



Clean Development Mechanism

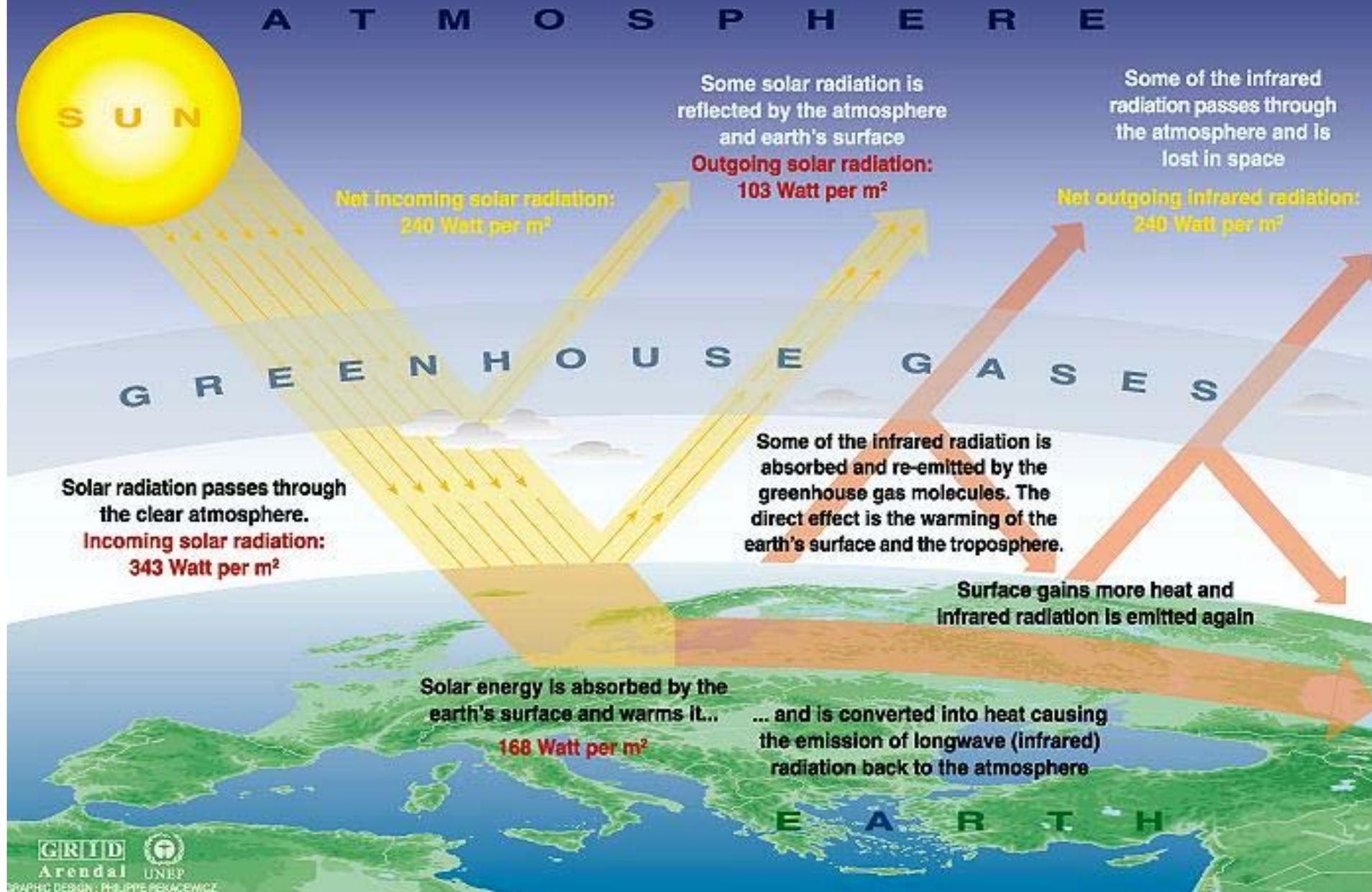
The why and how

David Abbass

UNFCCC secretariat

UNFCCC secretariat
<http://unfccc.int/cdm>

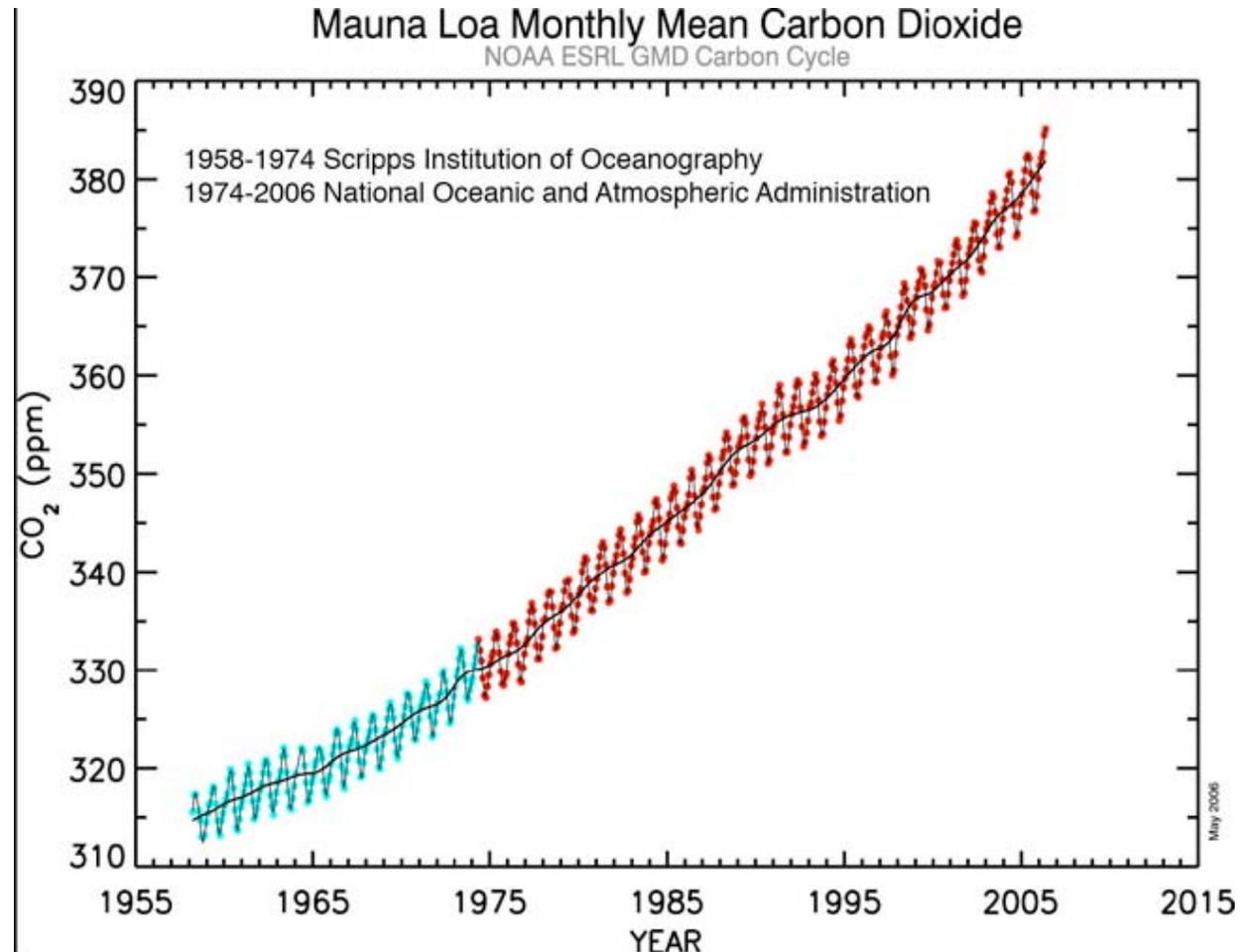
The Greenhouse effect



Sources: Okanagan university college in Canada, Department of geography, University of Oxford, school of geography; United States Environmental Protection Agency (EPA), Washington; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge university press, 1996.

