Voluntary Carbon Standard 2007

Validation Report

Report No. 1261936

Name of Verification Company:	**Date of the issue:**
TÜV SÜD Industrie Service GmbH	17 July 2009
Report Title:	**Approved by:**
Validation Report: Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania	TÜV SÜD Industrie Service GmbH; Certification Body "Climate and Energy"
Client:	**Project Title:**
Green Resources Ltd. Uhuru Road/P. O. Box 4730 Mwalimu House Dar es Salaam United Republic of Tanzania	Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania

Summary:
TÜV SÜD has performed the validation of the proposed VCS project activity "Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania". The project is designed under the AFOLU project category of Afforestation, Reforestation and Revegetation (ARR). It consists in the reforestation of 10,814 ha of grasslands with commercial tree species (*Pinus Patula* and *Eucalyptus spp*) through direct planting. The project consists of two discrete parcels: Uchindile Forest Project (7,252 ha) and Mapanda Forest Project (3,562 ha), both located south-eastern Tanzania. The project is expected to sequester 3,538,663 tons of CO_2-eq (long-term average) over a 99-years fixed crediting period. Considering the VCS AFOLU buffer of 40% as of time of validation, the project is expected to generate 2,123,198 VCUs. The project participants are Green Resources AS and its Tanzanian subsidiary Green Resources Limited. The purpose of this validation is an independent assessment by a Third Party (TÜV SÜD) of the proposed project activity against the VCS standards and criteria and the selected approved CDM methodology AR-AM0005 version 03. The review of the project documents, the subsequent follow-up interviews with relevant stakeholders, onsite visits, and a review of background information have provided TÜV SÜD with sufficient evidence to assess the fulfilment of all stated criteria. In our opinion, the project meets all relevant VCS requirements.

Work carried out by:	Number of pages:
Martin Schröder (Assessment Team Leader) Hubertus Schmidtke (PhD) (GHG Auditor) Sebastian Hetsch (GHG Auditor)	86

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Abbreviations

AR-AM	Approved Methodology for Afforestation / Reforestation
ARR	Afforestation, Reforestation, Revegetation
AFOLU	Agriculture, Forestry and Other Land Use
CAR	Corrective Action Request
CB	TÜV SÜD Certification Body “climate and energy”
CDM	Clean Development Mechanism
CR	Clarification Request
DOE	Designated Operational Entity
EB	Executive Board at the UNFCCC
EF	Emission Factor
EIA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Green House Gas(es)
GIS	Geographic Information System
GPG	Good Practice Guidance
GPS	Global Positioning System
GRL	Green Resources Limited
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
KP	Kyoto Protocol
LULUCF	Land-Use, Land-Use Change and Forestry
MP	Monitoring Plan
NGO	Non Governmental Organisation
PD	Project Document
PP	Project Participant
SOP	Standard Operating Procedure
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reduction
VCS	Voluntary Carbon Standard

1 Introduction

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Voluntary Carbon Standard (VCS). Validation is part of the VCS project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid.

The project activity discussed by this validation report has been submitted under the project title: “Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania”

1.2 Scope and Criteria

In the case of VCS project activities the scope of the assessment is set by:

- the VCS Standard 2007.1;
- Voluntary Carbon Standard Program Guidelines 2007.1;
- Tool for AFOLU Methodological Issues;
- Tool for AFOLU Non-Permanence Risk Analysis and Buffer Determination;
- Guidance for Agriculture, Forestry and Other Land Use Projects (AFOLU), VCS 2007.1.

The following documents are also taken into account in the VCS validation, as a CDM methodology was used:

- the Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM;
- further COP/MOP decisions with reference to the CDM (e.g. decisions 4-8/CMP.1);
- decisions and specific guidance by the EB published under http://cdm.unfccc.int;
- approved baseline and monitoring methodologies (including GHG inventories).

Further criteria and scope for the VCS validation also include:

- Standard auditing methods for management systems;
- Good practice in the respective technology and sectoral scope, including environmental and social impacts.

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

Once TÜV SÜD receives a first PD version, it is made publicly available on TÜV SÜD's webpage. Based on this initial version, a document review is conducted to check the applicability and completeness of the information. At the end of the validation process, the final PD will form the basis for the final evaluation as presented in this report.

The purpose of a validation is its use during the registration process as part of the VCS project cycle. Hence, TÜV SÜD cannot be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

1.3 VCS Project Description

The following description of the project as per PD was verified during the on-site audit:

The project activity is the reforestation of 10,814 ha of grass land with commercial tree species through direct planting in the districts of Kilombero, Morogoro Region and Mufindi, Iringa Region. The selected species are Eucalyptus (*Eucalyptus Saligna, E. Globulus, E. Camadulensis*) and Pine (*Pinus Patula*). The project aims at sequestering a long term average of 3,538,663 tons of CO_2-eq over a fixed crediting period of 99 years. Considering the VCS AFOLU buffer of 40% as of time of validation, the project is expected to generate 2,123,198 VCUs.

In the baseline setting the areas is covered with grass with a few isolated trees and shrubs, which are maintained through regular burning of the area.

The overall objective of the project is to establish and manage forest plantations to supply wood raw material and products. Further the project aims to contribute to carbon sequestration, conservation of adjacent forest ecosystems by reducing pressure, socio-economic development of local communities and improvement of infrastructure in the region. In addition to the VCS certification, the project further aims at receiving FCS certification for sustainable forest management

The project started in 1997; at that time it was assessed by an independent carbon monitoring expert for its potential to sequester carbon. In 2007 a validation process by TÜV SÜD was initiated under the UNFCCC CDM, but the project was then withdrawn from the UNFCCC process, as it did not meet CDM requirements regarding the starting date.

1.4 Level of Assurance

The validation is based on the information made available to us, as well as the engagement conditions detailed in this report. The validation has been performed following the VCS requirements and the Validation Opinion provided in this report is considered reasonably assured based on the document review, the evidence provided, the onsite visit, interviews with project proponents and stakeholders as

well as further research on internet and country expertise of the validation team.

2 Methodology

The project assessment applies standard auditing techniques to assess the correctness of the information provided by the project participants. The work starts with the appointment of the team covering the technical scope(s), sectoral scope(s) and relevant host country experience for evaluating the VCS project activity. Once the initial PD is received, members of the team carry out the desk review, follow-up actions, onsite visit, resolution of issues identified and finally preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the Certification Body "Climate and Energy" of TÜV SÜD, before final submission of the validation report.

The background material is clearly referenced and included to Annex 2, in order to ensure transparency and to clearly state assumptions made in the report. TÜV SÜD developed methodology-specific checklists and protocols customised for the project. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

- to organise, detail and clarify the requirements a VCS project is expected to meet;
- to ensure a transparent validation process where the validator documents how a particular requirement was validated and the result of the validation as well as any adjustment made to the project design.

The validation protocol consists of six tables. The different columns in these tables are described in the figure below.

Validation Protocol Table 1: Conformity of Project Activity and PD **Validation Protocol Table 3: Conformity of Methodology** **Validation Protocol Table 5: Conformity of Risk Assessment**				
Checklist Topic / Question	**Reference**	**Comments**	**First PD (Draft Conclusion)**	**Final PD (Final Conclusion)**
The checklist is organised in sections following the arrangement of the applied PD	Gives reference to documents where the answer to the checklist question or item	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It	Conclusions are presented based on the assessment of the first PD version. This is either acceptable based on evidence	Conclusions are presented in the same manner based on the assessment of the final PD version and further documents

version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.	is found in case the comment refers to documents other than the PD.	is further used to explain the conclusions reached. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column	provided (☑), or a **Corrective Action Request** (**CAR**) due to non-compliance with the checklist question (See below). **Clarification Request** (**CR**) is used when the validation team has identified a need for further clarification. **Forward Action Request** (**FAR**) to highlight issues related to project implementation that require a review during the first verification.	including assumptions presented in the documentation.

Validation Protocol Table 2, Table 4, Table 6: **Resolution of Corrective Action and Clarification Requests for each Table of the Validation Protocol**			
Clarifications and corrective action requests	**Ref. to table 1**	**Summary of project owner response**	**Validation team conclusion**
If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.	Reference to the checklist question number in Table 1 where the issue is explained.	The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the discussion on and revision to project documentation together with the validation team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final PD".

The completed validation protocol is enclosed in Annex 1 to this report.

2.1 Review of Documents

The project was first submitted to TÜV SÜD for validation under the CDM in 2007. Corresponding document review and onsite visits were conducted in 2007. The project participants then decided to withdraw the project from the UNFCCC process, among others as the starting date was prior to the year 2000, which is not eligible under the CDM. In 2008 the PP submitted the project documents for validation under VCS, since a starting date before 2000 is not a criterion for exclusion of the project activity under VCS. Additional documents were reviewed and an additional onsite visit was conducted in 2008.

A first version of the PD for VCS validation (based on the earlier CDM PDD) was submitted by the PP to TÜV SÜD in November 2008. This PD version and additional background documents related to the project design and baseline were reviewed to verify the correctness, credibility and interpretation of the presented information, furthermore a cross-check between information provided and information from other sources was carried out as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as Annex 2 to this report.

During the validation process the team made reference to available information related to similar projects or technologies as the VCS project activity. The documentation was also reviewed against the approved methodology to confirm the appropriateness of formulae and correctness of calculations.

2.2 Follow-up Interviews

On 09-16 December 2008 TÜV SÜD performed interviews with project stakeholders and a physical site inspection to confirm relevant information and to resolve issues identified in the first document review. In addition interviews conducted during the onsite visit for the earlier CDM validation (31-27 August 2007) were also taken into account during validation of the VCS project. The table below provides a list of all persons interviewed in this context:

Name	Organisation
Peter Nguye	Inventory Officer, Green Resources Limited (GRL)
Jakob Sandven	Inventory and Monitoring Manager
Nina Lande	Carbon Certification Specialist
Aziz A Abisu	Environmental Officer
Mashambah Philipo	Soil and Site Analyst Officer
Zawjia Omary	Ecology and Documentation Officer
Samson Msilu	Community Development Officer, GRL
Kazaula Geofrey	Project Surveyor, GRL
Dr. P.M. Mussami	Researcher and Monitoring Officer, GRL

Kisondela A.A	GIS + Mapping Manager, GRL
Dr. Moses Ngegba	Carbon Certification Manager Tanzania, GRL
Peter Myegeta	Chief GIS and Mapping Officer, GRL
Hamza Omary	Monitoring Officer, GRL
Eliya Mtupile	CCBA Officer, GRL
Victor Kimey	FSC Officer, GRL
Jenny Henman	Carbon Offset Certificate Manager Green Resources AS
Aloyce Kimaryo	Mapanda Project , GRL
Sylvester Luwagile	Uchindile Project Manager, GRL
Mwamki Ngibuini	Development Director (former Managing Director), GRL
Neemaeli, Ussiri	Community projects GRL
Vincent Nambombe	Forestry Manager GRL
Bartholomew Lyimo	CDM Manager GRL
Eveline Trines	Certification Manager GRL
Alphaxad G Magome	District Natural Resource Officer, Mafinga, Uchindile
Shabari Juma Mgaya,	Ward Executive Officer, Uchindile
Charles Anton Ngondagh	Ward Education Coordinator, Uchindile
Humphrey Matimbwi	Village Chairman, Uchindile
Mbola Enock	Agricultural and Veterinarian Extension Officer, Uchindile
Edison Kisawa	Village Representative, Uchindile

2.3 Resolution of any Material Discrepancy

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the validation protocol in Annex 1.

The final PD version that was submitted in July 2009 served as the basis for the final assessment presented herewith.

3 Validation Findings

3.1 Project Design

3.1.1 Project Boundary

The project boundary was assessed in the context of physical site inspection, interviews and based on the secondary evidence received on the design of the project.

The project boundary includes 10,814 ha, 7,252 ha in Uchindile and 3,562 in Mapanda. The boundary as defined in the field was found to be consistent with the indications in the PD. In the field the boundary delineation was taken based on GPS data and GIS analysis.

Complementary to the field visits of the audit team, the most relevant documents assessed in order to confirm the project boundary are the following:

- GIS files on the project boundary as provided by the PPs (IRL 55, 56, 70)
- GPS coordinates as gathered during the onsite visit by the audit team (IRL 71)

The emissions sources and gases included to the project boundary are combustion of fossil fuels and burning of above ground biomass and their respective gases. These sources and their main gases are considered by the selected AR-AM0005 CDM methodology.

The boundaries have been assessed during the validation process using standard audit techniques, further details of any observation are presented in the Annex 1.

3.1.2 Technology Used

The project will reforest the area through direct, manual planting. Overall 4,152 ha of Eucalypt and 6,662 ha of Pine are envisioned to be planted between 1997 and 2013 (IRL 6, 7). At time of validation, 38% of the plantation was already established (2,416 ha Pine and 1,652 ha Eucalypt)

The establishment of the plantation follows regular forest management techniques and is described in detail in the PD and the corresponding forest management plan (IRL 6, 7). It is considered that the technology used is in line with typical forestry techniques and that they are appropriate for the proposed project activity.

3.1.3 Project Duration, Crediting Time and Project Start Date

The starting date of the project is 01 January 1997 (IRL 6, 7). The crediting period is fixed at 99 years, which is consistent with the VCS 2007.1 requirement for AFOLU projects.

VCS requirements for pre-2002 starting date were met, as the project applied an externally reviewed methodology and engaged the auditing company SGS as independent experts to assess and quantify the project’s baseline scenario and net emissions reductions or removals

(IRL 72). This assessment was finalized in 2000. Further evidence of early carbon finance consideration was assessed during the validation process: A statement from the managing director of Green Resources AS, as well as critical assessments of eNGOs sustain the early consideration of carbon finance, and underline that this project was one of the first projects worldwide that took reference to the emerging Kyoto Protocol (IRL 85, 86, 87).

The start of the crediting period is 1 January 2002, which is in compliance with the VCS. The GHG removals between the time of project start and start of crediting period is not accounted for in the ex-ante estimates.

3.1.4 Ownership and Carbon Rights

The land is under control of the project proponent Green Resources Limited, which is clearly sustained with the corresponding land title (IRL 12).

Based on review of recognized registries of VER standards, TÜV SÜD has not detected indications that the same project activity is included to other standards or schemes intended to generate Voluntary Emission Reductions. This was furthermore confirmed in writing by the project participants (IRL 74).

Nonetheless, as double counting cannot be fully excluded based on the assessment carried out, TÜV SÜD refrains from any liabilities related to the potential double counting of carbon rights.

The ownership of the carbon rights are considered to be held by the project participant. This conclusion has been reached based on the fact that the participant Green Resources Limited is the owner of the land. However, as the holding of carbon rights may be impacted by other legislation or contracts not subject to the audit service, TÜV SÜD refrains from any liabilities related to the legal holding of carbon rights.

3.1.5 Project applicability to the VCS for projects rejected under other GHG programme (if applicable)

In 2007 the project was validated under CDM and then withdrawn by the PP, since the starting date in 1997 was not in compliance with CDM rules (IRL 75). VCS however accepts a starting date of the project prior to 2002, if the project applied an externally reviewed methodology and engaged in-dependent carbon monitoring experts to assess and quantify the project’s baseline scenario and net emissions reductions or removals. In the case of this project, SGS conducted a “GHG project verification and certification” in 2000 (IRL 21), which fulfils the early start criteria of VCS. Further documents were provided, sustaining early carbon finance consideration (IRL 72).

3.1.6 Eligibility

The project is designed under the VCS AFOLU project category of Afforestation, Reforestation and Revegetation (ARR).

In regard to eligibility of lands, the project area was visited extensively during field campaigns by the audit team and found to fully comply with the requirements of the AFOLU guidance (VCS 2007.1, 2008).

Tanzania has not yet defined the threshold for forest in the AR-CDM context (IRL 31). Therefore the PPs decided to chose a forest definition of 3 m minimum height, 30 % crown cover and a minimum area of 1 hectare. This definition coincides with verbal indications from the government of Tanzania of the likely definition and is in line with the Marrakesh Accords (IRL 83).

The assessment of eligibility was inter alia based on the following evidence:

- Topographic maps of 1985 (IRL 68)
- Satellite image: Landsat 1995 for Uchindile (IRL 76) and Landsat 2000 for Mapanda (IRL 77)
- Survey to assess the baseline vegetation prior to project start (IRL 78).

During the onsite visit the audit team was able to further confirm that there was no evidence on existence of forests prior of project start (IRL 71). The baseline vegetation was below the forest threshold and was considered to remain below the threshold without the project activity. Jointly with the local stakeholders interviewed by the audit team confirming the above (IRL 1), the available evidence is considered to sustain land eligibility as per VCS requirements.

3.2 Baseline

3.2.1 Baseline Methodology

In regard to the baseline methodology the approach as defined by the AR-AM00005 version 03 was applied. The section 3.2.2 below provides further detail on the correct application and justification of the methodology.

3.2.2 Applicability of the Selected VCS Approved Methodology

Compliance with each applicability condition as listed in the chosen UNFCCC CDM baseline and monitoring methodology AR-AM0005 version 03 was demonstrated. An assessment was carried out for each applicability criterion and included, among others, the compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources, which sustained that applicability conditions are complied with. Among others, the following documents confirmed the applicability conditions:

- Topographic maps of 1985 (IRL 68)
- Survey to assess the baseline vegetation prior to project start (IRL 78)

- Satellite image: Landsat 1995 for Uchindile (IRL 76) and Landsat 2000 for Mapanda (IRL 77)

The methodology specific protocol, included to the Annex 1, documents the assessment process, which also includes the steps taken. The results on the compliance check, as well as the relevant evidence, are detailed in Annex 1.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

3.2.3 Baseline Scenario

Based on the evidence provided and the discussion held with the project participants during the onsite visit, it was confirmed that the continuation of land degradation is the most likely baseline scenario in the absence of the project activity.

