### Forest Carbon Partnership Facility (FCPF) **Technical Assessment of Advanced Draft of Nicaragua**

#### I General Approach of the Review

The TAP received a draft ER-PD on November 6, 2017. A second draft was delivered on January 22, 2018, which is the basis for this TAP report.

The first report was delivered on November 6, 2017. Each TAP member revised the parts of the ER-PD in relation to a series of criteria and indicators that are in accordance with his/her professional experience (see table below). One kickoff teleconference was held to explain the evaluation procedure and to clarify doubts and a few thematic teleconferences were held to clarify specific issues, such as carbon accounting and legal aspects. During the country visit, the TAP members met with government authorities of the ministry of Environment and Natural Resources, representatives of various autonomous regions and consultants. During the country visit, the government representatives explained the main characteristics of the ER-PD, the role of the autonomous regions and the process of program development. The TAP members explained in detail why they considered that certain criteria or indicators did not meet the requirements stipulated in the Methodological Framework and how these observations could be incorporated in a revised version of the ER-PD. Nicaragua agreed to submit an advanced draft version of the ER-PD at the end of December 2017 and later on it was agreed to deliver the second draft on January 22, 2018. As such, this report is based on the review of the second draft version and some additional documents that were available on the internet and include references to comments that were based on the first draft version. All qualifications of the first draft are included in this report, to demonstrate the advances Nicaragua has achieved.

Those criteria or indicators that at this stage still do not completely meet the requirements of the Methodological Framework, according to the opinion of the TAP, are qualified as not met, some of which are considered as major, although none of them are out of reach considering the information that is available to the Nicaraguan government.

### PART 1 OF TECHNICAL ASSESSMENT: Summary

Date of Current Assessment: 22 of February, 2018. Second draft ERPD, received by TAP on January 22, 2018.

#### Name of Assessment team members:

TAP expertise Criteria and indicators Person

Agustin Inthamoussu Carbon accounting expert 10 - 22

Ben de Jong Leader, Carbon accounting 1, 2, 3 - 9; 23, 27.1-27.2, 37.1 - 38.4

Claudio Cabrera Gaillard Local expert Contribute to 27.1, 27.2, 28.1

Mario Nanclares Safeguards expert 24-26.3, 29, 30.1, 31.1-32.1, 34.1-35.1 Moritz von Unger Legal expert 28.1-28.3, 33.1 and 36.1-36.3, 37.1-38.4

#### Summary Assessment of the Quality and Completeness of the ER-PD:

**Assessment** Indicators The Nicaraguan government has done a good effort to develop a solid and interesting ER-PD. It is of special interest as it intends to develop a regional program that implies dealing with a hierarchical governmental structure of the central government and various regional authorities from the autonomous regions. This implies that a decision making institution has to be in place that can cope with this organizational complexity. We congratulate the Nicaraguan government to develop this very interesting endeavor! Needless to say that some issues in the document needs to

assessment

be refined in order to meet the criteria and indicators of the methodological framework, which we hope will be attended in the next version. All criteria and indicators of the sections on the Level of Ambition did meet the standard required by the methodological framework (MF) as of the first draft, although some aspects may be improved in the next version or during ER-PA negotiations, but are not an impediment to accept the ER-PD. All other sections improved substantially between the first and second draft. In the section on drivers and sustainable program design 8 indicators changed from Non-Conformity to Conformity and now the whole section on Sustainable Program Design and Implementation is meeting the criteria and indicators of the MF. In the section of Carbon Accounting 6 indicators changed from Non-Conformity to Conformity, whereas 14 will need more attention. In the section on Safeguards 3 out of 5 Non-Conformities changed to Conformity and in the section on ER Program Transactions 3 out of 5 Non-Conformities changed to Conformity. During the country visit it was clear that the section on Carbon Accounting needed more time to be improved in order to meet the criteria and indicators and will be attended in the final ER-PD.			
II. Level of Ambition → Criteria 1 – 2, including issues relating to legal aspects	1.1	YES	YES
The level of ambition of the project is important. The ER Program incorporates all six strategic pillars, as well as various of the 37 strategic actions of the national REDD+ Strategy. It focuses on the highest priority geographical area for reducing forest-based greenhouse gas emissions in Nicaragua - the Caribbean Coast. The accounting area is of significant scale and comprise about 54% of the national territory, 80% of the forests, the majority of indigenous populations and all indigenous and afro-descendant autonomous territories. It also accounts for the large majority of national deforestation. The ER Program has as the overall goal the reduction of forest-based emissions from the accounting area by 18.5 Mt CO <sub>2</sub> e (13.8 Mt CO <sub>2</sub> e excluding the uncertainty/buffer) during 5 years.	1.2 2.1	YES	YES
III. Carbon Accounting	3.1	YES	YES
	3.2	YES	YES
III (a) Scope and methods→ Criteria 3 - 6	3.3	NO	NO
III (b) Uncertainties→ Criteria 7 - 9	4.1	NO	NO
III (c) Reference Level→ Criteria 10 - 13	4.2 5.1	YES YES	YES YES
III (d) Reference Level, Monitoring & Reporting on Emission Reductions→ Criteria 14-16	6.1	NO	NO
	6.2	NO	NO
III (e) Accounting for Displacement (leakage) → Criterion 17	7.1	NO	NO
III (f) Accounting for Reversals → Criteria 18 – 21	7.2	NO	NO
III (g) Accounting for ERs → Criteria 22 - 23	8.1	NO	NO
	8.2	NO	NO
Scope and methods	9.1 9.2	NO NA	NO NA
Sources and sinks associated with any of the proposed REDD+ activities are accounted for in the ER program.	9.3	NA	NA
The definition of forest includes perennial crops. However, in the subsequent analysis of activity	10.1	YES	YES
data, perennial crops are considered as non-forest, which needs to be better explained. In terms of	10.2	NO	YES
activity data, in the first draft forest degradation was not considered as important, however after	10.3	NO	YES
discussions with the TAP, the Nicaraguan Government agreed that forest degradation may be important and in the second draft, forest degradation has now been recognized as an important	11.1	YES	YES
source of emissions, although estimations of the reference scenario of degradation has not been	11.2	YES	YES

