



Fast Start Climate Financing: Perspectives from UNEP

Glenn Hodes, Kaveh Zahedi

Addis Ababa, 14 April 2010

Copenhagen Accord

- NOT a formal decision but key elements:
 - Voluntary GHG reduction targets fall short of what science would require, but gap is closing
 - Developed countries pledge to mobilize \$100 billion annually by 2020 of which \$30 billion (additional) for actions in 2010–12.
 - Copenhagen Green Climate Fund to be established and manage a major part of these new funds (modalities unclear)
 - Technology Mechanism to be established to enhance action on technology development and transfer

Shift toward Low-Carbon Economies will require massive capital investment.



What's clear are: the science, political mandate and the costs of inaction

Investment in cleaner energy production will need to double and investment in energy efficiency will need to quadruple.

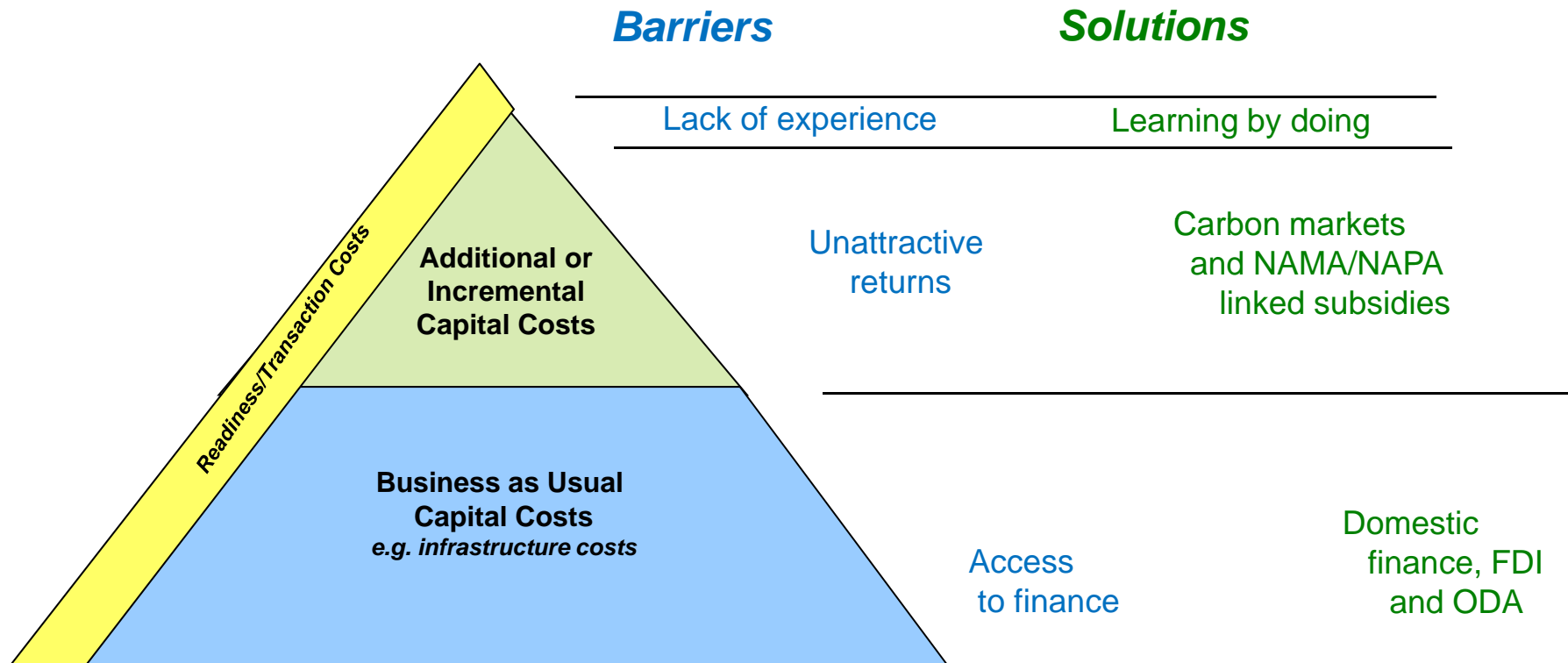
And carbon will provide supplementary funding for certain projects, depending on future permit prices.

- Int'l Energy Agency (WEO, 2008) models predict a CO₂ price of \$180/ton in 2030.

