



Forestry CDM

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Milestones for AR-CDM

- 1992.5 Adoption of UNFCCC
- 1994.3 UNFCCC came into effect
- 1997.12 Kyoto Protocol adopted at COP 3 in Kyoto
- 2001.11 Marrakesh Accords on Kyoto Protocol CDM agreed at COP 7
- 2003.12 AR-CDM agreed except for SSC-AR-CDM at COP9 in Milan
- 2004.12 SSC-AR-CDM agreed COP10 in Buenos Aires
- 2005.2 Kyoto Protocol came into effect
- 2010.12 12 AR-AM and 7 AR-AMS methodologies approved, 60 AR projects in the pipeline (of which 18 registered)

Modalities and procedures of AR-CDM project activities in 2008-12

- Procedures and modalities for AR-CDM project activities was decided at COP 9 except for small-scale AR-CDM
- Procedures and modalities for SSC-AR CDM agreed COP10 in Buenos Aires
- Credits limited to 1% of Annex I Party's base year emissions per year
- The treatment of LULUCF project activities under CDM in future commitment periods shall be decided as part of the negotiations on the 2nd commitment period
- Therefore, the following rule is applied only to the project activities for the 2008-2012

Eligibility requirements for host countries

General

- The host country is a Party to the Kyoto Protocol;
- Participation in project activity is voluntary
- It has a Designated National Authority (DNA) for the CDM.

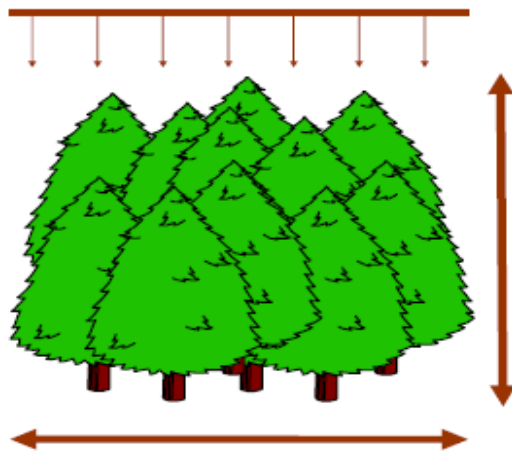
The specific eligibility requirements for a developing country to host an afforestation or reforestation CDM project activity under the CDM: its DNA to report its forestry definition for CDM to the CDM EB:

- A single min. tree crown cover value between 10 ~ 30%; and
- A single min. land area value 0.05 ~ 1 hectare; and
- A single min. tree height value: 2~ 5 metres

Definition of forest, afforestation and reforestation

Party should reports to EB their national criteria of forest definitions.

Party



Sparse forest
Large-sized gap
Woodlands that do not meet the forest threshold are to be distinguished.

