

**JACO CDM**

**SMALL-SCALE  
A/R VALIDATION REPORT**

Client: World Bank  
The Carbon Finance Unit

**Uganda Nile Basin  
Reforestation Project No.4**

29 August, 2011

Report No. GR08W0021D

**JACO CDM., LTD**

## Validation Report

Date of first issue: 20 June, 2011	
Approved by: Yasunori SHIMOI CEO, President of JACO CDM	Project No.: UNFCCC ref:
Client: Client Name: The World Bank The Carbon Finance Unit	Client ref.:

Summary:

JACO CDM., Ltd has been ordered by World Bank, the Carbon Finance Unit to perform validation of small-scale A/R project "Uganda Nile Basin Reforestation Project No.4 " (hereinafter the Project). The host country is Uganda.

This validation report summarizes the findings of the validation.

The validation consisted of the following three steps:

- desk review of the project design, the baseline and the monitoring plan etc.,
- follow-up interviews with project stakeholders
- the resolution of outstanding issues and issuance of the final validation report and the opinion.

The responses to 3 Corrective Action Requests and 7 Clarifications to the PDD version No.05 were satisfactorily provided by the Project participants and the original PDD was revised.

Total net anthropogenic removals (tCER) from the project are estimated to be on average of 3,969 tCO<sub>2</sub> per year over the selected 20 year crediting period starting 1 April, 2008. The net anthropogenic removal forecast has been checked and is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training and monitoring procedures have been implemented.

In summary, it is JACO CDM's opinion, that the "Uganda Nile Basin Reforestation Project No.4" in Uganda as described in the PDD version 07 of 21 October, 2010 meets all relevant UNFCCC requirements for A/R project activities under the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology AR-AMS0001, version 05.

Hence, JACO CDM requests the registration of the project as a small-scale A/R project activity.

Report No.: GR08W0021D		
Report title:  Small-Scale A/R Validation Report Uganda Nile Basin Reforestation Project No.4		
Work carried out by: Teruo FUKUDA, Osamu KOBAYASHI		
Work verified by: Yoshihiro OTSUKA Shigekazu OKA Noriyuki KOBAYASHI (Expert)		
Date of this revision 29 August, 2011	Rev. No.: 1	Number of pages: 18

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## Validation Report

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### Abbreviations

AGB	Above-ground Biomass
A/R	Afforestation Reforestation
BEF	Biomass Expansion Factor
CAR	Corrective Action Request
CCB	Climate, Community & Biodiversity
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CERs	Certified Emission Reduction
CFR	Central Forest Reserve
CL	Clarification Request
COP	Conference of Parties
DBH	Diameter at Breast Height
dm	Dry Matter
DNA	Designated National Authority
DOE	Designated Operating Entity
ENCOFOR	Environment and Community based framework for designing afFORestation
ERs	Emission Reductions
EIA	Environmental Impact Assessment
EIS	Environmental Impact statement
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FMP	Forest Management Plan
GHG	Green House Gas(es)
GIS	Geographical Information Systems
GPG	Good Practice Guidance
GSP	Global Stakeholder Process
IBRD	International Bank for Reconstruction and Development
IPCC	Intergovernmental Panel on Climate Change
JACO CDM	JACO CDM Co., Ltd
KP	Kyoto Protocol
LULUCF	Land use, land-use change and forestry
NEMA	National Environment Management Authority
NFA	National Forestry Authority
NGO	Non Governmental Organization
PDD	Project Design Document
QA	Quality Assurance
QC	Quality Control
RECPA	Rwaho Environmental Conservation and protection Association
SOPs	Standard Operating Procedures
SPGS	Sawlog Production Grant Scheme
SV	Stem Volume
TARAM	Tool for Afforestation and Reforestation Approved Methodologies
tCERs	Temporary Certified Emission Reduction
UNFCCC	United Nations Framework Convention on Climate Change
UTM	Universal Transverse Mercator coordinate system
WD	Wood Density
WGS	World Geodetic System

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## Validation Report

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Appointment Certificate

## 1. INTRODUCTION

### 1.1. Objective

The World Bank, the Carbon Finance Unit has commissioned JACO CDM to validate the small-scale A/R project “Uganda Nile Basin Reforestation Project No.4” (hereinafter called “the project”) on 24 March, 2006.

The validation serves as design verification and is a requirement for all CDM projects. The purpose of a validation is to have an independent third party assess the project design. In particular, the project’s baseline, the monitoring plan (MP), and the project’s compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria.

Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of temporary or long-term certified emission reductions (tCERs/ICERs).

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

### 1.2. Scope

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, sections A to F of the CDM modalities and procedures as agreed in the Marrakech Accords, the modalities and procedures for A/R project activities under CDM as agreed at COP 9, the simplified modalities and procedures for small-scale A/R project activities under the CDM as agreed at COP 10 and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology. The validation team has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of t/ICERs.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

The validation was conducted by the following validation team through the assessment of the PDD and the additional documents listed in the Chapter 6 “References”, also by the interviews with persons listed in the same Chapter.

The result of validation team activity was reviewed by the internal verifiers.

#### Validation Team

Teruo FUKUDA	JACO CDM	Team Leader
Osamu KOBAYASHI	JACO CDM	Team Member

#### Technical Expert

Makino YAMADA	Japan Overseas Plantation Center for Pulpwood
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#### Internal Verifiers

Yoshihiro OTSUKA	JACO CDM Lead Auditor
Shigekazu OKA	JACO CDM Lead Auditor
Noriyuki KOBAYASHI	Professor of Law School of Nihon University, Technical Advisor to JACO CDM for AR project

### 1.3. Project Description

The small-scale CDM A/R project “Uganda Nile Basin Reforestation Project No.4” is a part of a project cluster of 5 similar projects aiming to provide a new financing mechanism to overcome the current barriers to establish timber plantations in Uganda and to allow

communities to benefit from the CDM. In total the project activities cover an area of 347.1 ha within Rwoho Central Forest Reserve (NFA (National Forestry Authority) planting area: 324.9 ha (94 %), community planting area: 22.2 ha (6 %)).

In the project the NFA is the main investor being responsible for 94 % of the investor shares and proportional area. The Co-investors are community groups, like the Rwoho Environmental Conservation and Protection Association (RECPA), with currently 250 members that are interested in tree planting. Many of the members already have a track record planting trees. The community group will manage the remaining 6 % of the project area.

The community group will receive the payments for each tCO<sub>2</sub> sequestered at a price stipulated in the Emission Reductions Purchase Agreement between the buyer and the NFA. Detailed rights and responsibilities are regulated in Community Forest Management Agreements and a Tree Farming License. The NFA will provide seedlings and technical advice to the community group. In return the community group will be in charge to protect the plantations from fire and the remaining patches of natural forests.

NFA has all rights, titles and interest to the emission reductions produced by the community group. The Community group will be paid for the carbon sequestered by the NFA up-on delivery, but the NFA will maintain overall responsibility for the project implementation and delivery of the emission reductions.

The project was planned as a CDM project as described in the Forest Management Plan for BUGAMBA AND RWOHO Central Forest Reserve for the period 2006-2026 which was published in the beginning of 2006 by NFA. (/6/)

## 2. METHODOLOGY

The validation consists of the following three phases:

- I a desk review of the project design documentation
- II follow-up interviews with project stakeholders
- III resolution of outstanding issues and the issuance of the final validation report and opinion.

In order to ensure transparency, a validation protocol was customized for the project, according to the Validation and Verification Manual (version 01.2). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in Figure 1.

The validation protocol is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfillment of validation protocol criteria or where a risk to the fulfillment of project objectives is identified. Corrective Action Requests (CAR) are issued, if one of following occurs:

- i) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- ii) The CDM requirements have not been met;
- iii) There is a risk that emission reductions cannot be monitored or calculated.

The validation team may raise a Clarification Request (CL), if:

- iv) Information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

The validation team may also raise a Forward Action Request (FAR) to highlight issues related to project implementation that require review during the first verification of the project activity. FARs do not relate to the CDM requirements for registration.

<b>validation Protocol Table 1: Mandatory Requirements</b>			
<b>Requirement</b>	<b>Reference</b>	<b>Conclusion</b>	<b>Cross reference</b>
<i>The requirements the project must meet.</i>	<i>Gives reference to the legislation or agreement where the requirement is found.</i>	<i>This is either acceptable based on evidence provided (OK), or a <b>Corrective Action Request (CAR)</b> of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Validation report.</i>	<i>Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.</i>

<b>Validation Protocol Table 2: Requirement checklist</b>				
<b>Checklist Question</b>	<b>Reference</b>	<b>Means of verification (MoV)</b>	<b>Comment</b>	<b>Draft and/or Final Conclusion</b>
<i>The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.</i>	<i>This is either acceptable based on evidence provided (OK), or a <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>Clarification</b> is used when the validation team has identified a need for further clarification.</i>

<b>Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests</b>			
<b>Draft report clarifications and corrective action requests</b>	<b>Ref. to checklist question in table 2</b>	<b>Summary of project owner response</b>	<b>Validation conclusion</b>
<i>If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.</i>	<i>The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.</i>	<i>This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".</i>

**Figure 1 Validation protocol tables**

## 2.1. Review of Documents

The Project Design Document submitted by the World Bank and additional background documents related to the project design and baseline were reviewed.

Documents reviewed are listed in Chapter 6 "References".

In November 2006, the validation team was provided with the PDD version 04 dated 15 October 2006 and in March 2008, the validation team was provided with the PDD version 05 dated 13 March 2008.

The version 05 was made publicly available for GSP during 24 October to 22 November, 2008.

At the on-site assessment of March, 2007 the version 05 was not yet available, the assessment was conducted based on the PDD version 04. (/1a/) However the boundary condition, areas, species, local communities and GIS information of the version 04 are the same as those of the version 05. (/1b/)

Therefore, the validation findings stated hereafter are based on the PDD version 05, dated 13 March, 2008.

PDD version 6 was provided reflecting the changes of PDD form to CDM-SSC-AR-PDD/Version 02 and Methodology changes to AR-AMS0001/Version 05. (/1c/)

Final PDD version is 07 dated 21 October 2010. (/1d/)

## 2.2. Follow-up Interviews

In the period of 5 March, 2007 to 9 March, 2007, JACO CDM performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. DNA of Uganda, representatives of NFA (National Forestry Authority) head-office, NFA staff at project site and representative of the community were interviewed. The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organisation	Interview topics
DNA	<ul style="list-style-type: none"> <li>➤ Situation of the DNA's approval of the Project</li> <li>➤ Low-income communities and individuals</li> <li>➤ Authorization of project participants</li> <li>➤ Public funding</li> <li>➤ Sustainable development policy</li> <li>➤ EIA and socio-economic impacts</li> </ul>
NFA (Project participant)	<ul style="list-style-type: none"> <li>➤ Project overview</li> <li>➤ PDD                             <ul style="list-style-type: none"> <li>- General (incl. Definition of Forest, Boundary, Project Participants, Community, Public funding, etc.)</li> <li>- Baseline</li> <li>- Monitoring Methodology</li> <li>- GHG removal</li> <li>- Environmental Impacts</li> <li>- Socio-economic Impacts</li> <li>- Stakeholders comments</li> </ul> </li> <li>➤ Schedule</li> </ul>
Community	<ul style="list-style-type: none"> <li>➤ Organization and Activity</li> <li>➤ Relation with NFA</li> <li>➤ Purpose and expecting benefits</li> <li>➤ Information about the historical land-use of the project-site</li> </ul>
World Bank	<ul style="list-style-type: none"> <li>➤ Project overview</li> </ul>



## 2.3. Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarification and any other outstanding issues which needed to be clarified for JACO CDM's positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by JACO CDM were resolved during communications between the Client and JACO CDM.

To guarantee the transparency of the validation process, the concerns raised and responses given are summarized in chapter 3 below and documented in more detail in the validation protocol in Appendix A.

Since modifications to the Project design document were necessary to resolve JACO CDM's concerns, the Client decided to revise the documentation. After revised PDD was submitted and reviewed, JACO CDM issued the final validation report and opinion.

## 2.4. Internal Quality Control and Assurance

The draft validation report including the initial validation findings underwent a technical review before submitted to the project participants. The final validation report underwent the assessment by JACO CDM's Certification Determination Committee to ensure independence, impartiality, transparency, credibility and indiscrimination of assessments.

Two-third of the committee members are selected from outside of JACO CDM.

## 3. VALIDATION FINDINGS

In the following sections the findings of the validation are stated. The validation findings for each validation subject are presented as follows:

- 1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Validation Protocol in Appendix A.
- 2) Where JACO CDM had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A.  
The validation of the Project resulted in 3 Corrective Action Requests, 7 Clarifications.
- 3) Where Clarification or Corrective Action Requests have been issued, the exchanges between the Client and JACO CDM to resolve these Clarification or Corrective Action Requests are summarised.
- 4) The conclusions for each validation subject are presented.

The validation findings relate to the project design as documented and described in the original project design documentation.

### 3.1. Participation Requirements

#### 3.1.1. Discussion

In the PDD version 05, it is indicated that Italy participated as an Annex I project participant. For each project participant, the authorization is required by the Party in which the entity is a legal entity.

Rwoho Environmental Conservation and Protection Association (RECPA) and other community groups are not project participants but developed or implemented the project as low-income communities as determined by the host Party as shown in a written declaration of NFA. (Annex 3 of the PDD)

The host Party, Uganda has ratified the Kyoto Protocol and installed a designated national authority (DNA). The letter of approval from DNA for Uganda is to be provided which confirms the voluntary participation of the project participant of Uganda, contribution of the Project to the sustainable development of the country and authorizes the NFA (National Forestry Authority) as a project participant. (**CAR 1, CL 2**)

Via the World Bank (project participant) the letter of approval of DNA of Italy was provided which states that Italy ratified the Kyoto Protocol and approves the voluntary participation of Italy and authorizes the voluntary participation of the International Bank for Reconstruction and Development as the Trustee for the BioCarbon Fund as a project participant. (/5/) Also, as a Party directly involved in the project, the Government of Italy authorizes the participation of the Ministry for the Environment, Land and Sea as a Project Participant. (/5b/) The LoA was given directly from the PP and the validation team does not doubt the authenticity of the LoA of Italy.

### **3.1.2. Findings**

#### **Corrective Action Request 1**

- (1) The project should have the written approval as the CDM project from the DNA of Uganda.
- (2) PP of Uganda should have the written approval of voluntary participation from the DNA of Uganda.
- (3) PP of Uganda should have the authorization by the DNA of Uganda.
- (4) There is an inconsistency in the name of project participants in Uganda LoA. In the LoA, in one part, the project participant of Uganda (NFA) is indicated as "National Forest Authority" and in the other part it is indicated as "National Forestry Authority".

#### **Response:**

- (1) The letter of approval (LoA) of voluntary participation by DNA of Uganda dated March, 2010 was provided via the World Bank (project participant). The validation team does not have doubts the authenticity of the LoA.
- (2), (3) The LoA indicates that the NFA (National Forestry Authority, PP of Uganda) have the written approval of voluntary participation to the proposed project and the authorization by the DNA of Uganda. The LoA also indicates that the project contributes to sustainable development in Uganda.
- (4) A supplementary letter from DNA of Uganda "CORRECTION OF SPELLING ERROR WITH RESPECT TO THE NAME OF NATIONAL FORESTRY AUTHORITY (NFA) ON LETTERS OF APPROVAL ---"(/28/) was provided. In the letter it is explained that the correct name of the project participant of Uganda (NFA) is "National Forestry Authority".

