

CCS-Africa: findings and further steps

Maintaining awareness for sound decision-making
Heleen de Coninck (ECN) World Bank CCS workshop,
Johannesburg, June 1st, 2011



Energy research Centre of the Netherlands

Headquartered in Petten, the Netherlands

500 researchers develop technology and bring it to the market



ECN Policy Studies

- > Independent think tank
- > 65 researchers
- > Knowledge and strategies for a sustainable energy system

Former activities on CCS in Southern Africa

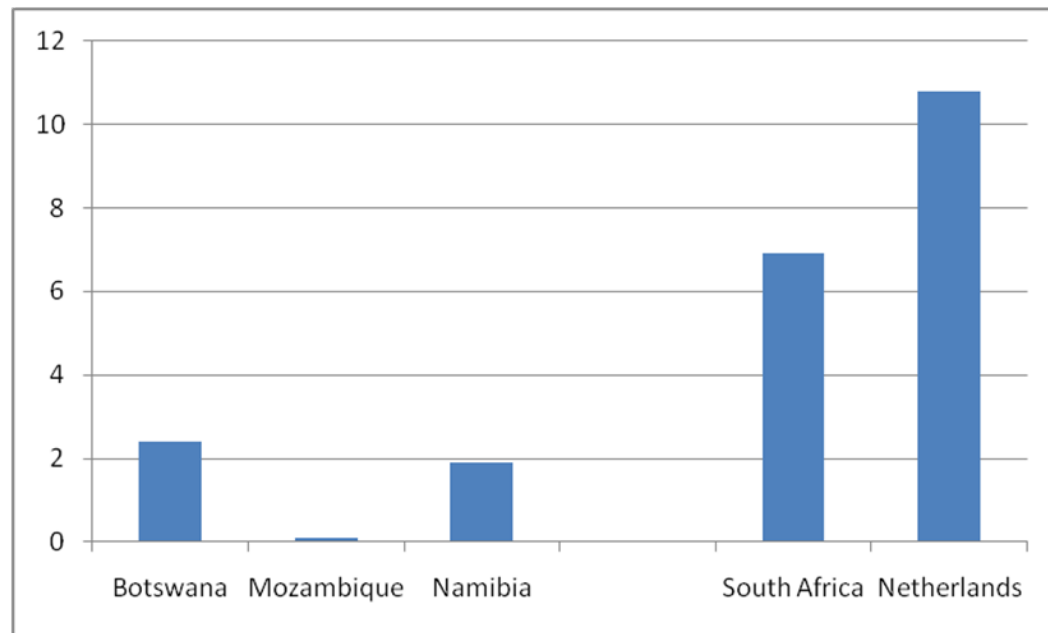
- COP12 Nairobi: discussions on CCS in CDM stalled
- Awareness of capacity needs in Africa
- 2007 regional workshops on CCS in Africa
 - West Africa: Dakar, Senegal
 - Southern Africa: Gaborone, Botswana
- 2009 Botswana Innovation Hub workshop on carbon market opportunities including CCS
- 2010 country workshops on CCS in Southern Africa
 - Gaborone, Botswana
 - Maputo, Mozambique
 - Windhoek, Namibia



Question: why consider CCS in Southern Africa?

Why not?

- Countries like Namibia, Mozambique, Botswana have very low CO₂ emissions
- Priority should be on development and poverty reduction
- Most CCS incur high costs, incentives are still absent
- Significant energy penalty with CCS on power production in a region with power deficits



Source: IEA 2010

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Why yes?

- CCS is needed globally
- Southern Africa has much coal and is likely to use it
- CCS can be part of a sustainable industrial development strategy
- High-purity sources can have lower costs; significant high-purity sources in the Southern Africa region
- New developments around CCS in the Clean Development Mechanism: incentives