30% crown cover

Expand eligible area for CDM

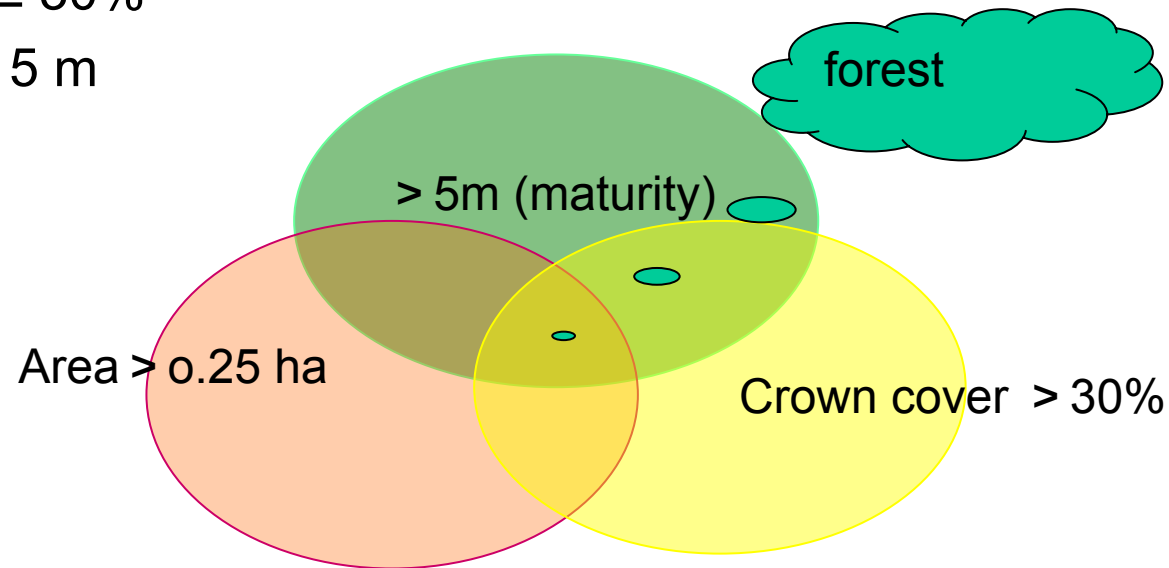
10% crown cover

Expand eligible area for Agro-forestry SS-CDM

Forest Definition - example

Indonesia

- - Area ≥ 0.25 ha
- - Crown cover $\geq 30\%$
- - Tree height ≥ 5 m



Afforestation Definition for CDM

More than 50 years



Non-forest land use

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.

Definition of reforestation for CDM

31 Dec 1989



After 2000



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-forest land. For 2008-12, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 Dec. 1989

Eligible land for AR-CDM

The land status since 1 January, 1990

- Tree height < 5 m (at maturity)
- Crown cover < 30% (at maturity)
- Land area < 0.25ha

Non forest status

At least one of the 3 conditions should be met

AR-CDM Plantation activity

- Tree height > 5 m (at maturity)
- Crown cover > 30% (at maturity)
- Land area > 0.25 ha