Atmospheric carbon dioxide measurements at Mauna Loa, Hawaii

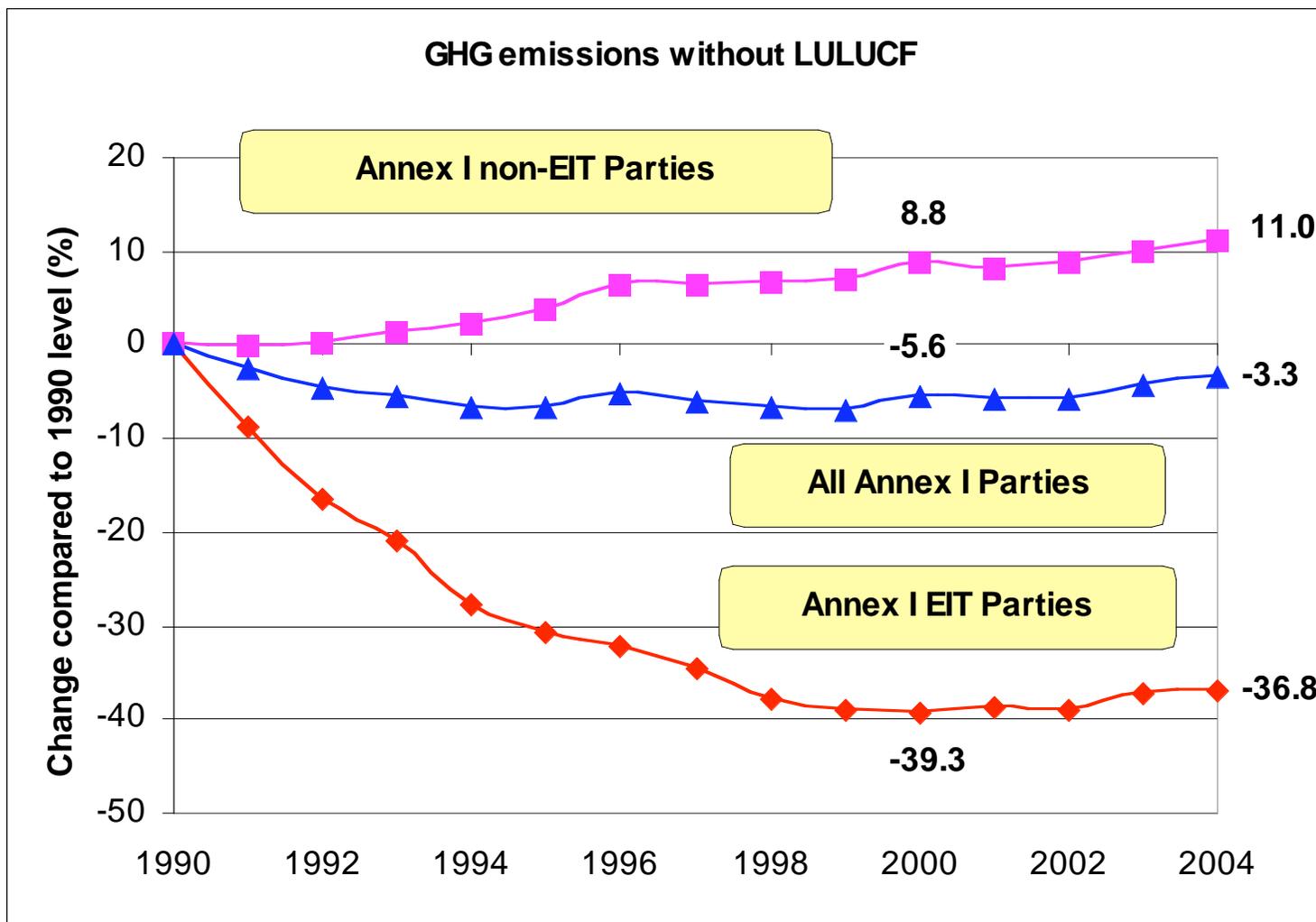
May 2007
measurement
at 384 ppm



Source: NOAA



Recent emission trends





IPCC Fourth Assessment Report

- Climate change due to human activity is unequivocal
- GHG emissions have increased by 70% since 1970
- Numerous long-term changes have been observed: arctic temperatures and ice, precipitation amounts, extreme weather
- Next two decades: warming of 0.2°C/decade
- Rise in temperature by 1.8 to 4.0°C by 2100



