



International CCS policy after Copenhagen: an update

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1 Executive Summary (restricted)

CO₂ capture and storage features in international climate policy under the UNFCCC as well as in other international forums. This report gives an update of the current and potential future role of CCS in the carbon market, climate negotiations after the Copenhagen and Cancun climate conferences in December 2009 and 2010, respectively, and in multilateral partnerships. These issues are summarised in two presentations on these topics as presented at CCS-related conferences in the Netherlands in June 2010.

The main conclusions are:

- Although CCS is recognised as a technology in the portfolio of climate change mitigation options, in the international climate negotiations it plays a limited role.
- Only with respect to the Clean Development Mechanism there is specific attention to CCS. After several years of strongly divergent opinions on this topic, a decision was adopted in late 2010 allowing CCS in the CDM provided a number of conditions are met.
- In addition to the carbon market, CCS deployment in developing countries could be facilitated through the new climate instruments, introduced in Copenhagen and agreed late 2010 in Cancun: nationally appropriate mitigation actions (NAMAs) and the Technology Mechanism.
- Outside the UNFCCC, there is a multitude of bi- and multilateral initiatives aiming at CCS research and deployment in developing countries. These pursue different goals and have different focus areas. There is some coordination, but it is not easy to get a full overview and independent evaluation of the initiatives.

In conclusion, there is much activity on CCS internationally, and there are possibilities both inside and outside the climate negotiations. However, the fragmented landscape lead to gaps in activities crucial to successful CCS roll out, such as common R&D programmes and financing of demonstration projects

Distribution List

(this section shows the initial distribution list)

External	copies	Internal	Copies

Document Change Record

(this section shows the historical versions, with a short description of the updates)

Version	Nr of pages	Short description of change	Pages
2011.03.15	1-18	First issue	
See header	See header	General update	

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2 Applicable/Reference documents and Abbreviations

2.1 Applicable Documents

(Applicable Documents, including their version, are documents that are the “legal” basis to the work performed)

	Title	Doc nr	Version
AD-01a	Beschikking (Subsidieverlening CATO-2 programma verplichtingnummer 1-6843)	ET/ED/9078040	2009.07.09
AD-01b	Wijzigingsaanvraag op subsidieverlening CATO-2 programma verplichtingennr. 1-6843	CCS/10066253	2010.05.11
AD-01c	Aanvraag uitstel CATO-2a verplichtingennr. 1-6843	ETM/10128722	2010.09.02
AD-01d	Toezegging CATO-2b	FES10036GXDU	2010.08.05
AD-01f	Besluit wijziging project CATO2b	FES1003AQ1FU	2010.09.21
AD-02a	Consortium Agreement	CATO-2-CA	2009.09.07
AD-02b	CATO-2 Consortium Agreement	CATO-2-CA	2010.09.09
AD-03a	Program Plan 2009	CATO2-WP0.A-D.03	2009.09.17
AD-03b	Program Plan 2010	CATO2-WP0.A-D.03	2010.09.30

2.2 Reference Documents

(Reference Documents are referred to in the document)

	Title	Doc nr	Issue/version	date

2.3 Abbreviations

(this refers to abbreviations used in this document)

APEC	Asia Pacific Economic Cooperation
APP	Asia-Pacific Partnership on climate change
BAP	Bali Action Plan
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
COACH	Cooperation Action within CCS China-EU
COP	Conference of the Parties
CSLF	Carbon Sequestration Leadership Forum
EUA	European Emission Allowance
G20	Group of 20
G8	Group of 8
GCCSI	Global Carbon Capture and Storage Institute

International CCS policy after Copenhagen

GHG	greenhouse gas
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
MEF	Major Economies Forum
NAMAs	Nationally appropriate mitigation actions
NZEC	Near Zero Emissions Initiative
R&D	Research and Development
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
REDD	Reduce Emissions from Deforestation and Degradation

3 A foggy matter – CCS in the international climate negotiations

A foggy matter – CCS in the international climate negotiations

Date
04-06-2010

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A foggy matter – CCS in the international climate negotiations