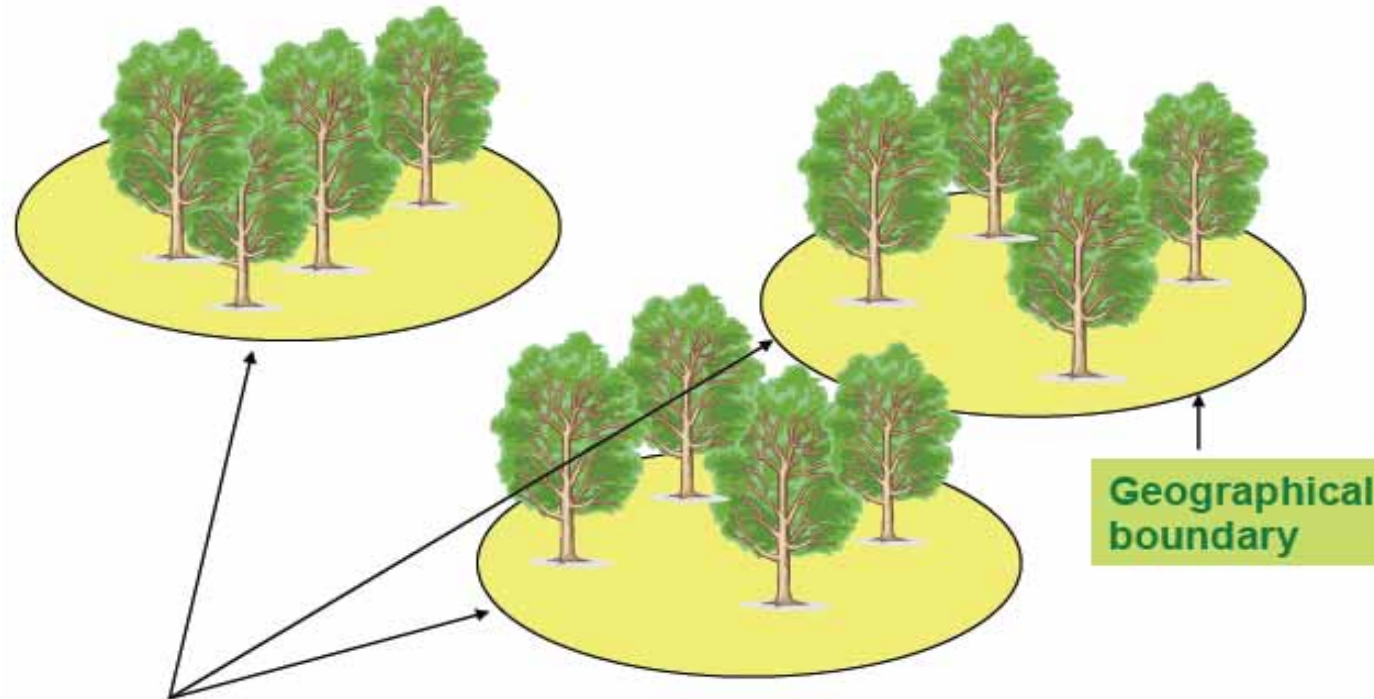
Forest Status

All 3 conditions should be met

The land status after AR-CDM project

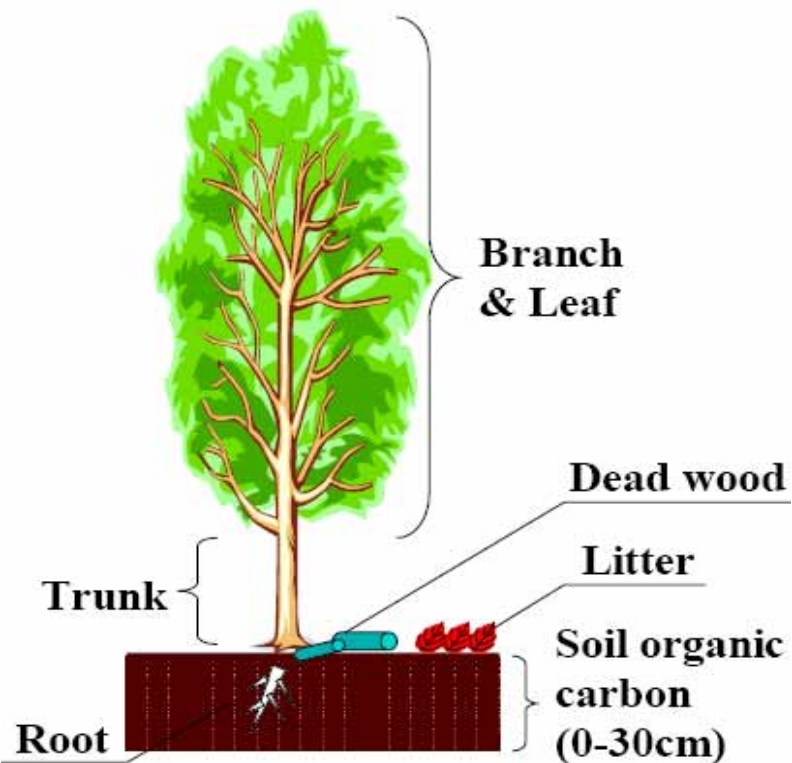
Project boundary

- The “project boundary” geographically delineates AR-CDM



The project activity may contain more than one discrete area of land.

5 Carbon pools defined at COP9



Carbon pools		Method for measurement
Above ground biomass	Branch & Leaf	Use of parameter
	Trunk	Direct measurement
Below ground biomass	Root	Sampling survey & model
Dead wood		
Litter		
Soil organic carbon		