Current status and debate on CCS in CDM

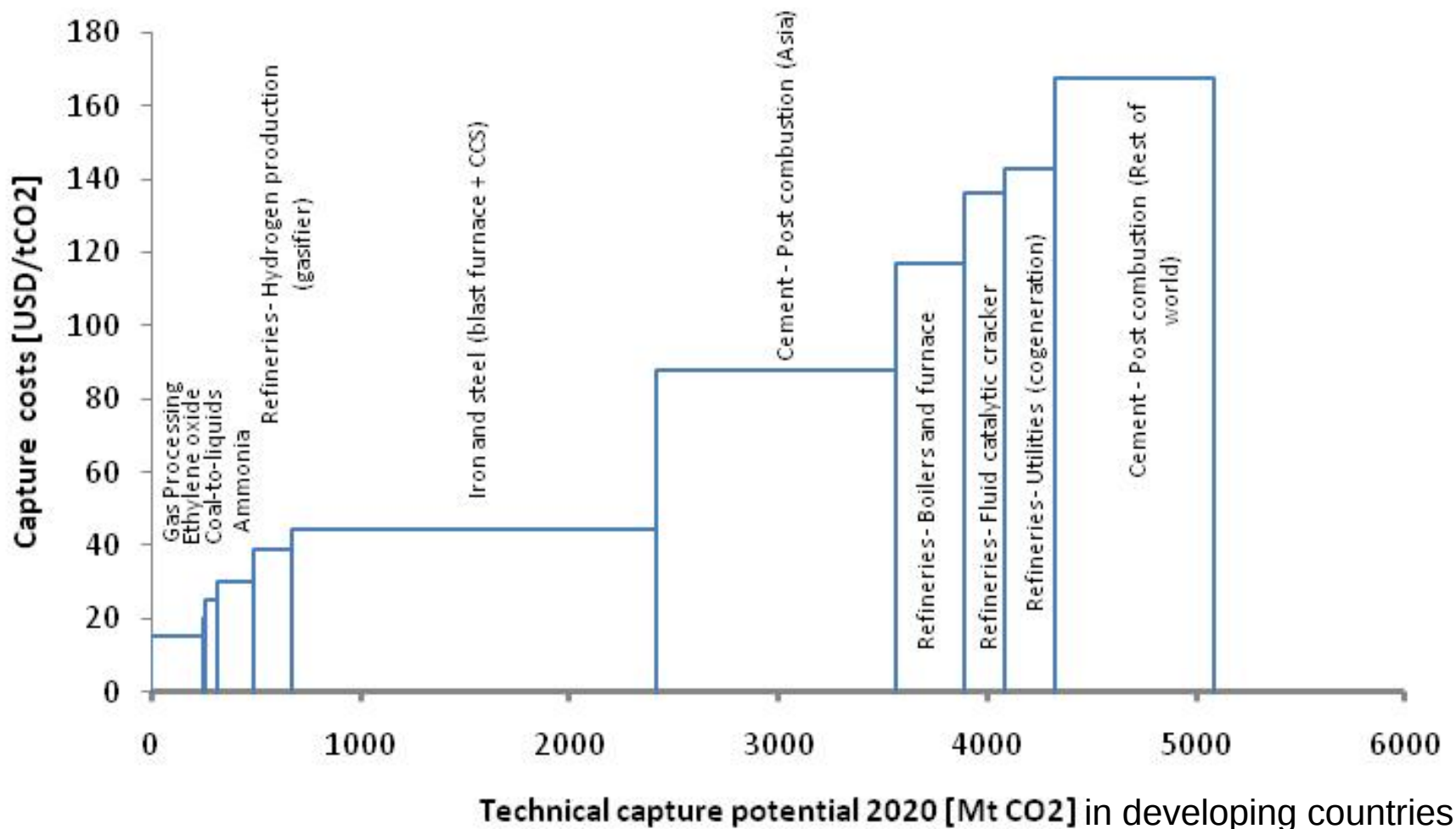
Cancun: decision that CCS is eligible under the Clean Development Mechanism

CDM: mechanism under the Kyoto Protocol that allows:

- Developed countries to more cost-effectively reach their Kyoto targets
- Developing countries to achieve more sustainable development

This means that in principle an incentive for CCS, corresponding to a carbon price of around 10-15 US\$/tCO₂ can be applicable to CCS in developing countries

What CCS projects might we see in the CDM?



