



CDM-PRCV-FORM

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|  <p style="text-align: center;">Validation report form for post-registration changes for CDM project activities (Version 03.0)</p> | |
| Complete this form in accordance with the instructions attached at the end of this form. | |
| BASIC INFORMATION | |
| Title and UNFCCC reference number of the project activity | Uganda Nile Basin Reforestation Project No. 2 UNFCCC Ref. 4940 |
| Process track | <input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period |
| Version number of the validation report | 2.0Aa |
| Completion date of the validation report | 01/09/2020 |
| Type(s) of PRCs | <input checked="" type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents ¹ <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan <input checked="" type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents <input type="checkbox"/> Changes to the project design <input checked="" type="checkbox"/> Changes specific to afforestation and reforestation project activities |
| Version number of PDD to which this report applies | 09 |
| Project participants | <p>Uganda: National Forest Authority (NFA).</p> <p>Italy: Government of Italy - Ministry for the Environment Land and Sea; International Bank for Reconstruction and Development (IBRD) as Trustee of the BioCarbon Fund (BioCF).</p> <p>Luxembourg: Government of Luxembourg - Ministry of the Environment, Climate and Sustainable Development</p> <p>France: Eco-Carbone S.A.S</p> <p>Spain: Kingdom of Spain - Ministry for the Ecological Transition & Ministry of Economy and Business</p> |

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

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| | Japan: Japan Iron and Steel Federation (JISF) ; Idemitsu Kosan Co., Ltd. ; The Okinawa Electric Power Co., Inc ; Suntory Holdings Limited ; Tokyo Electric Power Company Holdings, Inc. ; Sumitomo Joint Electric Power Co., Ltd. ; Japan Petroleum Exploration Co., Ltd. (JAPEX) ; Sumitomo Chemical. |
| Host Party | Uganda |
| Applied methodologies and standardized baselines | AR-AMS0001 Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grassland or croplands – version 5 of 09/2008. |
| Mandatory sectoral scopes | 14 Afforestation and reforestation |
| Conditional sectoral scopes, if applicable | NA |
| Name and UNFCCC reference number of the DOE | RINA SERVICES SPA E-0037 |
| Name, position and signature of the approver of the validation report | <p>Laura Severino (Authorized officer signing for the DOE)</p> <p>Head of Certification Innovation & Sustainability Unit</p>  |

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SECTION A. Executive summary**Purpose and general description of the project activity.**

The project activity is implemented within the Rwoho Central Forest Reserve in which pine forest plantations (*Pinus caribaea* and *Pinus oocarpa*) are being established and it is one of the five similar projects for establishing timber Plantations in Uganda. The project is implemented by the National Forest Authority (NFA) in cooperation with the local community group covering 370 ha divided in 19 blocks of an average of 25 ha each and managing a 22-year rotation cycle (rotation age for timber production). The forest management (nursery technology, planting, tending and harvesting regimes) is based on the Tree Planting Guideline developed by the Sawlog Production Grant Scheme /4/.

Scope of validation

This report summarizes the findings of the validation of post registration changes, on the basis of UNFCCC criteria for CDM. The scope of validation is to determine:

- that the actual post-registration changes to the registered CDM project activity comply with the relevant CDM rules and requirements;
- that the revised PDD reflects the post-registration changes.

Validation shall ensure that:

- the compliance of the revised PDD with the valid version of the applicable form and instructions therein applicable at the time of validation;
- the information transferred to the later valid version of the PDD is materially the same as that in the registered PDD;
- the requirements relevant to the actual post registration changes in § 8.2 – 8.4 of the CDM VVS.

Validation process

Validation is conducted using RINA procedures in line with the requirements specified in the CDM VVS, latest version available, relevant decisions of the CDM EB and applying standard auditing techniques. The validation assessment involved a document review of relevant documentation and on-site visit. Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement.

