

**Overview of the general conditions and timeframes in the flexible
Kyoto mechanisms:
Clean Development Mechanism (CDM),
Joint Implementation,
and Emission Trading**

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Status of the Kyoto Protocol

The text of the Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was adopted at the third session of the Conference of the Parties (COP-3) to the UNFCCC in Kyoto, Japan, on 11 December 1997. The Protocol entered into force the 16th February 2005, on the 90th day after the date when two conditions were fulfilled:

- 55 countries had ratified the Protocol.
- Annex I countries (industrialised countries), which accounted in total for at least 55 % of the total CO₂ emission from Annex I countries in 1990, had ratified.

Now when the Kyoto Protocol has entered into force the COP of the UNFCCC will also serve as the formal Meeting of the Parties (MOP) for the Kyoto Protocol. This is referred to as the COP/MOP or CMP. MOP1 will be held in Montreal, Canada in December 2005.

The three mechanisms

The Protocol establishes three flexible mechanisms designed to help industrialized countries (Annex I Parties) reduce the costs of meeting their emission targets in the first commitment period 2008-2012 by achieving emission reductions at lower costs in other countries than they could domestically:

- *International Emission Trading* permits countries to transfer parts of their 'allowed emissions' ("assigned amount units" (AAUs)).
- *Joint Implementation (JI)* allows countries to claim credit for emission reductions that arise from investment in other industrialized countries, which result in a transfer of equivalent "emission reduction units" (ERUs) between the countries.
- The *Clean Development Mechanism (CDM)* allows emission-reduction projects that assist in creating sustainable development in developing countries to generate "certified emission reductions" (CERs) for use by the investor.

The mechanisms give countries (Parties) and private or public sector companies, authorized by a Party to participate, the opportunity to reduce emissions anywhere in the world - wherever the cost is lowest - and they can then count these reductions towards their own targets.

As described in the following there are actually five different mechanisms, since Joint Implementation is split into Track 1 and Track 2, and since special rules exist for small-scale CDM projects. The terms mentioned in table 1 are explained in the following text, beginning with a section on the timeframes for the three flexible Kyoto mechanisms followed by a section about each of the mechanisms.

Table 1: Types of flexible mechanisms

	Executive body	Validator/Verifier	Name of units
Emission Trading	Compliance Committee		AAUs
Track 1 Joint Implementation	National Government	National Government	ERUs
Track 2 Joint Implementation	Supervisory Committee	Independent Entities	ERUs
Normal CDM projects	Executive Board	Operational Entities	CERs
Small-scale CDM projects	Executive Board	Operational Entities	CERs

Timeframes for the three flexible Kyoto mechanisms

At the end of the first commitment period a calculation of the compliance assessment will be made for Denmark and other Annex-I countries with an emission target in the Kyoto Protocol. This is illustrated in figure 1.

The right hand side of figure 1 illustrates that the emission of CO₂-equivalents for the five years in the first commitment period 2008-2012 will be added and compared with the allowed emission on the left hand side of figure 1.

The allowed emission is calculated in the following way: First the Assigned Amount (AAUs) is calculated by multiplying the 1990 emission with the reduction percentage for the country written in Annex B of the Kyoto Protocol. For all EU countries this is 8%, but according to the burden-sharing agreement in EU it is 21% for Denmark. Figure 1 shows that the country can add the CO₂ sequestered (absorbed in the biomass) in the country in the first commitment period. For Denmark the amount of CO₂ sequestered in biomass is small. It consists mainly of the 0,283 Mt CO₂ (times 5) absorbed in new forest planted after 1. January 1990 and maybe the 0.183 Mt CO₂ (times 5) absorbed in forest already existing in 1990 (this is the ceiling for forest management in the Marrakesh Accord).

Figure 1 shows that finally CERs and ERUs obtained from CDM and JI projects are added together with the traded AAUs. This illustrates how the obtained CERs and ERUs are used.

As described later, the ERUs and CERs are first obtained after the emission reductions have taken place and a certification of this has been made.

There are several differences between the three flexible mechanisms concerning the timing of the acquisition of the units that can be used for the first commitment period:

- Emission trading can first be done for years starting from 2008.
- JI projects, which started after 1st January 2000, may be eligible as JI projects. However, ERUs can only be issued for the emission reductions made after 1st of January 2008.
- Certified emission reductions (CERs) obtained during the period from the year 2000 up to the end of the first commitment period in 2012 can be used to assist in achieving compliance in the first commitment period

Table 2 summarizes these differences between the three Kyoto mechanisms and shows that the only way for Denmark to gain credits for emission reductions obtained before 2008 is to implement CDM projects.

