

Special Feature on the Kyoto Protocol

CDM Incentives in Industrialized Countries— The Long and Winding Road

Axel Michaelowa^a

Industrialized countries have been astonishingly slow in providing incentives for their private sectors to invest in Clean Development Mechanism (CDM) projects or to buy certified emission reductions (CERs). On the other hand, capacity-building initiatives have been promoted extensively and have used almost 10 percent of the total funds invested in the CDM. With the introduction of the linking directive, the European Union could open a window of opportunity to kick-start private sector participation. This would require stronger national allocation plans than are currently being considered.

Keywords: Clean Development Mechanism (CDM), Incentives, Capacity building, Private sector.

1. Introduction

Seven years have passed since the Clean Development Mechanism (CDM) was agreed on at the Third Session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP 3) in Kyoto and only recently have the first CDM projects been registered. Only now, the first link of the CDM and a mandatory domestic climate policy instrument, the European Union Emissions Trading Scheme (EUETS), has been passed into law. We are halfway between Kyoto and the end of the first commitment period (2012), and only now are the building blocks being put in place. So our activities must be accelerated considerably if the CDM is to fulfill its dual aim of providing cost-efficient emissions reduction and sustainable development. This paper assesses the history of industrialized country initiatives to spur the CDM and looks at governments and companies as major players. The different vehicles being used will be addressed and the overall volume of incentives quantified. While the principle of linking domestic climate policy instruments with the CDM is simple and was suggested even before the Kyoto conference (Michaelowa 1996), its implementation has taken a long time. Like the proverbial ostrich, many people stuck their heads in the sand and thought that the CDM would materialize on its own.

2. The lack of incentives in the AIJ pilot phase

The pilot phase of activities implemented jointly (AIJ) that started in 1995 tried to test the principle of transboundary project cooperation on greenhouse gas reduction, but it lacked a key element—the emissions credit. Therefore neither companies nor countries were interested in investing large amounts

a. Programme International Climate Policy, Hamburg Institute of International Economics, Germany.

of money. The only exceptions were the Netherlands, Norway, Sweden, and Switzerland, which to date have spent 36, 6, 28, and 6 million euros (€), respectively, on their AIJ programs.¹ These countries learned important lessons, and the Netherlands laid a decisive cornerstone for the development of the CDM with a number of initiatives (Michaelowa 2002).

3. Capacity building as a prerequisite of sourcing CDM supply

When the CDM was agreed at Kyoto, many people were unsure what it actually signified. It took over a year to generate a preliminary common understanding, but obvious differences persisted until the Marrakesh Accords were agreed at COP 7.^[ed21]²

3.1. National Strategy Study Program

In 1997, Switzerland agreed to provide seed funding to the World Bank to set up a program of country studies on the Kyoto mechanisms called the National Strategy Studies (NSS) Program. Australia, Austria, Canada, Finland, and Italy joined later. This program, which formally ended in 2004 and spent almost €6 million (World Bank 2004a), proved to be the catalyst needed for many countries to embark on their own CDM program and thus considerably influenced the current CDM supply structure. Each national strategy study (NSS) was geared to produce an estimate of the CDM potential of the specific country studied with the following elements:

- a description of the CDM
- an estimate of demand and supply on the international greenhouse gas market
- an estimate of costs and scope of greenhouse gas abatement options in the host country
- institutional requirements for the CDM
- a description of a project pipeline, i.e. a list of potential CDM projects

The way the program worked, one Annex B country would completely finance a national strategy study of a particular country;³ the World Bank played a relatively limited role in financing but asserted an important one when it came to the content of the study. Each NSS had a common structure that started with a general model-based world market assessment, continued with a model-based assessment of supply, described the institutional challenges for the CDM in the country, and ended with a project pipeline, i.e. a list of potential CDM projects. While the modeling chapters were initially useful for generating a rough idea about the overall market, they later degenerated into runs of a model provided by a Swiss consultant named Dr. Jürg M. Grütter that gave little added value but swallowed up a lot of resources.⁴

In the NSS Program, the World Bank also promoted its own agenda, particularly concerning the development of a project pipeline for its Prototype Carbon Fund (PCF). This role sometimes led to

1. All original US dollar values were converted into euros by dividing by 1.2.

2. COP 7 took place in Marrakesh, Morocco, October 29 to November 9, 2001, and resulted in the Marrakesh Accords, a 245-page compilation of rules and procedures that pave the way for ratification and entry into force of the Kyoto Protocol.