Conclusion

The World Bank has commissioned RINA to carry out the verification and certification of GHG removals by sink reported for the registered project activity “*Uganda Nile Basin Reforestation Project No. 2*” in Uganda, UNFCCC reference 4940, for the monitoring period 01/04/2008 to 31/12/2017. The project was validated by JACO CDM Ltd (validation report No. GR08W00020D rev. 0 of 20/06/2011) /5/ and it was registered on 23/08/2011. The crediting period starts on 01/04/2008 earlier than the registration date and the removals achieved before registration of the project activity can also be credited according to the CDM Modalities and Procedures. During the monitoring period some changes occurred to the implementation of the registered CDM project activity and have been documented and assessed during the verification activity.

In conclusion, it is RINA’s opinion that the project activity “*Uganda Nile Basin Reforestation Project No. 2*” as described in the revised PDD version 09 of 26/08/2020, meets all relevant requirements for CDM activities and post registration changes. Hence RINA is able to validate the post registration changes as described in the following sections.

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SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) | Involvement in | | | |
|-----|------------------|------------------|-----------|------------|---|----------------------|--------------------|------------|---------------------|
| | | | | | | Desk/document review | On-site inspection | Interviews | Validation findings |
| 1. | Team Leader | IR | VALOROSO | Rita | RINA Central Office | √ | √ | √ | √ |
| | Verifier | | | | | | | | |
| | Regional Expert | | | | | | | | |
| 2. | Technical Expert | EI | MASO | Daria | RINA Central Office | √ | √ | √ | √ |

B.2. Technical reviewer and approver of the validation report on PRCs

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) |
|-----|--------------------|------------------|------------------|------------|---|
| 1. | Technical reviewer | IR | AMALORPAVANATHAN | Cyril | RINA India |
| 2. | Technical reviewer | EI | MENON | Rekha | RINA India |
| 3. | Approver | IR | SEVERINO | Laura | RINA HO |

SECTION C. Means of validation**C.1. Desk/document review**

The monitoring report version 03 of 26/08/2020 and previous version /1/, the GHG removals by sink calculation provided in the form of a spreadsheet (UNBRP_Carbon calculation_Project2_20200716.xlsx) /2/, were assessed as part of the verification. In addition the PDD /4/, in particular the baseline estimations and the monitoring plan were reviewed. The monitoring report version 01 was made publicly available at the CDM UNFCCC website on 09/08/2018 (<http://cdm.unfccc.int/Issuance/MonitoringReports>). Appendix 3 of this report lists all documents reviewed during the verification including CDM regulatory documents.

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C.2. On-site inspection

| Duration of on-site inspection: 18/09/2018 to 26/09/2018* | | | | |
|---|---|---|------------|-----------------------------|
| No. | Activity performed on-site | Site location | Date | Team member |
| 1. | Introduction about the project, history and background of the project, operational and management structure, project starting date and start of crediting period. | Mbarara | 18/09/2018 | Rita VALOROSO Daria MASO |
| 2. | Actual implementation and operation of the project activity: field measurements and interview with representative of KADA community. Cross-check between field measurement and calculation spreadsheet | Rwoho Central Forest Reserve Mbarara | 20/09/2018 | Rita VALOROSO Daria MASO |
| 3. | QA/QC procedures, records and data storage. Measuring instruments. ERs calculation | Mbarara | 25/09/2018 | Rita VALOROSO Daria MASO |
| 4. | Closing meeting and communication of the assessment findings. | Mbarara | 26/09/2018 | Rita VALOROSO Daria MASO |
| 5. | Meeting at NFA | Kampala | 26/09/2018 | Rita VALOROSO Daria MASO |

*On-site inspection in conjunction with projects UNFCCC Ref. 1578, 4941, 4940, 4439.

C.3. Interviews

| No. | Interviewee | | | Date | Subject | Team member |
|-----|--|-------------|----------------|--------------------------|---|-----------------------------|
| | Last name | First name | Affiliation | | | |
| 1. | GASANA | George | NFA | 18/09/2018 to 26/09/2018 | History and background of the project. | Rita VALOROSO Daria MASO |
| 2. | RUBONG OYA | Rogers | NFA | | | |
| 3. | KYALIAGO NZA | Herbert | NFA | | Operational and management structure. | |
| 4. | MBABAZI | Geoffrey | NFA | | | |
| 5. | ARINEITWE | Innocent | NFA | | | |
| 6. | MUGUMYA | Xavier | THE WORLD BANK | | Actual implementation and operation of the project activity. | |
| 7. | SYIEM | Evanshainia | THE WORLD BANK | | Field measurements. Records and storage data. ER calculation | |
| 8. | Representatives of local community group | | | 19/09/2018 | Positive/negative impacts due to the implementation of the project. Role of the local community group. | |

