



The Study on Capacity Development for AR-CDM Promotion  
in the Socialist Republic of Vietnam

## Guidebook for Small Scale AR-CDM



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- This guidebook is compiled with reference of “Road Map for Afforestation/Reforestation Clean Development Mechanism (A/R CDM), prepared by Forestry and Forest Products Research Institute (FFPRI), Japan.
- Information in this guidebook are as of December 31, 2007.

# GUIDEBOOK FOR SMALL SCALE AR-CDM

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**Annex 3** Procedures to demonstrate the eligibility of lands for afforestation and reforestation CDM project activities (Version 01)

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**Annex 5** Guidelines for completing the simplified project design document for small scale AR-CDM (CDM-SSC-AR-PDD) and the Form for submissions on methodological for small-scale AR-CDM project activities (F-CDM-SSC-AR-Subm) (Version 04)

**Annex 6** Summaries of Approved Methodologies

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*1 BASIC RULES OF CLEAN  
DEVELOPMENT MECHANISM*

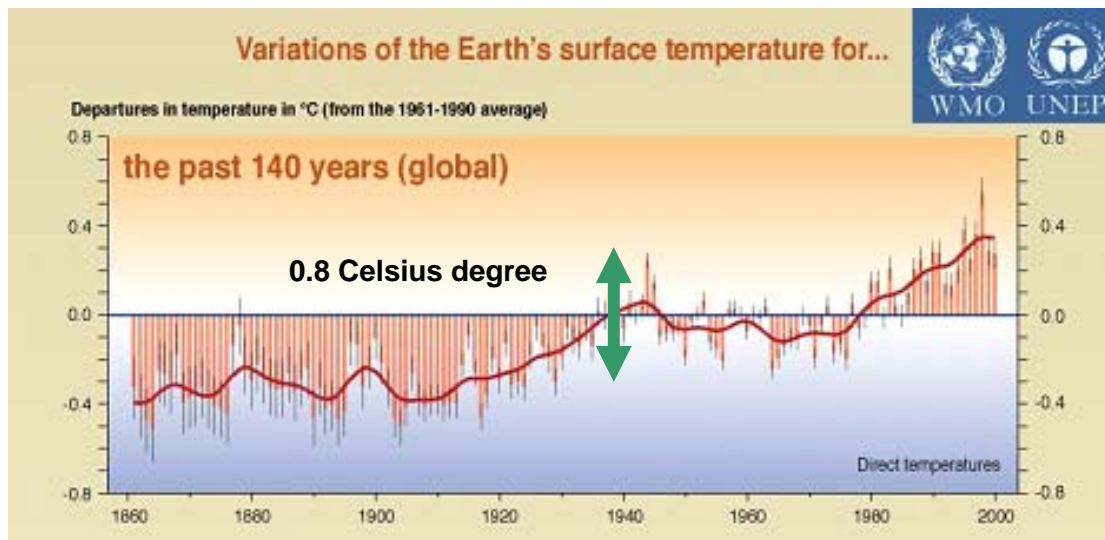
## 1. Basic Rules for Clean Development Mechanism

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I-1

### 1-1. Global Warming

Due to the increase in Greenhouse gas (GHG, including CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O etc.) emissions, the temperature of the earth's surface has been increasing (so-called global warming). Climate change is a serious issue for human beings. According to the 4th report from IPCC, temperatures will increase by 1.1 to 6.4 degrees Celsius by the end of 21st century in comparison with the 1980-1999 level. Due to global warming, there will be rises in sea level, abnormal weather, drought, desertification etc.



I-2

## 1-2. The Kyoto Protocol

### United Nations Framework Convention on Climate Change (UNFCCC) <<http://unfccc.int/2860.php>>

In 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted by the UN Conference on Environment and Development, taking sustainable development into consideration. The ultimate objective of the Convention is stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.



### Kyoto Protocol (adopted in Dec 1997 and brought into force on Feb 16 2005)

- Countries listed Annex I parties have different targets for the 5-year period of 2008 – 2012 (1<sup>st</sup> commitment period). E.g. : Japan (-6%), USA (-7%), EU (-8%).
- The base-year emissions are the Party's aggregate GHG emissions in 1990 (whereas, countries may use 1995 as the base year for HFCs, PFCs, and SF<sub>6</sub>). Assigned amounts (cap) for each Party are calculated from the base-year emissions and emission reduction targets.

## 1-3. The Kyoto Mechanism

The Kyoto Protocol introduces 3 market mechanisms, namely the Kyoto Mechanisms.

Annex I Parties would be able to achieve their emission reduction targets in a cost-effective manner, using three Mechanisms.

- Joint Implementation (JI), article 6 of the Protocol
- Clean Development Mechanism (CDM), article 12 of the Protocol
- International Emission Trading (IET), article 17 of the Protocol

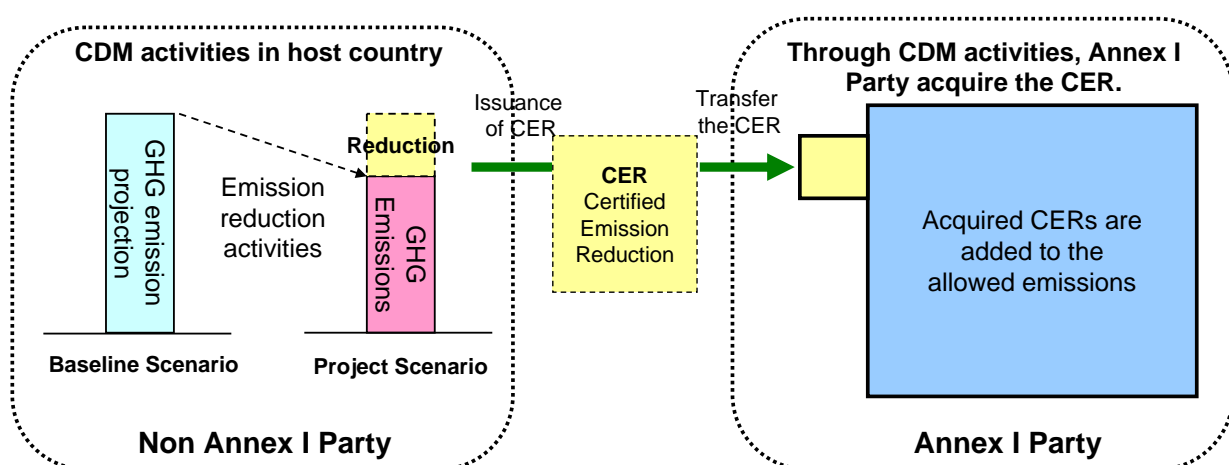
Besides countries, private firms can utilize the Kyoto Mechanisms. This is provided that the private firms meet eligibility requirements for using these.

[\[CMP/2005/8/Ad2, p7 para29\]](#)[\[CMP/2005/8/Ad1, p13 para33\]](#)[\[CMP/2005/8/Ad2, p19 para5\]](#)

I-3

## 1-4. Clean Development Mechanism (CDM)

Annex I Parties, which have emissions reduction targets (caps), assist non Annex I Parties, which do not have emission caps, in implementing project activities to reduce GHG emissions (or remove by sinks). Credits will be issued based on emission reductions (or removal by sinks) achieved by the project activities.



- Annex I Party can use CERs to comply with their quantified GHG emissions reduction targets of the KP.
- Non Annex I Party (Host country) can implement CDM projects by themselves. However, they shall find a partner from Annex I Party before issuance of CERs.
- In accordance with CDM basic policy, CDM projects shall contribute to sustainable development in the Host Party (Non Annex I Party).

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## 1-5. Classification of CDM project activities

CDM project activities are classified into 15 categories at present.

<b>Energy sector CDM</b>	<ol style="list-style-type: none"> <li>1. Energy industries (renewable-/non-renewable sources)</li> <li>2. Energy distribution</li> <li>3. Energy demand</li> <li>4. Manufacturing industries</li> <li>5. Chemical industries</li> <li>6. Construction</li> <li>7. Transportation</li> <li>8. Mining/mineral production</li> <li>9. Metal production</li> <li>10. Fugitive emissions from fuels (solid, oil and gas)</li> <li>11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride</li> <li>12. Solvent use</li> <li>13. Waste handling and disposal</li> <li>15. Agriculture</li> </ol>
<b>Forest sector CDM</b>	<ol style="list-style-type: none"> <li>14. Afforestation and reforestation</li> </ol>

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## 1-6. Kyoto Protocol Units

Under the Kyoto Protocol, the following 6 kinds of carbon credits (so-called "Kyoto Units") are certified.

1)	AAU	Assigned Amount Unit : Total amount of AAUs of an Annex I Party is calculated from its base year emissions and emission reduction target.
2)	RMU	Removal Unit : Total amount of RMU of an Annex I Party is calculated from net removal of GHGs by afforestation and reforestation activities.
3)	ERU	Emission Reduction Unit :The credit from JI project is called ERU.
4)	CER	Certified Emission Reduction : The credit from CDM project is called CER.
5)	tCER	temporary CER : tCER is issued from AR-CDM activities and shall expire at the end of the commitment period subsequent to the commitment period for which it was issued.
6)	ICER	long-term CER : ICER is issued from AR-CDM activities and shall expire

- Minimum trading unit is 1.0 ton CO<sub>2</sub> equivalent.
- GHG emission cap of an Annex I Party at the end of the 1<sup>st</sup> commitment period.  
 (Emission cap of Annex I) = (AAUs) + (RMUs) + (ERUs + CERs + tCERs + ICERs)  
 + or - (acquired/transferred KP units by IET)

I-6

### 1-7. List of Annex I Parties and their Targets

European Unions (15 member states)			Economies in Transition (EIT)			Other parties		
EU members	Target	GHG emission in 1990	Parties	Target	GHG emission in 1990	Parties	Target	GHG emission in 1990
Portugal	27%	59.3	Russian Fed.	0%	3,046.6	Iceland	10%	3.3
Greece	25%	109.4	Ukraine	0%	978.9	<i>Australia</i>	8%	417.9
Spain	15%	283.9	<i>Croatia</i>	-5%	31.8	Norway	1%	50.1
Ireland	13%	53.8	Hungary	-6%	122.2	New Zealand	0%	61.5
Sweden	4%	72.2	Poland	-6%	564.4	Canada	-6%	595.9
Finland	0%	70.4	Bulgaria	-8%	138.4	Japan	-6%	1,187.2
France	0%	568.0	Czech Republic	-8%	192.0	<i>USA</i>	-7%	6082.5
Netherlands	-6%	211.7	Estonia	-8%	43.5	Switzerland	-8%	52.4
Italy	-6.5%	511.2	Latvia	-8%	25.4	Liechtenstein	-8%	0.3
Belgium	-7.5%	145.7	Lithuania	-8%	50.9	<i>Monaco</i>	-8%	0.1
UK	-13%	748.0	Rumania	-8%	265.1	<i>Turkey</i>		
Austria	-13%	78.6	Slovakia	-8%	72.1	Source of GHG emissions in 1990 Unit : million t-CO <sub>2</sub> equivalent		
Denmark	-21%	70.7	Slovenia	-8%	20.2			
Germany	-21%	1,243.7	Belarus		129.2			
Luxembourg	-28%	13.4	<i>Countries written in Italic have not ratified the KP as of January 2007.</i>					
EU total	-8%	4,240.0						

Croatia, Slovenia, Liechtenstein and Monaco have a GHG emission reduction target as Annex B Parties to the KP, but they are not Annex I Parties to the UNFCCC.

I-7

### 1-8. Greenhouse Gas (GHG) and Global Warming Potential (GWP)

GHGs defined by the Kyoto Protocol are the following six (6) gases.

GWP is a measure of the relative radiative effect of greenhouse gases compared to carbon dioxide (CO<sub>2</sub>).

<http://unfccc.int/resource/docs/cop3/07a01.pdf>

Greenhouse Gases (GHG)	Global Warming Potential (GWP)
Carbon dioxide (CO <sub>2</sub> )	1
Methane (CH <sub>4</sub> )	21
Nitrous oxide (N <sub>2</sub> O)	310
Hydrofluorocarbons (HFCs)	140 - 11,700
Perfluorocarbons (PFCs)	6,500 - 9,200
Sulfur Hexafluoride (SF <sub>6</sub> )	23,900

Source : 1995 IPCC GWP values

#### Example

As for the greenhouse effect, 1 ton of methane (CH<sub>4</sub>) emissions is equivalent to that of 21 tons of carbon dioxide (CO<sub>2</sub>) emissions.

I-8

## 1-9. Afforestation/Reforestation CDM (AR-CDM)

During the 1<sup>st</sup> commitment period, Land use, Land-use change and Forestry project activities under the CDM are limited to “Afforestation” and “Reforestation” (Article 3, Clause 3 of KP)

<http://unfccc.int/resource/docs/cop7/13a02.pdf>

“**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.

“**Reforestation**” is the conversion of non-forested land to forested land, or land that was forested but that has been converted to non-forested land. For the 1<sup>st</sup> commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989.