The IPCC's Fourth Assessment Report

- Diminished food security, drying of continental interiors
- Glaciers and ice caps continue to melt - rise in sea levels
- Stress on water resources – security implications
- Health impacts due to heat waves, floods, storms, fires and droughts
- Increase of intensity and frequency of extreme events



The international response to climate change – overview

- 
- 3 – 14 December 2007: United Nations Climate Change Conference – Bali 2007 (COP13-COP/MOP3)
 - 2005 16 February: Entry into force of the Kyoto Protocol
 - 2001 COP-7 Marrakesh: Finalization of the technical details relating to the Kyoto Protocol – “Marrakesh Accords”
 - 1997 COP-3 Kyoto: Adoption of the Kyoto Protocol
 - 1992 Adoption of the UN Framework Convention on Climate Change





The UN Framework Convention on Climate Change

- 191 Parties – near universal membership

The UNFCCC:

- sets an overall framework for intergovernmental efforts to tackle climate change
- recognizes that the climate system is a shared resource whose stability is affected by emissions of carbon dioxide and other greenhouse gases





The Kyoto Protocol

- Entry into force on 16 February 2005
- 175 Parties (May 2007)

Main features

- **Legally binding targets** for emissions of six major greenhouse gases in industrialized countries during first commitment period
- New **international market-based mechanisms**, creating a new commodity: carbon
- Facilitate **sustainable development** and additional support to **developing countries** on adaptation





The three Kyoto mechanisms

- **Emission Trading (ET):**
exchanging emission allowances among Kyoto Protocol Parties
- **Clean Development Mechanism (CDM):** credits for emissions avoided through sustainable development projects in developing countries (non-Annex I countries)
- **Joint Implementation (JI):** credits for emissions avoided through projects in Annex I countries





The three Kyoto mechanisms – Emissions Trading

Carbon market:

- countries that have emissions units to spare may sell (trade) this excess capacity to countries that are over their targets.

Example: European Union Emissions Trading Scheme (EU ETS)

- Commenced on 1 January 2005
- first phase runs 2005–2007
- second phase 2008–2012 to coincide with the first commitment period of the Kyoto Protocol.





The three Kyoto mechanisms – Joint Implementation

- Industrialized countries can meet part of their required GHG reductions by implementing projects that reduce emissions in other industrialized countries
- Projects earn emission reduction units (ERUs)
- JI is likely to increase efficiency and reduce the global-warming output of the "transition economies" of central and eastern Europe.





The three Kyoto mechanisms – Clean Development Mechanism

- Projects in developing countries can earn saleable credits for reducing/avoiding emissions – certified emission reductions (CERs)
- The CERs can be used by countries with commitments under KP toward meeting a part of their targets
- Host countries benefit from sustainable development initiatives





What is the Clean Development Mechanism?

- Market oriented means to achieve sustainable development and reduce GHG emissions
- Meant to promote private sector investment and involvement
- Not about traditional North-South overseas development assistance
- Bottom-up approach
- Public participation





What is the Clean Development Mechanism?

- Described in **Article 12** of KP
- Projects in **non-Annex I** countries developing countries. Projects must
 - Contribute to **sustainable development**
 - Result in **real, measurable, verifiable, additional emission reductions**
- Projects earn saleable/tradable **certified emission reductions (CERs)**



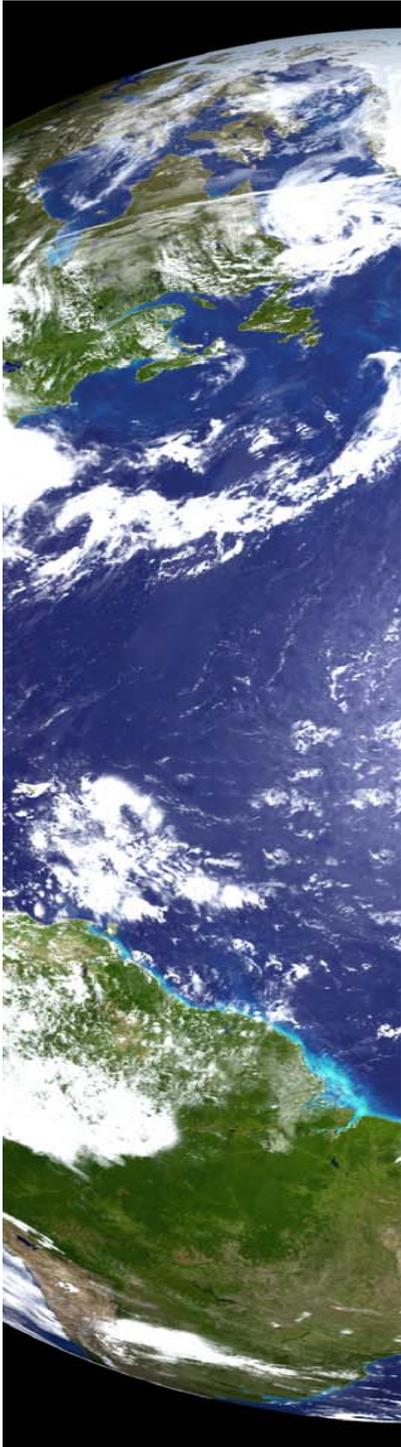


What is the Clean Development Mechanism?