A baseline reforestation rate as considered by the methodology was estimated. It was concluded that this rate was negligible at the time of project start (compare common practice analysis section 3.2.4).

3.2.4 Additionality

The additionality of the project has been presented in the PD using following approach: Additionality tool for AR-CDM (IRL 32) using the barrier analysis. This analysis fulfils the requirements of the VCS Additionality Project Test.

TÜV SÜD validated the information presented in the PD first by a document review, further confirmed based on the on-site visit and finally cross-checked with similar relevant projects and/or technologies. During the field visit additionality was discussed principally with the project team of Green Resources Limited. Furthermore relevant documents were reviewed on-site (Annex 2) and interviews on this matter were carried out with stakeholders (IRL 1). Finally the data, rationales, assumptions, justifications and documentation provided have been checked using local knowledge and sectoral and financial expertise. Based on these validation steps we can confirm that the documentation assessed is appropriate for this project. Further analysis of project additionality is summarized in the sections below.

In essence, the project is considered additional as non-forest lands area would not be reforested which otherwise would have remained degraded with partial grazing, among others due to unavailability of funding for long term reforestation projects.

Start date and prior consideration of carbon finances

The project activity started on 01 January 1997 with the start of the planting operation. The starting date is sustained with the corresponding project and planting schedule (IRL 6, 7). As described in section 3.1.3 of this report, the project is in compliance with early start requirements as defined by the VCS (IRL 21, 72, 85, 86, 87).

Identifications of alternatives

The output of the project is: timber plantations to supply wood raw material and offer employment.

Relevant alternatives (baseline scenario) identified in the context of the additionality test apart from the project activity without the carbon finance component is only the continuation of the pre-project situation: unmanaged grasslands with occasional burning of the vegetation.

Based on the evidence provided and the discussion held with the project participants during the onsite visit, it is credible that the continuation of land degradation is the most likely scenario in the absence of the project activity.

TÜV SÜD has determined that no reasonable alternative scenario has been excluded. Based on the validated assumptions TÜV SÜD considers that the identified baseline scenario is reasonable.

TÜV SÜD confirms that all relevant VCS requirements, including relevant and / or sectoral policies and circumstances, have been identified correctly taken into account in the definition of the baseline scenario.

A verifiable description of the baseline scenario has been included to the PD. The list of identified alternatives is considered to be complete.

Barrier analysis

The project participants used the barrier analysis in order to demonstrate the additionality of the project. The presented barriers are:

- Investment barrier
- Technological barrier
- Institutional barrier
- Market risk

The main barrier preventing the implementation of the project without carbon credits is the investment barrier. Due to the long-term period of repayment, banks were reluctant to offer funds required to conduct the project activity. The barrier is sustained and was assessed against documents such as statements of several banks in Tanzania on the non-availability of funds for such a project (IRL 29, 88). Further details are discussed in Annex 1. It has been confirmed that no alternative financing was available for the project activity at the time of project start and that it became available through the project and its carbon component. Furthermore, as demonstrated below in the common practice analysis, the other barriers (technological and institutional barrier) are related to the lack of experience and tradition on the land use as verified during the onsite visit.

The result of this assessment shows that the barriers presented in the PD can be considered real. The barriers prevent the project activity

from being implemented while it would not prevent the baseline of the project. This was confirmed based on the documentation review, interviews and local and sectoral expertise of the assessment team. The latter has been i.e. confirmed by the interviewed stakeholders.

Taking into account the description of the validation of the barrier presented above, the assessment team can confirm with reasonable certainty that the barriers are credible and correctly presented to demonstrate the additionality of the project.

Common practice analysis

The region for the common practice analysis has been defined as the geographical area of the Southern Highlands of Tanzania. The assessment team has reviewed the approach presented in the PD and can confirm that relevant parameters such as location, ecological conditions, economical situation, and development have been taken into account in order to define the region. The chosen region has unique characteristics in regard to forest structure, population structure and ethnic minorities. Therefore, the presented approach can be considered appropriate for the common practice analysis.

It was noted that there are some reforestations in the region, which are mainly related to a former state-driven and World Bank financed programme, which has expired (operational 1976-1991). Due to the expiration of the programme and the fact that the reforestation in the region remained insignificant prior to the starting date of the project activity, baseline reforestation rates were considered insignificant. This was also cross-checked by independent sources such as statistics on plantations in Tanzania from the Global Forest Resource Assessment 2005 by FAO (IRL 84). Participant specific baseline reforestation rates (as foreseen by the methodology) are considered negligible, as the first reforestations which took place in 1997 are already considered part of the project.

Therefore, it can be confirmed that the proposed VCS activity is not a common practice in the defined region, while considering the specific project design.

3.3 Monitoring Plan

3.3.1 Monitoring Plan

The compliance of the applicability of the monitoring methodology AR-AM0005 version 03 is demonstrated in section 3.2.1. The assessment team has checked all the parameters presented in the monitoring plan against the requirements of the methodology.

For the monitoring of carbon stock changes the requirements and parameter list as per methodology were followed. Monitoring of GHG emissions and leakage is not included in the monitoring plan, as it is not considered significant, as explained in the respective section (3.4.3).

The monitoring plan was included to the project documentation. The boundary and management monitoring was defined specifically for the project context.

The sampling design was reviewed onsite. Good practice in forestry inventory was demonstrated and the project showed well developed forest expertise for these purposes (IRL 24). The available procedures have been reviewed by the assessment team through document review and interviews with the relevant personnel. This information together with a physical inspection allows the assessment team to confirm that the proposed monitoring plan is feasible within the project design.

The major parameters to be monitored were discussed with the PPs, as well as the inventory processes, data management, quality assurance and quality control procedures that will be implemented in the context of the project. The PPs developed Standard Operating Procedures (SOP) towards carbon monitoring in order to ensure the collection of reliable field data (IRL 82).

The frequency of the data collection for monitoring depends on each specific parameter considered in the monitoring plan included to the PD and it is clearly indicated and cross checked to be in line with the methodology requirements. The monitoring plan will be implemented by Green Resources Limited as discussed with the PPs during the onsite visit.

3.4 Calculation of GHG Emissions Reductions

3.4.1 Carbon Pools and Emission Sources

The project is expected to sequester 3,538,663 tonnes of CO_2-eq which is found to be in line with the VCS AFOLU guidelines Step 6 of the “Tool for Methodological Issues”.

The baseline carbon stocks and removals assessed for the above- and below-ground carbon pools are based on adequate inventory data as well as defaults that are consistent with the field conditions.

The selected carbon pools for the project scenario are above-ground and below-ground biomass while litter and soil organic carbon are not considered. Therefore the verifiable change in carbon stocks is equal to the carbon stock changes in above-ground biomass and below-ground biomass. Credible justification on the selection of the carbon pools is included to the PD and this was verified to be in line with the methodology requirements.

3.4.2 Formulas and Factors Used

The parameters and equations presented in the PD and further documentation were compared with the information and requirements presented in the methodology and respective tools. The equation comparison was made explicitly following all the formulae presented in the calculation files.

TÜV SÜD has assessed the calculations of baseline stocks and removals, project emissions, leakage and the expected net anthropogenic GHG removals by sinks. Corresponding calculations were carried out based

on calculation spreadsheets (IRL 52, 53, 57). Correctness of calculations can be confirmed as the same have been replicated by the audit team using the information provided. The values and estimates presented in the PD are considered reasonable based on the documentation reviewed, further references and the result of the interviews.

Based on the information reviewed it can also be confirmed that the sources used are correctly quoted and interpreted in the PD. All assumptions and data indicated in the PD and all relevant sources have been checked and confirmed (IRL 79). Detailed information on the verification of parameters used in the equations can be found in Annex 1.

In essence, the methodology has been correctly applied following the requirements. Hence, the calculation of baseline stocks and removals as well as the expected project emissions, leakage and the net anthropogenic GHG removals by sinks can be considered as correct and in line with the methodology.

3.4.3 Project emissions

The methodology considers emissions from combustion of fossil fuel, biomass loss in site preparation and biomass burn. These sources were discussed in the PD, respectively in the audit process.

According to EB 44 meeting report, the GHG emissions from fossil fuel combustion may be neglected in A/R CDM project activities. Therefore, this source is considered insignificant.

Biomass burning as potential source according to the methodology was not considered for ex-ante estimates, as only limited amounts are expected from burning of fire breaks. However it is included in the monitoring plan.

3.4.4 Assumptions and estimates for GHG net anthropogenic removals

The estimates on the expected anthropogenic removals which are likely to be achieved by the envisioned reforestations under the project scenario were based on species specific growth models for Eucalypt (IRL 50) and Pine (IRL 51) and have been carried out in line with methodology requirements.

The strata as well as thinning, mortality and harvest events of the plantation are considered in this context. The equations used for biomass expansion factors are from published sources (IRL 79, 80). The Carbon Fraction was set as 0.5, as per default, the Root-to-Shoot Ratio were taken from IPCC (IRL 79), and Wood Density is taken from IPCC (IRL 79) and scientific literature (IRL 81). The values applied are considered adequate for the project context and the most appropriate data available.

3.4.5 Leakage

Potential sources of leakage according to the chosen methodology can be GHGs emissions from displacement of pre-project grazing and fuelwood collection activities.

No sources of leakage are considered significant, as there were no significant pre-project grazing and fuelwood collection activities in the area, in particular due to the poor conditions of the land.

Leakage from fossil fuels combustion and collection of wood posts for fencing are further considered insignificant in the project context, which is also sustained by recent EB decisions (EB 44).

3.4.6 Uncertainties and Risk

The risk assessment was conducted according to the “Tool for AFOLU Non Permanence Risk Analysis and Buffer Determination”.

Each risk category was calculated based on the VCS guidance and the input provided by the PPs. The information was validated and cross-checked through document and literature review, onsite visits of the project area and interviews conducted.

A quantitative assessment was carried out for the fire risk, while the other ARR specific and generic risk categories were assessed on a qualitative basis (Annex 1, table 3).

Overall the project is rated to fall into the risk class “medium” at time of validation. Following the VCS guidance, a buffer of 40% is determined, in order to conservatively cover the range of medium risks and to include the other remaining risk factors. The risk class is mainly influenced by the “medium” risk due to “project longevity” and “endorsement of the project or land use activity by local population and local/national political establishment”.

The risk will be reassessed at time of the first verification and with that prior to any issuance of VCUs. The current buffer is subject to change at verification also in line with further guidance from the VCS on this matter.

3.5 Environmental Impacts

The environmental and socio-economic impacts of the project have been analyzed in the context of Environmental Impact Studies as required by national law (IRL 9, 10, 11). The audit team has reviewed these studies. Beyond the requirements of the AR-CDM methodology applied, additional parameters related to environmental and socioeconomic aspects have been included to the monitoring plan (Section F of the PD). The continued compliance with legal obligations related to the EIA (i.e. Clearance) shall be reconfirmed throughout the implementation phase in the context of future verifications.

In essence, the audit team concluded that no negative the environmental and socio – economic impacts are expected.

3.6 Comments by stakeholders

A local stakeholder process was carried out and was found to be well documented through evidence on the consultation process.

Comments by stakeholders were collected using Participatory Rural Appraisal and semi-structured interviews in the communities adjacent to the project areas. The comments are summarized in the PD were cross-checked with the documentation of the stakeholder consultation (IRL 36) and confirmed through interviews with stakeholders (IRL 1) of the communities. The stakeholder process complied with corresponding VCS requirements.

4 Validation conclusion

TÜV SÜD has performed a validation of the following proposed VCS project activity “Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania”.

Standard auditing techniques have been used for the validation of the project. Methodology-specific customized checklists and protocol for the project have been prepared to carry out the audit in order to present the outcome in a transparent and comprehensive manner.

The review of the project documentation, subsequent follow-up interviews and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In our opinion, the project meets all relevant VCS requirements.

An analysis as provided by the applied methodology demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PD version.

The validation is based on the information made available to us, as well as the engagement conditions detailed in this report. The validation has been performed following the VCS requirements. The single purpose of this report is its use during the registration process as part of the VCS project cycle. TÜV SÜD can therefore not be held liable by any party for decisions made, or not made, based on the validation opinion beyond that purpose.

Munich, 17-07-2009

Thomas Kleiser
Certification Body
“Climate and Energy”
TÜV SÜD Industrie Service GmbH

