Carbon Market Update

for CDM Host Countries

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About the Update

This quarterly "CDM Market Update" is a joint effort between the United Nations Environment Program (through its CD4CDM project) and the International Emissions Trading Association. The objective of the Update is to contribute toward the enhancement of the local capacity for the CDM market development by providing information of use to experts in CDM host countries. The electronic copies of the Update are also available on-line at the websites of the partner organizations.

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Current Views in Carbon Market

Governments need to provide more market information

by Jorund Buen, Point Carbon

Annex I governments have not only found it difficult to burden their industry with tough targets for reducing greenhouse gas emissions, but also fund that reduction initiatives in other sectors are difficult to commence. Consequently, they have decided to start buying carbon commodities on the international market - so far, mainly Certified Emissions Reductions (CERs) on a forward basis.

To date, the same governments have tended to keep market information close to their chests: a strategy that is bound to make things more difficult for them to meet their Kyoto targets. Commodity markets tend to work better if there is a clear price signal. Most Annex I governments happily signed the Aarhus Convention on the disclosure of environmental information not too long ago, but obviously have decided that the Convention does not apply to their CDM activities. To say that Annex I governments currently inform their voters and other stakeholders properly of how they spend their money on CDM projects and other carbon purchases, would be an exaggeration of their disclosure practices. In contrast, the World Bank discloses information about the volumes it buys and how much it pays for them, hence implicitly communicating the price it pays per prospective CER. In so doing it supports the development of a price signal in the CDM market. However, the Bank takes the registration risk of CDM projects, while many governments and (especially) corporate buyers do not. This means that the price the Bank pays for prospective CERs is lower than that of the players' that are more risk-averse. However, with a few exceptions (I hope Point Carbon is one), the World Bank is the only place market players – both from Annex I and non-Annex I countries – can find key market information on prices and volumes.

The combination of governments' limited communication on market information and the World Bank's limited success in communicating the special features of its purchasing strategy has left substantial parts of the market in a state of confusion when it comes to forward CER prices. They think that the price of CERs in the global market is what the World Bank pays, whereas past trades have shown that prices have been substantially higher (the price in each individual deal of course still depends on the risk sharing between buyer and seller). This is especially true for corporate buyers. This confusion may have given at least three unpleasant results: first, potential project developers in non-Annex I countries may have dropped potential project ideas because they wrongly believe the price that they would get per CER would not be worth their efforts. Second, non-Annex I governments may have become more difficult climate negotiation counterparts because they believe the Annex I countries are let off the hook too easily. Third, potential Annex I corporate buyers may not have properly understood that the price for a prospective CER will differ widely between a situation where the seller takes registration risk and a situation where the buyer takes this risk. This means they are less prepared to enter the CDM market and to act in their best interest once they do so.

The system is further constrained by the lack of resources that the Executive Board faces. At Carbon Market Insights in early March, Christine Zumkeller from the UNFCCC Secretariat reported that the CDM Executive Board (EB) currently only has 30 per cent of the money it needs to implement the activities it has planned in its 2005 budget. It has been alomost five months since the EU indicated in Buenos Aires that it would contribute around € 3 million to the EB but the Europeans still haven't been able to agree internally on how the donations will be processed. This delays methodology approval, project registration and CER issuance – all crucial to Annex I countries' meeting their Kyoto targets.

The longer Annex I governments drag their feet on the disclosure of market information and financial support to the CDM EB, the longer it will take potential CDM market players to enter the CDM market.

To conclude on a positive note however, the problem is not that difficult to solve. First, Annex I governments need to develop web sites with public information about CER purchases. They could learn from non-Annex I countries. China, for example, has a perfectly updated web site in English on which projects that are approved or in the pipeline for approval are posted. Second, the same countries should finally get their acts together and fund the EB properly.

Impact of the EU ETS on the CDM

by Lucy Mortimer, CO2e.com

Prior to the start of the EU ETS on January 1 of this year, CERs accounted for the majority of carbon credit transactions in the carbon market. Japanese and Canadian companies were the dominant corporate buyers, from a wide range of projects, technologies and countries, whilst European corporations had largely held back, preferring to watch from the sidelines. However, the EU ETS has introduced not only a new compliance tool into the mix, the European Union Allowance (EUA), but also a large and active new pool of companies with an interest in the CDM. The start of the EU ETS has seen tremendous growth in the volume of EUAs transacted. In March alone, some 15 million EUAs changed hands on the Over the Counter (OTC) market across Europe, mostly between the largest 30 companies included in the scheme. For those companies, who have the greatest exposure under the ETS, desire to diversify their portfolio of types of credits, and take advantage of lower prices offered by the CDM, has encouraged a surge of interest in CERs. What do the next six months hold in store for the CDM in light of this new source of demand?

While some buyers in other parts of the world have been willing to absorb some or all of the risks associated with CERs purchases, European buyers of CERs have tended to be more cautious. For many, it was easier and more efficient to simply delay purchasing credits until the purchase of EUAs from credit rated companies with whom they have an existing relationship, have established credit lines, and have as low a risk of default as possible. With the *Linking Directive* only recently passed into European Law, most also chose to wait until there is certainty about the role of CERs in the first phase of the EU ETS (2005 to 2007). But corporate buyers may also want to know that some aspects of the CDM now offer more comfort and certainty.

It has taken many years of hard work and dedication from those involved to develop an infrastructure for the CDM capable of fulfilling the goals laid down in the Kyoto Protocol and the Marrakech Accords. It would seem that it is now finally reaching a point where CERs generated under the Mechanism can be used as a flexible and valuable compliance tool that benefits the developing world as well as Annex 1 countries. The processes for developing and submitting methodologies and baselines have been established, DOEs have been authorized, and are actively engaged in validation and verification processes for projects, and the registration and review processes have been more clearly defined. To date, four projects have been registered and the issuance of CERs generated by these projects is within reach. A firming-up of the complex structure of the CDM has gone a long way to enhancing the value placed on CERs as compliance tools by a largely risk-adverse group of buyers who, to date, have been less comfortable participating in the CDM, for fear of booking a compliance tool on their balance sheet should it fail to materialize into a tangible asset.