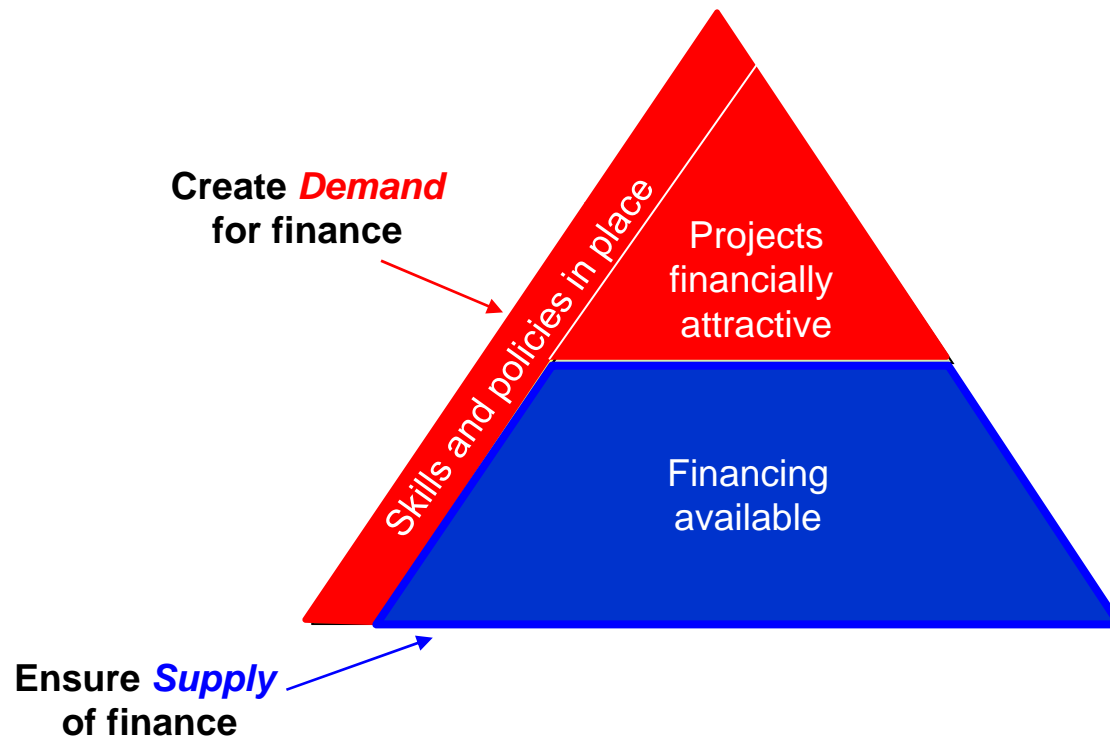
Key take-away points

- **Finance is vital, but not sufficient. Dialogue has mainly been on ensuring access to finance for low carbon or climate-resilient infrastructure, but supply is not the only barrier.** Need to stimulate domestic [demand](#) and build the [capacity](#) to absorb and deploy funds.
- **Future climate funds can maximize their impact through a “readiness” or pre-investment phase.** Building readiness essential for success of subsequent large-scale programs financed through MDBs and the private sector.
- **UNEP well placed to respond to country demands for such support.** We can help mobilize complementary finance that leverages private capital and large-scale public investment. Existing menu of options to catalyze green investment and build readiness for carbon mitigation, REDD activities.

WHAT needs to be financed...