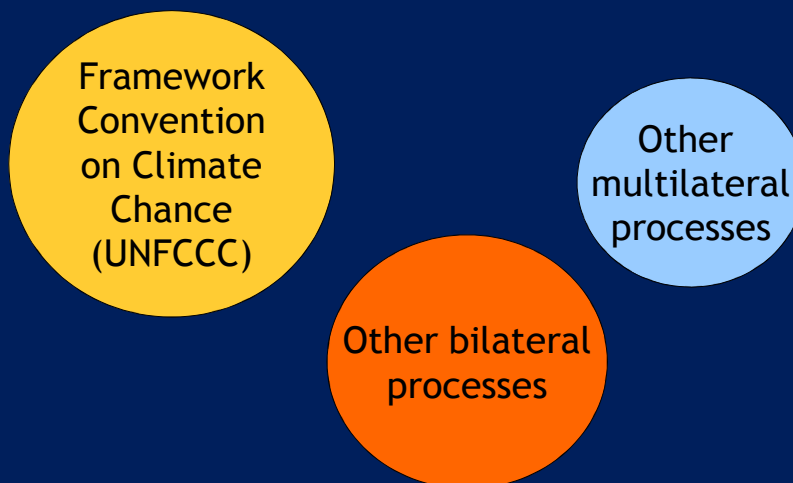
The climate policy arena

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Overview

- The international climate framework
 - Processes within and outside the international climate negotiations
- CCS in processes within the UNFCCC
 - CDM and other processes
- CCS in processes outside the UNFCCC
 - Bilateral
 - Multilateral
 - Excerpt: voluntary market
- Conclusion

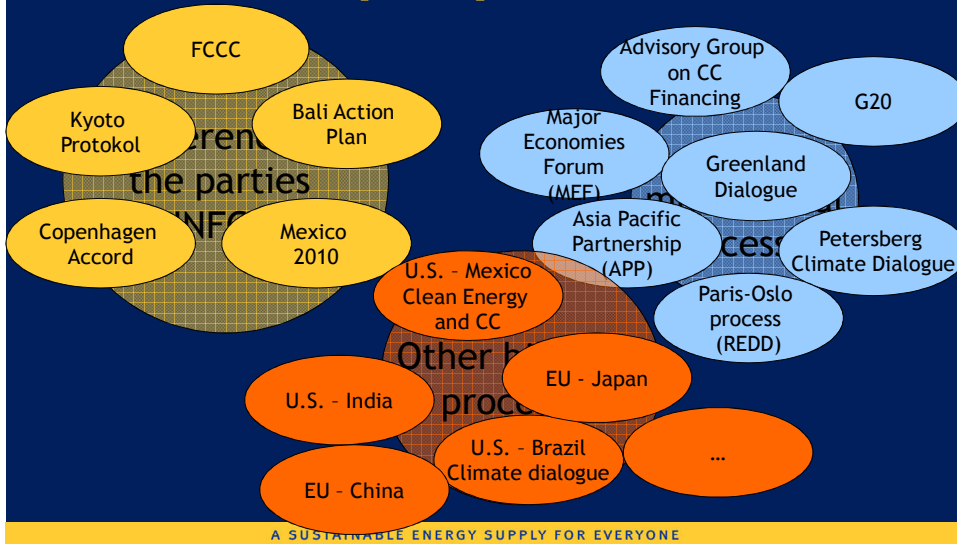
The climate policy arena



A foggy matter – CCS in the international climate negotiations



The climate policy arena



A foggy matter – CCS in the international climate negotiations



The climate policy arena

UNFCCC

- Since 1992, 194 parties
- Broadly accepted framework → high impact
- Long decision processes

Other multilateral processes

- Different foci and duration
- Smaller groups → easier decision processes
- Impact depends on policy level

Other bilateral processes

- numerous partnerships exist
- Normally less compulsive
- Opinions match better and decisions are easier to implement among two countries

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UNFCCC processes and CCS

- Kyoto for developed countries technology neutral
- CCS in the CDM
 - Currently CCS not eligible
 - Nothing agreed in Copenhagen – reconsidered in Cancun
 - All parties have to agree!!
- CCS in the ongoing negotiations
 - Proposed Technology Executive Committee and Climate Technology Centers
 - New opportunities as Nationally Appropriate mitigation actions (NAMAs)?