#### **Clarification Request 1:**

PDD version No. and the date are to be clearly indicated.

#### **Response:**

- (1) –(3): PDD was revised. The PDD for GSP is version 05 dated 13 March, 2008 and the final revised PDD is version 07 dated 21 October, 2010.

#### **Clarification Request 2:**

The confirmation for the project concerning the sustainable development is required.

#### **Response:**

The above LoA also states that the proposed CDM project contributes to sustainable development in Uganda.

### **3.1.3. Conclusion**

CAR 1: The letter of approval (LoA) of voluntary participation by DNA of Uganda dated 01 March, 2010 was provided via the World Bank (project participant).

The name of the PP in Uganda is clarified.

In addition to that, the letter by the DNA of Uganda “correction of the spelling of NFA” regarding the Uganda LoA addressed to the president of JACO CDM was provided to the validation team. The validation team does not doubt the authenticity of the LoA of Uganda. (/28a/)

CAR 1 was resolved.

CL1 was clarified, PDD was revised.

CL2 was clarified.

The project complies with the requirements.

## 3.2 Project Design

### 3.2.1 Discussion

#### (1) General Description

This small-scale AR CDM project titled “Uganda Nile Basin Reforestation Project No.4” aims to expand its wood resources substantially to meet the growing demand of wood products and to reduce the strong pressure on the remaining natural forests. This project is part of a project cluster of 5 similar projects as explained before in section 1.3.

The project area is part of the Rwoho Central Forest Reserve (CFR), located in Mbarara (Rwampara county), Isingiro (Isingiro county) and Ntungamo (Ruhama county) districts.

Land tenure is with the Government of Uganda.

The area of the project No.4 is 347.1 ha and the coordinates of the Project No.4 is as follows.

	Easting	Northing
Project No.4	230,724.95	9,901,267.50
	234,322.00	9,904,001.51

Projection:

UTM Zone 36 S (central Meridian E 33)

Datum (Spheroid) = WGS84 (or ARC 1960)

Scale: 0.9996

False Easting = 500,000

False Northing= 0

By the on-site assessment, the validation team confirmed that the area is suitably calculated by NFA using GIS (/45/) and also confirmed by sample measurements using GPS that the project boundary is correctly delineated. It was confirmed that the area is consistent to the area indicated in TARASM (/2/).

Rwoho CFR is categorized as a secondary conservation forest in the National Forestry Nature Conservation Master Plan. NFA checked the biodiversity aspect of the project using the checklist of CCB (Climate, Community & Biodiversity) standard.

There are no red-list species in the area.

As for Public Funding, the NFA will use revenues from licensing of their forests to finance the project. Therefore, the project do not results in a diversion of ODA.

As for the PDD format, Version 02 for CDM-SSC-AR came into effect at EB 35 (Oct. 2007) and it is applied to the PDD version05.

#### (2) Eligibility of Land

The eligibility of land was assessed based on the Decision 16/ CMP.1, Annex § 1. (c) and the decision of EB 35 Annex 18. (/36/)

Based on satellite images, the area that was non-forested since 31.12.1989 and hence being eligible for the proposed A/R CDM project activity has been delineated. Areas currently forested or which have been forest after the 31.12.1989 are excluded from the A/R CDM project activity using GIS information.

In addition to 1992 SPOT XS images, 1984 Landsat images and 2004 Landsat images were used to confirm that the land was not a forest from 31 Dec. 1989 to Aug. 1992.

Above process was demonstrated using GIS image processing at NFA office during on-site assessment that the areas were classified into categories as described in PDD Annex 5.

Also, as described in the discussion of 3.3.1 (b) below, the project area is highly degraded area and not temporally unstocked land.

### (3) Small Scale Project Activity

The eligibility of the project as a small scale AR CDM project was discussed based on the decision 19/CP.9, Decision 6/CMP.1 and its Appendix C.

According to the PDD (Version 05), average net GHG removals are 24,421 tCO<sub>2</sub>-e / 5 years from 2008 to 2012 and 59,306 tCO<sub>2</sub>-e / 10 years from 2008 to 2017. Annual GHG removals are calculated as 4,884 tCO<sub>2</sub>-e and 5,930 tCO<sub>2</sub>-e, respectively, and these values are less than 16,000 tCO<sub>2</sub>-e per year. In the revised PDD (Version 07) average net GHG removals are 9,020 tCO<sub>2</sub>-e / 5 years from 2008 to 2012 and 34,841 tCO<sub>2</sub>-e / 10 years from 2008 to 2017. Annual GHG removals are calculated as 1,804 tCO<sub>2</sub>-e and 3,484 tCO<sub>2</sub>-e, respectively, and these values are also less than 16,000 tCO<sub>2</sub>-e per year (limit for small-scale AR project activities).

PDD.A.12 states that 5 similar projects including this project (No.4) are more than 1km apart from each other.

The minimum distances between the projects were checked and indicated in the table A-6 "Closest points between individual projects demonstrating a minimum of 1 km between projects" and also illustrated in Annex 6 of the PDD.

Therefore, it was concluded that the project is not a debundled component of a larger project.

It was discussed whether the project is developed or implemented by low-income communities and individuals as determined by the host Party. A written declaration is attached as Annex 3 to the PDD.

### (4) Technology

A technical description of the project is included in the PDD.

Within the project 347.1 ha of timber plantations will be established. Pine and mixed native tree species plantations will be established in a block design in degraded grassland areas. The plantation area will be stocked with 75 % *Pinus caribaea*, an already introduced and tested species in the area, 20 % *Maesopsis eminii* and 5 % *Prunus africana*. However, after an analysis of the project site growth conditions was conducted the latter two species were dropped from the afforestation plan in favour of *Pinus Caribaea*. *Pinus caribaea* will be managed on a 22 years rotation cycle or until the target diameter is reached, i.e. 45 cm.

The carbon pools are above and below ground biomass. This is in accordance with the AR-AMS0001 version 05.

In Uganda, DNA has defined forests as land as follows.

- A single minimum tree crown cover value of 30%
- A single Minimum land area value of 1 hectare
- A single minimum tree height value of 5m

An approach to addressing the issue of non permanence of afforestation and reforestation activities under CDM has been chosen as tCERs in line with the modalities and procedures.

As for the practical technology for reforestation, SPGS (Sawlog Production Grant Scheme) guidelines was developed.

### (5) Contribution to sustainable development

Relevant legislation of Uganda was checked. (CL2 (ref. 3.1))

### (6) Duration of the project

Operational lifetime is 60 years and the crediting period is 20 years renewable. Project starting date is the start of planting trees and April 1, 2008. (CL 3)

(7) Training:

NFA staff and contractors will be trained to implement the forest management plan and the activities mentioned in the PDD. Details on the training program are outlined in the forest management plan and in the annual NFA plan of operation. (/6/)

### **Clarification Request 3**

The evidence of the starting date is to be provided.

### **Response:**

As examples of evidences for the starting date, contract document for planting work in May, 2008 between local workers and NFA regarding lining and pitting work for planting in the area for Block 4 and including payment certificate were provided. (/27/)

### **3.2.3. Conclusion**

The validation team confirmed that the project description including boundary of the project, eligibility of land, scale and technology indicated in the PDD is appropriate.

Also it is confirmed by the project plan and by a part of evidences that the project start date of 01 April, 2008 in the PDD is appropriate.

CL 3 was clarified.

The project complies with the requirements.

## **3.3. Baseline and Monitoring Methodology**

### **3.3.1. Discussion**

(1) Baseline methodology: Applicability of AR-AMS0001 version 05

- The validation team confirmed that the project area is degraded grasslands.
- The displaced grazing animals are less than 50% as indicated in the discussion below (5).
- No ploughing will be done as stated in B.2 of the PDD and the soil disturbance area is less than 10% of the total surface project area as a result of soil preparation for planting.
- Carbon pools are above- and below- ground tree and woody perennial biomass and below-ground biomass of grasslands.

By the document review (/13/) and on-site assessment, the validation team confirmed above and concluded that the AR-AMS0001 version 05 is applicable to the project activity.

(2) Additionality

The project applied the AR-AMS0001 version 05 approved by the Executive Board. As for the additionality of the project, following barriers are demonstrated in the PDD according to the AR-AMS0001 Version 05 Appendix B.

Investment barriers, Institutional barriers, barriers due to prevailing practice, Barriers due to local ecological conditions and Barriers due to social conditions.

According to the PDD, B.7, investment barriers, institutional barriers, barriers due to prevailing practice, barriers due to local ecological conditions and barriers due to social conditions are explained.

Through the document review and interviews to DNA of Uganda and project participants, the validation team identified that there are established regulations for reforestation and the risks relation to changes in government policies are unlikely, therefore, Institutional barriers are not considered as barriers. Also, in Uganda, there have been reforestation projects supported by above EU SPGS, therefore, the technological barriers are not applied.

- Investment barriers:

The validation team confirmed that existing reforestation projects in Uganda have been using the EU Sawlog Production Grant Scheme (SPGS) but this Sawlog Production Grant Scheme had been used-up by the time of the planning of the Uganda Nile Basin Reforestation Project No.1-5.

Also, the validation team confirmed that Bank in Uganda such as Bank of Uganda has not been interested in financing forestry. (/18/)

In addition to above, the validation team was provided with IRR calculation sheet for reference and it was confirmed that the FIRR for 5 small AR projects<sup>1</sup> including No.4 is 13.6 % (without carbon credits) and FIRR with carbon credits is 14.7 % (USD 3\$/tCO<sub>2</sub>e, tCO<sub>2</sub> have been risk reduced by 25%). (/3/)

On the other hand, the capital costs in Uganda, alternative investments potentially yield higher IRR to forestry projects such as below. (/26/)

- Treasury Bills in UGX (Uganda shilling) from the Government of Uganda: 15%
- Agricultural activities like maize in 2004: 24% IRR
- Fish farming: 20% IRR

As explained in 3.2.1 (4), tree species were changed from the original plan whose species are 75% *Pinus caribaea*, 20% *Maesopsis eminii* and 5% *Prunus Africana* to 100% *Pinus caribaea*.

However, the IRR is not affected by this change, because the the forest management plan which is the base of IRR calculation shows that the revenue is calculated by the total timber volume irrespective of species. (/6/)

- Barriers due to prevailing practice:

The proposed project is among the first CDM AR project group in Uganda, the first CDM AR project group approved by the DNA of Uganda which aims to support private and community investors to replicate the approach. Also the proposed project group is aiming the reforestation of the degraded land partially (community planting area) by native species.

Considering these conditions, Investment barriers and the barriers due to prevailing practice are major barriers to establish the additionality.

### (3) Baseline determination

The grassland of the project is the human induced fire-climax vegetation. According to the National Biomass Study report (NBS reports) of 2002, the biomass is decreasing in woodland, bush land and grassland. Reference information to NBS report shows that there has been a general biomass decline in areas near Rwoho in the last 5 to 8 years. (/13/)

Based on these information and interviews to the villagers, validation team concluded that significant changes in the carbon stocks within the project boundary would not have occurred in the absence of the project activity.

In this condition, the baseline carbon stock in the carbons pools is taken as constant at the level of the existing carbon stock measured at the start of the project activity.

Baseline calculation formula is in line with AR-AMS0001 version 05.

Mgrass and Mwoody: based on the National Biomass Study and its back data were used. (/13/, /15/)

Mgrass (measurement by sample plot (Grass + Forbs): 0.84 t/ha

Mwoody (National Biomass Study report and sample plot): 0.23 t/ha

Rgrass and Rwoody are not available in Uganda and IPCC default values are used.

Rgrass = 1.6 (IPCC GPG LULUCF, Table 3.4.3, value for Sub-tropical/ tropical grassland)

Rwoody = 0.42 (IPCC GPG for LULUCF, Table 3A 1.8, Secondary tropical/ Sub-tropical forest)

### (4) Prior consideration of CDM

The starting date of the proposed project is 1 April, 2008 (Existing project activity as per EB 49, Annex 22). The PDD has been published for global stakeholder consultation (GSC) on 24 October, 2008 after project activity start date.

<sup>1</sup> The proposed project is No.4 among similar 5 small scale AR projects "Uganda Nile Basin Reforestation Project No.1-5".

As described in section A.2 of the PDD, the proposed project is a part of a project cluster of 5 similar projects aiming to provide a new financing mechanism to overcome the current barriers to establish timber plantations in Uganda and to allow communities to benefit from the CDM.

The validation team confirmed that documents below indicate that awareness of the CDM prior to the project start date and the benefits of the CDM were a decisive factor in the decision to proceed with the project.

- The World Bank, the Carbon Finance Unit, invited a tender to perform the validation of above 5 small scale projects based the Carbon Finance Document for Land-use Change and Forestry (LULUCF) Projects "Uganda Nile Basin Watershed Reforestation Project" dated 04 May, 2005. (/26/)
- JACO CDM has been ordered the validation of the project on 24 March, 2006 by the World Bank.
- "Forest Management Plan for BGAMBA AND RWOHO, CFR for the period 2006-2026, by NFA, 2006 (/6/) states that the benefits of the CDM were a decisive factor of the project.

The validation team confirmed that documents below indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation.

- ERPA was agreed between NFA and IBRD, the World Bank on 30 June, 2006.
- The LoA of Italy dated 20 February, 2007 was given to PP. (/5a/)

Therefore, the procedures comply with the requirements of EB 49, Annex 22.

#### (4) Monitoring methodology

The selected monitoring methodology is AR-AMS0001 version 05.

For all tree species of the project, the values of BEF, R, WD and their data source (Table No. and corresponding rows and columns of IPCC GPG.) are identified.

#### (5) Monitoring of the actual net GHG removals

In the calculation of the monitoring, option 2 for step 3 of AR-AMS0001 / Version 05 is selected.

In this case the default value for BEF (biomass expansion factor) proposed by IPCC good practice guidance for LULUCF is used.

The monitoring plan (PDD B.8.1 and Appendix 8) indicate the monitoring plan for the collection and archiving of all relevant data necessary for estimation or measuring the actual net GHG removals by sinks during the crediting period. The monitoring plan shows the monitoring of overall performance, management, actual GHG removals by sinks, QA/QC, environmental and socio-economic impacts in accordance with the format of CDM-SSC-AR-PDD.

The monitoring data and frequency of PDD B.8.1 are in accordance with the methodology AR-AMS0001 version 05.

Timber production cycle is 22 years or until the target diameter is reached 45cm as described in PDD A.5. The monitoring will be conducted with 5 years interval, therefore, there is no systematic coincidence of verification and peaks in carbon stocks.

(ref. VVM version 01.2 §156-158)

The sample size and number of plots are planned as 400m<sup>2</sup> for every 25ha (Annex 8) and 14. The number of plots will be increased with the minimum precision target of  $\pm 10\%$  at a 95% confidence level. The validation team confirmed this is in accordance with the methodology AR-AMS0001 version 05 and appropriate.

#### (6) Monitoring of leakage

The project area is located within the Rwoho CFR and the land tenure is with the Government of Uganda. There are no people and no agricultural activities in the project areas. Therefore, no people and no agricultural production activities will be displaced. (PDD C.3)

Also, the grazing assessment in the PDD shows that the average grazing is below 10% and this indicates that there is no leakage due to grazing.