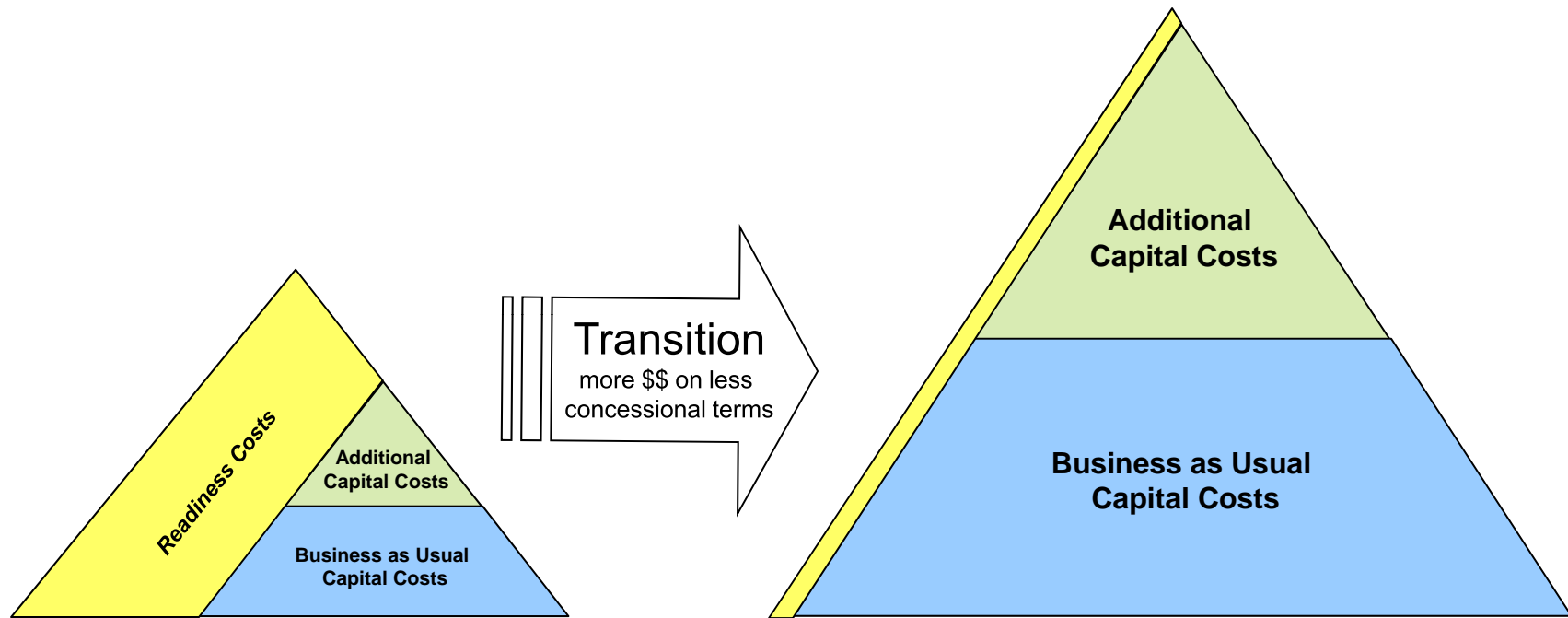
Need to Rebalance *Demand* and *Supply*



What defines “Readiness”?

- **Policy Support:** analysis of options, developing roadmaps/pathways, reviewing and undertaking legislative and policy reform;
- **Pre-Investment analytical support:** investment strategies and options, assessing renewable resources potential, technology needs assessments;
- **Capacity Building:** CDM, REDD including MRV, technology, as well as strengthening institutions to adapt to CC;
- **Creating bankable projects** by buying down initial costs and reducing transaction costs;
- **Early actions** to test out options and achieving other ‘quick wins’