\* AR-CDM has the following features (refer to Chapter 2).

- Non permanence (Carbon sequestration by tree is not permanent.)
- Non certainty (It is difficult to estimate GHG removals by sink.)
- Long term crediting period (it takes time to absorb GHG by forest.)
  - Taking the above features into consideration, AR-CDM rules established were quite different from that of energy sector CDM. e.g. temporary CER etc.

\* Rules and procedures for large and small scale AR-CDM were approved at COP9(2003) and COP(2004) respectively.

[http://cdm.unfccc.int/Reference/Documents/dec19\\_CP9/English/decisions\\_18\\_19\\_CP.9.pdf](http://cdm.unfccc.int/Reference/Documents/dec19_CP9/English/decisions_18_19_CP.9.pdf)

<http://unfccc.int/resource/docs/cop10/10a02.pdf#page=26>

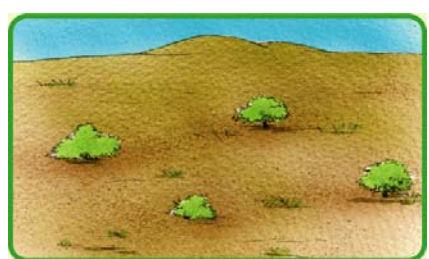
## *2 BASIC RULES OF SMALL SCALE AR-CDM*

## 2. Basic Rules of Small Scale AR-CDM

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### 2-1. What is AR-CDM ?

AR-CDM is .....



on non-qualified land as forest



by human-induced planting

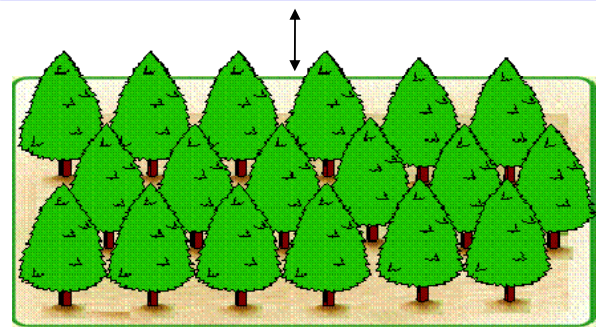


**Criteria of "Forest" for AR-CDM**

(1) A minimum area of land is 0.05-1.0ha  
 (2) Tree crown cover is more than 10-30 %  
 (3) Minimum height is 2-5m at maturity  
Host country can decide definitions of forest for AR-CDM within above criteria range.



In the case of Vietnam, definitions of forest are;  
**(1) An area of at least 0.5ha; with**  
**(2) A minimum crown cover of 30%; and**  
**(3) A minimum tree height at maturity of 3m**



Afforestation/reforestation activity fulfill above forest definition

## 2-2. Particular Rules for Small Scale AR-CDM (1)

- Small-scale AR-CDM --- GHG removal shall be less than 16,000ton-CO<sub>2</sub>/year\*.
- Small-scale AR-CDM shall assist developing countries that are particularly vulnerable to the adverse effects of climate change.
- Small-scale AR-CDM shall be entitled to use simplified procedures and rules to reduce transaction cost compared to Normal Scale AR-CDM.

<http://unfccc.int/resource/docs/cop10/10a02.pdf#page=26>

\*Ref: Decision in COP13 <FCCC/SBSTA/2007/L.18/Add.1/10 December 2007>

### Simplified procedures for small-scale AR-CDM

- In order to reduce transaction costs, procedures are simplified for small-scale A/R CDM project activities as follows:
  - The requirements for PDD 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.

II-3

## 2-2. Particular Rules for Small Scale AR-CDM (2)

	Small Scale AR-CDM	Benefit/Disadvantage
<b>Limited max removals</b>	Max 16,000 tCO <sub>2</sub> /year* -> about 800 ha plantation in degraded land	Cost (\$/credit) could be increased Too small amount to sell in the market (?)
<b>PDD &amp; Methodology</b>	Simplified PDD and Methodology can be applied.	Less complicated than normal scale to develop the project. Items to be monitored is reduced. Cost for developing and monitoring is reduced
<b>Participation of low income community</b>	Low income community defined by the host country should involve the project	Contribution to the rural development. Sometimes difficult to develop a project
<b>Validation, Verification and Certification</b>	It is possible to bundle several projects into one for process of validation, verification, certification and monitoring The same DOE can be used for validation and verification	Reduction of transaction cost for AR CDM (\$/project)
<b>Registration fee</b>	Lower than normal scale AR-CDM	Reduction of transaction cost for AR CDM (\$/project)
<b>Share of proceeds</b>	Share of proceeds to support developing countries is not deducted (normally 2%) Share for proceed for management of CDM EB Is reduced	Reduction of transaction cost for AR CDM (\$/project)

\*Ref: Decision in COP13 <FCCC/SBSTA/2007/L.18/Add.1/10 December 2007>

II-4

## 2-2. Particular Rules for Small Scale AR-CDM (3)

- **Methodology for normal scale is a document of over 100 pages but only 30 pages for small scale!**
- Carbon pools are limited only to above and below ground biomass
- Baseline scenario is the continuation of the land-use before the project starts
- Additionality is explained by barriers listed in the methodology
- Carbon calculation process is simplified
- Project emission only takes into consideration N<sub>2</sub>O from fertilizer and this can be ignored if it is not a significant amount
- Leakage only takes into consideration the displacement of cropland and grazing activities and a simple procedure for estimation is provided
- Items to be monitored are limited

II-5

## 2-3. AR-CDM Stakeholders (Common to Normal- and Small-scale AR-CDM)

### Project Participant

- (a) Host countries and investing countries ratified Kyoto Protocol
- (b) Private organization (company, NGO..etc.) and public organization.

### DOE: Designated Operational Entity

A Designated Operational Entity 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 Executive Board (EB) has the following two key functions:

- It validates and subsequently requests registration of a proposed CDM project activity.
- It verifies emission reductions for a registered CDM project activity.

### EB: Executive Board

The EB supervises the CDM under the authority and guidance of the COP/MOP. It shall (a) make recommendations to the COP/MOP, (b) approve new methodologies, (c) review provisions with regard to simplified modalities, procedures and the definitions of small scale CDM project activities, (d) be responsible for the accreditation of operational entities (OEs), (e) make any technical reports to the public comments on draft methodologies and guidance, (f) develop and maintain the CDM registry, (g) formally accept a validated project, and (h) instruct on the issuance of CERs.

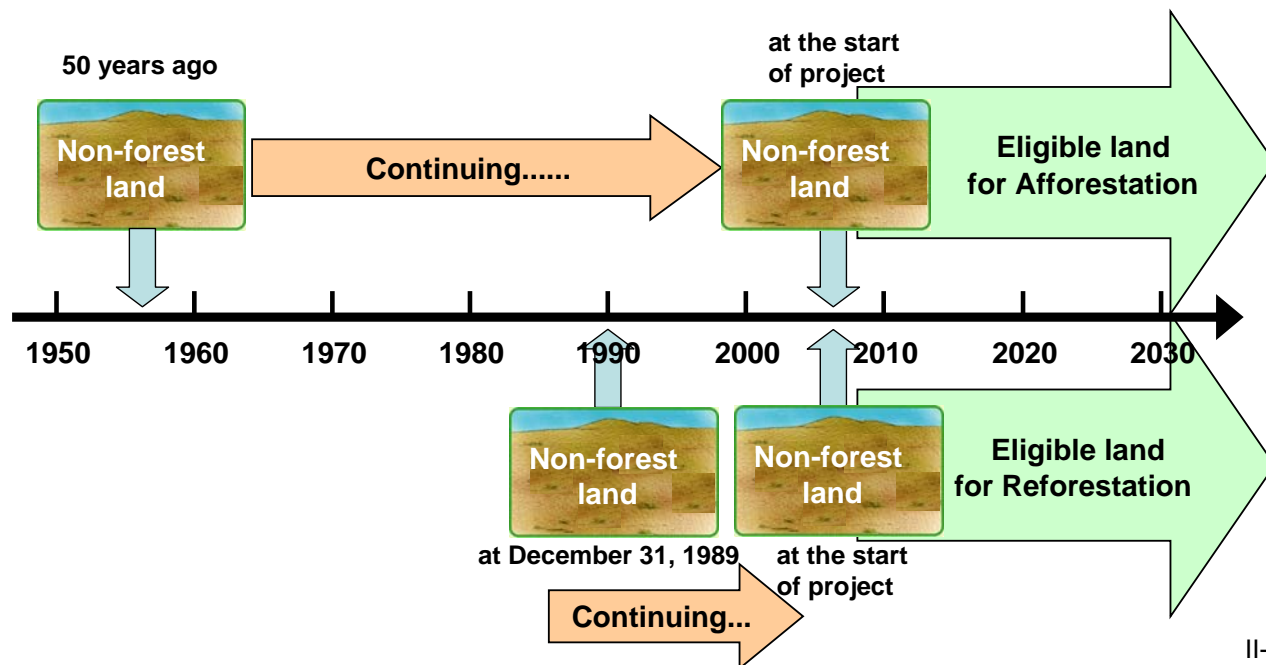
### DNA: Designate National Authority

- ◆ Parties participating in the CDM shall set up a designated national authority (DNA) for the CDM.
- ◆ 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.
- The details of the approval procedure are up to each Party.

II-6

## 2-4. Eligibility of AR-CDM (Common to Normal- and Small-scale AR-CDM)

For the first commitment period (2008-2012), eligible project for AR-CDM is as follows;  
**Afforestation:** Forestry activity on land which has not been forest for past 50 years at least.  
**Reforestation:** Forestry activity on land which has not been forest since December 31, 1989.



II-7

## 2-5. Procedures to Demonstrate the Eligibility of Land (Common to Normal- and Small-scale AR-CDM)

1. Project participants shall provide evidence that the land within the planned project boundary is eligible for an AR-CDM project activity by following the steps outlined below.
  - a. Demonstrate that at the moment the project starts the land does not contain forest by providing transparent information that:
    - i. Vegetation on the land is below the forest thresholds adopted for the definition of forest by the host country as communicated by the respective DNA; and
    - ii. 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
    - iii. 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:
    - i. 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.
    - ii. 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. Project participants shall provide information that reliably distinguishes forest and non-forest land, *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).

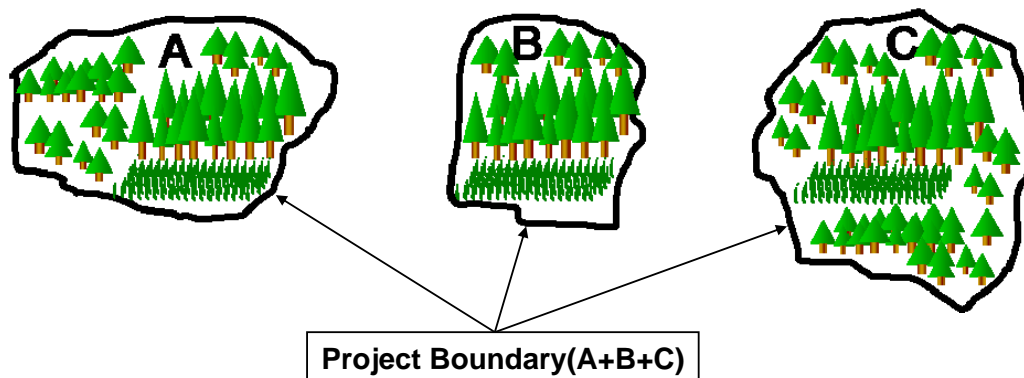
If the three options in paragraph 2 are not available/applicable, project participants shall submit a written testimony which was produced following a Participatory Rural Appraisal (PRA) methodology or a standard Participatory Rural Appraisal (PRA) as practised in the host country.



## 2-6. Project Boundary and Project Activity (Common to Normal- and Small-Scale AR-CDM)

### Project Boundary :

Geographically defined area for the AR-CDM project activity under the control of the project participants. The project boundary contains more than one discrete area.



### Project Activity :

In the process of Kyoto Protocol and CDM procedure, “project activity” are used to distinguish AR-CDM projects and normal forestry projects.

Ref.: [http://cdm.unfccc.int/Reference/Documents/Guide1\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guide1_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)

II-9

## 2-7. Baseline Scenario (1) (Common to Normal- and Small-scale AR-CDM)

### Baseline Scenario:

The Scenario that reasonably presents the change in carbon stocks in the carbon pools within the project boundary that occur in the event that AR-CDM project activity is not implemented.

Project participants can select one option from the following approaches as the most appropriate baseline scenario of the project activity.

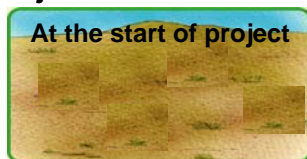
1. Existing historical, as applicable, changes in carbon stocks in the carbon pools within the project boundary
2. Changes in carbon stocks in the carbon pools within the project boundary from a land use that represent an economically attractive course of action, taking into account barriers to investment
3. Changes in carbon stocks in the pools within the project boundary from the most likely land use at the time the project starts.