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C.4. Sampling approach

For validation of post registration changes is not applied sampling approach.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

| Areas of validation findings | No. of CL | No. of CAR | No. of FAR |
|---|-----------|------------|------------|
| Compliance with PDD form | - | - | - |
| Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents | - | - | - |
| Corrections | - | - | - |
| Changes to the start date of the crediting period | - | - | - |
| Inclusion of a monitoring plan | - | - | - |
| Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents | - | - | - |
| Changes to the project design | - | - | - |
| Changes specific to afforestation and reforestation project activities | - | - | - |
| Others (please specify) | - | - | - |
| Total | - | - | - |

SECTION D. Validation findings**D.1. Compliance with PDD form**

| | |
|----------------------------|---|
| Means of validation | Comparing the revised PDD /4/ with the PDD form provided by CDM EB listed in the UNFCCC website. |
| Findings | / |
| Conclusion | The revised PDD version 09 of 26/08/2020 submitted for validation is in compliance with the latest PDD form (version available at UNFCCC website) and with the instruction for completing the form therein. It is also confirmed that the information transferred to PDD version 09 is materially the same as that in the registered PDD. |

D.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

| | |
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| Means of validation | Sampling. The PP chose to apply the provisions relating to uncertainty contained in the methodological tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities", in lieu of uncertainty-related requirements applicable in accordance with the clarification provided by EB /50/. During the actual monitoring period the uncertainty accounts to 31.2% /2/, meaning that 10% of margin of error at 90% of confidence level is not achieved; therefore the uncertainty discount factor of 100% /3/ is applied as per the Appendix 2 of the methodological tool /6/. |
| Findings | / |
| Conclusion | The deviation from the registered/revised monitoring plan is applied to the whole monitoring period under verification. RINA confirms that the deviation complies with the relevant requirements related to the temporary deviation from the registered monitoring plan in the CDM PS /23/. |

D.3. Corrections

| | |
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| Means of validation | BEF (Biomass expansion factor). The revised PDD is corrected providing the right value of 1.30 for Pine in line with the data sourced from IPCC LULUCF /48/. |
| | Survival monitoring. Since the applied methodology /20/ does not expect the monitoring of tree survival, PDD version 09 /4/ is updated removing the |

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| | requirements for the monitoring survival which are applicable to forestry operations and not the monitoring of the actual GHG removal. |
| Findings | / |
| Conclusion | RINA confirms that the above corrections are documented in the revised PDD version 09 /4/. The corrections do not affect the design of the project activity and therefore a request for approval is suitable to be submitted under the issuance track according Appendix of CDM project standard /23/. |

D.4. Changes to the start date of the crediting period

| | |
|----------------------------|----|
| Means of validation | NA |
| Findings | |
| Conclusion | |

D.5. Inclusion of a monitoring plan

| | |
|----------------------------|----|
| Means of validation | NA |
| Findings | |
| Conclusion | |

D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

| | |
|----------------------------|---|
| Means of validation | Monitoring of data and parameters. According the guidelines on application of specified versions of A/R methodologies /47/ monitoring is not required for data, parameters, or variables appearing as intermediate values in calculation steps. Therefore, the “Total CO ₂ ” and “Basic wood density” are not reported as monitored parameters. PDD version 09 is updated accordingly /4/. The permanent change to the monitoring have no material impact on the applicability of the applied methodology and methodological tools. |
| Findings | / |
| Conclusion | The request for approval is suitable to be submitted under the issuance track according Appendix of CDM project standard /23/. |

D.7. Changes to the project design

| | |
|----------------------------|----|
| Means of validation | NA |
| Findings | |
| Conclusion | |