3. The Annex B countries are the emissions-capped industrialized countries and economies in transition listed in Annex B of the Kyoto Protocol.

4. The CERT model is available at http://adminsrv.admin.ch/swissaij/home_whatsNew_CERT.htm.

conflict with the financing country and to long delays in the publication of studies. This is why Germany made its financial contributions on condition that it would retain control over the content and could decide unilaterally when a report was fit for publication.

In each NSS, a team of host country consultants would be put in charge of writing the report, while consultants from the Annex B country financing the study would provide support. Often, however, the consultants from the Annex B countries played a major role that, of course, limited the degree of capacity building. They also took the major share of the available funding so that, essentially, the NSS program built the capacity of Annex B country consultants at least as much as the capacity of the host country consultants.

Usually, an NSS took 18 months to be completed, but in some cases they dragged on for as long as three years. The main reasons cited for these delays were insufficient project ownership of the host country, conflicts over the allocation of financial resources, lack of competence, and slow allocation of experts by the Annex B consultancy. An instructive case is Indonesia, which had decided to separate its NSS into an energy and a forestry part. The former was financed by Germany, the latter by Australia. While initially both parts were to be started in early 2000 and published jointly, it became quickly clear that the Australian part would have difficulties. Eventually, the German NSS was published in September 2001 and the Australian one more than two years later.

By the time the NSS Program was wrapped up, seventeen national strategy studies had been completed in 16 CDM host countries (see table 1). Ten were supported by Switzerland, three each by Australia and Germany, and one each by Austria, Canada, and Italy. Interestingly, smaller countries were quicker in negotiating NSS terms with the World Bank, while larger host countries were sometimes skeptical and took a long time in negotiations. A prime example is India, which only started its NSS in 2003.

One particularly useful element of the NSS Program was the series of workshops held in Switzerland in 2000 and 2002, where representatives of different NSS countries met to exchange experiences.

Table 1. Host and financing countries that have completed national strategy studies

Year	Host country (financing country)
1998	Argentina (CAN)
1999	Uzbekistan (CH)
2000	Colombia (CH), Kazakhstan (AT)
2001	Bolivia (CH), Indonesia – Energy (D), South Africa (CH), Zimbabwe (CH)
2002	Egypt (CH), Thailand (AU)
2003	Chile (D), Indonesia – LULUCF (AU), Peru (CH), Uruguay (CH)
2004	China (CH, D, IT), India (CH), Vietnam (AU)

Note: Austria (AT), Australia (AU), Canada (CAN), Switzerland (CH), Germany (D), Italy (IT).

3.2. Country programs

As it became clear that the NSS Program could not cover all capacity-building needs, a number of United Nations (UN) agencies and Annex B countries embarked on specifically targeted programs (table 2).

Table 2. CDM awareness-building programs^[ed22]

Agency	Program name	Budget (millions of euros) ^a	Duration	Host country	Comments
UN agencies					
United Nations Council for Trade and Development (UNCTAD)	Carbon Market E-Learning Center	n.a.	2001–ongoing	Not specified	Online, fee-based training course on the CDM. Dubious quality and semi-commercial character.
United Nations Development Programme (UNDP)	Climatic Change in Maghreb Region	~ 0.3 for CDM part	1999–2002	Algeria Morocco Tunisia	Workshops, development of project pipeline
United Nations Environmental Programme (UNEP)	Diverse	0.8	2002–2003	Latin America	Workshops
United Nations Industrial Development Organization (UNIDO)	Concept for Developing National Capacity to Implement the Industrial Clean Development Mechanism Project in Africa	~2.0	1998–2001	Congo Ghana Kenya Nigeria Senegal Tanzania Zambia Zimbabwe	Evaluation of CDM potential in industrial sector
UNIDO	Capacity Mobilization to Enable Industrial Projects under the CDM in Nigeria	~0.2	2000–2004	Nigeria	Evaluation of CDM potential in industrial sector
UNIDO	Capacity Mobilization to Enable Industrial Projects under the Clean Development Mechanism	~0.6	2001–2002	Indonesia Malaysia Philippines Thailand Vietnam	Evaluation of CDM potential in industrial sector
UNDP, UNCTAD, UNIDO, UN Framework Convention on Climate Change, World Business Council for Sustainable Development	Engaging the Private Sector in the Clean Development Mechanism	1.3	2000–2002	Brazil South Africa	CDM investment guides