Munich, 17-07-2009

Martin Schröder
Assessment Team Leader

TÜV SÜD Industrie Service GmbH

Annex 1: Validation Protocol

Table 1 Requirement Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the Project Activity					
A.1 Title of the project activity					
Does the used project title clearly enable to identify the unique project activity?	2	DR	Yes, the project is clearly identifiable. **Corrective Action Request No.1.** The format of the PDD shall not be altered and thus contents currently presented in Annex 5-10 should be included to other PDD sections or presented as secondary documentation.	**CAR1**	☑
Are there any indication concerning the revision number and the date of the revision?	2	DR	Yes, version number and date is consistent.	☑	☑
Is this consistent with the time line of the project's history?	2	DR, IV	Yes, timeline is consistent. The project started early and thus the PDD was developed after project initiation.	☑	☑
A.2 Description of the project activity					
Has the project been described in terms of purpose, how the project is undertaken, and the project proponent's view of the project's contribution to sustainable development?)	2, 3, 4, 5,	DR, IV	The PDD includes indications on the objective as well as the purpose and general procedures how the project is carried out. During the onsite visit this was sustained with documentation on internal processes as well as the targeted external certification of forest management (FSC). Furthermore section A.2 includes indications on the land acquisition process relevant for the project and a concrete list of expected local benefits that will promote sustainable development. In the field of sustainable development an activity list was provided, enumerating measures and expenditures that were carried out in favour of neighbouring communities (1998-2005). In general high expectation levels on these "collateral benefits" were noted among neighbouring community members, partly considered result of	**CAR 2** **CR 1**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			promises / compromises from the starting phase of the project. It is a declared policy of the company that 10% of any potentially financial resources generated by carbon merchandising are going to be used in favour of community development (mentioned i.e. in project publications). During the onsite visit no indication of the use of GMOs were found. The genetic material and its sources were discussed. Sources of seeds have been documented, e.g. Eucalyptus prosopis seeds are provided from Chile and Pine from regional sources. In regard to IAS, the tree species used, especially Pine and Eucalyptus, do occasionally produce natural regeneration. The incorporation of natural regeneration is considered to be of growing importance in future management schemes of the plantation areas. Aggressive spreading beyond project boundaries is considered unlikely. The nurseries were found in full operation and with clear documentation procedures in regard to seedling production. Relevant procedures are documented in Procedures and work instructions for GRL forest Projects. **Corrective Action Request No.2.** The potential use of invasive species remains to be included and discussed in the PDD, as requested by the guidelines. **Clarification Request No. 1.** It shall be clarified, if / how the indicated measures in favour of local sustainable development (SD, section A.2) will be monitored and how SD monitoring relates to the defined Monitoring Plan included to the PDD. Furthermore clarification shall be provided on how the 10% share of carbon revenues for SD purposes is going to be managed, utilised and distinguished from general operation expenditures.		
A.3 Project participants					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Have the project participants been listed in the table as required?	2	DR	Yes, participants have been indicated correctly.	☑	☑
A.4 Technical description of the project					
Has the location of the project including Host Party, Region/State/Province and City/town/community been defined?	2	DR	The information on project location in regard to City/town/community has been provided in the PDD.	☑	☑
Has an appropriately detailed geographic delineation of the project boundary including a unique identifier been included?	2	DR	Overview maps of the two project areas are included to the PDD. Within these limits non-eligible conservation areas are included that are not foreseen for planting (riverine vegetation and vegetation in gullies) **Corrective Action Request No.3.** Following the AR-CDM guidelines, the boundary of a project activity shall only include the actual planting areas. Thus, adaptation of the defined project boundary is requested. Subsequently the PDD remains to be updated on area indications. Note that it is expected that the individual discrete parcels of land shall be holding a unique identification and the geographic coordinates of boundaries shall be provided (polygons), and included to the AR-CDM PDD.	**CAR3**	☑
AR-AM0005, section II.1	2	DR	See above		
Is the project boundary under control of the participants geographically delineated? (using adequate sources remote sensing, certified top. maps, official records, etc; geo-referenced, preferably in digital)	2	DR	See above	☑	☑
Does each discrete area of land have a unique identification and are the geographic coordinates of the boundary provided and included to the PDD?	2	DR	See above		
Has a description of the present environmental conditions of the project area (including climate, hydrology, soils, ecosystems and land use) been	2, 8,9	DR, IV	The large majority of the land under control of GRL is covered by grasslands that seem to be highly impacted by frequent fires (fire climax). In gullies some patches of riverine natural vegetation	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
included?			remain. The PDD contains a description of the environmental conditions of the two main properties being part of the project. Key environmental features described are in line with the information provided in the corresponding EIAs. In A.4.1.5 indications on the previous land use are briefly presented. It has been clarified during the onsite visit and sustained by representatives of neighbouring communities that the community based land use within the project property was limited to the "compensated areas" as indicated in the PDD. The overall size of these areas is small (10 ha plus individuals stems of different crops and trees). It has been indicated that all remaining areas were "unutilised" grasslands.		
Have any rare or endangered species been defined as present?	2, 10, 11	DR, IV	In 2006 two studies have been elaborated – an ecologic and a botanical survey. Results are summarized in the PDD. It is indicated that two endangered tree species were detected in the project boundary (ecological survey). The botanical survey was not able to confirm their presence. **Clarification Request No. 2.** Considering the scheduled changes in the boundary definition (exclusion of riverine and conservation areas), the presence of endangered species on the actual planting sites shall be discussed in the PDD. Further clarification is requested on a) the conservation status of the Protea (bush), and how this plant is managed once planting occurs. **Clarification Request No. 3.** It shall be clarified, based on which procedures it is assured that the 30 m buffer between plantation and riverine vegetation (EIA, 1999) is obeyed and maintained during planting.	**CR2** **CR3**	☑
Have the species and varieties to be grown been adequately described?	2,6,7	DR	The tree species to be used in the plantings are indicated in the PDD. The annual planting size is scheduled with 1300 ha (till 2013/14).	**CR4**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			The main procedures and silvicultural treatments are pre-defined by national regulations for Eucalyptus and Pine (Annex of Forest Management Plan). **Clarification Request No. 4.** It is requested that clarification on the chosen stand models and its main characteristics is provided and included to the PDD. Key parameters for planting, treatment, harvesting shall be included as well as the estimated share of each model within the annual planting.		
Have details of the legal title to the land, land tenure and rights to issued carbon been described?	2, 12	DR, IV	In Tanzania all land is in ownership of the government- Long term lease arrangements have been obtained for project land. The PDD provides a summary on corresponding processes. Customary rights for small areas used by local villagers have been compensated. **Clarification Request No. 5.** The title deed for the Uchindile / Kilombero site indicates that the land is foreseen for agricultural use. The commissioner for lands of the Ministry of Lands, Housing and Human Settlements has acknowledged in a letter dated 23 October 2006 that by mistake the title deed was prepared indicating the land use to be agriculture and pastoral use. Clarification on the status of the corresponding rectification of the title deed is requested. **Clarification Request No. 6.** The title deed of the Uchindile / Kilombero site is not on the name of Green Resources Ltd (but still on the name of a predecessor Escarpment Forestry Company LTD). Clarification / updated evidence on the land access of GRL to the land is requested.	**CR5** **CR6**	☑
Has the technology to be employed (including environmentally safe and sustainable/renewable technologies and know-how with specifications of whether they will be transferred to host Parties) been adequately described?	2	DR	Management Plans for forest installation and management have been compiled and presented during the onsite visit. It was witnessed that i.e. nurseries were fully operational, planting was ongoing, fire crew was installed. As it is generally the case, the technology employed for forestry projects is comparatively simply (planting techniques, silivicultural measures, fire protection, GIS	**CR7**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			etc). **Clarification Request No. 7.** It remains to be clarified and stated in the PDD (as per Guideline requirement), if transfer of technology can be expected from an Annex I country, and it shall be commented on the aspect of likelihood for technology substitution.		
A.4.5 Has the approach to address non-permanence been specified?	2	DR	See risk assessment in table below	☑	☑
A.4.6 Has the table on estimated net anthropogenic removals over the chosen crediting period been completed?	2	DR	Yes, the table is completed.	☑	☑
B. Duration of the Project Activity / Crediting Period					
B.1 Starting date of the project and the crediting period					
Does the starting date reflect the date of implementation (or when real action began that resulted in changes to the actual net removals) and has it been adequately justified?	2, 8, 85, 86, 87	DR; IV	The project started in 1997 with first trial plantings. Crediting period started in 2002 in line with VCS requirements See VCS section in the table below for further discussion.	☑	☑
B.2 Expected operational lifetime					
Has the expected operational lifetime been defined?	2	DR	Operational lifetime is 1997-2100	☑	☑
B.3 Choice of crediting period and related information					
Is the project fixed or renewable and does it have an appropriate crediting period length defined?	2	DR	A fixed crediting period of 99 has been chosen under VCS.	☑	☑
C. Application of Baseline and Monitoring Methodology					
C.1 Assessment of the eligibility of lands					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Has the latest version of the AR eligibility tool been applied?	2	DR, IV	Eligibility was assessed by using remote sensing and a baseline study. **Corrective Action Request No.4.** It needs to be clearly indicated if the project is to be considered as afforestation or a reforestation project.	**CAR4**	☑
Is adequate evidence provided which demonstrates that a) the land in the project boundary is not forest at project start b) the activity is an afforestation or reforestation by indicating historic land use (reforestation: unstocked by Dec. 1989; afforestation: unstocked >50 y)	2, 14, 15,16,17	DR	The final boundary of the discrete parcels of land (CAR3) remain to be defined. Both aspects are crucial for the eligibility check. It is underlined, that the scheduled project land consists in its vast majority of grassland without tree cover. Some minor patches with light cover (i.e. Protea) have been identified within the grasslands. Otherwise the main task is the clear delineation of the planting areas (eligible lands) from the patches of riverine vegetation (non-eligible / conservation), which is carried out based on very high resolution imagery (Quickbird) The GIS department of GRL Ltd. has elaborated eligibility based on different sources, such as • Official topographic maps of 1:50.000 (1983), which indicate no forest cover. • FAO land use census, which indicate no forest cover • 1995 Landsat image (in combination with the latter sources the satellite image is considered to supports the interpretation of 1990 status). The image was analyzed in regard to its most adequate band combination for land use classification. A visual interpretation was carried out. **Clarification Request No. 8.** Land eligibility according to AR-CDM requirements remains to be refined under consideration of the newly defined discrete parcels of land / boundary and under the final forest threshold definition (i.e. potentially also lower end).	**CR8**	☑
C.2 Title and reference of approved methodology					
Has the approved methodology and any other methodologies or tools used been properly	2	DR	Yes, the methodology is indicated correctly: AR-AM0005, version	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
referenced (including version no.)?			03		
Has the most current version of the methodology been used (consider also PDD formats, eligibility tool, AR add. tool)?	2	DR	Yes the most current version is used.	☑	☑
C.3 Assessment and justification of selected methodology					
AR-AM0005, section I (applicability criteria)					
Does the project use the baseline approach from paragraph 22 of the CDM A/R modalities and procedures: Changes in carbon stocks in the pools within the project boundary from the most likely land use at the time the project starts"?	2	DR	The project does consider the baseline approach of the most likely land use at project start. Compare Request below on role of reforestations.	☑	☑
Is the selected project an afforestation or reforestation activity undertaken to meet commercial or industrial needs?	2	DR	The AR project is designed to produce timber for commercial use.	☑	☑
Is one of the following baseline scenarios complied with: 1. maintenance of unmanaged or extensively managed grassland (with low soil carbon content) 2. afforestation and reforestation activities undertaken intermittently prior to AR project.	2	DR, IV	The baseline requirements in regard to grasslands are complied with and / or are focussed on in regard to previous Requests. Considering baseline reforestations, it has been indicated that national plantation size has remained at similar levels without change (aprox. 150.000 ha). On regional level, state subsidised reforestation activities were ongoing in the region in the 1980ies. In very recent years reforestation activities have picked up in the region (as i.e. confirmed by Officer Sharaban Adda of Mufindi District) **Clarification Request No. 9.** In regard to reforestations to be considered under the baseline setting, relevance of pre-project reforestations on the regional level (at project start) is to be discussed, sustained with evidence and potentially considered.	**CR 9**	☑
The land cover within the project boundary is in steady state either as unmanaged or extensively	2, 15,	DR		☑	☑

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<table>
<tr><th>CHECKLIST QUESTION</th><th>Ref.</th><th>MoV*</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td>managed grassland.</td><td>16, 17</td><td></td><td><table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td>☑</td><td>☑</td></tr></table>No indications have been found in regard to succession towards other vegetation type, which is sustained i.e. by historic land use maps. The areas have been grasslands for long periods of time (>10 y)</td><td></td><td></td></tr>
<tr><td>Natural regeneration is not expected to occur in the project area because of the absence of seed sources or because land use practices do not permit the establishment of tree vegetation.</td><td>2</td><td>DR</td><td><table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td>☑</td><td>☑</td></tr></table>No regeneration has been found within the stable grasslands during the onsite visit. Wildfires are a regional phenomena (still in neighbouring areas) which impedes forest recovery.</td><td>☑</td><td>☑</td></tr>
<tr><td>Carbon stocks in soil organic matter, litter and deadwood can be expected to decrease more or increase less in the absence of the project activity.</td><td>2, 18, 19</td><td>DR</td><td><table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td></td><td></td></tr></table>The monitoring reports of 2006, which include soil sampling, indicate i.e. increasing soil carbon for Mapanada while decreasing figures are indicated for plantations in Uchidile / Kilombero.
<u>Clarification Request No. 10.</u>
The fact that “Carbon stocks in soil organic matter, litter and deadwood can be expected to decrease more or increase less in the absence of the project activity” remains to be underlined with further evidence.
The latter is also related to the conservativeness in the omission of defined pools. Guidance provided by EB 33 Annex 15 “Procedure to</td><td>CR10</td><td>☑</td></tr>
</table>

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R project activities" shall be followed and discussed in the PDD.		
Flooding irrigation is not permitted;	2	DR	<table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td>☑</td><td>☑</td></tr></table> Not relevant due to natural conditions with only small water flows in the valleys and irrigation not being practiced.	☑	☑
Soil drainage and disturbance are insignificant, so that non CO_2-greenhouse gas emissions from this type of activities can be neglected;	2	DR	<table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td>☑</td><td>☑</td></tr></table> In line with hilly landscape, no water impacted soils included to the project area so that drainage is considered irrelevant. Disturbance is limited to planting without ploughing or other preparations and thus considered negligible.	☑	☑
The amount of nitrogen-fixing species (NFS) used in the AR CDM project activity is not significant	2	DR, IV	<table><tr><td>Incl. to PDD</td><td>Rationale / Assumptions referenced</td><td>Evidence Provided</td><td>Conclusion</td></tr><tr><td>☑</td><td>☑</td><td>☑</td><td>☑</td></tr></table> No indications on the use of NFPs have been found.	☑	☑
Are the carbon pools considered in the project activity in line with the requirements of the methodology?	2	DR	The considered carbon pools are in line with the methodology	☑	☑
C.4 Description of ex ante stratification					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
AR-AM0005, section II.3					
Has a hierarchical approach been used for the stratification as defined by the methodology (regional to local data) and is the strata size not smaller than the area indicated by the national forest definition?	2	DR	In the initial PDD only two strata were identified for ex-ante stratification: a. Grassland with scattered trees and shrubs b. Riverine trees and vegetation (non-eligible) **Corrective Action Request No.5.** It remains to be demonstrated and documented in the PDD (while following the step wise approach as defined by the methodology) that a hierarchical approach has been take in the ex-ante stratification process. The questions below / in table 1 reflect the expectations of the auditor. The results of the stratification need to be incorporated to the PDD.	**CAR5**	☑
Step 1: Stratification taking into account pre-existing conditions and likely evolution of baseline (priority on regional sources)	2	DR	See above	**CAR5**	☑
Step 2: Criteria of stratification to be considered in the proposed CDM A/R project activity	2	DR	See above	**CAR5**	☑
Step 3: Ex ante stratification of A/R CDM project activity taking into account the stratification criteria and land use within the project boundary Has the boundary of each stratum been delineated using land-use maps or geo-referenced data and is it consistent with the parcels identified for the project.	2	DR	See above	**CAR5**	☑
Step 4: Preparation of ex ante stratification map Has a stratification map showing different strata and their characteristic features been prepared?	2	DR	See above	**CAR5**	☑
Step 5: The changes to A/R project after the adoption of ex ante stratification shall be recorded Have / Will the relevant changes that occur during project activity implementation (after the ex ante	2	DR	See above	**CAR5**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
stratification) been / be recorded? *(Relevant for monitoring stage)*					
C.5 Identification of baseline scenario					
AR-AM0005, section II.4					
Step 1 Demonstration of the most likely land use at the time of the project starts Is it demonstrated that the relevant lands would remain under the existing grassland? Has this been demonstrated by at least one of the following • General – demonstrating that areas under similar land use in the vicinity are not expected to change. The barriers preventing alternatives can be identified. • Specifically for forest (step 2/3 of add. tool) • Specifically for other alternatives (step 2/3 of add. tool)	2, 63, 65, 68	DR, IV	It is demonstrated by credible sources (remote sensing etc) that the project area has been grassland before project start, and that grasslands are prevailing vegetation type in the vicinity. Regarding the considered time frames (>1990) no significant increase in forest cover has been detected in the region (i.e. by comparing 1995 satellite images with older topographic maps).	☑	☑
Have adequate sources been used in the analysis process for the most likely baseline scenario (archives, maps, images,etc)?	2, 15, 16, 17	DR, IV	Adequate sources have been used.	☑	☑
Step 2 Assessment of national and sector policies and legislation a) Policies related to the creation of wood sources • Have the national or sector policies with direct influence on land use in the context of the A/R CDM project activity been considered? • Have the applicable policy incentives and constraints been analyzed (based on the decision 17/CP. 7, 11 November 2001) by the project participants? • If applicable, have policies in the competing	2	DR, IV	An overview on policy elements and relevant documents is provided in the PDD. It is indicated that no other state driven programmes directed towards reforestation would have altered the land use in the project area at project start. No indications on working reforestation programmes at project start have been received by the auditor. Impacts of policy and legislation have been summarized and it was	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
industries or commercial end-uses been considered? • Have the project participants identified and analyzed specific policy contexts that had implications for A/R activities in the past or expected to have in the future?			concluded that they would not have altered land use patterns. Reforestations carried out in the past (Sao Hill project) have been indicated as part of C.5.2, step 3 in the PDD.		
b) Legislation related to the requirements of A/R activities and wood use • Have the project participants made an assessment of the impacts of prevailing legislation on the A/R activities, including the mandatory requirements on the land uses? • If applicable, has evidence on the non-compliance been presented if widespread non-compliance is observed? • Has an analysis of the national policies and regulations related to natural forests and A/R activities, and their implications in terms of demand and supply of forests products and the impacts of on the existing and future land uses been presented?	2	DR,IV	An overview on the analyzed legislation is provided in the PDD. Compliance of legally defined objectives and tasks of the forest legislation is considered incomplete due to limited human and financial resources on behalf of state authorities (i.e. underlined by steady plantation area on national level).	☑	☑
c) Other policy incentives and constraints • Has the macroeconomic and sector policies related to credit, marketing and technology been evaluated in order to asses the influence multi-sector policies on the land use for forestry?	2	DR, IV	Other policies have been described (i.e. poverty reduction), underlining that they would not have lead to enhanced reforestation in the region. Cross reference to prevailing barriers for the development of the forestry sector is indicated in the PDD.	☑	☑
Step 3 Assessment of demand and supply of wood resources for industrial and commercial purposes • Has an analysis of demand and supply balance of wood sources for industrial and commercial purposes been done? • Has long-term data for identifying the land use and plantation establishment trends	2	DR,IV	General market trends are discussed in the PDD. In general manner it is indicated that the demand for forest products is increasing. During the onsite visit it was highlighted that a pulp and paper company, which is located in the vicinity of the project headquarter, has not been operating since 2005. Furthermore recently wood prices have seen a rise.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
been used?					
Step 4 Assessment of land-use practices and prevailing land uses in the project region • Have the project participants assessed the previous land uses in the region and the project area, and the management practices that are likely to impact the carbon stocks of the prevailing land uses now and in the future? • Have the impact of policies and regulations been assessed in order to guide the choice of the most likely land uses? • Is there an explanation on how the incentives and constraints identified in Step 2, impact on land uses within the project area (if applicable)? • Is there an estimate of the average regional and project entity-specific annual rates of A/R activities in the absence of the proposed A/R CDM project activity? • Has the analysis focused on the rate of A/R activities that is likely to occur in the absence of the A/R CDM project activity?	2, 16	DR, IV	Prevailing land use is indicated to be forestry and subsistence agriculture. Some older reforestations exist in the region (Sao Hill, late 1980ies). Recently local reforestation activities have picked up in the region. For the relevance of forest installation under baseline conditions, compare CR9. Prevailing land uses were documented, among others, based on an FAO database, including some forest cover.	☑	☑
Step 5 Identification of plausible and credible land-use alternatives • Has the identification of plausible and credible land-use alternatives been based on the scope of maintaining current land use, including the possibility of undertaking A/R as per the applicable trends? • If there are no specific geographic trends in the pre-project A/R activities, has it been applied in proportion to all projects parcels? (as considered likely to be affected by the policies adopted prior to Nov 11, 2001)	2	DR, IV	Three scenarios have been identified: 1. Maintaining current land use without project (grassland) 2. Small scale afforestation reforestation 3. Commercial plantations Other agricultural land use was ruled out due to site characteristics.	☑	☑
Step 6 Identification of the most likely land-use	2	DR, IV	As stated in the PDD, grassland is considered the most plausible	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
• Has the most likely land-use form among the alternatives (listed in the project boundary at the start of the A/R CDM project) been identified as the baseline scenario? • Is it demonstrated that in the absence of the proposed A/R CDM Project activity, the most likely land-use would correspond to the plausible scenario "grassland"?			baseline scenario for the entire project area.		
C.5.2 Has the identified baseline scenario been described for each stratum defined in section C.4?	2	DR	**Clarification Request No. 11.** Section C.5.2 remains to be updated in line with stratification results (CAR 5) and baseline estimation (CR 9).	**CR 11**	☑
C.6 Assessment and demonstration of additionality					
Additionality (tool)					
Step 0. Preliminary screening					
Has evidence been provided that the starting date of the A/R CDM project activity was after 31 December 1999, and that the incentive from the planned sale of GHG emission allowances was seriously considered in the decision to proceed with the project activity (documentation that was available to third parties at, or prior to, the start of the project activity).	2, 8,9, 20,2 1,22, 22	DR, IV	In several documents, especially those of initial trainings and audits provided by SGS and the EIA for the Kilombero site, reference is taken to the early start as an AR-CDM project activity (as early as 1997/1998). Early start in 1997 is possible under the VCS due to the early assessment carried out by SGS Compare section B.1 on starting date. **Clarification Request No. 12.** The issuance of VER credits and corresponding commercialisation may have implications on the additionality of the AR-CDM project (risk of double selling). Evidence on non-merchandising of relevant VERs is requested.	**CR 12**	☑
Has evidence been provided that a) the land within the planned project boundary is eligible as the A/R CDM project activity and that b) the project activity is directly human-induced and not a mere continuation of the pre-project spontaneous processes.	2	DR	For land eligibility see C.1. As planting is foreseen, the project activity can be considered human-induced.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Step 1. Alternatives to the A/R project activity consistent with the current laws and regulations					
Have realistic and credible land-use alternative(s) been identified (sub-step 1a), including: • The proposed project activity not undertaken as a A/R CDM project activity; • Other plausible and credible land-use alternatives. • If applicable, continuation of the current situation	2	DR	The different alternatives are indicated in section C.5 **Corrective Action Request No.6.** In regard to additionality, It is requested that all realistic and credible land used alternatives shall be identified (in section C.6), Specifically for each relevant alternative, legal compliance needs to be discussed (step 1b) In order to cover step 3b, the identified barriers (step 3a) need to be discussed for all alternatives. Consider to use a matrix, demonstrating that the identified barriers do not oppose at least one alternative.	**CAR6**	☑
Are the alternative(s) in compliance with all applicable legal and regulatory requirements (sub-step 1b)? If that is not the case, an alternative can only be considered if applicable legal or regulatory requirements are systematically not enforced.	2	DR	See above	**CAR6**	☑
Is the project scenario not the only remaining alternative?	2	DR	The project scenario is not confirmed to be the only alternative.	☑	☑
Step 2: Investment analysis			N/a		
Step 3: Barrier Analysis					
In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	2	DR	Different barrier categories have been identified and discussed in the PDD with a focus on the project activity. **Clarification Request No. 13.** For each barrier included to the analysis / PDD (step 3 a), the submission of credible secondary evidence is requested (i.e non-availability for loans for forestry projects as investment barrier), showing that these barriers impede the project activity (as non AR-CDM).	**CR13**	☑

