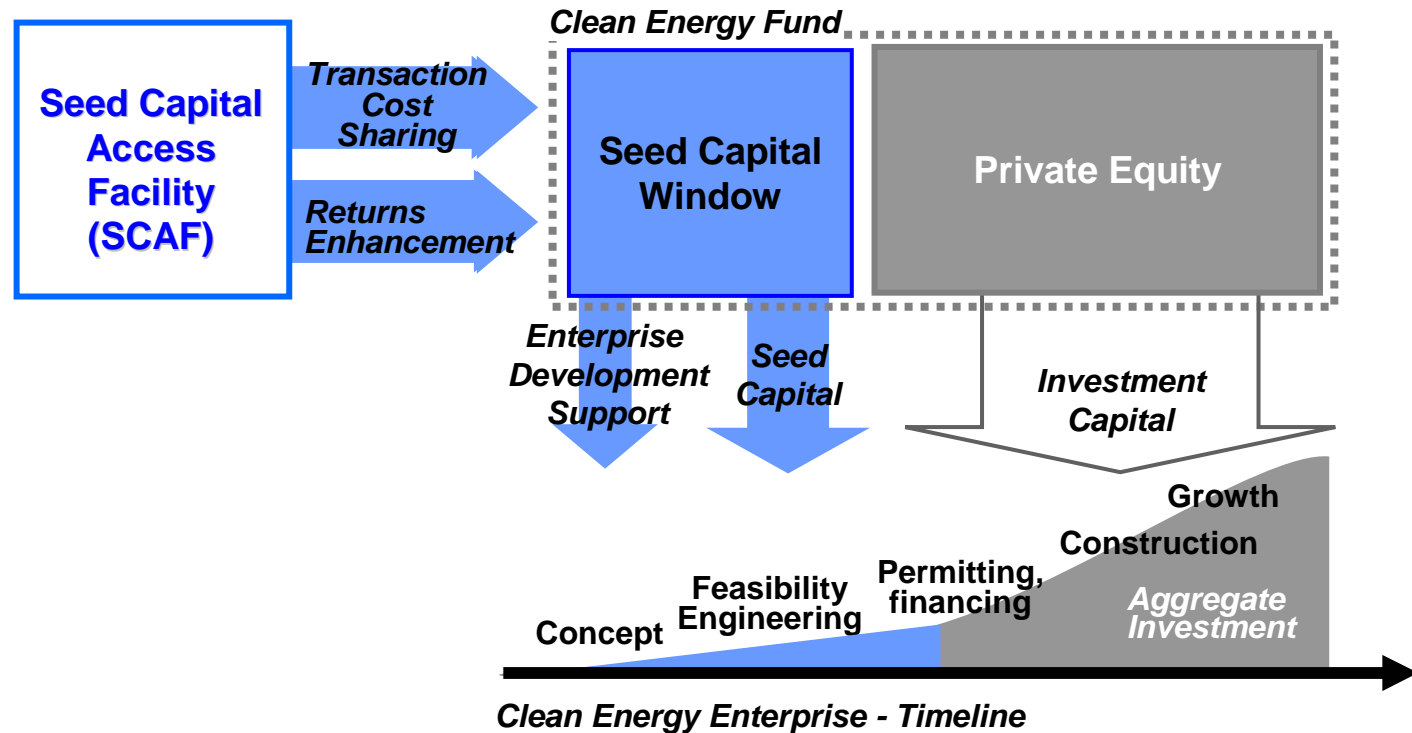


*Addressing the “risk capital gap” through enterprise development services and seed capital support.*



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# Implementation Example: The Seed Capital Access Facility (SCAF)



**Changing investment attitudes by supporting the creation of seed investment windows.**

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## ***Barriers Example: Indonesian Market for Solar Home Systems***