Reducing the risks at the structural level within the CDM has allowed some companies to absorb other risks which are project specific - such as technology failure, host country risk, and registration risk - and make purchases of streams of CERs on this basis. When compared to the risks inherent in a similar project 12 months ago, the risks faced by a buyer now are substantially reduced. At the same time, sellers are becoming more prepared to absorb these risks for a higher price per CER, and are less inclined to ask for an up front payment to cover the costs of preparing the PDD and registration fees. Many sellers, particularly those with large projects, are able to offer either escrow solutions, or market-to-market liquidated damages in the event of partial or non-delivery. Some fiduciary institutions are also now more willing - and able - to structure credit support solutions for these sellers. This has opened up the door for many of the more risk-adverse buyers in Europe to seriously start considering primary market CERs as a compliance tool within a wider portfolio.

This increased certainty, and a more solid structure upon which to transact, has helped increase the price expected for CERs – since - the more delivery that the seller can offer, the higher the price he can demand for his CERs.

However, for European buyers, some risks will still be apparent when purchasing CERs – for example, whilst there is no cap on the number of CERs that can be imported in to any Member State in Phase I of the ETS, the Netherlands has already suggested placing a cap on Phase II imports at 8% of included companies' emissions, and other Member States may well follow suit. So, whilst EU Member States targets may be harder in Phase II of the ETS than in Phase I, CER prices for Phase II are still reflecting this uncertainty. CERs that can be delivered in Phase I in the meantime are highly prized due to their bankability between the Phases.

Non-Annex I Industry participation in the CDM without Annex I participation

by Edwin Aalders, IETA and Erik Haites, Margaree Consultants

Until the 18th meeting of the CDM Executive Board, it was unclear whether CDM projects must necessarily have at least one participant from an Annex I country. The Marrakech Accords are silent about this, although COP 7 saw lengthy negotiations on the issue. Requiring Annex I participants could mean that companies in developing countries would not be able to implement CDM projects on their own. They would necessarily have to include Annex I entities (i.e. companies in the industrialized world) in the Project Design Document, an arrangement that could constrain developing country players from participating directly in the market.

The decision taken by the CDM Executive Board at its 18th meeting in February 2005 confirmed that projects without Annex I participants will be accepted for registration. While this new move will help get more projects into the market, there are other implications to this decision.

Most CDM project activities with Annex I participation involve a contract for future delivery of emission reductions or CERs; some involve investment by an Annex I entity in return for a share of the CERs. Whatever the arrangement, there is usually a sharing of various risks between the project operator in the developing country and the Annex I buyer/investor. This often results in contracts or investment agreements that are complex and costly to negotiate. In the absence of Annex I participants, project developers in developing countries assume a major portion of the risks.

How does this affect prices? The larger the share of the project risk borne by the buyer or investor, the lower the price received by the developing country project operator. When the CERs are issued for a unilateral project the operator can sell them in the "spot" market to get the best price with minimum transaction costs. Complex contracts/agreements are not needed, thus facilitating implementation of CDM project activities in countries considered to have a poor investment climate. However, the developing country operator must be able to bring the project to a financial closure without the Annex I purchase contract or investment. Project registration does not depend on implementation of the project. Developing country operators may register their projects with the CDM Executive Board as unilateral projects even if they are not fully financed. They may do so in the hope that registration will help them attract the necessary financing. Thus 2005 could see registration of a significant number of projects that have not yet arranged the necessary financing. Many of those projects might not be implemented unless registration helps them attract sufficient investment.

Reducing investment risk for both project developers and investors will increase the implementation of CDM projects. DNAs in host countries as well as the CDM Executive Board can play a significant role in bringing down the risk by providing clear guidance on the conditions for project implementation and transfer of CERs to investors participating in the project after its registration. A of number DNAs have started providing this by including in their letter of approval at time of registration a statement that Party will not object to future allocations of CERs generated, thereby honoring any commercial arrangement between the project developer and its investors after the project registration. By reducing the risk we will hopefully not only see an increase in registration of CDM projects but also the generation of real, measurable emission reductions.

Carbon funds/programs for the CDM

With the Kyoto Protocol entering into force, the CDM market is set to expand rapidly. Increasing numbers of carbon funds and support programmes both public and private have been launched. The table below summarizes basic information of the major programs. For more detailed information of each fund, please visit respective websites or contact the persons in charge.

See table on the next spread.