Need to Target Support by Phase



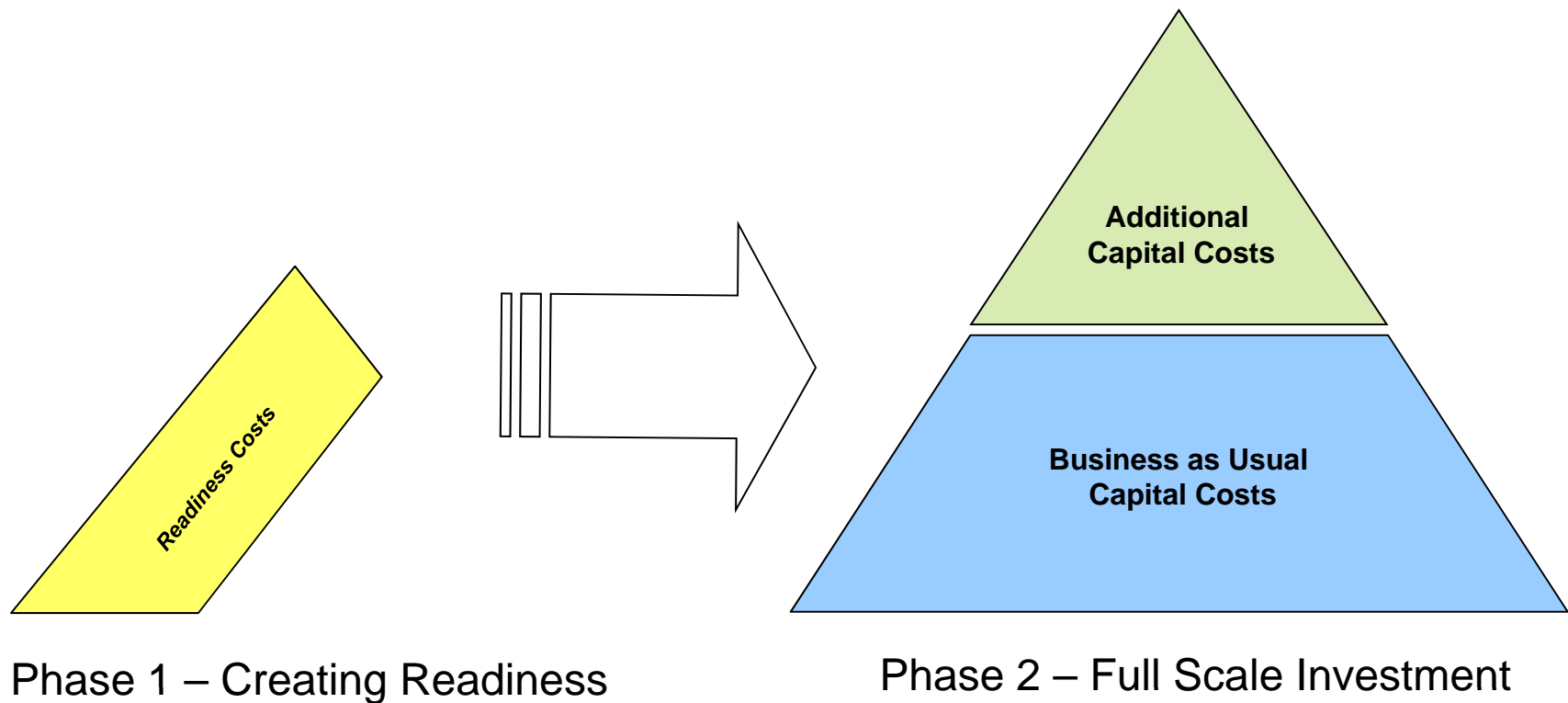
Phase 1 – Creating Readiness

- building capacities and
- mobilising early investments

Phase 2 – Full Scale Investment

- maintaining human/institutional capacities
- paying for additional costs through carbon/NAMAs/NAPAs
- maintaining access to finance

Capacity building & investment mobilization should go hand in hand



Transaction Costs Greatly Underappreciated

Exhibit 4 – Financing flows: €65–100 billion required in developing countries

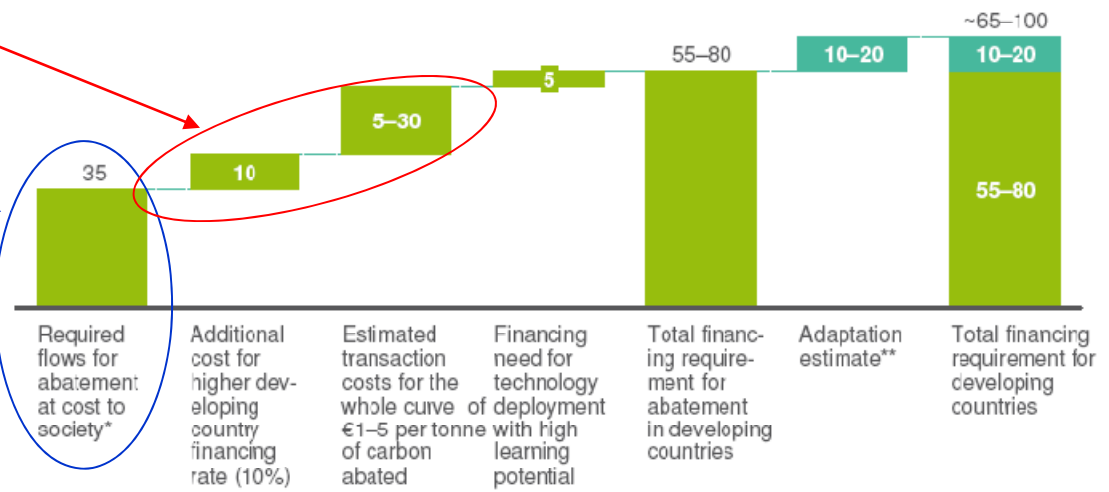
€ billion on average p.a. 2010–20 (excluding self-financing)