Figure 1: Compliance of a country with an emission target in the first commitment period 2008-2012

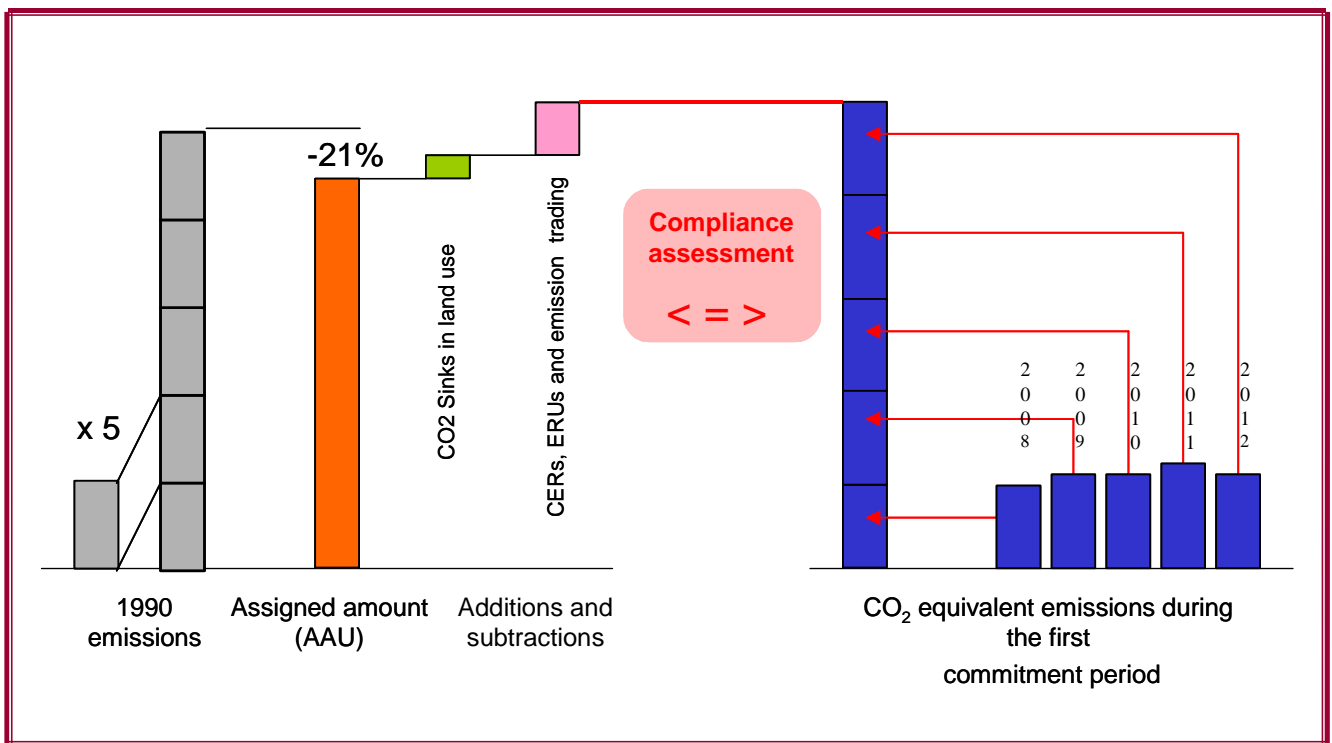


Table 2: Timeframes for the three mechanisms

Name of units	When can units be obtained for 1st commitment period
AAUs	2008-2012
ERUs	2008-2012
CERs	2000-2012

International Emission Trading is covered by article 17 of the Kyoto Protocol.

An Annex-I Party with an emission target in the Protocol can sell and/or buy AAUs, ERUs or CERs from another emission capped Annex-I Party if its eligibility has not been suspended (see below). Emission trading can first be done for years starting from 2008.

A Party can bank AAUs, ERUs and CERs for use in later 5-year commitment periods. However, not all ERUs and CERs can be banked, only up to 2.5% of the emission target for each of them.

In order to avoid that a country oversells its emission rights, each Annex-I Party shall maintain a "commitment period reserve", which must not drop below 90% of the emission target. This reserve consists of the holdings of AAUs, ERUs and CERs. If the reserve is too low the country are not allowed to sell emission rights.

The Kyoto Protocol also provides for penalty system for countries that fail to comply with their emission-reduction commitments. This penalty system was subsequently fleshed out in the Bonn Agreement, which provided in the following:

- A Compliance Committee with facilitative and enforcement branches will be elected at the first COP/MOP
- Penalties for failing to meet an emissions target, includes:
 - A country must make up its shortfall plus 30% in the next commitment period
 - Suspension of eligibility to trade emission credits (including ERUs and CERs)

In COP-7 at Marrakesh, member countries failed to come to an agreement on whether the consequences for non-compliance should be legally binding. Countries deferred the decision on the legal issue until the first meeting of Kyoto parties following the treaty's entry into force.

Joint Implementation (JI) is covered by article 6 of the Kyoto Protocol.

Projects in another Annex-I country, which started after 1st January 2000, may be eligible as JI projects. However, ERUs can only be issued for the emission reductions made after 1st of January 2008.