The biomass (grass) density of the project area and also the surrounding area is 4.0<sup>1</sup> tCO<sub>2</sub>/ha and very low compared with the average biomass density of 11.4 tCO<sub>2</sub>/ha for tropical moist grasslands. (Ref. Table 3.4.2 of IPCC GPG LULUCF)

This indicates that the project area as well as the surrounding area is highly degraded. Taking into account these conditions, the leakage can be considered insignificant.

In this condition, a leakage estimation is not required due to AR-AMS0001 version 05 and also, the monitoring of leakage is not required due to Decision 6/CMP.1 §23 (c).

### 3.3.2. Findings

#### **Corrective Action Request 2**

Version No. of the baseline and monitoring methodology AR-AMS0001 is to be revised to the version 05.

#### **Response:**

In the revised PDD the version number of the baseline and monitoring methodology was revised to the version 05.

#### **Clarification Request 4**

- (1) The method of estimating the available grazing area (PDD C.3.) is to be explained, especially sharing of the area among the 5 projects and how the area 10000ha is allocated to the Project No.4.
- (2) The leakage calculation due to grazing is to be explained in detail.

#### **Response:**

- (1) The available grazing area for the Project was estimated by map surrounding the project area.
- (2) Based on the enumeration and available grazing area for No.4 project, the animal/ ha is  $665/10000 = 0.0665$   
Animals generally spend 14 hours/ day in the reserve. (58% of a day)  
Therefore average time animal/ ha is  $0.0665 \times 0.58 = 0.0386$ .  
Based on the estimate of the average grazing capacity as 0.5 (head/ha), the ratio of the average time animal/ha to grazing capacity is  $0.0772 \approx 8\%$   
Therefore, the displacement of the grazing animals due to the project activity is 8 % and less than 10%.  
The description of the PDD was revised.

#### **Clarification Request 5**

- (1) According to the back data given by NFA, the dry matter t/ha of Grass is 0.84 t/ha and not 0.59. Please explain the difference. (/15/)
- (2) Below ground biomass is indicated in Table B-3 of the PDD as 0.08 tC/ha. How was this value derived? (Below ground biomass is above ground biomass multiplied by Rgrass (1.6).)
- (3) In the table B-3 of the PDD version 05 for the project No.4, the scattered trees are taken into account in baseline calculation. On the other hand in case of the registered project No.3 (UNFCCC ref. 1578) whose site condition is similar to that of the project No.4, the scattered trees are not taken into account in the baseline calculation. The reason why scattered trees are taken into account in the baseline calculation of No.4 project is to be explained.

#### **Response:**

- (1) 0.59 is error and 0.84 is correct. The PDD was revised.
- (2) 0.08 is error and the correct data is 0.67 tC/ha.  
( $0.84/2 \times 1.6 = 0.67$  tC/ha, R = 1.6)  
The PDD was revised

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<sup>1</sup> above ground biomass = 0.84 tdm/ha = 0.42 tC/ha

(above ground biomass) + (below ground biomass) =  $0.42 + 1.6 \times 0.42 = 1.09$  tC/ha =  $1.09 \times 44/12$  tCO<sub>2</sub>/ha = 4.0 tCO<sub>2</sub>/ha



- (3) The scattered trees are not part of the project area. The conditions are the same as project No.3. The table B-3 of the project No.4 PDD is revised.

### **Clarification Request 6**

1) It is to be clarified whether the same BEF, WD and R as ex-ante estimate are applied to the ex-post estimate.

### **Response**

The same BEF, WD and R will be used in the ex-post calculation.

### **3.3.3. Conclusion**

Validation team concluded followings.

CAR 2 was resolved.

CL 4 was clarified.

CL 5 (1) (2) (3) was clarified.

It was confirmed that the parameters for baseline biomass indicated in the table B-3 for the project No.4 is revised and they are the same as those of the registered project No.3. The revision is reflecting the site condition and appropriate.

CL 6 was clarified.

Investment barriers and the barriers due to prevailing practice are major barriers to establish the additionality.

The project complies with the requirements.

### **3.4. Estimate of Removals**

#### **3.4.1. Discussion**

The calculation formula of the PDD is based on the formula of AR-AMS0001 version 05. As for Caribbean Pine (*Pinus caribaea*), the yield model for Caribbean Pine in Uganda is used. (1/1) The calculation of carbon sequestration is made by the calculation method developed by BioCarbon Fund with above yield model. (1/2)

Based on above documents, following expansion factor (BEF), R and wood density (WD) data were applied.

BEF: IPCC LULUCF GPG, Table 3A.1.10

R: IPCC LULUCF GPG, Table 3A.1.8

WD: IPCC LULUCF GPG, Table 3A.1.9-2 and local data from various sources such as NBS, data of Uganda Timbers, etc.

Note:

For Pines:

BEF=1.32, R=0.3, WD=0.45

The data are adjusted by local expert judgment.

Yield calculation is based on the "Forest management Plan for BUGAMBA AND RWOHO" by NFA, 2006, in terms of thinning, pruning and assumption of survival rate 90% and density index 75%.

22 years rotation is used for *Pinus caribaea*.

As for the uncertainties in the GHG removals, it is based on conservative estimates which will be assessed during the GHG monitoring.

#### **3.4.2. Findings**

### **Corrective Action Request 3**

In the PDD C.4, explanation about the calculation for "Actual net GHG removals by sinks" is missing.

The calculation is to be transparent in accordance with the methodology. (ref. AR-AMS0001 version 05 p5/29)

## **Response:**

The calculation method was added to the PDD C.4 in accordance with AR-AMS0001 version 05.

## **Clarification Request 7**

Method for estimating the actual net GHG removals by sinks is to be clearly indicated.

## **Response:**

The accounting methodology is provided in the TARAM tool<sup>1</sup> and PDD is revised.

### **3.4.3. Conclusion**

CAR 3 was resolved.

CL 7: The validation team confirmed the GHG removals by sinks are properly calculated using the TARAM tool under the conditions of table 2 below.

**Table 2: Comparison of calculation in PDD version 05 and version 07**

		Version 05	Version 07
Baseline removals		$-9.63 \times 347.1\text{ha} = -3343$	$-3.05 \times 347.1\text{ha} = -1058.7^{(*)1}$
Tree Species		Pine, Maesopsis, Prunus	Pine
Yield model		Pine: by Adler et. Al (/11/) Maesopsis, Prunus: by Buchholtz (/12/)	Pine: by Adler et. Al (/11/)
Parameters	WD	Pine: 0.45 Maesopsis, Prunus: 0.5	Pine: 0.45
	BEF	Pine: 1.32 Maesopsis, Prunus: 1.4	Pine: 1.32
	R	Pine: 0.25 Maesopsis, Prunus: 0.2	Pine: 0.25
Planting plan		2007: site preparation 2008: planting of 347.1ha	Actual planting plan <sup>(*)2</sup>
Risk buffer		No buffer is considered.	25% buffer is considered.
Annual average GHG removals over the crediting period		5,561 tCO <sub>2</sub>	3969 tCO <sub>2</sub>

(\*)1: Refer to CL5 above.

(\*)2: 47.07 ha (2008) + 1.33 ha (2009) + 68.94 ha (2010) + 229.76 ha (2011) = 347.1ha

By above assessment, the validation team concluded that the GHG removals calculation of table A-5 and C-2 of PDD version 07 is realistic and appropriate.

The project complies with the requirements.

## **3.5. Environmental Impacts**

### **3.5.1. Discussion**

National Environment Management Authority (NEMA) approved the Rwoho and Bugamba Forest Management Plan proposed by NFA. In the letter of approval, NEMA is requesting to ensure followings points. (/8/)

“Minimizing loss of biological diversity, controlling the likely impacts of soil erosion, restoration of degraded hilly areas, collaborative forest management with local communities and training of the communities, annual audit reports to authorities, etc.”

The project is implemented in line with this condition.

### **3.5.2. Findings**

<sup>1</sup> TARAM: Tool for Afforestation and Reforestation Approved Methodologies

None

### 3.5.3. Conclusion

The project complies with the requirements.

## 3.6 Socio-Economic Impacts

### 3.6.1. Discussion

A socio-economic assessment was carried out by the NFA in the framework of the feasibility study. According to the summary of the socio-economic assessment contained in the EIS (Environment Impact Statement) and CCB standard checklist, there are several points to be improved such as needs for intensifying socio-economic analysis and work risk mitigation plan. However, considering that the project is small scale and based on the interview results to villagers, it is assumed that there is no substantial negative socio-economic impact by the project.

At the on-site assessment, validation team found that many community members are expecting various benefit to their life from the project. A few villagers expressed their concerns about the possibility of loss of access to some forest products such as firewood, etc. but they, on the other hand, expressed that such loss is limited and the situation will be much better in the long run, and also expressed their expectations for the project of providing new employment.

### 3.6.2. Findings

None

### 3.6.3. Conclusion

The project complies with the requirements.

## 3.7 Comments by Local Stakeholders

### 3.7.1. Discussion

In March 2005 meetings have been conducted by NFA in different villages to explain the purpose of the project and to receive information on the livelihood.

Follow-up stakeholder meetings have been conducted from June 2005 to March 2006 with all communities living near the 5 small-scale project sites.

The latter have been organized by RECPA.

In addition to that, RECPA conducted awareness raising meetings in all parishes close to the 5 small-scale projects sites to inform farmers about the project and to invite them to participate in the project.

There is no specific legislation for the stakeholder consultation process but the stakeholder comments are invited as part of EIA process.

The validation team confirmed the extract of the stakeholders' (farmers) comments in the project areas.

All comments are favorable to the project. (/23/)

### 3.7.2. Findings

None

### 3.7.3. Conclusion

The project complies with the requirements.

## 4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

JACO CDM published the PDD version 05 (/1b/) on its website linked with UNFCCC web site on 24 October, 2008 and invited comments until 22 November, 2008 by Parties, stakeholders and non-governmental organizations. No comments were received.

## 5. VALIDATION OPINION

JACO CDM has performed a validation of the “Uganda Nile Basin Reforestation Project No.4” in Uganda. The validation was performed on the basis of UNFCCC criteria for small-scale A/R project activities under the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. The review of the project design documentation and the subsequent follow-up interviews have provided JACO CDM with sufficient evidence to determine the fulfilment of stated criteria.

The host country of the project is Uganda. Uganda fulfils the participation criteria and has approved the project and authorized the project participants. The DNA of Uganda confirmed that the project assists in achieving sustainable development.

The project correctly applies AR-AMS0001 “Revised simplified baseline and monitoring methodologies for selected small-scale afforestation and reforestation project activities under the clean development mechanism” version 05.

CO<sub>2</sub> will be sequestered from the atmosphere and stored in biomass following the reforestation of grass land through tree planting. The project results in net anthropogenic removals of CO<sub>2</sub> that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Net anthropogenic removals attributable to the project are hence additional to any that would occur in the absence of the project activity.

Total net removals from the project are estimated to be on average of 3969 tCO<sub>2</sub> per year over the selected 20 year crediting period. The net anthropogenic removal forecast has been checked and is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training and monitoring procedures have been implemented.

In summary, it is JACO CDM’s opinion, that the “Uganda Nile Basin Reforestation Project No.4” in Uganda as described in the PDD version 07 of 21 October, 2010 meets all relevant UNFCCC requirements for A/R project activities under the CDM and all relevant host country criteria and correctly applies the baseline and monitoring methodology AR-AMS0001, version 05.

Hence, JACO CDM requests the registration of the project as a small-scale A/R project activity.

## 6. REFERENCES

### Category 1 Documents:

*Documents provided by the client related directly to the GHG components of the project,*

- /1a/ PDD version 04, 15 October, 2006
- /1b/ PDD version 05, 13 March, 2008 (PDD for GSC)
- /1c/ PDD version 06, 12 December, 2008
- /1d/ PDD version 07, 21 October, 2010 (PDD for request for registration)
- /2/ TARASM for No.4 project (calculation of the rate of sequestration)
- /3/ IRR calculation for LULUCF projects [Uganda Nile Basin Watershed Reforestation Project]
- /4/ Letter of Approval of Voluntary Participation (by DNA of Uganda, March, 2010)
- /5a/ Written Approval for "Uganda Nile Basin Reforestation Project No.4" (DNA of Italy) dated 20 FEB, 2007
- /5b/ Written Approval for "Uganda Nile Basin Reforestation Project No.4" (DNA of Italy) dated 16 February 2011
- /6/ Forest Management Plan for BGAMBA AND RWOHO, CFR for the period 2006-2026, by NFA, 2006
- /7/ Community Forest Management Arrangement Agreement (NFA and RECPA)
- /8/ Approval by NEMA for "Environmental Impact statement for the Proposed RWOHO and Bugamba Forest Management Plan (2006-2026)"
- /9/ "Environmental Impact statement for the Proposed RWOHO and Bugamba Forest Management Plan (2006-2016)"
- /10/ Checklist: Climate, Community & Biodiversity Alliance Standard and Level of Achievement by the NFA Uganda Nile Basin Reforestation Project
- /11/ Yield of Eucalyptus and Caribbean pine in Uganda by D. Adler et al
- /12/ Maesopsis eminii – a challenging timber tree species in Uganda by T. Buchholts, Timm Tennigkeit et al
- /13/ National Biomass Study/ Technical Report / Sept. 2002 by NFA
- /14/ Wood density data and BEF in Uganda (by NFA)
- /15/ Rwoho updated grass data (by NFA)
- /16/ Net biomass growth and removals (by NFA)
- /17/ Explanation for grass and woody perennials biomass calculation (by NFA)
- /18/ Letter of Bank of Uganda on Policy and Practice of financing Long term Forestry Projects (Answer to NFA Request)
- /19/ Letter of Support for the National Forestry Authority RWOHO Project (16 April, 2005, Uganda's National Focal Point for UNFCCC)
- /20/ Bio Carbon Fund Clean Development Mechanism Verified Emission Reductions Purchase Agreement
- /21/ License for 60ha to RECPA in accordance with the Collaborative Forest Management Agreement (20 February, 2007, by NFA)
- /22/ Collaborative Forest Management Plan (Oct. 2006, by RECPA and NFA)
- /23/ Community Response to projects of establishing a CDM\_Afforestation Project in Rwoho CFR, Ntungamo and Mubara District, UGANDA
- /24/ SPGS Plantation Guidelines
- /25/ Where are the Poor? Mapping Patterns of Well-Being in Uganda 1992 & 1999
- /26/ Carbon Finance Document for Land-use Change and Forestry (LULUCF) Projects "Uganda Nile Basin Watershed Reforestation Project", 04 May, 2005
- /27a/ Contract Agreement for planting work in May, 2008 issued by NFA

- /27b/ Certificate of payment for planting in R2
- /28a/ Supplementary letter for the correction of the spelling of NFA dated 11 March 2011.
- /28b/ The National Forestry and Tree Planting Act of 2003

## **Category 2 Documents:**

*Background documents related to the design and/or methodologies employed in the design or other reference documents.*

- /31/ AR-AMS0001/Version05: Revised simplified baseline and monitoring methodologies for selected small-scale afforestation and reforestation project activities under the clean development mechanism
- /32/ Decision 17/CP.7 (Marrakech Accord)
- /33/ 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
- /34/ Decision 6/CMP.1: Simplified modalities and procedures for small-scale afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol and measures to facilitate their implementation
- /35/ Decision 16/CMP.1: Land use, land-use change and forestry
- /36/ UNFCCC, CDM EB35, Annex 18
- /37/ UNFCCC, CDM EB21, §64
- /38/ IPCC Good Practice Guidance for LULUCF, 1996