Ref.: [http://cdm.unfccc.int/Reference/Documents/dec19\\_CP9/English/decisions\\_18\\_19\\_CP.9.pdf](http://cdm.unfccc.int/Reference/Documents/dec19_CP9/English/decisions_18_19_CP.9.pdf)

II-10

## 2-7. Baseline Scenario (2) (Common to Normal- and Small-scale AR-CDM)

### Project Scenario

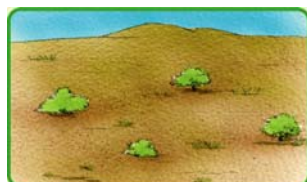


### Future



Forest will be established by the implementation of AR-CDM project activity

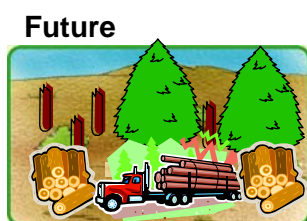
### Baseline Scenario (without AR-CDM project)



### Future

#### **The project is Additional Reason:**

- Planting trees is not common (traditional barrier)
- The area is degraded and not suitable (ecological barrier)
- The area is too far from the factory and not economically attractive for plantation (investment analysis)



### Future

#### **The project is NOT Additional**

Forest will be established without A/R CDM

II-11

## 2-8. Additionality (Common to Normal- and Small-scale AR-CDM)

### **Additionality:**

Comparing the Project Scenario to the Baseline Scenario, will the carbon stock be additionally increased?

= Explain why the carbon stock increase would not occur without the A/R CDM project  
Assessing by Barrier Analysis and/or Investment Analysis.

Project participants have to prove additionality by following methods;

- ① A A/R-CDM project activity is additional if GHG removals are increased above those that would have occurred in the absence of the registered A/R-CDM project activity.  
→ It has to be proved by comparison between project activity and baseline scenario.
- ② It is not until a proposed project activity is registered and implemented as A/R-CDM that project activity is feasible.  
→ It has to be proved by using [Investment Analysis] and/or [Barrier Analysis]

Ref: A/R additionality tool <[http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality\\_tool.pdf](http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality_tool.pdf)>

II-12

## 2-9. Evaluation of Additionality (1) (for Small-scale AR-CDM)

**Project participants 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 barriers, other than economic/financial barriers:**

- (a) Debt funding not available for this type of project activity;
- (b) No access to international capital markets due to real or perceived risks associated with domestic or foreign direct investment in the country where the project activity is to be implemented;
- (c) Lack of access to credit.

### **Institutional barriers:**

- (a) Risks relating to changes in government policies or laws;
- (b) Lack of enforcement of legislation relating to forest or land-use.

### **Technological barriers:**

- (a) Lack of access to planting materials;
- (b) Lack of infrastructure for implementation of the technology.

### **Barriers relating to local tradition:**

- (a) Traditional knowledge or lack thereof, of laws and customs, market conditions, practices;
- (b) Traditional equipment and technology;

II-13

## 2-9. Evaluation of Additionality (2) (for Small-scale AR-CDM)

### **Barriers due to prevailing practice:**

- (a) The project activity is the “first of its kind”. No project activity of this type is currently operational in the host country or region.

### **Barriers due to local ecological conditions:**

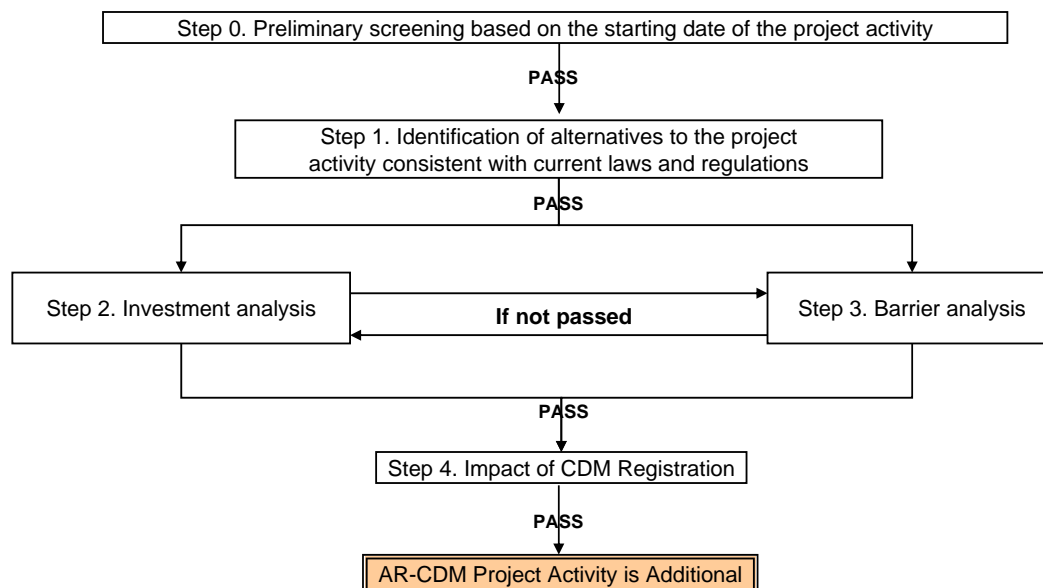
- (a) Degraded soil (e.g. water/wind erosion, salination);
- (b) Catastrophic natural and/or human-induced events (e.g. land slides, fire);
- (c) Unfavourable meteorological conditions (e.g. early/late frost, drought);
- (d) Pervasive opportunistic species preventing regeneration of trees (e.g. grasses, weeds);
- (e) Unfavourable course of ecological succession;
- (f) Biotic pressure in terms of grazing, fodder collection, etc.

### **Barriers due to social conditions:**

- (a) Demographic pressure on the land (e.g. increased demands on the land due to population growth);
- (b) Social conflict among interest groups in the region where the project activity takes place;
- (c) Widespread illegal practices (e.g. illegal grazing, non-timber product extraction and tree felling);
- (d) Lack of skilled and/or properly trained labour force;
- (e) Lack of organization of local communities.

## 2-10. Evaluation of Additionality (1) (for Normal Scale AR-CDM)

The tool provides a general framework for demonstrating and assessing additionality. Project participants proposing new baseline methodologies may incorporate this consolidated tool in their proposal. PPs may also propose other tools for the demonstration of additionality to the EB for its consideration.



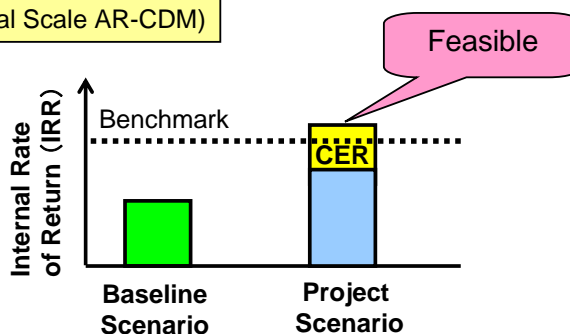
For detail: "TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN A/R CDM PROJECT ACTIVITIES" <[http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality\\_tool.pdf](http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality_tool.pdf)>

II-15

## 2-10. Evaluation of Additionality (2) (for Normal Scale AR-CDM)

### Investment Analysis

e.g. IRR will exceed benchmark by selling CER. Project activity prove to be feasible and can be implemented.



### Barrier Analysis

Project participants must prove that there are barriers such as followings which would prevent the implementation of a proposed project activity from being carried out if the project activity was not registered as an A/R CDM and it is not until a proposed project activity is registered and implemented as A/R-CDM that project activity is feasible.

- Investment barriers (other than the economic/financial barriers of Investment Analysis)
- Institutional barriers
- Technological barriers
- Barriers related to local traditions
- Barriers due to prevailing practice
- Barriers due to local ecological conditions
- Barriers due to social conditions
- Barriers relating to land tenure, ownership, inheritance, and property rights

Ref: A/R additionality tool <[http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality\\_tool.pdf](http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality_tool.pdf)>

II-16

## 2-11. Examples of Barriers for Demonstration of Additionality

(for Normal Scale AR-CDM)

Project Title	Barriers to Demonstrate Additionality
<b>AM0001</b> Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin in China	<p><b>Investment Barrier:</b> It is difficult for local people to afford the high establishment investment in the early stage of plantation because of low income of farmers. The chances to get commercial loans for implementation of planting.</p> <p><b>Technological Barrier:</b> Shortage of access to quality seed sources, a lack of skills for producing high quality seedlings and for successful tree planting.</p> <p><b>Institutional Barrier:</b> Individual farmer households are unable to successfully manipulate the chain from investment, production to market especially for the timber and non-wood forest products.</p> <p><b>Market Risks:</b> There are high market risks for timber and non-wood forest products.</p>
<b>AM0002</b> Moldova Soil Conservation Project	<p><b>Investment Barriers:</b> The upfront investment associated with the project activity is high and is concentrated in the early phase of the project, whereas benefits from the project start only after 5 years in the form of thinning revenue or revenue from non-timber products.</p> <p><b>Barriers due to Prevailing Practices:</b> Lack of institutional arrangements and legally enforceable measures are major barriers of public agencies of local councils which control the most degraded land.</p> <p><b>Technical/operational Barriers:</b> Lack of silvicultural practices and trained personnel to raise the successful plantations. Lack of awareness of the environmental impacts of soil erosion and prevailing information barriers.</p>
<b>AM0003</b> Assisted Natural Regeneration of Degraded Lands in Albania	<p><b>Barriers due to Social Conditions:</b> Fuel wood collection, uncontrolled harvesting and grazing, forest fires caused by agriculture, illegal wood collection</p> <p><b>Technological Barriers:</b> Poor forest management</p> <p><b>Institutional barriers:</b> No regional and national policy</p>

II-17

## 2-12. GHG Removals, Emission and Leakage

(Common to Normal- and Small-scale AR-CDM)

Change in carbon stock and GHG emissions to be measured are;

### **(A) Actual net greenhouse gas removals:**

“Actual net greenhouse gas (GHG) removals by sinks” is the sum of the verifiable changes in carbon stocks in the carbon pools **within the project boundary**, that are increased **as a result of the implementation** and attributable to the A/R CDM project activity.

### **(B) Baseline net greenhouse gas removals by sinks:**

“Baseline net GHG removals by sinks” is 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 A/R CDM project activity**.

### **(C) Leakage:**

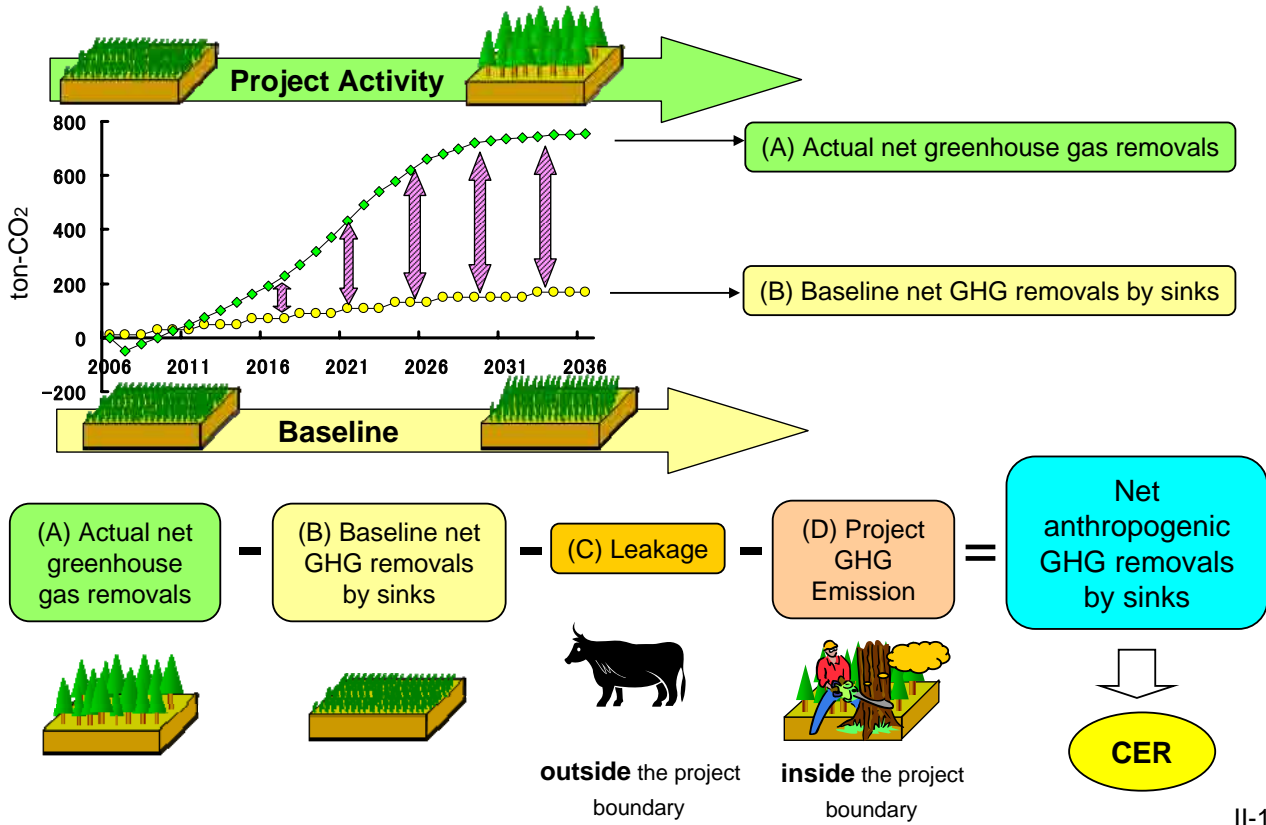
“Leakage” is GHG emissions and reduction of carbon pools which occurs **outside the project boundary** which can be measured and directly attributable to the A/R CDM project activity.