A Supervisory Committee (SC) will be the executive body for JI. However, the SC will first be elected at the first COP/MOP. Therefore no detailed rules for the JI projects exist at the moment.

When the SC start operating it will accredit Independent Entities (IEs) who will validate/verify/certify that JI projects meets the eligibility requirements under Track 2. It will also design the rules and procedures for JI, building on the CDM procedures mentioned below.

According to the decisions at COP-7 there are two kinds of JI projects (the so-called twin track):

- Track 1 Cover projects with a host Party that meets all the six JI eligibility requirements listed below. The host country can validate/verify/certify emission reductions in a track 1 JI project applying its own procedures and issue ERUs without recourse to the Supervisory Committee.
- Track 2: Cover projects with a host Party that only meets the first three JI eligibility requirements listed below. Here the procedures are determined by the SC (and will be similar to the CDM procedures). Emission reductions in the JI project must be validated/verified/certified by Independent Entities.

JI country eligibility requirements:

1. It is an Annex-I Party and a Party to the Kyoto Protocol;
2. Its assigned amount has been calculated and recorded;
3. It has in place a national registry;
4. It has in place a national system for estimation of greenhouse gas emissions;
5. It has submitted annually a GHG inventory report;
6. It submits the supplementary information on assigned amounts.

The **Clean Development Mechanism (CDM)** is covered by article 12 of the Kyoto Protocol.

Certified emission reductions (CERs) obtained during the period from the year 2000 up to the end of the first commitment period can be used to assist in achieving compliance in the first commitment period. However, existing projects started after 1 January 2000 and before the

adoption of the Marrakesh Accord at COP-7 (10 November 2001), can only be eligible for the first commitment period, if they are submitted for registration before 31 December 2005.

The Executive Board (EB) is the executive body for the CDM. Since COP-7, the EB has worked to facilitate the start-up of the CDM. The accreditation procedure for the Operational Entities has been launched. The template for the CDM Project Design Document (PDD), which the project participants (investors from developed countries and the host country) must use to get a CDM project approved, is available on the Internet and the EB is working on the simplified modalities and procedures for small-scale CDM project activities.

The first CDM projects were registered in November 2004.

The present outline of the PDD is shown in Table 3. In section C of the PDD the projects participants must decide which of the two possibilities for the *crediting period* they prefer:

- 1) a period of maximum 10 years (30 years for forestry), or
- 2) a period of maximum 7 years with the potential for renewal at most for two additional 7 year periods (a maximum of 21 years), (3*7 years for forestry).

Table 3: Required content of a Project Design Document (PDD)

A.	General description of project activity
B.	Application of a baseline methodology
C.	Duration of the project activity/Crediting period
D.	Application of a monitoring methodology and plan
E.	Calculation of GHG emission by sources
F.	Environmental impacts
G.	Stakeholders' Comments
Annex 1.	Contact information on participants in the project activity
Annex 2.	Information regarding public funding
Annex 3.	Table: Baseline data

The PDD must be validated by an Operational Entity, which has been accredited by the EB. This Operational Entity will then send the PDD to the EB for registration. The PDD must be sent together with a confirmation from the host country that the project activity assists it in achieving sustainable development and that it agrees to participate in the project.

The CDM project is then monitored by the project participants until the end of the 7 or 10 year crediting period. Finally another Operational Entity is chosen to verify the emission reductions. This OE will then send a letter of certification to the EB. The EB must issue the CERs to the project partners within 15 days after the receipt of this certification report. The verification period can be chosen to be shorter than the certification period, but due to the high cost for validation and verification this option will probably not be used normally.

It must be ensured that public funding for CDM projects from parties in Annex I is not to result in the diversion of official development assistance.

In order to participate in the CDM a host country must ratify the Kyoto Protocol and establish a Designated National Authority, which will have the responsibility to decide whether a CDM project activity assists it in achieving sustainable development and whether the country agrees to participate in the project.

Small-Scale CDM projects

In order to reduce the transaction costs for small CDM projects a small-scale CDM has been introduced. Three types of small-scale CDM projects are possible. For the first two there is a maximum size of the activity that reduces emissions, but for the third type there is a maximum on the total emission from the project at the end of the project activity.

The three types of small-scale CDM projects are:

- (i) Renewable energy project activities with a maximum output capacity equivalent of up to 15 MW;
- (ii) Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to 15 GWh per year; or
- (iii) Other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnes of carbon dioxide equivalent annually.

Methodologies for small-scale afforestation/reforestation projects are being elaborated, their annual absorption must be less than 8 ktCO₂.

A simplified PDD has been developed for these small-scale CDM projects and simplified procedures for baselines and monitoring has been developed.

General issues

For both JI and CDM projects an agreement on the sharing of the ERUs/CERs has to be made with the host country.

Parties included in Annex-I are to refrain from using emission reduction unit from nuclear facilities in JI and CDM projects.