## **Persons interviewed:**

*Persons interviewed during the validation, or persons contributed with other information that are not included in the documents listed above.*

- /41/ Philip M. Gwage, Secretary for National Climate Change Steering Committee (NCCSC) /Ministry of Water and Environment
- /42/ Timm Tennigkeit, ENCOFOR representative  
UNIQUE forestry consultants GmbH
- /43/ Kai Michael Windhorst, ENCOFOR representative, Global-woods AG
- /44/ Xavier Nyindo Mugumya, Natural forest Mgt. team leader, NFA
- /45/ John Begumana, Ag. Coordinator inventory & surveys, NFA
- /46/ Hope Rwaguma, Ag. Executive director, NFA
- /47/ Paul Buyerah Musamali, Ag. Director CAO (EIA specialist), NFA
- /48/ Tugumisirize Obed, Plantation Development Specialist, NFA
- /49/ Mununuzi David, Plantation Manager, NFA
- /50/ Michael Aboweka, Sector Manager, NFA
- /51/ Asionwe M., Chief, RECPA
- /52/ Byanyhanga F, LCI c/person, RECPA,
- /53/ Bangirama S., LCIII c/person, RECPA
- /54/ Tymo bweine Leon, Secretary, RECPA
- /55/ Turyasingula Zabron, Chairman, KANYWAMAIZI Division Association
- /56/ Mugyeny Charles, Secretary, KANYWAMAIZI Division Association
- /57/ Rushenyana Jeoffely, Chairman, KAGOTO Foundation Development Association
- /58/ Akansasira Patrick, Secretary, KAGOTO Foundation Development Association
- /59/ Allan Amumpe, SPGS Administration Manager

## **APPENDIX A**

### **Small-Scale AR CDM VALIDATION PROTOCOL**

#### **Uganda Nile Basin Reforestation Project No.4**

## SMALL-SCALE AFFORESTATION AND REFORESTATION CDM VALIDATION PROTOCOL (FOR PROJECT NO.4)

### INTRODUCTION

This document contains a generic Validation Protocol for small-scale afforestation and reforestation project activities, which must be seen in conjunction with the Validation and Verification Guidelines and the Validation Report Template.

This validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a project is expected to meet; and
- It ensures a transparent validation process by inducing the validation to document how a particular requirement has been validated and which conclusions have been reached;

This protocol contains two tables with generic requirements for validation projects. Table 1 shows the requirements that the GHG removal project will be validated against. Table 2 consists of a checklist with validation questions related to one or more of the requirements in Table 1. The checklist questions may not be applicable for all investors, and should not be viewed as mandatory for all projects. Where a finding is issued, a corrective action request or clarification request are stated. The resolution and final conclusions of these requests should be described in Table 3 of this protocol.

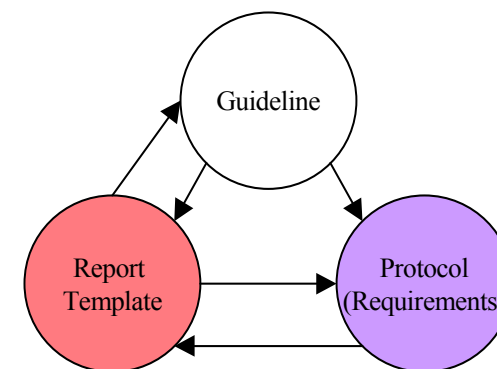
Before this generic validation protocol can be applied to validate a specific project, the validation must review and adjust/amend the protocol to make it applicable to individual project characteristics and circumstances as well as individual investor criteria. The application of the validator's professional judgment and technical expertise should ensure that checklist amendments cover all necessary specific project requirements that have impact on project performance and acceptance of the project. Given the above, the checklist part of the protocol is neither exhaustive nor prescriptive.

Reference:

A/R modalities: Modalities and Procedures for afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol (Annex to Decision 5/CMP.1)

SS A/R modalities: Simplified Modalities and Procedures for small-scale afforestation and reforestation project activities under the clean development mechanism in the first commitment period of the Kyoto Protocol (Annex to Decision 6/CMP.1)

SS A/R Methodologies: Revised simplified baseline and monitoring methodologies for selected small-scale afforestation and reforestation project activities under the clean development mechanism (AR-AMS0001/ version 04)





**Table 1: Mandatory Requirement for Small Scale Clean Development Mechanism (CDM) Project Activities**

Requirement	Reference	Conclusion	Cross Reference / Comment
1. Assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	OK	<b>Table 2, Section A.1.3</b> Annex I Party is Italy
2. Assist non-Annex I Parties in achieving sustainable development and the project has obtained confirmation by the host country that the project assists in achieving sustainable development	Kyoto Protocol Art. 12.2, Marrakech accord 40(a)	<del>CAR-1</del> OK	<b>Table 2, Section A.1, A.5</b> A copy of the approval letter of Host Party was <del>is to be</del> provided.
3. Assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC?	Kyoto Protocol Art. 12.2.	<del>CAR-1</del> OK	<b>Table 2, Section A.1, C.4.1</b>
4. The project has the written approval of voluntary participation from the designated national authorities of each Party involved	Kyoto Protocol Art. 12.5a, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	<del>CAR-1</del> OK	<b>Table 2, Section A. 1.3</b> Approval letter of host Party was provided. LoA of Italy was provided.
5. Private and/or public entities should have the authorization to participate in the CDM by the DNA of the Party in which the entity is a legal entity.	Marrakech accord 33	<del>CAR-1</del> OK	<b>Table 2, Section A.1.3</b> Uganda DNA's authorization for the PP of Uganda was <del>is to be</del> provided.
6. The GHG removals by sink should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	<del>Pending</del> OK	<b>Table 2, Section C.4.1</b>
7. A/R project is additional if the actual net GHG removals by sinks are increased above 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 registered CDM A/R activity	Kyoto Protocol Art. 12.5c, Marrakesh Accords(43), A/R Modalities § 18 SS AR methodologies AR-AMS0001, Appendix B.	OK	<b>Table 2, Section B.2.8, B.2.9.</b>
8. Potential public funding for the project from Parties in Annex I is not a diversion of official development assistance	Marrakech Accords (Decision 17/CP.7)	OK	<b>Table 2, Section A. 1.4</b>
9. Parties participating in the CDM should designate a national authority for the CDM	Marrakesh Accords (CDM modalities§ 29)	OK	DNA of Uganda: Ministry of Water and Environment DNA of Italy: Ministry for the Environment and Territory, Department for Global Environment, International and Regional Conventions
10. The host country and participating Annex I Party are a Party to the Kyoto Protocol	Marrakesh Accords (CDM modalities§ 30)	OK	Uganda and Italy are Parties to the Kyoto Protocol

Requirement	Reference	Conclusion	Cross Reference / Comment
11. The participating Annex I Party's assigned amount should have been calculated and recorded.	CDM Modalities and Procedure §31b	OK	
12. The proposed project activity should meet the eligibility criteria of lands for A/R project activities.	EB22 Annex 16	OK	<b>Table 2, Section A.2.</b>
13. The proposed project activity should meet the eligibility criteria for small scale A/R CDM project activities and should not be a debundled component of a larger project activity.	A/R Modalities, SS A/R modalities	OK	<b>Table 2, Section A.3.1, A.3.2</b> The project was clarified as - not a de-bundled component of a larger project - developed or implemented by low-income communities and individuals determined by the host Party - less than 16,000 tones of CO2
14. The participating Annex I Party should have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedure §31b	OK	
15. A bundle of small-scale A/R project activities satisfies the conditions of bundling and the overall monitoring is appropriate.	SS A/R modalities §14g	N/A	—
16. Project participant has specified the approach proposed to address non-permanence in accordance with § 38 of the A/R modalities.	SS A/R modalities §14e	OK	<b>Table 2, Section A.4.10</b>
17. Information has been provided regarding leakage.	SS A/R modalities §14h	OK	<b>Table 2, Section B.1.3 (d), B.2.6, (B.5), C.2</b>
18. Provisions for monitoring, verification and reporting should be in accordance with the modalities in decision 19/CP.9 that are not replaced by the SS A/R modalities and relevant decisions by the COP/MOP.	SS A/R modalities §14i	OK	<b>Table 2, Section B.3, B.4, (B.5)</b>
19. The host party should have selected and reported to the Executive Board through its designated national authority the minimum values for defining a forest.	A/R modalities §8	OK	It is selected and made public through UNFCCC web site.

Requirement	Reference	Conclusion	Cross Reference / Comment
20. Prior to the submission of the validation report to EB, a written declaration from PP is to be submitted that the proposed small-scale A/R activity is developed or implemented by low income communities and individuals as determined by the host Party.	SS A/R modalities §15(b)	OK	<b>Table 2, Section A.3.1</b> A written declaration from PP is indicated as Annex 3 of the PDD.
21. The project design document should conform with the Small Scale A/R Project Design Document format and the correct version of the PDD format.	Simplified Modalities and Procedures for Small Scale CDM Project Activities, Appendix A	OK	The project design document conforms to the SSC AR project PDD format and its correct version.
22. The proposed project activity should confirm to one of the project types defined for small scale A/R CDM project activities and uses the simplified baseline and monitoring methodology for that project type. (Decision 6/CMP.1, § 4(b), Appendix B) The correct version of the methodology should be applied.	Simplified Modalities and Procedures for Small Scale AR CDM Project Activities, Decision 6/CMP.1	OK	<b>Table 2, Section A.3.3 and B.1</b> The project type is grassland to forest land.
23. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small Scale AR CDM Project Activities, Decision 6/CMP.1 Appendix A	OK	<b>Table 2, Section F</b>
24. Analysis of the environmental impacts is to be documented, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary.	Simplified Modalities and Procedures for Small Scale AR CDM Project Activities, Decision 6/CMP.1 Appendix A	OK	<b>Table 2, Section D</b>
25. Analysis of the socio-economic impacts is to be documented, including impacts outside the project boundary.	Simplified Modalities and Procedures for Small Scale AR CDM Project Activities, Decision 6/CMP.1 Appendix A	OK	<b>Table 2, Section E</b>
26. Receive, within 30 days, comments on the validation requirements from Parties, stakeholders and UNFCCC accredited NGOs, and make them publicly available.	Simplified Modalities and Procedures for Small Scale AR CDM Project Activities, Decision 6/CMP.1	OK	Comment period: 24 Oct., 2008 – 22 November, 2008 No comments received.

Requirement	Reference	Conclusion	Cross Reference / Comment
27. A statement signed by all project participants stipulating the modalities of communicating with the Executive Board and the secretariat in particular with regard to instructions regarding allocations of CERs at issuance.	Glossary of CDM terms	OK	A statement of Modalities of communicating with the EB was provided.

## TABLE 2 REQUIREMENTS CHECKLIST

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>1 PROJECT DESCRIPTION</b> The project design is assessed.					
<b>A.1 General Description</b>					
<b>A.1.1 Title of the project activity: Has the project an appropriate title, and does it contain a version number and date? Does the PDD using a correct version of PDD format?</b>	/1/	DR	Yes, the title clearly indicates the project is a reforestation project. <b>Clarification request 1</b> PDD version No. and the date are to be clearly indicated.	CL1	OK
<b>A.1.2 Has the project been described in terms of purpose and the project proponent's view of the project's contribution to sustainable development? (SS A/R modalities Annex A (a))</b>	/1/ /34/	DR I	Yes, PDD A.2 describes the project is necessary to meet the growing demand of wood products in the country and to mitigate rapid deforestation of the country.	OK.	OK
<b>A.1.3 Project Participants</b> (1) Have the Parties and PPs in the project been listed in the table as required? (2) Have all involved Parties provided a valid and complete letter of approval and have all private/public PPs been authorized by an involved Party?	/1/ /4/ /5/ /32/ /42/ ~ /45/	DR I	Parties and project participants (PPs) are properly listed in the table as the requirement of the format. Government of Italy provided a written approval for the project. It declares that Italy participates voluntarily in the project, approves and authorises the voluntary participation of the International Bank for Reconstruction and Development as the Trustee for the BioCarbon Fund as a project participant in the project. <b>Corrective Action Request 1</b> (1) The project should have the written approval as the CDM project from the DNA of Uganda. (2) PP of Uganda should have the written approval of voluntary participation from the DNA of Uganda. (3) PP of Uganda should have the authorization by the DNA of Uganda. (4) There is an inconsistency in the name of project participants in Uganda LoA. In the LoA, in one part, the project participant of Uganda (NFA) is indicated as "National Forest Authority" and in the other part it is indicated as "National Forestry Authority".	CAR 1	OK
<b>A.1.4 Potential public funding for the project from</b>	/1/	DR	The project is not using ODA. NFA uses revenues from	OK	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>Parties in Annex I is not a diversion of official development assistance</b>	/42/ ~ /45/	I	licensing to finance the small-scale A/R CDM projects.		
<b>A.2 Eligibility of lands for A/R project activities</b> Project participants shall provide evidence that the land within the project boundary is eligible as an A/R project activity following the steps outlined below. <b>EB22 Annex16</b>					
<b>A.2.1. Is it demonstrated that the land at the moment the projects starts is not a forest Decision 16/CMP.1 Annex §1, (a) (b) (c) ?</b>	/1/ /35/ /36/ /42/ ~ /45/	DR I	<p>(a) <u>The land eligibility at the project start</u></p> <ol style="list-style-type: none"> <li>1) It was demonstrated using GIS image processing at NFA office during on-site assessment that the areas were classified into categories as described in PDD version 05, Annex 5.</li> <li>2) The method was demonstrated how to exclude the area currently forested using GIS image processing at NFA office during on-site assessment.</li> <li>3) The validation team confirmed by the interviews with local communities that the project areas human induced fire climax grassland and exposed to continuous degradation.</li> </ol> <p>(b) <u>The land eligibility at 31 December, 1989.</u> PDD states "Based on SPOT XS satellite images of Aug.1992, land eligibility for the project was identified". Further it was clarified :</p> <ol style="list-style-type: none"> <li>1) As for the area's classification into categories as described in Annex 5, it was demonstrated using GIS image processing at NFA office during on-site assessment in relation to the Uganda definition of forest specified in A.7.of the PDD</li> <li>2) The method was demonstrated how to exclude the area currently forested using GIS image processing at NFA office during on-site assessment.</li> <li>3) In addition to 1992 SPOT XS images, 1984 Landsat images and 2004 Landsat images were used to confirm that the land was not a forest from 31 Dec. 1989 to Aug. 1992.</li> </ol> <p>The validation team confirmed the eligibility of the</p>	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
			project by GIS at NFA office. Also, the validation team confirmed by the interviews with local communities conducted during on-site assessment that the project area is a human induced fire climax area and degraded during 1970's and early 90's.		
<b>A.2.2. Is it demonstrated that the activity is a reforestation or afforestation project activity per Decision 16/CMP.1 Annex §1, (a) (b) (c) ?</b>	Ditto	DR	As indicated above, the project is acceptable as reforestation of grassland.	OK	OK
<b>A.2.3. Has the latest version of the 'Procedure to define the eligibility of lands for A/R project activities' been properly applied?</b>	/1/ /36/ /42/ ~ /45/	DR I	The project is in accordance with the latest version of "Procedure to define the eligibility of lands for A/R project activities" defined EB 35 Annex 18.	OK	OK
<b>A.3. Small scale project activity</b> <b>It is assess whether the project qualifies as small scale A/R CDM project activity.</b>					
<b>A.3.1.Does the project qualify as a small scale A/R CDM project activity as defined in § Annex A. 1 (i) of decision 19/CP.9 on the modalities and procedures for the CDM SS A/R modalities § 4(a)</b>	/1/ /25/ /31/ /33/ /34/ /42/ ~ /45/	DR I	According to the PDD (Version 05), average net GHG removals are 24,421 tCO <sub>2</sub> -e / 5 years from 2008 to 2012 and 59,306 tCO <sub>2</sub> -e / 10 years from 2008 to 2017. Annual GHG removals are calculated as 4,884 tCO <sub>2</sub> -e and 5,930 tCO <sub>2</sub> -e, respectively, and these values are less than 16,000 tCO <sub>2</sub> -e per year. In the revised PDD (Version 07) average net GHG removals are 9,020 tCO <sub>2</sub> -e / 5 years from 2008 to 2012 and 34,841 tCO <sub>2</sub> -e / 10 years from 2008 to 2017. Annual GHG removals are calculated as 1,804 tCO <sub>2</sub> -e and 3,484 tCO <sub>2</sub> -e, respectively, and these values are also less than 16,000 tCO <sub>2</sub> -e per year (limit for small-scale AR project activities). As for the project a written declaration was presented by a project participant (NFA) as shown in Annex 3 of the PDD version 05. The declaration states that the project activity is developed and implemented in conjunction with low-income communities and individuals as determined by the host Party. The project complies with the requirements for the small scale A/R CDM project activity.	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>A.3.2.The small scale project activity is not a debundled component of a larger project activity? SS A/R modalities § 4(c)</b>	/1/ /34/ /42/ ~ /45/	DR I	PDD.A.12 states 5 similar projects including this project are more than 1km apart from each other. The map provided as Annex 6 to the PDD also supports this description. The distances between the projects were confirmed based on exact scale maps, exact longitude and latitude data of the vertices of each project area. Also, the validation team confirmed by sample measurements using GPS that the project boundary is correctly delineated and more than 1 km apart from each other.	OK	OK
<b>A.3.3.Does proposed project activity conform to one of the project types defined for small scale A/R CDM project activities? SS A/R modalities § 4(b)</b>	/1/ /31/ /34/ /42/ ~ /45/	DR I	Yes, the proposed project conforms to the project type "grassland to forest land".	OK	OK
<b>A.3.4. Does the project participant propose new simplified methodologies or amendments to the simplified monitoring methodologies for project activities? In this case, project participants submit to the CDM EB for consideration and get approval?</b>	/1/	DR	In the PDD version 05 and 06 the project uses AR-AMS0001 version 05.This question is not applied.	NA	OK
<b>A.4. TECHNOLOGY TO BE EMPLOYED</b> <b>Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.</b>					
<b>A.4.1. Does the project design engineering reflect current good practices?</b>	/1/ /6/ /22/ /24/ /42/ ~ /45/	DR I	Technologies used for the project are described in the PDD A.4.8 and these technologies are based on the EU-funded SPGS (Sawlog Production Grant Scheme) and reflect current good practice. Ex.: species matching, site preparation, planting, tending/ weed control, fire management, pest control/ disease management, thinning/ pruning.	OK	OK
<b>A.4.2. Does the project use state of the art technology or would the technology result in a significantly better</b>	Ditto	DR I	Ditto.	OK	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview



Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>performance than any commonly used technologies in the host country?</b>					
<b>A.4.3. Has the location of the project including host Party, region and town/community been described? (SS A/R Modalities Appendix A (a))</b>	/1/ /34/	DR I	Yes. PDD A.4.1.1 to 4.2 describes the questioned items. A map is provided in Annex 6 to indicate the project boundary.	OK	OK
<b>A.4.4. Has an appropriately detailed geographic delineation of the project boundary including a unique identifier been included? (SS A/R Modalities Appendix A (b))</b>	/1/ /34/	DR I	The distances between the projects were confirmed based on exact scale maps, exact longitude and latitude data of the vertices of each project area. Also, the validation team confirmed by sample measurements using GPS that the project boundary is correctly delineated and more than 1 km apart from each other.	OK	OK
<b>A.4.5. Has a description of items on the present environmental conditions of the project area including climate, soils, main water sheds, ecosystems, and the presence of any rare or endangered species and their habitats been included? (SS A/R Modalities Appendix A (a))</b>	/1/ /34/	DR	Yes, PDD A.5.2 describes the present environmental conditions of the project area including climate, soil, main watershed, ecosystems and information for species unique to forest.	OK.	OK
<b>A.4.6. Have the species and varieties to be grown been adequately described? (SS A/R Modalities Appendix A (a))</b>	/1/ /34/	DR	Yes, PDD A.5.3 describes the species and varieties including percentage of each species and their topics.	OK.	OK
<b>A.4.7. Have the GHGs whose emissions will be part of the project activity been specified? (SS A/R Modalities Appendix A (a))</b>	/1/ /34/	DR I	Yes. It is described in the PDD B.3 that no fertilizer will be used and there is no GHG emissions by the project. In addition to that, AR-AMS0001 version 05 states that project emission are considered insignificant and therefore neglected.	OK.	OK
<b>A.4.8. Have details of the legal title to the land, land tenure and sequestration rights been described adequately?</b>	/1/	DR I	Yes, PDD A.6 describes the questioned items clearly and adequately.	OK.	OK
<b>A.4.9. Have the selected carbon pools been specified? (SS A/R Modalities Appendix A (d))</b>	/1/ /34/	DR	Yes, PDD B.4 clearly indicates the carbon pools. This is in accordance with the SS A/R Methodologies.	OK.	OK
<b>A.4.10. Has the approach to address non-permanence been specified in accordance with § 38 of decision 19/CP.9. (SS A/R Modalities Appendix A (i))</b>	/1/ /34/	DR	Yes, PDD A.8 describes that tCER will be used.	OK.	OK
<b>A.4.11. Does the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period?</b>	/1/ /6/ /42/	DR I	Yes, the project requires extensive training. The training plan of the people engaged in monitoring is described in A.5.4, A.5.5, B.8.2 and Annex.8 of the	OK	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
Does the project make provisions for meeting training and maintenance needs?	~ /45/		PDD.		
<b>A.5. CONTRIBUTION TO SUSTAINABLE DEVELOPMENT</b> The project's contribution to sustainable development is assessed.					
A.5.1. Is the project in line with relevant legislation and plans in the host country?	/1/ /6/ /8//9/ /42/ ~ /45/	DR I	Yes, Environmental Impact Assessment Statement and Forest Management Plan were approved by National Environment Management Authority (NEMA).	OK	OK
A.5.2. Is the project in line with host-country specific CDM requirements?	Ditto	DR I	ditto	OK	OK
A.5.3. Is the project in line with sustainable development policies of the host country?	Ditto	DR I	<b>Clarification Request 2</b> The confirmation for the project concerning the sustainable development is required.	CL 2	OK
A.5.4. Will the project create other environmental or social benefits than GHG emission reductions?	/1/ /9/ /42/ ~ /45/	DR I	The validation team confirmed by the interviews with villagers at the on-site assessment that the project contributes to other environmental or social benefits other than GHG emission reductions.	OK	OK
<b>A.6. DURATION OF THE PROJECT / CREDITING PERIOD</b> It is assessed whether the temporary boundaries of the project are clearly defined.					
A.6.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	/1//6/ /34/ /42/ ~ /45/	DR I	The project's starting date is 1 April, 2008 and the operational lifetime is defined as 60 years in A.9 of the PDD.  <b>Clarification Request 3</b> The evidence of the starting date is to be provided.	CL 3	OK
A.6.2. Is the beginning of crediting period so defined as the start of the afforestation or reforestation project activity? Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 20 years or fixed crediting period of max. 30 years)?	ditto	DR I	It is indicated in the PDD that the beginning of crediting period coincide with the starting date of the reforestation. Crediting period is clearly and reasonably defined as 20 years, renewable crediting period.	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B. APPLICATION OF A BASELINE AND MONITORING METHODOLOGY</b> The validation of the project baseline and monitoring methodology establishes whether the selected baseline and monitoring methodology is appropriate.					
<b>B.1. Baseline Methodology</b> It is assessed whether the project applies an appropriate baseline methodology.					
<b>B.1.1. Is the selected baseline methodology in line with the baseline methodologies provided in the SS A/R modalities including the baseline approach specified by § 22(a) of the A/R modalities?</b>	/1/ /19/ /21/ /22/	DR	The selected baseline methodology AR-AMS 0001 is in line with the baseline methodology provided in the SS A/R modalities (APPENDIX B of the SS A/R modalities) including that the baseline approach complies with § 22(a) of the A/R modalities.  <b>Corrective Action Request 2</b> Version No. of the baseline and monitoring methodology AR-AMS0001 is to be revised to the version 05.	CAR 2	OK
<b>B.1.2. Is the baseline methodology of the SS A/R modalities applicable to the project being considered?</b>	/1/ /10/ /19/ /22/ /43/- /59/	DR	PDD B.3.1 states that the area is a human induced fire climax with more or less annual fires outside the natural forest conservation areas in the moist valleys and natural regeneration is not possible under these conditions. Also, PDD B.3.2 states that the National Biomass Study in Uganda indicates that the biomass stocks are relatively stable but a tendency to decrease.  Based on the interview at on-site assessment and the data such as the National Biomass Study, the validation team confirmed that above description is appropriate.  The project is for grassland and the baseline methodology of the SS A/R modalities (APPENDIX B).	OK.	OK
<b>B.1.3. (a) Is the most likely baseline scenario of the small-scale A/R CDM activity considered to be the land-</b>	/1/ /31/	DR I	The project is located in the Rwoho CFR (Central Forest Reserve) and the most likely baseline scenario	OK.	OK

\* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>use prior to the implementation of the project activity, either grassland or croplands?</b>			is considered to be the grassland as indicated above B.1.1.		
<b>B.1.3. (b) Are project activities implemented on settlements or wetlands not included in this methodology?</b>	/1/ /34/	DR	The project is implemented on degraded grassland. Settlements and wetland are not included in the project site.	OK.	OK
<b>B.1.3. (c) Does the project participant demonstrate that the grass lands or croplands for the A/R CDM activity have not been ploughed before the plantation is established?</b>	/1/ /42/ ~ /45/	DR I	No ploughing will be done as stated in B.2 of the PDD. Therefore, the soil disturbance area is less than 10% of the total surface project area as a result of soil preparation for planting.	OK	OK
<b>B.1.3. (d) Does the project participants demonstrate that the displacement of households or activities, due to the implementation of the A/R CDM activity, is estimated to be less than 50 percent?</b>	/1/ /42/ ~ /45/	DR I	<p>The project area is located within the Rwoho CFR and the land tenure is with the Government of Uganda. There are no people living in the project area and no people will be displaced from the project area and no agricultural activity will be displaced except for small-areas for subsistence agriculture in the area. The validation team confirmed this situation through on-site visit and the interviews to villagers at on-site assessment.</p> <p>As for the grazing animals (cattle), grazing assessment was carried out for domesticated roaming animals by the comparison of time-average number of grazing animals and the grazing capacity of the available grazing area.</p> <p><b>Clarification Request 4</b></p> <p>1) The method of estimating the available grazing area (PDD C.3.) is to be explained, especially sharing of the area among the 5 projects and how the area 5700ha is allocated to the Project No.4.</p> <p>2) It is to be explained how the average time in reserve in h/day is estimated as 0.67h/day (40minutes). It is also to be explained the relation between this value and the description of the PDD "Animals generally spend 2 thirds of their feeding time in the reserve.</p>	CL 4	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B.2. BASELINE DETERMINATION</b> It is assessed whether the project activity itself is not a likely baseline scenario and whether the selected baseline represents a likely baseline scenario.					
<b>B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?</b> SS A/R modalities Appendix B	/1//2/ /13/~ /17/ /31/ /38/ /42/ ~ /45/	DR I	<p>(1) The national Biomass Study (NBS) report of 2000, 2004 gives an over all biomass trends in Uganda that rate of annual change of grassland is minus 1%. Also, according to the NBS data sets, there has been a general biomass decline in areas near the project in last 5 to 8 years (1995-1999 to 2004)</p> <p>(2) The project sites are all degraded grasslands, other land-use types such as wood land, (existing) pine plantation etc. in the area are not considered as the project area.</p> <p>(3) The baseline calculation formula is in line with AR-AMS0001 / Version 05.</p> <p><b>Clarification Request 5</b></p> <p>(1) According to the back data given by NFA, the dry matter t/ha of Grass is 0.84 t/ha and not 0.59. Please explain the difference.</p> <p>(2) Below ground biomass is indicated in Table B-3 of the PDD as 0.08 tC/ha. How was this value derived? (Below ground biomass is above ground biomass multiplied by Rgrass (1.6).)</p> <p>(3) In the table B-3 of the PDD version 05 for the project No.4, the scattered trees are taken into account in baseline calculation. On the other hand in case of the registered project No.3 (UNFCCC ref. 1578) whose site condition is similar to that of the project No.4, the scattered trees are not taken into account in the baseline calculation. The reason why scattered trees are taken into account in the baseline calculation of No.4 project is to be explained.</p>	<b>CL 5</b>	OK
<b>B.2.2. Has the baseline been determined using conservative assumptions where possible?</b>	Ditto	DR I	To be judged after <b>CL 5</b> is resolved.	<b>(CL 5)</b>	OK
<b>B.2.3. Has the baseline been established on a project-</b>	Ditto	DR	Yes, PDD. B.6. indicates that the baseline study was	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>specific basis?</b>		I	carried out by NFA for this project specific basis.		
<b>B.2.4. Does the baseline scenario sufficiently take into account relevant national and/ or sectoral policies and circumstances such as historical land uses, practices, and economic trends.</b>	Ditto	DR I	Yes, PDD B.1 to B.7 explains the National/Sectoral situations clearly. It concludes that the baseline is the continuation of the current situation.	OK.	OK
<b>B.2.5. Is the baseline determination compatible with the available data?</b>	Ditto	DR I	To be judged after <b>CL 5</b> is resolved.	(CL 5)	OK
<b>B.2.6. Does the project participant estimate leakage appropriately as per SS A/R methodologies</b>	Ditto	DR I	PDD. C.4. states leakage estimation is unnecessary. The assertion is acceptable provided <b>CL 4</b> above is resolved.	(CL 4)	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl.	Final Concl.
<b>B.2.7. Does the selected baseline represent the most likely scenario among other possible and/ or discussed scenarios?</b>	Ditto	DR I	OK. (Refer to Checklist question B.2.4.)	OK.	OK
<b>B.2.8. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario?</b>	/1/ /31/ /42/ ~ /45/	DR I	PDD.B.7 asserts due to the investment barriers such as lack of funding, institutional barriers such as legal limitations on land use etc., the project activity would not occurred. The assertion follows the procedure of Appendix B of the AR-AMS0001 and is acceptable.	OK	OK
<b>B.2.9. What barriers are accepted to establish the additionality of the project?</b>  [(i) Investment barriers, (ii) Institutional barriers, (iii) Technological barriers, (iv) Barriers relating to local tradition, (v) Barriers due to prevailing practice, (vi) Barriers due to local ecological conditions, (vii) Barriers due to social conditions]	/1/ /2/ /3/ /18/ /31/ /42/ ~ /45/	DR I	According to the PDD. B.7, Investment barriers, Institutional barriers, Barriers due to prevailing practice, Barriers due to local ecological conditions and Barriers due to social conditions are explained. <b>Investment barriers:</b> The validation team confirmed that the project is the first CDM reforestation project in Uganda and existing reforestation project in Uganda have been using the EU Sawlog Production Grant Scheme but this Sawlog Production Grant Scheme had been used-up by the time of the planning of the Uganda Nile Basin Reforestation Project No.1-5. Also, it was confirmed that Bank in Uganda such as Bank of Uganda has not been interested in financing in forestry. (/18/)  As for a reference, IRR analysis was provided. FIRR for 5 small AR projects* including No.4 is 13.6 % (without carbon credits) and FIRR with carbon credits is 14.7 % (USD 3\$/ tCO <sub>2</sub> e, tCO <sub>2</sub> have been risk reduced by 25%). (/3/) On the other hand, the capital costs in Uganda, alternative investments potentially yield higher IRR to forestry projects such as below. (/26/) - Treasury Bills in UGX (Uganda shilling) from the Government of Uganda: 15% - Agricultural activities like maize in 2004: 24% IRR	OK	OK

\* The proposed project is No.4 among similar 5 small scale AR projects "Uganda Nile Basin Reforestation Project No.1-5".