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Multilateral processes and CCS

- Global CCS initiative
 - Initiative by Australian government (since 2009)
 - Broad membership: 215 members (20 countries)
 - Implementation: project funding and support programme
 - Facilitation: stock taking of CCS
- Major economies process on energy security and climate change (MEF)
 - 17 largest economies
 - CCS one of 10 technologies (lead: UK and Australia)
 - Facilitation: facilitate dialogue among parties; prepared technology action plan

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A foggy matter – CCS in the international climate negotiations



Bilateral processes and CCS

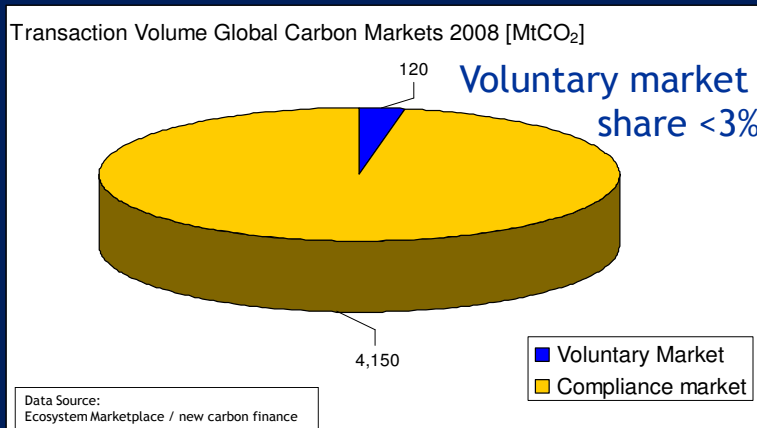
- USA – China
 - Clean Energy research center
 - Members: industry, research, etc...
 - Facilitation: e.g. joint research
 - implementation: e.g. feasibility studies on IGCC plants
- EU – China
 - E.g. Cooperation Action within CCS China – EU (COACH)
 - Members: 20 from industry; 12 EU, 8 China
 - Facilitation: e.g. research on capture technologies
 - Implementation: e.g. knowledge sharing

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A foggy matter – CCS in the international climate negotiations

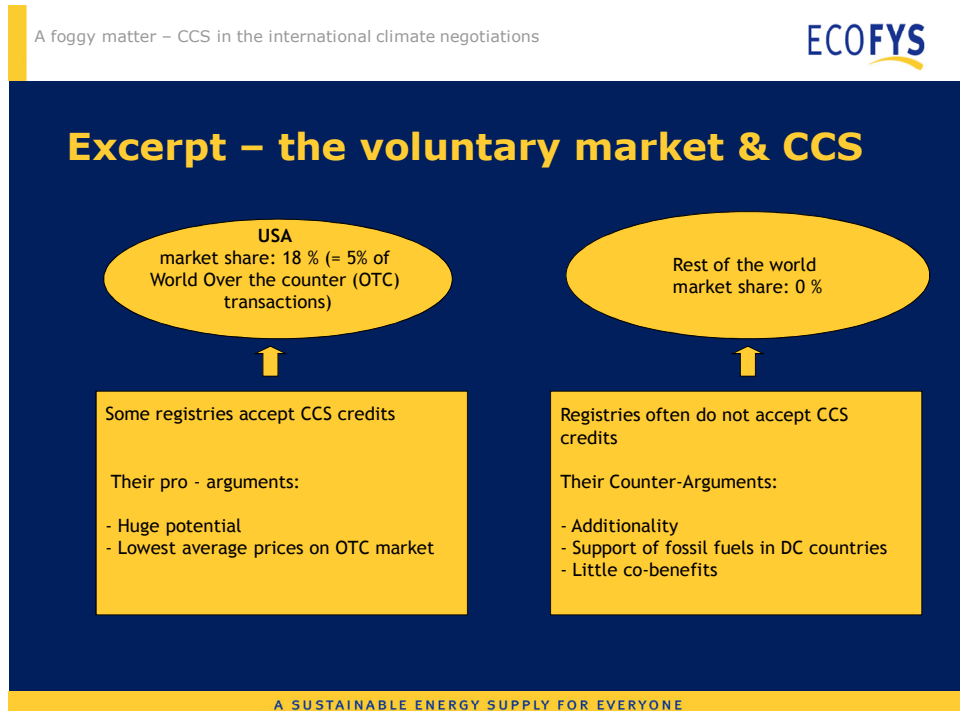
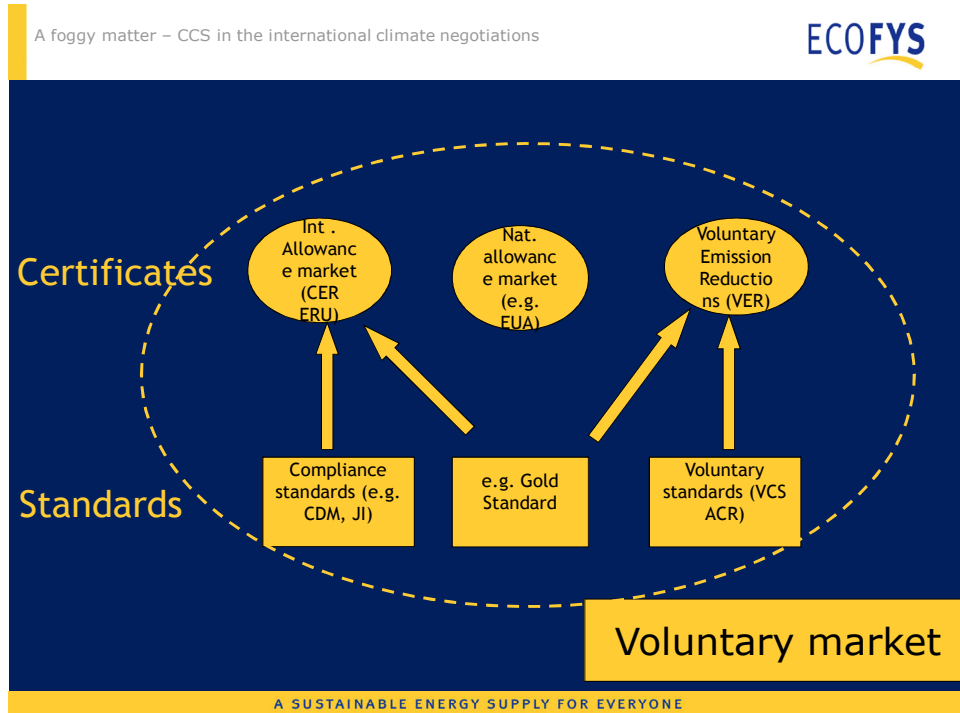