COP9 decisions

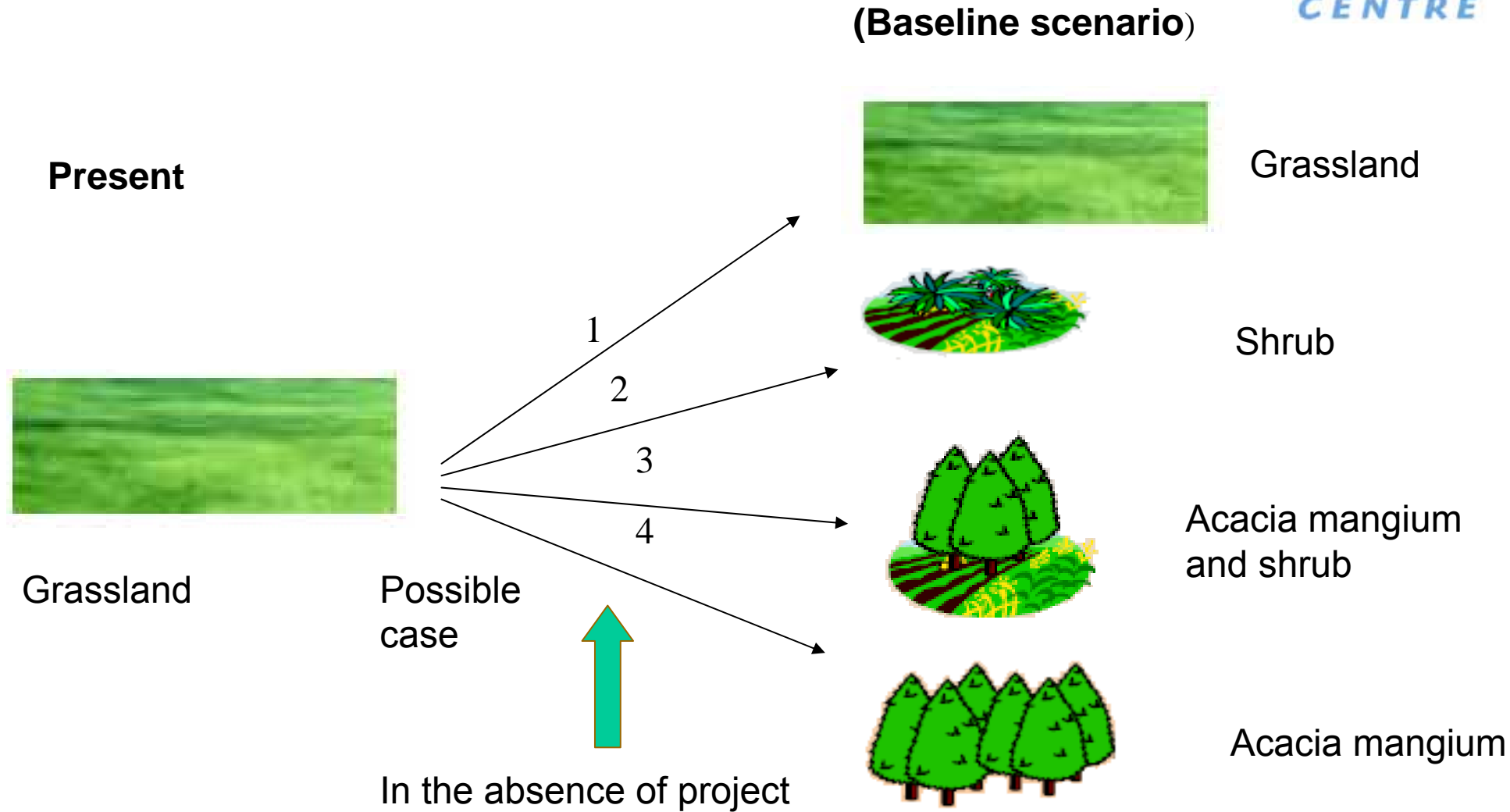
- Projects participants shall account for all changes in the 5 carbon pools.
- Projects participants may choose not to account for a given pool in a commitment period, if transparent and verifiable information is provided that the pool is not a source.

Select carbon pools for measuring

	Baseline	Project activity	Measuring
1. Above ground biomass	+10	+500	May not account for due to the increase of removal, but should be accounted for
2. Under ground biomass	+20	+100	
3. Litter	-3	-5	Should account for because of the increase of emission
4. Dead wood	-10	-7	Account for or not depending on the cost and benefits of measuring and consideration
5. Soil organic carbon	+1	+2	Recommendable not be measured if it is verified that soil is not emission source (high measuring cost)

Note: + removal, -emission

Baseline Scenario

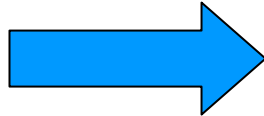


Small scale AR-CDM

Small-scale AR-CDM requirements

- Developed or implemented by low-income communities and individuals. Host party to define “low-income”
- Net removal is less than 16 Kt CO₂/year
 - fast growing species 2 ~ 300 ha
 - indigenous species 1,000 ha

Small Scale - Being one of the 5 project types

- grassland
 - cropland
 - wetland
 - Human settlement
 - land of inherent low living biomass-supporting potential
- 
- forestland

Non Permanence of AR-CDM project

As stipulated the annex to Decision 19/CP.9 in COP 9, to address non-permanence of AR-CDM project activity,