Carbon funds/programs for CDM

Name of Fund / Program	Size of Fund / Program	Initiative by	Focused Project Categories	Geographic Focus
Funds managed by WorldBank/IFC and other Multilateral Financial Institutions				
WB - Prototype Carbon Fund	$180m	World Bank	Diversified technologies, currently RE and waste to energy dominate the protofolio	Global
WB - Community Development Carbon Fund	$128.6m first tranche.Second tranche opens late2005	World Bank	Small scale RE / EE and waste to energy conversion	Global
WB - Biocarbon Fund	$100m but will start operating at viable minimum of $30m	World Bank	Small reforestation, agriculture and land management projects	LDCs and economies in transition
WB Netherlands CDM Facility	$180m	Netherlands VROM	Range of projects (except carbon sequestration)	Global
WB - Italian Carbon Fund	$80m	Italy	RE / EE, Waste, methane capture, gas flaring etc	China, Mediterranean region, Middle East, Central America (Balkans for JI)
IFC Netherlands Carbon facility (INCaF)	44m euros	IFC & Netherlands	RE / EE, methane capture form landfill, waste management, fuel switch, CBM utilization	All developing countries except Central & Eastern Europe
Netherlands European Carbon Facility (NECaF)	10 million tonnes of Emission Reductions along with IBRD	IFC, IBRD, & Netherlands	RE / EE, methane capture form landfill, waste management, fuel switch, CBM utilization, some afforestation	Central & Eastern Europe
MCCF (Multilateral Carbon Credit Fund)	Between 50m and 150m euros	European Bank for Reconstruction and Development (EBRD)	Industrial Energy Efficiency , Renewable Energy, Waste (Water) Treatment, District Heating	Central Europe, South East Europe & Caucasus and Russia & Central Asia
CAF- Netherlands CDM Facility	40m euros (10Mtons CO2eq)	Netherlands/ The Andean Development Corporation (CAF)	RE / EE, methane capture from landfills, and fuel switching to less intensive sources	Latin America and the Caribbean
Government funds managed by governments or local institutions				
Austrian JI/CDM Programme	euros (11M 2004, 24M 2005, 36M 2006, 36M annually 2007-2012)	Austria	CHP, RE, landfill gas / energy from waste, demand management and EE projects.	No geographic focus MoUs please see http://www.ji-cdm-austria.at/en/programm/rechtliches.php
KfW Carbon Fund	50m euros	KfW banking group in cooperation with the Federal German Government	No focus. Acceptance of every eligible CDM or JI category without sinks (LULUCF)	Developing countries for CDM projects; Industrialized and transition countries for JI projects
EcoSecurities Standard Bank Carbon Facility	10m euros	Denmark -Standard Bank London Ltd & EcoSecurities to manage. Danish Environmental Protection Agency in colloboration	EE, fuel switch, methane capture, industrial emission reduction. Sinks and nuclear energy explicitly ruled out.	Central & Eastern Europe, inc. countries of Former Soviet Union
SICLIP 2002-2012	SEK 200 million including some JI	Swedish Energy Agency	RE / EE priority	Kyoto signatories in Africa, Asia, Latin America and Central & Eastern Europe
Flemish Government JI / CDM Tender	70m euros	Flemish Government	RE / EE priority	Central-Eastern Europe (proposals from Poland, Russia, Hungary), Asia (India) and South America (Chile)
Belgian JI / CDM Tender	10m euros	Belgian Federal Government	Still to be confirmed but will probably cover all types of projects except nuclear and sinks projects	Open
Finnish CDM / JI Pilot Programme	20m euros (10m bilateral / 10m in PCF and TGF)	Finland-Ministry for foreign affairs/Finnish Environment Institute (SYKE)	Small scale RE	Latin America, Africa, India
Rabobank-Dutch government CDM Facility	10 million tons of CO2e	Rabobank Carbon Procurement Department	All type of CDM projects	All CDM countries, but preferably those countries where we have a local presence (Argentina, Brazil, Chile, China, India, Indonesia, Mexico and Thailand).
Private funds				
Japan Carbon Finance,Ltd	$141.5million	Japan Bank for International Cooperation/Development Bank of Japan	All types	Asia, Central and South America, Eastern Europe
European Carbon Fund	105m euros	Caisse des Dépots & Fortis Bank	All types	Americas, EMEA, Asia Pacific
GG-CAP Greenhouse Gas Credit Aggregation Pool	72 million euros (98.6 million euros within 30 days)	Natsource Asset Management Corp. (NAM Corp)	Agriculture; Energy Efficiency; Fugitive Emissions; Industrial Processes; Renewable Energy; Sequestration; Transportation	Africa; Central Asia; Eastern Europe;Latin America; Southeast Asia/Oceania
ICECAP	40-50 million tons of Co2e	Icecap Ltd (owned by Cumbria Energy Ltd, Less Carbon Ltd and Investec Bank Ltd)	All types of JI and CDM (except LULUCF and nuclear)	Global
Equity investors				
e7 Fund for Sustainable Energy Development	N/A	E7	EE / RE especially small RE projects	Developing countries and economies in transition
VER Buyers*				
www.klimabalance.de www.myclimate.org	Open (we purchase on a needs basis for voluntary offsetting purpose and market projects through website that facilitates small volume puchases)	500 PPM	Energy (renewable, efficiency), methane reduction	Global CDM and JI
Support programmes				
Asian Development Bank CDM Facility	CDM transaction support for ADB-financed projects	Asian Development Bank	Renewable Energy, Energy Efficiency, Coalmine Methane, Agriculture/Forestry	Member countries in Asia

* Purchase of Verified Emission Reductions (VERs) only, with no intention to convert them into CERs

Typical Size per Project	Website	Contact Name	Personal Email Address	Alternative / Generic Email Address
Approx 5m - both among projects underway and under development	www.prototypecarbonfund.org			helpdesk@carbonfinance.org
average approx 2.48m	www.carbonfinance.org/cdcf/home.cfm			helpdesk@carbonfinance.org
Approx 2m	www.biocarbonfund.org			helpdesk@carbonfinance.org
Unavailable	www.carbonfinance.org/NetherlandsClean.htm			helpdesk@carbonfinance.org
Unavailable				helpdesk@carbonfinance.org
Varies depending on volume and other factors	www.ifc.org/carbonfinance	Vikram Widge		carbonfinance@ifc.org
Varies depending on volume and other factors	www.ifc.org/carbonfinance	Vikram Widge		carbonfinance@ifc.org
Anticipated Emission Reduction Purchase Agreements values between € 500,000 and € 10 mln	www.ebrd.com/carbonfinance	Jan-Willem van de Ven	vandevej@ebrd.com	
Unavailable		Francisco J. Sucre	fsucre@caf.com	infocaf@caf.com
Unavailable	www.ji-cdm-austria.at	Alexandra Amerstorfer, Manager	a.amerstorfer@kommunalkredit.at	kyoto@kommunalkredit.at
1-5m euros for the purchase of emission credites	www.ktw.de/carbonfund	Bernhard Zander	bernhard.zander@kfw.de	carbonfund@kfw.de
Unavailable	www.essbcarbonfacility.com	Pedro Moura Costa, Facility Manager - EcoSecurities	pedro@ecosecurities.com	
Small and medium size under 1MtCO2e	www.stem.se	Angela Churie Kallhauge	Angela.Kallhauge@stem.se	
300,000-500,000 CO2eq (average)	www.energiesparen.be/	Willem Maaskant, BGP Engineers; Liselotte De Vos	wm@bgp.nl liselotte.devos@ewbl.vlaanderen.be	pim@partnersinmarketing.net
No limit	www.klimaat.be/jicdmtender/	Sophie Closson or Tine Heyse - Climate Change Policy Advisors	jicdmtender@health.fgov.be	
Around 0.5M EUR per project	www.global.finland.fi/english/projects/cdm	Pekka Puustinen, Programme Director / Kari Hämekoski, Programme Manager	pekka.puustinen@formin fi kari.hamekoski@ymparisto.fi	
depends, but project should generate preferably approx. 1 million ton of CO2e between now and up to and incl. 2012		Jenneke Segers, Manager Carbon Procurement	Jenneke.Segers@rabobank.com	
up to $17million according to portfolio guideline	under preparation	Shuji Isone	s-isone@jcarbon.co.jp	jcf@jcarbon.co.jp
50,000 to 1,000,000 tCO2e/year	www.europeancarbonfund.com	Management Company - IXIS E&I,Laurent Segalen, Karen Degouve, Pierre Pery	ls@europeancarbonfund.com	carbon@europeancarbonfund.com
Varies with project type and assessment	www.natsource.com	Aline Ribas, Project Manager	aribas@natsource.ca	
Minimum 100,000 tCO2e per annum	www.icecapltd.com	Greg Dunne (Europe), Dave Allen (Africa), Ian Murphy (Americas)	greg @icecapltdcom dave @icecapltdcom ian@icecapltd.com	
variable, in-kind and financial resources	www.e7.org	Johane Meagher, e7 Secretariat	meagher.johane@hydro.qc.ca	e7secretariat@hydro.qc.ca
4,000 EUR - 250,000 EUR	www.500ppm.com www.klimabalance.de www.myclimate.org	Ingo Puhl, Managing Director	ipuhl@500ppm.com	info@500ppm.com
Not applicable	www.adb.org/cdmf	Toru Kubo, CDM Specialist	tkubo@adb.org	