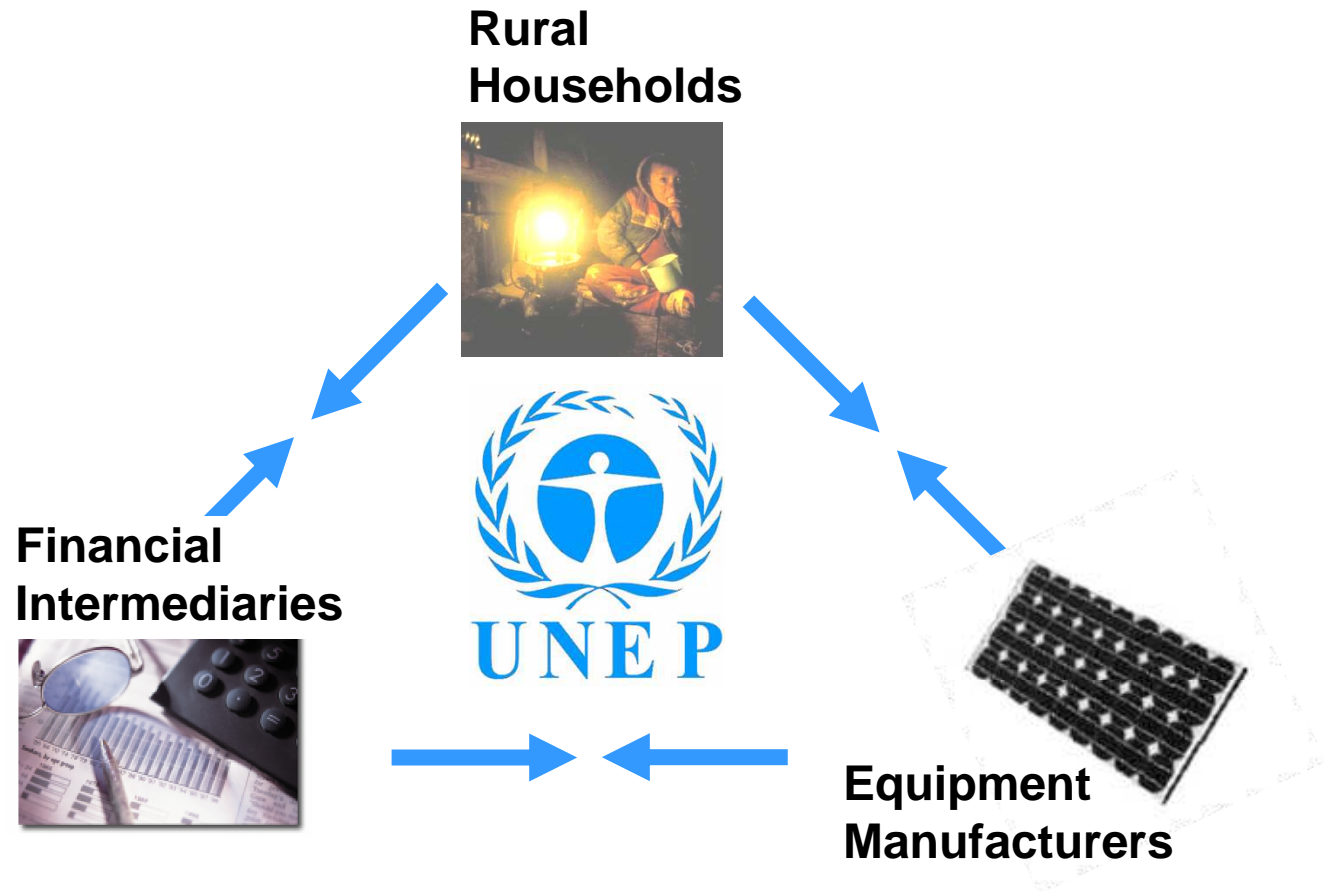
- Government **promoting SHS** aggressively  
...but with heavy subsidies, limited commercial orientation.
- **3 major vendors competing** to supply Govmt. programs  
...but making little headway in selling directly to customers.
- Millions of **rural homes using kerosene lamps**  
...willing to purchase SHS if only they had access to credit.
- **Well capitalized banks** spread across the country  
...yet not coming forward to extend loans to SHS

***Absence of credit solutions as key barrier.***



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# Implementation Example: End-User Lending for Solar Home Systems



***Leverage existing networks, build new market linkages.***

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# ***Bridging Market Gaps: Proposed solutions for market transformation***

## **(1) Encourage Banks to lend**

- Market intelligence: Helping understand the need, gaps and business potential
- Help structuring competitive loan products
- Facilitate Implementation

## **(2) Improve financial capacity of buyer**

- Reducing collateral requirements
- Offering credit insurance
- Extending load terms

## **(3) Build a commercial model**

- Help the market grow on its own, limit “soft support”
- Replication through improving SET “bankability”

***“Development with a business face “***



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## ***Barriers Example: Carbon Finance in Africa***

### ⇒ **Non Africa-specific:**

- Complex modalities & procedures, high transaction cost
- Heavy institutional requirements for project cycle
- Knowledge gap between ER buyers & sellers

### ⇒ **Africa-specific:**

- Limited access to finance by potential developers
- Financial intermediaries lack knowledge of CDM
- Lack of trained national CDM professionals
- Regulatory/legal framework, investment climate
- Large number of small projects, lack of entities capable of bundling

***Need for comprehensive hands-on capacity building.***



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# **Implementation Example: UNEP's CDM Activities in Africa**

- 1) "Capacity Development for CDM" (CD4CDM):**
  - U\$12.5 million, Dutch funded project
  - Inception: mid 2002. Phase I: 12 countries, Phase II (completion Dec. 2008): 9 countries
  
- 2) "Carbon Finance for Sustainable Energy in Africa" (CF-SEA):**
  - U\$1 million, UNF-CDCF funded
  - Five SSA countries
  - Completion Dec. 2007
  
- 3) Energy-Sector CDM Capacity Building:**
  - GTZ/BMZ funding. Five SSA francophone countries
  - Inception Sept. 2007
  