### **(D) GHG Emissions inside Project Boundary:**

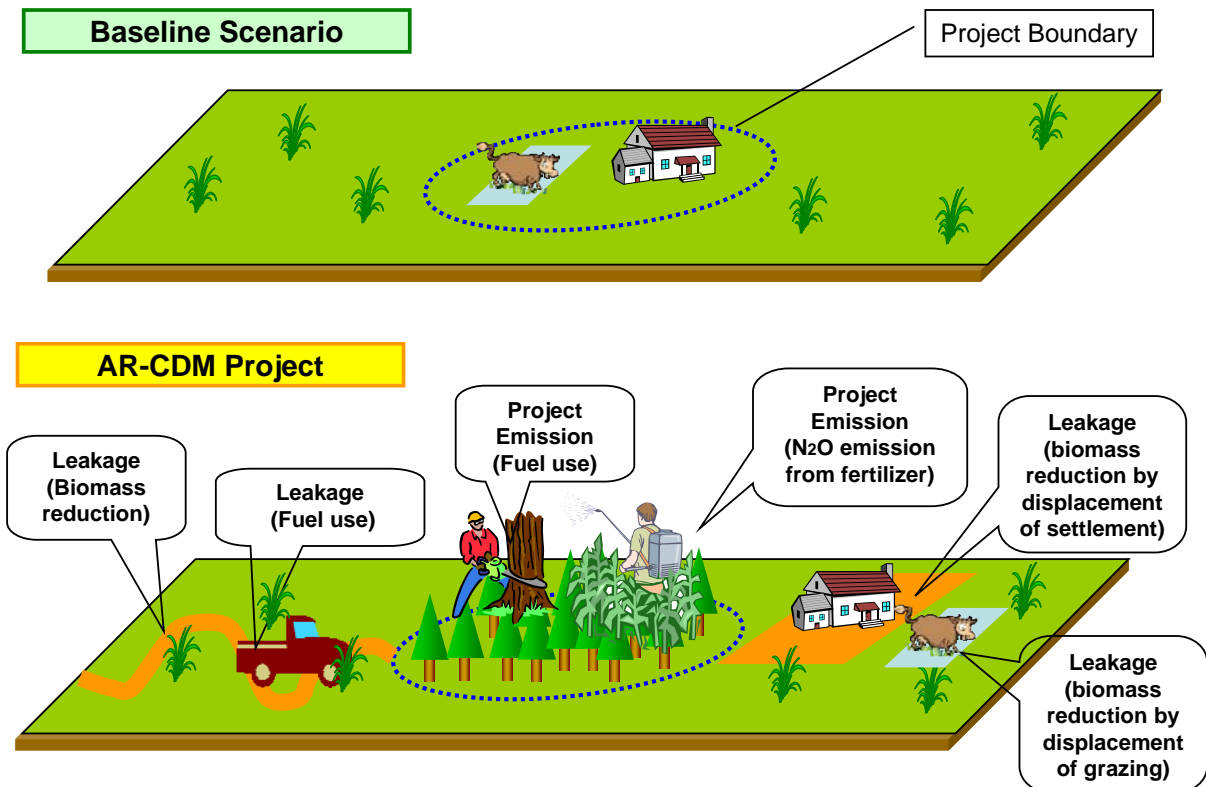
“GHG emissions” **inside the project boundary** and directly attributable to the AR-CDM project activity.

II-18

**2-13. Estimation of GHG Removals (1)** (Common to Normal- and Small-scale AR-CDM)



**2-13. Estimation of GHG Removals (2)** (Common to Normal- and Small-Scale AR-CDM)

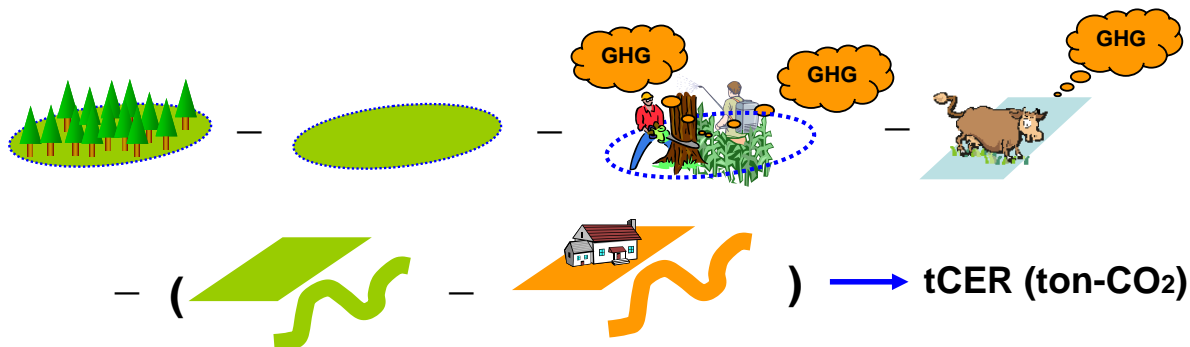


**2-13. Estimation of GHG Removals (3)** (Common to Normal- and Small-Scale AR-CDM)

**Equation of tCER**

tCER(ton-CO<sub>2</sub>)

- = Existing carbon stocks at the time of verification
- Estimated carbon stocks at the baseline scenario
- Project emissions in the project boundary
- Leakage (1) : GHG emissions outside of the project boundary
- Leakage (2) : Carbon pool reduction outside of the project boundary



II-21

**2-13. Estimation of GHG Removals (4)** (Common to Normal- and Small-Scale AR-CDM)

**Equations to Calculate tCERs**

$$t\text{-CER}(t_V) = \underbrace{C_P(t_V)}_{\textcircled{1}} - \underbrace{C_B(t_V)}_{\textcircled{2}} - \underbrace{\sum_0^{t_V} E(t)}_{\textcircled{3}} - \underbrace{\sum_0^{t_V} L_E(t)}_{\textcircled{4}} - \left( \underbrace{L_{P\_B}(t_V)}_{\textcircled{5}} - \underbrace{L_{P\_P}(t_V)}_{\textcircled{6}} \right)$$

(carbon stock in the project – carbon stock in the baseline) in the carbon pools, at the time of verification

①

②

–

cumulative GHG emissions from the project

③

–

cumulative GHG emissions, outside the project boundary due to A/R

④

–

⑤

⑥

(carbon stock in the baseline – carbon stock in the project) in the carbon pools outside the project boundary affected by A/R, at the time of verification

II-22

**2-13. Estimation of GHG Removals (5)** (Common to Normal- and Small-Scale AR-CDM)

**Equation of ICER**

ICER(ton-CO<sub>2</sub>)

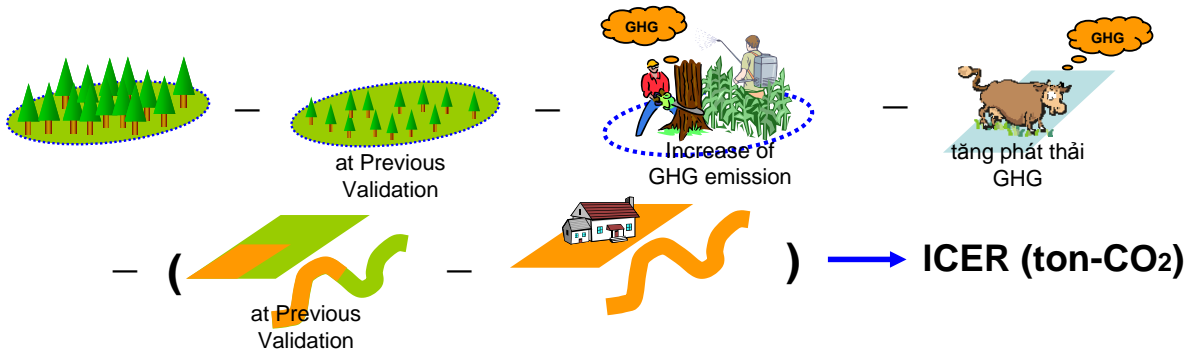
= Increase of carbon stocks from previous verification

– Increase of project GHG emission from previous verification

**(Can be ignored in Small Scale AR-CDM)**

– Increase of GHG emission outside the project boundary from previous verification [Leakage (1)]

– Reduction of carbon stock from previous verification outside the project boundary [Leakage (2)]



II-23

**2-13. Estimation of GHG Removals (6)** (Common to Normal- and Small-Scale AR-CDM)

**Equations to calculate ICERs**

$$I-CER(t_V) = [C_P(t_V) - C_P(t_V - K)] - [C_B(t_V) - C_B(t_V - K)] - \sum_{t_V - K}^{t_V} E(t) - \sum_{t_V - K}^{t_V} L_E(t) - [(L_{P-R}(t_V) - L_{P-B}(t_V - K)) - (L_{P-P}(t_V) - L_{P-P}(t_V - K))]$$

(increase of carbon stock in the project – increase of carbon stock in the baseline) in the carbon pools, at the time of 2 verification period respectively

GHG emissions from the project, between 2 verification period

cumulative GHG emissions, outside the project boundary due to A/R, between 2 verification period

(increase of carbon stock in the baseline – increase of carbon stock in the project) in the carbon pools outside the project boundary affected by A/R, at the time of 2 verification period respectively

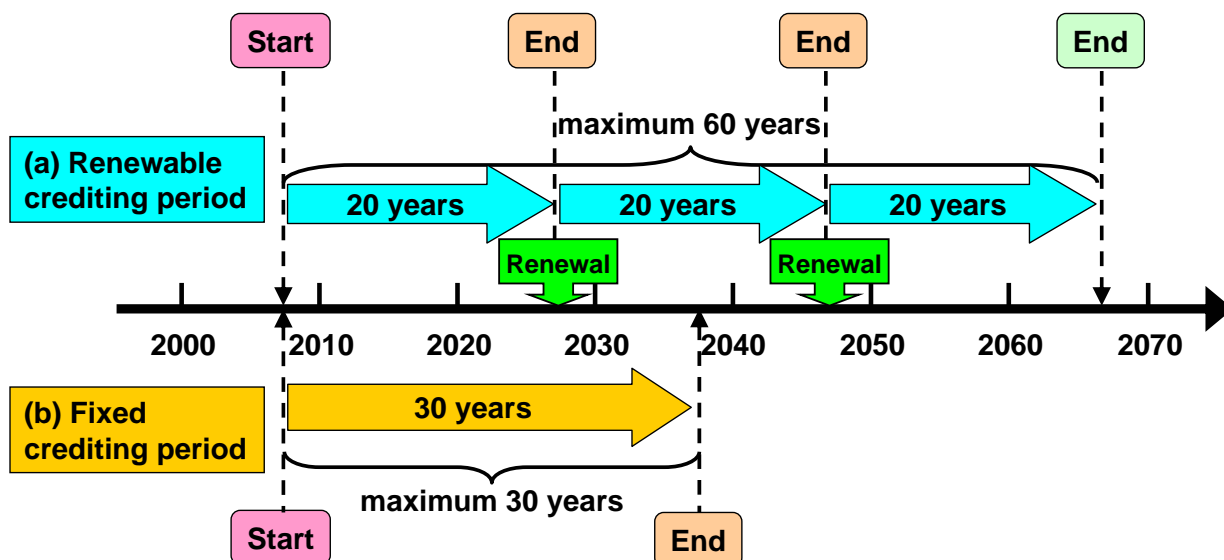
II-24



**2-14. Crediting Period** (Common to Normal- and Small-Scale AR-CDM)

Project participants can select a crediting period from the following;