Carbon Funds of this issue

In each issue, the Update will feature a couple of carbon funds. The carbon funds of this issue are Community Development Carbon Fund and European Carbon Fund.

Community Development Carbon Fund

The Community Development Carbon Fund (CDCF) managed by the World Bank is an initiative of the International Emissions Trading Association and the United Nations Secretariat on Climate Change. It is the first carbon fund initiative to exclusively target small-scale projects and local communities in the developing world through CDM, putting poverty reduction front and center. Less than 18 months since its opened for business, the groundbreaking CDCF announced in February that it was closing its first tranche at US $128 million—far beyond its original US$100 million projected target. The beneficiaries of this resounding commitment by the 25 public/private participants in the Fund will be small-scale projects in the poorest countries on the planet.

The CDCF will purchase emission reductions from small-scale projects in least developed countries, and poorer communities in all developing countries. The emphasis is on renewable energy, energy efficiency and waste-to-energy conversion projects that have significant and measurable community development benefits. Poorer communities will get the advantage of development dollars coming their way and participants in the funds will receive high quality emissions that make a significant contribution to sustainable development.

The revenues that will flow could be a powerful development tool for some countries. World Bank research shows that if half the targeted emission reductions are achieved by OECD countries domestically the 'compliance gap' to be met through trade with developing countries and transition economies through 2012 would be 2.5 billion tons—10 times the current carbon purchase contracts. At a selling price of US$5-US$10 a ton, carbon payments to developing countries and economies in transition between now and 2012, could be worth between US$12.5 billion and US$25billion.

The CDCF aims to invest at least 25 percent of its assets in projects located in least developed countries and other poorer developing countries with a population of less than 75 million. The fund has a priority list of countries for further development which includes Ethiopia, Guyana, Honduras, Kenya, Moldova, Mongolia, Nepal, Tanzania and Uganda. The World Bank has, in a "special effort on Africa", a program to identify and develop viable CDM projects in region under various World Bank funds. At least eight of the 29 projects in the CDCF pipeline are located in sub-Saharan African countries.

The CDCF focuses on obtaining Kyoto compliant greenhouse gas emission reductions—the first tranche will purchase at least 20 million tons of carbon dioxide equivalent to meet the enormous reductions obligations of the OECD. Participants in the CDCF are willing to pay a premium of 15-20 percent above current market rates for carbon. These dollars will go to improve the quality of life of local communities in the project area. Even with this sustainable development premium, the demand exceeds supply of eligible projects.

From Uganda to Nepal, with more than 11 projects already in the CDCF pipeline, communities are already seeing the benefits from the community fund. The 4-5 megawatt mini-hydro Mt. Elgon run of river projects in Uganda will bring the benefits of electricity to the lives of the Ugandan rural poor. The CDCF will purchase greenhouse gas emission reductions from Nepal's Biogas Project which will bring clean renewable energy for cooking and lighting to rural households. Between 2004 and 2009 the project will install 162 thousand quality-controlled biogas plants in the Terai - hill and mountain regions of Nepal.

La Esperanza hydro power project: The Honduras

And in Honduras, the La Esperanza Hydropower Project sells 310 thousand tons of carbon emission reductions to the CDCF. For the first time in the town of La Esperanza, power supplies will be guaranteed to about 40,000 people.

For more information on the CDCF and other carbon finance products of the World Bank, see www.carbonfinance.org

European Carbon Fund

The European Carbon Fund (ECF) has successfully closed the subscription process for its first fund, having attained a sum of €105m. Nine investment-grade financial institutions have contributed to its capital with Caisse des dépôts and Fortis Bank as the ECF's co-sponsors.

The ECF is an eight-year "carbon assets" (EU Allowances, Emission Reduction Units & Certified Emission Reductions) investment fund. It is managed by IXIS Environnement & Infrastructures (E & I), a wholly-owned subsidiary of IXIS CIB (S&P AA), a Groupe Caisse d'Epargne company.

Structured through a Luxembourg based SICAV (law of 1991), the ECF has been approved by the CSSF, the Luxembourg financial regulator, in January 2005.

The ECF has started its procurement phase and has already contracted 250,000 ERUs from a Baltic biomass investment. It is focusing on first-class CDM / JI projects which will be able to

deliver carbon assets up to 2012.
The fund offers the following qualities to any CER / ERU sellers:

- Competitive prices
- Recognised expertise
- A large investment capacity
- Mastery of banking techniques and financial engineering

The European Carbon Fund has designed a comprehensive buying policy in order to provide transparency, security, liquidity and profitability to sellers and investors alike.
The ECF expects to contract carbon assets from 15 to 20 projects operated by high-grade counterparties in order to create and manage a high-quality, diversified portfolio of assets.

In these transactions, the ECF will act as "Project Participant", before the registration of the project by the CDM Executive Board.

The transactions will have the following characteristics:

- Carbon Stream vintages: 2005-2012
- Quantities per project: from 50,000 to 1,000,000 t CO2 p.a.
- Spot & future contracts, including options
- Fixed and index based prices
- Bankable contracts
- Payment on delivery, with possible advance payments
- Management of the CDM EB's fees and duties, on behalf of all Project Participants
- Confidentiality and rapid execution

The fund is not subject to public procurement rules and will purchase CERs/ERUs free of VAT.