■ Costs of 12 Gt of abatement in developing countries
■ Adaptation cost

When they should also be here

Most eyes are here

Developing countries



McKinsey & Co: Sept. 2009, Finance Briefing Paper

UNEP Clean-Tech Readiness Program

Menu of Quick Start Services

Mitigation & Technology

- Building Capacity to prepare **low-emission development plans** and supporting **MRV**
- Regional **technology centres and climate change networks**
- Strengthening developing country capabilities for preparation and implementation of **Clean Development Mechanism** projects
- **Technology roadmaps** and regional technology market assessments
- Up front capability-development and support for expanded investment in **clean energy technologies** (green economy sectoral work)
- Local bank support to **upscale financing** for small scale clean technologies
 - Example: Indian Solar Loan Program
- Creating enabling environment to promote sustainable **energy access**

UN-REDD Menu of Quick Start Services

UN-REDD/Adaptation

- Development of national REDD+ strategy
- REDD+ monitoring (MRV plus reference scenario setting)
- Policy enablers/measures (cluster of governance and institutional strengthening, livelihoods, and legal frameworks)
- Sustainable management of forests and carbon enhancement
- Payment systems and market access including equitable benefit sharing
- Stakeholder engagement
- Capacity-building cutting across the above

Examples of UNEP Activities

Investment mobilization, engaging the finance sector in Africa

- ACAD Facility (for carbon projects)
 - SCAF Facility (for renewables)
 - CC-DARE
- 2nd Africa Carbon Forum March 2010 and 2nd African Bankers' Carbon Finance Investment Forum, Oct 2010.
- Dakar: Carbon finance perspectives for the banking sector. Feb 2008



African Bankers' Carbon Finance Investment Forum

May 28 – 30, 2007
Johannesburg (Midrand)
South Africa

Event Sponsors:

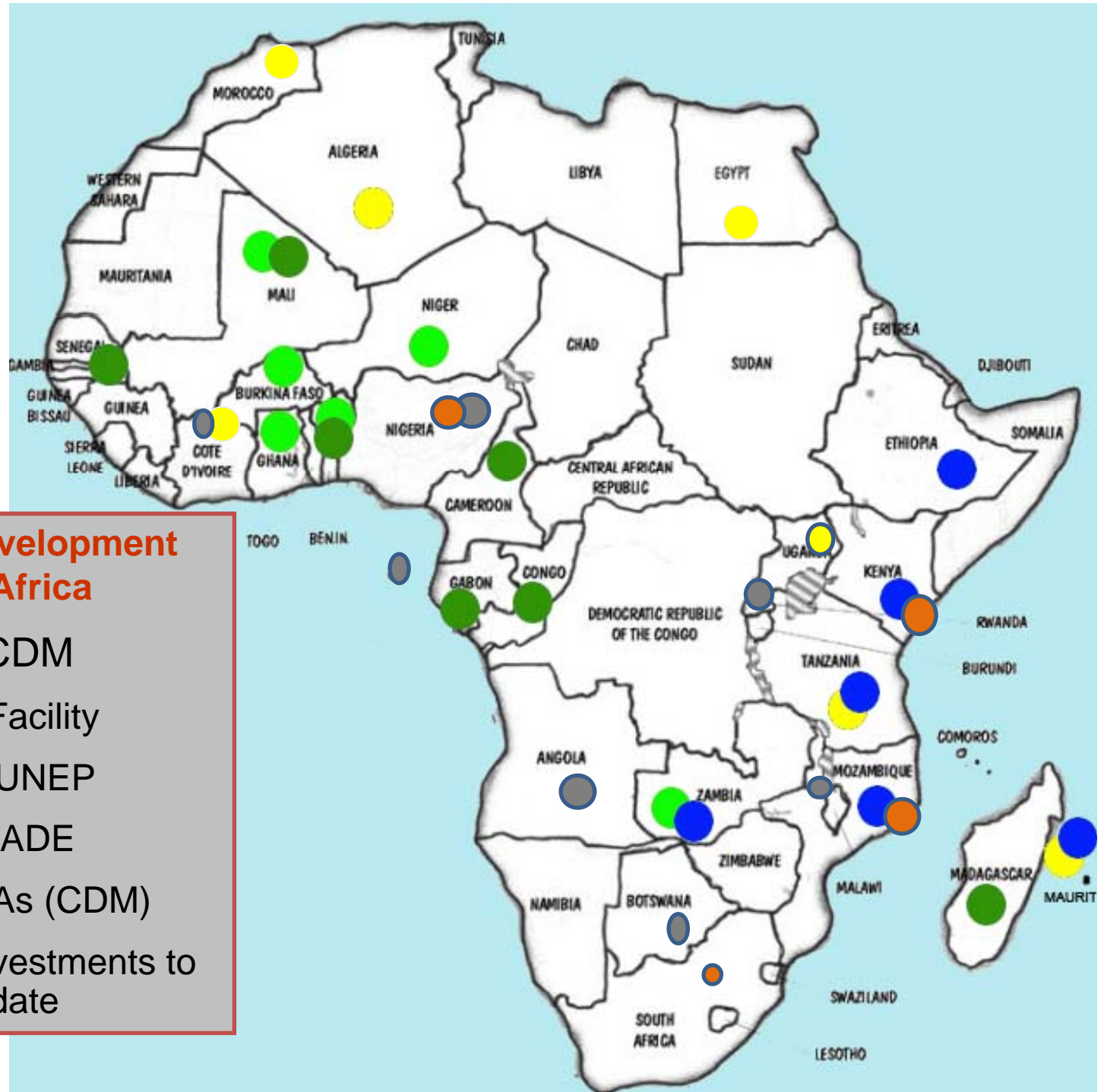
WBI CF ASSIST
Ministry for the Environment
Land and Sea
of Botswana
gtz
Climate Protection Programme