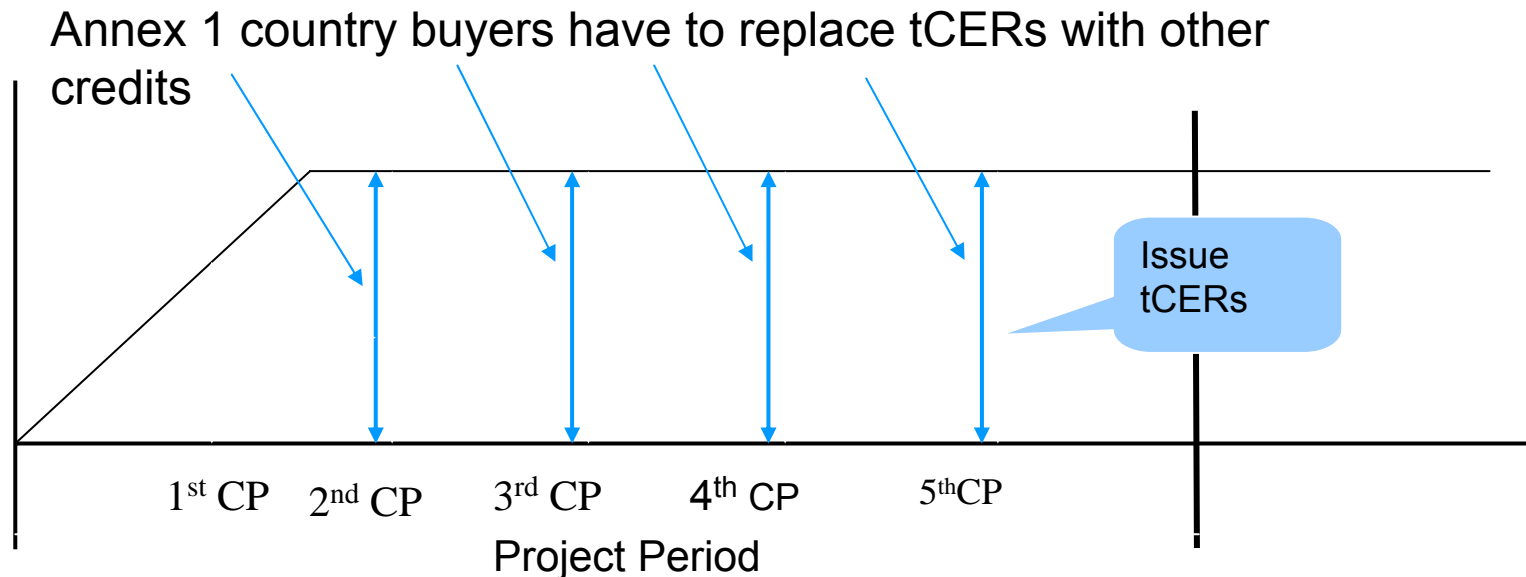
- Project participants shall select either Temporary CER (tCER) or Long-term CER (ICER)
- The choice of CER or ICER shall remain fixed for crediting period including renewals

tCER and ICER from AR-CDM

	Carbon Stock to be credited	Applicability	Replacement	Participants	Type of Land	Responsibility of participants
tCER		Industrial forest management (larger IRR)	Short	Companies	Naturally productive area	Until time of the issuance of the credit
ICER		- rehabilitation - Community forest (larger IRR)	Long	-local community -NGOs	Naturally unproductive area	Continued long