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Status and analysis of the current CDM project portfolio

by Jørgen Fenhann, UNEP Risø Center

Since December 2003, 97 CDM projects have been sent for validation by DOEs, and their PDDs have been available for the 30 days public comments at the website www.unfccc.int. This information has been used in the analysis of the CDM project portfolio. The average annual CERs created in the first crediting period from these projects have been analysed. Figure 1 below shows that landfill projects, where the gas is flared or used for power purposes, take the largest share of the CERs (43% of the CERs and 22% of the projects) and the 2 HFC23 projects the second largest share of the CERs (30%)

Figure 1: the sectoral distribution of the CDM project sent for validation

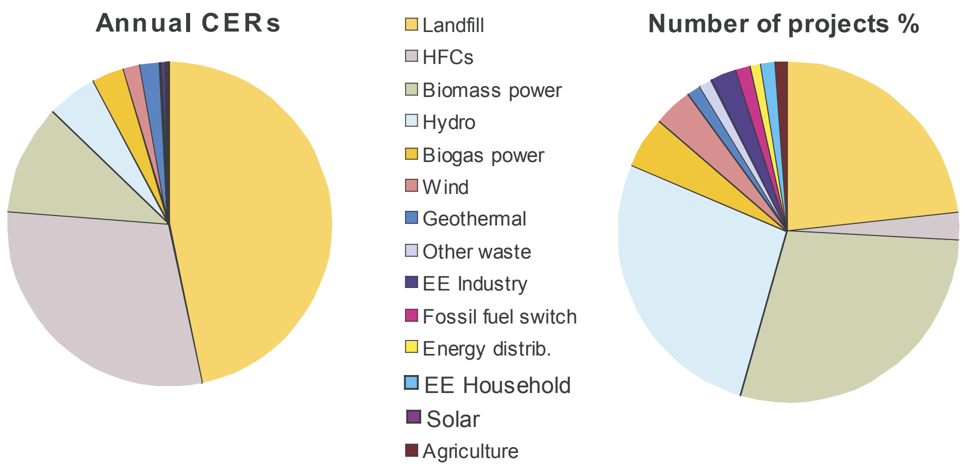

Table 1: Number of projects

Hydro	28
Biomass power	28
Landfill power	14
Landfill flare	8
Biogas power	4
Wind	4
HFCs	2
Geothermal	2
EE Industry	2
Other waste	1
Fossil fuel switch	1
Energy distribution	1
EE Household	1
Agriculture	1
Solar	0
Total	**97**

As shown in Table 1, the hydropower sector contains the largest number of the projects. Projects using biomass to produce electricity (half of them using bagasse) are also of most popular type of projects followed by landfill gas projects (flaring + power). The 4 biogas and 4 wind projects are also visible on the figures, but the energy efficiency project are lagging behind. Only 2 projects improving steam efficiency in industry- one on urban housing, and one natural gas pipeline rehabilitation project- have been validated. There are no solar or transport projects and only 2 geothermal projects have been under validation. 42% of the projects are small-scale projects, reflecting the fact that most hydro projects are small-scale.

Of the 97 projects only 11 have requested a registration by the UNFCCC secretariat. Of these 5 have succeeded to be registered (3 full-scale and 2 small-scale). Three of the eleven are under review. It is remarkable that only about 10% of the projects have requested registration, even though their public comment periods finalised more that a half-year ago for some of the projects. The UNFCCC or the DOE websites do not give any information about how many projects have been rejected by the DOEs. One possible reason is that although the validation has been successful for most projects, missing approval of Annex I countries are delaying the registration. Currently, no EU countries are issuing project approval letters for private sector project participants due to legal concerns. However, now projects without an Annex I partner can be registered, the Annex I approval letter is indeed required to get the CERs issued. Maybe this decision of the Executive Board will help improve the situation. The total annual number of CERs created by the 97 projects is 16 $MtCO_2$. This means that the average size of the 97 projects is 165 $ktCO_2$/year. The total number of CERs expected to be generated by the 97 projects from the start of their crediting periods until the end of 2012 is 136 $MtCO_2$.

Table 2 shows that most of the projects until now have been validated by DNV and TÛV-SÜD. However, now 2 more DOEs can validate energy projects and almost all those with an indicative letter can validate landfill projects, it is expected that the distribution will change in the future. The table also shows the 5 DOEs in yellow that have been designated by the Executive Board, and the 12 Applicant Entities, which have got an indicative letter. This letter is issued after a successful completion of the Desk Review and an on-site assessment Only 6 of the 29 Applicant Entities are from non-annex I countries (Malaysia, 2 from S. Korea, Brazil, South Africa and Colombia). Efforts to encourage more application from developing countries are needed.

Some expect that the three largest non-annex I countries would take a larger share of CDM projects. Table 3 shows that this indeed has happened for Brazil (with 32 projects) and India (14 projects). However, only 3 projects from China have been sent for validation so far. The table also shows that a big effort is needed to follow the declaration in the Marrakesh Accords to promote equitable geographic distribution of CDM project activities at regional and sub-regional levels. There is only one project in Africa. More CDM capacity building activities like the CD4CDM project that UNEP-Risoe Centre has been implementing in 12 developing countries would help. The only project in the Middle – East/North Africa is from Morocco, which is part of this project.

Table 2: The DOE's used for validation

Operational Entity	Projects Validated
Det Norske Veritas Certification (DNV)	66
TÜV Industrie Service GmbH - TÜV Süd Gruppe (TÜV-SÜD)	14
Société Générale de Surveillance (SGS UK)	8
Japan Quality Assurance (JQA)	2
Japan Audit and Certification Organisation for Env. And Quality (JACO)	1
Japan Consulting Institute (JCI)	2
TÜV Industrie Service GmbH - TÜV Rheinland (TÜV-Rhein)	2
KPMG Certification B.V.	1
AZSA & Co	
Tohmatsu Evaluation and Certiification Organization (TECO)	
BVQI Holdings S.V. Ltd.	
Korea Energy Management Corporation (KEMCO)	
Spanish Association for Standardisation and Certification (AENOR)	1
RWTÜV Systems GmbH	
ChuoAoyama PwC Sustainability Research Institute Corporation (CHUO)	
Korean Foundation for Quality (KFQ)	
Lloyd's Register Quality Assurance Ltd. (LRQA)	
Total	**97**