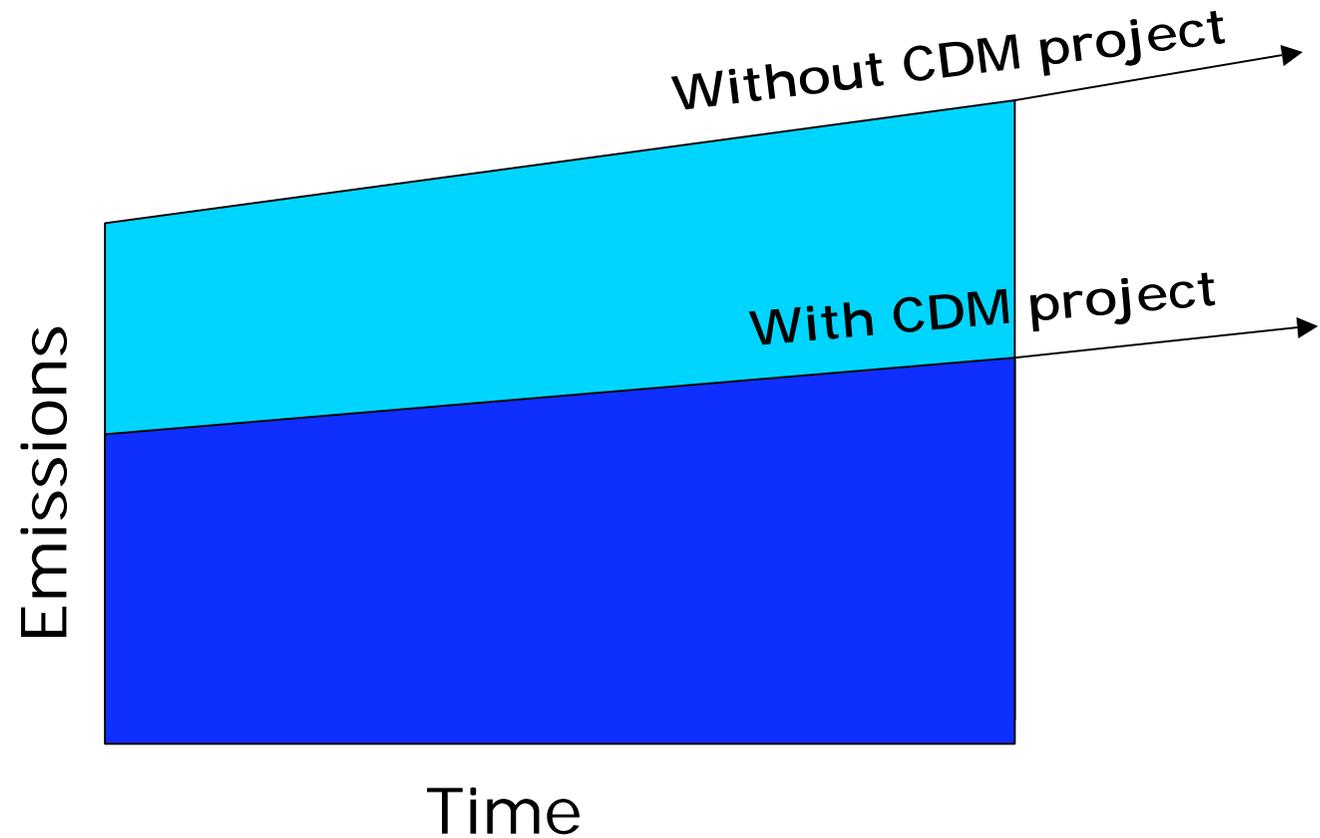
Mechanism overseen by:

- Executive Board (meets about eight times a year)
- Approval required from Parties (host country) and other Parties if any – designated national authority (**DNA**)
- Projects vetted by **designated operational entities (DOE)**; Executive Board, supported by panels and working groups, registration and issuance teams, with help from secretariat