D.8. Changes specific to afforestation and reforestation project activities

| | |
|----------------------------|--|
| Means of validation | <p>Species. Pinus caribea is replaces with Pinus oocarpa because of no seedlings availability. Both species belongs to Pinus family. The ex-ante estimates had to be updated using the new planting schedule. In the specific case of this project, the original ex-ante calculations assumed the plantation of Maesopsis eminii and Prunus Africana (20% and 10% of the area respectively), but finally these species were not planned and Pinus was planted instead. Pinus has a higher growth, so this resulted in higher ex-ante estimates. The species composition does not impact additionality or the baseline.</p> <p>Planting schedule. Paragraph A.6 of the PDD /4/ now states that “The project area will be planted from 2008 to 2021.” and MR in paragraph B.1 states “Tree planting began in 2008/2009. This deficit, excluding unproductive areas, is planned to be planted between 2019 and 2021” /1/. The area that is available to be planted is the total area (minus 10% of area considered to be covered unproductive areas such as roads, natural forest, rocks, minus the area planted in the period 2006-2011 according the plantation delineation report /44/ and minus the area estimated to be planted in 2012-2017 according the forest management system. A revised Plantation schedule /40/ based on the plantation delineation report /44/ is provided.</p> <p>Change to QA/QC procedures. The PDD version 09 of 26/08/2020 is updated</p> |
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| | <p>fixing the thresholds for DBH ($< \pm 1.0$ cm or 8% whichever is greater) and height ($< \pm 15$ % or ± 1 meter whichever is greater), and removing the procedure for uncertainty assessment. The quality assurance/quality control procedure is changed and it is demonstrated that it is more conservative than the procedure used in another A/R CDM project activity (UNFCCC ref. No. 2694), that does not contain provisions for uncertainty assessment. According to the Guidelines on accounting specified types of changes in A/R CDM project activities from the description in registered PDD, the change is considered minor and it does not need prior approval from EB /21/. Moreover according paragraph 3b of the : <i>“Guidelines on application of specified versions of AR CDM methodologies in verification of registered AR CDM project activities”</i> (Version 1.1) /47/, Accounting for uncertainty: Requirements related to “uncertainty assessment”, “uncertainty analysis”, “methods of combining uncertainties”, and “uncertainty in expert judgement” are superfluous and compliance with these requirements shall not enforced”, which justifies the removal of the uncertainty assessment.</p> <p>Plot size. The plot size has been changed from rectangular sample plots of 400 m² to circular plots of 12 md radius, therefore plots are of 452.39 m². The change is applied in the forestry inventory for the actual monitoring period.</p> <p>Sampling (targeted precision, permanent sampling plots and stratification). The PDD version 09 of 26/08/2020 has been updated to consider:</p> <ul style="list-style-type: none"> (a) A targeted precision level of +10% of the mean at a 90% confidence level which is allowed as per the guideline on application of specified versions of A/R CDM methodologies in verification of registered A/R CDM project activities /47/. (b) The use of temporary sampling plots instead of temporary sampling plots which is allowed by the guideline on application of specified versions of A/R CDM methodologies in verification of registered A/R CDM project activities /47/ and by the guidelines on accounting specified types of changes in A/R CDM project activities from the description in registered PDD, the change is considered minor and it does not need prior approval from EB /21/. (c) Stratification defines at each monitoring event based on parameters that explain the variation of carbon stocks. For this monitoring event, stratification has been based on the planting year which is acceptable. The stratification criteria provided in the updated PDD will be considering the planting years instead of species. Change in stratification are considered minor as per the guidelines on accounting specified types of changes in A/R CDM project activities from the description in registered PDD, the change is considered minor and it does not need prior approval from EB /21/. |
| Findings | / |
| Conclusion | According to the Guidelines on accounting specified types of changes in A/R CDM project activities from the description in registered PDD /21/, the changes mentioned above are considered minor and it does not need prior approval from EB. |

SECTION E. Internal quality control

The draft final validation report before being submitted to the client will be subjected to an independent internal technical review to confirm that all the verification activities had been completed according to the pertinent RINA instructions.

The technical review is performed by a technical reviewer qualified in accordance with RINA's qualification scheme for CDM validation and verification.

SECTION F. Validation opinion

RINA Services Spa (RINA) has performed validation of the post registration changes reported for the project activity “Uganda Nile Basin Reforestation Project No. 2” in Uganda, UNFCCC reference 4940, for the monitoring period 01/04/2008 – 31/12/2017, with regard to the relevant requirements for CDM activities.