Excerpt – the voluntary market



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International CCS policy after Copenhagen



Conclusion

- Support for CCS in the international arena is spread over many different initiatives
- Currently highest prospects
 - Bilateral and multilateral activities (direct support, action)
- Carbon market support to this date very limited
 - Pending acceptance in CDM (political uncertainties)
 - Voluntary market (accept only by few systems)
- Future of international climate regime still highly unclear, but some promising processes discussed

4 CCS in the international climate regime: deal maker or breaker?



**CCS in de internationale klimaatafspraken:
deal-maker of breaker?**

Stefan Bakker, Heleen de Coninck (ECN), Markus Hagemann (Ecofys)
 5^e Nationaal CCS symposium, Utrecht, 25 juni 2010



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In het kort:

- CCS beperkte rol in klimaatonderhandelingen
- Ontwikkelde landen gebruiken CCS voor doelstellingen
- Controverses rondom CDM
- Veelheid aan (versnipperde) bi- en multilaterale initiatieven buiten UNFCCC



Context: United Nations Framework Convention on Climate Change



- 192 landen (Parties)
- Jaarlijkse Conference of the Parties
- Onderhandelings op basis van consensus
- Kyoto Protocol (1997)
- Wereld opgedeeld in ontwikkelde and ontwikkelingslanden
- 'Common but differentiated responsibilities'
- Landen georganiseerd in onderhandelingsblokken:
 - EU, G77/China, African Group, Least Developed Countries, Umbrella Group, AOSIS
- Observers: ngos, research, business