included yet and will require additional analysis. Emissions derived from forest degradation is now	
estimated to be more than the 20% of total forest-based emissions. Including degradation as a	
source of emissions requires a revision of the reference scenario, as this will add a number of	
additional Land Use-transitions that have not been taken into account in the current estimations of	
area change. Various sources of data indicate that at least part of the tacotal area may be	
considered as forest, e.g. 1. average biomass densities are almost the same as coniferous forest,	
thus indicating that various plots exceed biomass densities of this forest type, 2. most of the	
"tacotal" plots of the forest inventory have average tree height above the limits of the forest	
definition and 3. Tacotal is one of the important sources of uncertainty in the reference scenario	
analysis with area estimations that are more than 100% higher from the sampling estimation	
compared to the estimations from maps.	
The treatment of even ferest is not consistent in the ED DD, as the inventory plate considered as	

YES

YES

NA

NA

NA

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NO

NO

12.1

13.1 13.2

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14.3 15.1

16.1

17.1

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23

**YES** 

**YES** 

NA

NA

NA

NO

YES

NO

YES

**YES** 

YES

**YES** 

NA

NA

NO

NO

**YES** 

NA

NA

NO

NA

YES

NO

The treatment of open forest is not consistent in the ER-PD, as the inventory plots considered as open forest are not used to estimate the emission factors of forests, whereas open forest of the maps is aggregated with closed forest. The TAP recommends to include part of these forest as degraded forest. The Nicaraguan government promises to submit an updated estimation of the emissions due to degradation, based on satellite derived estimation of loss of forest cover in forests remaining forests, and applying a relation between forest cover and loss of biomass that will be derived from the national forest inventory. This will require adjustments of the emission factors for closed forest and possibly tacotal (in the case that some areas now considered as tacotal will be classified as degraded forest).

The data publicly available do not allow us to reconstruct the reference level and the reported emissions and removals, therefore the TAP suggests to make all data publicly available or at least available to the TAP. As this section will need new analysis, none of the Non-Conformities changed from the first draft to the second draft

#### **Uncertainties**

The calculation procedure to estimate takes into account some of the uncertainties related to precision in activity data and emission factors. The contribution of accuracy errors in each source of information to the overall uncertainty is not assessed, which may be important as many data sources have been aggregated. One of the TAP's main concerns is the uncertainty analysis for the land-use change maps. None of the areas estimated from the LU-maps fall within the confidence limits of the sampling analysis. This means that the maps cannot be used for future monitoring purposes and that the sampling analysis may have significant errors (e.g. errors in stratification, number of samples in each stratum). Without accurate maps it will be difficult in the future to estimate emission reductions and to assign these to specific ER activities, which is particularly important if the benefit system will be based on carbon rights of the landowner and when other ER activities will take place in the accounting area. As this section will need new analysis, none of the Non-Conformities changed from the first draft to the second draft.

#### **Reference Level**

In general terms, these criteria have been well covered by Nicaragua, and improved from the first to the second draft and the result is that two indicators passed from "NO" to "YES" and now all indicators in this section comply with the MF.