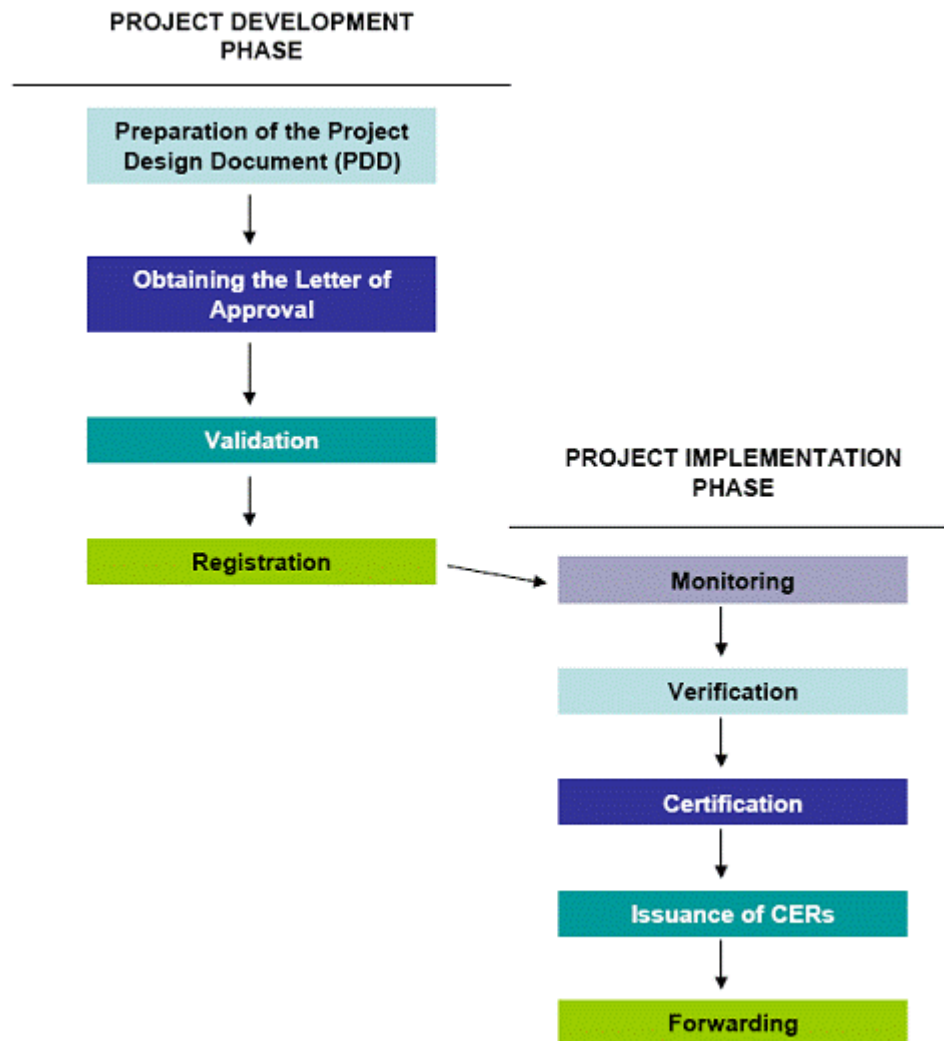
Current status and debate on CCS in CDM

CCS project activities need to be consistent with CDM cycle

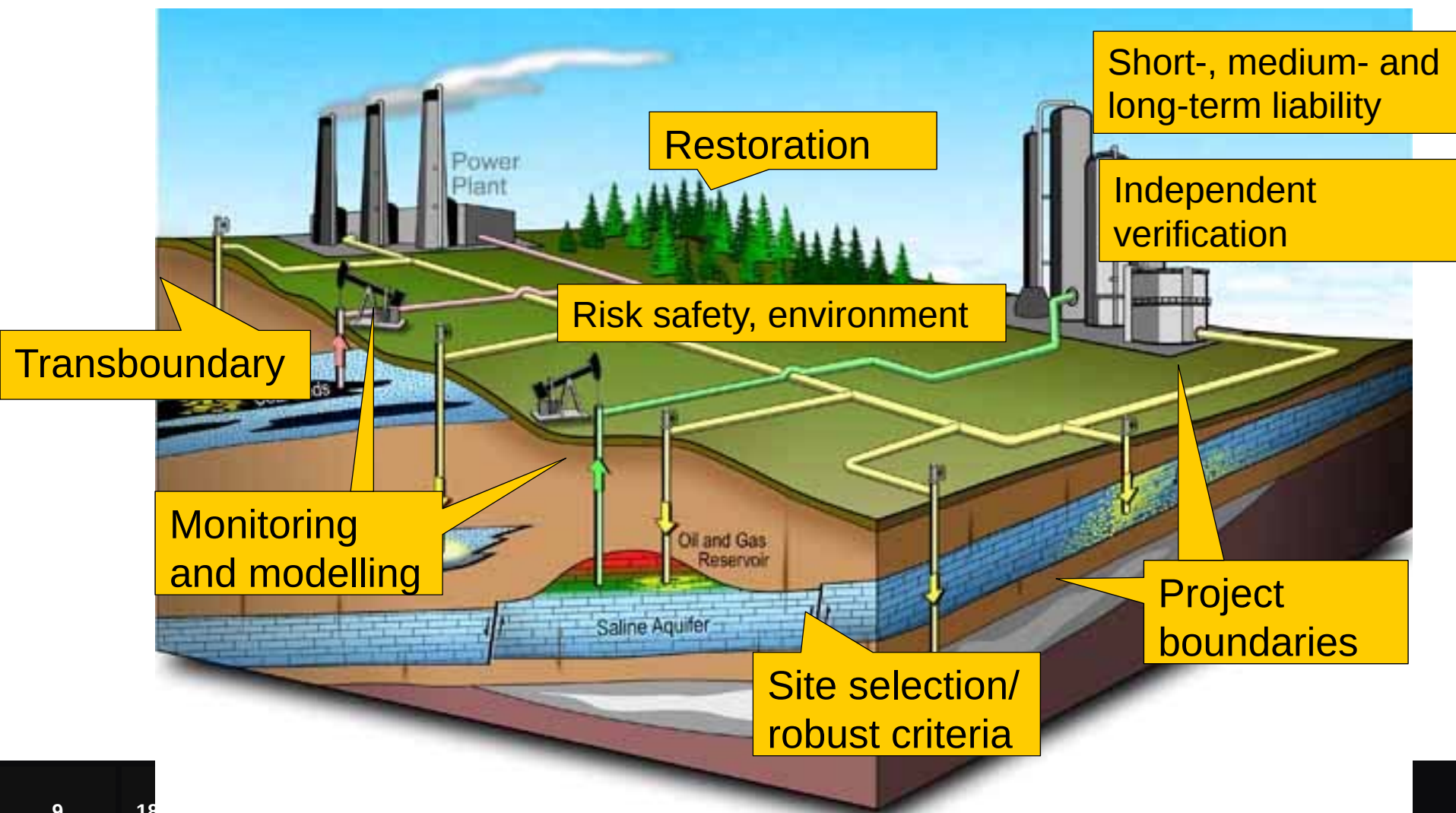
Cancun decision: develop “modalities and procedures”

Discussions continue at UNFCCC Workshop (July or September)

To be decided at COP/MOP7 in Durban (December 2011)



Current status and debate on CCS in CDM



Conclusions

CCS can only function in a broader, integrated energy strategy for the countries and for the region.

Especially for Botswana and Mozambique, further knowledge building on CCS is useful, as realistic possibilities for CCS may exist.

For Namibia, this is less obvious.

Further work may include

- Conducting geological storage assessments (quick scans)
- Regulatory capacity building with the relevant government bodies
- Fostering continued stakeholder interaction regarding CCS in the Southern African region

Conclusions

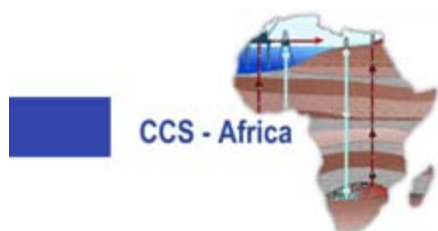
Acknowledge that countries in Southern Africa have lots of reasons to not do CCS

For countries which have little potential: maintain basic knowledge

For countries with potential and interest, focus on the drivers:

- Lower-cost opportunities in industry
- Clean Development Mechanism prospects
- New climate finance
- Long-term role of coal in a sustainable industrialisation strategy

Thank you



CCS: A Capacity Building Effort in Africa

Resources on CCS-Africa: www.ccs-africa.org

- Report on CCS in Botswana, Mozambique and Namibia
- Fact sheets on Botswana, Mozambique and Namibia
- 2007 and 2010 workshop presentations and participant lists
- Capacity building materials

More information: Heleen de Coninck, deconinck@ecn.nl