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In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	2	DR	See above / CR 13 In regard to project financing, it has been noted that GRL Ltd operating budget are provided completely by the mother company TreeFarms.	**CR13**	☑
In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	2	DR	See above / CAR 6	**CR6**	☑
Step 4.Common practice analysis					
Is the project activity common practice in the region? Has a common practice analysis been carried out in line with the requirement of the CDM and are there essential distinctions between them. Are there fundamental and verifiable changes in circumstances when compared to other projects (e.g. explain why the proposed CDM AR project cannot use e.g. political benefits granted in other projects)			Common practice analysis is carried out. Insignificant afforestation rates are found in the region at the time of project start.	☑	☑
Impact of CDM registration					
Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 4)?	2	DR	It is described how different barriers can be alleviated through the project as an AR-CDM activity.	**CR6** **CR13**	☑
C.7 Estimation of the ex ante baseline net GHG removals					
Have the ex ante baseline removal calculations been provided in the table, do they correspond to the chosen crediting period and use the approach provided in the selected approved methodology?	2	DR	**Corrective Action Request No.7.** In regard to the estimation of the ex ante baseline net GHG removals, main calculations in line with the formulae / steps as defined by the methodology (section II.5) remain to be included to the PDD (compare section C.7 in table1 and PDD). Table C.7.4 will require adaptations in line with results.	**CAR7** **CR14**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Clarification Request No. 14. In regard to the baseline study (also Annex 3), statistical significance and uncertainties of baseline estimates shall be discussed.		
AR-AM0005, section II.5 (Estimation of baseline net GHG removals by sinks)					
Is the baseline net GHG removal set by one or the combinations of the two categories of land uses in the baseline scenario: a) maintenance of grassland in its present state; and b) the afforestation/ reforestation implemented at a specific pre-project rate?	2	DR	See above	**CAR7** **CR14**	☑
Is the baseline net GHG removal set zero under the baseline scenario, maintenance of grassland in its state? (formula B.2)	2	DR	Baseline removals in grassland areas are set zero. Areas with scattered trees area covered with baseline study (compare CAR7 / CR14)	**CAR7** **CR14**	☑
Have the changes in carbon stocks of the living biomass for isolated trees (if present in the area) been estimated? (formula B.3)	2	DR	See above	**CAR7** **CR14**	☑
Has the pre-project reforestation rate been estimated and frozen over the crediting period?	2	DR	See above	**CAR7** **CR14**	☑
Have the changes in carbon stock in living biomass of trees been estimated using one of the following methodologies?: • Method 1: Carbon gain-loss method • Method 2: stock change method	2	DR	See above	**CAR7** **CR14**	☑
Has the corresponding formula been applied correctly, are used values in line with onsite	2	DR	See above	**CAR7**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
conditions and are they clearly sustained / referenced? (formulae B.5 ff)				**CR14**	
Have *Dj, BEF1,j, BEF2,j, CFj* and *Rj* been defined according to methodology indications (hierarchical order of sources)?	2	DR	See above	**CAR7** **CR14**	☑
Have conservative parameters been used for all parameters? Is the conservativeness of any parameter used to estimate tree biomass substantiated in the PDD?	2	DR	See above	**CAR7** **CR14**	☑
C.8 Completion of the baseline study					
Have the date of completion and the name of the person (or entity) determining the baseline been specified?	2	DR	**Corrective Action Request No.8.** Date (DD/MM/YYYY) of completion of baseline study to be given in PDD / section C.8.	**CAR8**	☑
D. Estimation of ex ante Actual Net Removals, Leakage* and Net Anthropogenic Removals					
D.1 Estimation of ex ante actual net removals					
Are the calculations of ex ante actual net removals for the crediting period consistent with the approach in the selected methodology and adequately defined?	2, 23	DR, IV	**Corrective Action Request No.9.** In regard to the estimation of the ex ante actual net GHG removals main calculations in line with the formulae as defined by the methodology (section II.1) remain to be included to the PDD (compare section D.1 in table1 and PDD). **Clarification Request No. 15.** For ex-ante actual net removals, sources and conservativeness of the elaborated valued for BEF, WD and RS shall be discussed in the PDD (i.e. comparison to literature sources). Background information on regional growth models for main species is requested.	**CAR9** **CR15**	☑
AR-AM0005, section II.1 (Project boundary)					

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<table>
<tr><th>CHECKLIST QUESTION</th><th>Ref.</th><th>MoV*</th><th>COMMENTS</th><th>Draft Concl</th><th>Final Concl</th></tr>
<tr><td>Are all gases / emissions of other sources considered that are included to the boundary definition?</td><td>2</td><td>DR</td><td>
<table>
<tr><th>Sources</th><th>Gas</th><th>Included to meth.</th><th>Conclusion</th></tr>
<tr><td rowspan="3">Combustion of fossil fuels</td><td>CO2</td><td>Yes</td><td>insignificant</td></tr>
<tr><td>CH4</td><td>No</td><td></td></tr>
<tr><td>N2O</td><td>No</td><td></td></tr>
<tr><td rowspan="3">Burning of biomass</td><td>CO2</td><td>Yes</td><td>Not applicable / compare D.2</td></tr>
<tr><td>CH4</td><td>Yes</td><td></td></tr>
<tr><td>N2O</td><td>Yes</td><td></td></tr>
<tr><td rowspan="3">Removal of pre-existing non-tree vegetation</td><td>CO2</td><td>Yes</td><td>Not applicable</td></tr>
<tr><td>CH4</td><td>No</td><td></td></tr>
<tr><td>N2O</td><td>NO</td><td></td></tr>
</table>
</td><td>☑</td><td>☑</td></tr>
<tr><td>AR-AM005, section II.7</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Ex ante actual net GHG removal by sinks</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Has the formula for the ex-ante estimation of actual removals been correctly applied?</td><td>2</td><td>DR</td><td>See above</td><td>CAR9
CR15</td><td>☑</td></tr>
<tr><td>a) Changes in carbon stocks of living biomass of trees
Is the calculation carried out according the gain and loss in the living biomass of trees method provided by the methodology? (formulae B.15-25 of methodology)</td><td>2</td><td>DR</td><td>See above</td><td>CAR9
CR15</td><td>☑</td></tr>
<tr><td>b) Increase in emissions of greenhouse gases
Is the calculation carried out considering the sources of emissions of greenhouse gases assumed in the methodology if the implementation of the A/R CDM results in such sources? (formula B.26)</td><td>2</td><td>DR</td><td>See above.</td><td>CAR9
CR15</td><td>☑</td></tr>
<tr><td>Estimation of $E_{FuelBurn}$ (GHG emissions from burning of fossil fuels):
Have the emissions from fuel burn been estimated adequately and in line with the methodology requirements? Is sufficient evidence provided on</td><td>2</td><td>DR</td><td>See above</td><td>CAR9
CR15</td><td>☑</td></tr>
</table>

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
input values?					
Estimation of $E_{BiomassLoss}$ (GHG emissions from biomass loss due to the conversion of grasslands to forests): Have the grassland and other pre-existing vegetation been removed to afforest or reforest? If Yes, have emissions been estimated adequately and in line with the methodology requirements?	2	DR	See above	**CAR9** **CR15**	☑
Estimation of $E_{BiomassBurn}$ *(burning of pre-existing vegetation for site preparation or from forest fires)* *Have the emissions from biomass burning considered, including not only CO2 but also other greenhouse gases resulting from incomplete combustion of biomass in line with the methodology description?(formulae B.29-32)*	*2*	DR	See above	**CAR9** **CR15**	☑
Estimation of (nitrous oxide emissions from nitrogen fertilization): Have the emissions from nitrogen fertilization been estimated adequately and in line with the methodology requirements? Is sufficient evidence provided on input values?	2	DR	See above	**CAR9** **CR15**	☑
Have all relevant data been provided for ex-ante estimation? Has data provision been cross-checked with section II, item 11, table 2 of AR-AM0005 (p.37 - 47).	2	DR	It remains to be demonstrated that all data relevant for ex-ante estimates is provided, as indicated by page 37-47 of methodology (as cross check).	☑	☑
D.2 Estimation of ex ante leakage					
Are the calculations of ex ante leakage for the crediting period consistent with the approach in the selected methodology and adequately defined? (formula B.36)	2	DR	**Clarification Request No. 16.** Comments and the role of deforestation outside the project boundary in section D.2 are to be clarified. **Clarification Request No. 17.**	**CR16** **CR17**	☑

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			The relevance of occasional controlled burning on the installed fire breaks shall be clarified / discussed in the PDD in regard to leakage (section D.2)		
AR-AM0005, section II.8 *Leakage definition: increase of GHGe and decrease of carbon stocks outside the boundary*	2	DR	See above	**CR16** **CR17**	☑
Determination of activity displacement Estimation of $LK_{ActivityDisplacement}$ - Carbon stock decreases caused by displacement of pre-project grazing and fuelwood collection: Have the emissions from $LK_{ActivityDisplacement}$ been estimated adequately and in line with the methodology requirements? (formula B.39) Is sufficient evidence provided on input values? (Leakage from deforestation and land use change - formulae B.40-45; leakage from fuelwood collection – formulae B.46-49)	2	DR	**Clarification Request No. 18.** The role of the compensation of pre-project activities / land-used in regard to leakage shall be considered in section D.2 according to the methodology requirements (section II.8)	**CR18**	☑
E. Monitoring Plan					
E.1 Monitoring of the project implementation					
Has the data to be collected for monitoring of the project boundary been listed adequately? (AR-AM0005, section III, 1.a)	2	DR	**Clarification Request No. 19.** In section E.1. / Boundary monitoring, it is unclear if the proposed compartment monitoring reflects on the required monitoring of the boundary for discrete areas and corresponding strata characteristics. Clarification / adaptation is requested.	**CR19**	☑
Has data to be collected for monitoring of forest establishment been listed adequately? (AR-AM0005, section III, 1.b)	2	DR	**Corrective Action Request No.10.** In section E.1. / Forest establishment monitoring, consistency with the methodology needs to be assured in the PDD, reflecting additionally on: • *Information on the number of species planted, area of stratum,*	**CAR10**	☑

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			and planting layout as per the management plan shall be prepared (i.e.Parameter E.1.2.11 area planted per stratum) • *Any deviation in the implementation in relation to the management or silvicultural plan and the information on such deviation shall be recorded and the justification shall be presented in the monitoring report.* • *The planted areas affected by natural and anthropogenic disturbances and seedlings planted by species as part of the gap planting during the year 2 and year 3 shall be recorded as during the assessment.*		
Has data to be collected for monitoring of forest management been listed adequately? (AR-AM0005, section III, 1.c)	2	DR	**Corrective Action Request No.11.** In section E.1. / Forest establishment monitoring, consistency with the methodology needs to be assured in the PDD, reflecting additionally on: • *Schedule of fertilization and the types and quantity of fertilizer applied (monitoring even if currently not scheduled)* • *Schedule of replanting, coppicing and other management implemented to ensure the land use in its intended purpose.* • *date, location, species, volume of biomass lost or affected, and the preventive or curative measures, if any implemented* *(ID 3.11- 3.13 should not only focus on fire but on any pest)*	**CAR1 1**	☑
In the collection of data for the monitoring of the project boundary, forest establishment or of forest management, do any measurements not follow typical forest mensuration practices and if so have they been adequately described?	2	DR	Typical forest mensuration practices are followed.	☑	☑
E.2 Sampling design and stratification					
Have results of the application of the stratification procedure from the selected methodology been	2	DR	**Corrective Action Request No.12.** In section E.2. / Sampling, consistency with the methodology needs	**CAR1 2**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
adequately described?			to be assured in the PDD, re*flecting additionally on:* • *Monitoring of strata shall be done using a Geographical Information System (GIS),* • *The monitoring of strata and stand boundaries is critical to the verification of the area of stratum i, sub-stratum k,* • *The need for ex post stratification shall be evaluated at each monitoring event and changes in strata should be reported to the DOE for verification.* • *a.1 Factors to be considered in the ex post stratification (…)*		
AR-AM005 Section III.2					
Is the project strata and their boundaries incorporated to monitoring schemes?	2,24	DR	See above. Boundaries and strata their boundaries are to be monitored according to section E.1.	**CAR1 2**	☑
Is the sampling framework, including sample size, plot size, plot shape, plot location, treatment of samples and management of sample plot data specified in the PDD as described in the methodology?	2,24	DR	Corresponding indications are included to the PDD. Random location and equal treatment is underlined in the PDD.	☑	☑
Is the sample size (systematic, permanent plots) calculated according to methodology requirements? Is random location foreseen? (formulae M.1-2)	2, 24	DR	Currently sampling intensity of 0.062 % is taken giving sample size of 0.88ha This is arrived at by multiplying the area planted during the first two years (1996/97 and 1997/98) by the sampling intensity (i.e. 0.062% x 1420ha. = 0.88ha.) **Corrective Action Request No.13.** In section E.2. / Sampling, the concrete number of sample size should be estimated according to the methodology requirements and included to the PDD. Compare also tool of EB 31	**CAR1 3**	☑
Is the sample plot size defined according to methodology requirements?	2,24	DR	Currently PSPs are installed on an aggregated area of 2,6 ha, PSP size in 400 m2.	☑	☑

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			It has been opted for circular plots of 400m^2.		
E.3 Monitoring of the baseline net removals					
Is monitoring of the baseline net removals required by the selected methodology? If yes, ▪ has the application of the procedure for selection of sample plots been adequately defined and has all data to be collected or used been listed? ▪ has the application of the procedure for selection of sample plots been adequately defined and has all data to be collected or used been listed?	2	DR	Monitoring of baseline net removals is not required.	☑	☑
E.4 Monitoring of the actual net removals					
Has the data to be collected in order to monitor the changes in carbon stock resulting from the project been adequately defined?	2	DR	**Corrective Action Request No.14.** In regard to section E.4.1 / actual net removals and GHG emissions, consistency with parameters as indicated in methodology (table III.1 and III.2).remains to be assured.	**CAR14**	☑
Has the data to be collected in order to monitor the GHG emissions that are increased as a result of the project activity within the project boundary been adequately defined?	2	DR	See above	**CAR14**	☑
Are the procedures for measurements in the monitoring of the changes in carbon stocks or the monitoring of GHG emissions increased in the project clearly defined and do they follow typical forest mensuration practices?	2	DR	**Clarification Request No. 20.** Complementary to the request on the elaboration of a Monitoring Plan to be included in Annex 4, monitoring procedures remain to be provided in line with the parameters to be monitored (stocks, emissions, leakage, etc).	**CR20**	☑
Are all GHG emissions increased by the project over time included to monitoring (fossil fuels, slash and burn, N_2O)	2	DR	It is considered that all significant project emissions are included to the monitoring	☑	☑
E.5 Leakage					
If monitoring of leakage is required by the selected	2	DR	**Corrective Action Request No.15.**	**CAR**	☑

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methodology has this been stated and has the data and information that will be collected to monitor leakage been adequately defined?			In regard to section E.5 / Leakage, consistency with parameters as indicated in methodology (table III.3) remains to be assured.	**15**	
Are the procedures for measurements for the monitoring of leakage clearly defined and do they follow typical forest mensuration practices?	2	DR	See CR 21	**CR 21**	☑
Have procedures for the periodic review of the implementation of activities and measures to minimize leakage been adequately defined?	2	DR	**Corrective Action Request No.16.** Section E.5.2 remains to be completed with procedures for the periodic review of the implementation of activities and measures to minimize leakage.	**CAR 16**	☑
E.6 QA/QC procedures undertaken for data monitored					
Have QA/QC procedures been defined appropriately and are explanations of procedures (including their absence) reasonable?	2	DR	**Corrective Action Request No.17.** QA / QC procedures remain to be defined in detail reflecting on the requirements of the methodology (uncertainty assessment and procedures to reduce uncertainties)	**CAR 17**	☑
AR-AM0005 (section III.10)					
• In regard to uncertainties, has the assessment followed guidance provided by IPCC GPG for LULUCF, GPG 2000 (compare Tier 1 / Tier 2 of GPG)? • Does the assessment include all relevant calculations (ex-ante, monitoring) and coefficients used? (formulae M.51-54)	2	DR	See above	**CAR1 7**	☑
E.7 Operational and management structure of project operator					
Has the operational and management structure that the project operator will implement in order to monitor actual removals and leakage by the project been adequately defined?	2, 25, 26	DR	Beyond the indications included to the PDD, an overview of the project's management structure has been provided and overall capacities in all relevant technical fields has been confirmed during the onsite visit. Monitoring procedures / Plan are pending (see CR21)	☑	☑

