

MRV protocol for the Indonesia-Norway partnership on climate, forests and peat

1. General principles for measuring, reporting and verification

- Measuring, reporting and verification (MRV) of REDD+ will build on the principles of transparency, accuracy, completeness, and consistency.
- A learning-by-doing approach is encouraged, and incentives for improvements in MRV over time.
- MRV will be in accordance with relevant UNFCCC decisions on REDD+, guidance and guidelines from the IPCC, and will as appropriate take into account internationally acknowledged guidance from GFOI and GOFC-GOLD, and other related sources.
- Reductions in emissions from gross deforestation are prioritized over other performance indicators, especially in the first period of phase 3 of the partnership. Payments for other performance indicators will be determined based on results in reducing emissions from gross deforestation.
- Conservative accounting shall be applied; when completeness and accuracy are lacking, the risk of overestimation shall be lower than the risk of underestimation.
- The UNFCCC places emphasis on the safeguards for the preservation of natural forests. To adhere to this safeguard Indonesia should make efforts, over time, to distinguish natural forest as from other forest types in all aspects of REDD+ MRV.

2. Forest reference emissions level and results based payment baseline

Reductions in emissions from performance indicators will be compared to a results based payment baseline to report results under the Indonesia-Norway bilateral agreement on phase 3. A results based payment baseline for results-based payments during phase 3 of the partnership may be an adapted version of Indonesia's Forest Reference Emission Level submission to the UNFCCC. The results based payment baseline will be updated periodically, indicatively every 5 years, but also taking into account any updated FREL Indonesia might submit to the UNFCCC. The following points will be addressed in the results based payment baseline. For further detail on how results based payments will be calculated, please refer to the Annex.

2.1. Main principles - methodologies

- There is methodological consistency in the estimation of emissions and removals, between the forest reference emissions level submitted to the UNFCCC and the results based payment baseline applied in the Indonesia-Norway bilateral agreement.
- The results based payment baseline is expressed in tonnes of CO₂ equivalents per annum. Estimates of emissions will be based on IPCC 2006 guidelines for GHG inventories, or more recent guidelines as they are developed.
- All significant pools and sources of greenhouse gas emission associated with relevant performance indicators are included in the results based payment baseline. If a major carbon pool/ or gas is excluded, this will be explained and justified, provided it is not a significant pool. Excluded pools and gases must collectively represent less than 10% of overall emissions that are included in the performance indicators of the Indonesia-Norway bilateral agreement. If a significant pool or gas cannot be included due to lack of data, steps will be taken to include it over time. Once a pool or gas is included

in the results based payment baseline, it shall not be excluded at a later stage or period.

- The data sets, methods, models and assumptions ensure transparency, completeness, consistency, accuracy and comprehensiveness.

2.2. Results based payment baseline

- The results based payment baseline is based on the annual historical average level of each of the following performance indicators: emissions from deforestation and forest degradation.
- The results based payment baseline is developed using reference period from 2006/2007 -2015/2016 and valid up to 2019/2020. The results based payment baseline shall distinguish between the performance indicators.
- The emission reduction results is the difference between the results based payment baseline and the emissions in each year.
- From the reported emission reduction results, set-asides will be made to determine the maximum number of emission reductions Indonesia can be rewarded for by Norway and other financiers. These will reflect risks related to uncertainty, leakage, reversal, as well as a reflection of Indonesia's ambition to reduce national GHG emissions. The deducted volumes cannot be rewarded or bought by other financiers.
- See the annex for further details.

2.3. Scale

- The results based payment baseline is national in scale.

2.4. Forest definition

- The forest definition used in the construction of the results based payment baseline will be specified and will be consistent with Indonesia's FREL to UNFCCC.
- The forest definition should be consistent with established international decisions and guidelines.

2.5. Period for historical average results based payment baseline and use of historical data

- The results based payment baseline will cover the period from 2006/2007 to 2015/2016.

2.6. Updating of the results based payment baseline

- The results based payment baseline will be updated periodically, indicatively every 5 years, but also taking into account any updated FREL and NDC Indonesia might submit to the UNFCCC.
- When the Indonesia-Norway agreement is renewed, the results based payment baseline will be updated for the upcoming period. Updating of the results based payment baseline will take into account new knowledge, extension of the scope (inclusion of more pools, gases or performance indicators) and improvements in methodologies and data.
- The updated results based payment baseline (for a new period) will reflect an increase in ambition.
- To update the results based payment baseline, the reference period will be moved forward in time, by 5 years. If this does not represent an increase in ambition, a percentage increase in ambition will be established.