organised by
Federal Ministry
for Economic Cooperation
and Development

"Emissions trading can achieve not only a more cost-effective reduction in global emissions but a more just one, enabling significant flows of investment into developing countries ... [This market] could grow to between \$50 and \$100 billion."
– Rt. Hon. Gordon Brown

Event Coordinators:
Glenn Hodges, UNEP Risoe Center
Gregor Pfler, africa@practice.gpfler@africa@practice.com
Tel. +27 78 1970 424 or +44 20 7462 7598 • Fax. +27 866 487 356 or +44 20 7462 7573

Event Organisers:
UNEP
UNEP RISO CENTRE
DBSA
Development Bank of Southern Africa



UNEP capacity development activities in Africa

- CD4CDM
- Green Facility
- UNDP-UNEP
- CASCADE
- CB for MEAs (CDM)
- ACAD investments to date

Introducing the ACAD Facility

- Innovative **public-private partnership** for green financing supported by the German Government's International Climate Initiative which aims to facilitate the realization and financial closure of highly replicable African carbon projects.
- Addresses key barriers to more robust African carbon market by:
 - Enhancing transactional capacity within African banks
 - Reducing high early-stage costs/risks
 - Providing a jump-start financing solution
- UNEP facilitates partnership working closely with Standard Bank and other financial institutions and investors.
 - Secretariat embedded in Standard Bank – Johannesburg following int'l tender
- Launched fall 2009: UNEP FI Roundtable, Carbon Markets Africa

ACAD Goals & Objectives

- Main short-term goal (end 2010):
 - Leverage closure of 10-12 replicable transactions through transaction cost sharing services and technical assistance to local financiers, developers, and project proponents
 - Enhance skills in CDM project identification and appraisal amongst African banks, build capacity to spot opportunities
- Main long-term goals:
 - Mainstream carbon capacity within African financial sector
 - Catalyze robust African carbon market
 - Demonstrate proof-of-concept for self-sustaining facility

Key Activities

- Transaction cost sharing services
 - Roughly €50,000 per project for documentation development, validation/registration, enviro-legal studies, other due diligence
 - CDM methodology selection/development
- Four advanced training workshops and additional in-house clinics for developers and African FIs
 - Cape Town (Oct. 2009), Nairobi (Mar. and April 2010), Lagos (August 2010)
- FI outreach/mobilization events
 - 2nd African Bankers' Carbon Investment Forum, Johannesburg, Oct/Nov 2010

Current challenges to leveraging carbon finance

(1) Weak incentives

- high transaction costs and low return on investment at odds with market-based nature of CDM
- 'premium' for projects w/high SD benefits low, not systematic

(2) Financial engineering realities

- low and variable carbon credit prices
- hard to frontload benefit, can't reduce high costs to end-user
- low market confidence: cannot monetize full credit stream