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E.8 Person applying monitoring plan					
Has the person or entity applying the monitoring plan been named, are they listed as a project participant and has contact information been provided?	2	DR	Persons / entities applying the Monitoring Plan are indicated in the PDD.	☑	☑
Environmental Impacts of the Project					
F.1 Documentation of analysis of environmental impacts					
Has an analysis of the environmental impacts including impacts on biodiversity and natural ecosystems and impacts outside the project boundary been adequately documented?	2, 8, 9, 18,19	DR,IV	An EIA has been carried out for each of the two project sites according to Tanzanian legal requirements. Potentially negative impacts were identified within these reports. The assessment covered impacts outside the project area.	☑	☑
Does the analysis include (where applicable) adequate information on hydrology and soils, and risk of fires, pests and diseases?	2, 27	DR, IV	In the region wildfires occur frequently. In order to tackle this risk, the project management has taken several measures, such as the installation of fire breaks, fire monitoring, instruction of fire fighters, etc. These aspects have been analysed also in brief in the EIAs. A range of activities in line with the Forest Management Plan have been implemented.	☑	☑
F.2 Significant negative impacts					
If any negative impact is considered significant by the project participants or the host Party, has a statement that the project participants have undertaken an environmental impact assessment in accordance with the procedures required by the host Party (including conclusions and references to supporting information) been provided?	2,8,9	DR,IV	It has been documented that the EIA process was undergone according to the requirements of Tanzania.	☑	☑
F.3 Remedial measures to address impacts					
Has a description of the planned monitoring and remedial measures to address significant	2,8,9	DR,IV	Monitoring and remedial measures have been identified and are included to the respective EIA and the PDD.	**CR21**	☑

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environmental impacts been adequately defined?			In line with the requirements of the EIAs, first reports on monitoring have been elaborated by GRL Ltd. Beyond the abundant monitoring tasks listed in section F.3, Annex 4 / Monitoring Plan includes an Environmental Monitoring Plan. **Clarification Request No. 21.** Consistency between F.3 and Annex 4 is to be assured and clear indications of the monitored environmental parameters to be included to the PDD. (If applicable: Table 1 of Annex 4 / Environmental Monitoring Plan, consistency with text based descriptions of monitoring obligations, choice of concrete indicators / parameters and monitoring frequency (AR-AM0005 does not provide frequency) needs to be reviewed.)		
Socio-economic Impacts of the Project					
G.1 Documentation of analysis of socio-economic impacts					
Has an analysis of the socio-economic impacts including impacts outside the project boundary been adequately documented?	2, 8, 9	DR, IV	Socio-economic impacts were assessed jointly with environmental impacts for the two main project areas (Mapanda and Uchindile). Main results of the studies are incorporated to the corresponding PDD sections.	☑	☑
Does the analysis adequately include (where applicable) information on local communities, indigenous people, land tenure, local employment, food production, cultural and religious sites and access to fuelwood and other forest products?	2, 8,9	DR, IV	The available documents include corresponding assessments of local communities, land tenure, food productions, etc.	☑	☑
G.2 Significant negative impacts					
If any negative impact is considered significant by the project participants or the host Party, has a statement that the project participants have undertaken a socio-economic impact assessment in	2	DR	Section G.3 includes the impacts as identified by the Socio-economic impact assessments carried out jointly with the EIAs.	☑	☑

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accordance with the procedures required by the host Party (including conclusions and references to supporting information) been provided?					
G.3 Remedial measures to address impacts					
Has an adequate description of the planned monitoring and remedial measures to address significant socio-economic impacts been provided?	2	DR	**Clarification Request No. 22.** Socio-economic monitoring as indicated in under G.3.2. shall be specified in regard concrete monitoring activities to be carried out. Identified remedial measures, if any, are to be included.	**CR22**	☑
H. Stakeholder Comments					
H.1 Description of how stakeholder comments have been invited and compiled					
Has a description of how stakeholder comments have been invited and compiled been provided and has it been undertaken in an open and transparent manner that facilitates comments being received and has the project been described in a manner that allows local stakeholders to understand the project?	2	DR, IV	The identified stakeholders and the methodology used is included to the PDD. The used questionnaires have been provided. First stakeholder comments were gathered in 2005 and additional interviews were carried out in 2007. Thus the latter was realized after project start. Interviews were carried out by visiting single households in the neighbouring villages, in coordination with the village representative.	☑	☑
H.2 Comments received					
Have stakeholders who made comments been identified and has a summary of the comments been provided?	2, 4, 5	DR, IV	The comments have been summarized and presented in an aggregated manner. About 130 community members close to each of the two project sites were interviewed. During the onsite visit, project support by local communities was reconfirmed by through village representatives (chief). In discussions with village members, it was noted that expectations on the delivery of other development measures (schools, roads, etc) provided by the project are relatively high. Therefore, straight forward and continuous communication on these expectations and	☑	☑

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			their compliance is considered crucial for the long term support and success of the project. As indicated in section A.2 / contribution to SD, several development activities are supported by the project.		
H.2 report on due account					
Has an explanation on how due account has been taken regarding the received comments from stakeholders been provided?	2	DR	Explanations on how the comments have been taken into account are included to the PDD, indicating relevant action of the project participants.	☑	☑
Annexes					
Annex 1 Contact information on project participants					
Is contact information on participants of the project complete?	PDD	DR	Yes, contact information is complete.	☑	☑
Annex 2 Public funding					
Has information been provided from Parties listed in Annex 1 on sources of public funding for the project which affirms that funding does not result in a diversion of official development assistance and is separate from and not counted towards the financial obligations of those Parties?	PDD	DR	Yes, information on funding is provided.	☑	☑
Annex 3 Baseline information*					
Has information additional to that required in Section C or in the approved methodology been provided (or stated as not required)?	PDD	DR	Baseline calculations /estimates are included based on 14 plots located in planting areas. The study focuses on carbon stocks in trees and grass. See section C.7. for requests on baseline study.	☑	☑
Annex 4 Monitoring plan*					
Has the monitoring plan been included as annex 4 and does it allow for all the requirements listed under paragraph 25 of the Modalities and procedures for	PDD	DR	Environmental monitoring plan was provided. **Corrective Action Request No.18.** A concrete Monitoring Plan is to be developed and included to the	**CAR1 8**	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A/R project activities under the CDM?			PDD (beyond environmental monitoring), reflecting on concrete monitoring procedures for the mains parameters as defined in section E.		

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Table 3 VCS Validation Checklist (for items not covered by the CDM-methodology checklist)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. Description of the Project					
A.1 Title of the project activity				☑	☑
A.12 Demonstration to confirm that the project was not implemented to create GHG emission reductions primarily for the purpose of its subsequent removal or destruction.					
Is it confirmed in the document that the project was not implemented to create GHG emission reductions primarily for the purpose of its subsequent removal or destruction?	2	DR, I	99-year lease of the project area for GRL. Subsequent rotation cycle are planned after initial harvesting	☑	☑
A.13 Demonstration that the project has not created another form of environmental credit (for example renewable energy certificates).					
If the project has created another form of environmental credit: Is a letter provided from the program operator that the credit has not been used and has been cancelled from the relevant program?	2, 73	DR, I	No other environmental credits have been generated. The project was withdrawn from the CDM validation process earlier	☑	☑
A.14 Project rejected under other GHG programs (if applicable)					
Projects rejected by other GHG programs can be considered. If this is the case it shall be: a) clearly stated in the VCS PD: all GHG programs for which the project has applied for credits and why the project was rejected (no commercially sensitive information, see A.17). b) provision of the VCS verifier and registry with the actual rejection document(s) including explanation. c) If the project was validated against VCS program requirements.	2, 21, 72	DR, I	Project was withdrawn from the CDM process due to the early starting date. The project was checked against the VCS program requirements. **Clarification Request 1:** Clarify and document the compliance with starting date and early crediting requirements as per VCS guidance.	CR 1	☑
H. Ownership					
H.1 Proof of land title					
Is the proof of title been provided by one of the following:	2, 12	DR	Ownership proof has been provided	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
a) a legislative right b) a right under local common law c) ownership of plant, equipment and/or process generating the reductions/removals d) a contractual arrangement with the owner of the plant, equipment or process that grants all reductions/removals to be proponent			already as per previous CDM validation.		
H.2 Projects that reduce GHG emissions from activities that participate in an emission trading program (if applicable)					
Is, if applicable, a list included to the document that shows all project proponents of projects that reduce GHG emissions from activities that: a) are included in an emission trading program, or b) take place in a jurisdiction or sector in which binding limits are established on GHG emissions.	2, 73	DR, I	The project does not participate in an emission trading program. This has been confirmed by the project owner.	☑	☑
Is, if applicable, evidence that reductions or removals generated by the project have or will not be used in the program or jurisdiction for the purpose of demonstrating compliance included?	-	-	n/a	-	-
If yes, does evidence include: a) a letter from the program operator or designated national authority that emissions allowances (or other GHG credits used in the program) equivalent to the reductions/removals generated by the project have been cancelled from the program, or national cap as applicable or; b) purchase and cancellation of the GHG allowances equivalent to the reductions/removals generated by the project related to the program or national cap.	-	-	n/a	-	-

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Table 4 VCS Risk Assessment Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion
General risk factors					
1. Risk assessment in general					
Are all risk factors listed in General AFOLU Guidance are considered? Was the significance x likelihood approach applied? If yes, is a comprehensible documentation provided? (details shall be provided in the respective section)	2	DR, I	All risk factors are listed in the Annex B Not the significance *likelihood approach was chosen but the general approach. This is considered adequate with exception of the fire risk For the fire risk the significance x likelihood approach shall be applied. See CAR 10	☑	☑
2. Project risk					
a) Risk of unclear land tenure and potentials for disputes?	2	DR, I	Described in question 8	☑	☑ low-medium risk
b) Risk of financial failure?	2	DR, I	Described in question 10 and 12	☑	☑ low risk
c) Risk of technical failure?	2	DR, I	Described in question 9	☑	☑ low risk
d) Risk of management failure?	2	DR, I	Described in question 11	☑	☑ low risk
3. Economic risk					
What is the risk of land opportunity costs to endanger the future viability of the project?	2	DR, I	Described in question 13	☑	☑ low risk
4. Risk of political failure					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion
Has political stability in the project region increased or decreased in the last 5 years? Is this reflected by the political stability indicator in the database of world wide governance indicators provided by the World Bank? (http://www.govindicators.org) Are there similar carbon forestry projects in the region? If yes, have they suffered any problems with the political authorities so far?	2	DR, I	see also question 14	☑	☑ low-medium risk
5. Risk of social instability					
How can the social-structures in the region be described? Will they be affected by the project? Is migration a common phenomenon in the region? To which extent are local people organised in forms of groups /societies, community institutions? Will local people / groups be involved in the project development, implementation and maintenance? If yes to which extent? Will the local communities benefit from the project? If, yes in which way?	2	DR, I	No assessment of the risk of social instability has been conducted. **Corrective Action Request No 1** An assessment of the risk of social instability shall be inserted in the risk assessment.	**CAR 1**	☑ low risk
6. Natural disturbance risk				**medium**	
a) What is the probability of fire occurring in the project area?	2	DR, I,	Fire is a major risk mostly caused by illegal hunters. Fire stripes around the plantations, watchtowers, trained and well equipped fire brigades are the main counter measures.	**CAR 2**	☑ low risk class (16%)

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion
			Corrective Action Request No 2 Apply for the fire risk the likelihood * significance approach of VCS Appendix A. Sustain the assumptions with evidence and explain how the fire risk assessment is considered in the overall risk class of the direct assessment.		
b) What is the probability of incidence of pests and disease attack?	2	DR, I	**Corrective Action Request No 3** Provide information on probability of pests and diseases.	**CAR 3**	☑ low-medium risk
c) What is the probability of extreme climatic events (e.g. floods, droughts, winds, frost) occurring?	2	DR, I	**Corrective Action Request No 4** Provide information on probability of extreme climatic events.	**CAR 4**	☑ mow-medium risk
d) Is there a geological risk (e.g. volcanoes, earthquakes, landslides)?	2	DR, I	**Corrective Action Request 5** Provide information on probability of geological risks.	**CAR 5**	☑ low risk
ARR specific risk factors					
7. Project longevity / Commitment Period					High: ☐ Medium: ☒ Low: ☐
Is the project designed to be short-, medium- or long-term?	2	DR	The project is designed to be long term. Project lands are under 99 year lease.	☑	☑
Is harvesting of trees planned?	2	DR, FV	Yes harvest is planned. Risk rating medium is correct **Corrective Action Request No 6** Project lifetime shall be included according to the PD.	**CAR 6**	☑
8. Land ownership type				**Medium or low**	High: ☐ Medium: ☒ Low: ☐

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion		
Who is the owner of the project land?	2	DR, IV	Land is under 99 year lease from the national and local governments by GRL. There is no private land ownership in Tanzania possible. The 99 year lease is considered equal to private ownership by GRL. The audit team concluded that based on the project setting of title deeds the overall risk class is medium for this item. **Corrective Action Request No 7** Describe the risk classification in regard to ownership in the project documentation.	**CAR 7**	☑		
Who has user rights?	2	DR, I	The User rights are with GRL.	☑	☑		
9. Technical capability					High	Medium	Low
					☐	☐	☒
Have the chosen techniques been successfully implemented in this region before?	2	DR, I	Experience in plantation establishment is available in the region.	☑	☑		
Have they successfully implemented in regions with similar growth conditions?	2	DR, I	N/A	☑	☑		
10. Financial capacity					High	Medium	Low
					☐	☐	☒
Has the project external financing? If yes, from whom?	2	DR, I	The Project is backed by private sector investors; parent company is well capitalized and has access to other sources of finance for expansion. Loans from IFC and Norfund under final negotiations. **Clarification Request No 1**	**CR 1**	☑		

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion		
			Financial backing from external financial institutions and governments shall be described in detail and sustained with evidence.				
11. Management capacity					High	Medium	Low
					☐	☐	☒
Has the project management experience from previous carbon forestry projects? If yes, how many projects have they managed?	2, Annex B	DR, IV	The Project is in operation since 1998. The on-site management team is in place since 1997. The company policy is to employ predominantly senior local management with a proven track record in planting, forestry and carbon operations. **Clarification Request No 2** Describe in more detail the management capacity in the PD.	**CR 2**	☑		
Will there be an on-site management team?	2	DR, I	Yes, a management team and a technical team are permanently engaged.	☑	☑		
12. Future income					High	Medium	Low
					☐	☐	☒
Is the management plan taking into consideration future income and costs from the project?	24	DR, IV	Yes, a management plan is in place. **Clarification Request No 3** Refer to existing documents and provide reference list.	**CR 3**	☑		
13. Future / current opportunity costs					High	Medium	Low
					☐	☐	☒
Is the project competing with other land uses? If yes, will other land uses become more attractive in the future?	2	DR, IV	Past and likely alternative use is unmanaged grassland – with no related income. **Corrective Action Request No 8** A baseline study was elaborated for CDM	**CAR 8**	☑		

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Conclusion	Final Conclusion		
			project development, where alternative land uses ware discussed. Summon up results of that study and refer to it.				
14. Endorsement of project or land-use activity by local or national political establishment					High ☐	Medium ☒	Low ☐
Is the project endorsed by the national or local political establishment? If yes, is this subject to change in the future?	2	DR, IV	Bottom to top process is used in Tanzania with approval starting from the Village elders to the President. The 99 years lease contract was signed by the government. **Corrective Action Request No 9** Stakeholder participation processes were conducted during AR CDM project development as well as during FSC-Certification procedure. Refer to those processes.	CAR 9	☑		

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Table 2: VCS responses to CAR and CR (VCS PD, methodological part)