2.7. Inclusion of additional performance indicators

- Indonesia will continue to develop the MRV system, and over time make efforts to include emissions from other performance indicators in the results based payment baseline. Please refer to the Annex of this document for further detail.

2.8. Accounting

- A national system of accounting will be in place, to provide transparency and certainty that no double counting to emission reductions delivered under other agreements or partnerships occurs.
- Rewarded emissions reductions should be registered in the Lima Info Hub to ensure transparency and certainty that no double counting to emission reductions delivered under other agreements or partnerships occurs.

3. Reporting on emission reductions relative to the results based payment baseline

3.1. General principles

- Reporting will be in the form of one consolidated report, covering all necessary elements described below and according to the reporting format.
- Final reports are published and freely accessible online at the NICFI website and other websites. It is encouraged to facilitate public discussion on the reports.
- Annual reporting is the main rule (linked to annual payments).
- Reports will be consistent with national reports to the UNFCCC (Biennial Update Reports and its REDD+ annex, National Communication).
- Measurement and reporting will be based on the most recent guidance from the IPCC on emissions reporting, currently IPCC 2006 guidelines for GHG inventories, at least Tier 2 if technically possible and data are available.

3.2. Objectives of reporting guidance

- To ensure consistent, complete, transparent and accurate reporting of emission reductions resulting from reduced deforestation and other performance indicators, as agreed, in Indonesia.
- To provide a basis for independent verification of emission reductions achieved.
- To ensure that reporting on emissions and emission reductions is comparable from one reporting period to the next (reporting can be annual or at other intervals).

3.3. Reporting on the National forest monitoring system

- The report shall take into account guidance from UNFCCC Decisions on National Forest Monitoring Systems
- A description of national forest monitoring system, including how it builds on existing systems and a description of the respective roles and responsibilities of institutions included in the national forest monitoring system.
- A description of quality control and quality assurance activities.

3.4. Scope - data material and reporting elements

- Results for agreed performance indicators (gross deforestation, agreed indicators for other activities, see Annex) are reported as tonnes CO₂-equivalents.

- Reporting shall cover:
 - All carbon pools and sources of greenhouse gas emission as reported in the FREL associated with relevant performance indicators, for the purpose of results-based payments; forest definition applied
 - Activity data; description of data sources and coverage
 - Areas covered; description of boundaries
 - Emissions factors; rationale and data sources for estimation of emission factors
 - Methods and models used for estimation of emissions over time
- Information on the Indonesia's forest reference emission level (FREL) submitted to the UNFCCC, the methodologies and data sources used to establish this FREL, and any further information pertaining to the establishment of the results based payment baseline.

3.5. Description of methodologies will include:

- Methods used to establish the FREL/Results based payment baseline.
- Description of methodologies used to develop forest area estimates and forest type maps, forest change analysis, biomass and carbon stock estimation and the approaches for estimation of emission reductions.
- Description of methodologies (including the reference data) used to analyze the uncertainty of the estimates of the change detection.
- Descriptions of the methodological details of the applied steps for calculating emission reductions, in a manner that allows reproduction of the calculation of emission reductions.

3.6. Reporting on uncertainty and bias

- Measurement and reporting will build on IPCCs "Good practice", including the principle of "neither over- nor under-estimates so far as can be judged, and uncertainties reduced so far as is practicable". Conservative approaches will be applied when completeness and accuracy is lacking.
- Estimation of accuracy, precision and/or confidence level for sources, activity data (including user and producer accuracies for forest area categories and potential area change biases) and emission factors.
- Discussion of key uncertainties, their sources and impacts.
- Discussion on, and implications of, potential biases in the estimations.
- Description of planned and implemented improvements to the MRV and NFM system.

4. Verification of results achieved from reduced deforestation and forest degradation

4.1. Background and rationale

Verification of the reported results from reduced deforestation and forest degradation, and other performance indicators as agreed, is a necessary part of the process of results-based payment. A sound verification process ensures that the reported results are based on consistent use of appropriate methodologies, and thus gives confidence for public financing.