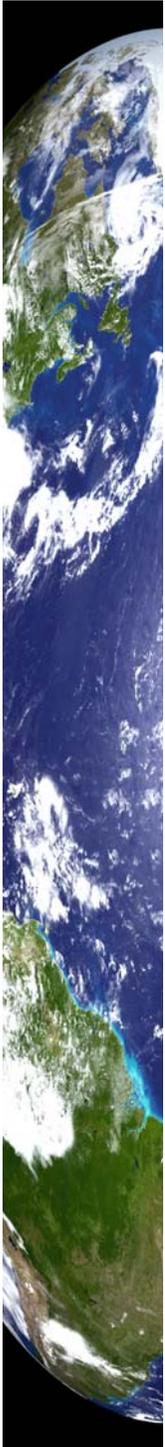


How it works

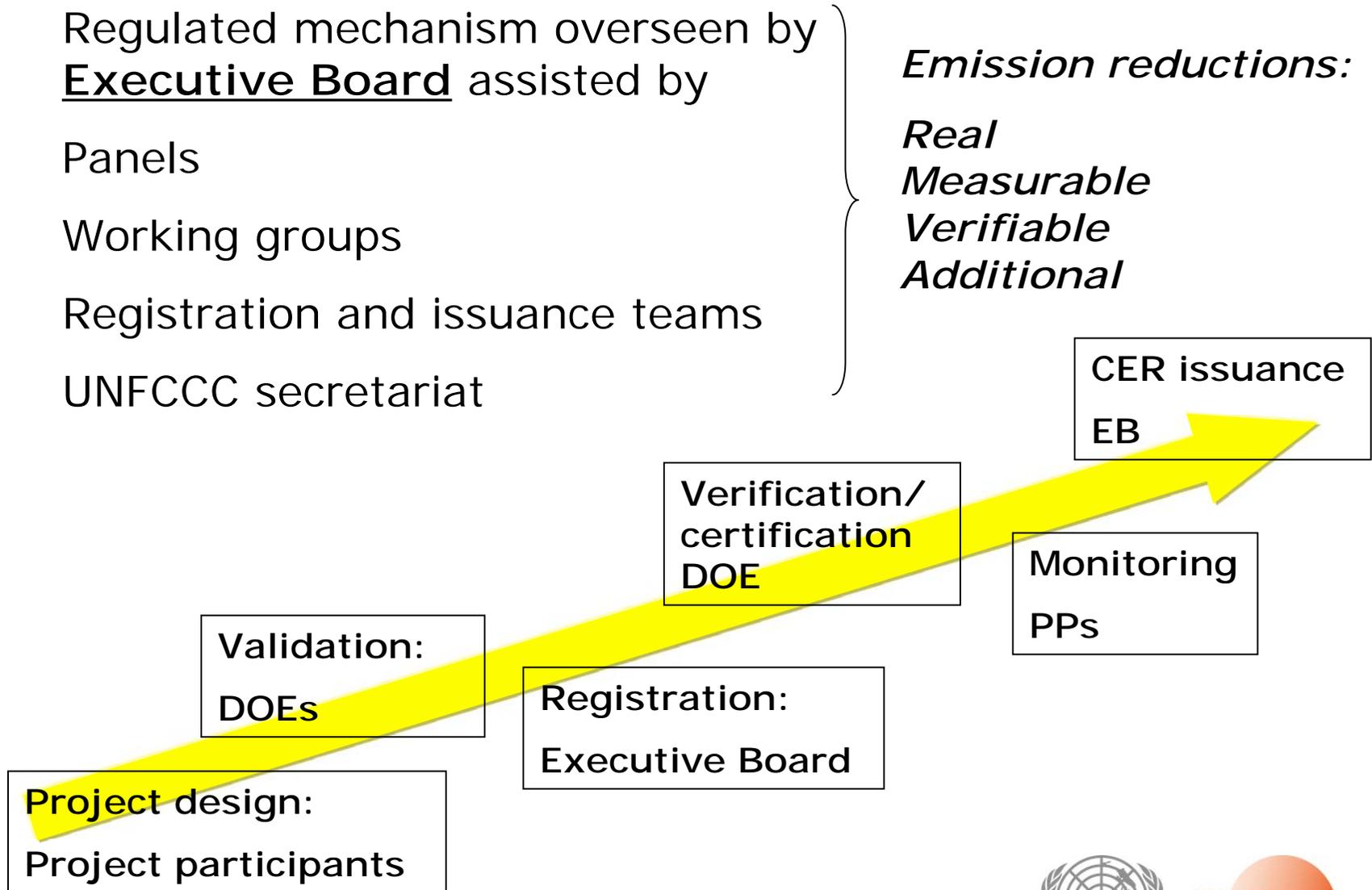


 = CERs certified emission reductions



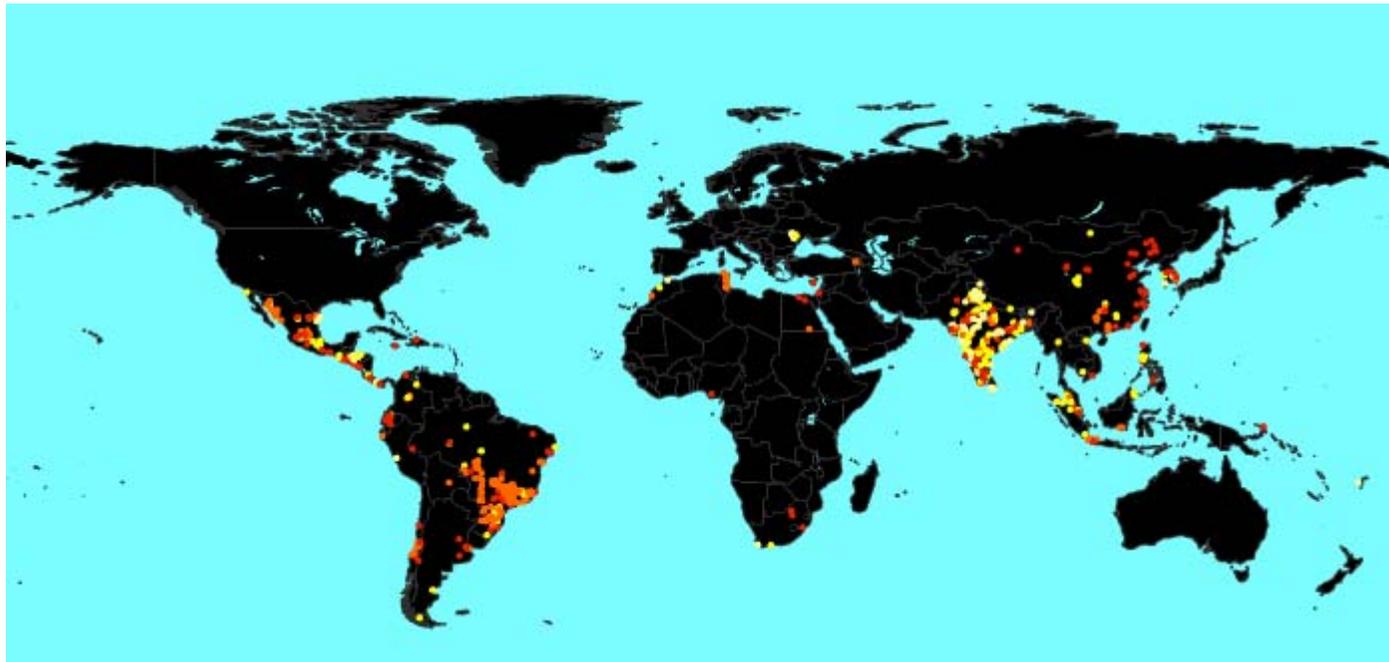


CDM project cycle



Update on the CDM | The Scoreboard

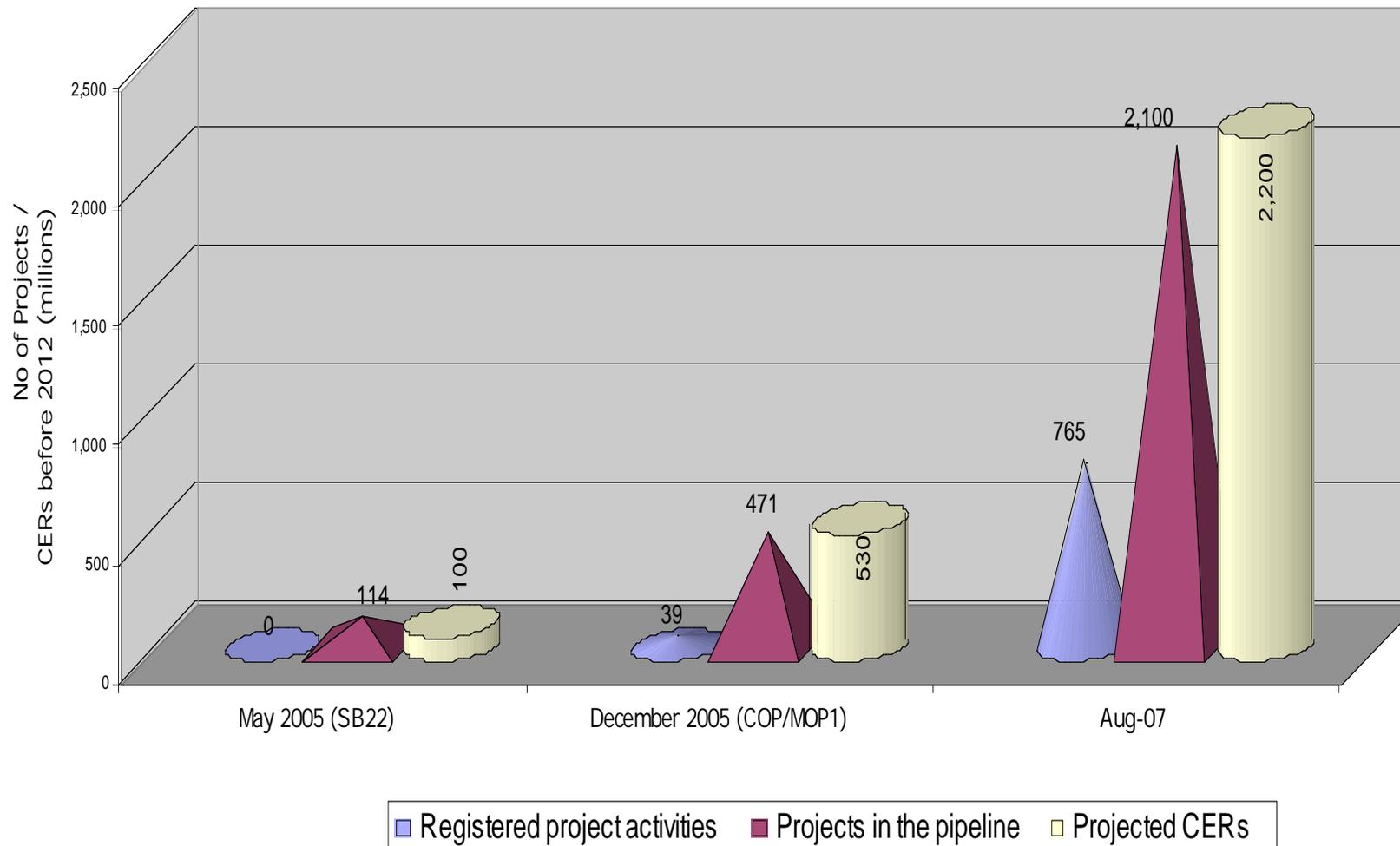
To date: > 760 registered CDM projects,
> 1 billion CERs expected to the end of 2012
from existing registered projects