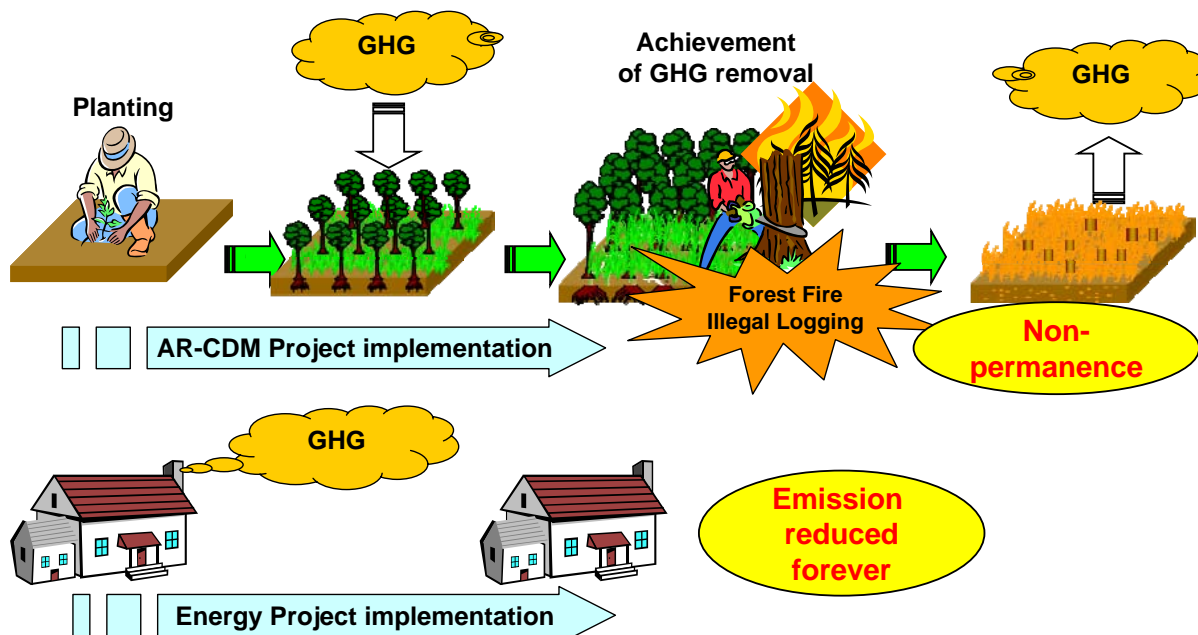
- (a) **Renewable crediting period:** maximum 20 years and may be renewed at most two times (maximum 60 years in total)
- (b) **Fixed crediting period:** maximum 30 years cannot be renewed



**2-15. Non-permanence** (Common to Normal- and Small-Scale AR-CDM)

**Non-permanence of AR-CDM project activity:**

In AR CDM project activity, Carbon is not stocked permanently. It could be re-emitted into the atmosphere due to harvesting, forest fires, etc., while the re-emission never happens in energy CDM once the emission is reduced.



**2-16. tCER and ICER (Common to Normal- and Small-Scale AR-CDM)**

To cope with the non-permanence of carbon stock, credit (CER) issued from the AR CDM project activity defined as **temporary credit** with expiry. The project participants shall select one of the following approaches to addressing non-permanence of the project.

**tCER (Temporary CER):**

tCER shall be Issued based on the net anthropogenic GHG achieved by the project activity since the project start date. Each tCER shall expire at the end of the commitment period subsequent to the commitment period for which it was issued.

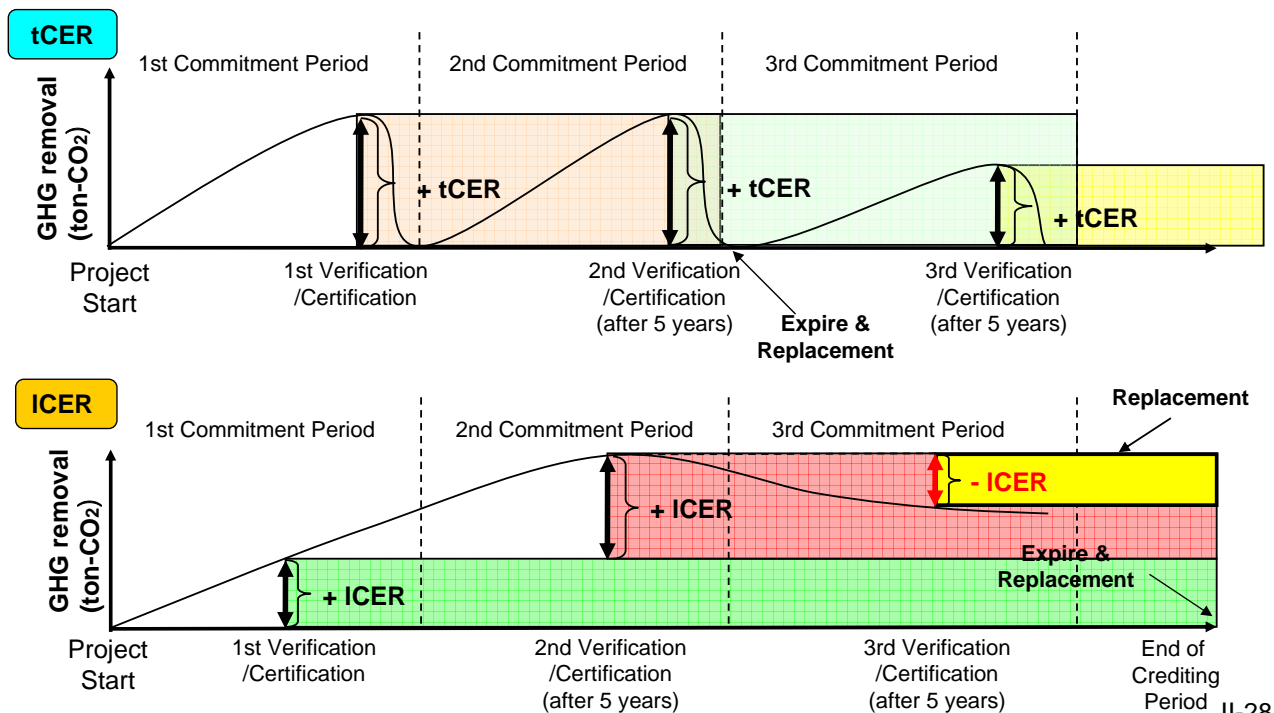
**ICER (Long-term CER):**

ICER shall be issued based on the net anthropogenic GHG achieved by the project activity during each verification period. Each ICER shall expire at the end of the crediting period or, where a renewable crediting period is chosen.

II-27

**2-17. Issuance of CER (Common to Normal- and Small-Scale AR-CDM)**

tCER and ICER shall be issued through the process of “Monitoring”, “Verification” and “Certification” of GHG removal. Project participants can decide the timing of 1st verification. Verification shall be conducted every 5 years after 1st verification. Crediting period is max 60 years.



II-28

## 2-18. Environmental Impacts (Common to Normal- and Small-Scale AR-CDM)

### Analysis of Environmental Impacts on;

- Biodiversity and natural ecosystems
- Impacts outside the project boundary
- Hydrology
- Soils
- Risk of fires,
- Pests and diseases
- ...etc



If any negative impact is considered,

### Environmental Impact Assessment

(in accordance with the procedures required by the host party)

✓ In Vietnam, EIA is not required for forestry projects with an area of less than 1,000ha.

## 2-19. Socio Economic Impacts (Common to Normal- and Small-Scale AR-CDM)

### Analysis of Socio-economic Impacts on;

- Local community
- Indigenous peoples
- Land tenure
- Local employment
- Food production
- Cultural and religious site
- Access to fuelwood and other forest products
- ...etc



If any negative impact is considered,

### Socio-economic Impact Assessment

(in accordance with the procedures required by the host party)

Ref: [http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)

II-29

## 2-20. Stakeholder Comments (Common to Normal- and Small-Scale AR-CDM)

For AR-CDM project implementation, various stakeholders will be involved.

e.g. Project participants (such as private enterprise and NGO), government agency (host country and investing country), local people...

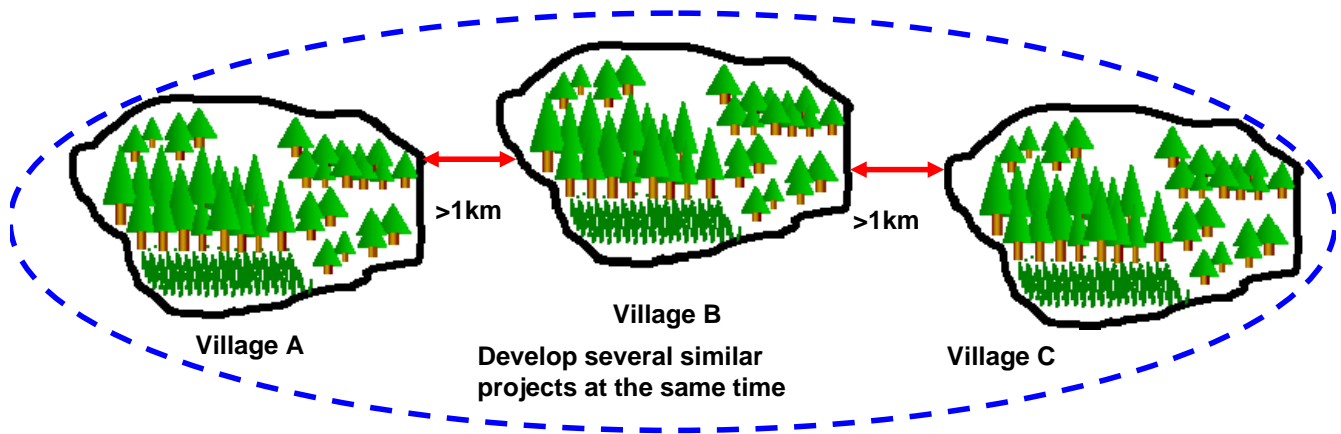
### Stakeholder's Comments on;

Project participants shall collect comments from local stakeholders in an open and transparent manner and explain how due account has been taken of comments received from stakeholders based on the development of the local community and attention to local peoples.

e.g. Whether stakeholders approve the AR-CDM project activity or not., the impact on each stakeholder, output to be desired by the project ...etc.

II-30

## 2-21. Bundling and Debundling (1) (for Small-scale AR-CDM)



Condition for Bundling;

- Different project participants
- Project boundary is more than 1km away

- Bundling small scale projects for validation, monitoring verification can reduce the transaction costs of CDM
- Project development cost reduction, securement of a certain amount of credit
- Considering the situation in Vietnam, “bundling Small Scale AR- CDM projects” would be suitable.

II-31

## 2-21. Bundling and Debundling (2) (for Small-scale AR-CDM)

### Bundling

◆Bundle is defined as: “Bringing together of several small-scale CDM 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 activities retaining it distinctive characteristics. Such characteristics include its: technology/measure; location; application of simplified baseline methodology. Project activities within a sub-bundle belong to the same type. The sum of the output capacity of project activities within a sub-bundle shall not exceed the maximum output capacity limit for its type.”

### Debundling

◆Debundling is defined as the fragmentation of a large project activity into smaller parts. A small-scale project activity that is part of a large project activity is not eligible to use the simplified modalities and procedures for SSC project activities.

◆It shall be deemed to be a debundled 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; and
- ⇒ Registered within the previous 2 years; and
- ⇒ Whose project boundary is within 1 km of the project boundary

Ref: GUIDELINES CDM-AR-PDD & CDM-AR-NM

<[http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)>

II-32

**2-22. Remarks for AR-CDM** (Common to Normal- and Small-Scale AR-CDM)

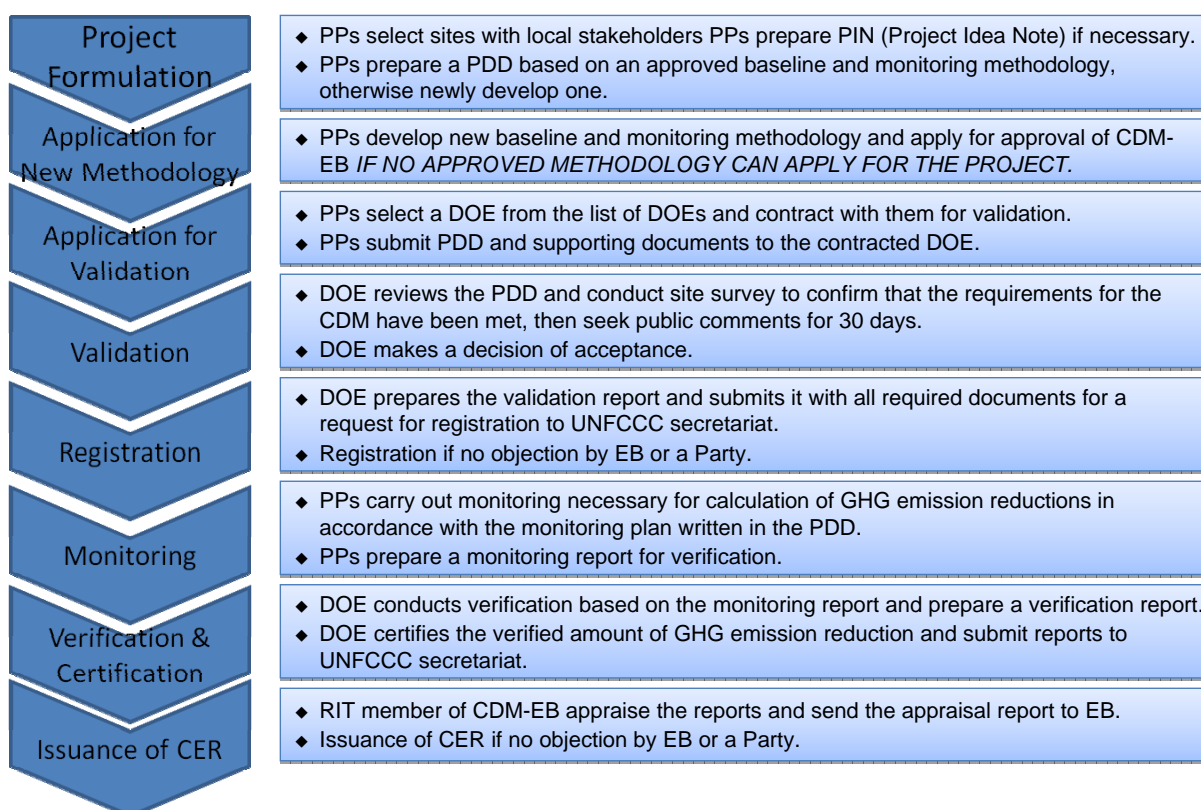
1. The following points shall be described in PDD
  - ◆ The AR-CDM project activity must contribute to sustainable development in host country based on principle of CDM.
  - ◆ Environmental and socio-economic impacts shall be analyzed. If any negligible impact is detected, environmental impact assessment shall be conducted and action shall be taken.
  - ◆ Project participants shall take action for comments by stakeholders.
  - ◆ Regarding 'Diversion of ODA fund', project participants shall follow host country's interpretation.
  