Table 2—Continued

Agency	Program name	Budget (millions of euros) ^a	Duration	Host country	Comments
Multinational agencies					
Asian Development Bank	Opportunities for the Clean Development Mechanism in the Energy Sector	0.6	2002–2003	China	CDM guide, project identification note (PIN)
Compania Andina de Fomento	Diverse	0.5	2000–2003	Latin America	Workshops
EC ASEAN Energy Facility	CDM-ASEAN	0.4	2003–2005	ASEAN	Two regional workshops, background papers
EU Commission	Start-up CDM in ACP Countries (SUSAC)	1.2	2000–2002	South Africa Senegal Zambia	Workshops, small strategy studies, development of sustainability criteria
EU Commission	Methodologies for the Implementation of the Kyoto Flexible Mechanisms - CDM	0.3	2003	Latin America	Not specified
EU Synergy Program	Planning and Strategies for the Implementation of Clean Development Mechanism of the Kyoto Protocol in Latin America (PLANER)	1.1	2001–2003	Belize Costa Rica Guatemala Honduras Nicaragua Panama Ecuador Peru Colombia	Workshops, guidebook, eligibility criteria
EU Synergy Program	Analysis of Viability of the Clean Development Mechanism in the Mediterranean Area (AVINMAR)	0.6	2001–2002	Lebanon Morocco Palestine Tunisia Turkey	Workshops, project design document (PDD) support
EU Synergy Program	Clean Development Mechanism Capacity Building amongst the Private Sector in Africa (CAPSSA)	0.9	2002–2003	South Africa Senegal Zambia	Workshops, small strategy studies, development of sustainability criteria
EU Synergy Program	EU–China Partnership in CDM Implementation	0.5	2003–2004	China	Workshops
EU Synergy Program	Business Opportunities for CDM Project Development in the Mediterranean	0.5	2003–2005	Mediterranean	Workshops, PDD development

Table 2—Continued

Agency	Program name	Budget	Duration	Host country	Comments
--------	--------------	--------	----------	--------------	----------

		(millions of euros) ^a			
EU Synergy Program	Innovative Risk Coverage and Financing of Projects Related to the Implementation of CDM Projects Focusing on India and Morocco (IRIS)	0.4	2003–2004	India Morocco	Workshops
EU 5 th Framework Program	Scenarios and Strategies for the Implementation of the CDM of the Kyoto Protocol in the Mediterranean Region (CDMED)	0.4	2000–2001	Mediterranean	Scenarios, pre-feasibility study for wind project in Egypt, user guide
EU 5 th Framework Program	Promoting and Financing CDM Renewable Energy Projects in the Mediterranean Region (CDMEDI)	0.1	2002–2003	Mediterranean	User guide, workshops
European Bank for Reconstruction and Development	Bankable CDM Projects in the Caucasus/Central Asia	n.a.	2004–2006	Caucasus Central Asia	PDD support
World Bank	PCF Plus	0.7	2000–2003	Latin America	Workshops, PINs
National agencies					
Canadian International Development Agency (CIDA)	Diverse	n.a. but substantial	2000–2004	Argentina China India	Workshops, manuals, preparation of PINs and PDDs
Danish Development Co-operation (DANIDA)	CDM Programme	~0.8	2003–2004	Thailand South Africa	PDD support
German Development Co-operation (GTZ)	Climate Protection Program (CAPP)	1.5	2003–2006	India	Training courses, designated national authority (DNA) staff support, support of PDDs
Institute for Global Environmental Strategies (Japan)	Integrated Capacity Strengthening (ICS)	~4.0	2003–2006	Cambodia India Indonesia Philippines	Well-funded program aimed at expanding to other countries. Workshops outside the capital organized by different organizations. Focus on waste management, renewable energy, and small-scale projects.
UK		~0.5	2003–2004	India	Workshops