Table 3: Host country distribution

Region/Country for CDM projects	Number of Projects
Latin America	**63**
Argentina	2
Bolivia	1
Brazil	32
Chile	7
Costa Rica	1
Ecuador	2
Guatamala	3
Honduras	7
Mexico	4
Nicaragua	1
Peru	3
Asia & Pacific DC	**30**
Bangladesh	1
Bhutan	1
China	3
India	14
Indonesia	1
Malaysia	3
Papa New Guinea	1
Phillippines	1
South Korea	1
Sri Lanka	3
Thailand	1
Europe (FSU)	**2**
Armenia	1
Moldova	1
Africa	**1**
South Africa	1
Middle-East/North Africa	**1**
Morocco	1
World	**97**

The CDM started with no full-scale baseline methodologies. Until now, project participants have submitted about 100 proposals for new methodologies. Out of these proposals, 21 have been approved for full-scale CDM projects. The Executive Board has additionally developed two consolidated methodologies; one covering all kinds of landfill gas projects, another covering renewable energy technologies producing electricity to the grid. Although no separate approved methodology exists for solar or geothermal, these projects can use the latter consolidated methodology (i.e. ACM2). However, only very few approved methodologies exist for energy efficiency, and methodologies for transport are still missing.
For the small-scale CDM projects, approved methodologies exist which were developed by the Executive Board itself. No approved methodologies for afforestation/reforestation exist yet (3 methodologies have been proposed), and there are therefore still no projects in this category under validation.
All the analysis presented and the background information for all methodologies proposed and validated projects can be downloaded from www.cd4cdm.org, where it is regularly updated.

Progress of UNEP's CD4CDM Project:

Portfolio of potential CDM projects

After 3 years from its inception, UNEP's Capacity Development for CDM project (CD4CDM:www.cd4cdm.org) host countries have been making a steady progress. More than two-thirds of 12 participating countries have established /consolidated the DNAs and are now developing their own project pipelines.

In the course of the implementation, many lessons have been learned. Although these are mainly for implementing agencies of capacity building programs and their national counterparts, they are important to share, as any CDM project development requires basic infrastructure in place in host countries. Among others, the key factors for successful implementation include the following:

- *Understanding the difference among regions and countries and reflect them in the work plan and activities*: Since different countries have different socio-economic, institutional, political, historic and cultural background, there is no one -size-fits-all approach.
- *Identifying and consulting right partners*: This is particularly important in the countries with complicated government/ institutional structures and influences the project's success greatly. Changing the partners in the middle of project implementation is almost impossible and undesirable.
- *Fostering mutual trust among key project partners*: Without this trust, project participants will have to spend much resource on administrative and less constructive activities.
- *Helping build the self-confidence of developing country implementing partners*: Once the self-confidence of national partners are established, they become more active, efficient and creative.
- *Allowing flexible implementation strategy to a possible extent*: The work plan, schedule and budget may need to be amended to accommodate unexpected events and new circumstances. A rigid bureaucracy would help no parties.

Below is a summary of the pipeline projects as of end March 2005. Information on individual projects and updated portfolio is available at the specified websites of respective DNA offices and relevant national partner agencies. Some of the projects summarised here will also be presented at the Carbon Expo 2005.

Cambodia

Small Scale Projects
2 Renewable Energy (2 PDDs under development)
1 Afforestation and Reforestation (1 under development)
1 Waste Management (1 under development)
More information, contact Cambodian Climate Change Office at Ministry of Environment, Tel/Fax: 855-23-218370, Email: cceap@online.com.kh

Bolivia

Large Scale Projects
5 Afforestation and Reforestation (2 PDDs approved by DNA, 2 PINs approved by DNA)
2 Waste Management (1 PDD approved by DNA and in registration phase to EB, 1 under development)
1 Industrial Process (under development)
7 Renewable Energy (3 PINs approved by DNA, 2 PINs, 2 under development)
1 Energy Efficiency (under development)
Small Scale Projects
5 Renewable Energy (1 PIN approved by DNA, 4 PINs)

More information at www.odl.gov.bo or contact: National Programme on Climate Change, National CDM Office, at the following email Codl@mds.gov.bo; giselau@mail.megalink.com ; odl.proyectos@gmail.com; mzaballa@gmail.com

Ecuador

Large Scale Projects
12 Renewable Energy (2PDDs approved by DNA and being validated, 3PDDs endorsed by DNA, 1 PIN endorsed by DNA, 2 PINs under development, 4 under development)
3 Fuel Switching (3 under development)
2 Waste Management (1 PDD endorsed by DNA, 1 under development)
7 Afforestation & Reforestation (1 PDD, 3 PINS endorsed by DAN, 3 under development)
Small Scale Projects
9 Renewable Energy (1 PDD endorsed by DNA, 1 PDD, 2 PINS endorsed by DNA, 1 PIN, 4 under development)
1 Fuel Swtich (1 under development)
1 Waste Management (1 under development)
5 Afforestation & Reforestation (1 PDD, 1 PIN endorsed by DNA, 3 under development)

More information at: Ecuadorian CDM Promotion Office: www.cordelim.net , info@cordelim.net ; or Ecuadorian DNA: www.ambiente.gov.ec , cdm-dna@ambiente.gov.ec

Morocco

Large Scale Projects
4 Afforestation and Reforestation (4 under development)
5 Waste Management (1 PIN approved by DNA;1 PDD approved by DNA, 3 under development)
1 Industrial Process Change (1 under development)
8 Renewable energy (1PDD approved by DNA; 3 PIN approved by DNA ; 4 under development)
7 Energy Efficiency (1PDD approved by DNA ; 6 under development)
Small Scale projects
3 Waste Management (2 PIN approved by DNA ; 1 under development)
5 Renewable Energy (3 PDD approved by DNA; 2 under development)
1 Energy Efficiency (1 PIN approved by DNA)

More information at http://www.mdpmaroc.com, or contact Secrétariat Permanent de l'Autorité Nationale Désignée du MDP, Unité Changements Climatiques at rcmdp@mtds.com