2. Project participant shall well-establish an operation and monitoring system to protect forestry against forest fire and illicit logging during a long term project period.

### **3 OPERATING PROCEDURE OF AR-CDM PROJECT ACTIVITY**

### 3. Operating Procedure of A/R CDM Project Activity

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#### 3-1. CDM Project Cycle



### 3-2. Formation of Project Participants

Identified project is preparing a document for further process, PDD is requisite and PIN is an additional document used for initial project promotion.

CDM projects are usually originated by one of the following methods.

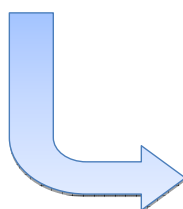
Identified /Developed by local party

- Government(National, Province)
- Universities
- Companies



Identified by foreign party

- Development activities (UN, JICA, JBIC etc.)
- Investors



#### PDD (Project Design Document)

PDD is the base document for

- ◆Project Approval from Governments
- ◆Validation by DOE
- ◆Registration by CDM EB

#### PIN (Project Information Notes)

- A. Project participants, Types of the Project, Location and Schedule
- B. Finance
- C. Expected Project's benefits
- D. Technical Summary of the Project
- E. Risk and Uncertainty

*In Vietnam, PIN is prepared only upon request by the investor.*



PDD contains information of following:

- A. General description of project activity
- B. Application of a baseline and monitoring methodology
- C. Duration of the project activity/crediting period
- D. Environmental impacts
- E. Stakeholder comments

III-3

### 3-3. Selection of Project Sites

#### Process to find potential sites for AR-CDM:

1. Seek information to district officials (officials of 661 program) on likely available land for reforestation.
  - ◆ *The officials could give us approximate information on land available for reforestation in general (not exactly for AR-CDM)*
2. Confirm availability of land for reforestation to commune officials
3. Request commune officials (especially cadastral officer) to accompany us to site visits.
  - ◆ *The officers know well about availability of land for reforestation*

#### Consider following items when visiting potential sites and collecting information on the sites:

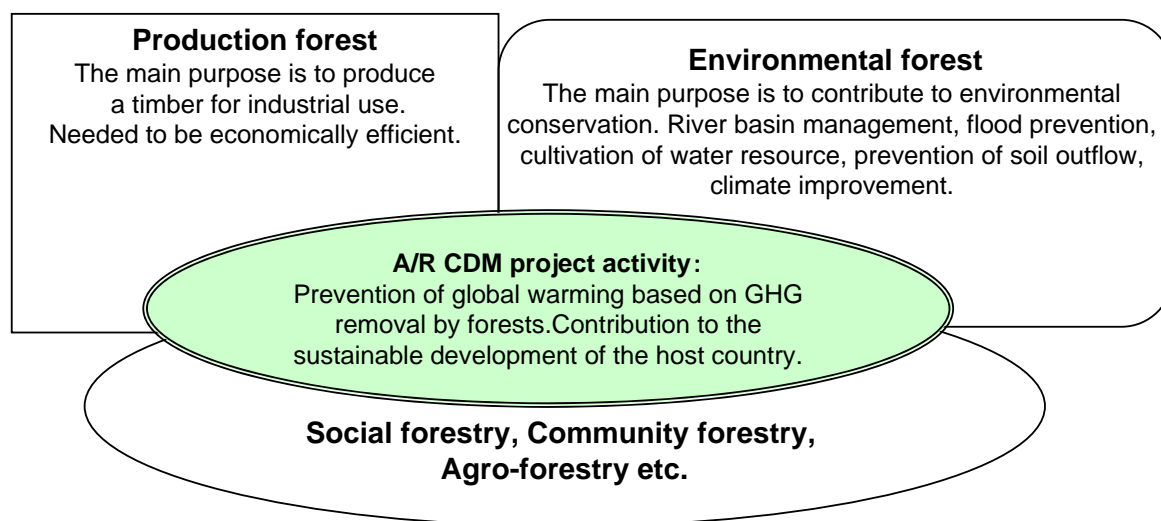
- ◆Land eligibility Ref to: 2-4, 3-11
- ◆Land tenure
- ◆Baseline carbon stock (=present land use: grass land or bush?) Ref to: 2-7
- ◆Baseline scenario Ref to: 2-7
- ◆Additionality Ref to: 2-8
- ◆Acceptability to local stakeholders Ref to: 2-20
- ◆Size and location of land available for reforestation Ref to: 2-2, 2-4
- ◆Leakage Ref to: 2-12

III-4



### 3-4. Outline of the Project Activity

Prepare outline of the project activities of the candidate sites in consultation with local stakeholders including the owners of land use right and with technical assistance of public institutions or consultants. For example, AR-CDM projects could have various objectives as follows:



III-5

### 3-5. Project Participants and their Duties (1)

Determine participants of an AR-CDM project and establish the operation system. Conclude a written agreement between project participants which clarifies the rights for CER, contribution to the project implementation (cash or in kind) and sharing of forest and non-forest products from the project (such as fuel wood, timber).

The example of A/R CDM project participants is as below:

	Related country	Name of the project participants Private and public organizations (duties)
Non-Annex I country	Host country	Private companies: Forestry company (project management) Private companies: Farmer and local community (Provision of land for plantations and labor)
Annex I country	Investing country	Investing companies (Finance, transfer of new technology)

A steering committee of AR-CDM project should be established to provide technical and managerial advices and support to the project and to facilitate their understanding on the project. The members of the steering committee should include the project stakeholders such as local government (forestry sub-department of DARD, district, and commune), forestry university, research institutions and residents of the neighboring area.

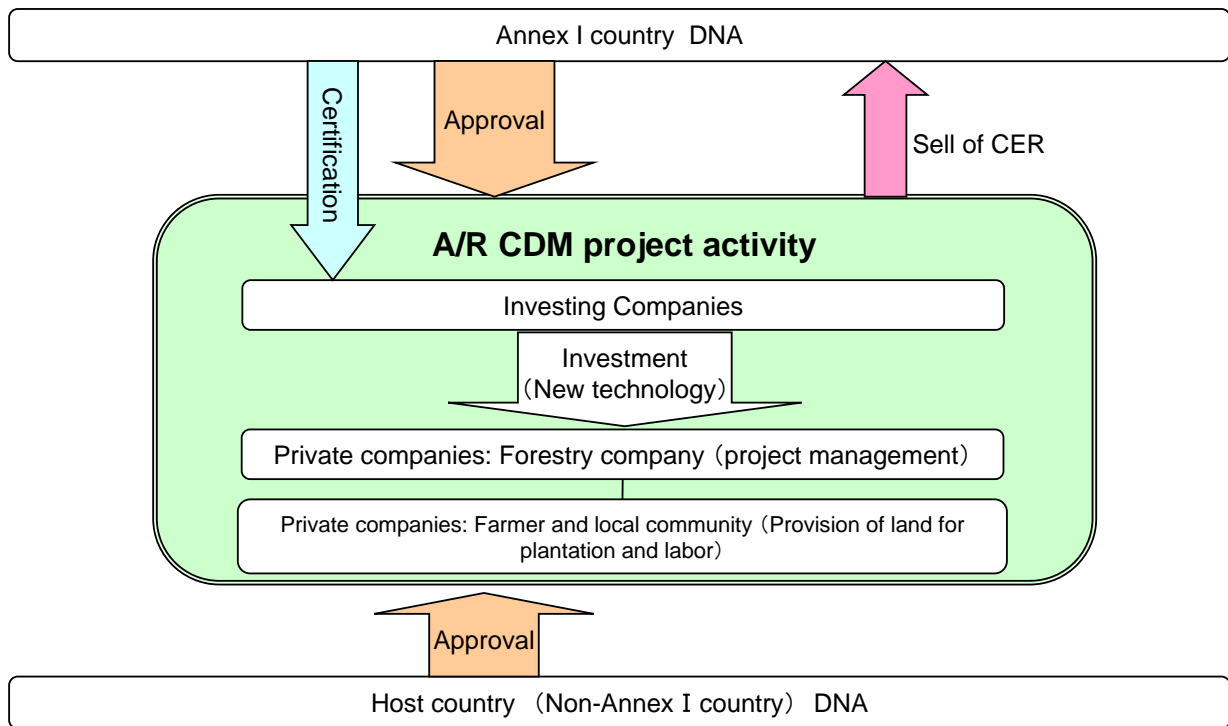
Note: For Small Scale AR-CDM projects, involvement of low-income communities and individuals defined by Host country to the project development is required.

[CDM A/R Simplified SSC M&P] <<http://unfccc.int/resource/docs/cop10/10a02.pdf#page=26>>

III-6

### 3-5. Project Participants and their Duties (2)

Example of relations between project participants and related parties.



III-7

### 3-5. Project Participants and their Duties (3)

In the case of Vietnam, MONRE is named as a DNA (Designated National Authority) responsible for project approval.

Approval for PIN is only upon request by the investor.

- Application Documents :
- a. Official letter of request for consideration
  - b. Official letter from concerned ministry, sector, PC, to request for examination of the project and acceptance.
  - c. Comments made by the concerned parties of the project

	Project Developer	CNA (DNA)	NSC (National Steering Committee)	Others
Approving procedure of PIN in Vietnam 25 days	Preparation of PIN Letter of endorsement	Consideration of legal status / examination of other documents Re-consideration and issuance of letter of endorsement by Minister of MONRE	Consideration of PIN by all members Comments	
Approving procedure of PDD in Vietnam 50 days	Preparation of PDD Letter of approval	Examination of PDD and other documents Re-consideration and issuance of letter of approval by Minister of	Consideration of PDD by members Meeting and evaluation (Presentation by project developer and vote by all members)	Energy and non-energy technical expert group Technical review PDD and other related documents

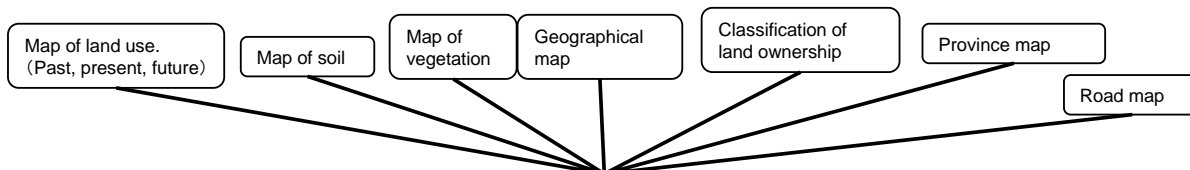
Source: MONRE Circular No:10/2006/TT-BTNMT dated 12th December 2006

III-8

### 3-6. Delineation of A/R CDM Project Boundary and Stratification

**Delineate the A/R CDM project boundary based on the general background information.**

- Describe the project boundary (with information about the location) and the geographical location of the project activity in PDD(A.4.1.4.)
- Integrate the GIS to use general background information about the bio-physical and socio-economic conditions (see below).



#### Delineation of A/R CDM Project Boundary

One or more sites could be included (in that case, boundary should be geographically peculiar)

**Stratification of the AR CDM project area.**

Stratify the project area into strata that form relatively homogenous units, if the project area is not homogenous.

- Species / age
- Primary vegetation
- Natural and environmental factors of the field (type of soil, height, relief, climate condition etc.)

Stratification enables the accuracy of estimation (of anthropogenic GHG removals) and monitoring.

Moreover,

stratification enables the reduction of the cost of sampling plot by reduction of the number of sampling plots.

