



**Annex 6**

**THE ASSESSMENT OF THE IMPLICATIONS OF THE POSSIBLE INCLUSION OF LANDS WITH FORESTS IN EXHAUSTION AS AFFORESTATION AND REFORESTATION CLEAN DEVELOPMENT MECHANISM PROJECT ACTIVITIES, TAKING INTO ACCOUNT TECHNICAL, METHODOLOGICAL AND LEGAL ISSUES**

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### **A. Mandate and background**

1. The Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP) and its fourth session, through its decision 2/CMP.4, paragraph 42, “Further guidance relating to the clean development mechanism”, requested the CDM Executive Board (hereinafter referred to as the Board) to assess the implications of the possible inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism (hereinafter referred to as A/R CDM) project activities, taking into account technical, methodological and legal issues, and report back to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its fifth session. This document provides the draft assessment responding to the Terms of Reference (ToR) defined in annex 16 to the report of the forty-seventh meeting of the Board.

### **B. Action expected from the CDM Executive Board**

2. In order to allow development of the final draft report assessing the implications of the possible inclusion of lands with forests in exhaustion as A/R CDM project activities, taking into account technical, methodological and legal issues, and reporting back to the CMP at its fifth session, the Board may wish to:

Provide a guidance on which of the two definitions of forest in exhaustion described in Chapter E. “Broad description of basic features of forests in exhaustion or lands with forests in exhaustion (FE), in relation to CDM project activities, which might be useful in contrasting FE to other types of forests or lands with other types of forests” shall be included in the report of the Board to the CMP at its fifth session.

3. The timeline for the consideration of the report assessing the implications of the possible inclusion of lands with forests in exhaustion as A/R CDM project activities, taking into account technical, methodological and legal issues, and reporting back to the CMP at its fifth session, might be difficult if the experts are not able to continue their work immediately after closing date of the forty-ninth meeting of the Board. Therefore, the members of the Board may wish to provide their agreed input during the above-mentioned meeting.

### **C. Scope of the document**

4. Based on Decision 2/CMP.4 “Further guidance relating to the clean development mechanism”, paragraph 42, this document assesses the implications of the possible inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism project activities, taking into account technical, methodological and legal issues, responding to the Terms of Reference defined in annex 16 to the report of the forty-seventh meeting of the Board.

### **D. Definitional issues**

#### **1. Forest**

5. In Annex to decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1(a) “forest” is defined as follows:



- (a) “Forest” is a minimum area of land of 0.05–1.0 hectare with tree crown cover (or equivalent stocking level) of more than 10–30 per cent with trees with the potential to reach a minimum height of 2–5 metres at maturity in situ. A forest may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground or open forest. Young natural stands and all plantations which have yet to reach a crown density of 10–30 per cent or tree height of 2–5 metres are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention such as harvesting or natural causes, but which are expected to revert to forest.

## 2. Deforestation

6. In the annex to decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1(d) “deforestation” is defined as follows:

- (a) “Deforestation” is the direct human-induced conversion of forested land to non-forested land.

## 3. Forest management

7. In the annex to decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1(f) “forest management” is defined as follows:

- (a) “Forest management” is a system of practices for stewardship and use of forest land aimed at fulfilling relevant ecological (including biological diversity), economic and social functions of the forest in a sustainable manner.

## 4. Forest degradation

8. No definition of “Forest Degradation” has been endorsed by COP/MOP so far.<sup>1</sup>

9. The Intergovernmental Panel on Climate Change (hereinafter referred to as IPCC) special report on ‘Definitions and Methodological Options to Inventory Emissions from Direct Human-Induced Degradation of Forests and Devegetation of Other Vegetation Types’ (2003) proposed the following characterization of forest degradation: ‘a direct, human-induced, long-term loss (persisting for  $x$  years or more) or at least  $y\%$  of forest carbon stocks [and forest values] since time  $T$  and not qualifying as deforestation’ (where  $x$  and  $y$  are undefined).

10. The UNFCCC Working paper No. 1 (a) (2006) defines “forest degradation” as: ‘a measurable sustained decrease in crown cover with crown cover remaining greater than  $mCC$  [minimal crown cover].

11. The Food and Agriculture Organization (hereinafter referred to as FAO) Working Paper No. 5 (2007) provides a definition along the lines:<sup>2</sup> Forest degradation is the direct human-induced long-term reduction of the overall potential supply of benefits from the forest, which includes carbon, wood, biodiversity and other goods and services. Forest degradation is likely characterized by a

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<sup>1</sup>The term “forest degradation” has also not been defined in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories or by the IPCC Good Practice Guidance for land use, land use change and forestry (2004).

<sup>2</sup>Paraphrased from Schoene, D., Killmann, W., von Lüpke, H., and Loyche Wilkie, M. 2007. Definitional issues related to reducing emissions from deforestation in developing countries. FAO Forests and Climate Change Working Paper 5. <<http://www.fao.org/docrep/009/j9345e/j9345e08.htm>>.



reduction of tree crown cover. Routine management from which crown cover will recover within the normal cycle of forest management operations is not included.

#### 5. Reforestation

12. In Annex to decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1 (c) “reforestation” is defined as follows:

- (a) “Reforestation” is the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989.