It is RINA's opinion:

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- That the actual post-registration changes to the registered CDM project activity comply with the relevant CDM rules and requirements;
- That the revised PDD reflects the post-registration changes.

Due the nature of the post registration changes, it is confirmed that the actual post-registration changes are suitable for approval under the issuance track.

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Appendix 1. Abbreviations

| Abbreviations | Full texts |
|-------------------|--|
| BE | Baseline Emissions |
| BEF | Biomass expansion factor |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CDM M&P | Modalities and Procedures CDM |
| CDM PCP | Clean Development Mechanism Project Cycle Procedure |
| CDM PS | Clean Development Mechanism Project Standard |
| CDM VVS | Clean Development Mechanism Validation and Verification Standard |
| CER(s) | Certified Emission Reduction(s) |
| CL | Clarification Request |
| CO ₂ | Carbon dioxide |
| CO ₂ e | Carbon dioxide equivalent |
| DBH | Diameter at breast height |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| EB | Executive Board |
| ERs | Emission Reduction(s) |
| FAR | Forward Action Request |
| GHG | Greenhouse Gas |
| GIS | Geographic Information System |
| GWP | Global Warming Potential |
| IPCC | Intergovernmental Panel on Climate Change |
| MR | Monitoring Report |
| NA | Not Applicable |
| NFA | National Forest Authority |
| PDD | Project Design Document |
| PE | Project Emission |
| PP(s) | Project Participant(s) |
| PSP | Permanent Sample Plot |
| QA/QC | Quality Assurance/Quality Control |
| RINA | RINA Services Spa |
| SS | Sectoral Scope |
| TA | Technical Area |
| TBD | To Be Defined |
| UNFCCC | United Nations Framework Convention on Climate Chang |

Appendix 2. Competence of team members and technical reviewers



CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Daria MASO

è qualificato come¹:
is qualified as:

TEC

per le seguenti aree tecniche:
for the following technical areas:

14.1, 15.1

| AREE TECNICHE TECHNICAL AREAS | DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION | SCOPO SETTORIALE SECTORAL SCOPE |
|----------------------------------|---|------------------------------------|
| 14.1 | Afforestation and reforestation | 14 |
| 15.1 | Agriculture | 15 |

in accordo alle istruzioni dell'unità Certificazione, Innovazione e Sostenibilità.
in accordance with the instructions of the Certification, Innovation & Sustainability Unit.

| REVISIONE REVISION | DATA DATE | MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION |
|-----------------------|--------------|---|
| 0 | 29/09/2017 | First Issue |
| 1 | 22/01/2020 | Update qualification in TA 15.1 |

Il Resp. CEINS
Head of CEINS

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS4GG: Gold Standard For Global Goals
SCS: SocialCarbon Standard
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports

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CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Rita VALOROSO

è qualificato come:
Is qualified as:

CDM -TEC, -VAL, -VER, -TL
TECHNICAL REVIEWER, REG-EXP²

per le seguenti aree tecniche:
for the following technical areas:

1.2, 3.1, 13.1, 14.1

| AREE TECNICHE TECHNICAL AREAS | DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION | SCOPO SETTORIALE SECTORAL SCOPE |
|----------------------------------|---|------------------------------------|
| 1.2 | Renewables | 1 |
| 3.1 | Energy demand | 3 |
| 13.1 | Solid Waste and waste water | 13 |
| 14.1 | Afforestation and reforestation | 14 |

In accordo alle Istruzioni dell'Unità Certification Innovation & Sustainability.
In accordance with the instructions of the Unit Certification Innovation & Sustainability.

| REVISIONE REVISION | DATA DATE | MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION |
|-----------------------|--------------|---|
| 0 | 18-01-2010 | - |
| 13 | 14-11-2019 | Update qualification with "Sampling and surveys for CDM PAs and PoAs" |

Il Resp. CEINS
Head of CEINS

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS: Gold Standard
SCS: SocialCarbon Standard
JI: Joint Implementation

² Iran, Pakistan, Qatar; Cameroon, Congo, Ethiopia, Ghana, Madagascar, Mozambique, Niger, Nigeria, Tunisia, Uganda, South Africa, Egypt, Brazil; Albania, Bosnia-Herzegovina, Georgia, Macedonia.