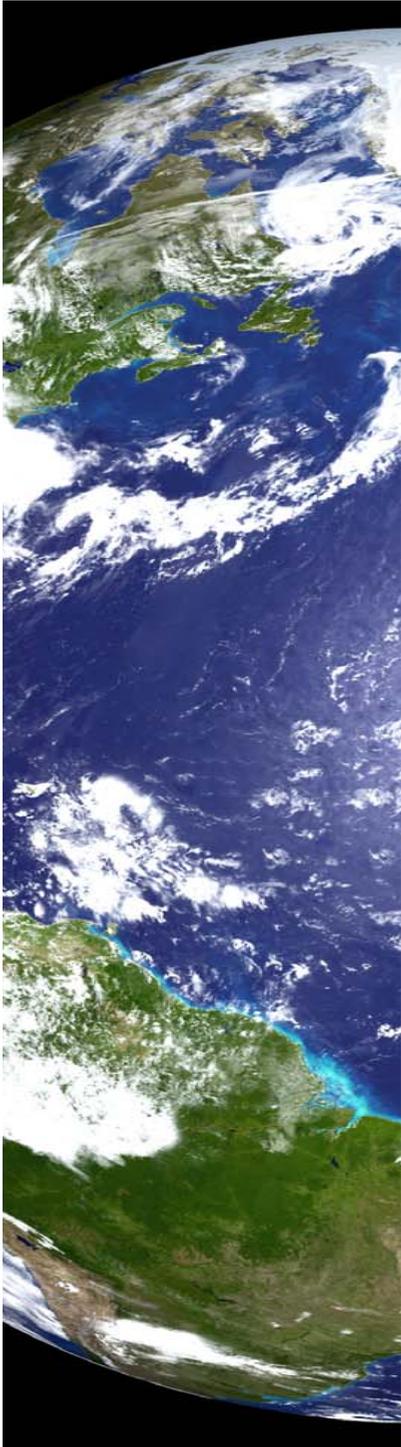


> 2,100 projects in CDM pipeline (incl. registered projects)
> 2.2 billion CERs expected to the of 2012

(assumption: no extension of crediting periods)

Exponential growth of the CDM





Where's the story

- Local
- National
- International
- Sectoral
- Business
- Environment
- Development
- Health
- Science



CDM: Project Activities - Microsoft Internet Explorer

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Address <http://cdm.unfccc.int/Projects/projsearch.html>

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Project Search

Search:

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 Methodologies
 Specific Call for Public Inputs
 Designated National Authorities (DNA)
 Designated Operational Entities (DOE)
 Reference
 CDM Statistics
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Search Criteria [\[Simple Search\]](#)

Title:

Sectoral Scopes: Find results that are in **any** of the selected:
 Energy industries (renewable - / non-renewable sources) (1)
 Energy distribution (2)
 Energy demand (3)
 Manufacturing industries (4)
 Chemical industries (5)

Scale: **All**

Methodologies: Find results that use **any** of the selected:
 AM0001
 AM0002
 AM0003
 AM0004
 AM0005

Host Country: **- no selection -**

Annex 1 Countries: France
 Germany
 Ireland
 Italy

Status: **All**

Registration date: from: to:
 * format YYYY/MM/DD, searches only registered projects if specified!

Amount of Reductions from: to:

Reference number:

Sort by: **Registration Date** descending:

Total Projects found: 19

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Total Projects found: 19

Registered	Title	Host Parties	Other Parties	Methodology *	Reductions **	Ref
23 Oct 05	DSL Biomass based Power Project at Paqara	India	Germany	AMS-I.D. ver. 5	17424	0095
11 Dec 05	3.5 MW Rice Husk based Cogeneration Project at Nahar Spinning Mills Ltd.	India	Germany	AMS-I.C. ver. 6	22267	0117
16 Dec 05	3.5 MW Rice Husk based Cogeneration Project at Oswal Woolen Mills Ltd.	India	Germany	AMS-I.C. ver. 6	22267	0118
24 Dec 05	GHG emission reduction by thermal oxidation of HFC 23 at refrigerant (HCFC-22) manufacturing facility of SRF Ltd	India	Italy France Netherlands Germany United Kingdom of Great Britain and Northern Ireland	AM0001 ver. 3	3833566	0115
06 Feb 06	CDM SOLAR COOKER PROJECT Aceh 1	Indonesia	Germany	AMS-I.C. ver. 6	3500	0218
11 Feb 06	CAMIL Itaquí Biomass Electricity Generation Project	Brazil	Netherlands Germany	AMS-I.D. ver. 7 AMS-III.E. ver. 7	57341	0231
20 Feb 06	Bandeirantes Landfill Gas to Energy Project (BLFGE)	Brazil	Germany	ACM0001 ver. 2	1070649	0164
29 May 06	Emission reduction through partial substitution of fossil fuel with alternative fuels like agricultural by-products, tyres and municipal solid waste (MSW) in the manufacturing of portland cement at Grasim Industries Limited-Cement division South (GIL-CDS), Tamilnadu, India.	India	Germany	ACM0003 ver. 1	51932	0339
04 Jun 06	KMS Power 6 MW Renewable Sources Biomass Power Project	India	Sweden Netherlands Germany	AMS-I.D. ver. 7	16266	0374
02 Jul 06	São João Landfill Gas to Energy Project (SJ)	Brazil	Germany	ACM0001 ver. 2	816940	0373
14 Aug 06	Generation of electricity from 2.5 MW capacity wind mills by Gujarat JHM Hotels Pvt. Ltd at Soda Mada Rajasthan	India	Germany	AMS-I.D. ver. 8	3453	0481
22 Aug 06	Solar steam for cooking and other applications	India	Germany	AMS-I.C. ver. 7	562	0414
24 Sep 06	Generation of electricity from 4 MW capacity wind mills by Sun-n-Sand Hotels Pvt. Ltd. at Supa, Maharashtra	India	Germany	AMS-I.D. ver. 8	7733	0559
29 Sep 06	PetroSA Biogas to Energy Project	South Africa	Germany	AMS-I.D. ver. 9	29933	0446
07 Oct 06	Catalytic N2O destruction project in the tail gas of the Nitric Acid Plant of Abu Qir Fertilizer Co.	Egypt	Austria Germany	AM0028 ver. 1	1065881	0490
22 Jan 07	Catalytic N2O destruction project in the tail gas of three Nitric Acid Plants at Hu-Chems Fine Chemical Corp.	Republic of Korea	Germany	AM0028 ver. 1	1268310	0765
Requesting						

CDM: CDM SOLAR COOKER PROJECT Aceh 1 - Microsoft Internet Explorer

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Address <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1135345789.43/view.html> Go Links >>

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Your location: CDM-Home > Project Activities > DB > CDM SOLAR COOKER PROJECT Aceh 1 09:47 20 Jul 07

Project 0218 : CDM SOLAR COOKER PROJECT Aceh 1

Project title	CDM SOLAR COOKER PROJECT Aceh 1 project design document (266 KB) registration request form (109 KB)
Host Parties	Indonesia approval (303 KB) authorization (303 KB) Authorized Participants: PT Petromat Agrotech
Other Parties Involved	Germany approval (3324 KB) authorization (3324 KB) Authorized Participants: Klimaschutz e.V.
Activity Category(ies)	1
Activity Scale	SMALL
Methodologies Used	AMS-I.C. ver. 6 - Thermal energy for the user
Amount of Reductions	3,500 metric tonnes CO2 equivalent per annum
Fee level	USD 5000
Validation Report	Explanation of taking due account of comments (13 KB) List of documents (15 KB) List of interviewed persons (25 KB) Modalities of communication (485 KB) <hr/> Other documents (descriptions provided by the DOE) Validation Report (204 KB) Confirmation of Validation (22 KB) PDD (GSP version) (716 KB) <hr/> Public availability information 23. Dec. 2005 www.netinform.net Compilation of all comments received (13 KB)
Registration Date	06 Feb 06
Crediting Period	01 Jan 06 - 31 Dec 11 (Renewable)
Requests for Issuance and related documentation	

Search:

CDM Home

Executive Board (EB)

Panels / Working Groups / Teams

Project Activities

- Guide to do a CDM project activity
- Project Search
- Registered
- Request for registration
- Request for review
- Under review
- Corrections requested
- Rejected
- Withdrawn
- Validation
- Requests for deviations
- Interactive Map

Issuance of CERS

Methodologies

Specific Call for Public Inputs

Designated National Authorities (DNA)

Designated Operational Entities (DOE)

Reference

CDM Statistics

CDM News

Extranets

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**CLEAN DEVELOPMENT MECHANISM
SIMPLIFIED PROJECT DESIGN DOCUMENT
FOR SMALL SCALE PROJECT ACTIVITIES (SSC-PDD)
VERSION 01 (21 JANUARY, 2003)**

**CDM Project Design Document (PDD):
Final PDD, 10. Oct. 2005**

**CDM SOLAR COOKER PROJECT Aceh 1
INDONESIA**

CONTENTS

- A. General description of project activity
- B. Baseline methodology
- C. Duration of the project activity / Crediting period
- D. Monitoring methodology and plan
- E. Calculation of GHG emission reductions by sources
- F. Environmental impacts
- G. Stakeholders comments

Annexes

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Search:

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In accordance with the modalities and procedures for a CDM [Decision 3/CMP.1](#) (735 KB) :

"29. Parties participating in the CDM shall designate a national authority for the CDM."

Parties are invited to send information on the designation of their national authority for the CDM to the [secretariat](#).

The CDM Executive Board in its eighth meeting, with regard to validation requirements to be checked by a designated operational entity, clarified that before entry into force of the Kyoto Protocol, all Parties to the Convention may participate in CDM project activities. In accordance with provisions of paragraphs 37 (a) and 40 (a) of the CDM modalities and procedures, the registration of a proposed CDM project activity can, however, only take place once approval letters are obtained from Parties to the Convention that have ratified the Kyoto Protocol. Regarding approval by Parties and authorization of private and public entities please refer to the glossary of terms contained in [Guidelines for completing CDM-PDD](#).

In order to facilitate the exchange of information between the CDM designated national authorities, the secretariat maintains a dedicated e-mail listserve. A DNA interested to subscribe to the list should send an e-mail to cdm-info@unfccc.int.