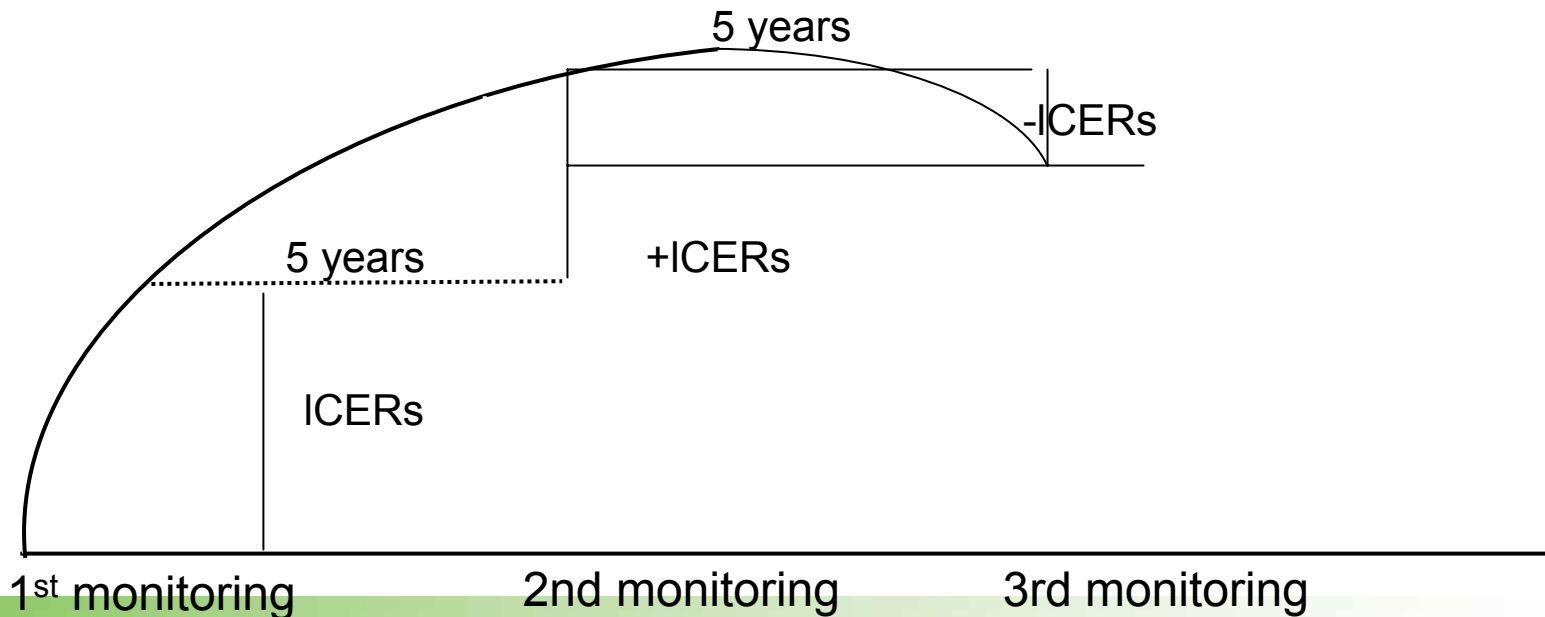
tCER

- tCERs which are issued in a commitment period expire at the end of the subsequent commitment period
- Based upon the periodic verification and certification of “*Net anthropogenic removals*”, tCERs can be issued during the crediting period



ICERs

- ICERs remain effective during the crediting period and expire at the end of it unless carbon stocks decrease
- If there is an increase in carbon stocks, the more ICERs can be issued
- If there is a decrease in carbon stocks, equivalent quantity of ICERs shall expire and be replaced with other credits by Annex I countries or project participants



Crediting period

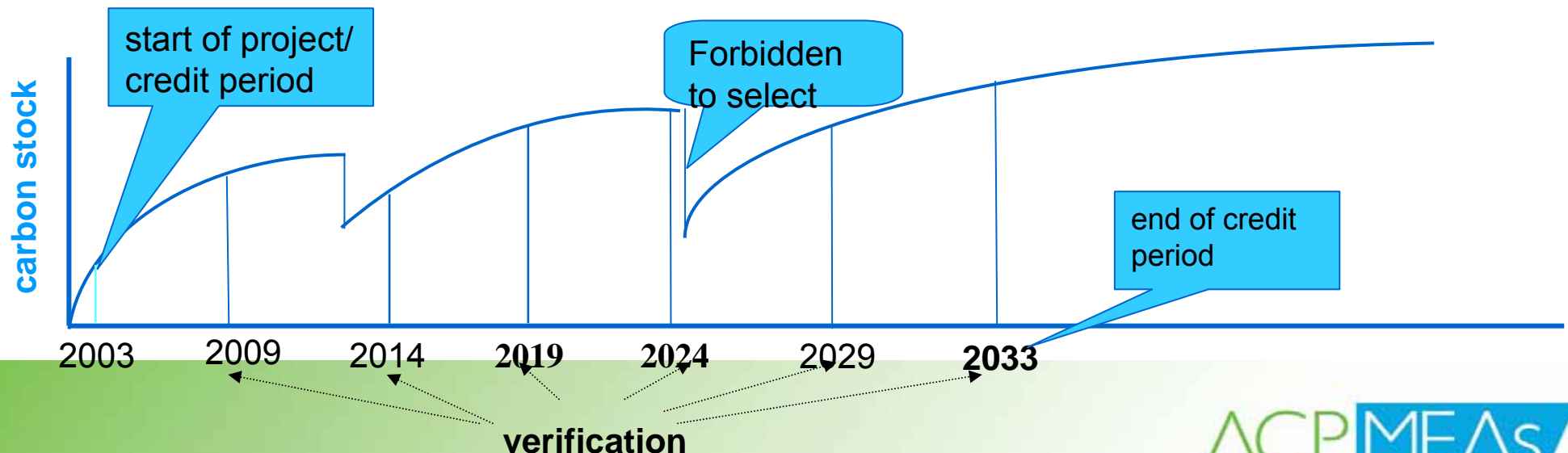
- Afforestation and reforestation projects
Max. 30 years fixed or 20 years renewable twice
- Non-forestry projects
Max. 10 years fixed or 7 years renewable twice