#### 6. Afforestation

13. In Annex to decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1(c) “afforestation” is defined as follows:

- (a) “Afforestation” is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources.



**E. Broad description of basic features of forests in exhaustion or lands with forests in exhaustion, in relation to CDM project activities, which might be useful in contrasting them to other types of forests or lands with other types of forests**

14. The term “forests in exhaustion” (FE) was used for the first time in Decision 2/CMP.4 “Further guidance relating to the clean development mechanism”, paragraph 42. A specific description or definition endorsed by international organizations such as FAO, IPCC, etc. is not available.

15. Given the definitions established in Annex to Decision 16/CMP.1 (Land use, land-use change and forestry) and Annex to Decision 5/CMP.1 (Modalities and procedures for afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol - further referred to as “A/R CDM M&P”) the following features of known importance in the CDM context were selected to allow for the consideration of FE as requested by the terms of reference (see Table 1).

**Table 1: Features of known importance, in the CDM context that were selected in the consideration of forests in exhaustion (FE)**

Feature	Source	Substantiation
Compliance with the CDM definition of forest on 31 December 1989	Annex to Decision 16/CMP.1	The date 31 December 1989 is invoked in the definition of reforestation. FE at the project start may have been established before 31 December 1989 and may or may not comply with the CDM definition of forest on that date
Compliance with the CDM definition of forest at the date of project start	Annex to Decision 16/CMP.1	The date of project start is invoked in the definitions of reforestation and afforestation. FE at the project start may or may not comply with the CDM definition of forest on that date
Baseline scenario	Annex to Decision 5/CMP.1	The baseline scenario may allow to distinguish FE from forest degradation and deforestation
Project activity	Annex to Decision 5/CMP.1	The project activity may allow to distinguish the forestation of FE from avoided forest degradation and avoided deforestation
Area	Annex to Decision 5/CMP.1	Each parcel of land shall exceed a minimum area of land of 0.05–1.0 hectare in order to qualify for A/R CDM project activity

16. The features introduced in Table 1 allowed the identification of three mutually non-exclusive types of forests in exhaustion taking into account the stipulation in the ToR that *forests in exhaustion shall be different from forest degradation and deforestation* (see Table 2). No attempt is undertaken here to provide any definition of forests in exhaustion which might be used beyond the purposes of the CDM.

**Table 2: Identification of different types of forests in exhaustion within the framework of A/R CDM M&P. Detailed explanations are provided in the text below.**

		At the project start					
		Non-forest <sup>3)</sup>			Forest		
		Baseline scenario	Human Activity <sup>1)</sup>	Qualification <sup>2)</sup>	Baseline scenario	Human Activity <sup>1)</sup>	Qualification <sup>2)</sup>
On December 31 <sup>st</sup> 1989	Non-forest <sup>3)</sup>	All land use scenarios, incl. forestation	Forestation (within CDM)	A/R CDM	Forest in exhaustion, type 1	Forestation of forests in exhaustion type 1	(R-FE 1 CDM)
		All	Forestation (beyond CDM)	No A/R CDM	All excluding FE	(Sustainable) Forest management	Forest management
			Agriculture	No A/R CDM		Forest degradation	Forest degradation
			Settlements	No A/R CDM		Deforestation	Deforestation
	Forest	Forest in exhaustion, type 3	Forestation	(R-FE 3 CDM)	Forest in exhaustion, type 2	Forestation of forests in exhaustion type 2	(R-FE 2 CDM)
		All excluding FE	Forestation (beyond CDM)	No A/R CDM	All excluding FE	Sustainable forest management	Forest management
			Agriculture	No A/R CDM		Forest degradation	Forest degradation
			Settlements	No A/R CDM		Deforestation	Deforestation

<sup>1)</sup> A human activity is the activity which is implemented instead of the baseline activity.

<sup>2)</sup> The qualification is the assessment of the human activity in the light of the terms and definitions of AR/CDM activities in line with Decision 16/CMP.1.

<sup>3)</sup> Non-forest is land that does not comply with at least one of the values referred to in paragraph 8 of A/R CDM M&P.

17. In line with the approach applied in the procedures to demonstrate the eligibility of lands for afforestation and reforestation CDM project activities (Annex 18 to the report of the thirty-fifth meeting of the Board), areas potentially qualifying as lands with forests in exhaustion should be tested at two points in time: on 31 December 1989 and at the project start.

18. *Forests in exhaustion, type 1* cover lands that, inter alia, *do not* comply with the CDM definition of forest on 31 December 1989 and contain a forest in exhaustion (to be defined) at project start that *does* comply with the CDM definition of forest. However, in order to qualify as a “forest in exhaustion” (largely irrespective of its definition), additional information on the status of the land in between 31 December 1989 and the project start is required to demonstrate the *exhaustion* of the forest. For the time being, forests in exhaustion, type 1, therefore are not considered further in this document.

19. *Forests in exhaustion, type 2* and *type 3* cover lands that, inter alia, *do* comply with the CDM definition of forest on 31 December 1989 and contain a forest in exhaustion (to be defined) at the project start. Forests in exhaustion, type 2 and type 3 differ in the sense that at project start lands with FE type 2 *do* comply with the CDM definition of forest (that is land that has an area and contains forest vegetation that all exceed the respective values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board), whereas lands with FE type 3 *do not* comply with the CDM definition of forest (that is land that has an area and contains forest vegetation



that does not meet at least one of the respective values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board).