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS.

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports.

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CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:

Amalorpavanathan Cyril AUGUSTUS AROKIASAMY

We declare that Mr/Mrs/Ms:

è qualificato come¹:
is qualified as:CDM-TEC, CDM-VAL, CDM-VER, CDM-TL,
ITRP, REG-EXP²per le seguenti aree tecniche:
for the following technical areas:

1.1, 1.2, 3.1, 5.1, 13.1

| AREE TECNICHE TECHNICAL AREAS | DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION | SCOPO SETTORIALE SECTORAL SCOPE |
|----------------------------------|---|------------------------------------|
| 1.1 | Thermal energy generation | 1 |
| 1.2 | Renewables | 1 |
| 3.1 | Energy Demand | 3 |
| 5.1 | Chemical industry | 5 |
| 13.1 | Solid Waste and wastewater | 13 |

in accordo alle istruzioni della Unità Certification Innovation and Sustainability.
in accordance with the instructions of the Certification Innovation and Sustainability Unit.

| REVISIONE REVISION | DATA DATE | MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION |
|-----------------------|--------------|---|
| 0 | 30/06/2010 | - |
| 13 | 31/03/2017 | Updated qualification as ITRP |
| 14 | 20/09/2018 | Update qualification as REG-EXP |
| 15 | 15/11/2019 | Update qualification with "Sampling and surveys for CDM PAs and PoAs" |

Il Resp. CEINS
Head of CEINS

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS: Gold Standard
SCS: SocialCarbon Standard
JI: Joint Implementation

² Ghana, Azerbaijan, China, Sri Lanka, Bangladesh, Nepal, Thailand, Indonesia, Singapore, Malaysia, Cambodia, Vietnam, Philippines, UAE and Iraq, Brazil, Japan.

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports

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CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Rekha MENON

è qualificato come¹:
Is qualified as:

**CDM-TEC, -VAL, -VER, -TL
ITRP, REG-EXP²**

per le seguenti aree tecniche:
for the following technical areas:

1.2, 2.1, 13.1, 13.2, 14.1

| AREE TECNICHE TECHNICAL AREAS | DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION | SCOPO SETTORIALE SECTORAL SCOPE |
|----------------------------------|---|------------------------------------|
| 1.2 | Renewables | 1 |
| 2.1 | Electricity Distribution | 2 |
| 13.1 | Solid Waste and wastewater | 13 |
| 13.2 | Manure | 13 |
| 14.1 | Afforestation and reforestation | 14 |

In accordo alle Istruzioni dell'Unità Certification Innovation & Sustainability.
In accordance with the instructions of the Certification Innovation & Sustainability Unit.

| REVISIONE REVISION | DATA DATE | MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION |
|-----------------------|--------------|---|
| 0 | 06-03-2008 | - |
| 13 | 14-11-2019 | Update qualification with "Sampling and surveys for CDM PAs and PoAs" |

Il Resp. CEINS
Head of CEINS

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS: Gold Standard
SCS: SocialCarbon Standard
JI: Joint Implementation

² India, Indonesia, Malaysia, Myanmar, Vietnam, Cambodia, Laos, Sri Lanka, Nepal, China, Philippines, Thailand, Iran, Congo

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologic Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologic Institute, to carry out Validation and Verification of SCS Reports

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Appendix 3. Documents reviewed or referenced