Timing of verification and certification

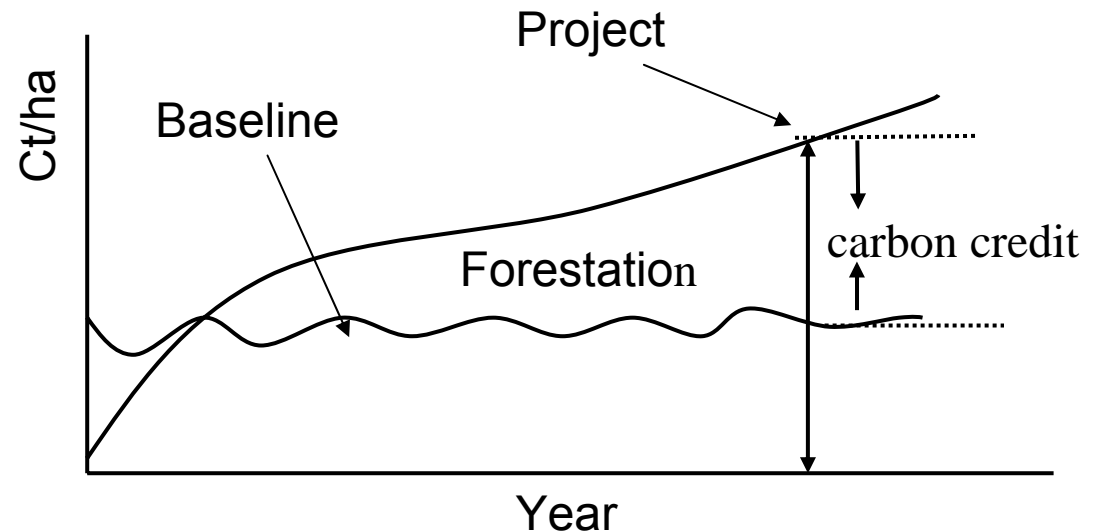
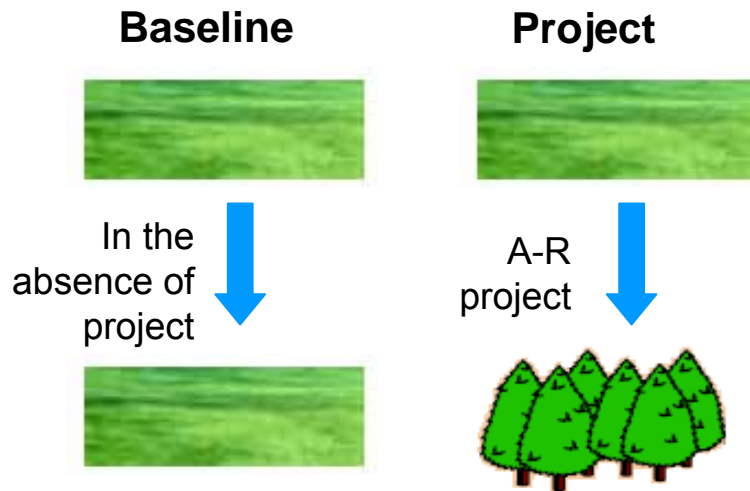
As stipulated Decision 19/CP.9 in COP 9

- The initial verification/certification may be undertaken at a time selected by project participants.
- Thereafter, verification/certification shall be carried out every 5 years until the end of the crediting period.
- Monitoring 5 carbon pools and carbon stock changes during the crediting period

Avoid Systematic coincidence of verification and peaks in carbon stocks



Baseline & Additionality



Explain how and why this project is additional and therefore not the baseline scenario in accordance with the selected baseline methodology. Include:

- 1) a description of the baseline scenario,
- 2) a decision of the project scenario,
- 3) an analysis showing why the baseline net GHG removals by sinks scenario would likely lie below actual net GHG removals by sinks in the project scenario.