20. With regard to the situations described above as forests in exhaustion type 2 and type 3, the following definition of forests in exhaustion is proposed:

**Definition 1:**

“Forests in exhaustion cover lands that have the following basic features:

- (a) On 31 December 1989 lands comply with the CDM definition of forest (that is land that has an area and contains vegetation that all exceed the respective values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board) and the vegetation was established through planting, seeding and/or the human-induced promotion of natural seed sources;
- (b) At the project start forests in exhaustion cover lands:
  - (i) With a minimum area of land of 0.05–1.0 hectare;
  - (ii) With vegetation with values for crown cover and tree height that all are within a defined range around the respective values referred to in paragraph 8 of A/R CDM M&P as reported by a Host Party to the CDM Executive Board, but which are expected to decrease or remain constant due to harvesting practices initiated before adoption of the A/R CDM M&P on 09 November 2003.
- (c) A Party not included in Annex I may host a forests in exhaustion type of the afforestation or reforestation project activity under the CDM if it has selected and reported to the Executive Board through its designated national authority for the CDM:
  - (i) A single per cent value to define the minimum of the range as mentioned in paragraph (b)(ii) above; and
  - (ii) A single per cent value to define the maximum of the range as mentioned in paragraph (b)(ii) above”.

The lands containing forests in exhaustion are subjected to an A/R CDM project activity, which is defined as follows:

“The reforestation of lands with forests in exhaustion as FE A/R CDM project activity is the direct human-induced practice involving at least one of the following: planting, seeding, the human-induced promotion of natural seed sources”.

The Executive Board may wish to consider whether it would request COP/MOP to set limits to the minimum and maximum of the range mentioned in paragraph (c) above.

This definition takes account of the following:

- Forests in exhaustion are limited to forests that have been established through planting, seeding and/or the human-induced promotion of natural seed sources in order to prevent any perverse incentive to exhaust natural forests for the purpose of establishing a forest in exhaustion A/R CDM project;



- Values for crown cover and tree height at the project start comply with a defined range around the respective values referred to in paragraph 8 of A/R CDM M&P as reported by a Host Party to the CDM Executive Board in order to distinguish forests in exhaustion from deforestation or forest degradation as well as from full grown forest, which is unlikely to be a part of an exhaustion process;
- Values for crown cover and tree height are expected to decrease or remain constant depending on the “exhaustion” activity. It can be conservatively assumed that these values remain constant in the baseline (see section E on methodological issues);
- Harvesting practices should have been initiated before the adoption of the A/R CDM M&P on 09 November 2003 to prevent any perverse incentive to exhaust forests for the purpose of establishing a forest in exhaustion A/R CDM project;
- The associated definition of the FE A/R CDM project activity provides a safeguard against perverse incentives to receive credits for delayed harvesting.

Following a request by one of the reviewers of the early draft version of this document, a second definition of forests in exhaustion was included:

***Definition 2:***

“Forests in exhaustion cover lands that have the following basic features:

- (a) On 31 December 1989 lands comply with the CDM definition of forest (that is land that has an area and contains forest vegetation that all exceed the respective values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board), containing forests that were established through direct planting or seeding;
- (b) At the project start forests in exhaustion, type 3 cover lands:
  - (i) With a minimum area of land of 0.05–1.0 hectare;
  - (ii) With vegetation with values for of crown cover or tree height above the threshold values referred to in paragraph 8 of the A/R CDM M&P for the CDM definition of forest, but which are expected to revert to non-forested lands due to harvesting practices;
  - (iii) That are expected to remain as non-forested lands after harvesting, as a result of the most likely land-use in the baseline scenario”.

It is noticeable that the definition 2 does not contain any reference to an A/R CDM project activity that shall be performed on lands containing FE. Both definitions are compared in Appendix I.

**F. Analysis of legal issues related to the possible inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism project activities**

1. Proposal of definition/definitions of what could be considered as a legal issue

21. No explicit definition of the term ‘legal issue’ could be found.<sup>3</sup> However, the term is used as a synonym for a ‘question of law’.<sup>4</sup>

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<sup>3</sup> Meriam-Webster’s dictionary of law: <<http://dictionary.getlegal.com/search>> ; Legal Dictionary by Farlex: <<http://legal-dictionary.thefreedictionary.com/>>



22. The Legal Dictionary of Law defines:<sup>5</sup> ‘question of law, an issue arising in a lawsuit or criminal prosecution which only relates to determination of what the law is, how it is applied to the facts in the case, and other purely legal points in contention. All "questions of law" arising before, during, and sometimes after a trial are to be determined solely by the judge and not by the jury. "Questions of law" are differentiated from "questions of fact", which are decided by the jury and only by the judge if there is no jury’.

23. In analogy to this definition and for the purpose of this document, the term ‘legal issue’ is defined as: “a question of A/R CDM modalities and procedures arising in the accommodation of a specific feature which relates to the determination of what the A/R CDM modalities and procedures are, how they are applied to the facts of the feature, and other purely legalistic points in contention”.