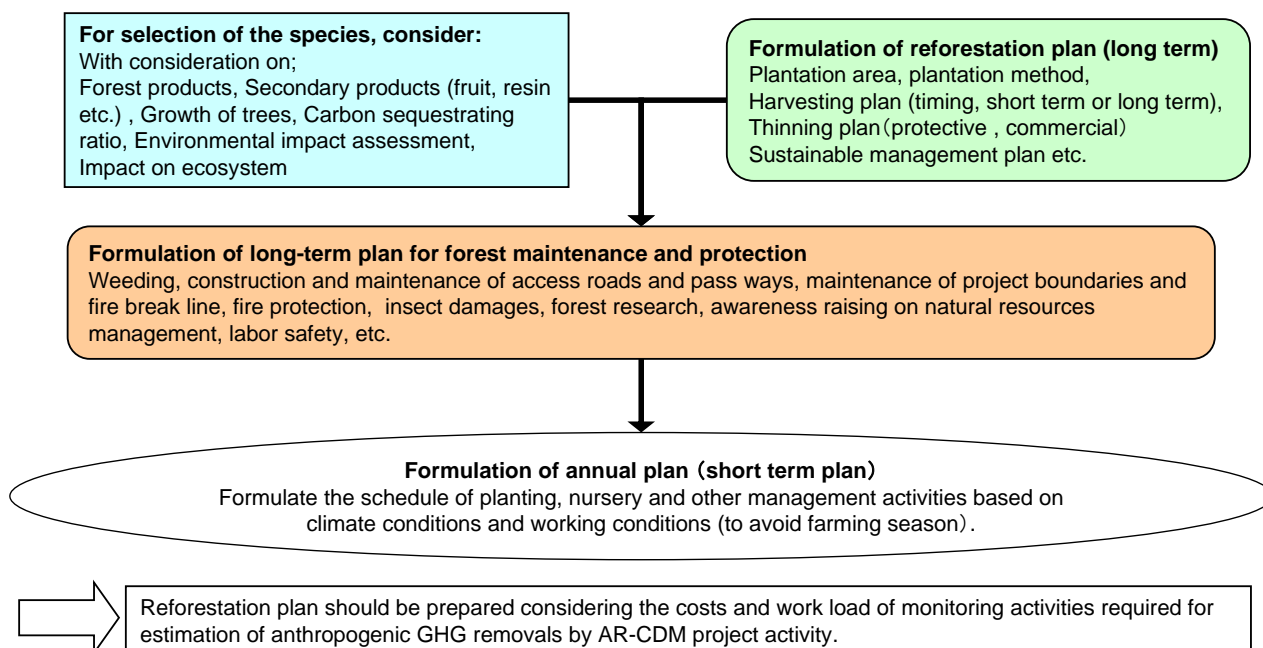
Refer 6-6. Project boundary and stratification.

More detailed information could be found in section 4.3.3.2 of [GPG LULUCF].

III-9

### 3-7. Plantation Planning, Estimation of Investment Cost and Benefit (1)

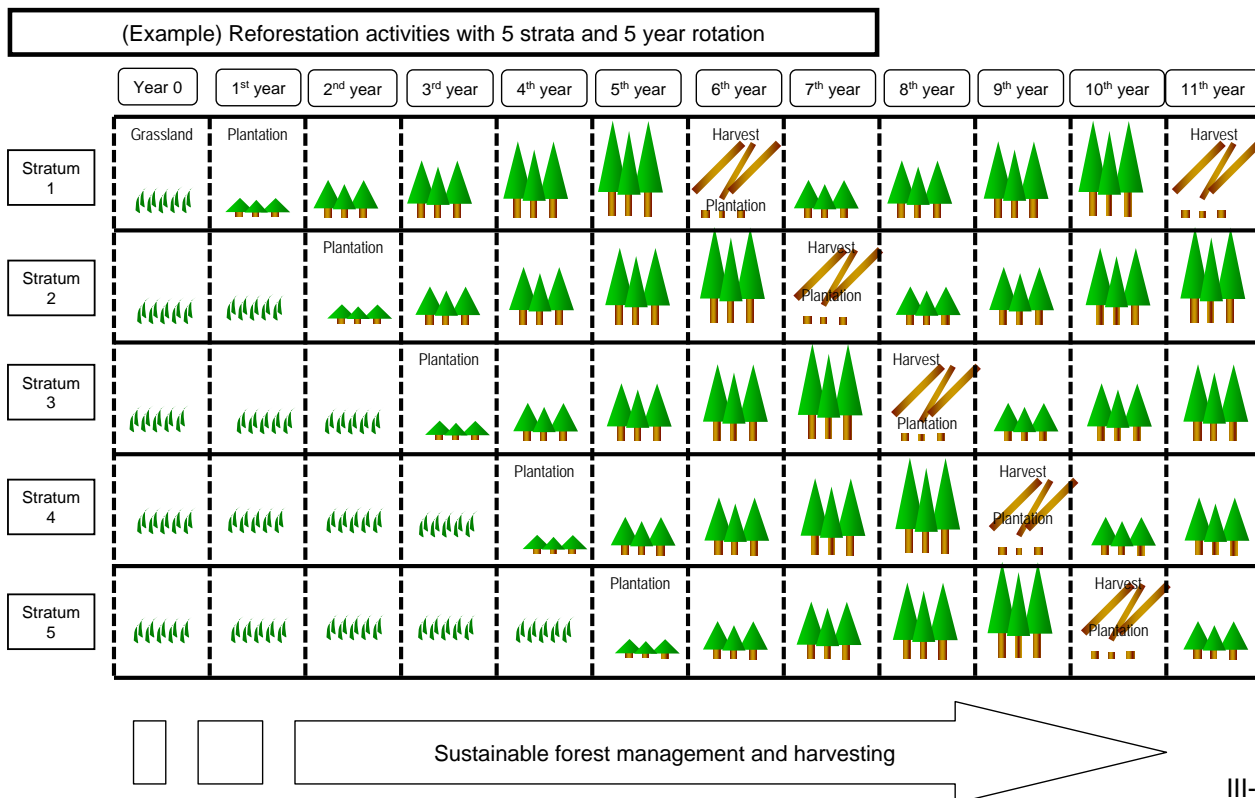
- Formulate a plantation plan based on the following flow-chart.
- Estimate the investment cost and profit of the proposed project activity based on the result of field survey and community information.
- Confirm the current level of technology of the site area, grasp the needs of local people



III-10

### 3-7. Plantation Planning, Estimation of Investment Costs and Benefits (2)

Stratification of the project site and formulation of plan for planting and harvesting.



III-11

### 3-7. Plantation Planning, Estimation of Investment Costs and Benefits (3)

- Estimate investment costs and benefits of the forestation plan.  
(In case of environmental forestry without benefits, only costs shall be estimated.)

Cash flow and income statement of the A/R CDM project activity (Example)

Fiscal year	1	2	3	4	5	6	7	8	9	10	11
Income (1)											
Expenditures (2)											
Depreciation (3)											
Interest of loan (4)											
Income/loss before deduction of tax (5) = (1-2-3-4)											
Income tax (6)											
Income/loss after deduction of tax (7) = (5-6)											
Fixed asset investment (8)											
Change in loan (9)											
Cash flow (10) = (7+3-8+9)											

CDM/JI Textbook, Kyoto mechanism, METI (2004)

- In demonstration of additionality tool, as one of the necessary conditions, conduct investment analysis based on the cash flow of the project activity with identification of most suitable index.
- The indexes used in investment analysis; IRR (Project IRR, Equity IRR), NPV, cost benefit ratio etc.

III-12

### **3-8. Application of Baseline and Monitoring Methodology** (for Small Scale AR-CDM)

Project participants have to consider the application of monitoring methodology to the AR-CDM project after planning of project activity.

For Small Scale AR-CDM project activity, simplified baseline and monitoring methodologies developed by CDM-EB can be applied.

<http://cdm.unfccc.int/methodologies/SSCmethodologies/SSCAR/approved.html>

In order to reduce transaction costs, these modalities and procedures are simplified for small-scale AR-CDM project activities as follows:

- (a) Project activities may be bundled at the following stages in the project cycle: the project design document, validation, registration, monitoring, verification and certification. The size of the total bundle should not exceed the limits stipulated in paragraph
- (b) The requirements for the project design document are reduced;
- (c) Baseline methodologies by project type are simplified to reduce the cost of developing a project baseline;
- (d) Monitoring plans are simplified, including simplified monitoring requirements, to reduce monitoring costs;
- (e) The same operational entity may undertake validation as well as verification and certification.

Ref: Decision 6/CMP.1 <http://cdm.unfccc.int/Reference/COPMOP/08a01.pdf>

III-13

### **3-9. Application of Baseline and Monitoring Methodology** (for Normal Scale AR-CDM)

#### Normal Scale AR-CDM

For Normal Scale AR-CDM, project participants have to decide the Baseline methodology to be applied from approved methodologies by CDM-EB. If approved methodologies cannot be applied to the project, project participant have to develop a new methodology and be approved by CDM-EB.

- (a) In case of the development of new Baseline and Monitoring Methodologies Project participant have to develop and submit a New Baseline and Monitoring (NMB & NMM) methodologies to CDM EB to be approved.

Refer to [GUIDELINES CDM-AR-PDD & CDM-AR-NM] to develop NMB and NMM.  
[http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)

- (b) In case of application of approved Baseline and Monitoring Methodology Project participant can apply methodologies approved by CDM-EB. In this case, reason and method for application to the project have to be described in PDD.

#### **A/R Methodologies approved by CDM EB (Normal Scale)**

[http://cdm.unfccc.int/methodologies/ARmethodologies/approved\\_ar.html](http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html)

III-14

### 3-10. Estimation of Anthropogenic GHG Removals

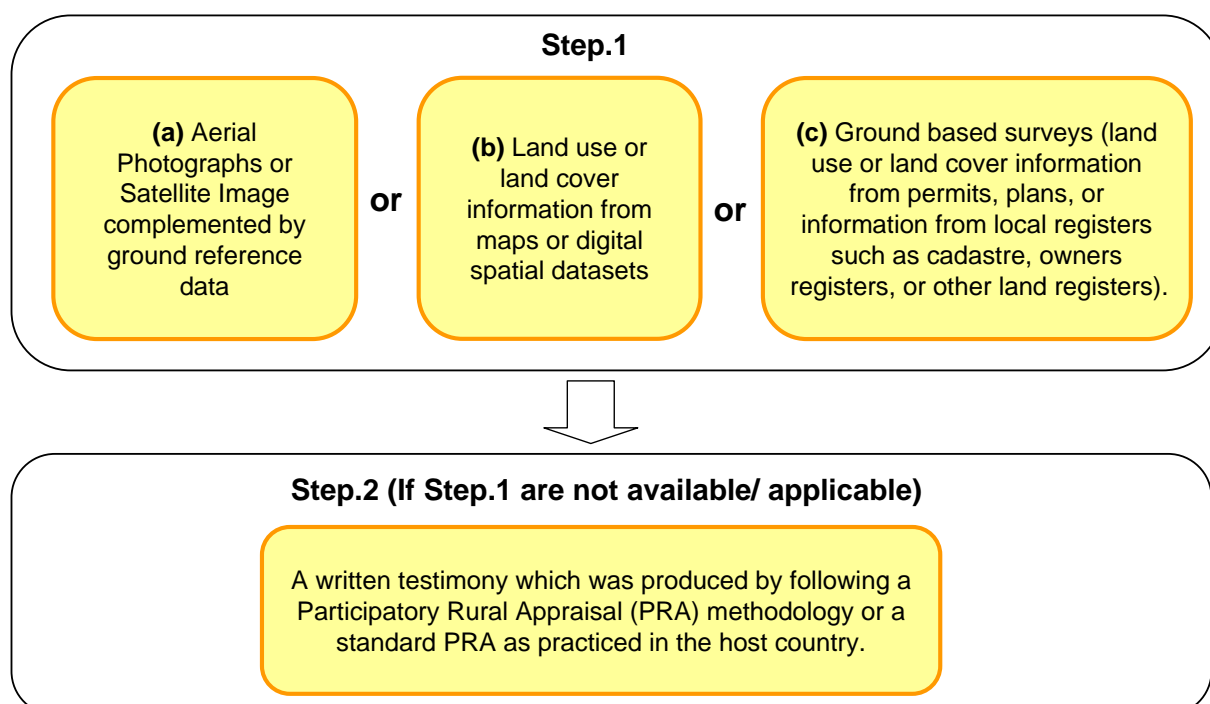
Estimate the anthropogenic GHG removals along the applied methodology of Baseline and Monitoring. Show the numbers using the table below in the section C of the SSC-AR-PDD.

Year	Baseline GHG removals (tons/CO <sub>2</sub> )	Actual GHG removals (tons/CO <sub>2</sub> )	Leakage (tons/CO <sub>2</sub> )	Anthropogenic GHG removals (tons/CO <sub>2</sub> )
	(A)	(B)	(C)	(B-A-C)
Year a				
Year b				
Year c				
Year ...				
Total (tons/CO <sub>2</sub> )				

Formulae for estimation of each net anthropogenic GHG have to be described in Section C of CDM-SSC-AR-PDD. (Refer Chapter 4 of Guideline for detailed methodology for estimation)

### 3-11. Demonstration of Land Eligibility

According to the Decision by UNFCCC,



### 3-12. Survey on Environmental Impacts (1)

#### Present Natural Condition

Project participants shall describe the following items in SSC-AR-PDD (A.4.1.5) to explain the present natural condition of project site.