Table 2—Continued

Agency	Program name	Budget (millions)	Duration	Host country	Comments
--------	--------------	-------------------	----------	--------------	----------

		of euros) ^a			
UK	CDM Centres of Excellence	0.1	2004	India, South Africa	
USAID		~1.0	1998–2000	India	Workshops and US study tour with industry leaders
USAID	Diverse	0.8	2000–2003	Latin America	Workshops and baseline methodologies
Total budgeted by all programs		~23.0			

Sources: Project documentation, government sources, personal communications from project participants, and own estimates

^a€1 = US\$1.2

In early 2004, Canada started a novel type of collaboration with broker Natsource to support project design document (PDD) development in India. It made a budget of 0.3 million Canadian dollars [€23](0.2 million euros) available in the form of interest-free loans to be forgiven if the certified emissions reduction (CERs) credits generated by the projects are sold to Canadian buyers. The Energy and Resources Institute (TERI), a renowned Indian research institute, is supporting the developers in answering PDD-related questions.

A common feature of all these programs was the writing of studies and holding general CDM workshops. The most effective of these programs was the United States' (US) effort in India. It involved the secondment of two US experts to TERI who focused on India's industry associations, with which they did several CDM workshops. The apex of that program was the sending of a delegation of some 50 chief executive officers from Indian companies to Washington, DC, which was received by Vice President Al Gore at the White House. Afterwards, awareness of the CDM among Indian businesspeople was extremely high and it was instrumental in changing the negative attitude of the Indian bureaucracy towards the CDM. The only flaw was that the US program had spread the impression that CDM revenues would amount to billions of dollars that could be easily reaped. For the donors arriving in India after the signing of the Marrakesh Accords, this impression did not facilitate their work.

At the other end of the effectiveness scale were the efforts of the United Nations Industrial Development Organization (UNIDO). A lot of money was spent on studying CDM potential in the industrial sector in Africa and in countries belonging to the Association of Southeast Asian Nations (ASEAN) but without any follow-up. In Indonesia, the study was written by a notoriously unreliable consultant from the local coal industry.

After the Marrakesh Accords had been agreed and it became clear that many countries had problems in setting up their own designated national authorities (DNAs), the focus of donor activities shifted. From 2002 onwards, several focused on DNA building (see table 3).

The institution-building programs show that host country ministries often feel that the CDM could bring them new possibilities for collecting rents from the private sector. Therefore, inter-ministerial conflicts often arise over who will be in charge of the DNA and from whose desk(s) project proposals will be approved (Varming 2003). In this context, it is key that the local consultants helping in these processes understand the political games and manage things to minimize the possibilities for rent seeking. The German program in Indonesia benefited from just such a well-connected consultant; still it took more than a year to get the formal decision made about the setup of the DNA.

Table 3. CDM institution-building programs

Agency	Program name	Budget (millions of euros) ^a	Duration	Host country	Comments
UN agencies					
UNDP (UN Foundation, Italy, Norway)	Capacity Building for the Clean Development Mechanism in China	1.2	2003–2006	China	Institutions, development of three projects
UNDP/UNEP	RAB	~0.8	2003–2004	Morocco	Follow-up of earlier program, now centered on making approved DNA fully operational.
UNEP	CD4CDM	8.0	2002–2005	<ul style="list-style-type: none"> • North Africa and Middle East (Egypt, Jordan, Morocco) • Sub-Saharan Africa (Côte d'Ivoire, Mozambique, Uganda) • Asia (Cambodia, Philippines, Vietnam) • Latin America (Bolivia, Ecuador, Guatemala) 	Largest CDM institution-building program to date. Intense preparation of stakeholders on national and regional levels.
Multinational agencies					
EU Commission	Establishing the Institutional Capacity to Enable Small Scale CDM Projects in India	0.3	2003	India	
EU Commission	Building-up the Structures for Commercializing Renewable Energy in China through Policy Advice, Capacity Building and Identification of CDM Funds Availability for such Projects	0.3	2003	China	Linking different stakeholders
World Bank	CF Assist	n.a.	2003–	Not specified	Training modules for establishing DNAs, book on legal issues.
Table 3—Continued					
Agency	Program name	Budget (millions of euros) ^a	Duration	Host country	Comments
National agencies					
DANIDA	n.a.	~0.5	2003	Malaysia	Support for the Energy Secretariat of the DNA

GTZ	CAPP	~0.6	2002– 2006	Indonesia Mongolia Tunisia	Local consultant works with ministries and other stakeholders until a DNA is agreed.
Total budgeted by all programs		~12.0			

Source: Project documentation, government documentation, personal communications from project participants, and estimates.