Egypt

Large Scale Projects

1 Renewable Energy (1PDD preliminary approved by DNA)
3 Energy Efficiency (3 PINs preliminary approved by DNA)
2 Waste Management (1 PDD preliminary approved by DNA;1 PIN preliminary approved by DNA)
3 Afforestation (3 PINs preliminary approved by DNA)

Small Scale Projects

1 Renewable energy (1PDD preliminary approved by DNA)
2 Energy Efficiency (2 PDDs preliminary approved by DNA)

More information at http://www.cdmegypt.org , or contact Climate Change Unit (CCU),Egyptian Environmental Affairs Agency (EEAA),Ministry of State for Environmental Affairs (MSEA), Email: ccu@eeaa.gov.eg

Tunisia *

Large Scale Projects

2 Waste Management (1 PIN, 1 under development)
1 Industrial Process Change (1 under development)
7 Renewable Energy (1PDD, 6 under development)
7 Energy Efficiency (1 PDD, 6 under development)

Small Scale projects

14 Waste Management (1 PDD, 13 under development)
2 Renewable Energy (2 PINs)
4 Energy Efficiency (1 PIN, 3 under development)

More information at http://www.changementsclimatiques.tn

Mozambique *

Large Scale Projects

1 Renewable Energy (hydro power plant, under development)

Small Scale projects

1 Renewable Energy (micro-hydro, under development)
1 Energy Efficiency (industrial, under development)
1 Transport (fuel switch for public transportation, under development)

More information, contact Mr. Alberto Júlio Tsamba, Univ. Eduardo Mondlane, Mozambique at ajtsamba@zebra.uem.mz

Viet Nam

Large Scale Projects

3 Waste Management (1 PDD approved by DNA, 1 PIN approved by DNA, 1 under development)
1 Energy Efficiency (1 PIN approved by DNA)

Small-Scale Projects

3 Renewable Energy (1 PDD approved by DNA, 2 under development)
1 Afforestation and Reforestation (1 under development)

National Office for Climate Change & Ozone Protection, International Cooperation Dept, Ministry of Natural Resources and Environment, Email: vnccoffice@fpt.vn

Philippines *

Large Scale Projects

3 Renewable Energy (1 PDD, 1 PIN, 1 Under development)
2 Waste Management (2 PIN)
1 Geothermal (1 PIN)

Small Scale Projects

7 Waste Management (2 PDD, 2 PIN, 3 Under development)
1 Afforestation and Reforestation (1 PIN)

More information at http://www.klima.ph/cd4cdm or contact Ms. Joyceline A. Goco, Head, Inter-Agency Committee on Climate Change Secretariat e-mail: joygoco@yahoo.com

Note: Countries marked * are in the process of establishing a DNA or CDM approval process, and therefore the projects listed here are not approved by respective DNAs. The information provided here is from technical co-operating organisations working with relevant ministries under the CD4CDM projects. Tunisia is not a host country of CD4CDM project, but is closely involved in extended project activities through the project's regional center for Middle East and North Africa, Apex, based in Tunis.

News from CDM host countries:

Morocco

Being aware of the potential opportunities presented through the CDM to realize sustainable development, Morocco has ratified the Kyoto Protocol and established a Designated National Authority for the CDM in 2002. Today, due in part to the support by UNDP and UNEP's CD4CDM project, Morocco has an operational Designated National Authority (in the Ministry of Land Use Management, Water and the Environment), national project evaluation procedures with own sustainable development criteria, qualified experts in the field, and different promotional and informational materials for CDM Morocco, which are available on the website www.mdpmaroc.com.

Morocco's CDM portfolio consists of more than 34 projects of which 9 are small scale projects. The estimated potential reduction of emissions from these projects is more than 4 million tons per year- 40 million tons for the next ten years. Of the 34 projects, 6 have been approved by DNA and 10 have passed the first step in the national approval process; one is at the validation/registration stage of the Executive Board pipeline (Essaouira Wind park) and a New energy efficiency methodology is proposed for another project (Jorf lasfar HRS, NM0088)
Morocco has a promising CDM potential in renewable energy, waste and sewage, industry process, agriculture, and afforestation and forestation sectors. With this dynamic effort for the CDM, Morocco is currently ranked in the TOP 10 of Point Carbon's CDM Host Country Rating, first African and meddle East country in this rating.

By Ali Agoumi, National Coordinator, UNEP Capacity Development for the CDM project, Morocco.

On-line information on the CDM

Latest information on CDM

See UNFCCC website http://cdm.unfccc.int/ for all information regarding methodologies, latest rules and decisions by the Executive Board, COP decisions related to CDM and other official documents.

News services and Newsletters

- CDM Highlights, GtZ and HWWA http://www2.gtz.de/climate/english/newsletter.htm (monthly newsletter covering comprehensive news on CDM)
- CDM & JI Monitor and Carbon Market News, Point Carbon www.pointcarbon.com (biweekly publication of CDM and JI market available in English, Spanish, Portuguese, Russian and Japanese, paid subscription required, discount available for non-Annex I subscribers; and daily news in carbon market ;some information restricted to paying subscribers)
- Evolution Markets LLC, Evaluation Market www.evolutionmarket.com (daily, weekly & monthly news on the carbon market)
- CDM Investment Newsletter, Climate Business Network, http://www.climatebusiness.net (quarterly newsletter with featured topics on each issue)
- Joint Implementation Quarterly, Magazine on the Kyoto Mechanisms, Foundation Joint Implementation Network, the Netherlands, http://jiq.wiwo.nl/dl.htm (quarterly newsletter on JI)
- JIKO Info, Wuppertal Institute http://www.wupperinst.org/Sites/Projects/rg2/jiko-info/ (quarterly newsletter of the "Joint Implementation Coordination Unit (JIKO)" project, covering current policy developments for JI and CDM)
- CDM News Facility, UNFCCC Secretariat http://cdm.unfccc.int/CDMNews (informs updates on UNFCCC CDM website)
- Earth Negotiation Bulletin (ENB), International Institute for Sustainable Development (IISD) (Up-to-the-minute record of UNFCCC negotiations) http://www.iisd.ca/process/climate_atm.htm
- Climate Change Info Mailing List, Climate-L, IISD http://www.iisd.ca/email/climate-L.htm (Mailing list for news and announcement on the climate change policy process and the UNFCCC)