< Necessary items for SSC-AR-PDD >

- Annual rainfall (mm)
- Average temperature (°C)
- Existence/non-existence of the dry season ( in case of existence, its frequency)
- Existence/ non-existence of flood (in case of Existence , its frequency)
- Existence/ non-existence of frost
- Other disasters (ex :tornado, fire, hurricane etc.), in case of existence describe its frequency
- Soil type (mainly clay/sand)
- Main titles of the basin of the project area
- Type of ecosystem (grassland, farmland, swamp etc.)
- Types and names of rare animals and endangered vegetation in case of existence

< Necessary items SSC-AR-PDD >

- Type of forest
- Name of exotic tree species
- Type of mixed hardwood species
- Name of indigenous tree species
- Name of clone
- Name of other tree species

[GUIDELINES CDM-SSC-AR-PDD & F-CDM-SSC-AR-Subm]

<[http://cdm.unfccc.int/Reference/Documents/Guidel\\_AR\\_SSC\\_Pdd/English/Guidel\\_CDM\\_AR\\_SSC\\_PDD.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_AR_SSC_Pdd/English/Guidel_CDM_AR_SSC_PDD.pdf)>

III-17

### 3-12. Survey on Environmental Impacts (2)

#### Environmental Impacts

If any negative impact is considered significant, a statement that project participants have undertaken an environmental impact assessment, in accordance with the procedures required by the host country, including conclusions and all references to support documentation. If applicable, a short summary and attach documentation provided in SSC-AR-PDD (D.1).

(Project participant may consign these assessment to local university, academic institutes, private company, consultants and NGOs which are familiar with conditions in Vietnam.)

Impacts on natural ecosystem and biodiversity, and impacts outside the project boundary of the proposed project activity shall be included.

[GUIDELINES CDM-AR-PDD & CDM-AR-NM] (not mentioned in Guideline for Small Scale AR-CDM)

<[http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)>

1. Preparation of Environmental Impact Assessment Report

- Water environment
- Soil
- Risk of fire disaster
- Damage by insects
- Disease damage

2. If any significant negative impacts are anticipated by the project participants, they should undertake an environmental impact assessment in accordance with the procedures required by the Host party.

3. Description of planned monitoring and remedial measures to address significant impacts

→ Host party together with Annex 1 country should undertake a risk assessment in line with its related laws, especially, in case of installation of "Potentially invasive alien species" and "GMO: Genetically Modified Organisms"

For information about foreign species: IUCN website <<http://www.iucn.org/>>

III-18

### 3-13. Socio-Economic Survey (1)

A socio-economic survey should be carried out including the description of legal land tenure, access to the biomass (sequestered carbon), current land use and land use of the project site in SSC-AR-PDD (E.1.).

(Project participants may consign the survey to local universities, academic institutes, private companies, consultants and NGOs which are familiar with social conditions in Vietnam.)

< Necessary items for SSC-AR-PDD (E.1.) >

- Name of the title to the land
- Information on the period of possession of the current land use rights
- Number of local residents within the boundary of the project activity
- Involvement of small associations of land owners
- Confirmation on the legal land ownership registered by name of project participant
- Whether the carbon pool of land belongs to the same owner (individual / corporate)
- Whether the carbon pool is included as a legal right of ownership  
(As for the carbon pool, describe the laws related to the land use ownership and land use)
- Explanation of current condition of land use (Agricultural crop, forest, grass species etc.)

[GUIDELINES CDM-AR-PDD & CDM-AR-NM] (not mentioned in Guideline for Small Scale AR-CDM)  
<[http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)>

III-19

### 3-13. Socio-Economic Survey (2)

“Socio-economic impacts of the proposed A/R CDM project activity” shall be described in E.1. of SSC-AR-PDD following the methodology below. Impacts outside the project boundary of the proposed project activity shall be included.

#### 1. Preparation of Socio-Economic Impact Assessment Report

- Local community
- Indigenous people
- Land tenure
- Local employment (income)
- Food production
- Cultural and religious sites
- Access to fuelwood and other forest products

2. If any significant negative impacts are anticipated by the project participants or the host Party, project participants will undertake a socio-economic impact assessment, in accordance with the procedures required by Vietnam.

3. Description of planned monitoring and remedial measures to address significant impacts referred to in E.1. of SSC-AR-PDD.

- The information acquired in Socio-economic survey can also be used as proof documents of the following items;
- Existing of leakage and identification
  - Proofing of “Project development and implementation by low income community or individual” as a requirement as a concept for Small Scale A/R CDM.

[GUIDELINES CDM-AR-PDD & CDM-AR-NM] (not mentioned in Guideline for Small Scale AR-CDM)  
<[http://cdm.unfccc.int/Reference/Documents/Guidel\\_Pdd\\_AR/English/Guidelines\\_CDM-AR-PDD\\_AR-NM.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_Pdd_AR/English/Guidelines_CDM-AR-PDD_AR-NM.pdf)>

III-20



### 3-14. Stakeholder Comments

“Stakeholder comments” shall be described in F.1. of SSC-AR-PDD as a part of socio economic survey.

1. Brief description of how comments by local stakeholders have been collected and compiled
2. Summary of the comments received
3. Description of remedial measures to address significant impacts

Refer [GUIDELINES FOR COMPLETING CDM-SSC-AR-PDD and F-CDM-SSC-AR-Subm CDM]  
[http://cdm.unfccc.int/Reference/Documents/Guidel\\_AR\\_SSC\\_Pdd/English/Guidel\\_CDM\\_AR\\_SSC\\_PDD.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_AR_SSC_Pdd/English/Guidel_CDM_AR_SSC_PDD.pdf)

Process by which comments by local stakeholders have been invited and compiled shall be described. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe an small-scale A/R CDM project activity in a manner which allows the local stakeholders to understand the proposed small-scale A/R CDM project activity, taking into account confidentiality provisions of the CDM modalities and procedures.

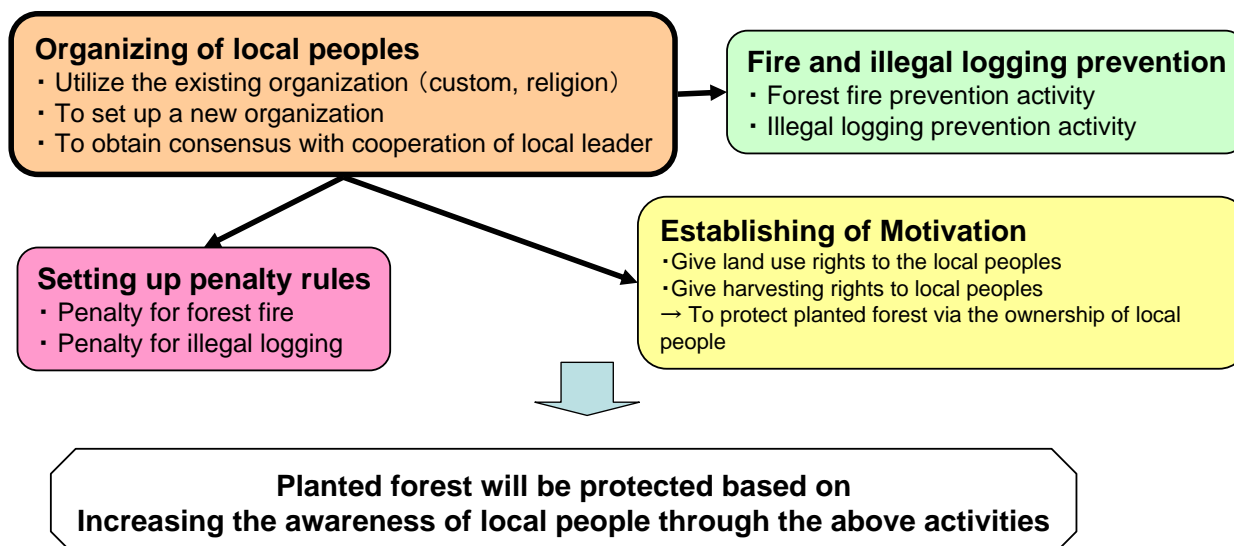
III-21

### 3-15. Determination of Forestation Management Rule for Forest Protection

Anybody can access forests. Therefore, project participants have to obtain consensus among stake holders including local people for sustainable forest management and protection.

The following charts are examples of procedures for obtaining consensus.

- To conduct a socio-economic survey on the local community in and around the project area with the counterpart to grasp the feature of the area.
- To establish forest management system and prepare document of management rules
- To prepare document on consensus for forest protection with signature of stakeholders including local people



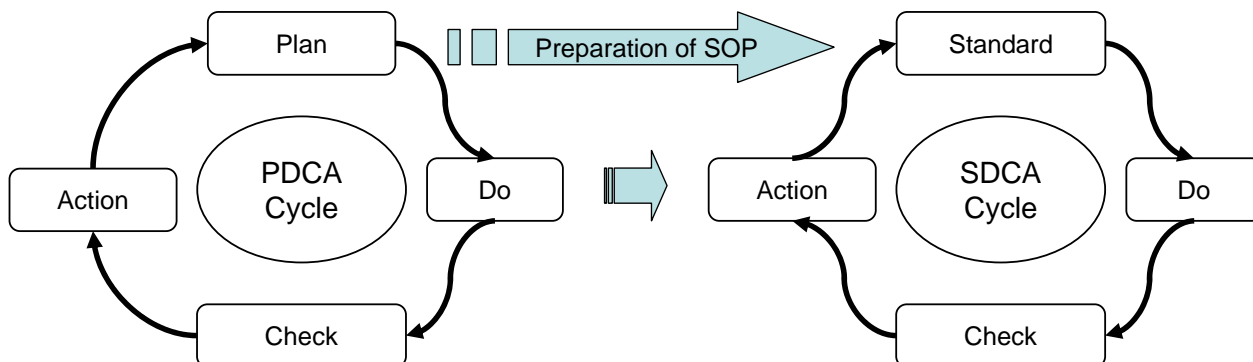
III-22

### 3-16. Capacity Building

Capacity building for the project participants, other stakeholders will contribute to sustainable development in rural areas.

Basic concept of project management (as an example) at the time of carrying out capacity building for each activity is as below;

1. Circulating PDCA Cycle (Plan, Do, Check, Action) and preparing of SOP (Standard Operating Procedure)
2. Implementation of SDCA cycle (Standard, Do, Check, Action) along with SOP



→ It also leads to achievements in Quality Control (QC) and Quality Assurance (QA) which are the requirements of the monitoring.

III-23

### 3-17. Useful Link to Related Documents for Procedure of Small Scale AR-CDM

#### Guideline:

Guidelines for completing CDM-AR-SSC-PDD and CDM-AR-NM (most recent version)

[http://cdm.unfccc.int/Reference/Documents/Guidel\\_AR\\_SSC\\_Pdd/English/Guidel\\_CDM\\_AR\\_SSC\\_PDD.pdf](http://cdm.unfccc.int/Reference/Documents/Guidel_AR_SSC_Pdd/English/Guidel_CDM_AR_SSC_PDD.pdf)

#### PDD Format:

Project Design Document Form for small-scale afforestation and reforestation project activities (CDM-SSC-AR-PDD) (most recent version)

PDF: [http://cdm.unfccc.int/Reference/Documents/cdm\\_ar\\_ssc\\_pdd/English/CDM\\_AR\\_SSC\\_PDD.pdf](http://cdm.unfccc.int/Reference/Documents/cdm_ar_ssc_pdd/English/CDM_AR_SSC_PDD.pdf)

Word: [http://cdm.unfccc.int/Reference/Documents/cdm\\_ar\\_ssc\\_pdd/English/CDM\\_SSC\\_AR\\_PDD.doc](http://cdm.unfccc.int/Reference/Documents/cdm_ar_ssc_pdd/English/CDM_SSC_AR_PDD.doc)

#### Glossary:

CDM Glossary of terms used in the Project Design Document (CDM-PDD)

[http://cdm.unfccc.int/Reference/Guidclarif/glossary\\_of\\_CDM\\_terms.pdf](http://cdm.unfccc.int/Reference/Guidclarif/glossary_of_CDM_terms.pdf)

#### Approved Methodologies (Normal Scale):

[http://cdm.unfccc.int/methodologies/ARmethodologies/approved\\_ar.html](http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html)

#### Additionality (Normal Scale):

Tool for the Demonstration and Assessment of Additionality in A/R CDM Project Activities

[http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality\\_tool.pdf](http://cdm.unfccc.int/methodologies/ARmethodologies/AdditionalityTools/Additionality_tool.pdf)

III-24

### 3-18. Overall Project Decision

Generally, forestation projects requires a comparatively long period of time until they come to fruition. Therefore, once the project is being implemented, it is necessary to examine periodically whether the project should be continued or not (refer the following flow chart). At least, 5 years of monitoring is required for A/R CDM project activity.