2. Identification of potential legal issues resulting from the inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism project activities and analysis of their implications

24. The possible inclusion of lands with forests in exhaustion as A/R CDM project activities causes initial legal issues (as defined above) when considered in the context of the A/R CDM M&P and A/R related guidance already approved by the Board. The identified initial legal issues are presented in the Table 3 below.

**Table 3: The identified initial legal issues resulting from the inclusion of lands with forests in exhaustion as A/R CDM project activities**

	<b>Legal issue</b>	<b>Document</b>
1	Application of the definition of reforestation exclusively with respect to the condition that “For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989”, particularly on land with forest in exhaustion. (Note: the condition is valid only for the first commitment period that is until 31 December 2012)	Annex to Decision 16/CMP.1 (Land use, land-use change and forestry)
2	Application of the definition of forest at the start of the project, particularly on lands with forest in exhaustion	Annex 18 to report of the thirty-fifth meeting of the Board

25. The scope of legal issues resulting from the inclusion of lands with forests in exhaustion as A/R CDM project activities depends on the way the inclusion is arranged legally to accommodate these two initial legal issues. The following two ways are possible to address the two initial legal issues identified in Table 3:

- (a) Extending the eligibility of land use, land-use change and forestry project activities under Article 12 of the Kyoto Protocol to include reforestation of forests in exhaustion. This option provides full flexibility in the elaboration of necessary regulations for this type of A/R CDM project activity, including necessary revision of existing regulations if they cover issues attributable to reforestation of forests in exhaustion as the A/R CDM project activities;
- (b) Accommodating the definition of reforestation as contained in Annex to Decision 16/CMP.1 (Land use, land-use change and forestry), paragraph 1.(c) to

<sup>4</sup> <<http://www.dict.cc/deutsch-englisch/Rechtsfrage.html>>

<sup>5</sup> <<http://legal-dictionary.thefreedictionary.com/Question+of+Law>>



incorporate the reforestation of forests in exhaustion. This option assumes that all currently valid regulations are applicable to forests in exhaustion. However, they may require necessary revisions in order to directly accommodate reforestation of forests in exhaustion in their language.

26. The second way of possibly including reforestation of forests in exhaustion as A/R CDM project activities is expected to have an impact on the legal system of the *current* A/R CDM M&P and the A/R related guidance already approved by the Board, thus requiring extensive modifications in these documents to maintain the integrity of the legal system. Therefore, the first way – the extension of the eligibility of land use, land-use change and forestry project activities under Article 12 of the Kyoto Protocol to include reforestation of forests in exhaustion - is assumed for the further identification of legal issues resulting from the possible inclusion of lands with forests in exhaustion as A/R CDM project activities and for the analysis of their implications. The identified legal issues are presented in the Table 4 below.

**Table 4: The identified legal issues resulting from the inclusion of lands with forests in exhaustion according to *definition 1* and *definition 2* as A/R CDM project activities and the analysis of their implications**

Category	Legal issue	Affecting FE according to definition <sup>1</sup>		Document	Analysis of their implications
		1	2		
Definition of project activity on lands with FE	An eligible CDM project activity to be performed on lands with forests in exhaustion shall be identified (in analogy to reforestation or afforestation as the A/R CDM project activity on land not containing forest)		x	Kyoto Protocol, Article 12 para. 3(a)	Neither Decision 2/CMP.4 “Further guidance relating to the clean development mechanism”, paragraph 42 nor the resulting ToR for this document (Annex 16 to the report of the forty-seventh meeting of the Board) specify the project activity potentially to take place on lands with forests in exhaustion. The definition of a project activity, however, is required according to Kyoto Protocol, Article 12 para. 3(a). This issue could be resolved by CMP with the definition of a project activity on lands with forests in exhaustion. (see also next legal issue)
Interpretation of the term project activity	Relying solely on the proposed definitions for lands containing forests in exhaustion, the mere stopping of the harvesting activity might suffice to increase carbon stocks above the baseline. In such a case, the term “project activity” would be extended to interpreting it in a passive way, i.e. of stopping a human activity as opposite to the introduction of a new human activity. At least in the A/R context, such an interpretation of the term project activity would be new.		x	Kyoto Protocol, Article 12 para. 5(b)	This legal issue is relevant for definition 2, as reverting to non-forested land is a priori assumed as the baseline scenario. Thus, not only the stopping of harvesting, but also a reduced rate of harvesting – i.e. a slower rate of exhaustion - would lead to carbon credits when compared to the baseline. This might finally result a) in carbon credits due to the slower rate of exhaustion under the project when compared to the baseline scenario, and b) to permanent GHG emissions due to the removal of the tree vegetation during the project life time (but at a slower rate than under the baseline scenario). It is to be considered if such a scenario provides “real, measurable, and long-term benefits related to the mitigation of climate change”