(3) Structural/regulatory barriers

- complex or uncertain rules f.x. 'bundling', displacing NRB, etc.
- capacity challenges, lack of integrated policy frameworks

UNEP RISOE CDM/JI PIPELINE FEB '10

Cumulative # of projects

Africa	Number	kCER2012	
South Africa	30	19863	21.7%
Egypt	13	17161	18.7%
Uganda	11	1287	1.4%
Morocco	9	2582	2.8%
Kenya	15	2833	3.1%
Nigeria	8	34112	37.2%
Tanzania	5	2062	2.2%
Congo DR	5	1025	1.1%
Mali	2	281	0.3%
Tunisia	3	4131	4.5%
Ivory Coast	3	1560	1.7%
Senegal	2	402	0.4%
Mozambique	1	111	0.1%
Madagascar	1	210	0.2%
Zambia	1	387	0.4%
Ethiopia	1	179	0.2%
Swaziland	1	252	0.3%
Rwanda	3	401	0.4%
Cameroon	2	556	0.6%
Liberia	1	215	0.2%
Cape Verde	1	340	0.4%
Ghana	1	1553	1.7%
Mauritius	1	231	0.3%
Equatorial Guinea	0	0	0.0%
Total	120	91735	100.0%

**Now 120
African Projects**

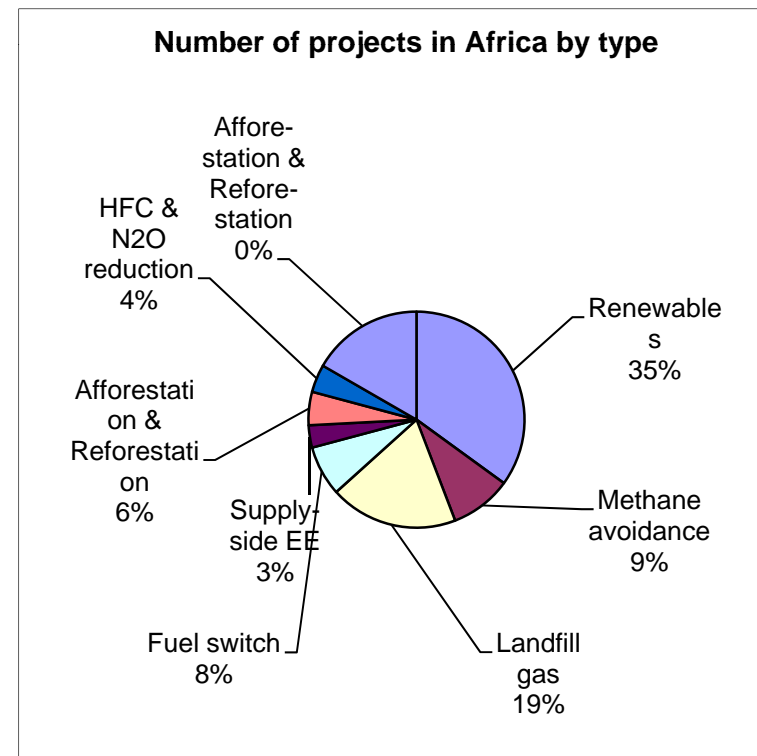
**Of which 42 are
registered or requesting**

**With potential
carbon revenue
around 1.275
billion USD by
2012**

Africa	Number
Landfill gas	20
Biomass energy	17
Reforestation	17
Hydro	11
Fossil fuel switch	8
Wind	8
N2O	5
EE households	4
Fugitive	4
Methane avoidance	4
EE OwnGeneration	3
Solar	3
Cement	2
EE industry	2
Geothermal	2
Afforestation	1
EE supply side	1
Agriculture	0
CO2 capture	0
Coal bed/mine methane	0
EE service	0
Energy distribution	0
HFCs	0
PFCs and SF6	0
Tidal	0
Transport	0
Total	112

Types of CDM Projects in Africa

Landfills & RE >50% of CERs



Approved Projects to Date

1. Lake Turkana Wind Power Project, KENYA
 - CDM validation costs and Gold Standard certification
2. Lagos Waste Management Authority , NIGERIA
 - Technical studies and PDD development for 2 landfill gas to electricity and 1 organic composting project
3. Biomass fuel switch project at Kaloleni Cement Plant, KENYA
 - Share partial costs for PDD development and validation
4. Matola Cement Gas Fuel-Switching Project , MOZAMBIQUE
 - Initial CER verification for country's first registered project
5. Clay Brick Sector EE Program – SOUTH AFRICA
 - Support soft costs of PoA set-up and enrollments
6. Int'l Ferrometals Waste Gas Co-gen – SOUTH AFRICA
 - Validation and registration costs