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
			<p>- Fish farming: 20% IRR</p> <p><b>Institutional Barriers:</b> Through the document review and interviews at on-site assessment the team confirmed that the NFA has only the capacity to reforest recently harvested plantations. This is more cost efficient because land preparation costs are lower and the revenue from the timber sales can be used to cover the investment costs. Therefore, without the CDM component, the project activity would not have occurred.</p> <p><b>Technological barriers:</b> In Uganda, there have been reforestation projects supported by above EU SPGS, therefore, the technological barriers are not applied.</p> <p><b>Barriers due to prevailing practice:</b> The proposed project is the first CDM AR project in Uganda, the first CDM AR project approved by the DNA of Uganda and the only one that aims to support private and community investors to replicate the approach. Also the proposed project is aiming the reforestation of the degraded land partially (community planting area) by native species.</p> <p>Considering these conditions, Investment barriers and the barriers due to prevailing practice are major barriers to establish the additionality.</p>		



Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B.2.10. Have the major risks to the baseline been identified?</b>	/1/ /13/ /17/ /31/ /36/ /37/ /42/ ~ /45/	DR I	The baseline was set to constant value throughout the project. No risk is likely.	OK.	OK
<b>B.2.11. Are all literature and sources clearly referenced?</b>	Ditto	DR, I	To be judged after <b>CL 4, 5</b> is resolved.	(CL 4,5)	OK
<b>.3. Monitoring Methodology</b> It is assessed whether the project applies an appropriate monitoring methodology.					
<b>B.3.1. Is the selected monitoring methodology in line with the monitoring methodologies provided in the SS A/R methodologies?</b>	/1/ /6/ /13/ /31/ /34/ /38/ /42/ ~ /45/	DR I	The selected monitoring methodology is AR-AMS0001 version 05. For all tree species of the project, the values of BEF, R, WD and their data source (Table No. and corresponding rows and columns of IPCC GPG.) are identified.  <b>Clarification Request 6</b> 1) It is to be clarified whether the same BEF, WD and R as ex-ante estimate are applied to the ex-post estimate.	CL 6	OK
<b>B.3.2. Is the SS A/R monitoring methodology applicable to the project being considered?</b>	/1/ /31/	DR I	Yes.	OK.	OK
<b>B.3.3. Is the application of the monitoring methodology transparent?</b>	/1/ /31/	DR I	CL 6 should be resolved.	(CL6)	OK
<b>B.3.4. Will the monitoring methodology give opportunity for real measurements of achieved GHG removals by sinks?</b>	/1/ /31/	DR I	Yes.	OK.	OK
<b>B.3.5. If small-scale afforestation or reforestation project activities under the CDM are bundled, does the project participant indicate clearly whether a separate monitoring plan shall apply for each of the constituent</b>	/1/	DR	The project is not the bundled portion of SS A/R CDM. This question is not applied.	NA.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>project activities in accordance with Decision 10/ CP10, § 23, 24 of Annex, or an overall monitoring plan shall apply for the bundled projects?</b>					
<b>B.3.6. Does the project participant specify 5-year monitoring frequency?</b>	/1/	DR	Yes, PDD.B.4.1.1.1 shows the monitoring frequency of 5 years.	OK.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B.4. Monitoring of the actual net GHG removals</b> <b>It is established whether the monitoring plan provides for reliable and complete actual net GHG removals.</b>					
<b>B.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the actual net greenhouse gas removals by sinks during the crediting period?</b>	/1/ /31/ /42/ ~ /45/	DR I	Yes. The monitoring plan (PDD B.8.1 and Appendix 8) indicate the monitoring plan for the collection and archiving of all relevant data necessary for estimation or measuring the actual net GHG removals by sinks during the crediting period. The monitoring plan shows the monitoring of overall performance, management, actual GHG removals by sinks, QA/QC, environmental and socio-economic impacts in accordance with the format of CDM-SSC-AR-PDD. The monitoring data and frequency of PDD B.8.1 are in accordance with the methodology AR-AMS0001 version 05. Timber production cycle is 22 years or until the target diameter is reached 45cm as described in PDD A.5. The monitoring will be conducted with 5 years interval, therefore, it is confirmed that there is no systematic coincidence of verification and peaks in carbon stocks. (ref. VVM version 01.2 § 156-158)	OK.	OK
<b>B.4.1.a. Does the monitoring plan provide for changes in circumstances within the project boundary that affect legal title to the land or right of access to the carbon pools?</b>	Ditto	DR I	The monitoring plan provide for the changes in circumstances such as monitoring of the location and size of the project areas. The sample size and number of plots are planned as 400m2 for every 25ha (Annex 8) and 14. The number of plots will be increased with the minimum precision target of $\pm 10\%$ at a 95% confidence level. The validation team confirmed this is in accordance with the methodology AR-AMS0001 version 05 and appropriate. Licensing period of the land is harmonized with the licensing period.	OK	OK
<b>B.4.1.b. Does the monitoring plan specify the technique and methods for sampling and measuring individual carbon pools and GHG removals by sinks included in the actual GHG removals by</b>	Ditto	DR I	Yes. The monitoring plan specifies the technique and methods for sampling and measuring individual carbon pools and GHG removals by sinks in accordance with the AR-AMS0001.	OK.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>sinks that reflects commonly accepted principles and criteria concerning forest inventory?</b>					
<b>B.4.2. Are the choice of project GHG indicators reasonable?</b>	Ditto	DR I	Yes. The project GHG indicators are in accordance with the AR-AMS0001 and reasonable.	OK.	OK
<b>B.4.3. Will it be possible to monitor / measure the specified project GHG indicators?</b>	Ditto	DR I	Yes. GHG indicators selected are common indicators and it is possible to monitor / measure the specified GHG indicators.	OK.	OK
<b>B.4.4. Will the indicators enable comparison of project data and performance over time?</b>	Ditto	DR I	Yes.	OK.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B.5. Monitoring of Leakage</b> It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
<b>B.5.1. Does the monitoring plan clearly identify the following indicators? [Refer to SS A/R methodology, P23, § 48, 52.]</b>  <b>(a) Percentage of families/ households of the community involved in or affected by the project activity displaced due to the implementation of the project activity</b> <b>(b) Percentage of total production of the main produce (for example meat or corn) within the project boundary displaced due to the project activity.</b>	/1/ /13/ /31/ /42/ ~ /45/	DR I	<p>The project area is located within the Rwoho CFR and the land tenure is with the Government of Uganda. There are no people and no agricultural activities in the project areas. Therefore, no people and no agricultural production activities will be displaced. (PDD C.3)</p> <p>Also, the grazing assessment in the PDD shows that the average grazing is below 10% and this indicates that there is no leakage due to grazing.</p> <p>The biomass (grass) density of the project area and also the surrounding area is 4.0 <sup>(*)</sup> tCO<sub>2</sub>/ha and very low compared with the average biomass density of 11.4 tCO<sub>2</sub>/ha for tropical moist grasslands. (Ref. Table 3.4.2 of IPCC GPG LULUCF)</p> <p>This indicates that the project area as well as the surrounding area is highly degraded.</p> <p>Taking into account these conditions, the leakage can be considered insignificant.</p> <p>In this condition, a leakage estimation is not required due to AR-AMS0001 version 05 and also, the monitoring of leakage is not required due to Decision 6/CMP.1 §23 (c).</p> <p>(*) : above ground biomass = 0.84 tdm/ha = 0.42 tC/ha          (above ground biomass) + (below ground biomass) = 0.42 + 1.6 x 0.42 = 1.09 tC/ha = 1.09 x 44/12 tCO<sub>2</sub>/ha = 4.0 tCO<sub>2</sub>/ha</p>	(CL5)	OK
<b>B.5.2. Have relevant indicators for GHG leakage been included?</b>	/1/ /42/ ~ /45/	DR I	Ditto.	OK	OK
<b>B.5.3. Will it be possible to monitor the specified GHG leakage indicators.</b>	ditto	DR I	Ditto.	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>B.6. MONITORING OF THE BASELINE NET GHG REMOVALS</b> It is established whether the monitoring plan provides for reliable and complete baseline net GHG removals data over time.					
<b>B.6.1. No monitoring of the baseline is required.</b> (SS A/R modalities appendix B, § 6)	/1/ /34/	DR	NA	OK.	OK
<b>B.7. PROJECT MANAGEMENT PLANNING</b> It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
<b>B.7.1. Is the authority and responsibility of project management clearly described?</b>	/1/	DR I	Yes, PDD.B.8.3.states the project will be managed by the Mbarara Sector Manager and officers in charge of the area.	OK.	OK
<b>B.7.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?</b>	/1/	DR I	Yes, PDD B.8.3 states monitoring will be conducted by the NFA Technical Service section.	OK	OK
<b>B.7.3. Are procedures identified for training of monitoring personnel?</b> SS A/R methodologies § 60 (c), (d)	/1/ /31/	DR I	Yes, Annex.7 of PDD identifies the training procedures of monitoring personnel in accordance with the AR-AMS0001.	OK	OK
<b>B.7.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?</b>	/1/ /6/ /42/ ~ /45/	DR I	Fire management is described in the Forest Management plan for Bugamba and Rwoho Central Forest Reserves.	OK	OK
<b>B.7.5. Are procedures identified for monitoring, measurements and reporting?</b>	/1/ /42/ ~ /45/	DR I	Yes, PDD. B.8.2. and Annex.8 identifies the procedures for monitoring, measurements and reporting.	OK.	OK
<b>B.7.6. Are procedures identified for calibration of monitoring equipment?</b> Are procedures identified for maintenance of monitoring equipment and installations?	/42/ ~ /45/	DR I	As the use of special equipments is unlikely, this question needs not be applied.	OK.	OK
<b>B.7.7. Are procedures identified for data maintenance</b>	/1/	DR	Yes, PDD. B.8.2. identifies the procedure for data	OK.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>and storage?</b> <b>SS A/R methodologies § 64, 65, 66</b>	/31/ /42/ ~ /45/	I	maintenance and storage.		
<b>B.7.8. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?</b>	Ditto	DR I	Yes, PDD. Annex.8 considers post stratification and modification of the sample size after the first monitoring event.	OK.	OK
<b>B.7.9. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?</b>	Ditto	DR I	QA/QC procedure will be implemented as indicated in annex 8.	OK	OK
<b>B.7.10. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?</b>	Ditto	DR I	Yes, the verification procedures for field data collection, data entry and analysis are specified in Annex.8 of PDD.	OK.	OK
<b>B.7.11. Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?</b>	Ditto	DR I	Refer to B.7. 8. of this table.	OK.	OK
<b>B.8. QUALITY CONTROL &amp; QUALITY ASSURANCE</b>					
<b>B.8.1. Are procedures identified to ensure reliable field measurements? The procedure includes development of standard operating procedures (SOPs) for each step of the field measurements, collecting reliable data, training and provisions for documentation for future verification. SS A/R methodologies § 59 (a), 60</b>	/1/ /42/ ~ /45/	DR I	Yes, PDD. B.8.2 and Annex.8 provide procedures to ensure reliable field measurements. Annex 8 of the PDD also states the SOP is to be prepared.	OK.	OK
<b>B.8.2. Are procedures identified to verify field data collection? SS A/R methodologies § 59 (b)</b>	Ditto	DR I	Yes, the PDD. B.8.2 and Annex.8 provide procedures to verify field data collection.	OK.	OK
<b>B.8.3. Are procedures identified to verify data entry and analysis? SS A/R methodologies § 59 (c)</b>	Ditto	DR I	Yes, Annex 8 of the PDD provides procedures to verify data entry and analysis by an independent expert team.	OK.	OK
<b>B.8.4. Are procedures identified for data maintenance and storage taking into account the long-term nature of A/R project activities under the CDM? SS A/R methodologies § 59 (d)</b>	Ditto	DR I	Yes, Annex 8 of the PDD provides procedures for data maintenance and archiving by both electronic and paper forms.	OK.	OK
<b>C. ESTIMATION OF NET ANTHROPOGENIC GHG REMOVALS BY SINKS</b>					
<b>It is assessed whether all material GHG removals sources are addressed and how sensitivities and data</b>					

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.</b>					
<b>C.1. ESTIMATE OF THE ACTUAL NET GHG REMOVALS BY SINKS</b> The validation of predicted project GHG removals focuses on transparency and completeness of calculations.					
<b>C.1.1. Are all aspects related to direct and indirect GHG removals captured in the project design?</b>	/	DR I	<b>Corrective Action Request 3</b> Explanation about the calculation for "Actual net GHG removals by sinks" is missing. The calculation is to be transparent in accordance with the methodology. (ref. AR-AMS0001 version 05 p5/29)	<b>CAR 3</b>	OK
<b>C.1.2. Are the GHG calculations documented in a complete and transparent manner?</b>	Ditto	DR I	GHG calculations are carried out as follows. 1) As for Pine, "Yields of Eucalyptus and Caribbean Pine in Uganda" was applied.. 2) BEF: no national data Density: national data available R: IPCC data was applied 3) 22 years rotation is used for all tree species.  <b>Clarification Request 7</b> Method for estimating the actual net GHG removals by sinks is to be clearly indicated.	OK	OK
<b>C.1.3. Have conservative assumptions been used to calculate project GHG removals?</b>	Ditto	DR I	Refer to CAR 3 above.	<b>(CAR3)</b>	OK
<b>C.1.4. Are uncertainties in the GHG removals estimates properly addressed in the documentation?</b>	Ditto	DR I	The GHG removals are based on conservative estimates which will be assessed during the GHG monitoring. Yield calculation is based on the Forest Management Plan (/6/) in terms of thinning, pruning and assumption of survival rate 90% and density index 75%.	OK	OK
<b>C.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?</b>	/1/ /31/	DR I	Only CO2 is considered. This is consistent with the methodology requirements.	OK.	OK
<b>C.2. ESTIMATED LEAKAGE</b>					



Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.</b>					
<b>C.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified in accordance with SS A/R methodologies? (SS A/R methodologies, § 26,30)</b>	/1/ /31/ /42/ ~ /45/	DR I	Refer to B.1.3 (d). Fertilizer is not used.	OK	OK
<b>C.2.2. Have these leakage effects been properly accounted for in calculations?</b>	Ditto	DR I	Ditto.	(NA)	
<b>C.2.3. Are the calculations documented in a complete and transparent manner?</b>	Ditto	DR I	Ditto.	(NA)	
<b>C.2.4. Have conservative assumptions been used when calculating leakage?</b>	Ditto	DR I	Ditto.	(NA)	
<b>C.2.5. Are uncertainties in the leakage estimates properly addressed?</b>	Ditto	DR I	Ditto.	(NA)	
<b>C.3. ESTIMATED BASELINE NET GHG REMOVALS BY SINKS</b> <b>The validation of estimated baseline net GHG removals focuses on transparency and completeness of calculations.</b>					
<b>C.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline removals?</b>	/1//2/ /3/ /6/ /11/ ~ /17/ /38/ /42/ ~ /45/	DR I	If it were shown that the baseline carbon stocks are constant or rather decreasing (when <b>Clarification 5</b> on Checklist question B.2.1 were resolved), calculation of baseline net GHG removals is not required. This question needs not be applied.	(CL 5)	OK
<b>C.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline removals?</b>	ditto	DR	Ditto.	(CL 5)	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>C.3.3. Are the GHG calculations documented in a complete and transparent manner?</b>	/1//2/ /31/	DR	Ditto.	(CL 5)	OK
<b>C.3.4. Have conservative assumptions been used when calculating baseline?</b>	/1//2/ /13/~ /16/	DR	Ditto.	(CL 5)	OK
<b>C.3.5. Are uncertainties in the GHG removal estimates properly addressed in the documentation?</b>	Ditto	DR	Ditto.	(CL 5)	OK
<b>C.3.6. Have the project baseline(s) and the project removals been determined using the same appropriate methodology and conservative assumptions?</b>	/1/ /2/ /6/ /11/ ~ /17/ /31/ /38/	DR	Ditto.	(CL 5)	OK
<b>C.4. Validation of baseline GHG removals will focus on methodology transparency and completeness in removal estimations.</b>					
<b>C.4.1. Will the project result in increased net GHG removals by sinks than the baseline scenario?</b> A/R Modalities § 18	/1//2/ /31/	DR I	All <b>Clarifications relating to B, C</b> of the checklist are to be resolved.	<b>Pendi ng</b>	OK
<b>D ENVIRONMENTAL IMPACTS</b> Documentation on the analysis of the environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary will be assessed, and if deemed significant, an EIA should be provided to the validator.					
<b>D.1.1. Is the analysis documented about the environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary?</b> This analysis should include, where applicable, information on, inter alia, hydrology, soils, risk of fires, pests and diseases. SS A/R modalities Appendix A (k) (i)	/1/ /6/ /8/ ~ /10/ /42/ ~ /45/	DR I	PDD D.1 describes that the EIA was carried out based on the regulations by the NEMA, and NEMA formally approved the project on 31 July, 2006. Summary of the EIS (Environment Impact Statement) should be provided.	OK	OK
<b>D.1.2. If adverse effect is considered significant by the project participants or the Host Party, is the statement</b>	Ditto	DR I	PDD. D.1 describes that the EIA was carried out based on the regulations by the NEMA, and NEMA formally	OK.	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>included that the project participants have undertaken EIA in accordance with the procedures required by the host party, including its conclusions and all references to support documentation?</b> <b>A/R Modalities § 12c</b>			approved the EIS of the project on 31 July, 2006.		
<b>D.1.3. Have identified environmental impacts been addressed in the project design?</b>	Ditto	DR I	Environmental Impact Statement by NFA (April 2006) refers; 1) project design 2) Environmental baseline and assessment of environmental impacts including biodiversity and socio, cultural and economic impacts. 3) Mitigation 4) Environmental management and monitoring plan	OK	OK
<b>D.1.4. Does the project comply with environmental legislation in the host country?</b>	Ditto	DR I	Yes, PDD D.1 describes that the EIA was carried out based on the regulations by the NEMA, and NEMA formally approved the project on 31 July, 2006.	OK	OK
<b>D.1.5. Does the project participant indicate planned monitoring and remedial measures to address significant impacts on environmental (ref. Decision 14/ C.P.10 Appendix A. 1(m))</b>	Ditto	DR I	Refer to D.1.3 of this table.	OK	OK
<b>E. SOCIO-ECONOMIC IMPACTS</b> <b>Documentation on the analysis of the socio-economic impacts, including impacts outside the project boundary will be assessed, and if deemed significant, a socio-economic impact assessment should be provided to the validator.</b>					
<b>E.1.1. Is the analysis documented about the socio-economic impacts, including impacts outside the project boundary?</b> <b>This analysis should include, where applicable, information on, inter alia, local communities, indigenous people, land tenure, local employment, food production, cultural and religious sites, and access to fuel wood and other forest products.</b> <b>SS A/R modalities Appendix A (I) (i)</b>	/1//6/ /8/ /9/ /23/ /42/ ~ /45/	DR I	Community response to the project at the stage of the feasibility study is provided. Also, the EIS was provided. The report includes a summary of socio-economic assessment carried out by the NFA in the framework of the feasibility study and as part of the environmental impact assessment (EIA). The EIS was accepted by the National Environment Management Authority (NEMA).	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>E.1.2. If any negative impact is considered significant by the project participants or the host Party, a statement is required including that the project participants have undertaken socio-economic impact assessment adequate to scale, in accordance with the procedures required by the host party, including conclusions and all references to support documentation. SS A/R Modalities Appendix A (I) (ii)</b>	Ditto	DR I	Socio-economic analysis as a part of Environmental Impact Statement was provided. Also, the checklist of CCB (Climate, Community & biodiversity Alliance checklist) was provided. There is no negative impact considered significant.	OK	OK
<b>E.1.3. Have identified socio-economic impacts been addressed in the project design?</b>	Ditto	DR I	Ditto.	OK	OK
<b>E.1.4. Does the project participant indicates planned monitoring and remedial measures to address significant impacts on socio-economic impacts. (ref. Decision 14/ C.P.10 Appendix A. 1(m))</b>	Ditto	DR I	The impact of the project on the well being of the population in the area will be monitored by the NFA staff within the framework of the Community Forest Management plan. The description was added to the PDD annex 8.	OK	OK
<b>F. STAKEHOLDER COMMENTS</b> <b>The validator should ensure that a stakeholder comments have been invited and that due account has been taken of any comments received.</b>					
<b>F.1.1. Have relevant stakeholders been consulted?</b>	/1/ /42/ ~ /45/ /51/~ /58/	DR I	Stakeholders meetings have been conducted 3 times from 30 June, 2005 to 1 March, 2006, with all communities living near the project sites. These meetings have been organized by RECPA.	OK	OK
<b>F.1.2. Have appropriate media been used to invite comments by local stakeholders?</b>	Ditto	DR I	Yes, the validation team confirmed that meetings to invite stakeholder comments were held as explained in the PDD F.1.	OK.	OK
<b>F. 1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?</b>	/1/ /42/ ~ /45/	DR I	No specific legislation has been formulated. Stakeholder comments are invited as part of EIA process.	OK	OK
<b>F. 1.4. Is a summary of the stakeholder comments received provided?</b>	Ditto	DR I	Yes, it is explained in the PDD F.2.	OK	OK
<b>F. 1.5. Has due account been taken of any</b>	Ditto	DR	Yes, it is explained in the PDD F.3.	OK	OK

Checklist Question	Ref.	MoV*	Comments	Draft Concl	Final Concl.
<b>stakeholder comments received?</b>		I			

**Table. 3 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question table 2	Summary of project owner response	Validation team conclusion
<b>Corrective Action Request 1</b> (1) The project should have the written approval as the CDM project from the DNA of Uganda. (2) PP of Uganda should have the written approval of voluntary participation from the DNA of Uganda. (3) PP of Uganda should have the authorization by the DNA of Uganda. (4) There is an inconsistency in the name of project participants in Uganda LoA. In the LoA, in one part, the project participant of Uganda (NFA) is indicated as "National Forest Authority" and in the other part it is indicated as "National Forestry Authority".	<b>A.1.3</b>	(1) The letter of approval (LoA) of voluntary participation by DNA of Uganda dated 1 March, 2010 was provided via the World Bank (project participant).  (2),(3) The LoA indicates that the NFA (National Forestry Authority, PP of Uganda) have the written approval of voluntary participation to the proposed project and the authorization by the DNA of Uganda. (4) A supplementary letter from DNA of Uganda "CORRECTION OF SPELLING ERROR WITH RESPECT TO THE NAME OF NATIONAL FORESTRY AUTHORITY (NFA) ON LETTERS OF APPROVAL ---"/28/) was provided. In the letter it is explained that the correct name of the project participant of Uganda (NFA) is "National Forestry Authority".	(1) OK  (2) OK (3) OK  (4) OK  The LoA was provided by the project participant (the World Bank). In addition to that, the letter by the DNA of Uganda "correction of the spelling of NFA" regarding the Uganda LoA addressed to the president of JACO CDM was provided to the validation team. The validation team does not doubt the authenticity of the LoA of Uganda. (/28a/) The LoA is regarded as valid.
<b>Corrective Action Request 2</b> Version No. of the baseline and monitoring methodology AR-AMS0001 is to be revised to the version 05.	<b>B.1.2</b>	In the revised PDD the version number of the baseline and monitoring methodology was revised to the version 05.	OK Methodology version 4.01 in the PDD for GSC was revised to version 05 in the PDD for request for registration.
<b>Corrective Action Request 3</b> In the PDD C.4, explanation about the calculation for "Actual net GHG removals by sinks" is missing. The calculation is to be transparent in accordance with the methodology. (ref. AR-AMS0001 version 05 p5/29)	<b>C.1.1</b>	The calculation method was added to the PDD C.4 in accordance with AR-AMS0001 version 05.	OK
<b>Clarification request 1</b> PDD version No. and the date are to be clearly indicated.	<b>A.1.1</b>	PDD was revised. Revised PDD is version 07 dated 21 October, 2010.	OK
<b>Clarification Request 2</b>	<b>A.5.3</b>	The above LoA also states that the	OK

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question table 2	Summary of project owner response	Validation team conclusion
The confirmation for the project concerning the sustainable development is required.		proposed CDM project contributes to sustainable development in Uganda.	
<b>Clarification Request 3</b> The evidence of the starting date is to be provided.	<b>A.6.1</b>	As examples of evidences for the starting date, contract document for planting work in May, 2008 between local workers and NFA regarding lining and pitting work for planting in the area for Block 4 and including payment certificate were provided. (27/)	OK By these evidences, it is confirmed by the project plan and by a part of evidences that the project start date of 01 April, 2008 in the PDD is appropriate.
<b>Clarification Request 4</b> 1) The method of estimating the available grazing area (PDD C.3.) is to be explained, especially sharing of the area among the 5 projects and how the area 10000 ha is allocated to the Project No.4. 2) The leakage calculation due to grazing is to be explained in detail.	<b>B1.3</b>	1) The available grazing area for the Project was estimated by map surrounding the project area. 2) Based on the enumeration and available grazing area for No.4 project, the animal/ ha is $665/10000 = 0.0665$ Animals generally spend 14 hours/ day in the reserve. (58% of a day) Therefore average time animal/ ha is $0.0665 \times 0.58 = 0.0386$ . Based on the estimate of the average grazing capacity as 0.5 (head/ha), the ratio of the average time animal/ha to grazing capacity is $0.0772 \approx 8\%$ Therefore, the displacement of the grazing animals due to the project activity is 8 % and less than 10%. The description of the PDD was revised.	1) OK  2) OK  The grazing area is estimated correctly (above 1)) and the grazing assessment is clear and suitable. The ratio of the average time of animal/ha to average grazing capacity of the project area is 8%. The grazing capacity is taken as 0.5 (head/ ha) and this is considered conservative.
<b>Clarification Request 5</b> (1) According to the back data given by NFA, the dry matter t/ha of Grass is 0.84 t/ha and not 0.59. Please explain the difference. (2) Below ground biomass is indicated in Table B-3 of the	<b>B.2.1</b>	(1) 0.59 is error and 0.84 is correct. The PDD was revised. (2) 0.08 is error and the correct data is 0.67 tC/ha. $(0.84/2 \times 1.6 = 0.67 \text{ tC/ha, } R = 1.6)$ The PDD was revised.	(1) OK, Dry matter t/ha of Grass is 0.59 (tab. B-3) in the PDD for GSC. It was correctly revised to 0.84 in the PDD for request for registration.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question table 2	Summary of project owner response	Validation team conclusion																																						
<p>PDD as 0.08 tC/ha. How was this value derived? (Below ground biomass is above ground biomass multiplied by Rgrass (1.6).)</p> <p>(3) In the table B-3 of the PDD version 05 for the project No.4, the scattered trees are taken into account in baseline calculation. On the other hand in case of the registered project No.3 (UNFCCC ref. 1578) whose site condition is similar to that of the project No.4, the scattered trees are not taken into account in the baseline calculation. The reason why scattered trees are taken into account in the baseline calculation of No.4 project is to be explained.</p>		<p>(3) The scattered trees are not part of the project area. The conditions are the same as project No.3. The table B-3 of the project No.4 PDD is revised.</p>	<p>(2) OK The wrong number in the PDD for GSC was corrected in the PDD for request for registration.</p> <p>(3) OK It was confirmed that the parameters for baseline biomass indicated in the table B-3 for the project No.4 is revised and they are the same as those of the registered project No.3. The revision is reflecting the site condition and appropriate.</p>																																						
<p><b>Clarification Request 6</b></p> <p>It is to be clarified whether the same BEF, WD and R as ex-ante estimate are applied to the ex-post estimate.</p>	<b>B.3.1</b>	The same BEF, WD and R will be used in the ex-post calculation.	OK																																						
<p><b>Clarification Request 7</b></p> <p>Method for estimating the actual net GHG removals by sinks is to be clearly indicated.</p>	<b>C.1.2</b>	The accounting methodology is provided in the TARAM tool and PDD is revised.	<p>OK The validation team confirmed the GHG removals by sinks are properly calculated using the TARAM tool under the conditions of table 2.</p> <p>The validation team concluded that the GHG removals calculation of table A-5 and C-2 of PDD version 07 is realistic and appropriate.</p>																																						
<p><b>Table 2: Comparison of calculation in PDD version 05 and version 07</b></p> <table> <tr> <th colspan="2">PDD version</th><th>Version 05 (for GSC)</th><th>Version 07 (for registration)</th></tr> <tr> <td colspan="2">Baseline removals</td><td>-9.63 x 347.1ha = -3343</td><td>-3.05 x 347.1ha = -1058.7<sup>(*)</sup></td></tr> <tr> <td colspan="2">Tree Species</td><td>Pine, Maesopsis, Prunus</td><td>Pine</td></tr> <tr> <td colspan="2">Yield model</td><td>Pine: by Adler et. Al (/11/) Maesopsis: by Buchholtz (/12/)</td><td>Pine: by Adler et. Al (/11/)</td></tr> <tr> <td rowspan="3">Parameters</td><td>WD</td><td>Pine: 0.45, Maesopsis: 0.5</td><td>Pine: 0.45</td></tr> <tr> <td>BEF</td><td>Pine: 1.32, Maesopsis: 1.4</td><td>Pine: 1.32</td></tr> <tr> <td>R</td><td>Pine: 0.25, Maesopsis: 0.2</td><td>Pine: 0.25</td></tr> <tr> <td colspan="2">Planting plan</td><td>2007: site preparation 2008: planting of 347.1ha</td><td>Actual planting plan<sup>(*)</sup></td></tr> <tr> <td colspan="2">Risk buffer</td><td>No buffer considered.</td><td>25% buffer is considered.</td></tr> <tr> <td colspan="2">Annual average GHG removals over the crediting period</td><td>5,561 tCO2</td><td>3969 tCO2</td></tr> </table> <p><sup>(*)</sup>: Refer to CL5</p> <p><sup>(*)</sup>: 47.07 ha (2008) + 1.33 ha (2009) + 68.94 ha (2010) + 229.76 ha (2011)= 347.1ha</p>				PDD version		Version 05 (for GSC)	Version 07 (for registration)	Baseline removals		-9.63 x 347.1ha = -3343	-3.05 x 347.1ha = -1058.7 <sup>(*)</sup>	Tree Species		Pine, Maesopsis, Prunus	Pine	Yield model		Pine: by Adler et. Al (/11/) Maesopsis: by Buchholtz (/12/)	Pine: by Adler et. Al (/11/)	Parameters	WD	Pine: 0.45, Maesopsis: 0.5	Pine: 0.45	BEF	Pine: 1.32, Maesopsis: 1.4	Pine: 1.32	R	Pine: 0.25, Maesopsis: 0.2	Pine: 0.25	Planting plan		2007: site preparation 2008: planting of 347.1ha	Actual planting plan <sup>(*)</sup>	Risk buffer		No buffer considered.	25% buffer is considered.	Annual average GHG removals over the crediting period		5,561 tCO2	3969 tCO2
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**APPOINTMENT CERTIFICATE of Validation team members /  
Technical Expert and CURRICULUM VITAE for Internal  
Verifiers****APPOINTMENT CERTIFICATE**

