

CDM in



Ministry of the Environment



CHARTS

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This document aims to give a comprehensive and easy-to-understand description of the Clean Development Mechanism (CDM). It should be noted that this document does not replicate in the exact manner all the texts agreed upon in the international negotiations. Also, there are issues yet to be settled in the international negotiations regarding detailed interpretations and processes. As for the details and exact expressions in the agreed texts, please refer to the respective documents available on the website of the United Nations Framework Convention on Climate Change <<http://unfccc.int/>>.

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For any queries relating to this document, please contact <cdm-info@iges.or.jp>. Other CDM-related publications can be downloaded from <<http://www.iges.or.jp/en/cdm/report.html>>.

Abbreviations and Acronyms

| | |
|---------|---|
| AAU | Assigned Amount Unit |
| ACM | Approved Consolidated Methodology |
| AE | Applicant Entity |
| AM | Approved Methodology |
| AMS | Approved small-scales methodologies |
| A/R CDM | Afforestation and Reforestation Project Activities under the Clean Development Mechanism |
| AR | Afforestation and Reforestation |
| CCS | Carbon dioxide Capture and Storage |
| CDM | Clean Development Mechanism |
| CDM-AP | CDM Accreditation Panel |
| CEF | Carbon Emission Factor |
| CER | Certified Emission Reduction |
| COP | Conference of the Parties (to the UNFCCC) |
| COP/MOP | the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol |
| CPA | CDM programme activity |
| CPR | Commitment Period Reserve |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| EB | CDM Executive Board |
| EIT | Economies in Transition |
| ER | Emission Reduction |
| ERT | Expert Review Team |
| ERU | Emission Reduction Unit |
| GHG | Greenhouse Gas |
| GWP | Global Warming Potential |
| HFCs | Hydrofluorocarbons |
| IET | International emissions trading under the Kyoto Protocol |
| IPCC | Intergovernmental Panel on Climate Change |
| ITL | International Transaction Log |
| JI | Joint Implementation |

| | |
|-----------------|--|
| KP | Kyoto Protocol |
| LULUCF | Land Use, Land-Use Change and Forestry |
| MP | Methodologies Panel |
| NM | New Methodology |
| OE | Operational Entity |
| Party | Country or regional integration organization which has ratified the KP, unless otherwise specified |
| PDD | Project Design Document |
| PFCs | Perfluorocarbons |
| PoA | Programme of Activities |
| PP | Project Participant |
| RMU | Removal Unit |
| SAR | (the IPCC) 2nd Assessment Report |
| SBI | Subsidiary Body for Implementation |
| SBSTA | Subsidiary Body for Scientific and Technological Advice |
| SF ₆ | Sulfur Hexafluoride |
| SOP | Share of Proceeds |
| SSC | Small Scale CDM |
| SSC-WG | Working group for small-scale CDM project activities |
| UNFCCC | United Nations Framework Convention on Climate Change |

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Glossary

Examples of abbreviated titles used in this document and corresponding formal document symbols and titles

| <i>Examples of abbreviated titles used in this charts, shown in []</i> | <i>Corresponding formal document symbols and titles</i> |
|--|---|
| KP Art.2 para1(a) | The Kyoto Protocol , Article2 , paragraph1(a) |
| CP/2001/13/Ad2, p1 para2(a) | FCCC/CP/2001/13/Add.2 , page 1 paragraph 2(a) |
| CMP/2005/8/Ad1, p1 para2(a) | FCCC/KP/CMP/2005/8/Add.1 , page 1 paragraph 2(a) |
| EB01 Rep, para1(a) | Executive Board of the Clean Development Mechanism , 1st Meeting Report , paragraph 1(a) |
| EB01 Anx1, para1(a) | Executive Board of the Clean Development Mechanism , Annex 1 to the 1st Meeting Report , paragraph 1(a) |
| PDD GL ver6.2, p1 | Guidelines for Completing the Project Design Document (CDM- PDD), and the Proposed New Baseline and Monitoring Methodologies (CDM-NM) Version 6.2 , page 1 (Ver6.2 was published on 19 December 2006) |
| SSC GL ver5, p1 | Guidelines for Completing CDM- SSC -PDD, F-CDM-SSC-Subm and F-CDM-SSC-BUNDLE, Version 05 , page 1 (Ver5 was published on 14 September 2007) |
| Glos ver3, p1 | Glossary of CDM terms Version 03 , page 1 (Ver3 was published on 30 November 2007) |
| Anx stands for Annex , Apx for Appendix , Att for Attachment , and Ann for Annotation . | |
| CDM M&P means CDM Modalities and Procedures (Annex to Decision 17/CP.7) (FCCC/CP/2001/13/Add.2, p26-41) | |
| CDM A/R M&P means Modalities and Procedures for Afforestation and Reforestation project activities under the CDM (Annex to Decision 19/CP.9) (FCCC/CP/2003/6/Add.2, p16-27) | |

1. The Kyoto Protocol

- ◆ The Kyoto Protocol was adopted at the 3rd session of the Conference of the Parties (COP3) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Kyoto, Japan, in December 1997.
- ◆ The Protocol defines quantified greenhouse gas (GHG) emissions reduction targets for Annex I Parties. [KP Art.3 para1]

GHGs defined by the Protocol are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), HFCs, PFCs, and SF₆. [KP AnxA]

Annex I Parties means those listed in Annex I of the UNFCCC. They are developed countries including Economies in Transitions, e.g. Russia and Eastern Europe.

Annex I Parties have different GHG emission ceilings for the 5-year period of 2008-2012 (1st commitment period).

- ☞ Emission ceiling which is called 'assigned amounts' for each Party is calculated as follows.
"The base-year emissions" x "emission reduction target" x five [KP Art.3 para7]
- ☞ The base-year emissions are basically a Party's aggregate GHG emissions in 1990 (whereas, countries may use 1995 as its base year for HFCs, PFCs, and SF₆). [KP Art.3 para1&8]

- ◆ The Protocol introduces 3 market mechanisms, namely the Kyoto Mechanisms. Annex I Parties would be able to achieve their emission reduction targets cost-effectively, by using these mechanisms.

Joint Implementation (JI)
<Article 6 of the Protocol>

Clean Development Mechanism (CDM)
<Article 12 of the Protocol>

International Emissions Trading
<Article 17 of the Protocol>

- ◆ Besides Parties, private firms may use the Kyoto Mechanisms. [CMP/2005/8/Ad2, p7 para29][CMP/2005/8/Ad1, p13 para33][CMP/2005/8/Ad2, p19 para5]
☞ Provided the Parties meet eligibility requirements for using the Kyoto Mechanisms.

BOX: Entry into force of the Kyoto Protocol

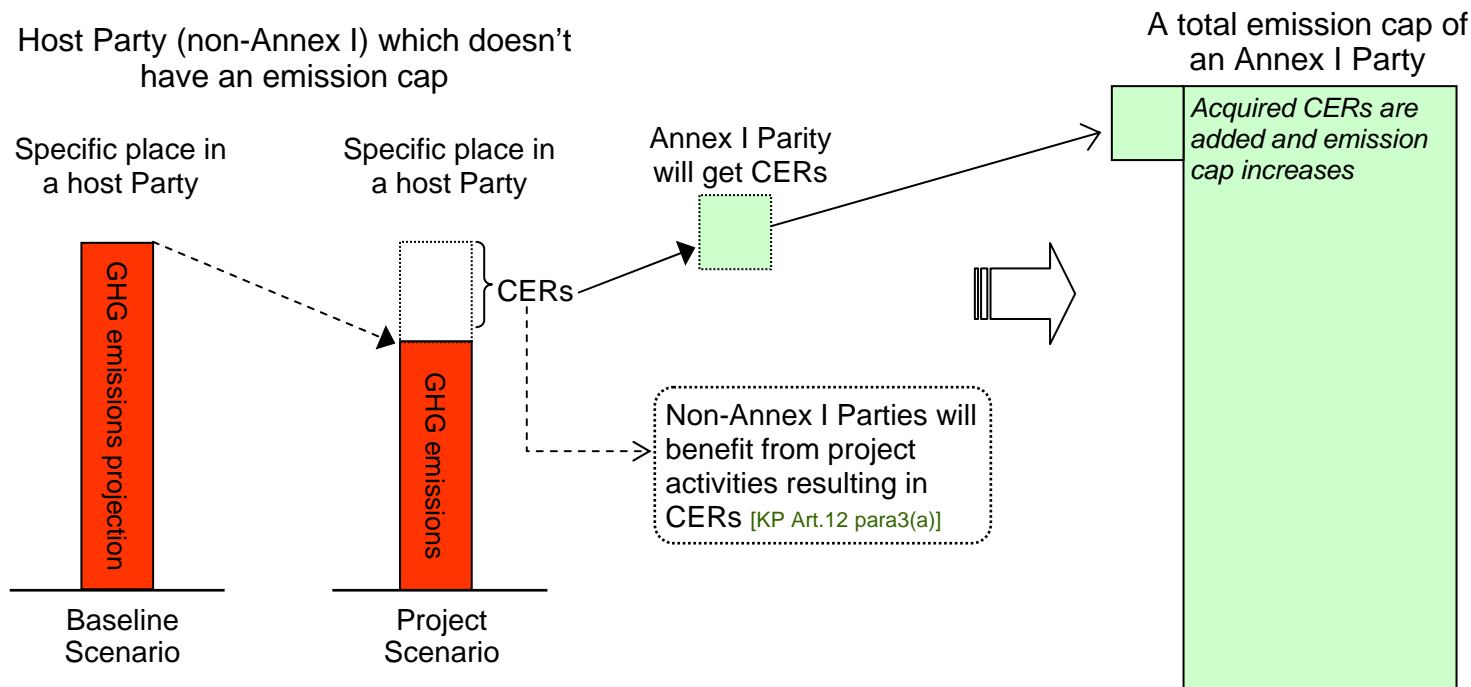
The Kyoto Protocol shall enter into force on the 90th day after the date on which not less than 55 Parties to the UNFCCC, incorporating Annex I Parties which accounted in total for at least 55% of the total CO₂ emissions for 1990 of the Annex I Parties, have deposited their instruments of ratification, acceptance, approval or accession. [KP Art.25 para1]

- ☞ As of 13 May 2008, 181 countries and one regional economic integration organization (the EEC) have deposited instruments of ratifications, accessions, approvals or acceptances.
- ☞ 63.7% of the total CO₂ emissions for 1990 of the Annex I Parties have ratified the Protocol.
⇒ The Protocol entered into force on 16 February 2005.

2. The Kyoto Mechanisms

2-1. The Clean Development Mechanism (CDM)

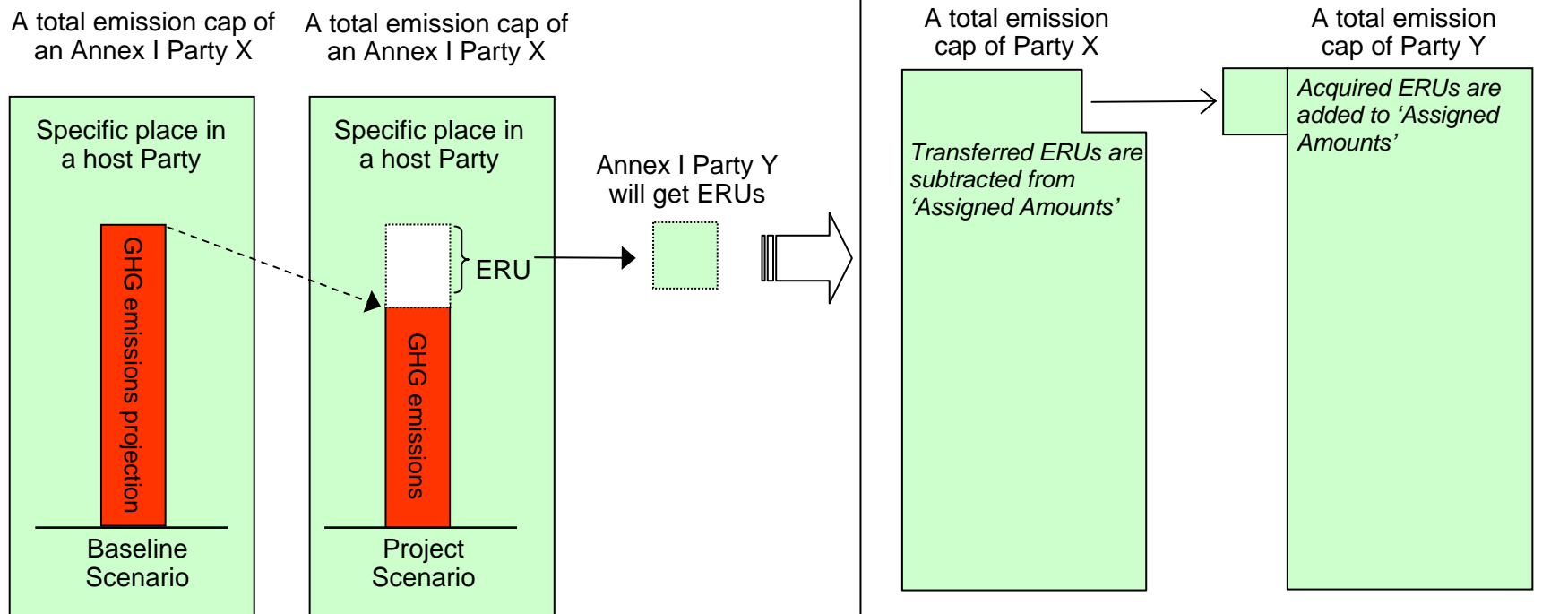
- ◆ Annex I Parties which have ceilings for GHG emissions (emission caps), assist non-Annex I Parties which don't have emission caps, to implement project activities to reduce GHG emissions (or remove by sinks), and credits will be issued based on emission reductions (or removals by sinks) achieved by the project activities.
 - ☞ A Party where CDM project is implemented, is called a host Party.
 - ☞ The credit from the CDM is called certified emission reduction (CER). [CMP/2005/8/Ad1, p7 para1(b)]
 - ☞ Reductions in emissions shall be additional to any that would occur in the absence of the certified project activity. [KP Art.12 para5(c)]
- ◆ Annex I Parties can use CERs to contribute to compliance of their quantified GHG emissions reduction targets of the Kyoto Protocol. [KP Art.12 para3(b)]
 - ☞ As a result, the amount of emission cap of Annex I Parties will increase.
- ◆ The CDM will issue CERs before the 1st commitment period.
 - ☞ CERs issued based on activities during the period from the year 2000 up to 2012 can be used in achieving compliance of Annex I Parties in the 1st commitment period. [KP Art.12 para10]



2-2. Joint Implementation (JI)

- ◆ Annex I Parties which have ceilings for GHG emissions (emission caps), assist other Annex I Parties to implement project activities to reduce GHG emissions (or remove by sinks), and credits will be issued based on amount of emission reductions (or removals by sinks) achieved by the project activities.
 - ☞ A Party where JI project is implemented, is called a host Party.
 - ☞ The credit from the JI is called emission reduction unit (ERU). [CMP/2005/8/Ad1, p7 para1(a)]
 - ☞ Any such project shall provide a GHG emission reductions, or removals by sinks, that is additional to any that would otherwise occur. [KP Art.6 para1(b)]
- ◆ Annex I Parties can use ERUs to contribute to compliance of their quantified GHG emissions reduction targets of the Kyoto Protocol. [KP Art.6 para1]
 - ☞ The total amount of emission cap of Annex I Parties will not change, because JI is credits transfer between the Parties both of which have emission caps.
- ◆ ERUs will be issued only after 2008. [CMP/2005/8/Ad2, p2 para5]

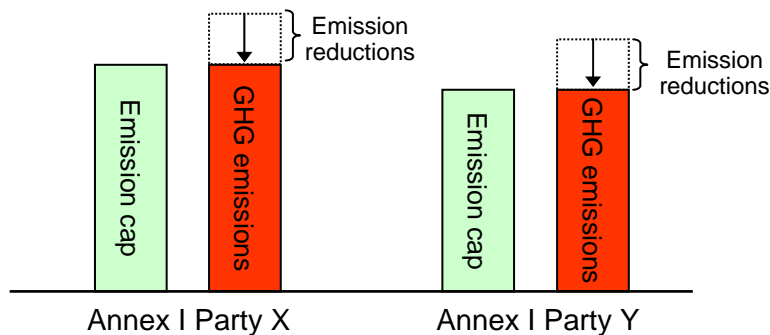
The total amount of emission cap of Annex I Parties is same



2-3. International Emissions Trading (IET)

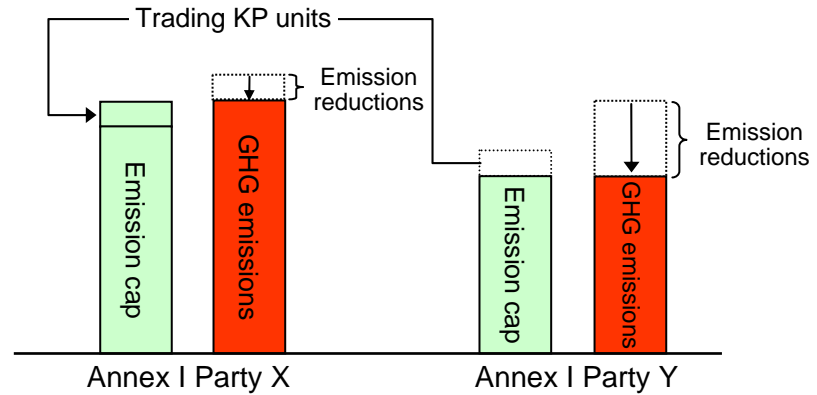
- ◆ International Emissions Trading is to trade Kyoto Protocol units (KP units) including part of assigned amounts, CERs, ERUs and etc, between Annex I Parties.
 - ☞ The total amount of emission cap of Annex I Parties will not change.
 - ☞ Only Annex B Parties of the Kyoto Protocol can participate International Emissions Trading.
 - ☞ Minimum trading unit is 1t-CO₂ equivalent.
- ◆ Through market mechanism, International Emissions Trading can decrease total cost of Annex I Parties to achieve their collective emission reduction targets.

Without International Emissions Trading



| | Party X | Party Y | Total |
|-------------------------|---------|---------|--------------|
| Before ET: Emission cap | 10 | 8 | 18 |
| Trading a KP unit | - | - | - |
| After ET: Emission cap | 10 | 8 | 18 |
| GHG emissions | 12 | 10 | 22 |
| Necessary reduction | 2 | 2 | 4 |
| Unit cost of reduction | \$200 | \$100 | - |
| Total cost of reduction | \$400 | \$200 | \$600 |
| Trading cost | - | - | - |
| Total compliance cost | \$400 | \$200 | \$600 |

With International Emissions Trading



| | Party X | Party Y | Total |
|-------------------------|---------|---------|--------------|
| Before ET: Emission cap | 10 | 8 | 18 |
| Trading a KP units | 1 | -1 | 0 |
| After ET: Emission cap | 11 | 7 | 18 |
| GHG emissions | 12 | 10 | 22 |
| Necessary reduction | 1 | 3 | 4 |
| Unit cost of reduction | \$200 | \$100 | - |
| Total cost of reduction | \$200 | \$300 | \$500 |
| Trading cost | 150 | -150 | 0 |
| Total compliance cost | \$350 | \$150 | \$500 |

Note: Party Y sold a KP unit to Party X at \$150.

◆ Annex I Parties can trade following types of Kyoto Protocol units.

☞ **Assigned amount unit (AAU)** [CMP/2005/8/Ad1, p7 para1(c)]

⇒ Total amount of AAUs of an Annex I Party is calculated from its base year emissions and emission reduction target

☞ **Removal unit (RMU)** [CMP/2005/8/Ad1, p7 para1(d)]

⇒ Total amount of RMU of an Annex I Party is calculated from net removal of GHGs by afforestation and reforestation (A/R) activities [CMP/2005/8/Ad3, p5 para1(a)-(d)] and additional activities related to GHG removals by sinks [CMP/2005/8/Ad3, p5 para1(e)-(h)]

☞ **Emission reduction unit (ERU)** from JI

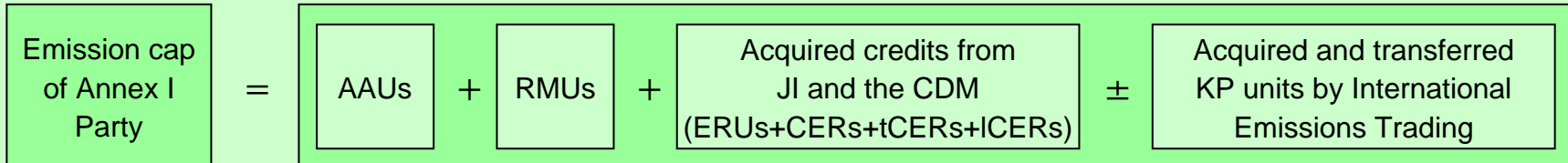
☞ **Certified emission reduction (CER)** from the CDM

☞ **Temporary CER (tCER)** and **long-term CER (ICER)**

⇒ tCER and ICER are issued from afforestation and reforestation (A/R) CDM project activities. [CMP/2005/8/Ad1, p62 para1(g)-(h)]

BOX: Compliance assessment

GHG emission cap of an Annex I Party at the end of the 1st commitment period is as follows.



Carry-over

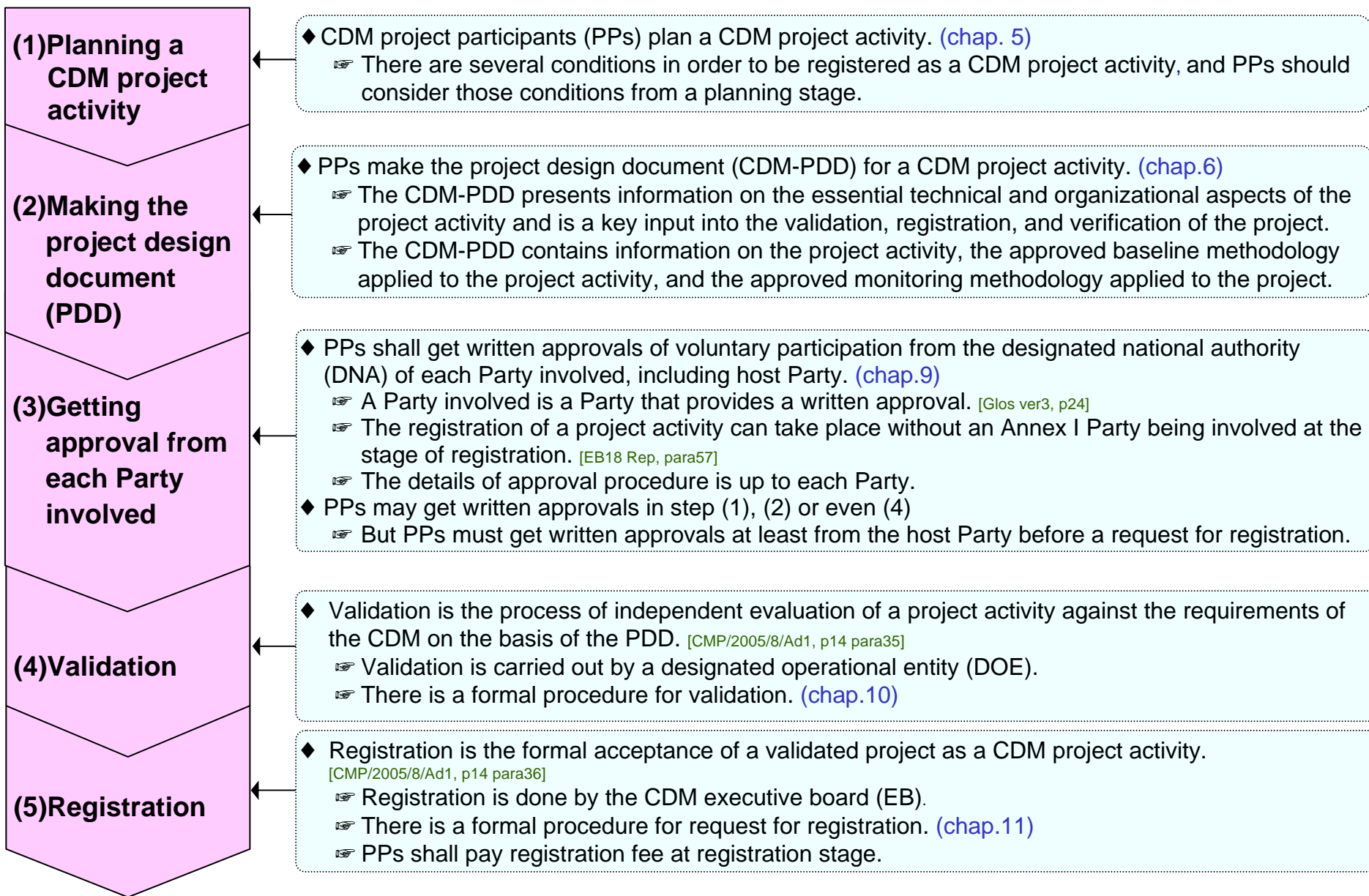
If an emission cap of an Annex I Party is more than its GHG emissions during the 1st commitment period, the surplus can be carried over to the subsequent commitment period. [CMP/2005/8/Ad2, p27 para15] [CMP/2005/8/Ad2, p30 para36]

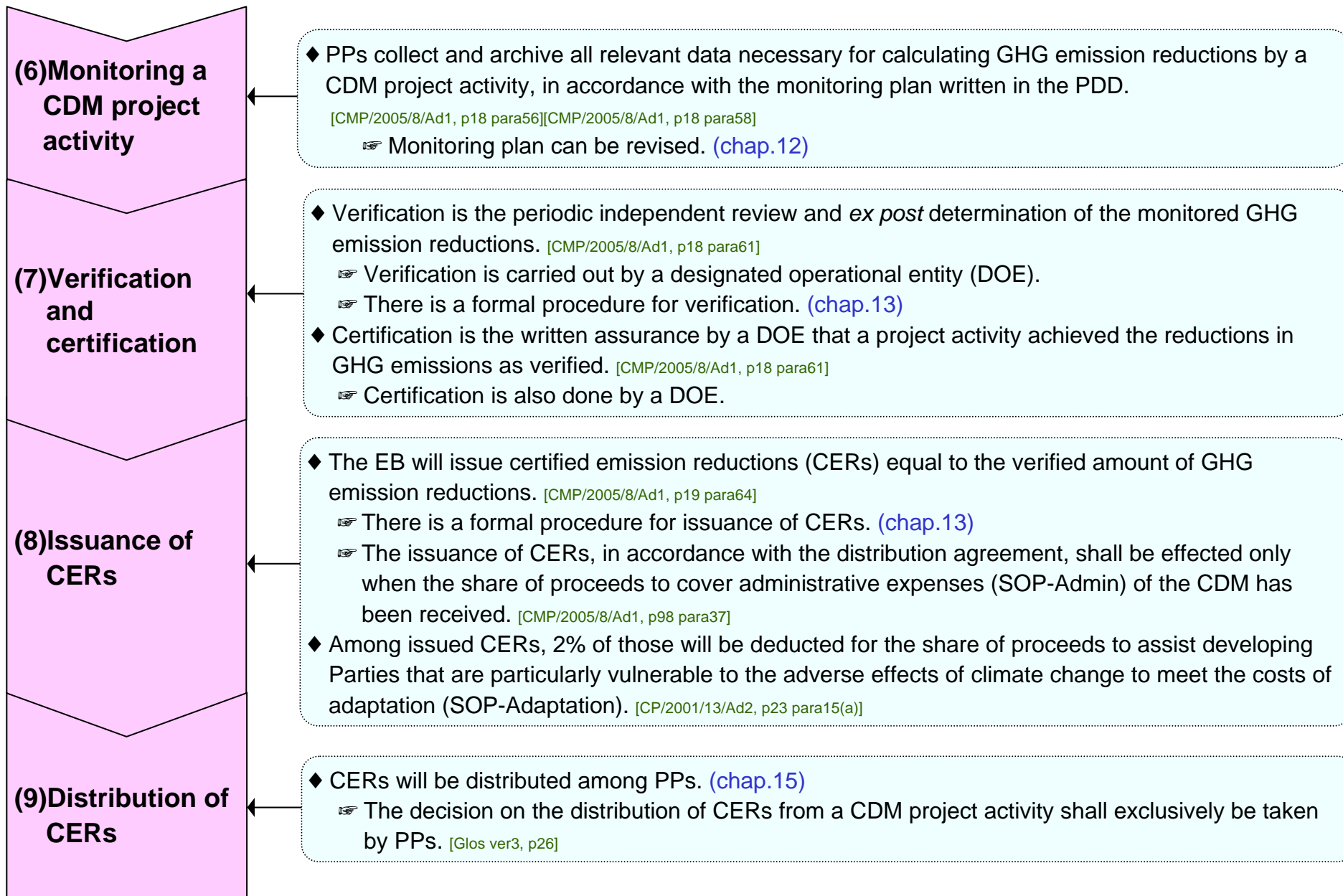
- ☞ The end of additional period is the 100th day after the date set by the COP/MOP. [CMP/2005/8/Ad3, p101 XIII]
- ☞ There are several restrictions for carry-over depending on the type of KP units.

Consequence of non compliance

- ◆ If GHG emissions during the 1st commitment period of an Annex I Party is more than its emission cap, the Annex I Party will be deemed to be non compliance to the Kyoto Protocol.
- ◆ The Party not in compliance shall be applied the following consequences. [CMP/2005/8/Ad3, p102 para5]
 - ☞ Deduction from the Party's assigned amount for the 2nd commitment period of a number of tonnes equal to 1.3 times the amount in tonnes of excess emissions;
 - ☞ Development of a compliance action plan; and
 - ☞ Suspension of the eligibility to make transfers under Article 17 of the Protocol until the Party is reinstated.

3. CDM project cycle





4. CDM-related bodies

4-1. COP/MOP

The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) [CMP/2005/8/Ad1, p7 para2-4]:

- ☞ Has authority over and provides guidance to the CDM;
- ☞ Decides on the recommendations made by the EB on its rules of procedure, and in accordance with provisions of decision 17/CP.7 [CP/2001/13/Ad2 p20-49], the present annex and relevant decisions of the COP/MOP;
- ☞ Decides on the designation of operational entities (OEs) accredited by the EB;
- ☞ Reviews annual reports of the EB;
- ☞ Reviews the regional and subregional distribution of designated operational entities (DOEs) and CDM project activities;
- ☞ Assists in arranging funding of CDM project activities, as necessary.