| No. | Author | Title | References to the document | Provider |
|-----|---------------------|--|--|----------|
| 1 | NFA | Monitoring Report of Uganda Nile Basin Reforestation Project No. 2 | Version 01 of 30/05/2018 Version 02 of 21/05/2020 Version 03 of 26/08/2020 | PP |
| 2 | NFA | 4939 Uganda Nile Basin Reforestation Project No. 2_leakage_survey_calculations.xlsx | Version of 31/07/2018 Version of 13/01/2020 | PP |
| 3 | NFA | Emission reductions calculation spreadsheet UNBRP_SMART_Tool_Project 2.xlsx UNBRP_Carbon calculation_Project2_20191030.xlsx UNBRP_Carbon calculation_Project2_20200716.xlsx | Version of 30/05/2018 Version of 13/01/2020 Version of 16/07/2020 | PP |
| 4 | NFA | Project Design Document of Uganda Nile Basin Reforestation Project No. 2 | Version 07 of 21/10/2010 Version 08 of 10/12/2019 Version 09 of 26/08/2020 | Other |
| 5 | JACO CDM LTD | Small-scale A/R Validation Report No. GR08W00020D | Version 0 of 20/06/2011 | Other |
| 6 | CDM Executive Board | Methodological tool tool "Estimation of carbon stocks and change in carbon stocks of trees and shrubs in A/R CDM project activities" | Version 04.2 of 24/07/2015. | Other |
| 7 | NFA | Field Carbon Inventory and Monitoring Manual | Version 3 of 08/2019 | PP |
| 8 | NFA | Carbon Revenue Distribution and Budgeting Procedure | / | PP |
| 9 | NFA | CDM Operations Plan | / | PP |
| 10 | NFA | CDM Monitoring Process - Standard Operating Procedures | November 2011 October 2019 | PP |
| 11 | NFA | CDM Monitoring Process – Data analysis and reporting manual. | November 2011 | PP |
| 12 | NFA | Forest Management Plan for Bugamba and Rwoho Central Forest Reserves for the period 2006-2026 | 2006 | PP |
| 13 | NFA | Fire Report No. 08 | 21/08/2016 | PP |
| 14 | NFA | Fire Report | 15/02/2013 | PP |
| 15 | NFA | Fire Report | 19/07/2018 | PP |
| 16 | NFA | Fire Report | 22/12/2017 | PP |
| 17 | NFA | Collaborative Forest Management | 18/01/2012 | PP |

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|----|---|---|--|-------|
| | | between NFA and KADA | | |
| 18 | NFA | Annual operating plan and expenditure budget estimates for 2018-2019 Mbarara plantations | / | PP |
| 19 | NFA | Fire Management Plan Mbarara Plantations | Jan-Feb 2016 | PP |
| 20 | CDM Executive Board | Simplified baseline and monitoring methodologies for small-scale afforestation and reforestation project activities under the clean development mechanism implemented on grasslands or croplands – AR-AMS0001 | Version 05 September 2008 | Other |
| 21 | CDM Executive Board | Guidelines on accounting of specified types of changes in A/R CDM project activities from the description in registered project design documents. | EB63 Annex 27 Version 01.0 of 29/09/2011 | Other |
| 22 | CDM Executive Board | Monitoring report form for CDM project activity (CDM-MR-FORM) | Version 07.0 of 31/05/2019 | Other |
| 23 | CDM Executive Board | CDM project standard for project activities | Version 02.0 of 29/11/2018 | Other |
| 24 | CDM Executive Board | Sampling and surveys for CDM project activities and programme of activities. | Version 08.0 of 28/11/2019 | Other |
| 25 | CDM Executive Board | CDM validation and verification standard for project activities. | Version 02.0 of 29/11/2018 | Other |
| 26 | Web site | Sample size calculator http://www.calculator.net/sample-size-calculator.html | English language | Other |
| 27 | FAO Forestry Department | National forest inventory - Field manual template Working Paper 94/E | 2004 | Other |
| 28 | CDM Executive Board | CDM Project cycle procedure for project activities. | Version 02.0 of 29/11/2018 | Other |
| 29 | NFA | Mbarara Plantation Report | 11/01/2016 | PP |
| 30 | Uganda Forest Resources Management and Conservation Programme | Yields of Eucaliptus and Caribbean Pine in Uganda | 06/05/2003 | PP |
| 31 | NFA | Annual operating plan and expenditure budget estimates for 2016-2017 Mbarara plantations | / | PP |
| 32 | NFA | Annual operating plan and expenditure budget estimates for 2017-2018 Mbarara plantations | / | PP |
| 33 | NFA | Form factor calculation Pinus <i>Oocarpa</i> Calcul_coef_forme_Pinus_oocarpa.xlsx | 13/01/2020 | PP |
| 34 | Norman Erik Estrada Càmbar | Elaboration of general volume tables for Pinus <i>Oocarpa</i> | 06/1997 | PP |
| 35 | Javier Eduardo Valencia Canales | Volumetric system for Pinus <i>Oocarpa</i> | 04/2013 | PP |
| 36 | Ernesto Crechi | Taper equation development to estimation different volumes for Pinus. | 2008 | PP |
| 37 | Forest Department, Ministry of Water | National Biomass Study - Technical Report | 21/09/2002 | PP |