^a€1 = US\$1.2

Many host countries do not understand the long-term institutional commitment necessary to develop a consistent CDM strategy. They hope that donor funds will pay for the operational costs of the DNA. Only rarely do they try to assess the level of costs involved. In Indonesia, the German program stressed the need for a calculation of the DNA budget, which came to US\$180,000 per year, and suggested a fee of 0.5 percent of expected CERs be levied from project proponents.

4. Funds

Engaging in the CDM is a risky business, as not only conventional project risks exist but also novel, emission reduction-related ones. Therefore, right from the start of the CDM, attempts were made to diversify project risks, and a number of funds have been created (see table 4).

4.1. The Prototype Carbon Fund and its successors at the World Bank

The World Bank planned to set up a fund for governments and private companies right after the adoption of the Kyoto Protocol. The Prototype Carbon Fund (PCF) was announced in 1998, formally set up in 1999, and closed for subscription by investors in 2000. So far, six governments and 17 companies have subscribed. The initial PCF volume of \$145 million was raised to \$180 million by increasing the shares of some of its participants (World Bank 2004b). By developing a procedure that builds on the sequence of Project Identification Note (PIN) → Project Concept Note (PCN) → Project Design Document (PDD) → Term Sheet → Emission Reduction Purchase Agreement (ERPA), the PCF became the model for most other CDM programs. It was instrumental in developing baseline methodologies and became a model for its transparency.

While the World Bank had initially stated that it would leave the carbon market once the private sector had really embraced it, the bank has entrenched itself with the creation of several new instruments. To promote small-scale projects with development benefits, it set up the Community Development Carbon Fund (CDCF), currently subscribed with \$50 million and having four government and ten private sector subscribers (World Bank 2004b).⁵ One initiative that has raised eyebrows in the community of non-governmental organizations (NGOs) is the BioCarbon Fund (\$30–50 million) that concentrates on carbon sink projects, including project types that are not eligible for the CDM under the current rules. On behalf of governments, the bank administers the Netherlands CDM Facility (\$120–160 million), which is to buy 21 million CERs. An option on 11 million CERs has also been concluded. The

5. All values taken from Sinha (2004).

Italian Carbon Fund shall contain \$15 million to \$80 million, and rumors persist that a Spanish Carbon Fund will see the light soon.

Table 4. List of CDM funds

Agency	Name	Target fund volume (millions of euros) ^a	Fund volume firmly committed as of early 2004	Funds committed to ERPAs as of early 2004
World Bank	PCF	150	150	140
World Bank	CDCF	100	30	—
World Bank	BioCF	40	25	—
World Bank	Netherlands CF	130	100	n.a.
World Bank	Italian CF	80	15	—
DBJ/JBIC		45	0	—
Govt. of Denmark	Danish CF	n.a.	7	—
KfW		50	8	—
Total		580	335	140

Source: World Bank 2004b, Sinha 2004, KfW 2003.

^a€1 = US\$1.2

4.2. Funds administered by government banks for public and private clients

Two CDM funds were planned in Japan for the 2003 fiscal year, but by spring 2004 it was announced that they would be merged into one. The Japanese Bank of Industrial Cooperation (JBIC) fund, under the Ministry of Foreign Affairs' supervision, aimed to get €24 million from the private sector and €4 million in government money. The Development Bank of Japan (DBJ) aimed for €21 million (PointCarbon 2003).

Denmark has recently asked Ecosecurities and Standard Bank London to administer a Danish Carbon Fund financed initially with €7 million. The fund does not finance carbon sink projects. The German bank for reconstruction and development, Kreditanstalt für Wiederaufbau (KfW), opened a fund for subscription in June 2003 with a target volume of €50 million (KfW 2003).