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
Corrective Action Request No.1. The format of the PDD shall not be altered and thus contents currently presented in Annex 5-10 should be included to other PDD sections or presented as secondary documentation.	Generalia	The PDD format has been restored. The text referring to Annex 5-10 has been updated throughout the main PDD text. The main contents for Annex 5-10 has been presented as secondary document: Annexes belonging to the PDD. Audit team, 26. Feb. 2008: The PDD format of version 03 has been used without alteration of the template. This is the template version used at start of the Global Stakeholder Process is used.	☑
Corrective Action Request No.2. The potential use of invasive species remains to be included and discussed in the PDD, as requested by the guidelines.	A.2	Species to be planted have been screened against the global database on invasive species. None of the species to be planted by the participant are invasive in Tanzania. Audit team, 26. Feb. 2008: The aspect of invasive species has been included to the PDD. None of the indicated species is considered invasive. General comment apart of the aspect of invasive species: Natural regeneration through seeds was partly witnessed by Pinus sp. in stands within the region (mature stands / not project area). Thus, it is considered possible that the created stands will be able to count on natural re-growth, allowing e.g. to include this to improved management regimes. However, the natural spreading of Pine regeneration to not planted areas on a medium to long-term basis is considered possible to some extend. Eucalyptus is managed by re-growth / re-sprouting and natural regeneration by seeds has not been witnessed.	☑ No invasive species included.
Corrective Action Request No.3. Following the AR-CDM guidelines, the boundary of a project activity shall only include the actual planting areas. Thus, adaptation of the defined project boundary is requested. Subsequently the PDD remains to be updated on area indications. Note that it is expected that the individual discrete	A.4.1.4	The actual planting areas have been established following an extensive mapping of the lands that have not been planted. The PDD reference to the actual plantable areas has been updated. The geographical coordinates of the discrete parcels of lands (polygons) are contained by the files attached separately with the submission of all materials. The centroids of the polygons have been included in the PDD	☑ The boundary is defined.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
parcels of land shall be holding a unique identification and the geographic coordinates of boundaries shall be provided (polygons), and included to the AR-CDM PDD.		main text. Audit team, 26. Feb. 2008: The revised maps have been included to the PDD. The initially included areas that were not foreseen for planting have been excluded (in comparison to initial PDD). The limits have been checked with the GPS points taken in the field and also the high resolution images as included to GoogleEarth for the Uchindile site. The initially delivered CDs (after onsite visit) did not include images which allowed the review of the accurate delineation work. The area has been subdivided to blocks with corresponding IDs. Each block is partially holding more than one discrete site (without separate identifiers). For the implementation phase each discrete planting / each individual polygon site shall be assigned with a clear identifier (label). Currently sites are already unambiguously identifiable through the maps on total areas / blocks including UTM coordinates and calculations on removals are not impacted by site enumeration. Include indications on planting area per block. The polygons on planting areas per year and their boundaries (as well as strata) have been provided in digital form. The areas sizes as provided based on ArcGis polygons are Uchindile 97-07: 3036 ha and Mapanda 98-07: 1937 ha; Uchindile 08-13 4503: Mapanda 08-11: 1880. Consistency of area indications remains to be assured. GRL response, 31st March 2008: • The missing images have been resubmitted. The images are LandSat TM 30m resolution of 1995. The image scene covers both Uchindile and Mapanda project locations. In addition the scanned geo-referenced topographic maps of 1974 are also included. • The polygons have been assigned with unique	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		identification. This includes project location, block number and polygon number. Example: UP0103, representing Uchindile project, Block 1 and Polygon number 3. • The planting areas indicated per year on Section A.2 are based on the actual plantings per year of blocks indicated in Section A.4.1.4 of the PDD • Consistency of the areas to be planted indicated in the PDD and the polygons have been corrected. <u>Audit team, 6. June 2008:</u> In the PDD the discrete project sites are now traceable and verifiable. The different planting blocks are identifiable through the included map and the coordinate of the different blocks. The maps include the corresponding geographic reference in UTM. The information included to the PDD was sustained with corresponding secondary GIS files. The delineation work of the project boundary was carried out based on additional field visits by the project team and further analysis work of the indicated satellite images. Field data gathered by the auditor during the onsite visit (> 20 GPS points), the Landsat images provided by the participant, and high resolution images available for Uchindile on Google Earth was compared to the adapted boundary and the presented differentiation of non-planting to planting areas within the GRL property. It is considered that now only the net planting area is included to the PDD. The project area is considered eligible considering the upper end of the forest definition as provided by the Marrakech Accords. Due to the special circumstance that the project boundary was adapted to some extent ex-post to the site visit of the audit team, it is requested that random checks of outer limits (especially to conservation areas as defined for FSC) are re-	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		confirmed at the first verification. The following data was confirmed with the provided GIS files. Consistency with PDD data is confirmed.	
Corrective Action Request No.4. It needs to be clearly indicated if the project is to be considered an afforestation or a reforestation project.	C.3	Anecdotal evidence of the local population indicates that forest vegetation was pushed back into the gullies and river valleys until the 1960/70s. Therefore it is a reforestation project. No maps exist that predate 1975. Audit team, 26. Feb. 2008: The project activity is a reforestation. Terminology has been adapted accordingly in the PDD to reforestation. Land eligibility was shown, among others by remote sensing data.	☑ The project activity is a reforestation.
Corrective Action Request No.5. It remains to be demonstrated and documented in the PDD (while following the step wise approach as defined by the methodology) that a hierarchical approach has been take in the ex-ante stratification process. The questions below / in table 1 reflect the expectations of the auditor. The results of the stratification need to be incorporated to the PDD.	C.4	Documentation has been done. The methodology hierarchy has been followed for ex-ante stratification process. The PDD section has been adapted to the methodology. The results of stratification e.g. stratification maps on step 3/4/5 have been included in the PDD. Audit team, 26. Feb. 2008: In the initial steps of stratification, non-project areas were still included. The stratification consists mainly in the subdivision of already planted areas from those areas yet to be planted. The areas to be planted are assigned with stand models (species) to be installed in defined years. Under consideration of the homogenous site conditions of the project area, this is deemed adequate. Only Eucalyptus and Pine is considered as stand model.	☑ Ex-ante stratification is considered sufficient.
Corrective Action Request No.6. In regard to additionality, - it is requested that all realistic and credible land uses alternatives shall be identified (in section C.6), - specifically for each relevant alternative, legal compliance needs to be discussed (step 1b) In order to cover step 3b, the identified barriers	C.5.1 / C.6	The realistic and credible alternative land use alternatives identified under section C.6, and the barriers identified have been discussed for each alternative. It has been elaborated that the identified barriers do not oppose the continuation of status – quo alternative, the continuation of the current land use, unmanaged grasslands Audit team, 26. Feb. 2008: The alternatives are included (continuation of grassland / small scale reforestation / plantation) and applicable barriers	☑ Alternatives are included to additionality and barrier discussion.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
(step 3a) need to be discussed for all alternatives. Consider to use a matrix, demonstrating that the identified barriers do not oppose at least one alternative.		indicated. In interviews it was clarified that none of these alternatives are opposed by legal barriers. GRL response, 4th April 2008: PDF file called "Clarification request 13" contains a section of the Tanzanian Forests Action Plan. On the last 2 pages in sections 3.2.1-3.2.4 various pieces of evidence are provided, Audit team, 6. June 2008: Investment barrier: Additional evidence has been received, which underlines that on the national level there is only short term loans available. Corresponding letters of confirmation were provided by the Bank CRDB Bank, Dar Es Salaam, dated 11th April 2008 and and FBME Bank, Dar Es Salaam, dated 8th of April 2008. For players in Tanzania, unavailability of long term loans is considered a prohibitive barrier for (non-CDM) reforestation activities. It is underlined that it has been credibly documented that the CDM has been considered by the project developers from the start of project design, among others through pre-validations and verifications on achieved removals. - Technological barrier: The provided secondary material on the forestry sector in Tanzania underlines that corresponding expertise, including on plant production and nurseries, is not available. The project activity has installed its own nurseries, which is partially considered an indicator that access to quality planting material constitutes a barrier. - Institutional barrier: The lack of organizational and institutional backing for the forestry sector is underlined in the Tanzanian Forest Action Plan. - Market barrier: Market and investment risk are considered related, being	

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		sustained by the evidence from the banking sector. In essence, all indicated barriers have been sustained with evidence that underlines the prohibitive character of the barrier. CR 9 deals with the aspect or regional reforestations.	
Corrective Action Request No.7. In regard to the estimation of the ex ante baseline net GHG removals, main calculations in line with the formulae / steps as defined by the methodology (section II.5) remain to be included to the PDD (compare section C.7 in table1 and PDD). Table C.7.4 will require adaptations in line with results.	C.7	The section C. 7 has been adapted according to the steps and formula provided in the methodology. Table C.7.4 has been adapted in line with the results. Audit team, 26. Feb. 2008: In the table on baselines it is indicated that baseline stocks for grasslands are 0.557 t C/ha (details also included to Baseline Study). The calculation steps that have led to the indicated results are not traceable in the PDD. Please include corresponding indications / steps from the spreadsheet to the PDD (areas planted and debits due to grassland as well as clear indications on the consideration of growing woody perennials and trees baseline stocks respectively growth). Make sure to follow methodology. Consistency of planting areas and debits from grassland stocks needs to be assured (currently cumulative; planting till 2013 vs. table in PDD till 2015). GRL response, 31st March 2008: • Consistency between planting areas and debits from grassland stocks has been reviewed. The estimated end of planting shall be 2013 • Corresponding results have been updated in Table C.7.3 of the PDD. • Emissions / removals beyond 2013 are based on the area being replanted. The same assumptions during the first rotation have been used. To be reviewed if the same assumptions are holding. Audit team, 26. Feb. 2008: Baseline stocks up to 2013 considered in calculations. Removals are negligible small (produced by trees with	☑ Consistency of PDD and excel spreadsheets confirmed. Field estimates considered adequate for homogenous conditions of project area.

Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		stocks) for ex-ante estimates estimation.	
Corrective Action Request No.8. Date (DD/MM/YYYY) of completion of baseline study to be given in PDD / section C.8.	C.8	The actual date of completion of the baseline study has been referred to as 30th June 2000. Audit team, 26. Feb. 2008: Date for baseline study was included. Complete contact details for all persons indicated (especially those not from GRL) GRL response, 31st March 2008: The contact details of persons involved in the baseline study have been indicated / completed.	☑ Names and contact details have been incorporated.
Corrective Action Request No.9. In regard to the estimation of the ex ante actual net GHG removals main calculations in line with the formulae as defined by the methodology (section II.1) remain to be included to the PDD (compare section D.1 in table1 and PDD).	D	The actual planted areas for the entire project areas have been established including annual planting rates and stand models. The results in accordance to the formula defined by the methodology have been included in the PDD. Audit team, 26. Feb. 2008: The details on BEF are considered acceptable (values for tropical conditions and DBH > 10 cm). Consistency with Excel spreadsheet needs to be assured For RS consider two digits as included to Excel and assure for consistency with table IPCC GPG 3A.18. See also corresponding CR below. Include to the PDD relevant indications on GHG emissions (as per methodology). Excel sheets on emissions are considered to require review (reason for TJ per 103 litres instead of regular EF) It is requested that all relevant calculation steps on removals as defined per methodology are included to the PDD. GRL response, 31st March 2008: • Consistency on BEF values in the PDD and in the calculations spreadsheet in the excel file have been restored. Explanation on the GPG LULUCF parameters has been provided in the Section D.1.	☑ Aggregated results included to PDD. Further calculations in excel spreadsheet.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		• Emission factor used during calculation are based on the IPCC default value for diesel. It has been resolved assumed that all fuel that is used under GRL is burned and all emissions associated with fuel used have been counted as leakage. • All relevant calculation steps in line with the methodology have been reviewed and applied Audit team, 6. June 2008: The calculations are considered to be in line with methodology requirements. The indicated assumptions have been updated. The areas considered in corresponding excel spreadsheets are not fully consistent with the project areas included to project boundary, but as the considered areas are smaller the results are considered conservative. The aggregated results were included to the PDD. Further details (remain included to Excel spreadsheets)	
Corrective Action Request No.10. In section E.1. / Forest establishment monitoring, consistency with the methodology needs to be assured in the PDD, reflecting additionally on: • Information on the number of species planted, area of stratum, and planting layout as per the management plan shall be prepared (i.e. Parameter E.1.2.11 area planted per stratum) • Any deviation in the implementation in relation to the management or silvicultural plan and the information on such deviation shall be recorded and the justification shall be presented in the monitoring report. • The planted areas affected by natural and anthropogenic disturbances and seedlings planted by species as part of the gap planting during the year 2 and year 3 shall be recorded as during the	E.1.2	The section has been adopted according to the needs of the methodology. Audit team, 26. Feb. 2008: Changes have been carried out according to methodology requirements. In regard to completion of all tables: Frequency cannot be once. Measured (m), calculated (c) estimated (e) or default (d) are only options for 4th column – applicable to all MP tables. GRL response, 31st March 2008: • The frequencies have been updated e.g. once has been updated to once per specific period (per rotation) • Fourth columns with m, c, e and d have been updated.	☑ The PDD was updated.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
assessment.			
Corrective Action Request No.11. In section E.1. / Forest management monitoring, consistency with the methodology needs to be assured in the PDD, reflecting additionally on: • *Schedule of fertilization and the types and quantity of fertilizer applied (monitoring even if currently not scheduled)* • *Schedule of replanting, coppicing and other management implemented to ensure the land use in its intended purpose.* • *date, location, species, volume of biomass lost or affected, and the preventive or curative measures, if any implemented* *(ID 3.11- 3.13 should not only focus on fire but on any pest)*	E.1.3	The section has been adopted according to the needs of the methodology. GRL response, 31st March 2008: Table updated Audit team, 6. June 2008: In table E.3 the frequencies shall be fixed (per rotation is relative and might differ per stand), i.e. each year / five year.	☑ The PDD was updated
Corrective Action Request No.12. In section E.2. / Sampling, consistency with the methodology needs to be assured in the PDD, r*eflecting additionally on:* - *Monitoring of strata shall be done using a Geographical Information System (GIS),* - *The monitoring of strata and stand boundaries is critical to the verification of the area of stratum i, sub-stratum k,* - *The need for ex post stratification shall be evaluated at each monitoring event and changes in strata should be reported to the DOE for verification.* - *a.1 Factors to be considered in the ex post stratification (…)*	E.2	The section has been adopted according to the needs of the methodology. Audit team, 26. Feb. 2008: Changes have been carried out according to methodology requirements. GRL response, 31st March 2008: Table updated Audit team, 6. June 2008: The PDD was updated accordingly.	☑ The PDD was updated in regard to sampling.
Corrective Action Request No.13. In section E.2. / Sampling, the concrete number of	E.2	The concrete samples size has been estimated according to the methodology requirement and is included in the PDD.	☑ Preliminary estimate on

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
sample size should be estimated according to the methodology requirements and included to the PDD.		Audit team, 26. Feb. 2008: There has been a misspelling in the request (size instead of sites). Apologies for that. Please indicate the expected amount of sample plots (number). GRL response, 31st March 2008: The total number of sample plots has been calculated according to the methodology requirement. The results were compared with the Winrock sampling calculator and are indicated in the PDD. Audit team, 6. June 2008: Calculation sheet was reviewed onsite. Compliance with methodology and uncertainty requirement will be reviewed at verification. The not systematic distribution of sample plots for initially installed plots would hold the potential for a Request of Deviation, if AR-CDM registration is pursued.	Permanent Sample plots carried out. Auditor considers non-systematic distribution of plots acceptable, if uncertainty requirements and good practice in inventories are complied with.
Corrective Action Request No.14. In regard to section E.4.1 / actual net removals and GHG emissions, consistency with parameters as indicated in methodology (table III.1 and III.2).remains to be assured.	E.4.1	Parameters are consistent and as indicated in the methodology has been updated. Audit team, 26. Feb. 2008: Parameters 2.1.23 and 24 remain to be completed in MP. Note that non-consideration of parameters of E.3.1 may cause difficulties at re-validation (after finalisation of first 20 y crediting period). GRL response, 31st March 2008: Table updated parameters 2.1.23 and 24 have been completed Audit team, 6. June 2008: The PDD has been updated in regard to the parameters to be monitored. Consistency with the methodology is achieved.	☑ The PDD has been updated in regard to monitoring requirements.
Corrective Action Request No.15. In regard to section E.5 / Leakage, consistency with parameters as indicated in methodology	E.5	Parameters consistent with the methodology have been adapted in the table. Assurance of the potential leakage from fossil fuels and that shall be monitored according to the	☑ The PDD has been updated in regard to

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
(table III.3) remains to be assured.		methodology has been assured. Audit team, 26. Feb. 2008: Leakage parameters due to displacement have not been considered which is considered acceptable.	leakage monitoring.
Corrective Action Request No.16. Section E.5.2 remains to be completed with procedures for the periodic review of the implementation of activities and measures to minimize leakage.	E.5.2	Section E.5.2 has been completed with explanation on potential leakage as being fuels from transportation of materials and staff. Audit team, 26. Feb. 2008: Activities to minimize leakage have been included.	☑ The PDD was updated accordingly.
Corrective Action Request No.17. A QA / QC procedures remain to be defined in detail reflecting on the requirements of the methodology (uncertainty assessment and procedures to reduce uncertainties)	E.6	The section on QA/QC procedures has been updated with details as required by the methodology. Uncertainty assessment and procedures to reduce uncertainties has been adapted in the PDD as per the methodology requirements. See section E.6. Audit team, 26. Feb. 2008: Included as required by Modalities and Procedures.	☑ The PDD was updated accordingly.
Corrective Action Request No.18. A concrete Monitoring Plan is to be developed and included to the PDD (beyond environmental monitoring), reflecting on concrete monitoring procedures for the mains parameters as defined in section E.	Annex 4	The Monitoring Plan has incorporated monitoring procedures for the main parameters defined in the methodology. These are beyond environmental monitoring which was currently in the monitoring of environmental issues submitted as annex 4. The document is annexed to the PDD. Adaptations of the main monitoring parameters are incorporated in the PDD. Audit team, 26. Feb. 2008: MP has been included. Partial repetition of parameter listing. Procedures for monitoring activities are considered to be covered also by other secondary documents such as the forest management plan. Good practice is in monitoring process and field work is to be followed (compare i.e. Sourcebook of Winrock etc)	☑ The PDD was updated accordingly and further details were given in the Annex 4.
Clarification Request No. 1. It shall be clarified, if / how the indicated measures in favour of local sustainable development (SD, section A.2) will be monitored and how SD	A.2	Under the PDD section A.2, it has been clarified that 10% of the revenues from the sale of tCERs shall be used for community and environmental projects. The GRL commitment to SD has been explicitly underlined by the Core	☑ SD monitoring included to the monitoring plan.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
monitoring relates to the defined Monitoring Plan included to the PDD. Furthermore clarification shall be provided on how the 10% share of carbon revenues for SD purposes is going to be managed, utilised and distinguished from general operation expenditures.		Environmental and Social values. Under section 6.2 of the monitoring plan, monitoring aspects of the social side of the project have been indicated. The specific activities under the arrangement are agreed with the local communities. These are distinguished from the general operations expenditures. Audit team, 26. Feb. 2008: SD compromises of GRL have been included to PDD.	
Clarification Request No. 2. Considering the scheduled changes in the boundary definition (exclusion of riverine and conservation areas), the presence of endangered species on the actual planting sites shall be discussed in the PDD. Further clarification is requested on a) the conservation status of the Protea (bush), and how this plant is managed once planting occurs.	A.4	Planting will respect a 60m buffer from the riverine and conservation areas (wetlands, etc.). This has been explained in the PDD. The requirement of the NEMC is that steep slopes (>42^{o}) shall be left intact or be planted with indigenous species for conservation purposes. The presence of endangered species on the actual planting areas has been discussed in the PDD and areas with dense Protea vegetation have been excluded from the plantable area. The monitoring of rare, threatened, and/or endangered species is including in the periodic monitoring and specific attention is paid through the compartment assessment form that is completed before any action takes place in any compartment. Audit team, 26. Feb. 2008: Considered with newly adapted boundaries. Protea excluded.	☑
Clarification Request No. 3. It shall be clarified, based on which procedures it is assured that the 30 m buffer between plantation and riverine vegetation (EIA, 1999) is obeyed and maintained during planting.	A.2	The 30m buffer (Water act, 2000) between rivers, creeks and other water bodies and the plantations are mapped on the ground and put in the GIS system. These are verified regularly by the survey team. We have appointed an environmental officer who is operating independently from the management of the plantations and conducting internal audits on all performance requirements. Due to the fact that GRAS is also in the process of obtaining FSC certification, the performance standards can be considered very high. Audit team, 26. Feb. 2008:	☑