Key Contacts

ACAD SECRETARIAT		ACAD@standardbank.co.za
Glenn Hodes	UNEP-Risoe Centre	gsho@risoe.dtu.dk
James Vener	UNEP DTIE/Energy Branch	james.vener@unep.org
Geoff Sinclair	Standard Bank	Geoff.Sinclair@standardbank.com
Muyideen Kazim	Standard Bank (Lagos)	Muyideen.Kazim@stanbic.com
Fenella Aouane	Standard Bank	Fenella.Aouane@standardbank.com

Technical Appendix: Carbon Market

- Under the Kyoto Protocol Annex B, countries are given targets expressed as levels of allowed emissions
- These are denominated in tons of CO₂ equivalent and generally referred to as Assigned Amount units (AAUs)
- In addition to these units the Kyoto Protocol has given three 'flexible mechanisms' that aim to help Annex B countries achieve their emissions reduction targets
- All these mechanisms operate under the overriding premise that whilst the cost of abatement varies across different countries, the effect on the global atmosphere of a reduction in emissions is the same – regardless of where in the world the reduction took place
- The Kyoto Protocol has recognised that it is little matter where emissions are reduced – just that they are reduced
- At the end of the Kyoto period, each country must ensure that it has enough units (whether in the form of CERs, AAUs or ERUs etc) to comply with its target
- Governments and decision makers have come up with various methods to help reduce emissions on a national level, including legislation, tax and cap & trade systems.
- Governments are using a variety of methods to reduce emissions within their countries

Flexible Mechanisms

International Emission Trading

Annex B countries may trade units between each other in order to make up national shortfalls or sell excess units

Clean Development Mechanism

Credits are allocated to projects in non-Annex 1 countries for reducing emissions 1 CER = 1 tonne reduction in emissions

Joint Implementation

An emission reducing project like above is implemented in an Annex B country, (these countries also operate under caps). This produces a similar unit; an ERU

- Through **national legislation** and various local government projects (eg Bicycle schemes, recycling etc) domestic emissions are being reduced
- **Taxation** has been used extensively to reduce emissions in transportation – various airport taxes and congestion charges
- Bigger single emitters can be captured under **cap and trade**. The biggest hurdle for such schemes is that emissions must be measurable on a regular basis

Technical Appendix: African CDM Projects

Cumulative # of projects

UNEP RISOE CDM/JI PIPELINE FEB '10

Africa	Number	kCER2012	
South Africa	30	19863	21.7%
Egypt	13	17161	18.7%
Uganda	11	1287	1.4%
Morocco	9	2582	2.8%
Kenya	15	2833	3.1%
Nigeria	8	34112	37.2%
Tanzania	5	2062	2.2%
Congo DR	5	1025	1.1%
Mali	2	281	0.3%
Tunisia	3	4131	4.5%
Ivory Coast	3	1560	1.7%
Senegal	2	402	0.4%
Mozambique	1	111	0.1%
Madagascar	1	210	0.2%
Zambia	1	387	0.4%
Ethiopia	1	179	0.2%
Swaziland	1	252	0.3%
Rwanda	3	401	0.4%
Cameroon	2	556	0.6%
Liberia	1	215	0.2%
Cape Verde	1	340	0.4%
Ghana	1	1553	1.7%
Mauritius	1	231	0.3%
Equatorial Guinea	0	0	0.0%
Total	120	91735	100.0%

**Now 120
African Projects**

**Of which 42 are
registered or requesting**

**With potential
carbon revenue
around 1.275
billion USD by
2012**

Africa	Number
Landfill gas	20
Biomass energy	17
Reforestation	17
Hydro	11
Fossil fuel switch	8
Wind	8
N2O	5
EE households	4
Fugitive	4
Methane avoidance	4
EE OwnGeneration	3
Solar	3
Cement	2
EE industry	2
Geothermal	2
Afforestation	1
EE supply side	1
Agriculture	0
CO2 capture	0
Coal bed/mine methane	0
EE service	0
Energy distribution	0
HFCs	0
PFCs and SF6	0
Tidal	0
Transport	0
Total	112

Types of CDM Projects in Africa

Landfills & RE >50% of CERs