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|----|--|--|----------------------------|-------|
| | Lands and Environment | | | |
| 38 | Forest Department, Ministry of Water Lands and Environment | Local data for wood density | 1992 | PP |
| 39 | NFA | Mbarara plantation situation report | 14/10/2017 | PP |
| 40 | NFA | Rwoho revised plantation schedule Rwoho_Revised Plantation schedule.xlsx | 13/01/2020 | PP |
| 41 | UNIQUE forestry and land use | Technical Support to Uganda's National Forestry Authority for the 2 nd CDM Verification of the Uganda Nile Basin Reforestation Projects | 01/11/2017 | PP |
| 42 | UNIQUE forestry and land use | Technical review of performance and CDM verification preparedness of the Uganda Nile Basin Reforestation Projects | 20/03/2017 | Pp |
| 43 | NFA | Uganda Inventory QA analysis Uganda_Inventory_QAanalysis_Rev01.xlsx | Rev.01 of 13/01/2020 | PP |
| 44 | NFA | Uganda Plantation Delineation Report | 20/10/2019 | PP |
| 45 | NFA | Planted area map Planted Area MR.kml | 27/03/2020 | PP |
| 46 | NFA | Project boundary registration Project Boundary registration.kml | 27/03/2020 | PP |
| 47 | CDM Executive Board | Guideline on application of specified versions of A/R CDM methodologies in verification of registered A/R CDM project activities. | Version 01.1 of 20/07/2012 | Other |
| 48 | IPCC | 2003 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 – AFOLU https://www.ipcc-nggip.iges.or.jp/public/2006gl/vol4.html | / | Other |
| 49 | UNIQUE forestry and land use | CDM Verification preparatory technical workshops | 28/08/2017 | PP |
| 50 | CDM Executive Board | AR_AM_CLA_0019 General guidance on cases where uncertainty in estimation of carbon stocks exceeds allowable maximum uncertainty | 21/03/2013 | Other |

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Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CLs from this validation

| | | | | |
|---|----|-------------|--|------------------|
| CL ID | xx | Section no. | | Date: DD/MM/YYYY |
| Description of CL | | | | |
| | | | | |
| Project participant response | | | | Date: DD/MM/YYYY |
| | | | | |
| Documentation provided by project participant | | | | |
| | | | | |
| DOE assessment | | | | Date: DD/MM/YYYY |
| | | | | |

Table 2. CARs from this validation

| | | | | |
|---|----|-------------|--|------------------|
| CAR ID | xx | Section no. | | Date: DD/MM/YYYY |
| Description of CAR | | | | |
| | | | | |
| Project participant response | | | | Date: DD/MM/YYYY |
| | | | | |
| Documentation provided by project participant | | | | |
| | | | | |
| DOE assessment | | | | Date: DD/MM/YYYY |
| | | | | |

Table 3. FARs from this validation

| | | | | |
|---|----|-------------|--|------------------|
| FAR ID | xx | Section no. | | Date: DD/MM/YYYY |
| Description of FAR | | | | |
| | | | | |
| Project participant response | | | | Date: DD/MM/YYYY |
| | | | | |
| Documentation provided by project participant | | | | |
| | | | | |
| DOE assessment | | | | Date: DD/MM/YYYY |
| | | | | |

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Document information

| <i>Version</i> | <i>Date</i> | <i>Description</i> |
|---|-----------------|--|
| 03.0 | 31 May 2019 | Revision to: <ul style="list-style-type: none">• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN);• Make editorial improvements. |
| 02.0 | 31 October 2017 | Revision to align with the requirements in the “CDM validation and verification standard for project activities” (version 01.0). |
| 01.0 | 23 March 2015 | Initial publication. |
| Decision Class: Regulatory Document Type: Form Business Function: Registration Keywords: post-registration change, project activities, validation report | | |