BOX: Revision of the modalities and procedures for the CDM [CMP/2005/8/Ad1, p6 para4]

- ☞ Revision of the modalities and procedures for the CDM shall be decided in accordance with the rules of procedure of the COP/MOP.
 - ⇒ The 1st review shall be carried out no later than 1 year after the end of the 1st commitment period
 - ⇒ The 1st review shall be carried out based on recommendations by the EB and by the SBI drawing on technical advice from the SBSTA, as needed.
 - ⇒ Further reviews shall be carried out periodically thereafter.
- ☞ Any revision of the decision shall not affect clean development mechanism project activities already registered.

4-2. Designated National Authority (DNA)

- ◆ Parties participating in the CDM shall set up a designated national authority (DNA) for the CDM. [CMP/2005/8/Ad1, p12 para29]
- ◆ CDM project participants (PPs) shall receive written approval of voluntary participation from the DNA of each Party involved.
 - ☞ The written approval shall include confirmation by the host Party that the project activity assists it in achieving sustainable development. [CMP/2005/8/Ad1, p15 para40(a)]
 - ☞ The details of approval procedure is up to each Party.

4-3. CDM Executive Board (EB)

◆ The EB supervises the CDM, under the authority and guidance of the COP/MOP [CMP/2005/8/Ad1, p8 para5], and shall:

- ☞ Make recommendations to the COP/MOP on further modalities and procedures for the CDM and/or any amendments or additions to rules of procedure for the EB, as appropriate;
- ☞ Approve new methodologies related to, *inter alia*, baselines, monitoring plans and project boundaries;
- ☞ Review provisions with regard to simplified modalities, procedures and the definitions of small scale CDM (SSC) project activities, and if necessary, makes appropriate recommendations to the COP/MOP;
- ☞ Be responsible for the accreditation of operational entities (OEs), and make recommendations to the COP/MOP for the designation of OEs.
- ☞ Make any technical reports to the public and provide a period of at least 8 weeks for public comments on draft methodologies and guidance;
- ☞ Develop and maintain the CDM registry;
- ☞ Formally accept a validated project as a CDM project activity (registration); [CMP/2005/8/Ad1, p14 para36]
- ☞ Instruct to issue CERs for a CDM project activity to the CDM registry administrator; [CMP/2005/8/Ad1, p19 para66]
- ☞ Etc.

◆ Activities of the EB, and approved rules, procedures, methodologies and standards related to the CDM can be downloaded from <http://cdm.unfccc.int/>.

Members of the EB [CMP/2005/8/Ad1, p9 para7-12]

- ☞ The EB comprises 10 members from Parties to the KP.
 - ⇒ 1 member from each of the 5 UN regional groups, 2 other members from the Annex I Parties, 2 other members from the non-Annex I Parties, and 1 representative of the small island developing States.
 - ⇒ The 5 regional groups of the UN are: Asia, Africa, Latin America, Eastern Europe, and the Western European and Others Group
 - ⇒ As a result, 4 are from Annex I Parties and 6 are from non-Annex I Parties, unless 1 member from Asia is selected from Japan.
 - ⇒ There is an alternate for each member of the EB.
- ☞ Members, including alternate members, of the EB are nominated by the relevant constituencies referred above, and be elected by the COP/MOP.
 - ⇒ Vacancies shall be filled in the same way.
- ☞ Members are elected for a period of 2 years and be eligible to serve a maximum of 2 consecutive terms.
 - ⇒ Terms as alternate members do not count.
- ☞ 5 members and 5 alternate members are elected initially for a term of 3 years, and other members and alternate members for a term of 2 years. Thereafter, the COP/MOP elects, every year, 5 new members, and 5 new alternate members, for a term of 2 years.
- ☞ The EB elects its own chair and vice-chair, with one being a member from an Annex I Party and the other being from a non-Annex I Party.
 - ⇒ The positions of chair and vice-chair alternate annually between a member from an Annex I Party and a non-Annex I Party.

Meeting and decision of the EB [CMP/2005/8/Ad1, p10 para13-16]

- ☞ The EB meets as necessary but no less than 3 times a year.
- ☞ At least 2/3 of the members of the EB, representing a majority of members from Annex I Parties and a majority of members from non-Annex I Parties, must be present to constitute a quorum.
- ☞ Decisions by the EB is taken by consensus, whenever possible. If that is not possible, decisions shall be taken by 3/4 majority of the members present and voting at the meeting. Members abstaining from voting shall be considered as not voting.
- ☞ Meetings of the EB are open to attendance, as observers, except where otherwise decided by the EB.

4-4. Panels and Working Groups

- ◆ The EB may establish committees, panels or working groups to assist it in the performance of its functions. The EB shall draw on the expertise necessary to perform its functions, including from the UNFCCC roster of experts. In this context, it shall take fully into account the consideration of regional balance. [CMP/2005/8/Ad1, p10 para18]
- ◆ The EB has established following panels and working groups so far. <<http://cdm.unfccc.int/EB/Panels>>

CDM executive board (EB)

Meth Panel (MP) (Methodologies Panel)

- ☞ The MP is responsible for recommendations to the EB on baseline and monitoring methodologies, revisions to the PDD, etc. [EB30 Anx3, para2-3]
- ☞ 2 members of the EB will act as Chair and vice Chair of the panel, respectively. In addition to the designated EB members, the panel shall be composed of 16 members. [EB30 Anx3, para5] [EB33 Rep, para34]

SSC WG (Working group for small-scale CDM project activities)

- ☞ The SSC WG is responsible for recommendations to the EB on baseline and monitoring methodologies for small-scale project activity, etc.[EB23 Anx20, para1]
- ☞ 2 members or alternate members of the EB will act as Chair and Vice-Chair of WG, respectively. In addition to the Chair and Vice-Chair, the WG shall be composed of 5 members, 2 of whom are members from the Meth Panel. [EB23 Anx20, para3]

AR WG (Working group on afforestation and reforestation project activities)

- ☞ The AR-WG is responsible for recommendations to the EB on baseline and monitoring methodologies for A/R CDM, revisions to the PDD for A/R CDM, etc. [EB23 Anx14, para2-3]
- ☞ 2 members or alternate members of the EB will act as Chair and Vice-Chair of the WG, respectively. In addition to the Chair and Vice-Chair, the WG shall be composed 8 members. [EB23 Anx14, para5] [EB31 Rep para48]

EB-RIT (Registration and Issuance Team)

- ☞ EB-RIT serves to prepare appraisals of requests for registration and issuance of CERs assessing whether their requirements are met and/or appropriately dealt with by DOEs for consideration by the EB. [EB29 Anx14, para5]
- ☞ The RIT is composed of not less than 20 members. [EB29 Anx14, para7]

CDM-AP (CDM accreditation panel)

- ☞ The CDM-AP is responsible for recommendations to the EB on the accreditation of an applicant OE, suspension, withdrawal and/or re-accreditation of accreditation of a DOE, etc [EB23 Anx1, para4-5]
- ☞ The CDM-AP also carries out selecting the members of a CDM accreditation assessment team (CDM-AT).
- ☞ In addition to the designated EB members who act as chair and vice chair, the panel shall be composed of 7 members. [EB23 Anx1, para13] [EB33 Rep, para16]

CDM-AT (CDM accreditation assessment team)

- ☞ The CDM-AT shall undertake an assessment of the applicant and/or DOEs and prepare an assessment report for the CDM-AP.
- ☞ A team shall be composed of a team leader and at least 2 team members chosen to serve in a team for an assessment at a time. [EB09 Anx1]

4-5. Designated Operational Entity (DOE)

◆ A DOE under the CDM:

- ☞ Is either a domestic legal entity or an international organization accredited and designated, on a provisional basis until confirmed by the COP/MOP, by the EB.
- ☞ Has two key functions:
 - ⇒ It validates and subsequently requests registration of a proposed CDM project activity
 - ⇒ It verifies emission reduction of a registered CDM project activity, certifies as appropriate and requests the EB to issue Certified Emission Reductions (CERs) accordingly.

- ◆ Upon request, the EB may allow a single DOE to perform all these functions within a single CDM project activity. [CMP/2005/8/Ad1, p12 para27(e)]

The terms used in DOE related official documents are:

- ☞ Applicant entity (**AE**)= once application has been duly submitted/subject to a procedure;
- ☞ Designated operational entity (**DOE**)= after designation by COP/MOP.

[EB34 Anx1, p3 footnote]

Procedure for accrediting OEs [EB34 Anx1, para3]

- ◆ The COP/MOP designates operational entities (OEs) based on a recommendation by the EB.
- ◆ The EB takes the decision whether or not to accredit an AE and recommend it to the COP/MOP for designation.
- ◆ The CDM-AP is responsible for preparing a recommendation to the EB regarding the accreditation of an AE based on assessment work conducted by a CDM-AT.
- ◆ The CDM-AP is also responsible for preparing recommendations regarding unscheduled surveillance, re-accreditation and accreditation for additional sectoral scope(s).
- ◆ The CDM-AP provides guidance to and approves the work plan of each CDM-AT.
- ◆ A CDM-AT, under the guidance of the CDM-AP, undertakes the detailed assessment of an AE and/or DOE. A CDM-AT shall be established by the CDM-AP which draws members from a roster of experts established by the EB for this purpose.

The validity of accreditation

- ☞ The accreditation of the OE for any “sectoral scope” shall be valid for 3 years from the date of accreditation by the EB. The designation by the COP/MOP shall be valid until the expiry date of the accreditation.
- ☞ A regular surveillance shall be undertaken within this 3-year-period. [EB34 Anx1, para70]
- ☞ The EB is authorized to conduct “spot-check” activities (i.e. unscheduled surveillance) of DOEs at any time. [EB34 Anx1, para89]

Phasing of accreditation

[EB34 Anx1, para7-8]

- ☞ The accreditation of an OE may be undertaken in phases, both in functions and sectoral scope(s) and shall be recommended on the basis of sectoral groups.
- ☞ The phasing of accreditation depends on the successful completion of a witnessing activity for a particular sectoral group and size (large or small) of the project activity.
- ☞ The successful completion of a witnessing activity in one function (e.g. validation) for a group of sectoral scopes (sectoral group) may allow the entity to be eligible for accreditation for the other function (e.g. verification) in the same and concerned sectoral group(s).
- ☞ An entity can only be accredited for its both functions, i.e. validation and verification/certification, if a witnessing activity in a sectoral scope has been successfully undertaken, on the basis of one large scale project activity.

Suspension or withdrawal of a DOE [CMP/2005/8/Ad1, p11 para21]

The EB may recommend to the COP/MOP to suspend or withdraw the designation of a DOE if it has carried out a review and found that the entity no longer meets the accreditation standards or applicable provisions in decisions of the COP/MOP.

- ☞ The EB may recommend the suspension or withdrawal of designation only after the DOE has had the possibility of a hearing.
- ☞ The suspension or withdrawal is with immediate effect, on a provisional basis, once the EB has made a recommendation, and remains in effect pending a final decision by the COP/MOP.
- ☞ The affected entity shall be notified, immediately and in writing, once the EB has recommended its suspension or withdrawal.
- ☞ The recommendation by the EB and the decision by the COP/MOP on such a case shall be made public.
 - ⇒ It is assumed that if the COP/MOP decides the affected DOE meets the accreditation standards, the DOE will recover from its suspension or withdrawal.

BOX: CDM validation and verification manual (CDM-VVM)

[EB39 Rep para5]

- ☞ The EB considered the draft CDM validation and verification manual (CDM-VVM) and agreed to invite public for comments on this draft for the period of 16 May 2008 to 15 June 2008. The EB requested the secretariat to compile these comments and prepare a revised draft document for consideration by the EB at its 41st meeting. The EB also agreed to have a detailed discussion on the document, at its 41st meeting.

Affect to registered CDM project activities by the suspension or withdrawal of designation of a DOE

[CMP/2005/8/Ad1, p11 para22-24]

- ☞ Registered project activities shall not be affected by the suspension or withdrawal of designation of a DOE unless significant deficiencies are identified in the relevant validation, verification or certification report for which the entity was responsible.
 - ⇒ There is no clear definition of “significant deficiencies.”
- ☞ In this case, the EB shall decide whether a different DOE shall be appointed to review, and where appropriate correct, such deficiencies.
 - ⇒ Any costs related to the review shall be borne by the DOE whose designation has been withdrawn or suspended.
- ☞ If such a review reveals that excess CERs were issued, the DOE whose accreditation has been withdrawn or suspended shall acquire and transfer, within **30 days** of the end of review, an amount of reduced tonnes of CO₂ equivalent equal to the excess CERs issued, as determined by the EB, to a cancellation account in the CDM registry.
- ☞ Any suspension or withdrawal of a DOE that adversely affects registered project activities shall be recommended by the EB only after the affected PPs have had the possibility of a hearing.

4-6. Project Participants (PPs)

- ◆ Participation in a CDM project activity is voluntary. [CMP/2005/8/Ad1, p12 para28]
- ◆ A PP is (a) a Party involved, and/or (b) a private and/or public entity authorized by a Party involved to participate in a CDM project activity. [Glos ver3, p26]

A Party involved

- ☞ A non-Annex I Party may participate in a CDM project activity if it is a Party to the Kyoto Protocol. [CMP/2005/8/Ad1, p12 para30]
- ☞ “Party involved” is only considered a PP if this is clearly indicated in section A.3 of the PDD or, in case of registered projects, if the secretariat is explicitly informed of this in accordance with modalities of communication. [EB25 Rep, para110]

A private and/or public entity

- ☞ Private and/or public entities may only transfer and acquire CERs if the authorizing Party is eligible to do so at that time. [CMP/2005/8/Ad1, p13 para33]
- ☞ A written approval constitutes the authorization by a designated national authority (DNA) of specific entity(ies)’ participation as project proponents in the specific CDM project activity. [Glos ver3, p6]

A change of PPs [Glos ver3, p27]

- ☞ A change of PPs shall immediately be communicated to the EB through the secretariat in accordance with the modalities of communication.
- ☞ The indication of change shall be signed by all PPs of the previous communication and by all new and remaining PPs.
- ☞ Each new PP needs authorization, as required.

Withdraw of PPs [EB38 Rep para57]

In cases where PP(s) wish(es) to withdraw their participation from a registered CDM project activity, the secretariat shall ensure that all PPs have communicated their agreement to this withdrawal in writing, in accordance with the modalities of communication. (chap.4-7)

Participation by a fund [Glos ver3, p7]

Multilateral funds do not necessarily require written approval from each participant’s DNA. However those not providing a written approval may be giving up some of their rights and privileges in terms of being a Party involved in the project.

4-7. Modalities of communication

Procedures for public communication with the EB [EB31 Anx37]

- ◆ Relevant communications received by the EB which are not in response to a call for input (hereinafter referred to as unsolicited communications) may only be taken into consideration at its next meeting if received before the documents submission deadline (**2 weeks** prior to the meeting).
 - ☞ Any unsolicited communication received after this deadline would be considered, as appropriate, at a subsequent meeting.
- ◆ The secretariat shall acknowledge receipt of unsolicited communications addressed to the EB and make them available to the EB through the EB's extranet. In consultation with the Chair of the EB, the Secretary of the EB shall initiate action including consultation with EB, as needed, and answer unsolicited communications on behalf of the Chair, as appropriate.
- ◆ The Chair of the EB shall assess if an unsolicited communication and the response is to be sent in addition via listserv to the EB.
- ◆ Unsolicited communications should be addressed to the Chair of the EB and send to the UNFCCC secretariat via email (cdm-info@unfccc.int or secretariat@unfccc.int) or fax (number +49. 228. 815.1999).
- ◆ If a member or alternate member of the EB, in that capacity, receives an unsolicited communication, he/she shall forward it to the secretariat, copying the sender of the unsolicited communication, for processing as per the above. The same shall apply for submissions received by members of panels or working groups.

Modalities of communication of PPs with the EB [Glos ver3, p21]

- ◆ The modalities of communication between PPs and the EB are indicated at the time of registration by submitting a statement signed by all PPs.
- ◆ All official communication from and to PPs, after a request for registration is submitted by a DOE, shall be handled in accordance with these modalities of communication.

BOX: Confidential/proprietary information

[Glos ver3, p13]

- ☞ Information obtained from PPs marked as proprietary or confidential shall not be disclosed without the written consent of the provider of the information, except as required by national law.
 - ⇒ Information used to determine additionality, to describe the baseline methodology and its application, and to support an environmental impact assessment shall not be considered as proprietary or confidential.
- ☞ PPs shall submit documentation that contains confidential and proprietary information in one marked up version where all confidential/proprietary parts shall be made illegible by the PPs, and a second version containing all information which shall be treated as strictly confidential by all handling this documentation.

5. Conditions for CDM projects

- ◆ When planning a CDM project activity, it is necessary to keep in mind following points:
 - ☞ The purpose of the CDM shall be to assist non-Annex I Parties in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Annex I Parties in achieving compliance with their commitments. [KP Art.12 para2]
 - ⇒ It is the host Party's prerogative to confirm whether a CDM project activity assists it in achieving sustainable development. [CP/2001/13/Ad2, p20]
 - ☞ A CDM project activity is additional if GHG emissions are reduced below those that would have occurred in the absence of the registered CDM project activity; [CMP/2005/8/Ad1, p16 para43]
 - ☞ Annex I Parties are to refrain from using CERs generated from nuclear facilities to meet their quantified GHG emissions reduction targets; [CP/2001/13/Ad2, p20]
 - ☞ The eligibility of land use, land-use change and forestry project activities under the CDM is limited to afforestation and reforestation (A/R); [CP/2001/13/Ad2, p22 para7(a)]
- ◆ It is necessary to prepare a project design document (PDD) in order to be registered as a CDM project activity.
 - ☞ The contents of PDD is described in Attachment 1-3.

Public funding for CDM projects

- ☞ Public funding for CDM projects from Annex I Parties is not to result in the diversion of official development assistance (ODA) and is to be separate from and not counted towards the financial obligations of Annex I Parties. [CP/2001/13/Ad2, p20]
 - ⇒ Annex I Parties shall provide an affirmation that such funding does not result in a diversion of ODA and is separate from and is not counted towards the financial obligations of those Parties. [PDD GL ver6.2, p9]
 - ⇒ There is also the document "ODA Eligibility of Expenditures under the Clean Development Mechanism" which was endorsed at the DAC High Level Meeting on 15-16 April 2004. [DAC/CHAIR(2004)4/FINAL]

BOX: CDM project activities under a programme of activities [CMP/2005/8/Ad1, p97 para20]

- ☞ Local/regional/national policy or standard cannot be considered as a CDM project activity
- ☞ But that project activities under a programme of activities can be registered as a single CDM project activity provided that approved baseline and monitoring methodologies are used that, inter alia, define the appropriate boundary, avoid double counting and account for leakage, ensuring that the emission reductions are real, measurable and verifiable, and additional to any that would occur in the absence of the project activity. (chap.19)

BOX: Carbon dioxide capture and storage (CCS)

- ☞ The COP/MOP decided to request the EB to continue to consider proposals for new methodologies, including the PDD for CCS in geological formations as CDM project activities. Approval of such methodologies by the EB can occur only after further guidance from the COP/MOP. [CMP/2006/10/Ad1, p6 para19]
- ☞ The COP/MOP requested the SBSTA, at its 27th session, to prepare recommendations on CCS in geological formations as CDM project activities for consideration by COP/MOP3, with a view to taking a decision at the COP/MOP4. [CMP/2006/10/Ad1, p7 para24]

Examples of guidance and clarifications regarding methodological issues

Guidance on transfer of know-how and training [EB23 Rep, para80]

The EB agreed that transfer of know-how and training, as such, cannot be considered as CDM project activities. The eligibility of project activities that are a result of the transfer of know-how and training shall be based only on measurable emission reductions which are directly attributable to these project activities.

Guidance on bunker fuels

[EB25 Rep, para58]

The EB agreed to confirm that the project activities/parts of project activities resulting in emission reductions from reduced consumption of bunker fuels (e.g. fuel saving on account of shortening of the shipping route on international waters) are not eligible under the CDM.

Project activities that result in emission reductions due to the use/consumption of a product in the project activity [EB36 Anx16]

The EB clarified that project activities that result in emission reductions due to the use/consumption of a product produced in the project activity are only eligible as CDM project activity if: (i) the users/consumers of the product are included in the project boundary; and (ii) monitoring takes place of the actual use/consumption and location of the product used/consumed by consumers. In such situations sampling can be used as a monitoring method for actual use/consumption and location of the product.

Guidance regarding the treatment of "existing" and "newly built" facilities [EB8 Anx1, para10]

If a proposed CDM project activity seeks to retrofit or otherwise modify an existing facility, the baseline may refer to the characteristics (i.e. emissions) of the existing facility only to the extent that the project activity does not increase the output or lifetime of the existing facility. For any increase of output or lifetime of the facility which is due to the project activity, a different baseline shall apply.

Definition of thresholds in terms of power density for hydroelectric power plants [EB23 Anx5]

Noting the scientific uncertainties concerning GHG emissions from reservoirs and that these uncertainties will not be resolved in the short term, a simple and transparent criteria, based on thresholds in terms of power density (installed power generation capacity divided by the flooded surface area: W/m^2), are to be used to determine the eligibility of hydroelectric power plants for CDM project activities. The thresholds are as follows:

- ☞ Power densities less than or equal to $4 W/m^2$ cannot use current methodologies;
- ☞ Power densities greater than $4 W/m^2$ but less than or equal to $10 W/m^2$ can use the currently AMs, with an emission factor of $90 g-CO_2eq/kWh$ for project reservoir emissions;
- ☞ Power densities greater than $10 W/m^2$ can use current AMs and the project emissions from the reservoir may be neglected.

6. Making PDD

Identifying a type of CDM project activities

Is it a GHG emission reduction project activity eligible for the CDM? (chap.5)

Yes

Is it eligible for a small-scale CDM project activity? (chap.17-1)

No

Yes

Project Design Document (CDM-PDD)

PDD for small-scale project activities (CDM-SSC-PDD)

Is it a GHG removal by afforestation and reforestation project activity eligible for the CDM? (chap.18-1)

Yes

Is it eligible for a small-scale afforestation and reforestation CDM project activity? (chap.18-3)

No

Yes

PDD for A/R project activities (CDM-AR-PDD)

PDD for small-scale A/R project activities (CDM-SSC-AR-PDD)

Is it a programme of activities eligible for the CDM? (chap.19)

Yes

There are various types of CDM programme of activity

Programme of Activities Design Document (CDM-PoA-DD)
CDM Programme Activity Design Document (CDM-CPA-DD)
etc

Skip the rest (similar to the steps written in the below diagram)

Determining a baseline and monitoring methodology

Is there an approved methodology (AM) applicable to the project activity? (chap.7-3)

Yes

No

Request for clarifications to an AM (chap.7-6)

Answers

Request for deviation (chap.14)

Approval

Request for a revision of an AM (chap.7-5)

Approval

Submission of a proposed new methodology (NM) (chap.7-4)

Approval

Writing the CDM-PDD by applying AMs (Att.3)

PDD and methodology related forms

| | | Normal-scale CDM project activity | | Small-scale CDM project activity | | |
|---------------------|-------------|-----------------------------------|---|----------------------------------|--|--|
| Emission Reduction | PDD | CDM-PDD ver.3.1 (Att.1-1) | CDM Project Design Document | CDM-SSC-PDD ver.3 (Att.1-2) | CDM Project Design Document for Small-Scale project activities | |
| | | CDM-PoA-DD ver.1 | Programme of Activities Design Document | CDM-SSC-PoA-DD ver.1 | Small-Scale CDM Programme of Activities Design Document | |
| | | CDM-CPA-DD ver.1 | CDM Programme Activity Design Document | CDM-SSC-CPA-DD ver.1 | Small-Scale CDM Programme Activity Design Document | |
| | Methodology | F-CDM-AM-Subm ver.2 | Form for submission of queries from DOEs to the MP regarding the application of approved methodologies | | | |
| | | F-CDM-AM-Rev ver.1 | Form for submission of requests for revisions of approved methodologies to the MP | | | |
| | | CDM-NM ver.3 | CDM Proposed New Methodology: Baseline and Monitoring | F-CDM-SSC-NM ver.1 | Form for proposed New Small-Scale Methodologies | |
| A/R (chap.18) | PDD | CDM-AR-PDD ver.4 | CDM Project Design Document for A/R project activities | CDM-SSC-AR-PDD ver.2 | Project Design Document Form for Small-Scale A/R project activities | |
| | | CDM-PoA-DD-AR ver.1 | Programme of Activities Design Document Form for A/R project activities | CDM-PoA-DD-SSC-AR ver.1 | Programme of Activities Design Document Form for SSC-AR project activities | |
| | | CDM-CPA-DD-AR ver.1 | CDM Programme Activity Design Document Form for A/R project activities | CDM-CPA-DD-SSC-AR ver.1 | CDM Programme Activity Design Document form for SSC-AR project activities | |
| | Methodology | F-CDM-AR-AM-Subm ver.1 | Form for submission of queries from DOEs to the AR WG regarding the application of Approved A/R Methodologies | | | |
| | | F-CDM-AR-AM-Rev ver.1 | Form for submission of requests for revisions of Approved Methodologies to the AR WG | | | |
| | | CDM-AR-NM ver.3 | CDM Proposed New Methodology: Baseline and Monitoring for A/R | | | |
| Deviation (chap.14) | | F-CDM-DEV ver.2 | Form for submission of requests for deviation | | | |

PDD: http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/index.html

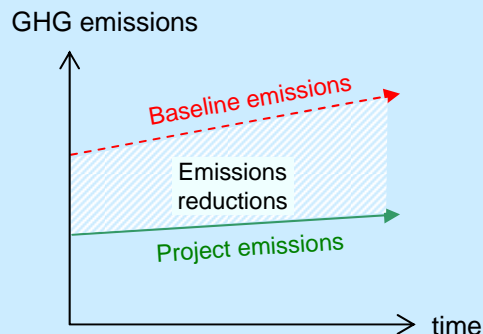
Methodology: http://cdm.unfccc.int/Reference/PDDs_Forms/Methodologies/index.html

Deviation: [EB24 Anx30]

7. Baseline

7-1. Concept of the baseline and additionality

- ◆ The baseline (scenario and emissions) for a CDM project activity is the scenario that reasonably represents GHG emissions that would occur in the absence of the proposed project activity. [CMP/2005/8/Ad1, p16 para44]



- ◆ Difference between the baseline emissions and GHG emissions after implementing the CDM project activity (project emissions) is emission reductions.

- ⇒ A baseline (scenario and emissions) shall be established:
 - (a) By PPs in accordance with provisions for the use of approved and new methodologies;
 - (b) In a transparent and conservative manner regarding the choice of approaches, assumptions, methodologies, parameters, data sources, key factors and additionality, and taking into account uncertainty;
 - (c) On a project-specific basis;
 - (d) In the case of small-scale CDM project activities, in accordance with simplified procedures developed for such activities;
 - (e) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. [CMP/2005/8/Ad1, p16 para45]
- ⇒ Before calculating baseline emissions, it is necessary to identify baseline scenarios.
- ⇒ A baseline (emissions) shall cover emissions from all gases, sectors and source categories within the project boundary. [CMP/2005/8/Ad1, p16 para44]

- ◆ A CDM project activity is **additional** if GHG emissions are reduced below those that would have occurred in the absence of the registered CDM project activity. [CMP/2005/8/Ad1, p16 para43]

⇒ The DOE shall review the PDD to confirm that the project activity is expected to result in a reduction in GHG emissions that are **additional** to any that would occur in the absence of the proposed project activity. [CMP/2005/8/Ad1, p14 para37(d)]

- ◆ PPs have to write explanation of how and why this project activity is **additional** and therefore not the baseline scenario in accordance with the selected baseline methodology. [PDD GL ver6.2, p11]

⇒ If the starting date of the project activity is before the date of validation, provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on (preferably official, legal and/or other corporate) documentation that was available at, or prior to, the start of the project activity. [PDD GL ver6.2, p11]

- ◆ “The tool for the demonstration and assessment of additionality” provides a general framework for demonstrating and assessing additionality. PPs may also propose other tools for the demonstration of additionality. [EB22 Anx8 para1]

BOX: Wording

PPs shall refrain from providing glossaries or using key terminology not used in the COP documents and the CDM glossary (environmental/investment **additionality**).

[EB09 Anx3, para3]

7-2. Baseline scenario

- ◆ The baseline scenario for a CDM project activity is the scenario that reasonably represents GHG emissions that would occur in the absence of the proposed project activity. [Glos ver3, p10]
- ◆ Different scenarios may be elaborated as potential evolutions of the situation existing before the proposed CDM project activity.
 - ☞ The continuation of a current activity could be one of them;
 - ☞ Implementing the proposed project activity may be another;
 - ☞ And many others could be envisaged.
- ◆ Baseline methodologies shall require a narrative description of all reasonable baseline scenarios.
- ◆ To elaborate the different scenarios, different elements shall be taken into consideration.
 - ☞ For instance, the PPs shall take into account national / sectoral policies and circumstances, ongoing technological improvements, investment barriers, etc.
- ◆ The baseline scenario may include a scenario where future GHG emissions are projected to rise above current levels, due to the specific circumstances of the host Party. [CMP/2005/8/Ad1, p16 para46]

Clarifications on the treatment of national and/or sectoral policies and regulations in determining a baseline scenario

The EB agreed to differentiate the following 2 types of national and/or sectoral policies that are to be taken into account when establishing baseline scenarios: [EB22 Anx3]

Type E+ That give comparative advantages to more emissions-intensive technologies or fuels.

- ☞ Only national and/or sectoral policies or regulations that have been implemented before adoption of the Kyoto Protocol (11 December 1997) shall be taken into account when developing a baseline scenario.
- ☞ If such national and/or sectoral policies were implemented since the adoption of the Kyoto Protocol, the baseline scenario should refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place.

Type E- That give comparative advantages to less emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programs).

- ☞ National and/or sectoral policies or regulations that have been implemented since the adoption by the COP of the CDM M&P(11 November 2001) need not be taken into account in developing a baseline scenario.
 - ⇒ i.e. the baseline scenario could refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place).