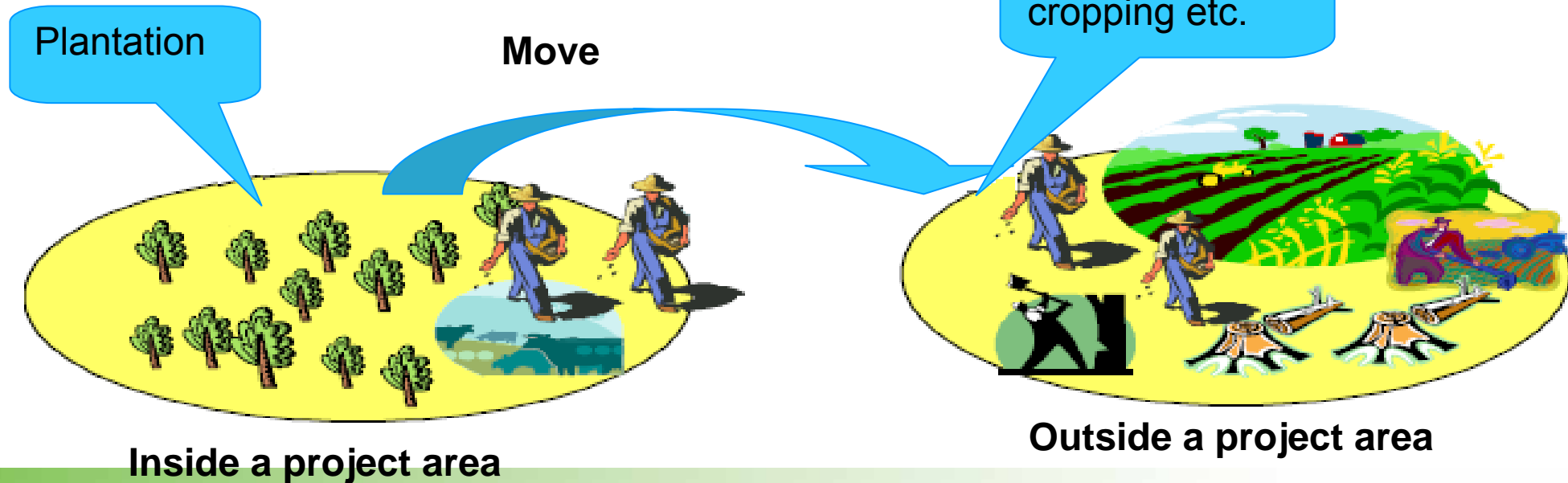
Leakage

Leakage is:

1. Increase of GHG emissions (Negative)
2. Occur outside the boundary
3. **Measurable** and **attributable** to the project activity

Positive leakage is not included

- ✓ Increase of removals
- ✓ Decrease of emissions



Calculation of Net GHG Removals by Sinks

Net GHG Removals by Sink(1) = (2) – (3) – (4) – (5)

(2) The sum of the verifiable changes in carbon stocks in the carbon pools within the project boundary,

(3) the increase in emissions of GHG within the project boundary, attributable to the project activity

(4) Baseline net GHG removals by sinks

(5) Leakage

Socio-economic impact, environmental impact

Requirements

- A letter from the DNA which states the project contributes to sustainable development
- Monitoring of circumstances that lead to changes in legal title of lands or rights to access to pools
- SIA/EIA if impacts are significant

Items to be described in a PDD

- Legal title of the land and rights of access to carbon pools
- (Socio-economic) local communities, indigenous peoples, land tenure, local employment, food production, cultural and religious sites, access to fuelwood and forest products, etc.
- (Environmental) hydrology, soils, risk of fires, pests and diseases, etc.
- National requirements relating to sustainable development

A/R CDM Implementation Progress

The progress of A/R CDM project activity implementation is slow compared with the overall CDM project activity implementation progress

- 1) The first methodology was not approved until Nov. 2005
- 2) The high transaction costs, complicated PDD, and monitoring and verification

However, it is already gaining momentum.

- 1) Methodology approval progress: 12 large scale A/R methodologies, 7 small scale ones
- 2) Project implementation progress: 11 afforestation projects, of which 3 registered; 49 reforestation projects, 15 registered, 2 in the process of registration. These projects are located in 25 countries.

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