4.3. Private funds: Teething troubles

In parallel with the World Bank, the Union Bank of Switzerland (UBS) was developing a fund. Senior management, however, stopped the preparations when they were already at a fairly advanced stage. Only now are private banks looking again into this possibility. Many vehicles are in the preparation stage—some with high-flying announcements—but it remains to be seen which ones will actually fly. In the United Kingdom in early 2004, ICECAP, a London-based company, was launched under the sponsorship of Cumbria Energy, Investec Bank, and Less Carbon. It is a vehicle intending to purchase CERs for large industrial emitters and governments with a target level of 40 to 50 million CERs.

5. Government procurement

While the CDM was initially seen as a private sector instrument, it has increasingly become a means for governments to cover expected shortfalls in their Kyoto emissions budgets. Natsource (2003) sees

government demand for the CDM and joint implementation (JI) at 84 to 762 million tonnes of carbon dioxide equivalent in 2010, which would be from 45 to 73 percent of all purchases in greenhouse gas (GHG) markets. PointCarbon (2003) calculated committed government demand at 100 million CERs. The use of procurement programs could lead to higher prices for a number of reasons (Natsource 2003, 46). They offer sellers the advantage of knowing that the prospective buyer is committed to purchasing reductions (i.e., that the government is a “captive buyer”). They may set criteria for emissions reduction projects that are supplemental to the criteria established under the CDM (e.g., achievement of additional goals such as technology transfer, location of activity types, and specific sustainable development objectives, etc.). Finally, they create additional paperwork requirements for prospective sellers. These factors are likely to lead to higher-priced offers in procurement programs than in the market, all else being equal.

5.1. The Dutch program: Path diversification

Already in 1998, the Dutch government announced in its national climate policy plan that it would use the Kyoto mechanisms to cover 50 percent of the gap between business-as-usual emissions and the Kyoto target. It started to act quickly by allocating a budget of €680 million for buying 67 million CERs (Asuka 2003). The Dutch strategy was initially built on two pillars but was diversified later. The first pillar was the PCF; the second one was a tender program, the Certified Emission Reduction Unit Procurement Tender (CERUPT), which announced its first round of proposals in 2000. The selection procedure, however, proved so cumbersome that CERUPT, which was originally estimated to deliver 17 million CERs, was stopped after the first round. The government now chooses intermediaries to source CERs. Besides asking the World Bank to develop the Netherlands CDM facility at the International Finance Corporation (IFC), it contracted the Compania Andina de Fomento (CAF) and the Rabobank to develop a project pipeline. Each of these pipelines has a target volume of 10 million CERs (Sinha 2004). Moreover, bilateral carbon purchase agreements (BCPAs) are being negotiated; the Indonesian one is aiming for 5 million CERs. Existing non-binding memoranda of understanding (MOUs) between the Netherlands and CDM host countries include Colombia (25 million CERs), Costa Rica (30 million), El Salvador (5 million), Panama (20 million), Uruguay (5 million), Bolivia (10 million), Nicaragua (5 million), Guatemala, and Honduras (no target value for the last two countries).

5.2. The followers

The CDM procurement program, under the Swedish International Climate Investment Program (SICLIP-CDM), aims to assemble a portfolio of four to six CDM projects that are geographically spread out. The call for CDM projects was issued in May 2002, and five projects with a total CER estimate of two million have been selected.

Finland launched a CDM/JI tender in 2003. CDM projects were selected from 23 eligible project proposals, of which 12 came from India. Three projects originated from “open tendering” before the CDM tender (Hämekoski and Fagerholm 2004). Austria opened its tender in 2004. In the context of the National Allocation Plans, several European Union (EU) member state governments have quantified

their current needs estimates for CER and emission reduction units (ERU), and more are likely to follow (Betz et al. forthcoming).

Current budgets are clearly insufficient to cover the gaps (see table 5), and it remains to be seen whether this runs counter to the European Union Commission's allocation guidance (Lefevre 2004). Overall, the tendency to leniently allocate allowances to industrial emitters shifts demand from the private sector to government. Government demand, however, is likely to come in large installments and relatively late, and thus will have a chilling effect on the market.