7-3. Baseline methodology

- ◆ Baseline emission under the selected baseline scenarios shall be calculated by PPs in accordance with **approved methodologies (AMs)** or **new methodologies (NMs)**.
- ◆ No methodology is excluded a priori so that PPs have the opportunity to propose any methodology. [Glos ver3, p8]

A baseline methodology approved by the EB is publicly available along with relevant guidance on the UNFCCC CDM website (<http://unfccc.int/cdm>). [Glos ver3, p9]

- ☞ DOEs can submit queries regarding the applicability of **approved methodologies**.

If a DOE determines that a proposed project activity intends to use a **new baseline methodology**, it shall, prior to the submission for registration of this project activity, forward the proposed methodology to the EB for review, i.e. consideration and approval, if appropriate. [EB32 Anx13, para2]

- ☞ There is “Technical Guidelines for the Development of New Baseline and Monitoring Methodologies version 01”. [EB24 Anx16]

- ◆ It is needed to ensure consistency between baseline scenario derived by baseline methodology and the procedure and formulae used to calculate baseline emissions. [PDD GL ver6.2, p24]

Baseline approach (para 48 of the CDM M&P) [Glos ver3, p8][CMP/2005/8/Ad1, p16 para48]

A baseline approach is the basis for a baseline methodology. The EB agreed that the 3 approaches be the only ones applicable to CDM project activities:

(a) Existing actual or historical emissions, as applicable; or

(b) Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment; or

(c) The average emissions of similar project activities undertaken in the previous 5 years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category. <See [EB08 Anx1 para4-5] for guidance>

BOX: Proposed project activities applying more than one methodology [EB08 Anx1, para6]

☞ If a proposed CDM project activity comprises different “sub-activities” requiring different methodologies, PPs may forward the proposal using one CDM-PDD but shall complete the methodologies sections for each “sub-activity”.

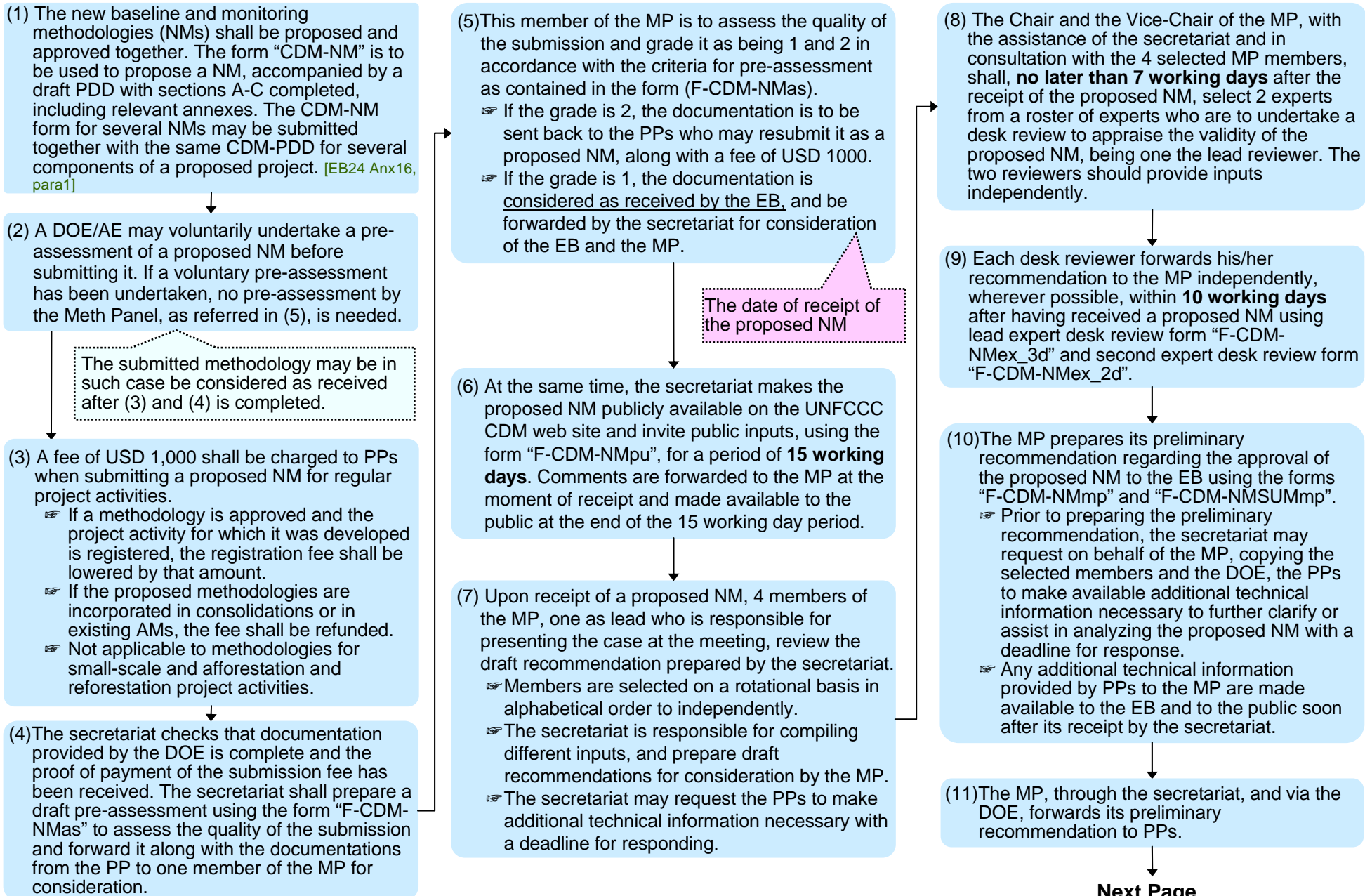
BOX: Temporarily result in “negative emission reductions” [EB21 Rep, para18]

☞ In some cases and for some methodologies, project activities may temporarily result in “negative emission reductions” in a particular year, for example due to poor performance or due to leakage effects outweighing emission reductions.

☞ In these cases, proposed NMs should stipulate that if a project activity temporarily results in “negative emission reductions”, any further CERs will only be issued when the emissions increase has been compensated by subsequent emission reductions by the project activity.

7-4. Procedures for the submission of a proposed new methodology (NM)

[EB37 Anx3][Version 13 / 1 February 2008]



Next Page

7-4. Procedures for the submission of a proposed NM

[EB37 Anx3][Version 13 / 1 February 2008]

(12) Within a timeframe stipulated by the Chair of the MP (**but not exceeding 4 weeks**), after the receipt of the preliminary recommendation of the MP by the PPs, the PPs may submit (copying the DOE), clarifications to the MP, through the secretariat, on technical issues concerning the proposed NM raised in the preliminary recommendation by the MP. Technical clarifications provided by the PPs shall include the revisions, in the form “CDM-NM” in a highlighted form.

- ☞ Clarifications provided by the project participants shall be made available to the EB and to the public soon after they have been received by the secretariat.

(13) If PPs provide clarifications related to the preliminary recommendation by the MP, the MP considers these clarifications **at its next meeting** and prepare its final recommendation to the EB.

- ☞ The final recommendation shall be forwarded to the EB and made publicly available.
- ☞ If PPs do not provide clarification related to preliminary recommendation by the MP within the timeframe of 3 months, the case will be considered as withdrawn.

(14) The EB shall consider a proposed NM **at the next meeting** following the receipt of the final recommendation regarding the approval (“A” case) or non-approval (“C” case) of the proposed NM by the MP.

Once approved by the EB, it shall make the approved methodology (AM) publicly available and the DOE may proceed with the validation of the project activity and submit the PDD for registration.

BOX: Timeline of analysis/ recommendation by the MP and consideration/approval by the EB

- ☞ A proposed NM shall be available to the MP at least **10 weeks prior to its next meeting**.
- ☞ In case more than 10 proposed NMs are submitted by the deadline, the Chair of the MP ascertains how many proposals are analyzed at the next MP meeting and decide to postpone the analysis of some submissions.
- ☞ The MP makes a recommendation to the EB, if possible **at its next meeting**. The MP shall finalize its recommendation to the EB **within 2 meetings** of the MP.
- ☞ Submissions are treated on a “First come first served” basis.
- ☞ The EB may decide to change a deadline for submissions of proposed NMs taking into account the workload of the MP
- ☞ The EB shall expeditiously, if possible **at its next meeting** but **not later than 4 months** after the date of receipt of the proposed NM, review the proposed NM in accordance with the CDM M&P.

- ◆ There is the guidance, “Modifications to the methodologies consideration process,” which sets priorities and timelines required for the approval of CDM methodologies, tools and guidance. It aims to ensure the effective use of human resources, through an equitable distribution of workload amongst the Panel and Working Groups of the EB while introducing performance based incentives. [EB32 Anx12]
- ◆ The EB clarified that methodologies are approved for application both to CDM project activity and to CDM programme activities (CPA) under a Programme of Activities (PoA) ([chap.19](#)). The EB also clarified that proposed NMs submitted for consideration by the EB should clearly define the activity to which the proposed methodology is applicable. [EB35 Rep, para15]
- ◆ There is a “Procedures for submission and consideration of proposed new methodologies for Afforestation and Reforestation of project activities under the CDM (version 07)”. [EB37 Anx4]

7-5. Procedures for the revision of an approved methodology (AM) or tool

Request for revisions to AM [EB30 Anx1, para5-9]

- ◆ The revision of AM may be carried out in response to requests by a PP, relevant stakeholders, the EB, the MP or WGs in accordance with the latest version of the procedures.
- ◆ A request for revision is suited for situations where:
 - ☞ An AM is not applicable to a project activity but the project activity is broadly similar to the project activities to which the AM is applicable;
 - ⇒ Similarity is based on the nature (technology/measure) of the project activity and sources of the emissions affected by the project activity. For example, the AM may not be applicable as the source of emissions affected by the project activities are the same but the technology/measure used in the project activity is not covered under the applicability conditions.
 - ☞ Or the procedures provided in the methodology for estimating emissions from sources are not applicable because of slight variations in the approach, flow of events or structure chosen in the project activity.
- ◆ Should no AM be appropriate, then a revision to an AM could be requested.
 - ☞ In this case significant changes are required to the AM for it to be applicable to all possible project scenarios, without which *inter alia*:
 - ⇒ The application of the methodology to the proposed project activity would be inappropriate, resulting in an incorrect definition of the project boundary, double counting, an inaccurate account of leakage, emission reductions that are either not real, measurable, verifiable or additional to those that would occur in the absence of the project activity.

BOX: In case the revision results in the withdrawal of existing AMs

- ☞ If the revision results in the withdrawal of one or more AMs, the withdrawal shall not affect
 - ⇒ (i) registered CDM project activities during their crediting periods; and
 - ⇒ (ii) project activities that have been published for public comments for validation using the previously AM or tool, so long as the project activity is submitted for registration within 8 months of the effective date of the revision. [EB35 Anx13, para17]

if the request for revision to an AM is likely to result in the addition of new procedures or scenarios to more than half of the sections of an AM, it is advisable that project participants propose a NM as per procedures for submission and consideration of proposed NM accordance with the latest version of the procedures (chap.7-4)

The request for revisions shall not include changes to the AM that would result in the exclusion, restriction, narrowing of the applicability conditions of the AMs for other project activities. Should the request result in the above the PP is advised to submit a NM.

There is "Guidance on criteria for consolidations and revision of methodologies". [EB27 Anx10]

7-5. Procedures for the revision of an AM or tool

[EB35 Anx13 para1-16][Version 9]

(1) PPs who intend to propose a revision to an AM or tool referred to in a methodology for the EB's consideration and approval submit to a DOE the following: (a) a form F-CDM-AM-Rev; (b) a draft revised version of the AM or tool referred to in a methodology highlighting proposed changes; and (c) a draft project PDD with sections A to C completed, including relevant annexes.

(2) Once it has checked that the above requirements are met and documentation is complete, the DOE transmits the documentation to the secretariat.

(3) The secretariat forwards the documentation to the EB and the MP after checking that the DOE has properly filled the form F-CDM-AM-Rev, (b) submitted complete documentation and preparing draft responses. The date of transmission by the secretariat to the EB is to be considered as the date of receipt of a proposed revision to an AM by the EB.

(4) Depending on the proposed revision of a methodology, the MP and or the EB may decide to request the secretariat to invite public inputs on the proposed revision for a period of **15 working days**.

(5) One member of the MP, under the guidance of the Chair of the Panel, is selected to review the secretariat's draft recommendations. If more detailed consideration is required, the Chair may select an additional member.

(6) The MP shall consider the proposed revision at **its next meeting**, if feasible and if received by the secretariat **at least 6 weeks before the meeting**.

(7) The MP recommends, based on substantiated justification, a revision to an AM or tool referred to in a methodology or the continued validity of the AM, possibly with minor revisions and/or minor corrections.

(8) The MP may also recommend the revision of an AM based on the experience gained through the examination of submissions of NMs in order to ensure a consistent approval process. Information on a proposal for revision of an AM shall be made available in the UNFCCC CDM web site and forwarded to the EB via list serve and to the public through the CDM news facility.

(9) The MP recommends to the EB whether to accept the request for revision and if it recommends approval, it shall submit a draft revised version of the AM to the EB.

(10) The EB shall consider the recommendations for revision to AMs or tool referred to in a methodology by the MP at **its next meeting**.

(11) If the EB approves the revision of an AM, this methodology replaces the previous AM. The revision is deemed effective **14 calendar days** after the date of publication on the UNFCCC website (24h00 GMT), which shall be **within 5 calendar days** after the EB's publication of the report.

BOX: Revision of an AM

Any revision to an AM or tool referred to in a methodology shall only be applicable to project activities registered after the revision and shall not affect (i) registered CDM project activities during their crediting period; and (ii) project activities that have been published for public comments for validation using the previous AM or tool, so long as the project activity is submitted for registration within 8 months of the effective date of the revision.

[EB35 Anx13, para16-17]

If the EB considers that the possible revision of the methodology could have significant implications for the use of the methodology, the EB may agree to suspend the use of the methodology, by putting it "on hold", with immediate effect.

Project activities using such a methodology that have not been submitted for registration **within 4 weeks** after the methodology has been put "on hold", will not be permitted to use the methodology until the EB has made a decision with respect to the methodology.

If the EB puts a methodology "on hold", a revised methodology should be approved **no later than the 3rd EB meeting** after the methodology has been put "on hold".

[EB35 Anx13, para18-20]

The following exception applies to these procedures: If the COP/MOP requests the revision of an AM, no CDM project activity may use that methodology. The EB shall request the panel/working group to revise the methodology or tool referred to in a methodology, as appropriate, taking into consideration any guidance received from the EB.

The EB agreed that these procedures shall apply *mutatis mutandis* to AMs for A/R project activities but subsequently approved separate procedures, which supersede these procedures for small scale methodologies only.

[EB35 Anx13, para3, 6]

7-6. Procedures for request for clarifications to approved methodologies (AMs)

[EB37 Anx5][Version 5]

When to request for clarifications to AM

[EB30 Anx1, para3-4]

- ◆ The clarifications to approved methodologies (AMs) may be carried out in response to requests by a project participant (PPs) or relevant stakeholders or may be carried out in response to requests recommended by the EB, MP or WGs in accordance with the latest version of the procedures.
- ◆ The procedure for request for clarification is provided to enable the DOEs, and PPs via the DOE, to seek clarification on the applicability of an AM, clarification on various procedures provided in an AM, inter alia for identifying the baseline scenario, demonstrating additionality, estimating baseline emissions, project emissions, leakage, etc. and in clarifying monitoring data and procedures.
- ◆ Should a methodology be unclear or ambiguous in this regard requiring further background information as to the conditions under which it is to be applied, PPs are advised to submit a request for clarification.

- (1) If DOEs wish to submit queries regarding the applicability of approved methodologies (AMs) to the Meth Panel (MP), they shall complete the form "F-CDM-AM-Subm" for submission of queries regarding the application of AMs and submit it to the secretariat.
PPs wishing to seek clarification on the applicability of an AM, may do so by submitting to the DOE the completed form "F-CDM-AM-Subm". The DOE shall submit the PP's request at the earliest possible time but no later than 5 working days, after the receipt of the request from PP, to the secretariat.
 - (2) The secretariat shall forward the query to the MP listserv, post the query in a common extranet page for the DOEs and MP, forward it to the EB and make it publicly available through the UNFCCC CDM web site.
 - (3) A query regarding the application of an AM shall be available to the MP at least **6 weeks prior to its next meeting** in order to be considered by the meeting.
The Chair shall assess when queries are to be considered by the MP depending on the workload of the MP.
 - (4) The chair shall select one member as a reviewer. For cases that require more detailed consideration, the Chair may select an additional member.
 - (5) Should the secretariat, while preparing the draft response, assess that the clarification is simple enough so as to not require the MP's consideration, it shall forward the proposal to the 2 appointed member(s) for early consideration.
- If there is no agreement or endorsement, the request will be considered at the MP meeting.
- (6a) All responses to requests for clarification recommended by the MP are considered as agreed upon by the EB, in taking note of the MP's report, unless otherwise revised by the EB at its subsequent meeting.
 - (6b) If both the appointed panel members agree to the draft proposal **within 2 days**, the secretariat shall seek the approval of the Chair of the MP **within 1 day** and upon endorsement shall forward the final response to the DOE and post it on the UNFCCC CDM web page for methodology clarifications.
The response shall be reflected in the report of the meeting of the MP immediately following the publication of the response.
 - (7) Draft recommendations, which shall be considered by the MP, shall be made available for the MP's consideration at least **1 week before the next MP meeting**. The secretariat shall prepare the draft responses to requests for clarifications for discussion by the MP meetings. The recommendation and answer shall be drafted using form "F-CDM-AM-Subm".
 - (8) Once the MP agrees on a final recommendation, the secretariat shall:
 - ☞ forward the final response to the DOE and the EB,
 - ☞ and make it publicly available on the UNFCCC CDM web site in the corresponding section and in the history web page of the approved methodology concerned.

8. Other items in the project design document (PDD)

8-1. Project boundary and leakage

Project Boundary

- ◆ The project boundary shall encompass all anthropogenic GHG emissions by sources under the control of the PPs that are significant and reasonably attributable to the CDM project activity. [CMP/2005/8/Ad1, p17 para52]
 - ☞ The Meth Panel (MP) shall develop specific proposals for consideration by the EB on how to operationalize the terms “under the control of”, “significant” and “reasonably attributable.” [Glos ver3, p25]
 - ☞ Pending decisions by the EB on these terms, PPs are invited to explain their interpretation of such terms when completing and submitting the CDM-NM.

Leakage

- ☞ Leakage is defined as the net change of GHG emissions which occurs outside the project boundary, and which is measurable and attributable to the CDM project activity. [CMP/2005/8/Ad1, p17 para51]
 - ⇒ In an operational context, the terms measurable and attributable should be read as “which can be measured” and “directly attributable”, respectively. [Glos ver3, p21]
- ☞ Reductions in GHG emissions shall be adjusted for leakage in accordance with the monitoring and verification provisions. [CMP/2005/8/Ad1, p17 para50]

8-2. Monitoring plan

- ◆ Monitoring refers to the collection and archiving of all relevant data necessary for determining the baseline, measuring GHG emissions within the project boundary of a CDM project activity and leakage, as applicable. [Glos ver3, p22]
- ◆ A monitoring plan for a proposed project activity shall be based on a previously approved monitoring methodology or a new methodology. [CMP/2005/8/Ad1, p17 para54]
- ◆ Revisions, if any, to the monitoring plan to improve its accuracy and/or completeness of information shall be justified by PPs and shall be submitted for validation to a DOE. [CMP/2005/8/Ad1, p18 para57]
 - ☞ The EB requested the secretariat to prepare draft procedures to facilitate the changes in monitoring plans of registered CDM project activities. [EB25 Rep, para109]

- ☞ A monitoring methodology approved by the EB and made publicly available along with relevant guidance. [Glos ver3, p22]
- ☞ PPs may propose a new monitoring methodology.
 - ⇒ The new baseline and monitoring methodologies (NMs) shall be proposed and approved together.

BOX: Conditions of use of measurement instruments in the monitoring [EB23 Rep, para24]

- ☞ The specific uncertainty levels, methods and associated accuracy level of measurement instruments and calibration procedures to be used for various parameters and variables should be identified in the PDD, along with detailed quality assurance and quality control procedures.
- ☞ In addition standards recommended shall either be national or international standards.
- ☞ The verification of the authenticity of the uncertainty levels and instruments are to be undertaken by the DOE during the verification stage.
- ☞ A zero check cannot be considered as a substitute for calibration of the measurement instrument. [EB24 Rep, para37]

8-3. Crediting period

- ◆ CERs shall only be issued for a crediting period starting after the date of registration of a CDM project activity. [CP/2001/13/Ad2, p23 para12]
- ◆ PPs select a crediting period for a proposed project activity from one of the following alternative approaches

[CMP/2005/8/Ad1, p17 para49] :

- ☞ A maximum of 7 years which may be renewed at most 2 times.
 - ⇒ For each renewal, a DOE determines and informs the EB that the original project baseline is still valid or has been updated taking account of new data where applicable.
- ☞ A maximum of 10 years with no option of renewal.

- ◆ GHG emission reductions since 2000 may be eligible to claim CERs.

[CP/2001/13/Ad2, p23 para13]

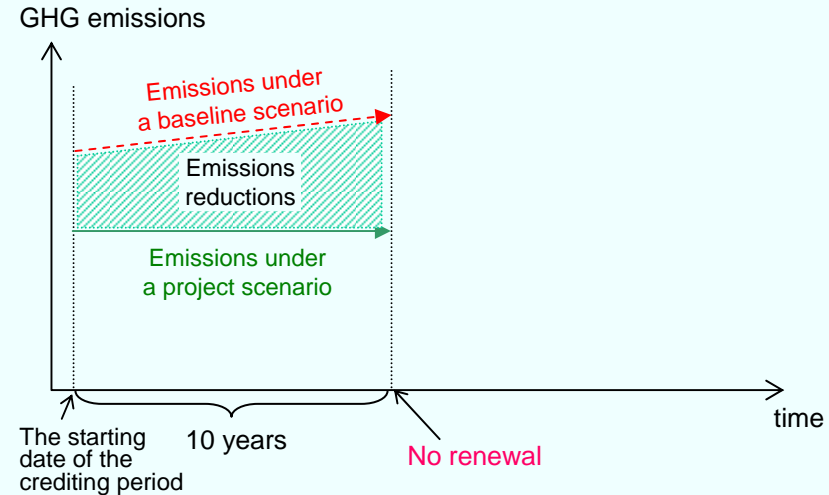
Regarding the procedures and documentation which need to be used for the renewal of a crediting period, the EB agreed that at the start of the 2nd and 3rd crediting period for a project activity, assessing the continued validity of the baseline and updating the baseline, need to be addressed. [EB20 Anx7, para1] (chap.16)

Indicating the starting date of the crediting period [EB24 Anx31, para4-5]

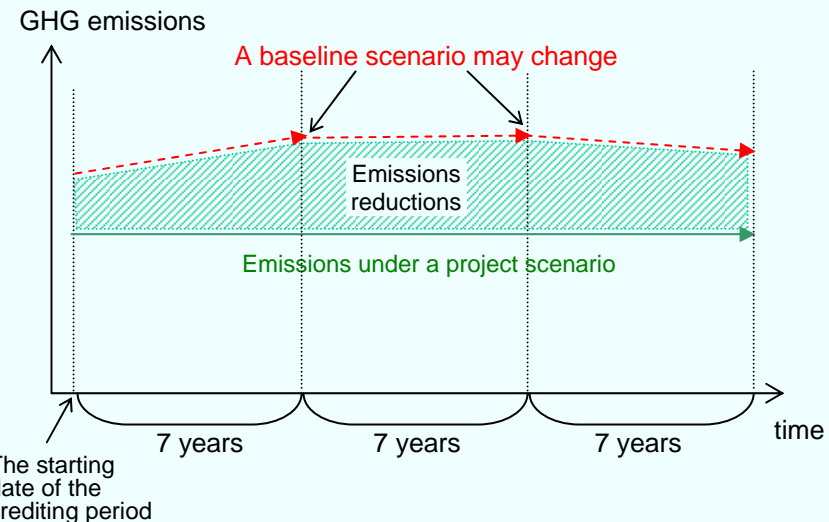
- ◆ PPs shall state in the PDD the starting date of the crediting period in the format dd/mm/yyyy, no qualifications, e.g. “expected”, can be made to this date. PPs shall specify only one starting date for the crediting period, even in cases of phased implementation.

- ☞ The starting date of a CDM project activity does not need to correspond to the starting date of the crediting period for this project activity. Therefore project activities starting as of 1 January 2000 may be validated and registered. [EB21 Rep, para63]
- ☞ The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins. [Glos ver3, p28]
- ☞ Project activities which have a starting date before the date of validation shall provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. [EB38 Rep para59]

A maximum of 10 years with no option of renewal



A maximum of 7 years which may be renewed at most 2 times



Requesting changes to the starting date of the crediting period [EB24 Anx31, para6-9]

- ◆ PPs in projects for which the starting date of the crediting period is prior to the date of registration (i.e. project claiming retroactive credits) cannot request changes in the starting date of the crediting period.
- ◆ PPs of projects for which the starting date of the crediting period is after the date of registration may:
 - ☞ (a) Inform the secretariat that the starting date of the crediting period be moved to a date up to 1 year earlier than the one indicated in the PDD, provided that this date is not earlier than the date of registration of the project activity;
 - ☞ (b) Inform the secretariat to delay the starting date of the crediting period by up to 1 year;
 - ☞ (c) Make a request to the secretariat, via a DOE, that the starting date of the crediting period be delayed by more than 1 year but no more than 2 years by submitting to the secretariat:
 - ⇒ confirmation from a DOE that no changes have occurred which would result in a less conservative baseline and that substantive progress has been made by the PPs to start the project activity;
 - ⇒ confirmation from the Host Party that the revision to the crediting period will not alter the project's contribution to sustainable development.
- ◆ The secretariat will consider requests made under (c), in consultation with the Chair of the EB, before making the requested change to the start of the crediting period.
- ◆ PPs may only make use of provisions of (a), (b) or (c) above once for each registered project activity.
- ◆ For the case of a request for a change in the starting date of the crediting period of a project activity for which CERs have already been issued, procedures above apply and that the secretariat can proceed to make the change as requested. [EB25 Rep, para105]

Treatment of the lifetime of plants and equipment in proposed new baseline methodologies [EB22 Anx2, para4-9]

- ☞ Where a project activity involves the replacement or retrofit of existing equipment or facilities, it is reasonable to assume that emission reductions shall only be accounted from the date of replacement until the point in time when the existing equipment would have been replaced in the absence of the project activity or the end of crediting period, whatever is earlier.
- ☞ In order to estimate the point in time when the existing equipment would need to be replaced in the absence of the CDM, a new methodology may consider the following approaches:
 - ⇒ A sector and/or activity specific method or criteria to determine when the equipment would be replaced or retrofitted in the absence of the CDM;
 - ⇒ The typical average technical lifetime of the type equipment may be determined and documented, taking into account common practices in the sector and country, e.g. based on industry surveys, statistics, technical literature, etc.;
 - ⇒ The practices of the responsible entity/PPs regarding replacement schedules may be evaluated and documented, e.g. based on historical replacement records for similar equipment.

9. Approval from each Party involved

Approval by Parties involved [Glos ver3, p6-7]

- ◆ The DNA of a Party involved in a proposed CDM project activity shall issue a statement including the following:
 - ☞ The Party has ratified the Kyoto Protocol.
 - ☞ The approval of voluntary participation in the proposed CDM project activity
 - ☞ In the case of Host Party(ies): statement that the proposed CDM project activity contributes to sustainable development of the host Party(ies).
- ◆ The written approval shall be unconditional with respect to the above.
- ◆ A written approval from a Party may cover more than one project provided that all projects are clearly listed in the letter.
- ◆ The DOE shall receive documentation of the approval.

- ☞ The registration of a project activity can take place without an Annex I Party being involved at the stage of registration.
- ☞ Before an Annex I Party acquires CERs from such a project activity from an account within the CDM registry, it shall submit a letter of approval to the EB in order for the CDM Registry administrator to be able to forward CERs from the CDM registry to the Annex I national registry. [EB18 Rep, para57]
 - ⇒ This is so called “unilateral CDM project.”