- 4) "Carbon finance for Agriculture, Silviculture, Conservation, and Action against Deforestation" (CASCADE):**
  - U\$3 million. French-funded
  - Focus on Forestry/Bioenergy projects
  - Seven SS African francophone countries
  - Inception March 2007

***Close cooperation with partners of "Nairobi Framework"***





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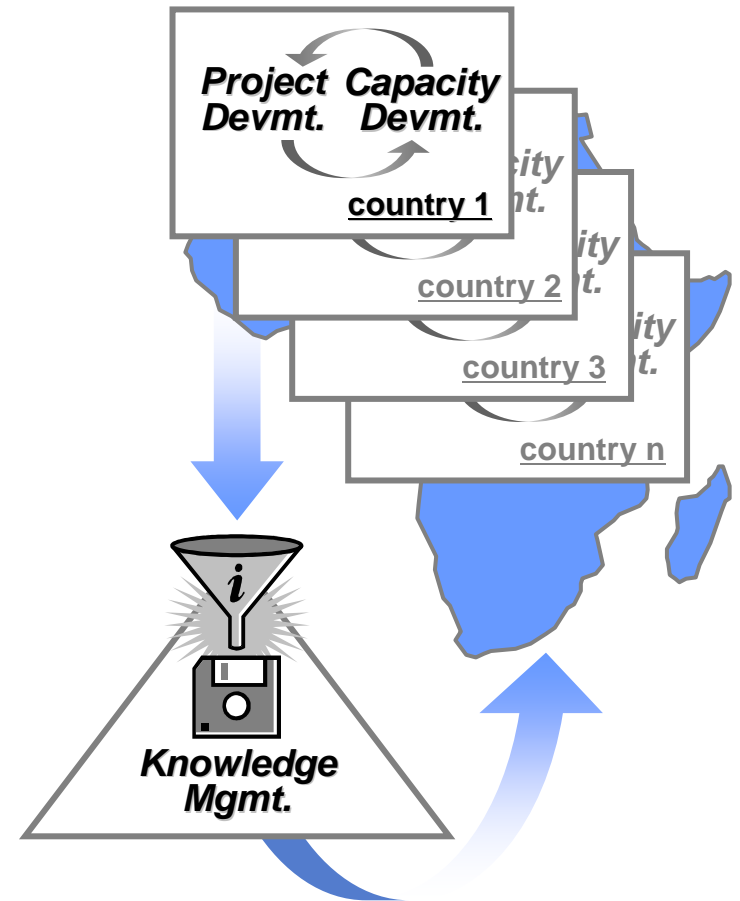
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# Implementation Example: Integrated Approach of CDM Activities

**Track 1 Activities:**  
*Capacity Development*

**Track 2 Activities:**  
*Project Development*

**Track 3 Activities:**  
*Knowledge Management*



**3 interlacing activities performed in parallel...**



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# ***Barriers Example: The Carbon Project Financing Challenge***

## ***Preferences of financial sector:***

- Banks, equity investors, insurers prefer large scale projects to maximise absorption of transaction cost
- Carbon funds focus on compliant CERs
- ECA focus on “export benefits”

## ***Needs of SMEs/project developers:***

- ⇒ Flexible and risk tolerant sources of capital
- ⇒ Up-front carbon buyers
- ⇒ Funding for small-scale projects

***Large gap b/w supply and demand for funding.***



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# ***The Carbon Project Financing Challenge - The SME's Perspective***

## ⇒ ***“Intellectual” Challenge***

- Understanding what investors and lenders are looking for in a “bankable” project
- “Thinking like a banker”, investor or buyer of CERs

## ⇒ ***“Sourcing” Challenge***

- Seeking financing from a variety of local and international sources

## ⇒ ***“Packaging” Challenge***

- Finding the right risk/reward balance for every financier

***Cost of raising capital 20-30% higher compared to  
traditional project finance.***

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# ***The Carbon Project Financing Challenge - The Financier's Perspective***

## ⇒ ***Investment environment concerns***

- Traditional country risk + additional concerns about institutional/regulatory exposure

## ⇒ ***Project viability concerns***

- Traditional project risk + additional concerns about new technologies, non-traditional feedstock, non-traditional purchasers, new stakeholders

## ⇒ ***Carbon revenue concerns***

- Enhancement of revenue stream and ROI, but how volatile? How long into the future?

***Traditional Risk/Return Analysis insufficient.***

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## ***Implementation Example: UNEP approach to mobilising the finance community***

- ⇒ Project development support provided in **close cooperation with leading carbon buyers**
- ⇒ Delegates of **local financial institutions** present at all capacity building activities
- ⇒ Sponsoring of **deal making opportunities** to enhance interaction between investors and developers
- ⇒ Supporting developers in providing **sound financial data and analysis**
- ⇒ 3 major African events **addressing the African banking community** (May 07 - Anglophone Banker's workshop; January 08 - Francophone Banker's workshop); Sept. 08 African Carbon Expo.

***Financial sector engagement key part of CDM capacity building approach.***



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***Thank you!***



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# Thank You!

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