Table 5. Government CDM procurement programs

Country	Administering agency	Committed budget (millions of euros)	CER and ERU need in NAP (in millions, 2008–2012)	Gap at current prices of €4/CER (millions of CERs)
Austria	Kommunalkredit	73 ^a	35	16.75
Belgium	n.a.	—	22	22
Denmark	DANIDA	130	18.5	—
Finland	Finnish Environment Institute	10	15	12.5
Ireland	n.a.	—	18.5	18.5
Italy	n.a.	—	57	57
Luxembourg	n.a.	—	15	15
Netherlands	VROM, diverse intermediaries	680	100	—
Portugal	n.a.	—	32.5	32.5
Spain	n.a.	—	100	100
Sweden	STEM	~8	0	—
EU totals			413.5	267.25

Source: National programs, Gilbert et al. 2004.

^aUntil 2007.

6. The EU linking directive: Harnessing the private sector

The European Union is a pioneer in the setting up of a domestic GHG trading scheme for its private sector.⁶ In 2003, the EU Emissions Trading Directive became law. Initially, the EU Commission was skeptical concerning the integration of the Kyoto mechanisms into the trading scheme. It stated that the priority should be on implementing trading domestically. Due to pressure from emitters, the initial Commission proposal of October 2001 included the wording that the “Commission believes that the eventual inclusion of credits is desirable.” It made very clear, however, that it feared lax international rules on the CDM and JI. A separate directive would need to be developed. The Council's position in late 2002 became clearer when it stated that “credits will be recognized subject to modalities.” The final text of the emissions trading directive was very positive: “Project-based mechanisms are important to...increasing the cost-effective functioning of the Community scheme” and the “use of the mechanisms should be supplemental to domestic action.” Article 30.3 refers to “provisions adopted by EP and Council which should apply in parallel with the Community scheme from 2005,” thus making

6. For a detailed, up-to-date history, see Lefevre (2004).

the timetable clear. Thereafter, the Commission embarked on drafting the “linking directive” at a speed rarely seen before. Its first unofficial draft, which was leaked in June 2003, contained the following features:

- the import of CERs (and ERUs) would be capped at 6 percent of allocated EU emissions permits (EU allowances)
- no CERs would be accepted before 2008
- no sinks CERs would be allowed
- hydro would be only allowed if consistent with the criteria of the World Commission on Dams

The environment directorate in the Commission thus continued in the spirit of seeing the CDM as a dangerous instrument. This is surely also due to the fact that the person drafting the directive came from an NGO background and had been fighting market mechanisms for many years.

Already within the Commission, however, voices arose that saw the CDM much more positively. Thus the official draft published in July 2003 looked very different. It discussed an import cap of 8 percent once imports surpass 6 percent of allocated EU allowances and said that hydro projects should take account of environmental and social impacts.

The Council position published in January 2004 strengthened the CDM even further. It deleted the reference to entry into force of the Kyoto Protocol, thus making the CDM independent of the fate of the protocol. This was a step of great significance. Moreover, it said that CERs should be accepted from 2005 and converted into EU allowances at 100 percent. As well, import restrictions and acceptance of sinks would be put in the competence of member states.

In an astonishing willingness to adopt the linking directive before the 2004 European Parliament elections, the EU Parliament did not ask for a reconciliation procedure but was willing to compromise on many issues. Thus it was possible to adopt the directive in parliament in late April 2004. The final text says that CERs can be used from January 2005 and that no common CER import limit will be set. Limits will be member state competence and thus are unlikely to be implemented, as no member state wants to jeopardize its competitiveness. Sinks are excluded until 2007; their inclusion for the Kyoto commitment period (2008–2012) will be reconsidered in 2006. Large hydro projects are to follow the rules of the World Commission on Dams.

The survival of the Kyoto mechanisms without the Kyoto Protocol coming into force is thus guaranteed, and the linking directive is the first large-scale incentive for private companies to participate in CDM projects. Unfortunately, the demand for CERs will be rather small, as the initial allocation of allowances under the EU scheme is likely to be generous.

7. Private sector initiatives

Japanese companies are so far the only ones that are actually investing in the CDM. In 2003, Chubu Power invested €4.3 million to acquire a 34 percent equity stake in the Thai AT Biopower project. The utility J-Power aims to both invest in CDM projects as well as to buy CERs on the market (Nakayama 2004). It has invested in the Yala rubber wood bioelectricity project in Thailand and negotiated CER

purchases with six South American project developers. The Japanese activities are remarkable inasmuch that there is no domestic incentive for the private sector and that it is unlikely that an emissions trading system or carbon tax will be introduced soon.