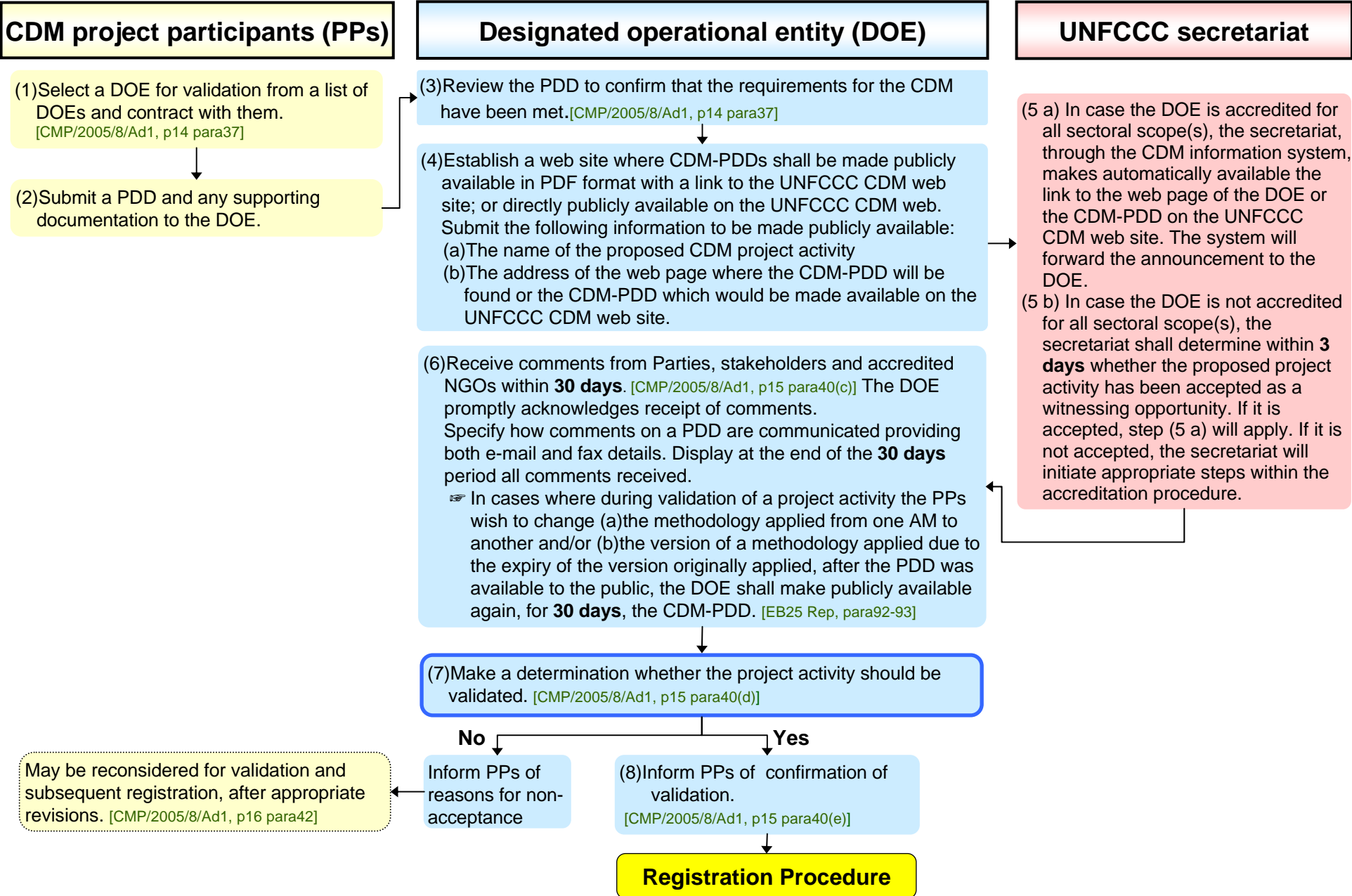
BOX: Contents of actual approval letters

- ☞ An approval letter is addressed and sent to PPs.
- ☞ In most cases, an approval letter is the same with an authorization letter. (chap.4-6)
 - ⇒ In some cases, a DNA authorizes an entity in another country.
- ☞ In some cases, a DNA sets conditions on issues other than unconditional issues.
 - ⇒ For example, conditions on amount of CERs to be transferred, validity of the approval, the rejection of an unilateral CDM project, the requirement of reports to a DNA, etc.
- ☞ In some cases, an official approval letter is written in the original language and validated with a seal, while an unofficial English translation is attached.

10. Validation

<http://cdm.unfccc.int/Reference/Procedures/public_availPDD_ver04.pdf>[Version 4 / June 2005]

10-1. Procedures for validation



10-2. Validation requirements

The DOE selected by PPs to validate a project activity, being under a contractual arrangement with them, shall review the PDD and any supporting documentation to confirm that the following requirements have been met. [CMP/2005/8/Ad1, p14 para37]

- ☞ The participation requirements, as follows, are satisfied;
 - Participation in a CDM project activity is voluntary. Parties participating in the CDM shall designate a national authority (DNA) for the CDM. A non-Annex I Party may participate in a CDM project activity if it is a Party to the Kyoto Protocol.
- ☞ Comments by local stakeholders have been invited, a summary of the comments received has been provided, and a report to the DOE on how due account was taken of any comments has been received;
- ☞ PPs have submitted to the DOE documentation on the analysis of the environmental impacts of the project activity or an environmental impact assessment in accordance with procedures as required by the host Party;
- ☞ The project activity is expected to result in GHG reductions that are additional to any that would occur in the absence of the proposed project activity;
- ☞ The baseline and monitoring methodologies comply with requirements pertaining to methodologies previously approved by the EB, or modalities and procedures for establishing a new methodology;
- ☞ Provisions for monitoring, verification and reporting are in accordance with the CDM M&P and relevant decisions of the COP/MOP;
- ☞ The project activity conforms to all other requirements for CDM project activities in CDM M&P and relevant decisions by the COP/MOP and the EB.

Validation Report [CMP/2005/8/Ad1, p15 para40]

The DOE shall:

- ☞ Prior to the submission of the validation report to the EB, have received from the PPs written approval of voluntary participation from the DNA of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development;
- ☞ In accordance with provisions on confidentiality above, make publicly available the PDD;
- ☞ Submit to the EB, if it determines the proposed project activity to be valid, a request for registration in the form of a validation report including the PDD, the written approval of the host Party, and an explanation of how it has taken due account of comments received;
- ☞ Make this validation report publicly available upon transmission to the EB.

BOX: Revisions to AM and validation

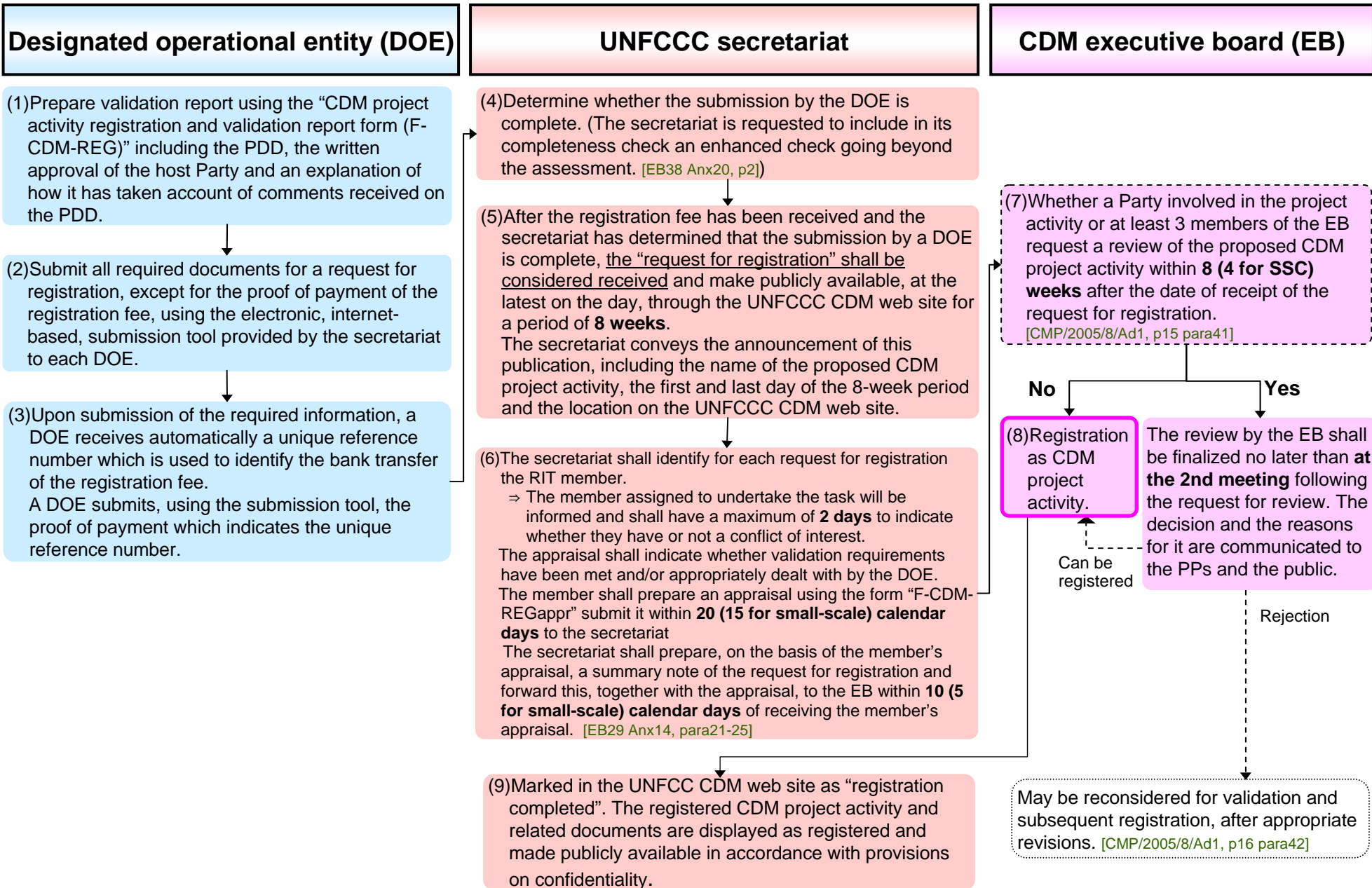
[EB27 Rep, para29]

- ☞ In cases where during validation of a project activity the PPs have to change the version of a methodology applied due to the expiry of the version originally applied after the PDD was available to the public for comments (note the PDD is to be made public as received from PPs), the DOE shall make publicly available, for **30 days**, the CDM-PDD unless otherwise specified in the corresponding revised methodology if the PP make this change within the grace period.

11. Registration

11-1. Procedures for registration

[EB14 Anx7] [CMP/2005/8/Ad1, p54]



11-2. Procedures for review of registration

[EB38 Anx20]

(1) Request for review

By a Party involved in a proposed CDM project activity

A request for review shall be sent by the relevant DNA to the EB, through the secretariat, using official means of communication (such as recognized official letterhead and signature or an official dedicated e-mail account).

By a member of the EB

A request for review shall be made by notifying the EB.

The secretariat acknowledges the receipt of a request for review and promptly forward the request to the EB via the list-serve.

- ☞ A review shall be related to issues associated with the validation requirements
- ☞ A request for review shall include the CDM project activity registration review form (F-CDM-RR) and provide reasons, including any supporting documentation.
- ☞ A request for review is not be considered if it is received after **17:00 GMT of the last day of the 8-week period** after the receipt of the request for registration.
- ☞ If 3 EB members submit the request for review form on the basis of issues which are only of minor nature, the DOE/PPs will be informed by the secretariat that the registration of the project has been postponed until they have provided satisfactory clarifications to the issue(s) raised. These clarifications shall be submitted to the secretariat **within 2 weeks** from the notification and they will be checked by the secretariat, in consultation with the Chair of the EB before the activity is registered.

As soon as a Party involved or 3 EB members request a review of a proposed project activity, the following action shall be taken:

- (a) The consideration of a review of the proposed project activity shall be included in the proposed agenda of the next meeting (In case a project is requested for review **3 weeks before** the start day of a EB meeting) or a subsequent EB meeting;
- (b) The EB notifies the DOE/PPs that a review has been requested, and informs about the date and venue of the next and subsequent EB meetings at which the request for review will be considered. Stakeholders interested in the review process also be given opportunity to attend the EB meeting;
 - ⇒ The DOE/PPs, when being notified of the request for review, shall be invited to submit comments to the EB on issues raised. The deadline for submitting such comments shall be **within 2 weeks from** the notification.
 - ⇒ In case a project is requested for review **within 1 week prior** to the deadline for circulation of the proposed agenda, there is a different treatment.
- (c) The DOE/PPs each provide a contact person for the review process;
- (d) The proposed project activity will be marked as being “under review” on the UNFCCC CDM web site and a notification be sent through the News facility.

(2) Scope and modalities of review

- ☞ The EB considers and decides, at **its next meeting**, either to undertake a review or register as a CDM project activity.
- ☞ If the EB decides to register the activity it may request the DOE/PPs to make corrections before proceeding with registration. If the Chair of the EB considers that the corrections have not been made properly, the Chair may ask the secretariat to place the case on the agenda of the next meeting of the EB.
- ☞ If the EB agrees to undertake a review, it decides on the scope of the review and the composition of a review team, at the same meeting. The review team consists of 2 EB members and outside experts, as appropriate.

(3) Review process

- ☞ A detailed request for clarification shall be prepared and submitted to the DOE/PPs by the review team **within 1 week** after the composition of a review team.
- ☞ Clarifications from the DOE/PPs to the review team shall be submitted **5 working days** after the request for clarifications has been made by the review team.
- ☞ The recommendation by the review team shall be made available to the EB **no later than 1 week before** the next EB meeting.

(4) Review decision

- ☞ The review by the EB shall be finalized no later than **at the 2nd meeting** following a request for review.
- ☞ The EB decides on whether to register the proposed project activity, to request the DOE/PPs to make corrections before proceeding with registration, or to reject it.
- ☞ The EB shall communicate the decision to the public.
- ☞ If the review indicates any issues relating to performance of the DOE, the EB considers whether or not to trigger a spot-checking of the DOE.

BOX: Coverage of costs of the request for review

The EB bears the costs for reviewing. If the EB rejects the registration and if a DOE is found in the situation of malfeasance or incompetence, the DOE shall reimburse the EB for the expenses. This provision is subject to review as experience accrues. [EB38 Anx20, para21]

11-3. Registration fee

Registration fee of the CDM project activity [EB37 Anx20]

- ◆ PPs shall pay registration fee at registration stage.
- ◆ The revised registration fee shall be the share of proceeds to cover administrative expenses (SOP-Admin) applied to the expected average annual emission reduction for the project activity over its crediting period.
 - ☞ SOP-Admin is **USD 0.10/CER** issued for the first 15,000 t-CO₂ and **USD 0.20/CER** issued for any amount in excess of 15,000 t-CO₂, for which issuance is requested in a given calendar year.
 - ☞ The maximum registration fee shall be **USD 350,000**.
 - ☞ **No registration fee** has to be paid for CDM project activities with expected average annual emission reduction over the crediting period below 15,000 t-CO₂.
 - ☞ No registration fee and share of proceeds at issuance have to be paid for CDM project activities hosted in least developed countries.

Example of registration fee

| Expected average annual emission reduction | Registration fee |
|--|------------------|
| 10,000 t | - |
| 15,000 t | \$ 1,500 |
| 30,000 t | \$ 4,500 |
| 100,000 t | \$ 18,500 |
| 1,000,000 t | \$ 198,500 |
| 1,757,500 t | \$ 350,000 |
| 3,000,000 t | \$ 350,000 |

- ◆ The DOE shall include a statement of the likelihood of the project activity to achieve the anticipated emission reductions stated in the PDD. This statement will constitute the basis for the calculation of the registration fee. [EB11 Anx6, para2]
- ◆ For A/R CDM, there is the “Guidance related to the registration fee for proposed A/R CDM project activities. [EB36 Anx21]

- ☞ The registration fee shall be deducted from the SOP-Admin.
 - ⇒ Sop-Admins is a fee that PPs have to pay at issuance of CERs. (chap.15)
- ☞ In effect, the registration fee is an advance payment of the SOP-Admin for the emission reductions achieved.
- ☞ If an activity is not registered, any registration fee above **USD 30,000** shall be reimbursed.

BOX: Withdrawn of PDD-published project activity

- ☞ The EB agreed that where a PP listed in the PDD published at validation is not included in the PDD submitted for registration, the DOE shall provide a letter from the withdrawn PP confirming its voluntary withdrawal from the proposed project activity, and address this issue in its validation report. [EB30 Rep, para41]

12. Revising a monitoring plan

- ◆ The CDM modalities and procedures allow PPs to revise monitoring plans in order to improve accuracy and/or completeness information, subject to the revision being validated by a DOE. [CMP/2005/8/Ad1, p18 para57]
- ◆ A request for revision of the monitoring plan is made by the DOE in advance of request for issuance of CERs.
- ◆ The request for revising monitoring plan is made in cases where:
 - ☞ the monitoring plan in the registered CDM project activity document is found not to be consistent with the approved monitoring methodology applied to the registered project activity; or
 - ☞ the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revision. [EB31 Anx14 para14-15]

Applicability of the revised monitoring plan [EB26 Anx34 para4]

PPs shall implement the monitoring plan contained in the registered PDD. PPs may only apply a revised monitoring plan once it has been accepted by the Chair of the MP in consultation with the Chair of the EB in accordance with this procedure.

Performing validation [EB26 Anx34 para5]

The DOE shall prepare and submit to the secretariat via a dedicated interface on the CDM website a validation opinion including information on how:

- ☞ the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions;
- ☞ the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity
- ☞ the findings of previous verification reports, if any, have been taken into account.

Processing of applications [EB26 Anx34 para6-9]

- ☞ The secretariat shall carry out a completeness check of the documentation submitted and when deemed complete assign the proposed revision to a member of the RIT to prepare an appraisal.
- ☞ The appraisal shall be submitted to the secretariat within a period of **10 days**, and forwarded to the EB within **1 working day**.
- ☞ The proposed revision of the monitoring plan shall be considered by the secretariat in consultation with the Chair of the MP and the Chair of the EB.
- ☞ If accepted, the revised monitoring plan shall be displayed on the project page on the CDM website.

13. Verification, certification and issuance of CERs

13-1. Procedures for verification, certification and issuance of CERs

[Procedures for making the monitoring report available to the public in accordance with paragraph 62 of the modalities and procedures for the CDM version 01 / 7 April 2005][Procedures relating to verification report and certification report/request for issuance of CERs version 01.1 / 20 December 2006] <<http://cdm.unfccc.int/Reference/Procedures>>

CDM project participants (PPs)

Designated operational entity (DOE)

UNFCCC secretariat

(1) CDM project participants contract with a DOE for verification and certification from a list of DOEs and submit a monitoring report. [CMP/2005/8/Ad1, p18 para60]
⇒ Timing and frequency of submission is not specified in the official documents.

(2) Make the monitoring report directly publicly available in PDF format on the UNFCCC CDM web site using a dedicated interface, specifying the start and ending date of the monitoring period.
⇒ Unless the EB has agreed grant an exception, a DOE shall not perform verification functions on a CDM project activity for which it has performed the function of validation/registration.
⇒ The first monitoring report made publicly available shall be the one prepared by the PPs prior to the verification activity. Any revised monitoring report, prepared as a result of corrective action raised by the DOE, shall be submitted as an additional document together with the request for issuance. [EB25 Rep, para107]

(4) Implement verification and provide a verification report. [CMP/2005/8/Ad, p18 para62(a)-(h)]
(5) Based on its verification report, certify in writing the verified amount of GHG emission reductions. [CMP/2005/8/Ad1, p19 para63]

(6) Submit the form "CDM form to submit verification and certification reports and to request issuance (F-CDM-REQCERS)" including, inter alia, the verification and certification reports, using the electronic submission tool available to DOEs on the UNFCCC CDM website.

(3) Immediately upon completion of the entry by the DOE, the information shall be made available on the UNFCCC CDM web site and the public shall be informed of the availability of the monitoring report through the CDM news facility. The secretariat shall promptly inform the DOE and PPs when the announcement has been made.

(7) Expediently determine whether the submission by the DOE is complete. (The secretariat is requested to include in its completeness check an enhanced check going beyond the assessment. [EB38 Anx22, p2])
⇒ The date of receipt of a request for issuance is the date when the secretariat has determined that the request is complete.

(8) The form, the verification and certification reports shall be made available on the UNFCCC CDM web site. The web site shall be distributed to:
⇒ EB by e-mail through its listserv
⇒ PPs, in accordance with the modalities of communication
⇒ Parties involved through DNA
⇒ DOE by e-mail to the contact person(s)
⇒ Public through the UNFCCC CDM news facility.

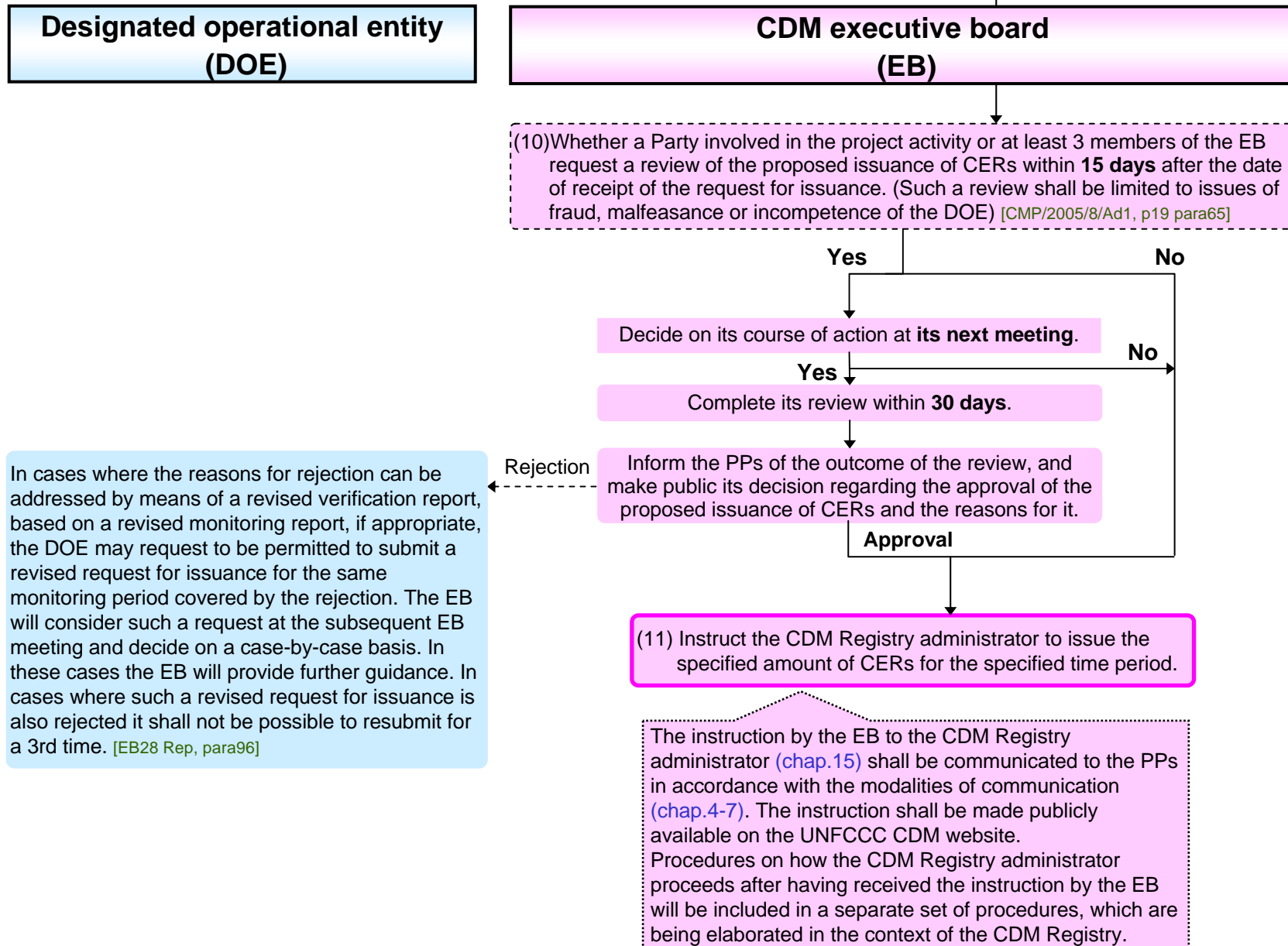
(9) The secretariat shall identify for each request for issuance the RIT member. The member will be informed and has a maximum of **1 day** to indicate whether he/she has or not a conflict of interest. If a conflict of interest situation exists another person shall be assigned. The appraisal shall indicate whether verification and certification requirements have been met and/or appropriately dealt with by the DOE. The RIT member shall prepare an appraisal using the form "Appraisal of issuance requests (F-CDM-ISSappr)" and submit it to the secretariat **within 6 calendar days**. The secretariat shall prepare a summary note of the request for issuance and forward this, together with the member's appraisal, to the EB **within 3 calendar days** of receiving the member's appraisal. [EB29 Anx14, para27-32].

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13. Verification, certification and issuance of CERs

13-1. Procedures for verification, certification and issuance of CERs

[Procedures relating to verification report and certification report/request for issuance of CERs version 01.1 / 20 December 2006] <<http://cdm.unfccc.int/Reference/Procedures>>



13-2. Procedures for review of issuance

[EB38 Anx22]

(1) Request for review

By a Party involved in a proposed CDM project activity

A request for review shall be sent by the relevant DNA to the EB, through the secretariat, using official means of communication (such as recognized official letterhead and signature or an official dedicated e-mail account).

By a member of the EB

A request for review shall be sent to the EB.

The secretariat shall acknowledge the receipt of a request for review and promptly forward the request to the EB via the list-serve.

- ☞ A review shall be limited to issues of fraud, malfeasance or incompetence of the DOEs. A request for review shall be specific in this regard.
- ☞ A request for review of a request for issuance of CERs has to clearly indicate the reasons and need for requesting in the on-line request for review form (FCDM-IR).
- ☞ A request for review is not be considered if it is received after **17:00 GMT of the last day of the 15-day period** after the receipt of the request for issuance of CERs.
- ☞ If 3 EB members submit the request for review form on the basis of other issues which are only of minor nature, the DOE/PPs will then be informed by the secretariat that the issuance of CERs has been postponed until they have provided satisfactory clarifications to the issue(s) raised. These clarifications shall be submitted to the secretariat **within 2 weeks** from the notification and they will be checked by the secretariat, in consultation with the Chair of the EB before the CDM registry administrator is instructed to issue CERs.

As soon as a review of a proposed issuance of CERs is requested by a Party involved or by 3 EB members, the following action shall be taken:

- (a) The consideration of a review of the proposed issuance of CERs shall be included in the proposed agenda of the next meeting (In case a issuance of CERs is requested for review **3 weeks before** the start day of a EB meeting) or a subsequent EB meeting;
- (b) The EB notifies the DOE/PPs that a review has been requested, and informs about the date and venue of the EB meeting at which the request for review will be considered. Stakeholders interested in the review process also be given an opportunity to attend the EB meeting;
 - ⇒ The DOE/PPs, when being notified of the request for review, shall be invited to submit comments to the EB on issues raised. The deadline for submitting such comments shall be **within 2 weeks from** the notification.
 - ⇒ In case a request for issuance is requested for review **within 1 week prior** to the deadline for circulation of the proposed agenda, there is a different treatment.
- (c) The DOE/PPs shall each provide a contact person for the review process;
- (d) The proposed issuance of CERs shall be marked as being “under review” on the UNFCCC CDM web site.

(2) Scope and modalities of review

- ☞ The EB considers and decides, at **its next meeting**, either to perform a review of the proposed issuance of CERs or to approve the issuance.
- ☞ If the EB decides to approve the issuance it may request the DOE/PPs to make corrections before proceeding with issuance. If the Chair of the EB considers that the corrections have not been made properly, the Chair may ask the secretariat to place the case on the agenda of the next EB meeting.
- ☞ If the EB agrees to perform a review, it decides on the scope of the review relating to issues of fraud, malfeasance or incompetence of the DOE and the composition of a review team, at the same meeting. The review team consists of 2 EB members and outside experts, as appropriate.

(3) Review process

- ☞ Requests for clarification and further information may be sent to the DOE/PPs. Answers shall be submitted to the review team, through the secretariat, within **5 working days** after the receipt of the request for clarification.
- ☞ The recommendation by the review team shall be made available to the EB **no later than 1 week before** the next EB meeting.

(4) Review decision

- ☞ The EB shall complete its review within **30 days** following its decision to perform the review.
- ☞ The EB decides on whether to approve the proposed issuance of CERs, to request the DOE to make corrections based on the findings from the review before approving the issuance of CERs, or to not approve the proposed issuance of CERs.
- ☞ The EB shall make public its decision regarding the approval of the proposed issuance of CERs and the reasons for it.
- ☞ If the review indicates any issues relating to performance of the DOE, the EB shall consider whether or not to trigger a spot-check of the DOE.

BOX: Coverage of costs of the request for review

The EB bears the costs for reviewing. If the EB decides not to approve a proposed issuance of CERs and if a DOE is found to be in the situation of malfeasance or incompetence, the DOE shall reimburse the EB for the expenses. This provision is subject to review as experience accrues. [EB38 Anx22, para21]

14. Deviation

- ◆ A DOE shall, prior to requesting registration of a project activity or issuance of CERs, notify the EB of deviations from AMs and/or provisions of registered project documentation and explain how it intends to address such deviations. [EB24 Anx30, para1]
- ◆ A request for deviation is suitable for situations where a change in the procedures for the estimation of emissions or monitoring procedures is required due to a change in the conditions, circumstances or nature of a registered project activity. The deviation shall be project specific.
- ◆ A request for deviation is not suited for cases where (i) the monitoring plan is not in accordance with the monitoring methodology applied to the registered project activity, (ii) when the approved methodology is no longer applicable to the project activity, (iii) it results in the types of changes referred to in (chap.7-6), (iv) or for example it results in a change in default parameter values other than those mentioned in the approved methodology. [EB30 Anx1, para12-13]

(1) Submission of a request for deviation [EB24 Anx30, para4-9]

(a) Registration: Request for deviation from an AM

If a DOE finds at validation that PPs deviated from an AM, it may seek guidance on the acceptability of the deviation from the EB prior to requesting registration.

If a DOE finds that the deviation from the AM requires revision of this methodology the procedures provided for revision of AM shall be used.

(b) Issuance: Request for deviation from provisions for a registered project activity

If a DOE determines at verification that PPs deviated from the monitoring plan of a registered CDM project activity, it may conclude not to certify, and inform the EB accordingly, or to seek guidance from the EB on the acceptability of the deviation prior to concluding on its verification/certification decision.

If guidance is sought, the DOE shall submit the form for submission of a request for deviation "F-CDM-DEV" through the dedicated internet interface.

Upon submission of the form, the secretariat shall forward the documentation to the EB (in case of (a), and to the MP).

- ☞ If the Secretariat, in consultation with the Chair of the MP (in case of (b), the Chair of the EB), assesses that the request for deviation does not meet the criteria for a request for deviation, it shall ask the DOE to submit the request as a request for revision of an AM (in case of (b), to resubmit the request for deviation). The date of transmission by the secretariat to the EB is the date of receipt of a request for deviation. Information on a request for deviation shall be made publicly available unless specified differently by the DOE.

(2) Consideration of a request for deviation [EB24 Anx30, para10-12]

The Chair of the EB, in consultation with the relevant chair of panel(s) and/or WG(s) decides within **5 working days**.

- ☞ The submission shall be considered by the relevant panels/WGs to provide technical input.
- ☞ If more information is required, the DOE shall provide such information. Upon receipt the information is forwarded to the members of the EB, panels, WGs, as applicable.

In the case that no technical clarification is needed by any panel and/or WG, or once technical clarifications have been provided by a panel and/or WG, the EB decides, whenever possible, by electronic decision making based on a decision prepared by the Chair of the EB,

- ☞ if the request for deviation shall be accepted or not;
- ☞ if further guidance is to be provided to the DOE; and
- ☞ if the general clarifications shall be shared with all DOEs and PPs, as appropriate.