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		Buffer considered through internal procedures.	
Clarification Request No. 4. It is requested that clarification on the chosen stand models and its main characteristics is provided. Key parameters for planting, treatment, harvesting shall be included as well as the estimated share of each model within the annual planting. ´	A, D	The stand models are characterised by species, year of planting and the estimated share of each model are based on the soil condition and the topography. Under the CDM component of the project, only Eucalyptus and pine species are part of the project. Eucalyptus is preferred in deep soils while pine shall be planted on hill tops. The actual areas have been indicated in the PDD. The total area under the management of GRL is much larger compared to the areas for the CDM project activity. A high percentage of the land remains conservation area, including 10% of the total land holding as set aside being representative for the original vegetation and terrain circumstances. In addition, from the plantable area 5% has been set aside for planting lesser known indigenous and exotic hardwoods. The total area shall be managed and monitored. Audit team, 26. Feb. 2008: How are the 5% for planting the lesser known species and corresponding areas considered in the removal calculations. Is this additional area? GRL response, 31st March 2008: The 5% of the plantable area is set aside before the planting starts and is not part of the areas being considered in the removal calculation. Audit team, 7. June. 2008: Hence, besides Eucalyptus and Pine, other species will mostly be used outside the project boundary. Species are described in A.4.2. Stand management is further outlined in the forest management plan. Rotation periods assumed for removal calculations is 13 years for Eucalyptus, and for 21 years for Pine.	☑ The relevant information on stand models was provided.
Clarification Request No. 5.	A	The title deed has been changed to reflect the land use	☑

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
The title deed for the Uchindile / Kilombero site indicates that the land is foreseen for agricultural use. The commissioner for lands of the Ministry of Lands, Housing and Human Settlements has acknowledged in a letter dated 23 October 2006 that by mistake the title deed was prepared indicating the land use to be agriculture and pastoral use. Clarification on the status of the corresponding rectification of the title deed is requested.		being forestry. Evidence is submitted at the same time as this document. Audit team, 26. Feb. 2008: Please indicate the evidence. Is this also file 304? GRL response, 31st March 2008: The document reflecting the land use change is submitted. Correction: The title deed file is 308.	It is considered sufficiently documented that the title deed may include forest activities. **Forward Action Request No 1:** It shall be reconfirmed at verification that the title deed is still fully held by the project participant.
Clarification Request No. 6. The title deed of the Uchindile / Kilombero site is not on the name of Green Resources Ltd (but still on the name of a predecessor Escarpment Forestry Company LTD). Clarification / updated evidence on the land access of GRL to the land is requested.		The title name holder has been changed to GRL. Evidence is submitted at the same time as this document. Audit team, 26. Feb. 2008: Evidence has been received.	☑ Evidence on title received.
Clarification Request No. 7. It remains to be clarified and stated in the PDD (as per Guideline requirement), if transfer of technology can be expected from an Annex I country, and it shall be commented on the aspect of likelihood for technology substitution.	A	It has been clarified in the PDD that the transfer of technology from Annex I country is not expected. The technologies currently in use are unlikely to be replaced by a significantly different technology. Updates in software etc. are not considered "transfer of technology" but are considered standard operating procedure. No 3rd party will be involved however, in the introduction of such new software: we have in house capacity for that (educated professionals in IT, GIS, etc.). Audit team, 26. Feb. 2008: Technology from Annex 1 is not required. Request closed.	☑ No transfer of technology from Annex 1.
Clarification Request No. 8. Land eligibility according to AR-CDM requirements remains to be refined under consideration of the newly defined discrete	C	The areas eligible for planting have been delineated. The crown cover in the eligible land is not exceeding the 30% threshold on 1 ha assessment units. The areas to be planted have been mapped and a buffer of 60m from main water bodies and 30m from non-plantable natural vegetation areas	☑ Closed in line with Request CAR 3.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
parcels of land / boundary and under the final forest threshold definition (i.e. potentially also lower end).		will be respected. These areas will be demarcated on the ground when a compartment is coming up for planting.	
Clarification Request No. 9. In regard to reforestations to be considered under the baseline setting, relevance of pre-project reforestations on the regional level (at project start) is to be discussed, sustained with evidence and potentially considered. Compare also step 4 of C.5.2 (baseline definition):	C	Contact has been sought with the authorities and no forestation activities are going on in the region, other than under the title deeds of GRAS. However, no formal statistics are available to demonstrate this. The only "evidence" could be that no new title deeds have been granted. Audit team, 26. Feb. 2008: During the onsite visit local development / natural resource provided indications of reforestations for some districts at minor levels. This shall be explained and put to proportion and reforestation rates at starting date. The existing reforestations of Sao Hill should be discussed. GRL response, 31st March 2008: See response to CAR number 6 Audit team, 6 June 2008 Only reforestations present in neighbouring areas are those on public land, established in the context of a World Bank financed program (until 1991, aprox 40,000 ha, titled Sao Hill). The corresponding financing program was not continued. Interviews with local authorities have confirmed that private reforestations on smaller areas have increased to some small extent in very recent years within the region. As these rates are lower than those established solely by GRL and considered partially triggered by the incentives and model provided by the project activity itself, reforestations are not viewed as common practice.	☑ On the regional level, reforestations rates are small. Present reforestations were mostly established in the context of one single and expired state program.
Clarification Request No. 10. The fact that "Carbon stocks in soil organic matter, litter and deadwood can be expected to decrease	C3	Indicated and updated in the PDD text. Since the planted area has been grassland, the tool from EB 33 Annex 15, has been tested and complies with the text in the PDD that: no removal of vegetation above 10% of the baseline area, no	☑ Evidence provided and project conditions underline the compliance

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
more or increase less in the absence of the project activity" remains to be underlined with further evidence. The latter is also related to the conservativeness in the omission of defined pools. Guidance provided by EB 33 Annex 15 "Procedure to determine when accounting of the soil organic carbon pool may be conservatively neglected in CDM A/R project activities" shall be followed and discussed in the PDD.		soil disturbance for land prep above 10% of the project area, no ploughing, fine litter remains on site. Audit team, 26. Feb. 2008: Literature source indicated in PDD to be provided in order to sustain compliance with applicability criteria. GRL response, 31st March 2008: Literature has been supplied. Audit team, 31. March 2008: Corresponding literature sources have been submitted and are considered. It is considered that "Carbon stocks in soil organic matter, litter and deadwood can be expected to decrease more or increase less in the absence of the project activity"	with this applicability criterion.
Clarification Request No. 11. Section C.5.2 remains to be updated in line with stratification results (CAR5) and baseline estimation (CR9).	C.5.2	The section has been updated.	☑ PDD was updated.
Clarification Request No. 12. The issuance of VER credits and corresponding commercialisation may have implications on the additionality of the AR-CDM project (risk of double selling). Evidence on non-merchandising of relevant VERs is requested.	A	No VERs have been commercialised before the validation. The evidence of non commercialization has been provided in a letter from the CEO of Green Resources AS. Audit team, 26. Feb. 2008: Corresponding letter of confirmation has been provided and considered adequate to reduce risks of double selling (letter dated 1. April 2008 by Green Resources)	☑ Letter of confirmation received.
Clarification Request No. 13. For each barrier included to the analysis / PDD (step 3 a), the submission of credible secondary evidence is requested (i.e non-availability for loans for forestry projects as investment barrier), showing that these barriers impede the project activity (as non AR-CDM).	C	The banks cannot give such assurance unless a formal application is submitted. However, as indicated in the analysis, local commercial banks prefer shorter moratorium periods on loan repayments. Audit team, 26. Feb. 2008: Independent third party evidence is requested in order to underline existence of barriers and that they are prohibitive.	☑ Further evidence on additionality was provided.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		GRL response, 31st March 2008: Tanzania Forests Action Plan pg 23 and 24 indicate lack of financing and commercial / private plantations being new development in 2001. See also the response to CAR number 6 Audit team, 26. Feb. 2008: The evidence was considered applicable and adequate to demonstrate the existence of the barriers.	
Clarification Request No. 14. In regard to the baseline study (also Annex 3), statistical significance and uncertainties of baseline estimates shall be discussed.	Annex 3	The number of sample plots is relatively high. In addition, the statistical significance and uncertainties of the baseline estimates have been considered by the way of choosing higher and conservative figures. Audit team, 26. Feb. 2008: Data (as gathered in 14 plots) on grassland is considered adequate, among others due to the fact that estimated data is underlines by other defaults for grasslands. Through comparison to other studies it was sustained that results of baseline study on grasslands are applicable for the region.	☑ Baseline estimates accepted.
Clarification Request No. 15. For ex-ante actual net removals, sources and conservativeness of the elaborated valued for BEF, WD and RS shall be discussed in the PDD (i.e. comparison to literature sources). Background information on regional growth models for main species is requested.	D.1	The conservative values (lower end) and default values for BEF, WD and RS have been used during calculations and are discussed in the PDD. Where possible, local (Tanzania) growth models have been used (e.g. growth models). The studies are made available. Audit team, 26. Feb. 2008: To be closed jointly with CR 9.	☑ The PDD was updated and the calculations have been reviewed.
Clarification Request No. 16. Comments and the role of deforestation outside the project boundary in section D.2 are to be clarified.	D.2	Increase in deforestation outside project boundary is not anticipated as no households were resident within the project boundary. The management plan provides procedures to give away seedlings to the villagers as a means to reduce deforestation. Audit team, 26. Feb. 2008: No indications of permanent settlements were witnessed	☑ No deforestation due to displacement expected.

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
		beyond compensated areas. It is considered credible that the project does not lead to relevant leakage.	
Clarification Request No. 17. The relevance of occasional controlled burning on the installed fire breaks shall be clarified / discussed in the PDD in regard to leakage (section D.2)	D	The occasional controlled burning on the installed fire breaks has been clarified and discussed in the PDD. Audit team, 26. Feb. 2008: Has been included and are considered negligible. Only grassland strips are occasionally burnt.	☑ Burning of firebreaks is not considered. To be revisited at verification.
Clarification Request No. 18. The role of the compensation of pre-project activities / land-used in regard to leakage shall be considered in section D.2 according to the methodology requirements (section II.8)	D.2	The lands under the project have been idle, with limited land use as explained in the PDD. The compensation is to extinguish the customary right of occupancy which is a legal requirement. The amount of emissions is less then 5% of the project emissions/removals and can therefore, be ignored. This has been clarified in the PDD now. Audit team, 26. Feb. 2008: The compensated areas are of minor extension.	☑ It was credibly demonstrated that activities displaced from within the project area are negligible.
Clarification Request No. 19. In section E.1. / Boundary monitoring, it is unclear if the proposed compartment monitoring reflects on the required monitoring of the boundary for discrete areas and corresponding strata characteristics. Clarification / adaptation are requested.	E.1	The PDD has been adapted so as that the compartments and the corresponding strata indicated in the PDD will be monitored. Audit team, 26. Feb. 2008: Has been included. Strata are to be monitored.	☑ Strata and actual project area to be monitored.
Clarification Request No. 20. Complementary to the request on the elaboration of a Monitoring Plan to be included in Annex 4, monitoring procedures remain to be provided in line with the parameters to be monitored (stocks, emissions, leakage, etc).	Annex 4	See upgraded Monitoring Plan (MP) as included in Annex 4 of the MP. Audit team, 26. Feb. 2008: It is underlined that the included sampling intensity of 0.062 % is only indicative. The requirements of the methodology, with its formula on number of sample plots required, remains to be complied with.	☑ In a general manner, the procedures for monitoring are summarized in the Monitoring Plan. Procedures (SOPs) in detail to be reviewed at verification.
Clarification Request No. 21. Consistency between F.3 and Annex 4 is to be	F.3	See upgraded Monitoring Plan (MP) as included in Annex 4 of the MP.	☑ The PDD has been

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Validation Report clarifications and corrective action requests by validation team	Ref. to Table 1 and 2	Summary of project owner response	Validation team conclusion
assured and clear indications of the monitored environmental parameters to be included to the PDD. (If applicable: Table 1 of Annex 4 / Environmental Monitoring Plan, consistency with text based descriptions of monitoring obligations, choice of concrete indicators / parameters and monitoring frequency (AR-AM0005 does not provide frequency) needs to be reviewed.)		Audit team, 26. Feb. 2008: Annex 4 has been updated.	updated. Parameters are in line with EIA requirements.
Clarification Request No. 22. Socio-economic monitoring as indicated in under G.3.2. shall be specified in regard concrete monitoring activities to be carried out. Identified remedial measures, if any, are to be included.	G.3.2	See upgraded Monitoring Plan (MP) as included in Annex 4 of the MP. Audit team, 26. Feb. 2008: Annex 4 has been updated.	☑ The PDD has been updated. Parameters are in line with EIA requirements.