8. Conclusion

For several years, incentives for the private sector to invest in CDM projects have been completely lacking. International institutions and governments, however, have been very active in CDM capacity-building activities, having spent over €30 million on them to date. Since 1999, the World Bank has played a catalytic role with its carbon finance program to harness project proposals. Besides the bank, only a limited number of governments have been active in investing in funds and setting up procurement programs. Out in front is the Netherlands, which has opened a series of procurement channels; they are now being followed by several other European countries. In 2002 and 2003, approximately 70 million CERs were sold (Sinha 2004); the EU governments will demand at least 250 million CERs and ERUs, but committed budgets are only likely to procure about 100 million tonnes of emission credits. In contrast to earlier announcements that it would withdraw once the market had matured, the World Bank's program is expanding and is by far the largest actor in the CDM market. Depending on the national allocation plans of the EU member states, the linking directive can harness considerable private demand for CERs.

Acknowledgements

Part of this paper was presented as a background paper at the Skillshare Workshop on the CDM in the ASEAN Region in Jakarta, Indonesia, March 18–19, 2004. The author thanks the EC-ASEAN Energy Programme for related funding.

References

- Asuka, J. 2003. Experiences of Netherlands' ERUPT/CERUPT and implication on the designing of Japan's system. Mimeo. Tohoku: Tohoku University.
- Betz, R., W. Eichhammer, and J. Schleich. Forthcoming. Designing National Allocation Plans for EU emissions trading—A first analysis of the outcome. *Energy & Environment*
- Gilbert, A., J.-W. Bode, and D. Phylipsen. 2004. Analysis of the National Allocation Plans for the EU emissions trading scheme. Mimeo. London: Ecofys.
- Hämeikoski, K., and J. Fagerholm. 2004. Finnish CDM/JI Pilot Programme summary. Mimeo. Helsinki: Ministry of Environment.
- Kreditanstalt für Wiederaufbau (KfW). 2003. KfW Carbon Fund. Draft concept. Status: October 2003. Frankfurt: KfW.
- Lefevere, J. Forthcoming. The EU greenhouse gas emission allowance trading scheme. In *The Kyoto Protocol flexible mechanisms: Implementation and evolution within Europe and worldwide*, ed. F. Yamin. London: Earthscan.
- Michaelowa, A. 1996. Incentive aspects of Joint Implementation of greenhouse gas reduction. *Mitigation and Adaptation Strategies for Global Change* 1 (1): 95–108.

- . 2002. The AIJ pilot phase as laboratory for CDM and JI. *International Journal of Global Environmental Issues* 2 (3-4): 267–280.
- Nakayama, S. 2004. CDM activities in private sector: J-POWER's experience. Presentation at the South Asian Forum on the Clean Development Mechanism, February 3, 2004, at New Delhi.
- Natsource. 2003. Governments as participants in international markets for greenhouse gas commodities. New York: Natsource.
- PointCarbon. 2003. Annex I Parties' current and potential CER demand. Oslo: PointCarbon.
- Sinha, C. S. 2004. State and trends of the carbon market 2003. Presentation at the South Asian Forum on the Clean Development Mechanism, February 2, 2004, at New Delhi.
- Varming, S. 2004. Danish CDM policy and the implementation in Asia. Presentation at the Second ASEF Roundtable: Reinforcing Asia-Europe Cooperation on Climate Change, March 25–26, 2004, at Jeju, South Korea.
- World Bank. 2004a. *Carbon finance at the World Bank*. Washington, DC: World Bank.
- . 2004b. *NSS lessons learned—Program features*. Washington, DC: World Bank.

Page: 2

[ed21] This spelling confirmed online on the UNFCCC Web site. The spelling *Marrakech* is found in French documents and the like. This paper was edited for US spelling, as requested by IGES.

Page: 4

[ed22] Aki, please have the printer be especially careful here with the page breaks in tables 2 and 3. MS Word jumps now and then. Right now, it's set up correctly. Just be aware.

Page: 7

[ed23] The Canadian dollar amount was re-inserted because the funds come from Canada.