Category	Legal issue	Affecting FE according to definition <sup>1</sup>		Document	Analysis of their implications
		1	2		
					(Kyoto Protocol, Article 12 para. 5(b))
Potential similarity to definitions being considered within the REDD process	The definition 2 of FE stipulates that forests in exhaustion “are expected to revert to non-forested lands” and “are expected to remain as non-forested lands after harvesting, as a result of the most likely land-use in the baseline scenario”. This language may not be different from the definition of “deforestation” according to Annex to Decision 16/CMP.1 para. 1(d). The definition 1 of FE allows for the reduction in the values of crown cover and/or height hence, it may potentially interfere with a future definition of “forest degradation” resulting from the REDD (if adopted by CMP)	(x)	x	Future negotiations under the UNFCCC (e.g. REDD)	Both definitions of forests in exhaustion contain potential similarities to definitions currently considered within the REDD process, especially for definition 2 that requires land use change to non-forest land
Potential generation of CERs due to decreasing carbon stocks in carbon pools under the baseline scenario	Both definitions of FE could result in carbon credits from a) decrease of carbon stocks in carbon pools under the baseline scenario; and b) from the increase of carbon stocks due to the project activity to be defined	(x)	x	New	The generation of CERs due to a decrease of carbon stocks in carbon pools under the baseline scenario would be a new concept to be introduced to A/R CDM. For FE according to definition 1, this legal issue could be solved by conservatively assuming constant values for crown cover and tree height under the baseline scenario. (see Section E on methodological issues) For FE according to definition 2, this legal issue is inherent to its definition



Category	Legal issue	Affecting FE according to definition <sup>1</sup>		Document	Analysis of their implications
		1	2		
“Leakage” under baseline	Both definitions for lands with forests in exhaustion allow for reducing values for crown cover and tree height due to harvest. Definition 2 of FE explicitly assumes reverting to non-forested land as the baseline scenario. It may be assumed that after continued exhaustion or reverting to non-forested land of the lands with FE, the apparent demand for wood will be satisfied outside the project boundary. This will lead to an increase in greenhouse gas emissions by sources which occur outside the boundary of an afforestation or reforestation project activity under the baseline scenario.	(x)	x	New	Guidance by Board would be required on how to deal with decreases in carbon stocks in carbon pools outside the project boundary as a result of the baseline scenario. Guidance could contain, e.g. that the avoidance of decreases in carbon stocks in carbon pools outside the project boundary as a result of the baseline scenario due to the project activity shall be conservatively neglected



Category	Legal issue	Affecting FE according to definition <sup>1</sup>		Document	Analysis of their implications
		1	2		
Baseline (approach)	<p>Baseline approach 22(a) and 22(c) are not at all applicable:</p> <ul style="list-style-type: none"> <li>- Approach 22(a) refers to historical or existing changes in carbon stocks, which is not continued under definition 2 for FE;</li> <li>- Approach 22(c) refers to the “most likely land use at the time the project starts” whereas – according to definition 2 for FE – the lands within the project boundary contain forest at the project start, that will be harvested under the baseline scenario;</li> <li>- Approach 22(b) refers to an economically attractive course of action, taking into account barriers to investment. Such a course of action can only be defined based on many assumptions related, e.g., to the timing of harvestings under the baseline, the land use following reversion to a non-forest land, potentially further land use changes and their timing, etc. Such a course of action can thus not be defined on a project-specific basis but only referring to a projection of observed regional land use patterns and changes</li> </ul>		x	Annex to Decision 5/CMP.1 para. 22	<p>To include land with forests in exhaustion according to definition 2, an additional baseline approach would be required, along the lines:</p> <p>(d) Expected changes in carbon stocks in the carbon pools within the project boundary based on most likely regional land use trends.</p> <p>This issue could be accommodated by a decision by CMP. (see also baseline (project-specific))</p>



Category	Legal issue	Affecting FE according to definition <sup>1</sup>		Document	Analysis of their implications
		1	2		
Baseline (project-specific)	Definition 2 of forests in exhaustion contains a request for a future reverting to non-forested land as the baseline scenario. The land use type following the reversion and potential further land use changes can only be defined referring to a projection of land use patterns and changes observed on a regional scale, thus be based on a (regional) probability of land use changes		x	Annex to Decision 5/CMP.1 para. 20(c)	Identification of a baseline scenario based on land use patterns and changes observed on a <i>regional</i> scale constitutes a new way of defining a baseline. To ensure that such a “regional” baseline can be treated as “project-specific”, the Board might wish to consider the elaboration of a methodological guidance for FE, where a baseline scenario is based on regional data. Guidance should include, inter alia, the timing of harvest leading to reverting to non-forested land, timing and determination of subsequent land conversion, impacts of anticipated changes in national and sectoral policies on all the determined baseline land uses, etc. (see also Section E on methodological issues)
Baseline (Length of crediting period)	Definition 2 of forests in exhaustion contains a request for future reverting to non-forested land as the baseline scenario. Such a baseline can only be defined on regional scale, i.e. the baseline would only approximate “...the sum of the changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of the proposed project activity” and not necessary reasonably represent them as required by (AR M/P, para. 19)		x	Annex to Decision 5/CMP.1 para. 23(a)	In order to ensure that the baseline “reasonably represents the sum of the changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of the proposed project activity” (AR M/P, para. 19), baseline defined for project activities on lands with forests in exhaustion might need to be reviewed more frequently than 20 years, as defined for a renewable crediting period in Annex to Decision 5/CMP.1 para. 23(a). This issue could be accommodated by a decision by COP/MOP

<sup>1</sup>Explanation:

x - affected

(x) - partially affected



27. It should be noted that several legal issues identified for forests in exhaustion according to definition 2 are due to the fact that they could potentially generate net (anthropogenic) GHG removals by sinks in two ways, i.e. as:

- (a) The difference in carbon stocks between the baseline scenario of exhaustion including the reverting to non-forested lands and the maintenance/increase/decrease of the carbon stocks due to *the renunciation of harvesting*;
- (b) The difference in carbon stocks between the baseline scenario as a land use change to non-forested lands due to harvesting practices and the *reforestation* of these harvested lands as the project scenario.