CDM Guidebooks, recent reports, training tools and presentations

- CDM information and Guidebook; Legal Issue Guidebook to CDM;CDM sustainable development Impact http://www.cd4cdm.org/publications.htm
- CDM practitioners tool kit, by SouthSouthNorth, http://www.cdmguide.com/
- "Three years after Marrakech: Lessons Learned from CDM", IETA http://www.ieta.org/ieta/www/pages/download.php?docID=690
- Validation & Verification Manual, www.vvmanual.info
- Presentations at Delhi GHG Forum 2005 hosted by TERI, WBCSD, IETA and World Bank Feb 1-2, 2005 http://www.ieta.org/ieta/www/pages/index.php?IdSiteTree=1237
- CDM Project Developers Workshop, hosted IETA, WBCSD and TERI Feb 3, 2005 www.ieta.org
- CDM Project Developers Workshop hosted by WBCSD and BCSD Mexico, February 22, 2005. www.wbcsd.org
- Training materials on CDM Methodologies, WB workshop for CDM project developers in Buenos Aires, 5.December.2004 http://carbonfinance.org/Router.cfm?Page=DocLib&Dtype=50&ActionType=ListItems#CDM1
- Conditions and timeframes for CDM, JI and ET, by Jørgen Fenhann,UNEP Collaborating Centre on Energy an Environment, Risø National Laboratory, 01 March 2005 http://www.cd4cdm.org/

Upcoming events (May-August 2005)

- 02 May – 03 May 2005, Annual GreenTrading Summit™: Emissions, Renewables & Negawatts, New York, USA. http://www.greentradingsummit.com/
- 11 May –13 May 2005, Carbon Expo 2005, Cologne, Germany http://www.carbonexpo.com/
- 11 May – 13 May 2005, CDM EB19 meeting, Bonn, Germany UNFCCC
- 16 May – 17 May 2005, Seminar of governmental experts, Bonn, Germany UNFCCC, http://unfccc.int/meetings/seminar/items/3410.php
- 16 May – 27 May 2005, SB 22 Bonn, Germany UNFCCC
- 15 June – 16 June 2005, Renewable Energy Finance Asia, Hong Kong, PR China http://www.greenpowerconferences.com/events/RenewableFinanceAsia.htm
- 16 June – 17 June 2005, Emerging Carbon Markets: Can they deliver?, London, UK http://www.chathamhouse.org.uk/index.php?id=5&cid=72
- 05 July – 08 July, UNFCCC – CDM EB20 meeting, Bonn, Germany, UNFCCC

Carbon Expo

Following its successful premiere in June 2004, CARBON EXPO — the Global Carbon Market Fair & Conference — will continue to build on its leading role in 2005 for emissions trading and the carbon market. The event is jointly organized by the World Bank, the International Emissions Trading Association and Koelnmesse. It will be held in Cologne, Germany on May 11 – 13, 2005.

The 2005 event will feature more then 125 exhibitors from over 50 countries. This represents an increase of more than 100 per cent compared to last year (50 exhibitors). The exhibitors will include technology and service providers such as: consulting firms, banks, law firms, verification and certification firms, aid institutions, project developers, trading platforms, financial service providers, suppliers of software and technology, suppliers of emissions certificates and companies and government representatives from developing countries. Exhibitors will present their services and products for an effective emissions market and state-of-the-art technology for the reduction of carbon emissions to trade fair visitors from all over the world. Over 1,000 participants are expected at CARBON EXPO 2005.

Other news from partner organizations

UNEP's new video on Kyoto Protocol and the CDM for host countries

A new short video, *"Changing Climate, Changing Opportunities"* provides the background of the Kyoto Protocol and shows the opportunities provided by the CDM for developing countries. The video examines a real CDM project (i.e. Graneros fuel switch project) as an example and demonstrates how such projects are identified and approved in their host countries, and how they can contribute to national sustainable development. DNAs and National CDM promotion offices can use it to help key stakeholders understand the CDM and how it may be applied in their country. The 18 minute video is available in English, French and Spanish, and in DVD and CDR. A limited number of the master copy for broadcast includes an empty "international " track that allows individual organisations to make particular language versions. The English version can be viewed at http://www.unep.fr/en/info/videos.htm. To obtain more information and copies, please contact Aki Maruyama (aki.maruyama@uenp.fr).

The Gold Standard - Premium quality carbon credits - now hosted by BASE

The Gold Standard, initiated by WWF and subsequently endorsed by over 25 NGOs worldwide, helps to secure CDM projects make a substantial contribution to sustainable development in host countries. First of all, by using a positive list making only renewable energy and energy efficiency projects eligible. Secondly - apart from generating cost-effective CERs for buyers - it requires additional screening for social, local environmental and economic benefits and applies additional public consultation requirements. Since it is built upon the standard CDM project cycle, additional efforts to validate a project to the Gold Standard are minimal. Project developers can profit from a fair priced niche market for Gold Standard credits with substantial demand currently developing. Buyers using the Gold Standard can reduce CDM-specific and reputational risks. Gold Standard is, since the beginning of 2005, a seperate organisation that is hosted by BASE (Basel Agency for Sustainable Energy; a UNEP Collaborating Centre). For more information, please see http://www.cdmgoldstandard.org or contact Michael Schlup (michael.schlup@energy-base.org).

New UNEP-World Bank Capacity Building Initiative "Using Carbon Finance to Promote Sustainable Energy Services in Africa (CF-SEA)"

Building upon several on-going World Bank and UNEP programmes in the carbon finance and enterprise development areas, a comprehensive new initiative is being implemented to help originate carbon finance project activities in the five sub-Saharan African countries Cameroon, Ghana, Mali, Mozambique and Zambia. In each of the countries, the programme strategy will be twofold and involve 1) Capacity Development: strengthening the capacity of local carbon experts, co-financiers and governmental authorities to engage in carbon project activity and 2) Project Development: putting "theory into practice" by working with a number of project developers on specific promising carbon transactions. Project activities will start in April 2005. For more information, please contact Eric Usher (eric.usher@unep.fr) or Jan Kappen (Jan.kappen@unep.fr) at UNEP, Sami Kamel (sami.kamel@risoe.dk) or Myung-Kyoon Lee (mk.lee@risoe.dk) at URC and Andrea Pinna (apinna@worldbank.org) or Glenn Hodes (ghodes@workdbank.org) at the World Bank.