The table below provides the name and contact information for designated national authorities (DNA) for the CDM

Country	Organization's address / Contact person	A/R definition / Project Activities, as applicable
Albania	Climate Change Unit, Ministry of Environment Rruga "Duresit" No 27 Tirana; ALBANIA ^ Ermira Fida (mirafida@icc-al.org) Manager, Climate Change Unit Phone: (355) 422 5101, (355-68) 202 9754 (Mobile) Fax: (355) 422 5101	<ul style="list-style-type: none"> Minimum values for forest (A/R projects)
Algeria	Développement durable et des Affaires scientifiques et culturelles 4, Route des Quatre Canons 16000 Alger ^ M. Lazhar Soualem (soualem_lazhar@yahoo.fr) Directeur à la Direction Générale des Relations Multilatérales, Ministère des Affaires Etrangères Fax: (213-21)50 41 60 Environment Division, Ministry of Tourism and Environment	

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09:54 20 Jul 07

List of DOEs

Designated Operational Entities

The Executive Board, in accordance with [paragraph 20 of the CDM modalities and procedures](#), shall maintain a publicly available list of designated operational entities. The table below provides the list of accredited and provisionally designated operational entities for validation functions. These entities are accredited for the sectoral scopes shown below in the table and qualify to submit requests for project registration in these sectoral scopes.

[List of sectoral scopes \(active version\)](#) (15 KB)

Ref. Number	Entity Name (short name)	Sectoral scopes for validation	Sectoral scopes for verification and certification
E-0001	Japan Quality Assurance Organization (JQA)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 10 , 11 , 12 , 13	
E-0002	JACO CDM.,LTD (JACO)	1 , 2 , 3	1 , 2 , 3
E-0003	Det Norske Veritas Certification AS (DNV Certification AS)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12 , 13 , 15	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12 , 13 , 15
E-0005	TÜV SÜD Industrie Service GmbH (TÜV-SÜD)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12 , 13 , 14 , 15	1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9 , 10 , 11 , 12 , 13 , 15
E-0006	Tohmatsu Evaluation and Certification Organization Co., Ltd. (TECO)	1 , 2 , 3	
E-0007	Japan Consulting Institute (JCI)	1 , 2 , 13	
E-0009	Bureau Veritas Certification Holding S.A. (BVC Holding S.A.)	1 , 2 , 3	1 , 2 , 3
E-0010	SGS United Kingdom Ltd. (SGS)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 10 , 11 , 12 , 13 , 15	1 , 2 , 3 , 4 , 5 , 6 , 7 , 10 , 11 , 12 , 13 , 15
E-0011	The Korea Energy Management Corporation (KEMCO)	1	
E-0013	TÜV Rheinland Japan Ltd. (TÜV Rheinland)	1 , 2 , 3 , 13	
E-0014	KPMG Sustainability B.V. (KPMG)	1 , 2 , 3 , 13	
E-0018	British Standards Institution (BSI)	1 , 2 , 3	
E-0021	Spanish Association for Standardisation and Certification (AENOR)	1 , 2 , 3	1 , 2 , 3
E-0022	TÜV NORD CERT GmbH (RWTUV)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 10 , 11 , 12 , 13	1 , 2 , 3
E-0023	Lloyd's Register Quality Assurance Ltd (LRQA)	1 , 2 , 3 , 4 , 5 , 6 , 7 , 10 , 11 , 12 , 13	
E-0024	Colombian Institute for Technical Standards and Certification (ICONTEC)		1 , 2 , 3
E-0025	Korean Foundation for Quality (KFQ)	1 , 2 , 3	
E-0029	PricewaterhouseCoopers - South Africa (PwC)	1 , 2 , 3	

Done

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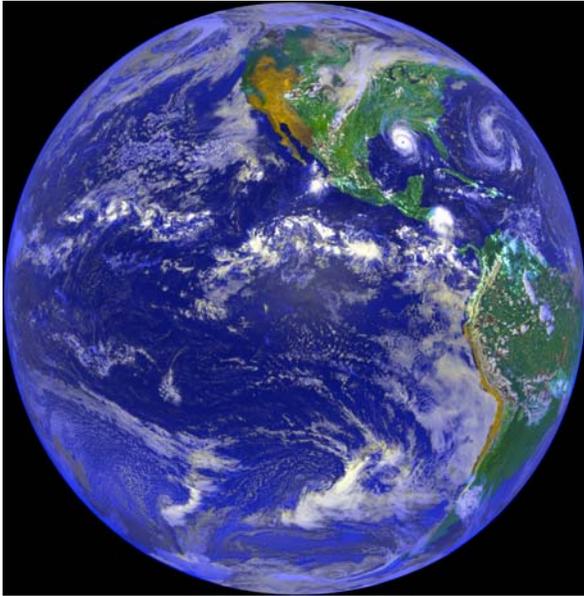
Potential of the carbon market

Scaling up CDM A back-of-the-envelope calculation

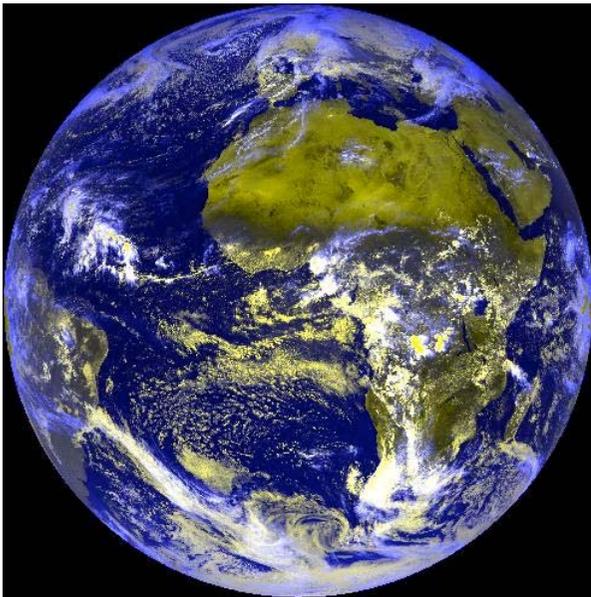
The Kyoto mechanisms can generate investment:

- ✓ Assuming 60-80% emission reduction by industrialized countries
- ✓ If 50% of these reductions are met through investments in developing countries (e.g. via a mechanism like the CDM)
- ✓ If the price for a tonne of carbon is above \$10 per tonne
- ➔ Potential to mobilize resources for developing countries of some **US\$ 100 billion annually**





Thank you for your
interest in the clean
development
mechanism



UNFCCC