28. In addition, the project activity and the baseline scenario can coincide or co-exists for forests in exhaustion according to definition 2, if a harvesting is assumed before the implementation of the project activity (to be defined, see section D). This means that:

- (a) The project activity and the baseline scenario could coincide until the final (complete) harvest is done;
- (b) Vegetation being accounted for under the baseline scenario and the vegetation resulting from the project activity co-exist physically on the same area of land until the final (complete) harvest of the baseline forest. This can happen if news are introduced under the cover of the pre-project forest.

29. These features are absent in current A/R CDM project activities that replace the baseline scenario at the project start.

30. The underlying assumption of a land use change in the baseline and the potential (initial) overlap between the project activity and the baseline scenario lead to additional legal issues besides the ones identified for forests in exhaustion according to definition 1.

3. Identification of provisions contained in the A/R CDM M&Ps and A/R related decisions by the Board that requires minor legal/technical or editorial revisions of the Board's decisions resulting from possible inclusion of lands with FE as afforestation and reforestation clean development mechanism project activities

31. Irrespective of the definition chosen for forests in exhaustion, several minor legal/technical revisions might need to be applied in the Board's approved guidance as listed in Table 5.

**Table 5: The Board's approved guidance that might need minor legal/technical revision to include lands with forests in exhaustion as A/R CDM project activities**

Action	Reference
Definition of renewable biomass: annex to the report of the twenty-third meeting of the Board, para. 1 might need to be specified with respect to biomass from forests in exhaustion	Annex 18 to EB 23 report
Application of the definition of forest to stands with several stories to forests in exhaustion	EB 31 report, para. 45 EB 32 report, para. 44



32. In addition, several other pieces of the Board's approved guidance will require only editorial revisions in order to include lands with forests in exhaustion as A/R CDM project activities as listed in Table 6.

**Table 6: Documents that might need only editorial revisions in order to include lands with forests in exhaustion as A/R CDM project activities**

Document	Reference
Validation and Verification Manual (VVM)	Annex 3 to EB 44 report
Guidelines for completing the CDM A/R forms for: the Project Design Document (PDD), the proposed new baseline and monitoring methodology (CDM-AR-NM):	Annex 12 to EB 42 report

4. Identification of provisions contained in the A/R CDM M&Ps and A/R related decisions by the Board that require no further guidance by Board, i.e., will not be affected by implications of the possible inclusion of lands with FE as afforestation and reforestation clean development mechanism project activities

33. The following provisions contained in the A/R CDM M&Ps and A/R related decisions by the Board have been identified that require no further guidance by Board, i.e. for a possible inclusion of lands with FE as A/R CDM project activities, can be referred to mutatis mutandis (in a separate decision) or implicitly by adopting a respective definition for the project activity on lands with forests in exhaustion (Table 7):

**Table 7: Provisions contained in the A/R CDM M&Ps and A/R related decisions by the Board that require no further guidance by Board, i.e. will not be affected by implications of the possible inclusion of lands with FE as A/R CDM project activities**

Document	Name	Remarks
<i>Decision 5/CMP1, including its annex</i>	Modalities and procedures for afforestation and reforestation project activities under the clean development mechanism in the first commitment period	Covering definitions for, inter alia: <ul style="list-style-type: none"> <li>- Project boundary</li> <li>- Carbon pools</li> <li>- Baseline net GHG removals by sinks</li> <li>- Actual net GHG removals by sinks</li> <li>- Net anthropogenic GHG removals by sinks</li> <li>- Leakage</li> <li>- SSC A/R activity</li> </ul> And provisions on, inter alia: <ul style="list-style-type: none"> <li>- Validation and registration</li> <li>- Monitoring</li> <li>- Verification and certification (except for para. 23 if definition 2 for FE is adopted)</li> <li>- Issuance on tCERs and ICERs</li> <li>- Addressing non-permanence</li> <li>- Content of the Project Design Document (PDD)</li> </ul>
<i>Decision 1/CMP.2, para. 28</i>	Methodologies and additionality	Thresholds for SSC CDM project activities
<i>EB 35 annex 20</i>	CDM Project Design	