Once a decision has been made by the EB, the secretariat shall inform the DOE about the decision. If general clarifications shall be shared with all DOEs and PPs, the secretariat makes the guidance publicly available.

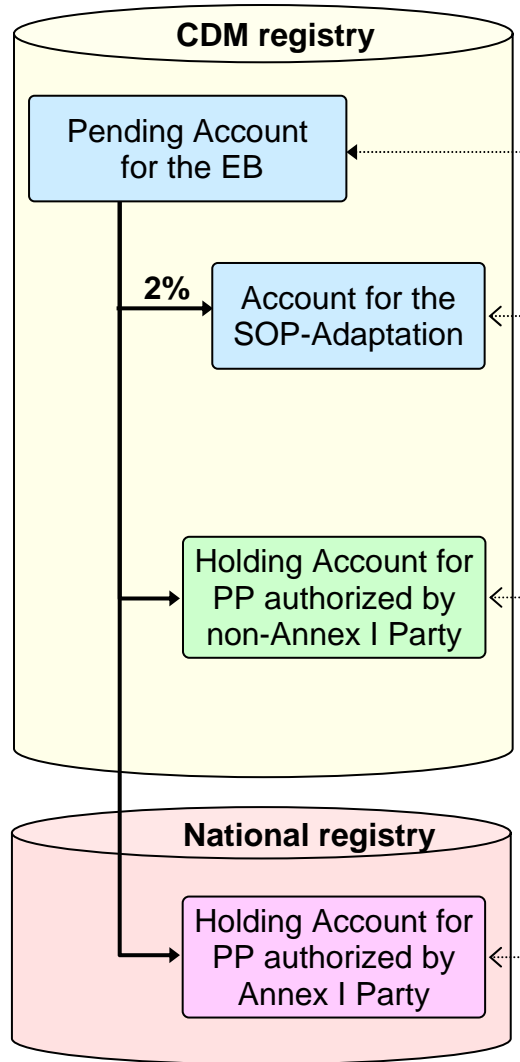
(3) Consideration of a request for deviation by panel/WG [EB24 Anx30, para13-14]

If a panel and/or WG is to consider a request for deviation, the Chair of the panel/WG decides,

- ☞ if it shall be treated at the next meeting of the panel/WG;
- ☞ or whether the request can be treated electronically by the panel/WG.

The panel/working group considers the proposed deviation at **its next meeting, if feasible**, and recommend to the EB whether the proposed request should be accepted and/or provide clarifications requested. Up to 2 member(s) shall be selected for preparing draft recommendations for the panel/WG.

15. Distribution of CERs



- ◆ Upon being instructed by the EB to issue CERs for a CDM project activity, the CDM registry administrator shall, promptly, issue the specified quantity of CERs into the pending account of the EB in the CDM registry. [CMP/2005/8/Ad1, p19 para66]
- ◆ The issuance of CERs, in accordance with the distribution agreement, shall be effected only when the share of proceeds to cover administrative expenses (SOP-Admin) of the CDM has been received. [CMP/2005/8/Ad1, p98 para37]
 - ☞ The **SOP-Admin** shall be:
 - ⇒ **USD 0.10** per CER issued for the 1st 15,000 t-CO₂ equivalent for which issuance is requested in a given calendar year;
 - ⇒ **USD 0.20** per CER issued for any amount in excess of 15,000 t-CO₂ equivalent for which issuance is requested in a given calendar year. [EB23 Anx35, para1]
 - ☞ The registration fee shall be deducted from the SOP-Admin. (chap.11-3)
 - ☞ No registration fee and share of proceeds at issuance have to be paid for CDM project activities hosted in least developed countries. [EB37 Anx20, para5]

Among issued CERs, 2% of those will be deducted for share of proceeds to assist developing Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation (SOP-Adaptation). [CP/2001/13/Ad2, p23 para15(a)]

- ☞ CDM project activities in least developed country Parties shall be exempt from the SOP to assist with the costs of adaptation. [CP/2001/13/Ad2, p23 para15(b)]

- ◆ CERs are forwarded to the registry accounts of PPs, in accordance with their request. [CMP/2005/8/Ad1, p20 para66(b)]
- ◆ The decision on the distribution of CERs shall exclusively be taken by PPs. [Glos ver3, p26]
 - ☞ PPs shall communicate with the EB, through the secretariat, in writing in accordance with the “modalities of communication” as indicated at the time of registration or as subsequently altered.
 - ☞ If a PP does not wish to be involved in taking decisions on the distribution of CERs, this shall be communicated to the EB through the secretariat at the latest when the request regarding the distribution is made.
 - ☞ The request regarding the distribution of CERs can only be changed if all signatories have agreed to the change and signed the appropriate document. [Glos ver3, p27]
- ◆ Requests for the partial distribution of CERs issued in a single transaction shall be allowed. [EB21 Rep, para70]

BOX: Temporary accounts for PPs from Annex I Parties (chap.20-1)
 The CDM registry is to include temporary accounts for Annex I Parties, and PPs from such Parties, until national registries for such Parties (and international transaction log) and entities are operational, for the purpose of receiving CERs, forwarded to them from the pending account and of transferring such units to accounts in national registries. [CP/2004/2/, p15 para57]

BOX: Transferring CERs from the CDM registry
 The CDM registry is to enable non-Annex I Parties, and entities from non-Annex I Parties, to transfer CERs from their holding accounts in the CDM registry to accounts in national registries. [CP/2004/2/, p15 para58]

16. Renewal of crediting period

[EB36 Anx43]

The renewal of a crediting period of a registered CDM project activity shall only be granted if a DOE determines and informs the EB that the original project baseline is still valid or has been updated taking account of new data where applicable.

(1) Preparation of a revised PDD

PPs shall update those sections of the PDD relating to the baseline, estimated emission reductions and the monitoring plan using an AM as follows:

- ☞ a) The latest AM, applied in the original PDD of the registered CDM project activity, shall be used whenever applicable;
- ☞ b) If a baseline and monitoring methodology, applied in the original PDD, was withdrawn after the registration of the CDM project activity and replaced by a consolidated methodology, the latest approved version of the respective consolidated methodology shall be used;
- ☞ c) If the registered CDM project activity does not meet applicability criteria of the options provided for by a) or b), due to their revision or due to the update of the baseline, the PPs shall either select another applicable AM or request, through the DOE, a deviation from an AM for the purpose of renewal of the crediting period.

(2) Application for renewal of a crediting period

PPs shall notify the secretariat of their intention to request a renewal of a crediting period of the registered CDM project activity by submitting an updated PDD and informing of their selection of a DOE, **within 9 to 6 months prior to the date of expiration** of the current crediting period.

- ☞ For the purpose of renewal of the crediting period it is not necessary to obtain a new letter of approval from Parties involved.
- ☞ No fee is due for the application for the renewal of the crediting period.

The DOE's validation opinion shall address the following issues:

- ☞ a) the validity of the original baseline scenario or its update;
- ☞ b) an impact of new relevant national and/or sectoral policies and circumstances on the baseline scenario taking into account relevant EB guidance; and
- ☞ c) the correctness of the application of an AM for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

A DOE shall submit a request for renewal of a crediting period of a registered CDM project activity using the form "Renewal of the crediting period of a registered CDM project activity" (F-CDM-REN) along with the updated PDD and validation report.

If the notification of the intention to request a renewal of a crediting period is not received by the secretariat 6 months prior to the date of expiration of the current crediting period, the PP shall not be entitled to the issuance of CERs for the period from the expiration date of the current crediting period until the date on which the crediting period is deemed renewed.

(3) Processing of an application

Upon receipt of a request for renewal of a crediting period of the registered CDM project activity the secretariat will determine whether all information and documentation requested in the F-CDM-REN form has been provided by the DOE.

Once the secretariat has determined that the request is complete it shall be made publicly available through the UNFCCC CDM web site for a period of **4 weeks**. The secretariat shall announce a request for renewal of a crediting period of the registered CDM project activity on the UNFCCC CDM web site and notify the requesting DOE, the PPs and the DNA.

Unless there is a request for review within 4 weeks after the publication of the request for renewal, the crediting period of the registered CDM project activity shall be deemed renewed.

- ☞ The procedures to be applied for review of a request for renewal of a crediting period are the same as the procedures for review of registration. ([chap.11-2](#))
- ☞ The start date of the renewed crediting period is the first day after the ending date of the previous crediting period.

17. Small-scale CDM (SSC)

17-1. Definition of small-scale CDM (SSC)

Simplified modalities and procedures are applicable for the following small-scale CDM project activities. [CMP/2005/8/Ad1, p43-45]

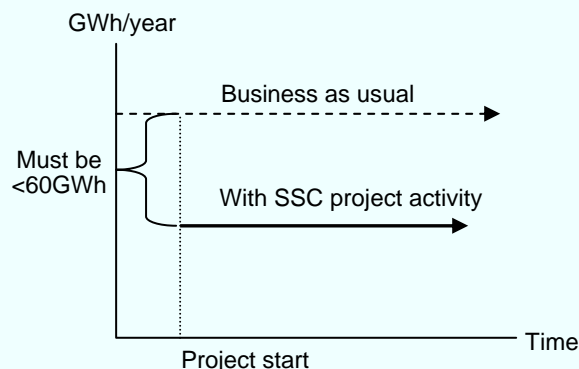
- ☞ Project activities using a renewable crediting period shall reassess their compliance with the limits at the time when they request renewal of the crediting period. [Glos ver3, p31]

Type I project activities shall remain the same, such that renewable energy project activities shall have a maximum output capacity of 15 MW (or an appropriate equivalent) [CMP/2006/10/Ad1, p8 para28(a)]

- ☞ Maximum "output" is defined as installed/rated capacity, as indicated by the manufacturer of the equipment or plant, disregarding the actual load factor of the plant;
- ☞ As MW(e) is the most common denomination, and MW(th) only refers to the production of heat which can also be derived from MW(e), the EB agreed to define MW as MW(e) and otherwise to apply an appropriate conversion factor.

[Glos ver3, p31]

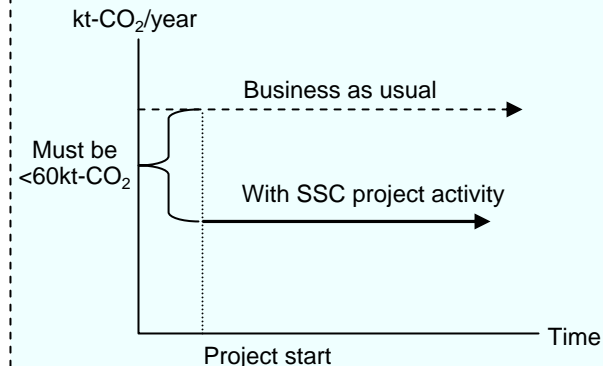
Type II project activities or those relating to improvements in energy efficiency which reduce energy consumption, on the supply and/or demand side, shall be limited to those with a maximum output of 60 GWh per year (or an appropriate equivalent); [CMP/2006/10/Ad1, p8 para28(b)]



- ☞ Demand side, as well as supply side, projects shall be taken into consideration, provided that a project activity results in a reduction of maximum 60 GWh. A total saving of 60 GWh is equivalent to 4000 hours of operation of a 15 MW plant or $60 \times 3.6 \text{ TJ} = 216 \text{ TJ}$, where TJ stands for terajoules.

[Glos ver3, p31]

Type III project activities, otherwise known as other project activities, shall be limited to those that result in emission reductions of less than or equal to 60 kt CO₂ equivalent annually; [CMP/2006/10/Ad1, p8 para28(c)]



BOX: Equipment performance [Glos ver3, p19]

☞ To determine equipment performance, PPs shall use:

- (a) The appropriate value specified in CMP/2006/10/Ad1 p9 para28;
- (b) If the value specified in (a) is not available, the national standard for the performance of the equipment type;
- (c) If the value specified in (b) is not available, an international standard for the performance of the equipment type, such as ISO and IEC standards;
- (d) If a value specified in (c) is not available, the manufacturer's specifications provided that they are tested and certified by national or international certifiers.

☞ PPs have the option of using performance data from test results conducted by an independent entity for equipment installed under the project activity.

Project activity with more than one component

- ◆ A single project activity composed of 2 or 3 distinct project activities being implemented by the same PP, each applying an approved category/methodology separate from the other. [Glos ver3, p25]
- ◆ Each component of a project activity should receive or provide an input from/to other components of the project activity. [Glos ver3, p25]
- ◆ The EB agreed that the sum of the size of components of a project activity belonging to the same type should not exceed the limits for SSC project activities. [EB28 Rep, para56]
- ◆ The EB agreed that a project activity with more than one component may submit one PDD, provided the information regarding the sections covering the type and categories and technology / measure of the SSC project activity and application of the baseline and monitoring methodology in the CDM-PDD are provided separately for each component. [EB28 Rep, para57]
 - ☞ Two different project activities will be considered to be applying the same technology if they provide the same kind of output and use the same kind of equipment and conversion process.
 - ☞ Two different project activities will be considered to be using the same measure if they constitute the same course of action and result in the same kind of effect (e.g. two projects using the same management practice such as fuel switch). [Glos ver3, p28]

BOX: In case a SSC project activity goes beyond the limit

If a project activity goes beyond the limit of its type in any year of the crediting period, the emission reductions that can be claimed by the project during this particular year will be capped at the maximum emission reduction level estimated in the CDM-SSC-PDD by the PPs for that year during the crediting period. [Glos ver3, p30]

17-2. Simplified modalities and procedures

- ◆ SSC project activities shall follow the stages of the project cycle specified in the CDM M&P. In order to reduce transaction costs, however, modalities and procedures are simplified for SSC project activities, as follows: [CMP/2005/8/Ad1, p45 para9]
 - ☞ Project activities may be bundled or portfolio bundled at the following stages in the project cycle: the PDD, validation, registration, monitoring, verification and certification;
 - ☞ The requirements for the PDD are reduced (Att.1-2);
 - ☞ Baselines methodologies by project category are simplified to reduce the cost of developing a project baseline;
 - ☞ Monitoring plans are simplified to reduce monitoring costs;
 - ☞ The same OE may undertake validation, and verification and certification.
- ◆ GHG reductions shall be adjusted for leakage in accordance with the provisions of Appendix B (simplified baseline and monitoring methodologies) for the relevant project categories. The EB shall consider simplification of the leakage calculation for any other project categories added to Appendix B.
 - ☞ In the cases where leakage is to be considered, it shall be considered only within the boundaries of non-Annex I Parties. [Glos ver3, p21]
- ◆ The other differences from large-scale CDM project activities are as follows:
 - ☞ For the appraisal by EB-RIT, the member shall prepare an appraisal and submit it within **15 calendar days** (20 for large-scale) to the secretariat. The secretariat shall prepare a summary note of the request for registration and forward this, together with the appraisal, to the EB within **5 calendar days** (10 for large-scale) of receiving the member's appraisal. [EB29 Anx14, para24-25]
 - ☞ The registration by the EB shall be deemed final 4 (8 for large) weeks after the date of receipt of the request for registration, unless there is a request for review of the proposed CDM project activity. [CMP/2005/8/Ad1, p48 para24]

BOX: Simplified baseline and monitoring methodologies

- ☞ There are approved methodologies for small scale CDM project activities (AMS). (Att.3)
- ☞ There is a "Procedures for submission and consideration of request for clarification on the application of approved small scale methodologies". [EB34 Anx6]
- ☞ There is a "Procedures revisions of SSC methodologies" [EB34 Anx7]
- ☞ There is a "Procedures for submission and consideration of proposed SSC methodologies". [EB37 Anx8]

Additionality for SSC project activities [http://cdm.unfccc.int/methodologies/SSCmethodologies/AppB_SSC_AttachmentA.pdf]

- ◆ The attachment A to Appendix B (=CMP/2005/8/Ad1 p52) corresponds to list of barriers PPs shall use in order to demonstrate that a small-scale project activity would not have occurred otherwise (i.e. is additional).
- ◆ PPs shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:

Investment barrier:

- ☞ a financially more viable alternative to the project activity would have led to higher emissions;

Technological barrier:

- ☞ a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;

Barrier due to prevailing practice:

- ☞ prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;

Other barriers:

- ☞ without the project activity, for another specific reason identified by the PP, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

- ◆ Quantitative evidence that the project activity would otherwise not be implemented may be provided instead of a demonstration based on the barriers listed above.

Non-binding best practice examples to demonstrate additionality for SSC project activities [EB35 Anx34]

- ☞ Best practice examples of investment barrier include but are not limited to, the application of investment comparison analysis using a relevant financial indicator, application of a benchmark analysis or a simple cost analysis (where CDM is the only revenue stream such as end-use energy efficiency). It is recommended to use national or global accounting practices and standards for such an analysis.
- ☞ Best practice examples of access-to-finance barrier (the project activity could not access appropriate capital without consideration of the CDM revenues) include but are not limited to, the demonstration of limited access to capital in the absence of the CDM, such as a statement from the financing bank that the revenues from the CDM are critical in the approval of the loan.
- ☞ Best practice examples of technological barrier include but are not limited to, the demonstration of nonavailability of human capacity to operate and maintain the technology, lack of infrastructure to utilize the technology, unavailability of the technology and high level of technology risk.
- ☞ Best practice examples of barrier due to prevailing practice include but are not limited to, the demonstration that project is among the first of its kind in terms of technology, geography, sector, type of investment and investor, market etc.

17-3. Bundling of SSC

Bundling [Glos ver3, p12]

- ◆ Bundle is defined as, bringing together of several SSC project activities, to form a single CDM project activity or portfolio without the loss of distinctive characteristics of each project activity.
- ◆ Project activities within a bundle can be arranged in one or more sub-bundles, with each project activity retaining its distinctive characteristics.
 - ☞ Such characteristics include its: technology/measure; location; and application of simplified baseline methodology.
- ◆ Project activities within a sub-bundle belong to the same type. The sum of the output capacity of projects within a sub-bundle must not be more than the maximum output capacity limit for its type.

Debundling [EB36 Anx27]

- ◆ Debundling is defined as the fragmentation of a large scale project activity into smaller parts.
- ◆ A small-scale project activity that is part of a large scale project activity is not eligible to use the simplified modalities and procedures for SSC project activities.
- ◆ A proposed small-scale project activity shall be deemed to be a debundled component of a large scale project activity if there is a registered SSC project activity or a request for registration by another small-scale project activity:
 - ☞ By the same project participants;
 - ☞ In the same project category and technology/measure;
 - ☞ Registered within the previous 2 years;
 - ☞ Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.
- ◆ If a proposed small-scale project activity is deemed to be a debundled component, but the total size of such an activity combined with the previous registered SSC project activity does not exceed the limits for SSC project activities, the project activity can qualify to use simplified modalities and procedures for SSC project activities.

General Characteristics [SSC GL ver4, p19 para1-8]

- ☞ Project activities wishing to be bundled shall indicate this when making the request for registration.
- ☞ The composition of bundles shall not change over time. A project activity shall not be taken out of a bundle nor shall a project activity be added to the bundle after registration.
- ☞ All project activities in the bundle shall have the same crediting period.
- ☞ PPs shall at registration provide a written statement along with the submission of the bundle indicating:
 - ⇒ The agreement of all PPs to bundle their individual project activities;
 - ⇒ One PP who represents all PPs in order to communicate with the EB.
- ☞ Bundled project activities shall be submitted in a single submission to the EB and pay only one fee proportional to the amount of expected average annual emission reductions of the total bundle.
- ☞ If 3 EB members or a Party involved in a project activity requests the review of the project activity, the total bundle remains under review.
- ☞ A form with information related to the bundle "F-CDM-BUNDLE" must be included in the submission. (Att.1-3)

Letter of approval [SSC GL ver4, p20 para12-14]

The letter of approval by the host Party(ies) has to indicate that the Party is aware that the project activity(ies) taking place in its territory is part of the bundle.

Overall monitoring plan [Glos ver3, p24]

- ☞ If project activities are bundled, a separate monitoring plan shall apply for each of the constituent project activities, or an overall monitoring plan shall apply for the bundled projects, as determined by the DOE at validation.
- ☞ Only projects within the same category and technology/measure can use an overall monitoring plan.

Validation and verification [SSC GL ver4, p20 para15]

- ☞ One DOE can validate this bundle.
- ☞ One verification report is adequate, one issuance will be made at the same time for the same period, and a single serial number will be issued for all the project.

18. Afforestation and Reforestation CDM (A/R CDM)

18-1. Overview of A/R CDM

Rules and procedures regarding A/R CDM project activities are similar to those of GHG emission reduction CDM project activity including project cycle, PDD contents, and validation and verification procedure. The most significant difference between the emission reduction CDM and A/R CDM is non-permanence. Once GHG emission reductions are achieved, they are permanent reduction whereas in A/R CDM, CO₂ once sequestered in trees could be release back into the atmosphere in an occasion of such as forest fire or die back from pests. The issue of non-permanence is addressed by creating different type of CERs, namely temporary CERs (**tCERs**) and long-term CERs (**ICERs**).

Procedures to demonstrate the eligibility of lands for A/R CDM project activities [EB35 Anx18]

- ◆ 1. PPs shall provide evidence that the land within the planned project boundary is eligible for an A/R CDM project activity by following the steps outlined below.
 - ☞ (a) Demonstrate that the land at the moment the project starts does not contain forest by providing transparent information that:
 - ⇒ Vegetation on the land is below the forest thresholds adopted for the definition of forest by the host country; and
 - ⇒ All young natural stands and all plantations on the land are not expected to reach the minimum crown cover and minimum height chosen by the host country to define forest; and
 - ⇒ The land is not temporarily unstocked, as a result of human intervention such as harvesting or natural causes.
 - ☞ (b) Demonstrate that the activity is a reforestation or afforestation project activity:
 - ⇒ For reforestation project activities, demonstrate that the land was not forest by demonstrating that the conditions outlined under (a) above also applied to the land on 31 December 1989.
 - ⇒ For afforestation project activities, demonstrate that for at least 50 years vegetation on the land has been below the thresholds adopted by the host country for definition of forest.
- ◆ 2. In order to demonstrate steps 1 (a) and 1 (b), PPs shall provide information that reliably discriminates between forest and non-forest land according to the particular thresholds adopted by the host country, *inter alia*:
 - ☞ (a) Aerial photographs or satellite imagery complemented by ground reference data; or
 - ☞ (b) Land use or land cover information from maps or digital spatial datasets; or
 - ☞ (c) Ground based surveys (land use or land cover information from permits, plans, or information from local registers such as cadastre, owners registers, or other land registers).If options (a), (b), and (c) are not available/applicable, project participants shall submit a written testimony which was produced by following a Participatory Rural Appraisal (PRA) methodology or a standard Participatory Rural Appraisal (PRA) as practised in the host country.

An non-Annex I Party may host an A/R CDM project, if it has selected and reported to the EB through its DNA:

- (a) A single minimum tree crown cover value between 10 and 30%; and
- (b) A single minimum land area value between 0.05 and 1 hectare; and
- (c) A single minimum tree height value between 2 and 5 metres.

[CDM A/R M&P, p17 para7-8]

Crediting period of the A/R CDM project activity [CMP/2005/8/Ad1, p67 para23]

It begins at the start of the A/R CDM project activity and can be either:

- ☞ A maximum of 20 years, may be renewed twice (total 60 years maximum)
- ☞ A maximum of 30 years

- ☞ A/R CDM project activity starting after 1 January 2000 can be validated and registered after 31 December 2005 as long as the 1st verification of the project activity occurs after the date of registration of this project activity.
- ☞ Given that the crediting period starts at the same date as the starting date of the project activity, the projects starting 2000 onwards can accrue tCERs/ICERs as of the starting date. [EB21 Rep, para64]

The initial verification and certification of an A/R CDM project activity may be undertaken at a time selected by the PPs. Thereafter, verification and certification shall be carried out **every 5 years** until the end of the crediting period. [CMP/2005/8/Ad1, p69 para32]

18-2. Non-permanence of A/R CDM (tCER and ICER)

Temporary CERs (**tCERs**) and Long-term CERs (**ICERs**):

- ☞ The PPs shall select one of the following approaches to addressing non-permanence of an A/R CDM project activity [CMP/2005/8/Ad1, p70 para38]:
 - (a) Issuance of **tCERs** for the net GHG removals by sinks achieved by the project activity since the project starting date; or
 - (b) Issuance of **ICERs** for the net GHG removals by sinks achieved by the project activity during each verification period
- ☞ The approach chosen to address non-permanence shall remain fixed for the crediting period including any renewals.

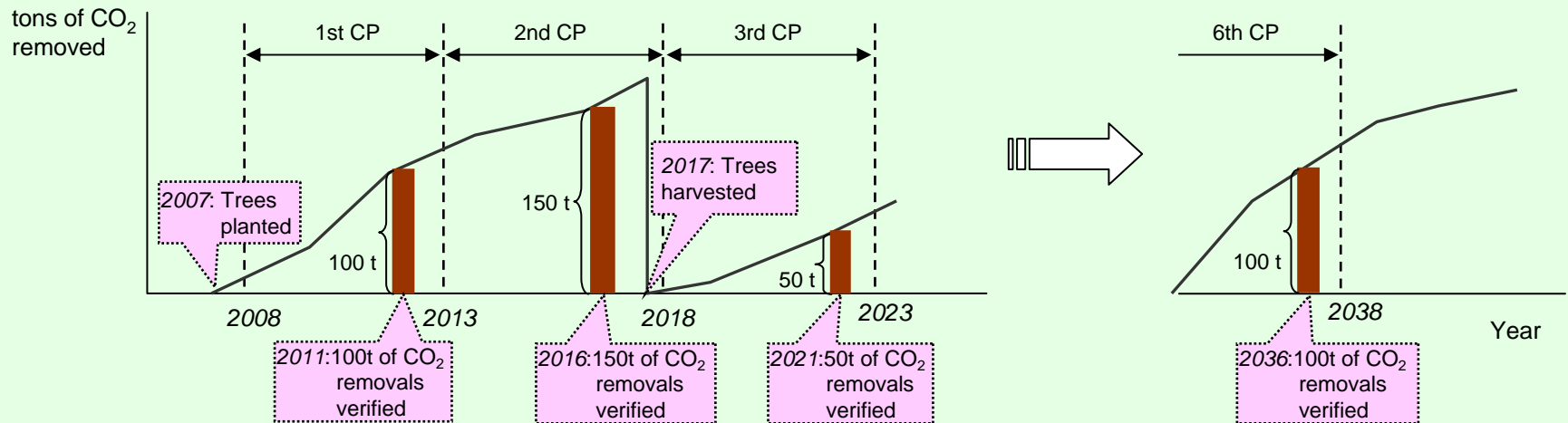
Expiry of tCERs and ICERs

- ☞ Each **tCER** shall expire at the end of the commitment period subsequent to the commitment period for which it was issued. [CMP/2005/8/Ad1, p71 para42]
- ☞ Each **ICER** shall expire at the end of the crediting period or, where a renewable crediting period is chosen, at the end of the last crediting period of the project activity. [CMP/2005/8/Ad1, p71 para46]

Example: Changes in net GHG removals by a A/R project activity

The chart below shows changes in GHG removals by an A/R project activity. In the next two pages, an explanation of issuance and expiration of **tCERs** and **ICERs** will be given based on the assumptions shown in the chart below.

- ☞ Trees are planted in 2007.
- ☞ 1st issuance of **tCERs** or **ICERs** takes place in 2011. Trees are left to grow during the 1st and 2nd commitment periods and 2nd issuance of **tCERs** or **ICERs** takes place in 2016.
- ☞ **Assuming** each commitment period (CP) would be 5 years.
- ☞ Trees are cut in 2017 before the end of the 2nd commitment period (CP) and 3rd issuance takes place in 2021. The last issuance takes place in 2036.
- ☞ Each **tCER** or **ICER** issued will be used for achieving a Party's emission reduction target.
- ☞ Crediting period is 30 years without renewal.