This section forms the basis for developing more specific Terms of Reference. The final ToR will establish details regarding the timelines of processes, possible consultations, data requests and other issues, and form the basis for a contract with a designated verification team.

4.2. Objectives of guidance on verification

- Ensure an independent, credible and high-quality verification process, aligned with UNFCCC decisions and taking into account international standards and practice for results-based payments.
- Validate the consistency of the methodology used to estimate emissions reductions in relation to the methodology established in the development of the Reference Level/results based payment baseline.
- Allow reconstruction of reported emission reductions.
- Verify the results on estimated emission reductions from reduced deforestation in order to avoid errors, omissions or misrepresentations that could influence the overall results, and thereby decisions for payments.
- Provide recommendations for improvements in MRV system.
- Analyze and discuss proposed and implemented MRV improvement options. The decision to implement methodological changes or adjustments lies with Indonesia.

4.3. Basis for verification

- The report on estimated emission reductions relative to the results based payment baseline is subject to verification.

4.4. Reference documentation

- Reporting requirements and agreed format for reporting, as agreed in the MRV-protocol Section 3.
- The reference level submitted to the UNFCCC, including the historical average deforestation level and the results based payment baseline of the Indonesia-Norway bilateral agreement.
- The technical assessment of the FREL presented to the UNFCCC
- REDD decisions and MRV decisions under the UNFCCC
- Most recent IPCC Guidelines for GHG inventories as adopted by the UNFCCC COP, and 2013 Wetland Supplement
- Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD) REDD+ Source Book (2015)
- Global Forest Observation Initiative (GFOI) Methods and Guidance Documents (2013&2016) and supplementary modules
- Good Practice Guidance and Uncertainty Management in National GHG Inventories (2000).

The reference documentation may be updated if new guidance from the IPCC or other relevant international sources is developed.

4.5. Access to data and further information

- Methods and data material used will be made available to the verification team to allow reconstruction of FREL/results based payment baseline and emission reduction estimate reports, and publicly available at the same time if technically possible and according to confidentiality restrictions¹.
- The verification team shall be given access² to additional data, if this is requested in order to ensure a sound verification outcome. If data is confidential, the verification team shall maintain confidentiality.
- The verification team may ask questions and discuss findings with relevant institutions in Indonesia that have participated in reporting and/or have responsibilities under Indonesia's national forest monitoring system.

4.6. Process of consultation

- The verification team shall include an in-country visit as part of the verification process.
- Indonesia will be consulted on the planned verification process by the verification team, according to a timeline agreed in the Terms of Reference for verification
- Indonesia will have the opportunity to provide clarifications and comments to a draft verification report.
- Input from Indonesia on the draft verification report will be included in the final verification report. The report will include a written response to how Indonesia's comments have been considered.

4.7. Output from verification process

- The verification team delivers a verification report according to the ToR, to Indonesia and Norway.
- The report is the responsibility of the verification team.
- The report is publicly available on the NICFI and MoEF DGCC websites.
- The verification report is the central basis for payment for emission reductions under the agreement.

5. Selection and composition of independent verification team

5.1. Background and rationale

The verification team that conducts the verification has a key role. Selection of the verification team will ensure independence, high quality, relevant expertise, credibility and trust. It is important that the verification team has the trust of both Norway and Indonesia.

5.2. Principles for composition of verification team

- Experts in the verification team shall not be a national of Indonesia or Norway nor be nominated by Indonesia or Norway to the UNFCCC roster of experts.
- Experts have not been directly involved in the preparation of the reference emission level or the report on emission reductions from Indonesia.
- The team shall include both developing country and developed country experts.
- Competence – the verification team shall include:

¹ Confidentiality might apply, for instance, to raw data from research institutions and individual researchers.

² Access here does not imply release or disclosure of confidential data and information.

- Expertise in tropical forests and carbon stocks
- Expertise in MRV for REDD+ and LULUCF sector
- Expertise on peatlands and fires is preferable
- Expertise in auditing/verification procedures

5.3. Responsibility for selecting verification team

- Terms of reference for the verification process are agreed between Indonesia and Norway.
- Selection of a verification team will be done through an open tender process.
- The verification team can be selected from acknowledged firms with required expertise, or a consortium of independent experts, or a combination (firm + independent experts)