Document	Name	Remarks
	Document for A/R project activities	
<i>EB 35 annex 22</i>	CDM Project Design Document for small-scale A/R project activities	
<i>EB 32 annex 20</i>	CDM Proposed new methodology for AR (CDM-AR-NM) – v.03	
<i>EB 24 annex 19</i>	Afforestation/reforestation in the baseline scenario	
<i>EB 20 annex 8</i>	Clarifications on definition of biomass and consideration of changes in carbon pools due to a CDM project activity	Relating to: – Definition of biomass – Consideration of changes in carbon pools due to a CDM project activity
<i>EB 22 annex 15</i>	Clarifications regarding methodologies for A/R CDM project activities	Relating to: – Pre-project emissions – Leakage – Equations for the calculation of net anthropogenic GHG emissions by sinks
<i>EB 23 annex 19</i>	Consideration of national and/or sectoral policies and circumstances in baseline scenarios	
<i>EB 28, para. 31&amp;32</i>	General issues	Clarifications related to pre-project emissions
<i>EB 25, para. 38</i>	Guidance on avoiding double counting of emission sources	In the case of bioenergy projects getting fuel from A/R CDM projects
<i>EB 24, para. 56 c</i>	Losses of carbon in carbon pools from road construction	
<i>EB 20 annex 7</i>	Clarifications on procedures and documentation which need to be used for the renewal of a crediting period	Changes required for methodology implementation in 2 <sup>nd</sup> and 3 <sup>rd</sup> crediting period
<i>EB 44, annex 16</i>	Guidance on application of the definition of the project boundary to A/R CDM project activities	

34. Forms for administrative purposes such as expert forms or comment forms have not been revisited for this document.



**G. Analysis of methodological issues related to the possible inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism project activities**

35. Methodological issues identified related to the possible inclusion of lands with forests in exhaustion as A/R CDM project activities are listed in Table 8 below.

**H. Analysis of technical issues related to the possible inclusion of lands with forests in exhaustion as afforestation and reforestation clean development mechanism project activities**

36. Technical issues identified related to the possible inclusion of lands with forests in exhaustion as A/R CDM project activities are listed in Table 9 below.

**Table 8: Methodological issues related to the possible inclusion of lands with forests in exhaustion as A/R CDM project activities and analysis of their implications**

<b>Feature of CDM projects</b>	<b>Definition 1</b>	<b>Definition 2</b>	<b>Analysis of their implications</b>
Monitoring	- Distinction between pre-project (tree) vegetation (which are expected to be much more numerous than for current A/R CDM) and the trees established as the project activity	- Distinction between pre-project (tree) vegetation (which are expected to be much more numerous than for current A/R CDM) and the trees established as the project activity	The Board might wish to consider the elaboration of a tool for the distinction between pre-project (tree) vegetation and the trees established as the project activity on lands with FE, eventually based on methodological approaches proposed in methodologies applicable to lands with FE
Definition and quantification of the baseline scenario		<ul style="list-style-type: none"> <li>- Definition of the baseline, which can only be determined unspecifically for the site, based on regional data on land use change (see also section D)</li> <li>- Definition of the timeframe for the land to be reverted to non-forested lands due to harvesting practices to qualify as forests in exhaustion</li> <li>- Definition of land uses following reversion to non-forested lands due to harvesting practices, their potential sequence and timing of changes</li> </ul>	Methodological guidance by the Board would be required for FE according to definition 2, where the baseline is based on regional data. Guidance should include, inter alia, the timing of harvestings leading to the reversion to non-forested lands due to harvesting practices, timing of land conversion, determination of subsequent land uses and timing of their sequence, impacts of anticipated changes in national and sectoral policies of all the determined land uses, etc. (for the potential legal implications on the crediting period during which the land is expected to be non-forest land , see “land eligibility above)



Feature of CDM projects	Definition 1	Definition 2	Analysis of their implications
Demonstration of additionality		<ul style="list-style-type: none"> <li>- According to definition 2, the conservation of plantations with high or increasing biomass levels could be qualified as forests in exhaustion and generate credits without or with limited human intervention due to an assumed reverting to non-forested land in the baseline.</li> <li>- The harvesting of the trees present at project start (leading to exhaustion) will generate revenues after the start of the project activity (see definition 2 of FE), which will have to be considered in the demonstration of additionality; revenues from future CERs might be insignificant, depending on the discount factor applied (see also next point);</li> <li>- The project activity will most likely lead to revenues from future harvests. The result from the investment analysis and thus the additionality of the project activity will be sensitive to a) the type, sequence and timing of land use changes assumed in the baseline, and b) the discount factor applied</li> </ul>	<p>The first issue arises partly due to the absence of the definition of a project activity on lands with forests in exhaustion (see also section D).</p> <p>The second and third issue are of general nature, and depending on the definition of the eligible project activity/ies on lands with FE, the Board might wish to consider the revision of the Tool for the demonstration and assessment of additionality in A/R CDM project activities (Annex 17 to report of the thirty-fifth meeting of the Board, and of the Combined tool to identify the baseline scenario and demonstrate additionality in CDM project activities (Annex 19 to the thirty-fifth meeting of the Board) to make them sensitive to project activities on lands with FE</p>



Feature of CDM projects	Definition 1	Definition 2	Analysis of their implications
Estimation of actual net GHG removals by sinks		<ul style="list-style-type: none"> <li>- Potentially significant loss of pre-project biomass due to (initial) harvesting</li> <li>- Quantification of the level of decrease in biomass due to harvesting, if (complete) harvesting is part of the project activity (to reforest); in such a case, the baseline and the project scenario would start to differ only after the (complete) harvesting. The potential to generate CERs due to reforestation will depend on the assumed decrease in biomass due to harvesting.</li> <li>- Quantification of the level of decrease in biomass due to (incomplete) harvesting (occurring before the final harvest of the existing trees) in order to allow planting in the resulting gaps as the project activity; in such a case, the baseline and the project scenario would start to differ from the partial harvest to create gaps. The potential to generate CERs due to reforestation will depend on the assumed decrease in biomass due to harvesting</li> </ul>	<p>See result of the analysis of the implications related to the issues detected under “Definition and quantification of the baseline scenario”.</p> <p>In addition, the Board might wish to consider the elaboration of a tool for the quantification of losses of pre-project biomass if (initial) harvesting is part of project activities, eventually based on methodological approaches proposed in methodologies applicable to lands with FE</p>

No methodological issue has been detected with regard to the delineation of the project boundary.