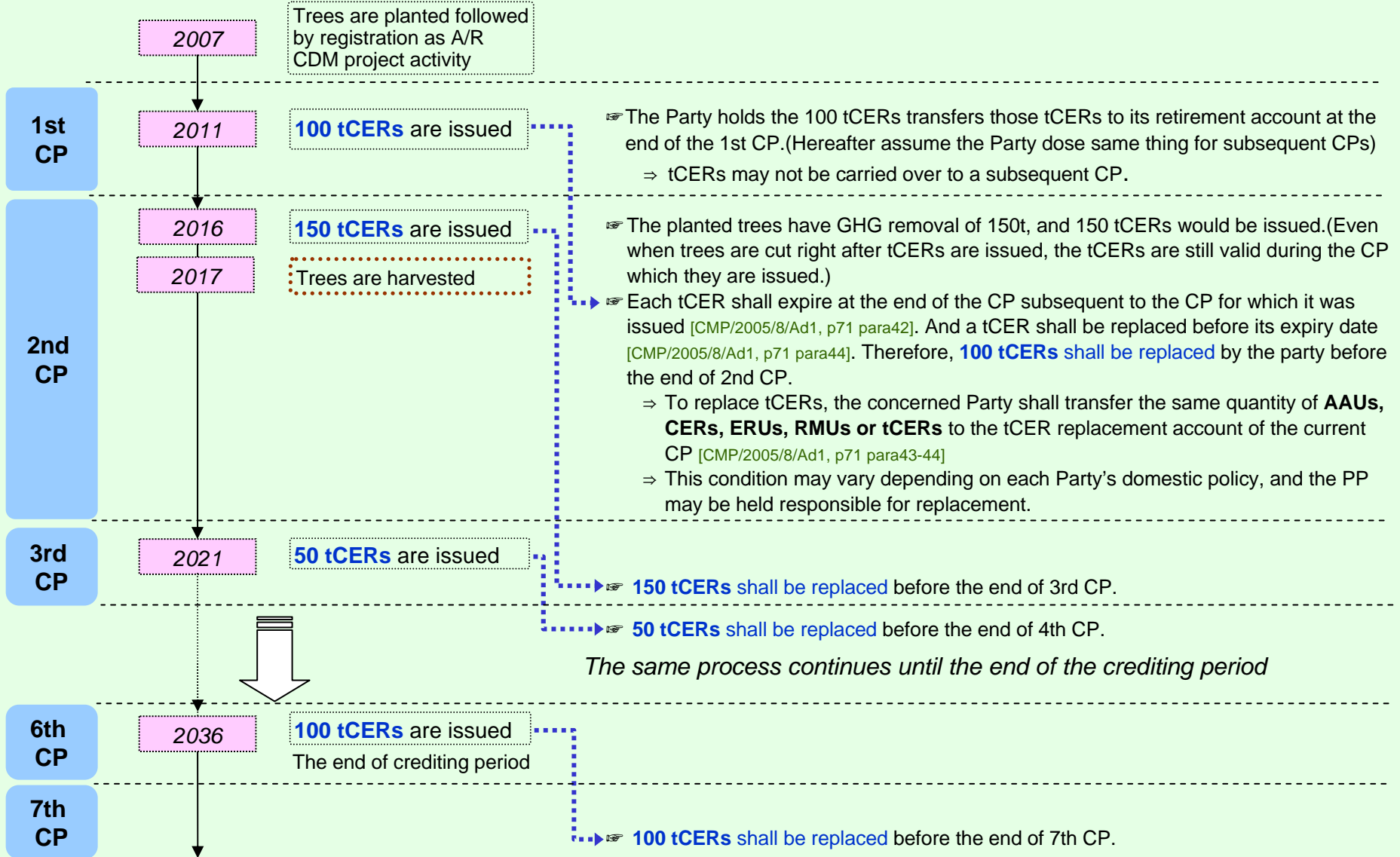


18-2. Non-permanence of A/R CDM (tCER and ICER)

Example: From issuance to replacement of tCERs

Actions taken by PPs

Actions taken by Annex I Parties

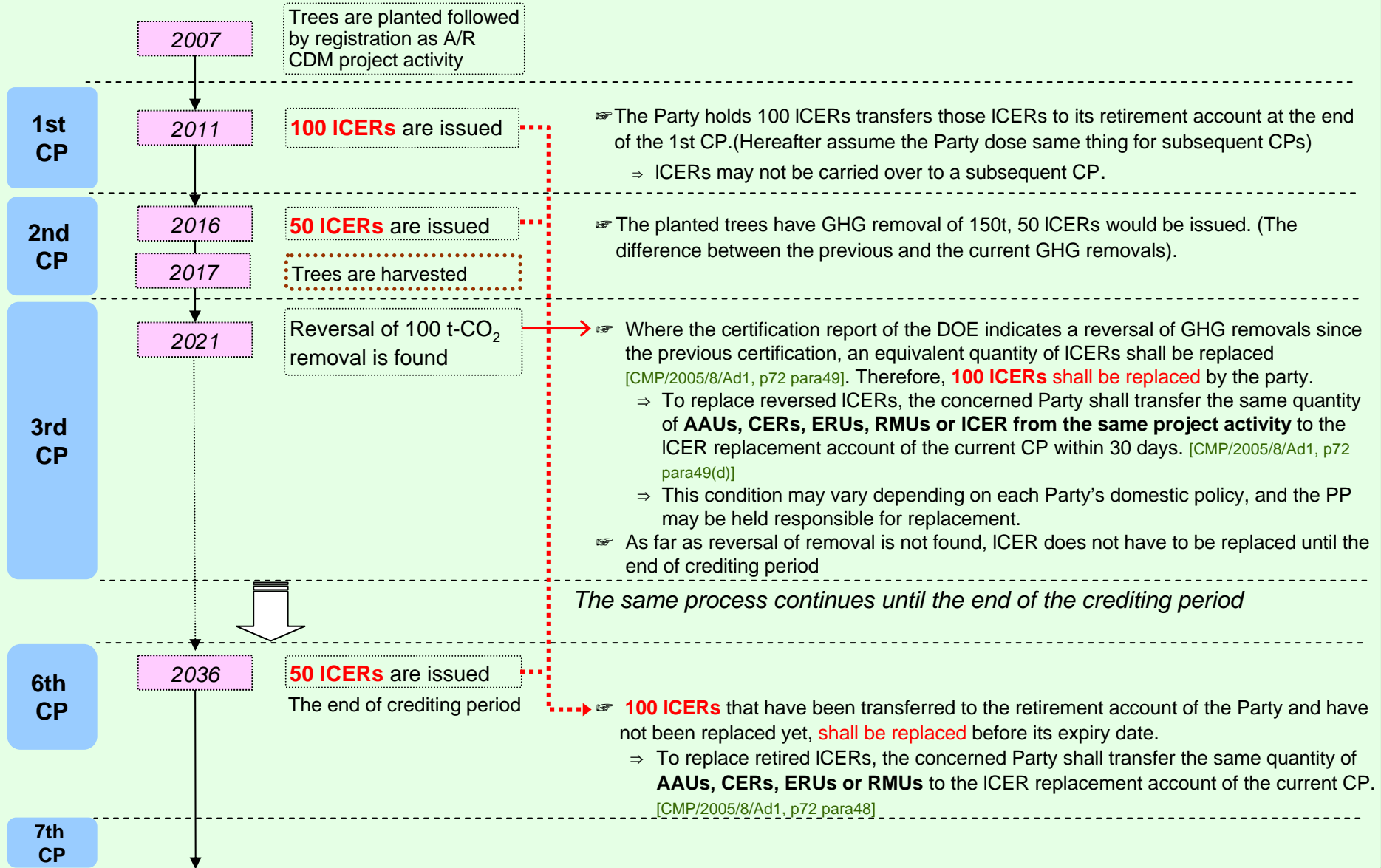


18-2. Non-permanence of A/R CDM (tCER and ICER)

Example: From issuance to replacement of **ICERs**

Actions taken by PPs

Actions taken by Annex I Parties



18-3. Small-scale A/R CDM

Definition of small-scale A/R CDM project activity

- ◆ Those that are expected to result in net GHG removals by sinks of less than 16,000 t-CO₂/year; [EB37 Rep, para55]
 - ☞ The average projected net GHG removals by sinks for each verification period shall not exceed 16,000 t-CO₂/year. [CP/2004/10/Ad2, p26 para1(b)]
- ◆ Developed or implemented by low-income communities and individuals as determined by the host Party. [CMP/2005/8/Ad1, p62 para1(i)]
 - ☞ Prior to the submission of the validation report to the EB, the DOE have received from the PPs a written declaration of that. [CMP/2005/8/Ad1, p85 para15(b)]

If a small-scale A/R CDM project activity results in net GHG removals by sinks greater than 8,000t of CO₂ per year, the excess removals will not be eligible for the issuance of **tCERs** or **ICERs**.

[CMP/2005/8/Ad1, p62 para1(i)]

The “General principles for bundling” [EB21, Anx 21] may not be applicable mutatis mutandis in the context of bundles of small scale A/R project activities created for the purpose of validation. [EB32 Rep, para42]

Simplified modalities and procedures for small-scale A/R CDM project activity

- ◆ In order to reduce transaction costs, modalities and procedures are simplified for small-scale A/R CDM project activities as follows: [CMP/2005/8/Ad1, p82 para1]
 - ☞ The requirements for the project design document are reduced;
 - ☞ Baseline methodologies by project type are simplified to reduce the cost of developing a project baseline;
 - ☞ Monitoring plans are simplified, including simplified monitoring requirements, to reduce monitoring costs;
 - ☞ The same operational entity may undertake validation, and verification and certification.
- ◆ Small-scale A/R CDM project activities shall be:
 - ☞ exempt from the share of proceeds to be used to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change;
 - ☞ entitled to a reduced level of the non-reimbursable fee for requesting registration and a reduced rate of the share of proceeds to cover administrative expenses of the CDM. [CMP/2005/8/Ad1, p83 para13]

- ◆ There is a “Guidelines for completing the simplified project design document for small scale A/R (CDM-SSC-AR-PDD) and the form for submissions on methodologies for small scale A/R CDM project activities (F-CDM-SSC-AR-Subm) Version -04.” [EB35 Anx23]

19. CDM Programme of activities

[EB32 Anx38]

A programme of activities (**PoA**) and a CDM program activity (**CPA**)

A programme of activities (**PoA**) is:

- ☞ a voluntary coordinated action,
- ☞ by a private or public entity,
- ☞ which coordinates and implements any policy/measure or stated goal,
 - ⇒ i.e. incentive schemes and voluntary programmes,
- ☞ which leads to GHG emission reductions or increase removals by sinks additionally,
- ☞ via an unlimited number of CDM program activities (**CPAs**).

A CDM program activity (**CPA**) is:

- ☞ a project activity under a programme of activities,
- ☞ a single, or a set of interrelated measure(s),
- ☞ to reduce GHG emissions or result in net removals by sinks, applied within a designated area defined in the baseline methodology.
 - ⇒ The applied AM shall define whether the **CPA** is undertaken in a single facility/installation/land or undertaken in multiple facilities/installations/land.
 - ⇒ In the case of **CPAs** which individually do not exceed the SSC threshold, SSC methodologies may be used.

◆ CDM programme activities (**CPAs**) under a programme of activities (**PoA**) can be registered as a single CDM project activity.

Coordinating or managing entity [EB32 Anx38 para4-5]

- ☞ A **PoA** shall be proposed by the coordinating or managing entity which shall be a PP authorized by all participating host country DNAs involved and identified in the modalities of communication (chap.4-7) as the entity which communicates with the EB, including on matters relating to the distribution of CERs.
- ☞ PPs of the **PoA** shall make arrangements with the coordinator or managing entity, relating to communications, distribution of CERs and change of PPs.

Boundary [EB32 Anx38 para2]

- ☞ The physical boundary of a **PoA** may extend to more than one country provided that each participating non-annex I host Party provides confirmation that the **PoA**, and thereby all **CPAs**, assists it in achieving sustainable development.

Treatment of local/regional/national policies and regulations [EB32 Anx38 para3]

- ☞ A **PoA** shall comply with all current guidance by the EB concerning the treatment of local/regional/national policies and regulations.
- ☞ **PoAs** addressing mandatory local/regional/national policies and regulations are permissible provided it is demonstrated that these policies and regulations are systematically not enforced. If they are enforced, the effect of the **PoA** is to increase the enforcement beyond the mandatory level required.

Double counting [EB32 Anx38 para6]

- ☞ The coordinating entity of the **PoA** shall identify measures to ensure that all **CPAs** under its **PoA** are neither registered as an individual CDM project activity nor included in another registered **PoA**. These measures are to be validated and verified by DOE.

Registration fee for a **PoA** [EB33 Rep, para60]

- ☞ The registration fee for a **PoA** is based on the total expected annual emission reductions of the **CPA(s)** that will be submitted together with the request for registration of the **PoA**. The calculation of the amount to be paid and the procedures for payment will follow mutatis mutandis the existing rules. (chap.11-3)
- ☞ For each **CPA** which is included subsequently, no fee is to be paid.
- ☞ Fees are to be paid by the coordinating/managing entity to the secretariat.

Baseline and additionality [EB32 Anx38 para7-8, 12]

- ☞ All **CPAs** of a **PoA** shall apply the same AM,
- ☞ The **PoA** shall demonstrate that GHG reductions or net removals by sinks for each **CPA** under the **PoA** are real and measurable, are an accurate reflection of what has occurred within the project boundary, and are uniquely attributable to the **PoA**.
- ☞ The **PoA** shall therefore define at registration, the type of information which is to be provided for each **CPA** to ensure that leakage, additionality, establishment of the baseline, baseline emissions, eligibility and double counting are unambiguously defined for each **CPA** within the **PoA**.

- ☞ If the AM is put on hold or withdrawn, not for the purpose of inclusion in a consolidation, no new **CPAs** shall be added to the **PoA** in accordance with the timelines indicated in procedures.
- ☞ If the methodology is subsequently revised or replaced by inclusion in a consolidated methodology, the **PoA** shall be revised accordingly and changes validated by a DOE and approved by the EB. Once changes have been approved by the EB, each **CPA** included in the **PoA** thereafter has to use the new version of the **PoA**.
- ☞ **CPAs** included prior to the methodology being put on hold, shall apply the new version of the **PoA** at the time of the renewal of its crediting period.

Monitoring [EB32 Anx38 para13]

- ☞ The emission reductions or net removals by sinks of each **CPA** shall be monitored as per the registered monitoring plan according to the methodology applied to the registered **PoA**. The method or approach used to verify emission reductions or removals by sinks (that may include random sampling) shall ensure the accuracy of these emission reductions.

Duration and crediting period [EB32 Anx38 para9-11]

- ☞ Each **CPA** shall be uniquely identified, defined and localized including the exact start and end date of the crediting period at the stage it is added to the registered **PoA**.
- ☞ The crediting period of a **CPA** will be either a maximum of 7 years (20 years for A/R project activities) which may be renewed at most 2 times or a maximum of 10 years (30 years for A/R project activities) with no option of renewal.
- ☞ The duration of the **PoA**, not exceeding 28 years and 60 years for A/R project activities, shall be defined by the entity at the time of request for registration of the **PoA**.
- ☞ Any **CPA** can be added to the **PoA** at any time during the duration of the **PoA** by the coordinating/managing entity.
 - ⇒ The entity shall inform the EB of the adding of **CPA(s)** through a DOE using a pre-defined format.
- ☞ The duration of crediting period of any **CPA** shall be limited to the end date of the **PoA** regardless of when the **CPA** was added.
- ☞ The latest version of the “Procedures for Renewal of a Crediting Period of a Registered CDM project activity (chap.16)” shall be applied, mutatis mutandis, to a **PoA** every 7 years (20 years for A/R project activities). Any resulting changes to the **PoA** shall be applied by each **CPA** at the time of the 1st renewal of its crediting period after such change to the **PoA**.
 - ⇒ In case of multiple host Parties, only those **CPAs** which can apply these changes may renew their crediting period.

BOX: De-bundling under a programme of activities (PoA) [EB36 Anx27, para7-8]

- ◆ For the purposes of registration of a **PoA**, a proposed small-scale **CPA** of a **PoA** shall be deemed to be a de-bundled component of a large scale activity if there is already an activity, which:
 - ☞ Has the same activity implementer as the proposed small scale **CPA** or has a coordinating or managing entity, which also manages a large scale **PoA** of the same sectoral scope, and;
 - ☞ The boundary is within 1 km of the boundary of the proposed small-scale **CPA**, at the closest point.
- ◆ If a proposed small-scale **CPA** of a **PoA** is deemed to be a debundled component, but the total size of such a **CPA** combined with a registered small-scale **CPA** of a **PoA** does not exceed the limits for SSC, the **CPA** of a **PoA** can qualify to use simplified modalities and procedures for small-scale CDM and small-scale A/R CDM project activities.

20. Registry and international transaction log (ITL)

20-1. CDM registry

- ◆ The EB establishes and maintains a CDM registry to ensure the accurate accounting of the issuance, holding, transfer and acquisition of CERs by non-Annex I Parties. [CMP/2005/8/Ad1, p27 para1-2]
 - ☞ The EB identifies a registry administrator to maintain the registry under its authority
 - ☞ The CDM registry is in the form of a standardized electronic database, which enables the accurate, transparent and efficient exchange of data between national registries, the CDM registry and the international transaction log.
- ◆ The CDM registry will have the following accounts.

(1) One pending account for the EB, into which CERs are issued before being transferred to other accounts.

[CMP/2005/8/Ad1, p27 para3(a)]

(2) Holding accounts for non-Annex I Party

of hosting a CDM project activity or requesting an account. [CMP/2005/8/Ad1, p27 para3(b)]

(3) Temporary accounts for Annex I Parties, and PPs from such Parties,

until national registries for such Parties and entities are operational, for the purposes of receiving CERs. [CP/2004/2, p15 para57]

(4) Cancellation accounts for excess CERs, to cancel KP units equal to excess CERs issued, as determined by the EB.

[CMP/2005/8/Ad1, p27 para3(c)]

(5) Cancellation account for tCERs and ICERs, that have expired in a holding account of the CDM registry, and ICERs that have become ineligible. [CMP/2005/8/Ad1, p80 para3]

(6) Accounts for the share of proceeds, to hold and transfer CERs corresponding to the SOP-Adaptation.

[CMP/2005/8/Ad1, p27 para3(d)]

- ◆ Accounts described in (2)(3)(4)(6) above may have multiple accounts.
 - ☞ Each account will have a unique account number comprising a Party/organization identifier and a number unique to that account. [CMP/2005/8/Ad1, p27 para5]
- ◆ KP units transferred to a cancellation account may not be further transferred or used for the purpose of demonstrating the compliance of a Party with its commitment.
- ◆ Each CER has a unique serial number and be held in only one account in one registry at a given time. [CMP/2005/8/Ad1, p27 para4]

Publicly accessible information through the CDM registry

The CDM registry shall make non-confidential information publicly available through the Internet. [CMP/2005/8/Ad1, p28 para9-12]

- ◆ Up-to-date information for account name, representative identifier, Party/organization identifier, etc for each account.
- ◆ CDM project activity information including project name, years of CER issuance, operational entities involved, downloadable documentation to be made publicly available, etc.
- ◆ Holding and transaction information relevant to the CDM registry, by serial number, for each calendar year

Monthly report [EB21 Rep, para70]

The CDM registry will provide the monthly reports to DNAs of respective Parties involved.

20-2. National registry

- ◆ Each Annex I Party must establish and maintain a national registry to ensure the accurate accounting of the issuance, holding, transfer, acquisition, cancellation and retirement of ERUs, CERs, AAUs and RMUs and the carry-over of ERUs, CERs and AAUs. [CMP/2005/8/Ad2, p28 para17]

- ☞ Each Party designates an organization as its registry administrator to maintain the national registry of that Party. [CMP/2005/8/Ad2, p28 para18]
 - ⇒ Any 2 or more Parties may voluntarily maintain their respective national registries in a consolidated system, provided that each national registry remains distinct.
- ☞ A national registry is in the form of a standardized electronic database. The accurate, transparent and efficient exchange of data between national registries, the CDM registry and the transaction log should be ensured. [CMP/2005/8/Ad2, p28 para19]

- ◆ Each national registry has the following accounts in order to account for KP units (AAUs, ERUs, CERs, tCERs, ICERs and RMUs): [CMP/2005/8/Ad2, p28 para21]]

(1) Holding account for the Party

(3) Cancellation account for LULUCF activities,
to cancel the KP units in case such activities result in a net source of GHG emissions.

(6) tCER replacement account,
to cancel AAUs, CERs, ERUs, RMUs and/or tCERs for the purposes of replacing tCERs prior to expiry. [CMP/2005/8/Ad1, p71 para43]

(2) Holding account for each legal entity authorized by the Party,
to hold KP units under its responsibility.

(4) Cancellation account for non compliance,
to cancel the KP units equal to 1.3 times the amount of excess emissions in case the Party was not in compliance in the 1st commitment period

(7) ICER replacement account,
to cancel AAUs, CERs, ICERs, ERUs and/or RMUs for the purposes of replacing ICERs. [CMP/2005/8/Ad1, p71 para47]

(5) Cancellation account for other cancellations by the Party,
to cancel KP units for purposes of cancellations other than (3) and (4) above.

(8) Retirement account,
used to retire KP units valid for that commitment period for use towards meeting the Party's commitments. [CMP/2005/8/Ad2, p27 para14]

- ☞ For accounts described in (1) (2)(3)(5), multiple accounts may be established.
- ☞ Accounts described in (3) (4) (5) (6) (7) (8) should be established for each commitment period.
- ☞ Each account must have a unique account number comprising a Party identifier and a unique number. [CMP/2005/8/Ad2, p28 para22]

- ◆ KP units transferred to cancellation accounts may not be further transferred or carried over to the subsequent commitment period, or be used for the purpose of demonstrating the compliance of a Party. [CMP/2005/8/Ad2, p30 para35]

- ◆ KP units transferred to the retirement account may not be further transferred or carried over to the subsequent commitment period. [CMP/2005/8/Ad2, p30 para35]

Serial number of KP units *Below are images for illustrative purposes

- ◆ Every t-CO₂ of KP units is given a unique serial number.
- ◆ Each KP unit shall be held in only one account in one registry at a given time.

[CMP/2005/8/Ad2, p28 para20]

Serial Number Identifiers

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|----|---|---|---------------------|---------------------|----|----|---|---------|----|----------|
| XX | 1 | | 000,000,000,000,001 | 999,999,999,999,999 | 01 | 01 | 1 | 0000001 | 1 | XX/YY/ZZ |

| | Identifier | Range or Codes |
|----|------------------------------|--|
| 1 | Originating Registry | Two-letter country codes in ISO3166, as of 01 January 2005 |
| 2 | Unit Type | 1 = AAU, 2 = RMU, 3 = ERU converted from AAU, 4 = ERU converted from RMU, 5 = CER, 6 = tCER, 7 = ICER |
| 3 | Supplementary Unit Type | Blank for Kyoto-only Units, or as defined by STL (supplementary transaction log) |
| 4 | Unit Serial Block Start | Unique numeric values assigned by registry from 1 - 999,999,999,999,999 |
| 5 | Unit Serial Block End | Unique numeric values assigned by registry from 1 - 999,999,999,999,999 |
| 6 | Original Commitment Period | 1 - 99 |
| 7 | Applicable Commitment Period | 1 - 99 |
| 8 | LULUCF Activity | 1 = Afforestation and reforestation, 2 = Deforestation, 3 = Forest management, 4 = Cropland management, 5 = Grazing land management, 6 = Revegetation |
| 9 | Project Identifier | Numeric value assigned by registry for Project, unique per originating registry. The Project Number is the combination of the Originating Registry and the Project Identifier. |
| 10 | Track | 1 or 2 |
| 11 | Expiry Date | Expiry Date for tCERs or ICERs |

[Data exchange standards for registry system under the Kyoto Protocol, technical specifications (Version 1.1), 26 November, 2006, p F-2]

Publicly accessible information through national registry

Each national registry shall make non-confidential information publicly available through the Internet.

[CMP/2005/8/Ad2, p32 para44-48]

- ☞ This also applies to information on accounts held by legal entities.
- ◆ Information on accounts
 - ☞ The holder of the account, representative name and contact information of the account holder, etc.
- ◆ Information on the total quantity of KP units
- ◆ Holdings of KP units in each account
- ◆ Information on the JI project
 - ☞ Project name, location, years of ERU issuance, relevant publicly available documentation.
- ◆ A list of legal entities authorized by the Party to participate to the Kyoto Mechanisms.

20-3. International transaction log (ITL)

◆ The UNFCCC secretariat establishes and maintain an international transaction log (ITL) to verify the validity of transactions, including issuance, transfer and acquisition between registries, cancellation, expiration and replacement (in case of tCER and ICER), retirement and the carry-over of KP units. [CMP/2005/8/Ad2, p31 para38] [CMP/2005/8/Ad1, p73 para55-56]

☞ The ITL is in the form of a standardized electronic database. The accurate, transparent and efficient exchange of data between national registries, the CDM registry and the ITL should be ensured

◆ The ITL conducts the following automated check. [CMP/2005/8/Ad2, p31 para42]

(1) All transactions (issuance, transfer and acquisition between registries, cancellation, retirement and carry-over)

- ☞ units previously retired or cancelled; units existing in more than one registry; units for which a previously identified discrepancy has not been resolved;
- ☞ units improperly carried over; units improperly issued;
- ☞ the authorization of legal entities involved to participate in the transaction.

(2) Transfers between registries

- ☞ the eligibility of Parties involved in the transaction to participate in the KM;
- ☞ infringement upon the commitment period reserve of the transferring Party.

(3) Acquisitions of CERs from A/R CDM projects

- ☞ infringement of the limits (limitation for net acquisitions of tCERs and ICERs).

(4) Retirement of CERs

- ☞ the eligibility of the Party involved to use CERs to contribute to its compliance.

◆ Prior to the completion of any transactions, the initiating registry sends a record of the proposed transaction to the ITL and, in the case of transfers to another registry, to the acquiring national registry. [CMP/2005/8/Ad2, p31 para41]

◆ The ITL shall records, and makes publicly available, all transaction records and the date and time of completion of each transaction. [CMP/2005/8/Ad2, p32 para43(d)]

◆ The ITL notifies the Annex I Party that a replacement of the tCER or ICER has to occur, 1 month prior to the expiry of each tCER or ICER. [CMP/2005/8/Ad1, p73 para55]

☞ Where a Annex I Party does not replace tCERs or ICERs in accordance with the rules, the ITL shall forward a record of non-replacement to the secretariat, for consideration as part of the review process for the relevant Party, under Art.8 of the KP, to the EB and to the Party concerned. [CMP/2005/8/Ad1, p73 para56]

BOX: In case a discrepancy is notified in the automated check by the ITL

☞ The initiating registry shall terminate the transaction, notify the ITL and, in the case of transfers to another registry, the acquiring registry of the termination. The ITL shall forward a record of the discrepancy to the secretariat for consideration as part of the review process for the relevant Party or Parties under Article 8. [CMP/2005/8/Ad2, p32 para43(a)]

☞ In the event of a failure by the initiating registry to terminate the transaction, KP units involved in the transaction shall not be valid for use towards compliance with commitments, until the problem has been corrected and questions have been resolved.

⇒ The Party shall perform any necessary corrective action within **30 days**. [CMP/2005/8/Ad2, p32 para43(b)]

Attachment 1. CDM documents

1-1. Project Design Document (CDM-PDD)

- ◆ Revisions come into effect once adopted by the EB.
- ◆ Revisions to the CDM-PDD do not affect project activities:
 - ☞ Already validated, or already submitted to the OE for validation, prior to the adoption of the revised CDM-PDD;
 - ☞ Submitted to the OEs within a month following the adoption of the revised CDM-PDD;
- ◆ The EB will not accept documentation using the previous version of the CDM-PDD **6 months after** the adoption of a new version.
[PDD GL ver6.2, p4 para9-10]

(Version 03 - in effect as of 28 July 2006) [EB25 Anx15]

SECTION A. General description of project activity

A.1. Title of the project activity

A.2. Description of the project activity

A.3. Project participants

A.4. Technical description of the project activity

A.4.1. Location of the project activity

A.4.1.1. Host Party(ies)

A.4.1.2. Region/State/Province etc.

A.4.1.3. City/Town/Community etc.

A.4.1.4. Detail of physical location, including information allowing the unique identification of this project activity:

A.4.2. Category(ies) of project activity

A.4.3. Technology to be employed by the project activity

A.4.4. Estimated amount of emission reductions over the chosen crediting period

A.4.5. Public funding of the project activity

SECTION B. Application of a baseline and monitoring methodology

B.1. Title and reference of the approved baseline and monitoring methodology applied to the project activity

B.2. Justification of the choice of the methodology and why it is applicable to the project activity

B.3. Description of the sources and gases included in the project boundary

B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario

B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality)

B.6. Emission reductions

B.6.1. Explanation of methodological choices

B.6.2. Data and parameters that are available at validation

B.6.3. Ex-ante calculation of emission reductions

B.6.4. Summary of the ex-ante estimation of emission reductions

B.7. Application of the monitoring methodology and description of the monitoring plan

B.7.1. Data and parameters monitored

B.7.2. Description of the monitoring plan

B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)

(Version 03 - in effect as of 28 July 2006) [EB25 Anx15]

SECTION C. Duration of the project activity / Crediting period

C.1. Duration of the project activity

C.1.1. Starting date of the project activity

C.1.2. Expected operational lifetime of the project activity

C.2. Choice of crediting period and related information

C.2.1. Renewable crediting period

C.2.1.1. Starting date of the 1st crediting period

C.2.1.2. Length of the 1st crediting period

C.2.2. Fixed crediting period

C.2.2.1. Starting date

C.2.2.2. Length

SECTION D. Environmental impacts

D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party

SECTION E. Stakeholders' comments

E.1. Brief description of how comments by local stakeholders have been invited and compiled

E.2. Summary of the comments received

E.3. Report on how due account was taken of any comments received

Annex 1. Contact information on participants in the project activity**Annex 2. Information regarding public funding****Annex 3. Baseline information****Annex 4. Monitoring information**

1-2. Project Design Document for small-scale project activities (CDM-SSC-PDD)

- ◆ Revisions come into effect once adopted by the EB.
- ◆ Revisions to the CDM-SSC-PDD do not affect project activities:
 - ☞ Already validated, or already submitted to the OE for validation, prior to the adoption of the revised CDM-SSC-PDD;
 - ☞ Submitted to the OEs within a month following the adoption of the revised CDM-PDD;
- ◆ The EB will not accept documentation using the previous version of the CDM-PDD **6 months after** the adoption of a new version.
[SSC GL ver4, p4 para11-12]

(Version 03 - in effect as of 22 December 2006) [EB28 Anx34]

| SECTION A. General description of small-scale project activity | |
|---|---|
| A.1. | Title of the small-scale project activity |
| A.2. | Description of the small-scale project activity |
| A.3. | (Same as CDM-PDD) |
| A.4. | Technical description of the small-scale project activity |
| A.4.1. | Location of the small-scale project activity |
| A.4.1.1 – A.4.1.4. | (Same as CDM-PDD) |
| A.4.2. | Type and category(ies) and technology/measure of the small-scale project activity |
| A.4.3. | Estimated amount of emission reductions over the chosen crediting period |
| A.4.4. | Public funding of the small-scale project activity |
| A.4.5. | Confirmation that the small-scale project activity is not a debundled component of a large scale project activity |

| SECTION B. Application of a baseline and monitoring methodology | |
|--|---|
| B.1. | Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity |
| B.2. | Justification of the choice of the project category |
| B.3. | Description of the project boundary |
| B.4. | Description of baseline and its development |
| B.5. | Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity |
| B.6 – B.8. | (Same as CDM-PDD) |
| SECTION C. (Same as CDM-PDD) | |
| SECTION D. Environmental impacts | |
| D.1. | If required by the host Party, documentation on the analysis of the environmental impacts of the project activity |
| D.2. | (Same as CDM-PDD) |
| SECTION E. Stakeholders' comments | |
| E.1. | Brief description how comments by local stakeholders have been invited and compiled |
| E.2 – E.3. | (Same as CDM-PDD) |
| Annex 1 – 4. (Same as CDM-PDD) | |

1-3. Forms for submission of bundled small-scale CDM project activities (F-CDM-SSC-BUNDLE)

If project activities wishing to be bundled, a form with information related to the bundle (F-CDM-BUNDLE) must be included in the submission. [SSC GL ver4, p19 para8]

SECTION A. General description of the Bundle

- A.1. Title of the Bundle: (Include cross references to PDD/s)
- A.2. Version and Date: (Provide the date and version number of the form, include the version and dates of cross referenced PDD/s)
- A.3. Description of the Bundle and the subbundles
- A.4. Project participants

B. Technical description of the Bundle

- B.1. Location of the Bundle
 - B.1.1. Host Party(ies)
 - B.1.2. Regions/States/Provinces etc: (provide information in tabular form)
 - B.1.3. Cities/Towns/Communities etc: (provide information in tabular form)
 - B.1.4. Details of physical locations, including information allowing the unique identification of this Bundle
- B.2. Type/s, Category(ies) and Technology/(ies)/Measure/(s) of the bundle
- B.3. Estimated amount of emission reductions over the chosen crediting period

C. Duration of the project activity / Crediting period

- C.1. Duration of the Bundle
 - C.1.1. Starting date of the Bundle
 - C.1.2. Expected operational lifetime of the project activities
- C.2. Choice of crediting period and related information
 - C.2.1. Renewable crediting period
 - C.2.1.1. Starting date of the first crediting period
 - C.2.1.2. Length of the first crediting period
 - C.2.2. Fixed crediting period
 - C.2.2.1. Starting date
 - C.2.2.2. Length

SECTION D. Application of a monitoring methodology

Annex 1. Contact information on participants in the bundle

[SSC GL ver4, p21]

BOX: Use of a single PDD covering all activities [SSC GL ver4, p20 para17-18]

- ☞ If all project activities in the bundle belong to the same type, same category and technology/measure, PPs may submit a single CDM-SSC-PDD covering all activities in the bundle. In this case (a single PDD is used) a single verification and certification report shall be submitted by the DOE.
- ☞ In all other cases (if the bundle includes project activities with (a) the same type, same category and different technology/measure; (b) same type, different categories and technologies/measures and; and (c) different types), PPs would have to make the submission of the bundle using a CDM-SSC-PDD for each of the project activities contained in the bundle. In these cases a single verification and certification report can be submitted for the bundle provided that it appraises each of the project activities of the bundle separately and covers the same verification period.