China
India
Singapore
Saudi Arabia
Maldives
Cameroon
Bangladesh



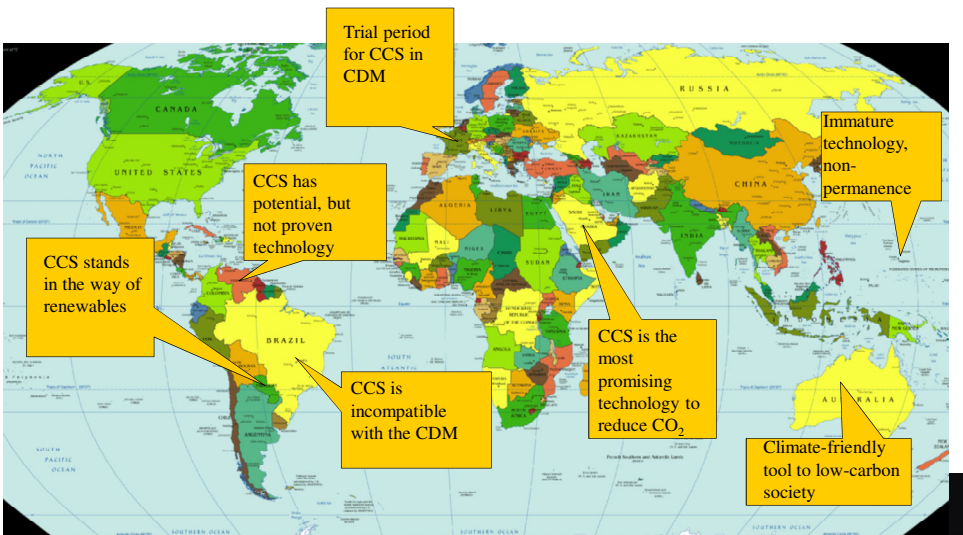


CCS in UNFCCC

- CCS: in potentie een technologie die belangen van landen/industrie afhankelijk van fossiele brandstoffen en het klimaat kan behartigen
- COP11 (2005): 'UNFCCC welcomes IPCC Special Report on CCS'
- Voor ontwikkelde landen kan CCS gebruikt worden voor emissiedoelstellingen
- Ontwikkelingslanden: CCS ook als offset-projecten in het Clean Development Mechanism?



- Onderhandelingen sinds 2005
- Diepe verschillen



International CCS policy after Copenhagen



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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
 Thirty-second session
 Bonn, 31 May to 9 June 2010

Agenda item 8 (b)
 Methodological issues under the Kyoto Protocol
 Carbon dioxide capture and storage in geological formations
 as clean development mechanism project activities

Carbon dioxide capture and storage in geological formations as clean development mechanism project activities

Draft conclusions proposed by the Chair

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) took note of the views submitted by Parties,¹ including those submitted in response to previous requests for submissions on this agenda item and those expressed during the session, on concerns related to the following outstanding issues,² inter alia:

- (a) Non-permanence, including long-term permanence;
- (b) Measuring, reporting and verification;
- (c) Environmental impacts;
- (d) Project activity boundaries;
- (e) International law;
- (f) Liability;
- (g) The potential for perverse outcomes;
- (h) Safety;
- (i) Insurance coverage and compensation for damages caused due to seepage or leakage

‘laten we doorpraten’



FCCC/SBSTA/2010/L.11
 Page 2

2. The SBSTA agreed that the issues referred to in paragraph 1 above must be addressed and resolved during the further consideration of the possible inclusion of carbon dioxide capture and storage in geological formations as clean development mechanism project activities.

3. It further agreed to continue to work on the possible inclusion of carbon dioxide capture and storage in geological formations in the clean development mechanism at its thirty-third session by consideration of the issues listed in paragraph 1 above, with a view to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol adopting a decision on this matter at its sixth session.

4. The SBSTA also agreed that further consideration of this issue should be based on the views submitted by Parties,³ including those made in response to previous requests for submissions and those expressed during the session, and on the draft decision text contained in the annex.



Andere mechanismen?

Copenhagen Accord:

- Nationally Appropriate Mitigation Actions
 - vrijwillige maatregelen van ontwikkelingslanden
 - ondersteund met financiering, technologie en capaciteitsopbouw van ontwikkelde landen
 - \$100 miljard per jaar in 2020
- Technology Mechanism
 - Instrument voor technologieoverdracht



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Initiatieven in ontwikkelingslanden

- China: CCS roadmap
- Indonesia: CCS study working group
- South Africa: Centre for CCS
- Brazil: CCS roadmaps, demonstration projects (Petrobras), Centre of Excellence

- Gedeeltelijk gefinancierd door bi- en multilaterale samenwerkingsverbanden



Internationale initiatieven

- Carbon Sequestration Leadership Forum (2003)
 - US en fossiele brandstof im-/exporteurs
 - Propageren CCS
 - Informatie-uitwisseling / capacity building
- International Energy Agency (GHG R&D programme)
 - Faciliteert discussie rond CCS
 - Onafhankelijke studies
- Global CCS Institute (2009)
 - Australië, met hubs in andere continenten
 - Onderzoek, capaciteitsopbouw, en demonstratieprojecten



Wereldwijde versnippering

- Moeilijke positie van CCS in UNFCCC heeft geleid tot fragmentatie
- Verschillende drijfveren voor internationale organisaties
- Verschillende doelen
- Versnipperde activiteiten
- Gebrek aan:
 - Gemeenschappelijke R&D
 - Geologische opslagstudies
 - Financiering van demonstratieprojecten



Conclusies

- Onduidelijk of CCS ooit in CDM komt
- Nieuwe UNFCCC mechanismen misschien betere mogelijkheden voor CCS
- Vele initiatieven over de hele wereld
- Versnippering leidt tot suboptimale uitkomsten