Validation team

**Teruo FUKUDA**

**Osamu KOBAYASHI**

Technical Expert

**Makino YAMADA YAMANOSHITA**

**CURRICULUM VITAE for Internal Verifiers**

**Yoshihiro OTSUKA**

**Shigekazu OKA**

**Noriyuki KOBAYASHI (Technical Advisor)**

## **APPOINTMENT CERTIFICATE**

**Mr. Teruo FUKUDA**

born on 14 March 1942

satisfies the requirements as specified in the JACO CDM Quality Manual and is hereby appointed as

**JACO CDM CDM Lead Auditor and  
Validation Team Leader for Uganda Nile Basin  
Reforestation Project No.1-5**

Tokyo, 19 December 2006



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Yoshihiro Otsuka

General Manager of the Business Development Division  
JACO CDM Co., Ltd.

**CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF**

**1. Name of Firm:** JACO CDM, Ltd.

**2. Name of Staff:** Teruo FUKUDA / Senior Chief Engineer, Assessment

**3. Qualification:** CDM lead auditor

**4. Employment Record:**

2004 - Present: Assessment Division of JACO CDM

- Verification team leader of China Xiaogushan Hydropower Project
- Validation team leader of Uganda Nile Basin AR Reforestation Project
- Verification team leader of “e7 Bhutan” CDM project
- Validation team member of Zafarana Windpower Project
- Validation team leader of “Fushun AN Plant “ CDM project
- Validation team sub-leader of “e7 Bhutan” CDM project
- Verification team leader of domestic GHG emission assessment projects

2002 - 2004: Technical Advisor of Japan AE Power Systems Corporation

1998 - 2002: Director and manager of Environmental department, Japan Electrical  
Manufacturers Association

1967 - 1998: Hitachi, Ltd. Head Office

**5. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned:**

- Verification e7 Bhutan project: acted as a leader and made a verification report
- Verification of China Xiaogushan Hydropower Project: acted as a leader
- Validation of “Energy Recovery Project from Multistage Combustion treatment of Off-gas and Wastewater of the AN Plant of Fushun Chemical Company” (Trial project sponsored by Government of Japan, MOE): Acted as a validation team leader
- Validation of e7 Bhutan project: acted as a sub-leader and made a validation report and registration for EB

## **APPOINTMENT CERTIFICATE**

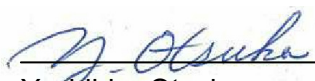
**Mr. Osamu KOBAYASHI**

born on 22 February 1947

satisfies the requirements as specified in the JACO CDM Quality Manual and is hereby appointed as

**JACO CDM CDM Lead Auditor and  
Validation Team Member for Uganda Nile  
Basin Reforestation Project No.1-5**

Tokyo, 19 December 2006



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Yoshihiro Otsuka

General Manager of the Business Development Division  
JACO CDM Co., Ltd.

**CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF**

**1. Name of Firm:** JACO CDM, Ltd.

**2. Name of Staff:** Teruo FUKUDA / Senior Chief Engineer, Assessment

**3. Qualification:** CDM lead auditor

**4. Employment Record:**

2007 – Present: Manager of Assessment Division of JACO CDM

2004 - 2007: Assessment Division of JACO CDM

- Validation team member of Uganda Nile Basin AR Reforestation Project
- Determination team leader of Kaliakra Windpower Project in Bulgaria (JI project)
- Verification team member of “e7 Bhutan” CDM project
- Validation team leader of Zafarana Windpower Project
- Validation team leader of “e7 Bhutan” CDM project
- Verification team leader of domestic GHG emission assessment projects

2002 - 2004: Japan Audit and Certification Organization for Environment and Quality

1970- 2002: Fuji Electric Holdings Co., Ltd.

**5. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned:**

- Verification team member of “e7 Bhutan Micro Hydro Power CDM Project”
- Validation team leader of Kaliakra Windpower Project in Bulgaria
- Validation team leader of Zafarana Windpower Project in Egypt
- Validation team leader of “e7 Bhutan Micro Hydro Power CDM Project”
- Verification team leader of domestic GHG emission assessment projects

## **APPOINTMENT CERTIFICATE**

**Ms. Makino YAMADA YAMANOSHITA**

born on 25 November 1972

satisfies the requirements as specified in the JACO CDM Quality Manual and is hereby appointed as

**Technical Expert for AR-CDM Project for  
Validation of Uganda Nile Basin Reforestation  
Project No.1-5**

Tokyo, 19 December 2006



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Yoshihiro Otsuka

General Manager of the Business Development Division  
JACO CDM Co., Ltd.

**CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF**

1. **Name of Firm:** Japan Overseas Plantation Center for Pulpwood
2. **Name of Staff:** Makino YAMADA YAMANOSHITA
3. **Membership of Professional Association:** The Japanese Forest Society
4. **Other Training:**
  - Training course for establishing tropical plantations by JIFPRO in 2002.
  - Capacity Building for AR-CDM project by JIFPRO in 2004
5. **Countries of Work Experience: Japan**  
Research Experience in Vietnam, Thailand, Australia, Uruguay, Brazil, Chile, Guyana and South Africa
6. **Employment Record:**  
1998 - Present: Researcher / Japan Overseas Plantation Center for Pulpwood

7.

Detailed Tasks Assigned	Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
<ul style="list-style-type: none"><li>-Capacity building on AR-CDM for Vietnamese government and researchers</li><li>-Develop a small scale AR-CDM project</li></ul>	Name of assignment or project: The Study on Capability Development for AR-CDM Promotion  Year: 2006-2008  Location: Vietnam  Client: Japan International Cooperation Agency(JICA)  Main project features: Capacity building of the Forestry Institute and Forestry University in Vietnam and develop a small scale AR-CDM project in Hoa Binh Province  Position held: Experts on AR CDM  Activities performed: Lecture in seminars, field research, PDD development and report making
<ul style="list-style-type: none"><li>-Development of investment model for AR CDM</li></ul>	Name of assignment or project: Investment Model of AR CDM  Year: 2006-2008  Location: Japan

<p>-Province information of AR CDM to potential investors</p>	<p>Client: The Forestry Agency of Japan</p> <p>Main project features: Developing a investment model of AR CDM for project developers and investors of the temporary CER</p> <p>Position held: Experts on AR CDM</p> <p>Activities performed: Investment analysis and report making</p>
<p>-Providing guidelines for developing AR- CDM project</p> <p>-Providing basic information of AR-CDM to investors and developer in Japan</p>	<p>Name of assignment or project: Technical guidelines for developing AR-CDM project</p> <p>Year: 2003-2008</p> <p>Location: Vietnam, Indonesia, Uruguay</p> <p>Client: The Forestry Agency of Japan</p> <p>Main project features: Making guidelines for the developer of AR-CDM project</p> <p>Position held: Experts on AR CDM</p> <p>Activities performed: Field research and report making</p>
<p>-A feasibility study of AR CDM on the industrial plantation sites for pulpwood production</p>	<p>Name of assignment or project: Model project for AR-CDM and JI</p> <p>Year: 2002-2004</p> <p>Location: Vietnam, Australia</p> <p>Client: Japan Paper Association</p> <p>Main project features: Using industrial plantation sites in Australia and Vietnam as a case study, the models are developed with different baselines and tree growth patterns.</p> <p>Position held: Experts on AR CDM</p> <p>Activities performed: Field research and report making</p>




<p>-Evaluation of the potential carbon stock in the industrial plantation for pulpwood</p>	<p>Name of assignment or project: Evaluation of Carbon Accumulation in Industrial Plantation for Pulpwood</p> <p>Year: 1998-1999</p> <p>Location: Vietnam, Australia, Chile, India</p> <p>Client: Ministry of Economy, Trade and Industry</p> <p>Main project features: Evaluating the Carbon stock in the industrial plantations for the future carbon trading and biomass energy utilization.</p> <p>Position held: Experts on Forest Ecology</p> <p>Activities performed: Field research, analysis in laboratory and report making</p>
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## CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. **Proposed Position :** CDM Internal Auditor, Project manager
2. **Name of Firm:** JACO CDM., Ltd.
3. **Name of Staff:** Yoshihiro OTSUKA
4. **Date of Birth:** January 27, 1948 , **Nationality:** JAPAN
5. **Education:** Graduated from Faculty of Engineering, Chemical Engineering, Chiba University in 1970
6. **Qualification:**  
CDM Lead Auditor  
JRCA accredited Quality Auditor  
CEAR accredited Environment Auditor
7. **Countries of Work Experience:** Japan, USA
8. **Languages:** Mother language: Japanese  
Other language: Good in speaking, reading and writing in English
9. **Employment Record:**  
2003 – Present: Director and General Manager of JACO CDM  
2002 – 2003: Director of JACO Management System Co. Ltd.  
1997 – 2002: Director of Tokai Branch, SONY Human Capital Corporation  
1994 – 1997: Director of SONY Display Tube Co. Ltd. USA  
1983 – 1994: Project Leader of “32 inches CRT”, SONY Inazawa Factory  
1979 – 1983: SONY San Diego Factory, USA  
1970 – 1979: SONY CRT Tube Manufacturing Division
10. **Detailed Tasks Assigned (Proposed)**  
CDM Internal Auditor, Project manager for Capacity Building Project
11. **Work Undertaken that Best Illustrates Capability of Handle the Tasks Assigned:**  
Planning, administration and dispatch of instructors for validator and verifier 5days course sponsored by METI (Japanese Government) (In 2004, 2005 and 2006, 3 times)
12. **Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

 Date: June 13, 2006

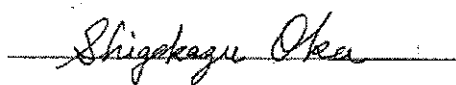
Full name of authorized representative: Yoshihiro OTSUKA

## CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. Proposed Position: Internal verifier
2. Name of Firm: JACO CDM, Ltd.
3. Name of Staff: Shigekazu OKA
4. Date of Birth: January 02, 1945 Nationality: Japan
5. Education: Graduated from Faculty of Engineering, Tokyo University in 1968
6. Qualification: manager in charge of pollution control, health administer, health controller in health engineering, RST Trainer, CEAR accredited Environmental lead auditor (A 1658)
7. Membership of Professional Associations: Full member of Japan Society of Mechanical Engineers
8. Countries of Work Experience: Japan
9. Languages: Mother language: Japanese  
Other languages: Good in speaking, reading and writing in English
10. Employment Record :
  - 2004 - Present: Manager of Assessment Division of JACO CDM
    - Verification team leader of domestic GHG emission assessment projects
  - 2000 - 2004: Japan Audit and Certification Organization for Environment and Quality
  - 1968 - 2000: Hitachi, Ltd.
    - \*The manager of Production Technology Department
    - \*Lead the operation of EMS
    - \*Engaged in development of the elemental technology of new series, development of automation of production facilities and the rationalization of refrigerators, etc.
11. Detailed Tasks Assigned: Internal Verifier
12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned:

Validation of "Introduction of Gas turbine co-generation system" to Semiconductor Company Nagaoka Factory of Matsushita Electric Industrial Co., Ltd. (Trial Project sponsored by Government of JAPAN, MOE)
13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



Date: 2 April 2007

Full name of authorized representative: Yoshihiro Otsuka

### 3F. CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

**Proposed Position:** Technical Advisor

**Name of Firm:** Law School of Nihon University  
Nihon University

**Name of Staff:** Noriyuki KOBAYASHI

**Profession:** Professor of Law School, Nihon University  
Professor of Bioresources Science of Nihon University

**Date of Birth:** August 9, 1940

**Years with Firm/Entity:** one year

**Nationality:** Japan

**Membership in Professional Societies:**

Expert Reviewer of the IPCC Fourth Assessment Report  
Member of Government Committees related with CDM, Forest Sink  
Member of Committee of the Technical Advisory Board of Bio Carbon Fund

**Detailed Tasks Assigned:** Technical Advisor for AR CDM

**Key Qualifications:** Ph.D.

**Education:**

1964 Graduated from Hokkaido University, Agriculture Department, Forestry  
2000 Ph.D., (Hokkaido University)

**Employment Record:**

2004 Professor of Law School, Nihon University  
Professor of Bioresources Science of Nihon University  
2003 Retired from Sumitomo Forestry Co., Ltd.  
2001 Chief Research Fellow of Sumitomo Forestry Co., Ltd.  
1998 Supervisory Officer of Sumitomo Forestry Co., Ltd.  
1991 General Manager of Green Environmental Department of Sumitomo Forestry Co., Ltd.

1987 General Manager of Overseas Department of Sumitomo Forestry Co., Ltd.  
1964 Entered to Sumitomo Forestry Co., Ltd.

**Part Time Lecture:**

Tokyo University of Agriculture and Technology  
Shinsyu University

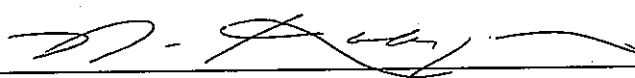
**Languages:**

Mother Language: Japanese

Other Languages: Excellent in speaking, reading and writing in English

**Certification:**

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experience, and me.

  
\_\_\_\_\_  
[Signature of staff member and authorized representative of the firm]

Date: 13, DEC, 2005  
Day/Month/Year

Full name of staff member: Noriyuki Kobayashi

Full name of authorized representative: Yoshihiro Otsuka