1-4. Programme of Activities Design Document Form (CDM-PoA-DD)

- ◆ This form is for the submission of a CDM PoA whose CPAs apply a large scale approved methodology. At the time of requesting registration this form must be accompanied by a CDM-CPA-DD form that has been specified for the proposed PoA, as well as by one completed CDM-CPA-DD (using a real case).

SECTION A. General description of programme of activities (PoA)

- A.1. Title of the programme of activities
- A.2. Description of the programme of activities
- A.3. Coordinating/managing entity and participants of POA
- A.4. Technical description of the programme of activities
- A.4.1. Location of the programme of activities
- A.4.1.1. Host Party(ies)
- A.4.1.2. Physical/ Geographical boundary
- A.4.2. Description of a typical CDM programme activity (CPA)
- A.4.2.1 Technology or measures to be employed by the CPA
- A.4.2.2 Eligibility criteria for inclusion of a CPA in the PoA
- A.4.3. Assessment and demonstration of additionality
- A.4.4. Operational, management and monitoring plan for the PoA
- A.4.4.1 Operational and management plan
- A.4.4.2. Monitoring plan
- A.4.5. Public funding of the programme of activities

SECTION B. Duration of the programme of activities

- B.1 Starting date of the programme of activities
- B.2. Length of the programme of activities

SECTION C. Environmental Analysis

- C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken
- C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts
- C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA)

SECTION D. Stakeholders' comments

- D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice
- D.2. Brief description how comments by local stakeholders have been invited and compiled
- D.3. Summary of the comments received
- D.4. Report on how due account was taken of any comments received

SECTION E. Application of a baseline and monitoring methodology

- E.1. Title and reference of the approved baseline and monitoring methodology applied to each CPA included in the PoA
- E.2. Justification of the choice of the methodology and why it is applicable to each CPA
- E.3. Description of the sources and gases included in the CPA boundary
- E.4. Description of how the baseline scenario is identified and description of the identified baseline scenario
- E.5. Assessment and demonstration of additionality of CPA
- E.5.1. Assessment and demonstration of additionality for a typical CPA
- E.5.2. Key criteria and data for assessing additionality of a CPA
- E.6. Estimation of Emission reductions of a CPA
- E.6.1. Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA
- E.6.2. Equations, including fixed parametric values, to be used for calculation of emission reductions of a CPA
- E.6.3. Data and parameters that are to be reported in CDM-CPA-DD form
- E.7. Application of the monitoring methodology and description of the monitoring plan
- E.7.1. Data and parameters to be monitored by each CPA
- E.7.2. Description of the monitoring plan for a CPA
- E.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)

Annex 1 Contact Information On Coordinating/Managing Entity and Participant in the Programme of Activities

Annex 2 Information regarding Public Funding

Annex 3 Baseline Information

Annex 4 Monitoring Information

1-5. CDM Programme Activities Design Document Form (CDM-CPA-DD)

- ◆ The coordinating/managing entity shall prepare a CDM-CPA-DD, that is specified to the proposed PoA by using the provisions stated in the PoA DD.
- ◆ At the time of requesting registration the PoA DD must be accompanied by a CDM-CPA-DD form that has been specified for the proposed PoA, as well as by one completed CDM-CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the PoA must submit a completed CDM-CPA-DD.

SECTION A. General description of CDM programme activity (CPA)

A.1. Title of the CPA

A.2. Description of the CPA

A.3. Entity/individual responsible for the CPA

A.4. Technical description of the CPA

A.4.1. Identification of the CPA

A.4.1.1. Host Party

A.4.1.2. Geographic reference of other means of identification allowing the unique identification of the CPA

A.4.2. Duration of the CPA

A.4.2.1 Starting date of the CPA

A.4.2.2 Expected operational lifetime of the CPA

A.4.3. Choice of the crediting period and related information

A.4.3. 1.Starting date of the crediting period:

A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP

A.4.4. Estimated amount of emission reductions over the chosen crediting period

A.4.5. Public funding of the CPA

A.4.6. Confirmation that CPA is neither registered as an individual CDM project activity nor is part of another Registered PoA

SECTION B. Eligibility of CPA and Estimation of emissions reductions

B.1 Title and reference of the Registered PoA to which CPA is added

B.2. Justification of the why the CPA is eligible to be included in the Registered PoA

B.3. Assessment and demonstration of additionality of the CPA, as per eligibility criteria listed in the Registered PoA

B.4. Description of the sources and gases included in the project boundary and proof that the CPA is located within the geographical boundary of the registered PoA.

B.5. Emission reductions

B.5.1. Data and parameters that are available at validation

B.5.2. Ex-ante calculation of emission reductions

B.5.3. Summary of the ex-ante estimation of emission reductions

B.6. Application of the monitoring methodology and description of the monitoring plan

B.6.1. Description of the monitoring plan

SECTION C. Environmental analysis

C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts

C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the PoA

SECTION D. Stakeholders' comments

D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice

D.2. Brief description how comments by local stakeholders have been invited and compiled

D.3. Summary of the comments received

D.4. Report on how due account was taken of any comments received

Annex 1 Contact Information On Entity/Individual Responsible for the CPA

Annex 2 Information regarding Public Funding

Annex 3 Baseline Information

Annex 4 Monitoring Information

Attachment 2. Methodological tools

Methodological Tools for Emission Reduction CDM Project Activities (AM Tools)

| | |
|---|---|
| <p>1. Tool for the demonstration and assessment of additionality (ver.5) [EB39 Anx10]</p> | <p>This document provides for a step-wise approach to demonstrate and assess additionality. (Att.4)</p> |
| <p>2. Combined tool to identify the baseline scenario and demonstrate additionality (ver.2.1) [EB28 Anx14]</p> | <p>This tool provides for a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality.</p> |
| <p>3. Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (ver.1) [EB32 Anx9]</p> | <p>This tool provides procedures to calculate project and/or leakage CO₂ emissions from the combustion of fossil fuels. It can be used in cases where CO₂ emissions from fossil fuel combustion is calculated based on the quantity of fuel combusted and its properties.</p> |
| <p>4. Tool to determine methane emissions avoided from dumping waste at a solid waste disposal site (ver.2.1) [EB39 Anx9]</p> | <p>This tool calculates baseline emissions of methane from waste that would in the absence of the project activity be disposed at solid waste disposal sites (SWDS). Emission reductions are calculated with a first order decay (FOD) model.</p> |
| <p>5. “Tool to calculate baseline, project and/or leakage emissions from electricity consumption (ver.1) [EB39 Anx7]</p> | <p>The tool may, for example, be used in methodologies where auxiliary electricity is consumed in the project and/or the baseline scenario. The tool can also be applied in situations where electricity is only consumed in the baseline or in the project or as leakage source.</p> |
| <p>6. Tool to determine project emissions from flaring gases containing methane [EB28 Anx13]</p> | <p>This tool provides procedures to calculate project emissions from flaring of a residual gas stream (RG) containing methane.</p> |
| <p>7. Tool to calculate the emission factor for an electricity system (ver.1) [EB35 Anx12]</p> | <p>This methodological tool determines the CO₂ emission factor for the displacement of electricity generated by power plants in an electricity system, by calculating the “operating margin” (OM) and “build margin” (BM) as well as the “combined margin” (CM).</p> |

Methodological Tools for A/R CDM Project Activities (AR-AM Tools)

| | |
|--|---|
| 1. Tool for the demonstration and assessment of additionality in A/R CDM project activities (ver.2) [EB35 Anx17] | This tool provides for a step-wise approach to demonstrate additionality in A/R CDM projects. |
| 2. Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities (ver.1) [EB35 Anx19] | This tool provides for a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality in A/R CDM project activities. |
| 3. Calculation of the number of sample plots for measurements within A/R CDM project activities (ver.1) [EB31 Anx15] | This tool is applicable if sample plots are used for monitoring purposes. The tool estimates the number of permanent sample plots needed for monitoring changes in carbon pools at a desired precision level. |
| 4. Tool for testing significance of GHG emissions in A/R CDM project activities (ver.1) [EB31 Anx16] | This tool facilitates the determination of which GHG emissions by sources, possible decreases in carbon pools, and leakage emissions are insignificant for a particular CDM A/R project activity. |
| 5. Estimation of GHG emissions related to fossil fuel combustion in A/R CDM project activities (ver.1) [EB33 Anx14] | This tool allows for estimating increase in GHG emissions (both project and leakage emissions) related to fossil fuel combustion in A/R CDM project activities. The sources of emissions are: vehicles and mechanical equipments. |
| 6. Procedure to determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R project activities (ver.1) [EB33 Anx15] | This tool provides guidelines to determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R projects. |
| 7. Estimation of direct nitrous oxide emission from nitrogen fertilization (ver.1) [EB33 Anx16] | This tool allows for estimating direct nitrous oxide emission from applying nitrogenous fertilizer within project boundary of an A/R CDM project activity, for both <i>ex ante</i> and <i>ex post</i> estimation. |
| 8. Tool for Estimation of GHG emissions related to displacement of grazing activities in A/R CDM project activity (ver.2) [EB39 Anx12] | This tool is applicable for estimating GHG emissions caused by the displacement of grazing animals due to implementation of an A/R CDM project activity. |
| 9. Tool for estimation of GHG emissions from clearing, burning and decay of existing vegetation due to implementation of a CDM A/R project activity (ver.1) [EB36 Anx20] | This tool can be used to estimate the increase in emissions of GHGs due to live vegetation existing within the project boundary at the time an A/R project commences. |
| 10. Procedures to demonstrate the eligibility of lands for afforestation and reforestation CDM Project Activities (ver.1) [EB35 Anx18] | This tool describes how PPs provide evidence that the land within the planned project boundary is eligible for an A/R CDM project activity by the steps. |
| 11. Calculation of GHG emissions due to leakage from increased use of non-renewable woody biomass attributable to an A/R CDM project activity (ver.1) [EB39 Anx11] | This tool allows for estimation of the increase in GHG emissions due to leakage, resulting from an increased use of non-renewable woody biomass from sources outside the project boundary. |

Attachment 3. Approved methodologies

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|------------------|-------------------|----------|--|-----------|------------|------|
| Renewable energy | ACM0002 | 7 | Consolidated baseline methodology for grid-connected electricity generation from renewable sources | 1,3,7 | 14-Dec-07 | 194 |
| | AM0019 | 2 | Renewable energy project activities replacing part of the electricity production of one single fossil-fuel-fired power plant that stands alone or supplies electricity to a grid, excluding biomass projects | 1 | 19-May-06 | 0 |
| | AM0026 | 3 | Methodology for zero-emissions grid-connected electricity generation from renewable sources in Chile or in countries with merit order based dispatch grid | 1,7 | 2-Nov-07 | 1 |
| | <i>AMS-I.A.</i> | 12 | <i>Electricity generation by the user</i> | | 10-Aug-07 | 7 |
| | <i>AMS-I.B.</i> | 10 | <i>Mechanical energy for the user with or without electrical energy</i> | | 10-Aug-07 | 0 |
| | <i>AMS-I.C.</i> | 13 | <i>Thermal energy for the user with or without electricity</i> | | 28-Mar-08 | 49 |
| | <i>AMS-I.D.</i> | 13 | <i>Grid connected renewable electricity generation</i> | | 14-Dec-07 | 321 |
| Biomass | ACM0006 | 6 | Consolidated methodology for electricity generation from biomass residues | 2,3,4,5 | 10-Aug-07 | 73 |
| | AM0007 | 1 | Analysis of the least-cost fuel option for seasonally-operating biomass cogeneration plants | | 14-Jun-07 | 0 |
| | AM0036 | 2 | Fuel switch from fossil fuels to biomass residues in boilers for heat generation | 1,4 | 10-Aug-07 | 1 |
| | AM0042 | 2 | Grid-connected electricity generation using biomass from newly developed dedicated plantations | 1,7 | 2-Nov-07 | 0 |
| | <i>AMS-I.E.</i> | 1 | <i>Switch from non-renewable biomass for thermal application by the user</i> | | 01-Feb-08 | 0 |
| | <i>AMS-III.E.</i> | 15.1 | <i>Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment</i> | | 14-Dec-07 | 23 |

Classification based on the key words are made by the author, and not described in the UNFCCC documents.

AM Tools*: Methodological tools which are referenced in the approved methodology. Please see Attachment 2 to identify the exact name of the AM tools.

Reg*: Total number of registered CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|-------------------|-------------------|-----------|---|-----------|------------|------|
| Waste gas or heat | ACM0012 | 2 | Consolidated baseline methodology for GHG emission reductions for waste gas or waste heat or waste pressure based energy system | 1,7 | 2-Nov-07 | 56 |
| | AM0009 | 3 | Recovery and utilization of gas from oil wells that would otherwise be flared | 2,3,5 | 14-Dec-07 | 4 |
| | AM0024 | 2 | Methodology for greenhouse gas reductions through waste heat recovery and utilization for power generation at cement plants | 1,7 | 2-Nov-07 | 3 |
| | AM0037 | 2 | Flare (or vent) reduction and utilization of gas from oil wells as a feedstock | 1,3,5,7 | 28-Mar-08 | 1 |
| | AM0055 | 1.1 | Baseline and Monitoring Methodology for the recovery and utilization of waste gas in refinery facilities | 2,5 | 27-Jul-07 | 0 |
| | AM0066 | 1 | GHG emission reductions through waste heat utilization for pre-heating of raw materials in sponge iron manufacturing process | 2,3,5,7 | 14-Mar-08 | 0 |
| | <i>AMS-II.I.</i> | <i>1</i> | <i>Efficient utilization of waste energy in industrial facilities</i> | | 30-May-08 | 0 |
| | <i>AMS-III.P.</i> | <i>1</i> | <i>Recovery and utilization of waste gas in refinery facilities</i> | | 19-Oct-07 | 0 |
| | <i>AMS-III.Q.</i> | <i>1</i> | <i>Waste gas based energy systems</i> | | 19-Oct-07 | 0 |
| Fuel switch | ACM0009 | 3 | Consolidated methodology for industrial fuel switching from coal or petroleum fuels to natural gas | 1 | 28-Jul-06 | 10 |
| | ACM0011 | 2 | Consolidated baseline methodology for fuel switching from coal and/or petroleum fuels to natural gas in existing power plants for electricity generation | 1,2,3,7 | 2-Nov-07 | 0 |
| | ACM0013 | 2 | Consolidated baseline and monitoring methodology for new grid connected fossil fuel fired power plants using a less GHG intensive technology | 1,3 | 30-May-08 | 0 |
| | AM0014 | 4 | Natural gas-based package cogeneration | 1 | 10-Aug-07 | 2 |
| | AM0029 | 3 | Methodology for Grid Connected Electricity Generation Plants using Natural Gas | 1,7 | 30-May-08 | 10 |
| | AM0048 | 2 | New cogeneration facilities supplying electricity and/or steam to multiple customers and displacing grid/off-grid steam and electricity generation with more carbon-intensive fuels | 1,7 | 2-Nov-07 | 0 |
| | <i>AMS-III.B.</i> | <i>12</i> | <i>Switching fossil fuels</i> | | 2-Nov-07 | 10 |

Classification based on the key words are made by the author, and not described in the UNFCCC documents.

AM Tools*: Methodological tools which are referenced in the approved methodology. Please see Attachment 2 to identify the exact name of the AM tools.

Reg*: Total number of registered CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|---------------------------------|------------------|--|---|-----------|------------|------|
| Energy efficiency - supply side | ACM0007 | 3 | Methodology for conversion from single cycle to combined cycle power generation | 2,7 | 2-Nov-07 | 1 |
| | AM0017 | 2 | Steam system efficiency improvements by replacing steam traps and returning condensate | | 22-Jun-05 | 0 |
| | AM0018 | 2 | Steam optimization systems | 1,3,5 | 30-May-08 | 9 |
| | AM0038 | 2 | Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of SiMn | 1,7 | 2-Nov-07 | 1 |
| | AM0044 | 1 | Energy efficiency improvement projects: boiler rehabilitation or replacement in industrial and district heating sectors | 1 | 22-Dec-06 | 0 |
| | AM0045 | 2 | Grid connection of isolated electricity systems | 1,7 | 2-Nov-07 | 1 |
| | AM0049 | 2 | Methodology for gas based energy generation in an industrial facility | 1,7 | 2-Nov-07 | 0 |
| | AM0052 | 2 | Increased electricity generation from existing hydropower stations through Decision Support System optimization | 1,7 | 2-Nov-07 | 0 |
| | AM0054 | 2 | Energy efficiency improvement of a boiler by introducing oil/water emulsion technology | 1,2,7 | 2-Nov-07 | 0 |
| | AM0056 | 1 | Efficiency improvement by boiler replacement or rehabilitation and optional fuel switch in fossil fuel-fired steam boiler systems | 2,3 | 27-Jul-07 | 0 |
| | AM0058 | 1 | Introduction of a new primary district heating system | 1,2,3 | 19-Oct-07 | 0 |
| | AM0061 | 2 | Methodology for rehabilitation and/or energy efficiency improvement in existing power plants | 2,3,7 | 30-May-08 | 0 |
| | AM0062 | 1 | Energy efficiency improvements of a power plant through retrofitting turbines | 2,3,7 | 30-Nov-07 | 0 |
| | <i>AMS-II.A.</i> | 9 | <i>Supply side energy efficiency improvements – transmission and distribution</i> | | 10-Aug-07 | 0 |
| | <i>AMS-II.B.</i> | 9 | <i>Supply side energy efficiency improvements – generation</i> | | 10-Aug-07 | 9 |
| <i>AMS-III.M.</i> | 2 | <i>Reduction in consumption of electricity by recovering soda from paper manufacturing process</i> | | 10-Aug-07 | 0 | |
| Energy efficiency - demand side | AM0020 | 2 | Baseline methodology for water pumping efficiency improvements | 1,7 | 2-Nov-07 | 0 |
| | AM0046 | 2 | Distribution of efficient light bulbs to households | 1,7 | 2-Nov-07 | 0 |
| | AM0060 | 1 | Power saving through replacement by energy efficient chillers | 2,7 | 30-Nov-07 | 0 |
| | AM0067 | 1 | Methodologies for installation of energy efficient transformers in a power distribution grid | 2,7 | 14-Mar-08 | 0 |
| | <i>AMS-II.C.</i> | 9 | <i>Demand-side energy efficiency activities for specific technologies</i> | | 10-Aug-07 | 4 |
| | <i>AMS-II.D.</i> | 11 | <i>Energy efficiency and fuel switching measures for industrial facilities</i> | | 2-Nov-07 | 30 |
| | <i>AMS-II.E.</i> | 10 | <i>Energy efficiency and fuel switching measures for buildings</i> | | 2-Nov-07 | 5 |
| | <i>AMS-II.F.</i> | 9 | <i>Energy efficiency and fuel switching measures for agricultural facilities and activities</i> | | 10-Aug-07 | 0 |
| | <i>AMS-II.G.</i> | 1 | <i>Energy efficiency measures in thermal applications of non-renewable biomass</i> | | 01-Feb-08 | 0 |
| <i>AMS-II.H.</i> | 1 | <i>Energy efficiency measures through centralization of utility provisions of an industrial facility</i> | 7 | 14-Mar-08 | 0 | |

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|----------------|----------------|----------|---|-----------|------------|------|
| Biofuel | AM0047 | 2 | Production of biodiesel based on waste oils and/or waste fats from biogenic origin for use as fuel | 1 | 10-Aug-07 | 0 |
| | AMS-III.T. | 1 | <i>Plant oil production and use for transport applications</i> | | 30-Nov-07 | 0 |
| Transportation | AM0031 | 1 | Methodology for Bus Rapid Transit Projects | 1 | 28-Jul-06 | 1 |
| | AMS-III.C. | 11 | <i>Emission reductions by low-greenhouse gas emitting vehicles</i> | | 10-Aug-07 | 1 |
| | AMS-III.S. | 1 | <i>Introduction of low-emission vehicles to commercial vehicle fleets</i> | | 30-Nov-07 | 0 |
| Cement | ACM0003 | 7 | Emissions reduction through partial substitution of fossil fuels with alternative fuels or less carbon intensive fuels in cement manufacture | 2,3,4,5 | 14-Dec-07 | 8 |
| | ACM0005 | 4 | Consolidated Methodology for Increasing the Blend in Cement Production | 1,7 | 2-Nov-07 | 14 |
| | ACM0015 | 1 | Consolidated baseline and monitoring methodology for project activities using alternative raw materials that do not contain carbonates for clinker manufacturing in cement kilns | 1,7 | 30-Nov-07 | 0 |
| Material use | AM0027 | 2.1 | Substitution of CO ₂ from fossil or mineral origin by CO ₂ from renewable sources in the production of inorganic compounds | 1 | 6-Oct-06 | 1 |
| | AM0050 | 2 | Feed switch in integrated Ammonia-urea manufacturing industry | 2,7 | 2-Nov-07 | 0 |
| | AM0057 | 2 | Avoided emissions from biomass wastes through use as feed stock in pulp and paper production or in bio-oil production | 1,3,4,5,6 | 14-Dec-07 | 0 |
| | AM0063 | 1 | Recovery of CO ₂ from tail gas in industrial facilities to substitute the use of fossil fuels for production of CO ₂ | 1,2,3,5,7 | 30-Nov-07 | 0 |
| | AMS-III.J. | 3 | <i>Avoidance of fossil fuel combustion for carbon dioxide production to be used as raw material for industrial processes</i> | | 10-Aug-07 | 0 |
| | AMS-III.O. | 1 | <i>Hydrogen production using methane extracted from biogas</i> | | 19-Oct-07 | 0 |
| Others | AMS-III.A. | 1 | <i>Urea offset by inoculant application in soybean-corn rotations on acidic soils on existing cropland</i> | | 30-May-08 | 0 |

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Reg*: Total number of registered CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|-----------------------|-------------------|----------|--|-------------|------------|------|
| Biogas | ACM0010 | 4 | Consolidated methodology for GHG emission reductions from manure management systems | 3,5,6 | 30-May-08 | 51 |
| | ACM0014 | 2 | Mitigation of greenhouse gas emissions from treatment of industrial wastewater | 1,3,5,6,7 | 28-Mar-07 | 8 |
| | AM0053 | 1 | Biogenic methane injection to a natural gas distribution grid | 1,3,5,6 | 22-Jun-07 | 0 |
| | <i>AMS-III.D.</i> | 14 | <i>Methane recovery in animal manure management systems</i> | | 28-Mar-07 | 97 |
| | <i>AMS-III.H.</i> | 9 | <i>Methane recovery in wastewater treatment</i> | | 28-Mar-07 | 11 |
| | <i>AMS-III.I.</i> | 6 | <i>Avoidance of methane production in wastewater treatment through replacement of anaerobic lagoons by aerobic systems</i> | | 10-Aug-07 | 3 |
| Landfill gas | ACM0001 | 8 | Consolidated baseline and monitoring methodology for landfill gas project activities | 1,2,3,4,5,6 | 14-Dec-07 | 75 |
| | AMS-III.G. | 6 | Landfill methane recovery | | 28-Mar-08 | 3 |
| Composting | AM0025 | 10 | Avoided emissions from organic waste through alternative waste treatment processes | 1,4,6,7 | 2-Nov-07 | 5 |
| | AM0039 | 2 | Methane emissions reduction from organic waste water and bioorganic solid waste using co-composting | 1,4 | 2-Nov-07 | 0 |
| | <i>AMS-III.F.</i> | 5 | <i>Avoidance of methane production from decay of biomass through composting</i> | | 10-Aug-07 | 6 |
| Coal mine/bed methane | ACM0008 | 4 | Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction by flaring or catalytic oxidation | 1,6,7 | 2-Nov-07 | 8 |
| | AM0064 | 1 | Methodology for mine methane capture and utilisation or destruction in underground, hard rock, precious and base metal mines | 1,2,3,5,6,7 | 30-Nov-07 | 0 |
| Leak reduction | AM0023 | 2 | Leak reduction from natural gas pipeline compressor or gate stations | | 18-May-07 | 0 |
| | AM0043 | 2 | Leak reduction from a natural gas distribution grid by replacing old cast iron pipes or steel pipes without cathodic protection with polyethylene pipes | 1 | 2-Nov-07 | 0 |
| Other methane related | AM0041 | 1 | Mitigation of Methane Emissions in the Wood Carbonization Activity for Charcoal Production | 1 | 2-Nov-06 | 1 |
| | <i>AMS-III.K.</i> | 3 | <i>Avoidance of methane release from charcoal production by shifting from pit method to mechanized charcoaling process</i> | | 2-Nov-07 | 0 |
| | <i>AMS-III.L.</i> | 2 | <i>Avoidance of methane production from biomass decay through controlled pyrolysis</i> | | 10-Aug-07 | 0 |
| | <i>AMS-III.R.</i> | 1 | <i>Methane recovery in agricultural activities at household/small farm level</i> | | 19-Oct-07 | 0 |

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Reg*: Total number of registered CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

| Key word | Number | Ver. | Name of the Approved Methodology | AM Tools* | Valid from | Reg* |
|---------------------------------------|------------|------|--|-----------|------------|------|
| N ₂ O | AM0021 | 2 | Baseline Methodology for decomposition of N ₂ O from existing adipic acid production plants | 3,5 | 14-Dec-07 | 4 |
| | AM0028 | 4.1 | Catalytic N ₂ O destruction in the tail gas of Nitric Acid or Caprolactam Production Plants | 1 | 22-Dec-06 | 11 |
| | AM0034 | 3 | Catalytic reduction of N ₂ O inside the ammonia burner of nitric acid plants | 1 | 28-Mar-08 | 16 |
| | AM0051 | 2 | Secondary catalytic N ₂ O destruction in nitric acid plants | 1 | 2-Nov-07 | 0 |
| HFCs, PFCs, and SF ₆ | AM0001 | 5.2 | Incineration of HFC23 Waste Streams (also see "Guidance on Accounting Eligible HFC-23" [EB39 Anx8]) | | 22-Dec-06 | 17 |
| | AM0030 | 2 | PFC emission reductions from anode effect mitigation at primary aluminium smelting facilities | 1 | 14-Dec-07 | 0 |
| | AM0035 | 1 | SF ₆ Emission Reductions in Electrical Grids | 1 | 29-Sep-06 | 2 |
| | AM0059 | 1 | Reduction in GHGs emission from primary aluminium smelters | 2,5,7 | 19-Oct-07 | 0 |
| | AM0065 | 1 | Replacement of SF6 with alternate cover gas in the magnesium industry | 2 | 01-Feb-08 | 0 |
| | AMS-III.N. | 2 | Avoidance of HFC emissions in rigid Poly Urethane Foam (PUF) manufacturing | | 10-Aug-07 | 0 |

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 Reg*: Total number of registered CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

| Key word | Number | Ver. | Name of the Approved A/R Methodology | AR-AM Tools* | Valid from | Reg* |
|---------------------------------|-------------------|----------|---|--------------------|------------|------|
| Afforestation and reforestation | AR-ACM0001 | 1 | Afforestation and reforestation of degraded land | 2,3,4,5,6,7,8,9,10 | 14-Mar-08 | 0 |
| | AR-AM0001 | 2 | Reforestation of degraded land | 1 | 19-May-06 | 1 |
| | AR-AM0002 | 1 | Restoration of degraded lands through afforestation/reforestation | 1 | 19-May-06 | 0 |
| | AR-AM0004 | 2 | Reforestation or afforestation of land currently under agricultural use | 1 | 14-Dec-07 | 0 |
| | AR-AM0005 | 1 | Afforestation and reforestation project activities implemented for industrial and/or commercial uses | 1 | 22-Dec-06 | 0 |
| | AR-AM0006 | 1 | Afforestation/Reforestation with Trees Supported by Shrubs on Degraded Land | 1 | 16-Feb-07 | 0 |
| | AR-AM0007 | 2 | Afforestation and Reforestation of Land Currently Under Agricultural or Pastoral Use | 1 | 14-Dec-07 | 0 |
| | AR-AM0008 | 2 | Afforestation or reforestation on degraded land for sustainable wood production | 1,3 | 14-Dec-07 | 0 |
| | AR-AM0009 | 2 | Afforestation or reforestation on degraded land allowing for silvopastoral activities | 1,3,5,6,7 | 14-Dec-07 | 0 |
| | AR-AM0010 | 2 | Afforestation and reforestation project activities implemented on unmanaged grassland in reserve/protected areas | 1,3,5,6,7 | 14-Dec-07 | 0 |
| | AR-AMS0001 | 4.1 | <i>Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands</i> | 14 | 10-Aug-07 | 0 |
| | AR-AMS0002 | 1 | <i>Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the CDM implemented on settlements</i> | 14 | 14-Dec-07 | 0 |
| | AR-AMS0003 | 1 | <i>Simplified baseline and monitoring methodology for small scale CDM afforestation and reforestation project activities implemented on wetlands</i> | 14 | 14-Dec-07 | 0 |

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 AR-AM Tools*:Methodological tools which are referenced in the A/R approved methodology. Please see Attachment 2 to identify the exact name of the AR-AM tools.
 Reg*: Total number of registered A/R CDM projects which applies the listed methodology (including previous and replaced versions) as of April 30, 2008.