**Table 9: Technical issues related to the possible inclusion of lands with forests in exhaustion as A/R CDM project activities and analysis of their implications**

<b>Feature of CDM projects</b>	<b>Definition 1</b>	<b>Definition 2</b>	<b>Analysis of their implications</b>
Land eligibility	<ul style="list-style-type: none"> <li>- Proof that lands on 31 December 1989 was forest because <i>of planting, seeding and/or the human-induced promotion of natural seed sources</i>. Hence, the proof of mere presence of forest is not enough to satisfy this condition and a separate proof that the forest was not a natural one is required.</li> <li>- Demonstration that crown cover and tree height are expected to decrease or remain in steady state;</li> <li>- Provision of evidence that harvesting was initiated before 09 Nov 2003;</li> <li>- Demonstration that at project start the vegetation is within the bandwidth adopted of forests in exhaustion; especially for tree height, demonstration via remote sensing might be difficult and costly</li> </ul>	<ul style="list-style-type: none"> <li>- Proof that lands on 31 December 1989 was forest because <i>of planting or seeding</i> but not the human-induced promotion of natural seed sources. Hence, the proof of mere presence of forest is not enough to satisfy this condition and a separate proofs that the forest (i) was not a natural one, and (ii) has not been initiated by the human-induced promotion of natural seed sources, are required;</li> <li>- Proof that lands would have been harvested and after harvesting the lands would remain non-forest</li> </ul>	<p>These technical issues appear to be solvable via a respective guidance approved by the Board and they should not impede the inclusion of lands with forests in exhaustion as A/R CDM reforestation project activities. The Board might wish to consider the elaboration of a tool to demonstrate eligibility of lands containing FE</p>



Feature of CDM projects	Definition 1	Definition 2	Analysis of their implications
Definition and quantification of the baseline scenario	- Determination of the rate of decrease of tree height and crown cover	- Determination of the rate of decrease of tree height and crown cover	As discussed for FE according to definition 2, the rate of decrease of tree height and crown cover may have a significant influence on the timing of the generation of CERs and their total amount. The Board might wish to consider: a) the elaboration of a tool for the conservative estimation of the decrease of tree height and crown cover for FE; or b) to decide that the rates of decrease of tree height and crown cover for FE are conservatively assumed to be zero.

No technical issues have been detected with regard to the delineation of the project boundary, the estimation of actual net GHG removals by sinks, potential double counting and monitoring.

**Appendix I**

1. Comparison of selected features and implications of the two definitions of forests in exhaustion considered in the paper.

<b><i>Feature</i></b>	<b><i>Definition 1</i></b>	<b><i>Definition 2</i></b>
Forest on 31 December 1989	Yes	Yes
Forest on project start	Yes, <i>within</i> limited range around values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board	Yes, <i>without</i> limits related to values referred to in paragraph 8 of the A/R CDM M&P as reported by a Host Party to the CDM Executive Board
Baseline scenario	Steady state, revert to non-forest	Revert to non-forest
Type of baseline	Projection of a state at the project start or prediction of a future state	Prediction of a future state
Change from forest to non-forest under the baseline scenario	Allowed	Required
Values referred to in paragraph 8 of the A/R CDM M&P under the baseline scenario	The same as at the project start or decreasing	Decreasing at a rate that is not measurable
Measurability of the baseline net greenhouse gas removals by sinks	Yes, but if the values referred to in paragraph 8 of the A/R CDM M&P decrease under the baseline scenario - No	No
Is an increase in carbon stocks present within the project boundary at the project start necessary in order to make the project additional?	Yes	No
Can decrease of carbon stock allow getting CERs under the project activity?	No	Yes



## Appendix II

1. The following documents have been analysed for this document, inter alia:

- Kyoto Protocol, Article 12;
- Decision 2/CMP.1 (Principles, nature and scope of the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol);
- Decision 4/CMP.1 (Guidance relating to the clean development mechanism);
- Decision 5/CMP.1 (Modalities and procedures for afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol);
- Decision 6/CMP.1 (Simplified modalities and procedures for small-scale A/R project activities under the CDM in the first commitment period of the Kyoto Protocol and measures to facilitate their implementation);
- Decision 7/CMP.1 (Further guidance relating to the clean development mechanism);
- Decision 16/CMP.1 (Land use, land-use change and forestry);
- Decision 1/CMP.2 (Further guidance relating to the clean development mechanism);
- Decision 2/CMP.3 (Further guidance relating to the clean development mechanism);
- Decision 2/CMP.4 (Further guidance relating to the clean development mechanism);
- All Board decisions and their annexes as related to A/R CDM.