Table 5: Responses to CAR and CR: VCS Specific Items and Risk Assessment

Corrective Action Requests by audit team	Summary of response	Conclusion
VCS-Validation: Items in addition to CDM validation		
Clarification Request 1: Clarify and document the compliance with starting date and early crediting requirements as per VCS guidance.	**Project team March 2009:** The project was designed and implemented as a climate change mitigation project from its inception (see supporting documents a-c) Prior to 1 January 2002, the project applied an externally reviewed methodology and engaged independent carbon monitoring experts (SGS UK) to assess and quantify the project's baseline scenario and net emissions reductions or removals. **Audit Team April 2009:** Documents are delivered and sustain early CDM consideration in 1998.	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
	- Please identify / clarify the date of the GHG Project Verification and Certification report by SGS **GRAS Comment – May 2009** The GHG Project Verification and Certification report by SGS is dated 10th November 2000. Please see attachment (previously the date had been cut off during scanning of the document) **Audit Team June 2009:** Date of the report was provided and also cross-checked with other sources from SGS reports. VCS requirements are considered to be met.	
VCS Risk Assessment		
Corrective Action Request 1: General Section 5: An assessment of the risk of social instability shall be inserted in the risk assessment.	**Project Team March 2009:** Social Structures are described; migration processes are described; information on political structures are given. Villagers were involved in the process through PRA; Community benefits are listed. **Audit Team April 2009:** Information on social settings in the vicinity of the project is provided. Institutional setting in Uchindile and Mapanda is described. - Provide information on sources of the population census. Explain the increase in population in Mapanda village - Provide results of the community monitoring surveys **GRAS comment May 2009** The 1998 and 2002 population information came from the 2002 Tanzania National Census. The 2006 and 2007 information came from survey information collected by the village officials, and submitted to the district office. The increase in population at Mapanda can be explained by the opening of the Kihansi hydropower station which is located near Mapanda which led to inward migration. Green Resources is yet to implement its community monitoring survey – the survey itself is being finalized.	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
	Audit Team June 2009: Respective information was provided.	
Corrective Action Request 2: General Section 6: Apply for the fire risk the likelihood * significance approach of VCS Appendix A. Sustain the assumptions with evidence and explain how the fire risk assessment is considered in the overall risk class of the direct assessment.	**Project Team March 2009:** likelihood * significance approach was applied. Likelihood is considered 0.333, Significance= 3 (damage possible leading to (almost) complete failure) Mitigation strategies =4 Risk Mitigation Management=4 Resulting in an overall low risk class of 0 **Audit Team April 2009:** Approach is applied following the VCS methodology. Determination of significance and likelihood is reasonable. **Mitigation strategies** however are rated as 3 by DOE: "Countermeasures implemented and adequate for the situation" Category 4 Countermeasures using best-practices and adapted to the specific risk cannot be granted, since in the past 10 years of implementation also fire incidents occurred, damaging large percentages of the planted areas. Provide information on the internal audit and review structure for fire control, management and training. Without further evidence, the **mitigation management systems** is considered category 2 "System for most countermeasures in place, but poorly documented management system and no internal auditing" Overall this leads to an result of 0.62, which is considered as a **low overall risk** (= 16% in the ARR context) **GRAS Comment – May 2009** Information on internal auditing system and management system is now presented in the PDD. **Audit Team June 2009:**	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
	Descriptive information on internal audit system is provided. No evidence (documents and SOPs) was further provided. Therefore the final risk rating by DOE is: Likelihood : 0.333, Significance= 3 (damage possible leading to (almost) complete failure) Mitigation strategies =3 Risk Mitigation Management=2 Resulting in an overall low risk class of 0.62	
Corrective Action Request 3: General Section 6: Provide information on probability of pests and diseases	**Project Team March 2009:** Information on pests/disease outbreaks in the plantation is provided. Countermeasures are presented **Audit Team April 2009:** Past pest and disease outbreaks are presented, however, no indications on probabilities of incidents are given. Please provide a statement backed up with references regarding the probability of pests/diseases for pine and Eucalyptus plantations in this area. Without further evidence, the risk factor is considered medium (30% in the ARR context) **GRAS Comment – May 2009** The project assessing the probability of pest/ disease in this area as 15%. **Audit Team June 2009:** A descriptive explanation is given, that no significant pests have been recorded in the plantations over the last 10 years. However, no evidence (studies, scientific literature) was provided. The overall risk is considered low-medium	☑
Corrective Action Request 4: General Section 6: Provide information on probability of extreme climatic events	**Project Team March 2009:** Results from IPCC report are presented **Audit Team April 2009:**	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
	Extreme climatic events are discussed. Please provide a statement backed up with references regarding the probability of extreme climatic events in this area. Without further evidence, the risk factor is considered medium **GRAS response – May 2009** It is anticipated that the species being planted will be able to tolerate the range of predicted changes anticipated by the IPCC1 due to wide genetic base and resilience to changes in rainfall and temperature predicted for the next 20 years. **Audit Team June 2009:** Evidence for Eucalypt to withstand long drought seasons is given. Further descriptive explanation is given. However, the species planted are not likely to have "wide genetic base", since the seeds form nurseries are expected to come from similar genetic pool. During onsite visit, it was found that some soils in the project area had a solid layer in the upper part, and thus trees could not easily develop deep roots, which also limits drought resistance. The overall risk is considered low-medium	
Corrective Action Request 5 General Section 6: Provide information on probability of geological risks	**Project Team March 2009:** Information on geological risks is provided **Audit Team April 2009:** Based on the information provided the geological risks can be classified as low	☑
Corrective Action Request 6: ARR Section 7: Project lifetime to be insert according PD	**Project Team March 2009:** Information is added to PD **Audit Team April 2009:** The expected lifetime of the project is 99 years with option prolongation. Therefore the risk can be classified as "medium" according to the VCS guideline (30% in the ARR context in the ARR context)	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
Corrective Action Request 7: Describe the risk classification in regard to ownership in the project documentation.	**Project Team March 2009:** A summary of the land acquisition procedures in Tanzania is presented **Audit Team April 2009:** Land ownership is considered as rented or tenant operated, since the land is not owned by Green Resources. According to VCS guidelines this is classified as medium risk. However, since it is not a owned, but a 99 –year lease, it is considered medium risk as per VCS guidance	☑
Clarification Request 1 ARR Section 10: Financial backing from external financial institutions and governments shall be described in detail and sustained with evidence.	**Project Team March 2009:** Information on financial backing is provided **Audit Team April 2009:** Financial capacities are presented and additional documents provided to sustain the statements. Evidence shows that backing from financial institutions such as Phaunos Timber Fund and private equity is provided. Therefore the risk is considered as low	☑
Clarification Request 2: ARR Section 11: Describe in more detail the management capacity in the PD.	**Project Team March 2009:** Information on management capacities and CVs of the people involved in the project management is provided **Audit Team April 2009:** Evidence for management capacities are provided and sustained with the CV of the persons. Substantial project experience was proven for several people involved in project management. Therefore the overall risk is classified low	☑
Clarification Request 3: ARR Section 12: Refer to existing documents and provide reference list.	**Project Team March 2009:** GRL has management plans in place for Uchindile and Mapanda Forest Projects, namely: Forest Management Plan for Uchindile Forest Project, Revised Edition 2007, Forest Management Plan for Mapanda Forest Project, Revised Edition 2007. These are both being implemented, and have both been reviewed as part of the FSC certification process. **Audit Team April 2009:**	☑

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Corrective Action Requests by audit team	Summary of response	Conclusion
	References are provided. Information need to be included in the main PDD.	
Corrective Action Request 8: ARR Section 13: A baseline study was elaborated for CDM project development, where alternative land uses ware discussed. Summon up results of that study and refer to it.	**Audit Team April 2009:** No information was provided in the reply. Please provide the required information **GRAS – May 2009** Please see the summary text in the document. The only alternative land use scenarios are continuation of the degraded grassland, and reforestation without carbon money. **Audit Team June 2009:** Information from the baseline study is provided and it is referred to section C.5)	☑
Corrective Action Request 9: ARR Section 14: Stakeholder participation processes were conducted during AR CDM project development as well as during FSC-Certification procedure. Refer to those processes.	**Project Team March 2009:** As documented in the UFP/MFP PDD there has been extensive stakeholder consultation. This is also discussed in the section on land acquisition, as this itself is a process which involves considerable community consultation. **Audit Team April 2009:** Reference to the stakeholder process is given. Based on the current information and on the assessment onsite during meetings with stakeholders, the endorsement is given, but may be subject to change in the future. This leads to a medium risk assessment according to VCS methodology	☑

Table 6: Unresolved CAR / CR / FAR

Forward Action Request No 1: It shall be reconfirmed at verification that the title deed is still fully held by the project participant.

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Annex 2: Information Reference List

Reference No.	Document or Type of Information
1.	On-site interviews at the offices and the project site of the "Reforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania", performed between 27-31 August 2007 and 09-16 December 2008: **Validation team on site**: Martin Schröder Auditor, TÜV SÜD Industrie Service GmbH Hubertus Schmidtke Auditor, TÜV SÜD Industrie Service GmbH **Interviewed persons:**

Name	Organisation
Peter Nguye	Inventory Officer, Green Resources Limited (GRL)
Jakob Sandven	Inventory and Monitoring Manager
Nina Lande	Carbon Certification Specialist
Aziz A Abisu	Environmental Officer
Mashambah Philipo	Soil and Site Analyst Officer
Zawjia Omary	Ecology and Documentation Officer
Samson Msilu	Community Development Officer, GRL
Kazaula Geofrey	Project Surveyor, GRL
Dr. P.M. Mussami	Researcher and Monitoring Officer, GRL
Kisondela A.A	GIS + Mapping Manager, GRL
Dr. Moses Ngegba	Carbon Certification Manager Tanzania, GRL
Peter Myegeta	Chief GIS and Mapping Officer, GRL
Hamza Omary	Monitoring Officer, GRL
Eliya Mtupile	CCBA Officer, GRL
Victor Kimey	FSC Officer, GRL
Jenny Henman	Carbon Offset Certificate Manager Green Resources AS
Aloyce Kimaryo	Mapanda Project , GRL
Sylvester Luwagile	Uchindile Project Manager, GRL
Mwamki Ngibuini	Managing Director-GRL
Neemaeli, Ussiri	Community projects GRL
Vincent Nambombe	Forestry Manager GRL
Bartholomew Lyimo	CDM Manager GRL

Reference No.	Document or Type of Information
	<table><tr><td>Eveline Trines</td><td>Certification Manager GRL</td></tr><tr><td>Alphaxad G Magome</td><td>District Natural Resource Officer, Mafinga, Uchindile</td></tr></table> In Uchindile and Mapanda some further interviews were carried out by the auditors with representatives of local villages. In Uchindile the interviewed included among others: - Mr. Shabari Juma Mgaya, Ward Executive Officer - Mr. Charles Anton Ngondaghi. Ward Education Coordinator - Mr. Humphrey Matimbwi, Village Chairman - Mr. Mbola Enock, Agricultural and Veterinarian Extension Officer - Mr Edison Kisawa, Village Representative.
2.	Project Design Document, Vers. 01, dated July 26 2007
3.	Expenditure overview for (sustainable) development projects related to Uchindile and Mapanda project sites, as prepared by GRL for years 1998-2005, without date, submitted 28 August 2007
4.	Requests of villages for SD project financing (schools, dispensary, etc) during 2007, without date, submitted 28 August 2007
5.	Draft Environmental and Social Policy of Tree Farms, as elaborated by E.Trines, , without date, submitted 28 August 2007.
6.	Forest Management Plan for Mafinga Forest Project (Draft), January 2005 - December 2009, First Edition, 2004, Revised By: V. G. Nambombe and Dr. P.M. Mussami, without date, submitted 28 August 2007. (MAPANDA)
7.	Forest Management Plan for Kilombero Forest Project (KFP) January 2005 - December 2009, Revised Edition, 2005, Prepared By: V. G. Nambombe, without Date, submitted 28 August 2007 (UCHINDILE)
8.	Assessment of the Environmental Impact of the forest plantation project at Uchindile and lugala villages in Kilombero district, Tanzania, Prepared for the Kilombero Forests Limited by Orgut consulting Tanzania branch, August 1999
9.	Environmental Impact Assessment on proposed Mafinga and Idete forest projects in Mufindi district, Iringa region, tanzania submitted to: National Environment Management Council, Dar es salaam- Tanzania; prepared by: Environmental association of Tanzania (ENATA), Dar es salaam, October 2006
10.	Ecological survey in the Kilombero forest project at Uchindile Kilombero District Tanzania, prepared for Green Resources Limited, Tanzania by Prof. Pkt Munishi Faculty of forestry and nature conservation, Department of forest biology, Sokoine University of Agriculture, Morogoro, Tanzania, June 2006
11.	Report On Botanical Survey, C.K. Ruffo and L.O.N. Uronu, Tanzania Tree Seed Agency, Morogoro, Tanzania, February, 2006, on behalf of Green Ressources Limited (covering sites Uchindile, Mapanda, Iringa)
12.	Title deeds: a) for Mapanda sites, copy of certificate dated 2004, title on the name of GRL Ltd, forest plantation as landuse; and b) Title on Uchindle site, on the name of Escarpment Forestry Company LTD, agriculture as land use, incl. letter confirming wrong land use indications by the Ministry of Lands Housing and Human Settlements, dated 23 Oct 2006.
13.	Procedures and work instructions for GRL forest Projects, 4th edition Nov 2005
14.	Guidelines for execution of environmental monitoring plan for Mapanda: Mafinga and Idete Forest Projects (MFP &IFP), Green Resource Limited, Aug 2006.

Reference No.	Document or Type of Information
15.	Guidelines for execution of environmental monitoring plan for Uchindile: Kilombero Forest Project (KFP), Green Resource Limited, Aug 2006.
16.	CDM Mapping Report Uchindile/Mapanda. Prepared by Peter Myegeta, Chief GIS Officer, January 2008.
17.	Certificate of Incorporation with Green resource Limited, Dec 2001.
18.	Monitoring activities report for Mafinga Forest Project, by Dr. Mussami, Aug, 2006.
19.	Monitoring activities report for KFP, by Dr. Mussami, Aug, 2006.
20.	2nd Surveillance Report GRL Tanzania, November 2006.
21.	Execution Summary of GHG project verification and certification, Kilombero Forests Limited, Nov 2000.
22.	Determination of biomass expansion factor, Green Resources LTD, Dr. P.M. Mussami, Aug. 2006.
23.	GRL – Work Instructions for nursery and plantation operations, Green Resource Ltd. Nambombe and Mussami, Nov 2005.
24.	Inventory and monitoring of permanent sample plots (PSP), submitted by GRL on 25 Aug 2007.
25.	Change of land-use, Approval of Variation of Conditions of a Right of Occupancy, 08 July 2006
26.	Fire protection plan, Green Resource Ltd., Nambombe and Mussami, Okt 2004.
27.	Health and safety code of practice, Green Resource Ltd., Nambombe and Mussami, Okt 2004.
28.	Questionnaire used for interviews with stakeholders (template), without date, submitted during onsite visit.
29.	Financing GRL Forest project in Tanzania, CRDB Bank request, Apr 2008.
30.	PRESENTATION ON PROJECT “GREEN RESOURCES LIMITED”, Powerpoint presentation, 26th August 2007.
31.	UNFCCC webpage, DNA section, publication of national forest definition, http://cdm.unfccc.int/DNA/view.html?CID=211
32.	UNFCCC website on most recent methodology version, additionality tool http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html
33.	Annexes belonging to the PDD, Ver.1, Nov 2007.
34.	Attendance Sheet Workshop 29th July 2007
35.	Document on GIS procedures for boundary definition and eligibility check as delivered previous to onsite visit, Dec 2008
36.	Stakeholder comments report, Green Resources ltd and Sao Hill Industries, July 2007
37.	Certificate of occupancy, Farm No. 308. Registered 26.9.2000.
38.	Letter, Term Loan Forestry Project, FBME Bank Ltd., April 2008.
39.	Community based project in GRL projects areas, GRL 2006
40.	Report Fieldtrip Uchindile, TUEV SUED, Aug 2008
41.	Letter from Green Resources Ltd., Sale of carbon offsets, Feb 2008.
42.	Responsible table 3b for GRL Tanzania Apr 2008
43.	SOIL CARBON SEQUESTRATION IN SUB-SAHARAN AFRICA: A REVIEW, T.-G. VA˚ GEN,1* R. LAL2 AND B. R. SINGH3, 2004.
44.	Surveillance Report, GRL Sao Hill Tanzania, Dez 2006
45.	Information on forest sector in Tanzania, book excerpt from “Tanzania Forests”, file provided by GRL, dated 03 April 2008.

Reference No.	Document or Type of Information
46.	VER Certificate for GRL, March 2007
47.	Forest Plantations in Tanzania, submitted to DOE on 8 June 2008.
48.	Schedule of Workshop on CDM, FSC and ISO in Sao Hill, Tanzania. Document dated 26 July 2007.
49.	Compendium of forest legislation in Tanzania. Document dated 26 July 2007.
50.	Yield tables of Eucalyptus Salinga in Tanzania, Forestry and Beekeeping division, Ministry of Natural Resources, Tanzania.
51.	Yield tables of Pinus patula in Tanzania, Forestry and Beekeeping division, Ministry of Natural Resources, Tanzania.
52.	Carbon Estimates model for Mapanda – Excel sheet: “madanda cers2 7 09.xls”, provided by GRL, dated 02 July 2009
53.	Carbon Estimates model for Uchindile – Excel sheet: “uchindile cers2 7 09.xls”, provided by GRL, dated 02 July 2009
54.	Introduction to TÜV SÜD for Tree Farm – Power Point. Document provided by GRL, dated 29 August 2007.
55.	Polygons-boundary points for Mapanda – Excel sheet. File provided by GRL, dated 08 April 2008.
56.	Polygons-boundary points for Uchindile – Excel sheet. File provided by GRL, dated 08 April 2008.
57.	Mapanda Ex-ante estimates Rev17 – Excel Sheet. File provided by GRL, dated 02 March 2008.
58.	Uchindile and Mapanda Stand Models Final PDD – Excel sheet: “cers ufp mfp 3 7 09 1997 to 2096.xls”, provided by GRL, dated 02 July 2009
59.	Uchindile Ex-ante estimates Rev20 – Excel sheet. File provided by GRL, dated 29 Feb 2008.
60.	Mapanda plantation area check – Excel sheet. File provided by GRL, dated 05 March 2008.
61.	Uchindile plantation area check – Excel sheet. File provided by GRL, dated 05 March 2008.
62.	Map Mapanda Species Distribution. File provided by GRL, dated 31 Jan 2008.
63.	Map Mapanda Land Eligibility. File provided by GRL, dated 31 Jan 2008.
64.	Map Mapanda Stratification. File provided by GRL, dated 31 Jan 2008.
65.	Map Uchindile Land Eligibility. File provided by GRL, dated 31 Jan 2008.
66.	Map Uchindile Species Distribution. File provided by GRL, dated 31 Jan 2008.
67.	Map Uchindile Stratification. File provided by GRL, dated 31 Jan 2008.
68.	Topographic maps: 50.000, 1983 including forest areas. Surveys and mapping division of Ministry of Lands, Housing and Urban Development. Gov of Tanzania
69.	Final VCS PD, version 06, dated 2 July 2009
70.	GIS boundary files, provided by GRL, submitted 18 Dec 2008
71.	Field notes of audit team, August 2007 and December 2008.
72.	Communication exchange between GRL and SGS regarding activity, dated 27 May 1998
73.	Confirmation of the PP on double counting, dated 30 June 2009
74.	TÜV SÜD CDM validation report, 22 August 2008
75.	Tanzanian Forest Act, 2002, http://www.parliament.go.tz/Polis/PAMS/Docs/14-2002.pdf

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77.	Satellite image: Landsat 2000 for Mapanda
78.	Baseline study, Annex 3 to the PD
79.	IPCC GPG LULUCF, 2003
80.	Teobaldelli et al, 2009, Generalized functions of biomass expansion factors for confers and broadleaved by stand age, growing stock and site index, Forest Ecology and Management VOl 257 pp1004-1013
81.	The Commercial Timbers of Tanzania' by J.M.Bryce revised edition of 1999.
82.	Inventory Guideline for Green Resources AS. Prepared by Endre Hansen, Inventory Manager, April 24th 2008
83.	Personal communication in October 2008 between Sangito Sumari, Managing Director of Green Resources Ltd and Dr Tango, Ministry of National Resources and Tourism, Tanzania
84.	FAO 2006: Global Forest Resource Assessment 2005. FAO Forestry Paper 147.
85.	Statement on early consideration of carbon finance of Mapanda/Uchindile Forest Projects, by Mads Aspren, Managing Director Green Resources AS, 9 July 2009
86.	CO2lonoalism – Norwegian Tree Plantation, Carbon Credits and Land Conflicts in Uganda, by Harald Eraker, NorWatch 2000.
87.	Carbon Upsets: Norwegian "Carbon Plantations" in Tanzania, by Jorn Stave, NorWatch/ The Future in Our Hands – Norway: http://www.wrm.org.uy/actors/CCC/trouble6.html
88.	Term Loans – Forestry Project, FBME Bank Ltd, Apr 2008.