The use of this tool is not mandatory for PPs when proposing new methodologies. PPs may propose alternative methods to demonstrate additionality for consideration by the EB, or submit revisions to approved methodologies (AMs) using this tool. But once this tool is included in an AM, its application by PPs using this methodology is mandatory.

Project activities with a start date before the date of validation shall specifically take into account the guidance provided in PDD GL.

Step 1. Identification of alternatives to the project activity consistent with current laws and regulations

Sub-step 1a. Define alternatives to the project activity:

- ☞ Identify realistic and credible alternative scenario(s) available to the PPs or similar project developers that provide outputs or services comparable with the proposed CDM project activity.

Sub-step 1b. Consistency with mandatory laws and regulations:

- ☞ The alternative scenario(s) shall be in compliance with all mandatory applicable legal and regulatory requirements. If an alternative does not comply with all mandatory applicable legislation and regulations, then show that those applicable legal or regulatory requirements are systematically not enforced;
- ☞ If the proposed project activity is the only alternative amongst the ones considered by the PPs that is in compliance with all mandatory regulations with which there is general compliance, then the proposed CDM project activity is not additional.

Pass

Step 2 or Step 3, or both step 2 and step 3

Step 2. Investment analysis (also see “Guidance on the Assessment of Investment Analysis” [EB39 Anx35])

Determine whether the proposed project activity is not the most economically or financially attractive, or economically or financially feasible, without the revenue from the sale of CERs.

Sub-step 2a. Determine appropriate analysis method :

- ☞ If the CDM project activity and the alternatives identified in Step 1 generates no financial or economic benefits other than CDM related income, then apply Option I below. Otherwise, use Option II or Option III.

Sub-step 2b.

Option I. Apply simple cost analysis

- ☞ Document the costs associated with the CDM project activity and demonstrate that there is at least one alternative which is less costly than the project activity.

Option II. Apply investment comparison analysis

- ☞ Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context.

Option III. Apply benchmark analysis

- ☞ Identify the financial/economic indicator, such as IRR. The financial/economic analysis shall be based on parameters that are standard in the market but not linked to the subjective profitability.
- ☞ Only in the particular case where the project activity can be implemented by the PP, the specific financial/economic situation of the company undertaking the project activity can be considered.

Sub-step 2c. Calculation and comparison of financial indicators (only applicable to options II and III):

- ☞ Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity and:
 - ⇒ (a) The alternatives, if Option II (investment comparison analysis) is used, or (b) the financial benchmark, if Option III (benchmark analysis) is used.
 If the CDM project activity has a less favourable indicator, then the CDM project activity cannot be considered as financially attractive.

Sub-step 2d. Sensitivity analysis (only applicable to options II and III) :

- ☞ Include a sensitivity analysis that shows whether the conclusion is robust to reasonable variations in the critical assumptions.

The EB agreed to clarify that investment analysis should be prepared within the context of the underlying project activity and should therefore not be limited to the proposed CDM crediting period. [EB35 Rep para77]

Pass

Step 3. Barrier analysis

Determine whether the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity, and do not prevent the implementation of at least one of the alternatives. Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers.

If the CDM does not alleviate the identified barriers that prevent the proposed project activity from occurring, then the project activity is not additional.

Sub-step 3a. Identify barriers that would prevent the implementation of type of the proposed project activity:

- ☞ Establish that there are realistic and credible barriers that would prevent the implementation of the type of proposed project activity from being carried out if the project activity was not registered as a CDM activity. Such barriers may include, among others, investment barriers other than the economic/financial barriers in Step 2 above, technological barriers, barriers due to prevailing practice and other barriers.

Sub-step 3 b. Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):

- ☞ If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity.

Pass

Step 4. Common practice analysis

Unless the proposed project type has demonstrated to be first-of-its kind (according to Sub-step 3a), the above generic additionality tests shall be complemented with an analysis of the extent to which the proposed project type has already diffused in the relevant sector and region. This test is a credibility check to complement the investment analysis (Step 2) or barrier analysis (Step 3).

Sub-step 4a. Analyze other activities similar to the proposed project activity:

- ☞ Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities (registered project activities and project activities which have been published on the UNFCCC website as part of the validation process) are not to be included in this analysis.

Sub-step 4b. Discuss any similar options that are occurring:

- ☞ If similar activities are identified above, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers.

The EB clarified that in the context of conducting common practice analysis, PPs may exclude registered CDM project activities and project activities which have been published on the UNFCCC CDM website as part of the validation process. [EB38 Rep, para60]

Pass

The proposed CDM project activity is additional

Scope and applicability

- ◆ This tool may be referred to in order to estimate the CO₂ emission factor for the purpose of calculating baseline emissions for a project activity substitutes electricity from the grid, i.e.
 - ☞ where a project activity supplies electricity to a grid,
 - ☞ or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).
- ◆ Note that this tool is also referred to in the “Tool to calculate project emissions from electricity consumption” for the purpose of calculating project and leakage emissions in case where a project activity consumes electricity from the grid or results in increase of consumption of electricity from the grid outside the project boundary.
- ◆ This tool provides procedures to determine the following three parameters (Unit: t-CO₂/MWh):

| | | |
|------------------|---|---|
| $EF_{grid,OM,y}$ | Operating margin (OM) CO ₂ emission factor for grid connected power generation in year y | OM means a cohort of power plants that reflect the existing power plants whose electricity generation would be affected by the proposed CDM project activity |
| $EF_{grid,BM,y}$ | Build margin (BM) CO ₂ emission factor for grid connected power generation in year y | BM means a cohort of power units that reflect the type of power units whose construction would be affected by the proposed CDM project activity |
| $EF_{grid,CM,y}$ | Combined margin (CM) CO ₂ emission factor for grid connected power generation in year y $EF_{grid,CM,y} = EF_{grid,OM,y} \times W_{OM} + EF_{grid,BM,y} \times W_{BM} \quad (W_{OM} + W_{BM} = 1)$ | |

Baseline methodology procedure

Step 1. Identify the relevant electric power system

Step 2. Select an operating margin (OM) method

Step 3. Calculate the operating margin (OM) emission factor according to the selected method

Step 4. Identify the cohort of power units to be included in the build margin (BM)

Step 5. Calculate the build margin (BM) emission factor

Step 6. Calculate the combined margin (CM) emissions factor

Step 1. Identify the relevant electric power system

A project electricity system

☞ the spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g. the renewable power plant location or the consumers where electricity is being saved) and that can be dispatched without significant transmission constraints.

Electricity import

Electricity export

Significant transmission constraint

A connected electricity system

☞ An electricity system (e.g. national or international) that is connected by transmission lines to the project electricity system. Power plants within the connected electricity system can be dispatched without significant transmission constraints but transmission to the project electricity system has significant transmission constraint.

◆ If the DNA of the host country has published a delineation of the project electricity system and connected electricity systems, these delineations should be used.

◆ If such delineations are not available, PPs should define the project electricity system and any connected electricity system and justify and document their assumptions in the CDM-PDD. In doing, so the following criteria can be used to determine the existence of significant transmission constraints:

- ☞ In case of electricity systems with spot markets for electricity: there are differences in electricity prices (without transmission and distribution costs) of more than 5 percent between the systems during 60 percent or more of the hours of the year.
- ☞ The transmission line is operated at 90% or more of its rated capacity during 90% percent or more of the hours of the year.

◆ Where the application of these criteria does not result in a clear grid boundary, use a regional grid definition in the case of large countries with layered dispatch systems (e.g. provincial / regional / national). A provincial grid definition may indeed in many cases be too narrow given significant electricity trade among provinces that might be affected, directly or indirectly, by a CDM project activity. In other countries, the national (or other largest) grid definition should be used by default.

In case of determining the operating margin (OM) emission factor

- ☞ Use one of the following options to determine the CO₂ emission factor(s) for net electricity imports ($EF_{\text{grid,import,y}}$) from a connected electricity system within the same host country(ies):
 - ⇒ (a) 0 t-CO₂/MWh, or
 - ⇒ (b) **The weighted average operating margin** emission rate of the exporting grid, determined as described in step 3 (d) below; or
 - ⇒ (c) **The simple operating margin** emission rate of the exporting grid, determined as described in step 3 (a), if the conditions for this method, as described in step 2 below, apply to the exporting grid; or
 - ⇒ (d) **The simple adjusted operating margin** emission rate of the exporting grid, determined as described in step 3 (b) below.
- ☞ For imports from connected electricity systems located in another host country(ies), the emission factor is 0 tons CO₂ per MWh. Electricity exports should not be subtracted from electricity generation data used for calculating and monitoring the electricity emission factors.

In case of determining the build margin (BM) emission factor

- ☞ The spatial extent is limited to the project electricity system, except where recent or likely future additions to transmission capacity enable significant increases in imported electricity. In such cases, the transmission capacity may be considered a build margin source.

Step 2. Select an operating margin (OM) method

- ◆ The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following 4 methods, and any of the methods (each method is described under Step 3) can be used basically.
- ◆ The data vintage chosen should be documented in the CDM-PDD and not be changed during the crediting periods.
- ◆ Power plants registered as CDM project activities should be included in the sample group that is used to calculate the operating margin if the criteria for including the power source in the sample group apply.

(a) Simple OM**(b) Simple adjusted OM****(d) Average OM****(c) Dispatch data analysis OM**

The simple OM method can only be used if low-cost/must-run resources constitute less than 50% of total grid generation in:

- ☞ 1) average of the five most recent years, or
- ☞ 2) based on long-term averages for hydroelectricity production.
 - ⇒ Low-cost/must-run resources are defined as power plants with low marginal generation costs or power plants that are dispatched independently of the daily or seasonal load of the grid. They typically include hydro, geothermal, wind, low-cost biomass, nuclear and solar generation. If coal is obviously used as must-run, it should also be included in this list.

For the dispatch data analysis OM, use the year in which the project activity displaces grid electricity and update the emission factor annually during monitoring.

For the simple OM, the simple adjusted OM and the average OM, the emissions factor can be calculated using either of the 2 following data vintages:

- ☞ **Ex ante option:** A 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation, without requirement to monitor and recalculate the emissions factor during the crediting period, or
- ☞ **Ex post option:** The year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring. If the data required to calculate the emission factor for year y is usually only available later than 6 months after the end of year y , alternatively the emission factor of the previous year ($y-1$) may be used. If the data is usually only available 18 months after the end of year y , the emission factor of the year preceding the previous year ($y-2$) may be used. The same data vintage (y , $y-1$ or $y-2$) should be used throughout all crediting periods.

Step 3. Calculate the operating margin (OM) emission factor according to the selected method (1/2)

(a) Simple OM

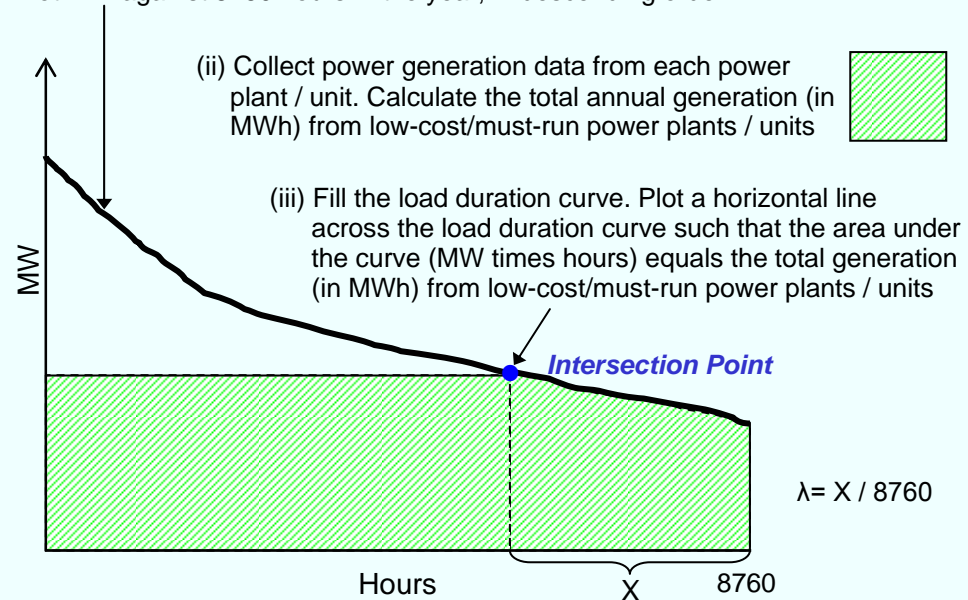
- ◆ The simple OM emission factor is calculated as the generation-weighted average CO₂ emissions per unit net electricity generation (t-CO₂/MWh) of all generating power plants serving the system, not including low-cost / must-run power plants / units. It may be calculated:
 - ☞ **Option A:** Based on data on fuel consumption and net electricity generation of each power plant / unit
 - ☞ **Option B:** Based on data on net electricity generation, the average efficiency of each power unit and the fuel type(s) used in each power unit (There are 3 sub-options subject to data availability)
 - ⇒ **Option B1:** In case for data for a power unit on fuel consumption and electricity generation is available
 - ⇒ **Option B2:** In case for only data for a power unit on electricity generation and the fuel types used is available, the emission factor should be determined based on the CO₂ emission factor of the fuel type used and the efficiency of the power unit
 - ⇒ **Option B3:** In case for only data for a power unit on electricity generation is available, an emission factor of 0 tCO₂/MWh can be assumed as a simple and conservative approach.
 - ☞ **Option C:** Based on data on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system.
- ◆ **Option A** should be preferred and must be used if the data is available for each power plant / unit. In other cases, **option B** or **option C** can be used. For the purpose of calculating the simple OM, **Option C** should only be used if the necessary data for option A and option B is not available and can only be used if only nuclear and renewable power generation are considered as low-cost / must-run power sources and if the quantity of electricity supplied to the grid by these sources is known.

(b) Simple adjusted OM

- ◆ The simple adjusted OM emission factor is a variation of the simple OM, where the power plants / units (including imports) are separated in low-cost/must-run power sources and other power sources.
- ◆ As with the **simple OM**, it can be calculated by **Option A** or **Option B** (see the left). **Option A** should be preferred and must be used if data is available. In other cases, **option B** can be used. Option C is not applicable to the simple adjusted OM.

How to calculate λ_y for the Simple Adjusted OM

- (i) Plot a **load duration curve**. Collect chronological load data (typically in MW) for each hour of the year y, and sort the load data from the highest to the lowest MW level. Plot MW against 8760 hours in the year, in descending order.



- (iv) Determine the “Number of hours for which low-cost/must-run sources are on the margin in year y”. First, locate the intersection of the horizontal line plotted in step (iii) and the load duration curve plotted in step (i). The number of hours (out of the total of 8760 hours) to the right of the intersection is the number of hours for which low-cost/must-run sources are on the margin. If the lines do not intersect, then one may conclude that low-cost/must-run sources do not appear on the margin and λ_y is equal to zero.

Step 3. Calculate the operating margin (OM) emission factor according to the selected method (2/2)

(c) Dispatch data analysis OM

- ◆ The dispatch data analysis OM emission factor is determined based on the power units that are actually dispatched at the margin during each hour h where the project is displacing electricity.
- ◆ To determine the set of the power units that are in the top of the dispatch, obtain from a national dispatch centre:
 - ☞ The grid system dispatch order of operation for each power unit of the system including power units from which electricity is imported; and
 - ☞ The amount of power (MWh) that is dispatched from all power units in the system during each hour h that the project activity is displacing electricity.
- ◆ At each hour h , stack each power unit's generation using the merit order. The group of the power units in the dispatch margin includes the units in the top $x\%$ of total electricity dispatched in the hour h , where $x\%$ is equal to the greater of either:
 - ☞ (a) 10%; or
 - ☞ (b) The quantity of electricity displaced by the project activity during hour h divided by the total electricity generation in the grid during that hour h .
- ◆ This approach is not applicable to historical data and, thus, requires annual monitoring.
 - ☞ If hourly fuel consumption data is available, then the hourly emissions factor is determined for each plant.
 - ☞ Otherwise, the hourly emissions factor is calculated based on the energy efficiency of the power unit and the fuel type used.
- ◆ The CO₂ emission factor of the power units should be determined as per the guidance for **the simple OM**, using the **options B1, B2 or B3**.

(d) Average OM

- ◆ The average OM emission factor is calculated as the average emission rate of all power plants serving the grid, using the methodological guidance as described under (a) above for **the simple OM**, but including in all equations also low-cost/must-run power plants.
- ◆ **Option A** should be preferred and must be used if fuel consumption data is available for each power plant / unit. In other cases, **option B** or **option C** can be used. Option C should only be used if the necessary data for option A and option B is not available.

Step 4. Identify the cohort of power units to be included in the build margin (BM)

- ◆ The sample group of power units m used to calculate the build margin consists of the larger annual generation of either:
 - ☞ (a) The set of five power units that have been built most recently, or
 - ☞ (b) The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently.
 - If 20% falls on part capacity of a unit, that unit is fully included in the calculation.
- ◆ As a general guidance, a power unit is considered to have been built at the date when it started to supply electricity to the grid.
- ◆ Power plant registered as CDM project activities should be excluded from the sample group m . However, If group of power units, not registered as CDM project activity, identified for estimating the BM emission factor includes power unit(s) that is(are) built more than 10 years ago then:
 - ☞ (i) exclude power unit(s) that is (are) built more than 10 years ago from the group; and
 - ☞ (ii) include grid connected power projects registered as CDM project activities, which are dispatched by dispatching authority to the electricity system (This information shall be provided by the host country).
- ◆ Capacity additions from retrofits of power plants should not be included in the calculation of the BM emission factor.
- ◆ In terms of vintage of data, PPs can choose between one of the following two options:
 - ☞ **Option 1:** For the 1st crediting period, calculate the BM emission factor *ex-ante* based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation. For the 2nd crediting period, the BM emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the 3rd crediting period, the BM emission factor calculated for the 2nd crediting period should be used. This option does not require monitoring the emission factor during the crediting period.
 - ☞ **Option 2:** For the 1st crediting period, the BM emission factor shall be updated annually, *ex-post*, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available. For the 2nd crediting period, the BM emissions factor shall be calculated *ex-ante*, as described in **option 1** above. For the 3rd crediting period, the BM emission factor calculated for the 2nd crediting period should be used.
- ◆ The option chosen should be documented in the CDM-PDD.

Step 5. Calculate the build margin (BM) emission factor

- ◆ The BM emissions factor is the generation-weighted average emission factor (t-CO₂/MWh) of all power units m during the most recent year y for which power generation data is available.
- ◆ The CO₂ emission factor of each power unit m should be determined as per the guidance in step 3 (a) for **the simple OM**, using options **B1**, **B2** or **B3**, using for y the most recent historical year for which power generation data is available, and using for m the power units included in the BM.

Step 6. Calculate the combined margin (CM) emissions factor

◆ The combined margin (CM) emissions factor is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

⇒ $EF_{grid,BM,y}$ = BM CO₂ emission factor in year *y* (t-CO₂/MWh), and $EF_{grid,OM,y}$ = OM CO₂ emission factor in year *y* (t-CO₂/MWh)

⇒ w_{OM} = Weighting of operating margin emissions factor (%), and w_{BM} = Weighting of build margin emissions factor (%)

◆ The following default values should be used for w_{OM} and w_{BM} :

- ☞ Wind and solar power generation project activities: $w_{OM} = 0.75$ and $w_{BM} = 0.25$ (owing to their intermittent and non-dispatchable nature) for the 1st crediting period and for subsequent crediting periods.
- ☞ All other projects: $w_{OM} = 0.5$ and $w_{BM} = 0.5$ for the 1st crediting period, and $w_{OM} = 0.25$ and $w_{BM} = 0.75$ for the 2nd and 3rd crediting period, unless otherwise specified in the approved methodology (AM) which refers to this tool.
- ☞ Alternative weights can be proposed, as long as $w_{OM} + w_{BM} = 1$, for consideration by the EB, taking into account the guidance as described in the tool. The values for $w_{OM} + w_{BM}$ applied by PPs should be fixed for a crediting period and may be revised at the renewal of the crediting period.

Monitoring methodology

The calculation of the OM and BM emission factors should be documented electronically in a spreadsheet that should be attached to the CDM-PDD. This should include all data used to calculate the emission factors, including:

- ☞ For each grid-connected power plant / unit the following information:
 - ⇒ Information to clearly identify the plant, the date of commissioning, the capacity (MW), the fuel type(s) used, the quantity of net electricity generation in the relevant year(s), if applicable: the fuel consumption of each fuel type in the relevant year(s), in case where the simple OM or the simple adjusted operating margin is used: information whether the plant / unit is a low-cost / must-run plant / unit.
 - ☞ Net calorific values used, CO₂ emission factors used, plant efficiencies used, identification of the plants included in the BM and the OM during the relevant time year(s), in case the simple adjusted OM is used: load data (typically in MW) for each hour of the year *y*.
 - ☞ In case the dispatch data OM is used: for each hour *h* where the project plant is displacing grid electricity:
 - ⇒ The dispatch order of all grid-connected power plants, the total grid electricity demand, the quantity of electricity displaced by the project activity, identification of the plants that are in the top of the dispatch and for each plant information on electricity generation and, where hourly fuel consumption data is available, data on the types and quantities of fuels consumed during that hour.

The data should be presented in a manner that enables reproducing of the calculation of the BM and OM grid emission factor.

BOX: Default efficiency factors for power plants

When calculating the simple OM by option B2, the default values provided in the table below can be used.

| | | Before 2000 | After 2000 |
|------|---|-------------|------------|
| Coal | Subcritical | 37.0 % | 39.0 % |
| | Supercritical | | 45.0 % |
| | Ultrasupercritical | | 50.0 % |
| | IGCC (Integrated Gasification Combined Cycle) | | 50.0 % |
| | FBS (Fluidized Bed Combustion) | 35.5 % | |
| | CFBS (Circulating Fluidized Bed Combustion) | 36.5 % | 40.0 % |
| | PFBS (Pressurized Fluidized Bed Combustion) | | 41.5 % |
| Oil | Steam turbine | 37.5 % | 39.0 % |
| | Open cycle | 30.0 % | 39.5 % |
| | Combined cycle | 46.0 % | 46.0 % |
| Gas | Steam turbine | 37.5 % | 37.5 % |
| | Open cycle | 30.0 % | 39.5 % |
| | Combined cycle | 46.0 % | 60.0 % |

Attachment 6. Using blended biofuel

The following guidance serves to avoid double-counting of emission reductions that could occur in project activities if both biofuel production and biofuel use are eligible to generate CERs and where such double-counting could occur at different points in the production chain. [EB26 Anx12]

Type of biofuel project activities covered under the guidance

Methodological proposals for the CDM project activities that seek to claim CERs from the substitution of fossil fuels by biofuels may be proposed for project activities where:

- ☛ The consumers (end-users) of biofuels claim CERs from displacing fossil fuel consumption with biofuel.
- ☛ The producer of biofuels claim CERs, for biofuel production, provided:
 - ⇒ the consumers, to whom the biofuel is sold, are included in the project boundary;
 - ⇒ the emissions reduction from use of biofuel are estimated based on monitored consumption by the consumers included within the project activity.

The EB further clarified to the guidance that project activities claiming CERs from the production of biofuels only, while not taking into account consumers (end-users) of these biofuels, are not eligible as CDM project activities.

[EB30 Rep, para14]

Export of biofuels to Annex I countries

No biofuel production exported to Annex I countries is eligible to claim CERs under the CDM.

Monitoring

- ◆ The methodology shall provide a monitoring scheme/framework with elements (e.g. electronic loggers) that can be used to verify without doubt the actual amount of biofuel consumed by the consumer (end user) for displacement of fossil fuels.
- ◆ The monitored elements of the consumption by the end-user shall correspond to the production of the biofuel and be used to calculate and claim emission reductions.
- ◆ The methodology for project activities undertaken by consumers of biofuel shall provide an estimate of leakage, which is measurable and attributable to the CDM project activity.

Cultivation, harvesting and preparation of biofuel

- ◆ Emissions associated with the production of biomass used to produce the biofuel shall be accounted for when calculating emission reductions achieved by the blended biofuel project activity.
- ◆ However, in the case that it can be demonstrated that the project activity is using biomass originating from a registered A/R project activity (i.e. through contractual agreement for procurement of biomass), emissions related to the production of the biomass need not be accounted for.

BOX: Combustion of biofuels [Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual, 1.33]

☛ CO₂ emissions from the combustion of biomass fuels are not to be included in the total national CO₂ emissions.

Attachment 7. Global warming potential (GWP) and carbon emission factor (CEF)

- ◆ Global warming potential (GWP) is a measure of the relative radiative effect of GHGs compared to CO₂. GWP used by Parties should be those provided by the IPCC 2nd Assessment Report (“1995 IPCC GWP values”) based on the effects of the GHGs over a 100-year time horizon [CP/1997/7/Ad1, p31 para3]. The value of GWP is fixed for the 1st commitment period, but it is subject to change for the subsequent commitment periods depending on new scientific findings.
- ◆ Carbon Emission Factor (CEF) is the estimated average carbon (or CO₂) emission rate for a given source, relative to units of activity. The EB agreed that the IPCC default values should be used only when country or project specific data are not available or difficult to obtain [EB25 Rep, para59]. The EB further clarified that the ‘2006 IPCC Guidelines for National Greenhouse Gas Inventories’ was published on the IPCC website on 24 October 2006 after which this version shall be considered as the latest version. [EB28 Rep, para68]

Global Warming Potential

| Species | Chemical formula | GWP | Species | Chemical formula | GWP |
|----------------------|--------------------------------|--------|-----------|--|--------|
| CO ₂ | CO ₂ | 1 | HFC-23 | CHF ₃ | 11,700 |
| Methane * | CH ₄ | 21 | HFC-236fa | C ₃ H ₂ F ₆ | 6,300 |
| Nitrous oxide | N ₂ O | 310 | HFC-143a | C ₂ H ₃ F ₃ | 3,800 |
| Perfluoroethane | C ₂ F ₆ | 9,200 | HFC-134a | CH ₂ FCF ₃ | 1,300 |
| Perfluoropentane | C ₅ F ₁₂ | 7,500 | HFC-134 | C ₂ H ₂ F ₄ | 1,000 |
| Perfluorohexane | C ₆ F ₁₄ | 7,400 | HFC-32 | CH ₂ F ₂ | 650 |
| Sulphur hexafluoride | SF ₆ | 23,900 | HFC-41 | CH ₃ F | 150 |

Climate Change 1995: The Science of Climate Change, p. 22, Intergovernmental Panel on Climate Change, 1996.

General Conversion Factors for Energy

| To: | TJ | Gcal | Mtoe | GWh |
|-------------|---------------------------|-----------------|--------------------------|--------------------------|
| From: | Multiply by: | | | |
| TJ | 1 | 238.8 | 2.388 x 10 ⁻⁵ | 0.2778 |
| Gcal | 4.1868 x 10 ⁻³ | 1 | 10 ⁻⁷ | 1.163 x 10 ⁻³ |
| Mtoe | 4.1868 x 10 ⁴ | 10 ⁷ | 1 | 11630 |
| GWh | 3.6 | 860 | 8.6x10 ⁻⁵ | 1 |

CO₂ Emissions from fuel combustion (2006 Edition), p.I.11, International Energy Agency, 2006.

Carbon Emission Factor

| Fossil fuel | | CO ₂ emission factor (kg/TJ) | Net calorific value (TJ/Gg) Gg=1000t | CO ₂ emission factor (t-CO ₂ /t (Fuel)) |
|----------------|---------------------------|---|--------------------------------------|---|
| Liquid Fossil | Crude Oil | 73,300 | 42.3 | 3.101 |
| | Motor Gasoline | 69,300 | 44.3 | 3.070 |
| | Other Kerosene | 71,900 | 43.8 | 3.149 |
| | Gas/Diesel Oil | 74,100 | 43.0 | 3.186 |
| | Liquefied Petroleum Gases | 63,100 | 47.3 | 2.985 |
| Solid Fossil | Anthracite | 98,300 | 26.7 | 2.625 |
| | Sub-Bituminous Coal | 96,100 | 18.9 | 1.816 |
| | Lignite | 101,000 | 11.9 | 1.202 |
| Gaseous Fossil | Natural Gas | 56,100 | 48.0 | 2.693 |

2006 IPCC Guidelines for National Greenhouse Gas Inventories, p. 1.18-1.24, Intergovernmental Panel on Climate Change, 2006.

[Default carbon oxidation factor is 1] [CO₂ emission factors t-CO₂/t (Fuel) are calculated for this document and do not appear in the IPCC guideline]

Important changes from previous version (Ver. 5.0 / February 2008)

| <i>Page</i> | <i>Chapter</i> | <i>Change</i> |
|-------------|--|---|
| 12 | 4-5. Designated Operational Entity (DOE) | Added “BOX: CDM validation and verification manual (CDM-VVM)” |
| 13 | 4-6. Project Participants (PPs) | Added “Withdraw of PPs” |
| 15 | 5. Conditions for CDM projects | Modified “Public funding for CDM projects” |
| 28 | 8-3. Crediting period | Updated the explanation of “the starting date of a CDM project activity”, at the lower left |
| 33 | 11-1. Procedures for registration | Updated step (4) |
| 34 | 11-2. Procedures for review of registration | Updated overall |
| 37 | 13-1. Procedures for verification, certification and issuance of CERs | Updated step (7) |
| 39 | 13-2. Procedures for review of issuance | Updated overall |
| 65-66 | Attachment 2. Methodological tools | Added new tools and updated versions of tools |
| 67-73 | Attachment 3. Approved methodologies | Updated and revised overall |
| 74-75 | Attachment 4. Tool for the demonstration and assessment of additionality | Updated overall |



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