#### Reference Level, Monitoring & Reporting on Emission Reductions

The second draft improved somewhat with the addition of information about how the development of ERPD is integrated to the elaboration of the national Forest Reference Emission Level, Forest Management Level or country's greenhouse gas inventory. Thus, the TAP requested Nicaragua to improve the section. Also, the reference period is now well defined.

The sections that have not been accomplished are related to previous issues detected above, for example the correct definition of "tacotal" and its emission factor, the inclusion or not of

degradation, how the emissions factors will be determined for deforestation and degradation for				
the different land-use changes categories. The TAP maintains the suggestions done in indicator 14.3 related to emission factors.				
Accounting for Displacement (leakage) and for Reversals Risk of displacement and reversals have been improved with more justifications, and made it more comprehensible for an external reader. Two indicators changed form NO to YES and only three indicators related to "Reversals" still require some improvements				
Accounting for ERs The calculation of total estimated ERs now complies with the MF and changed from No to YES. Only the part on data management system to avoid double counting is not yet in place, but will be dealt with in the next version of the ER-PD, as a consultant will be contracted to resolve this issue (see also indicators under C 37).				
In this section, 18 indicators are met, 15 are not met and 10 do not apply in the second draft version of the ER-PD.				
IV. Safeguards	24.1 24.2	YES	YES	
Actions undertaken to meet WB and Cancun Safeguards → Criteria 24-26	25.1	NO NO	YES	
The document introduces an appropriate identification and interpretation of the safeguards promoted by the Program and its relationship with the country's regulatory framework.	25.2 26.1	NA NO	NA YES	
The Document includes an Environmental and Social Management Framework of the Program and identifies impacts, risks and mitigation measures developed.	26.2 26.3	NO NO	NO NO	
The ESMF covers the requirements for each of the safeguard policies applicable to the ERP accountability area and the procedures to reduce the environmental and social risks during intervention activities.				
The Program includes an Indigenous Peoples Planning Framework (IPPM), Procedural Rules for Involuntary Resettlement (IPPR) and the Feedback Mechanism that will allow stakeholders to gather information and register complaints or suggestions.				
Although an impacts and risks analysis are performed, it is considered that the Document needs to include more considerations on social risks derived from the existing tensions, in some territories involve in the Program, between indigenous communities and third-party settlers.				
As concerns ERPD consultation process, the design and implementation of the ER programs are based on and use transparent consultation and information exchange mechanisms between actors involved, in particular the affected local communities and indigenous peoples.				
A Mechanism of Communication Strengthening (MFC) for the ERPD Program has been designed that integrates a variety of channels for the reception, attention, and feedback of complaints based on traditional and non-traditional communication channels.				
It is necessary to perform and assessment of the existing Grievance Mechanisms in the institutions involved in the ER program to identify: a) priority areas where the existing mechanisms needs to be strengthened, and b) the existing capacity in the institutions involved to receive and handle grievances.				
The second draft improved this section and three indicators changed from No to YES in the second draft, remaining only two indicators to be improved.				
In this section, 4 indicators are met, 2 are not met and 1 does not apply at this stage of the ER-PD.				

V. (a) Drivers and Land Resource Tenure Assessment → Criteria 27-28  V. (b) Benefit sharing → Criteria 29 – 33  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  Drivers and Land Resource Tenure Assessment  This sections improved substantially from the first to second draft. Now the drivers, proposed actions and possible sources of financing are better integrated The drivers of deforestation included attending some of the important policies that stimulate deforestation, among others the forest policy, the land policy, the investments policy and the agricultural policy. In the first TAP 34.1  NO 33.1, NO 34.1  YES 34.1  YES 34.1  NO 35.1  NO 36.1  NO 36.1  NO 36.1  NO 37.1  NO WES 36.2  NO WES 36.3  NO N					
V. Job Benefit sharing → Criteria 29 – 33  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 34 – 35  V. (c) Non-Carbon Benefits → Criteria 36  V. (c) Non-Carbon Benefits → Criteria 36  V. (c) Non-Carbon Benefits → Criteria 37 – 38  V. (d) ERPA Signing Authority and Transfer of Title to ERS → Criteria 37 – 38  V. (e)					
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	Data Managarant and ED Transaction Parietyies	38.3	NA NA	NA NA	
Data Management and EK Transaction Registries	Data Management and ER Transaction Registries	30.4	IVA	IVA	

Preliminary decisions on a data management system and registry options have been made, but details are mostly missing. The Nicaraguan government is planning to contract a consultant to resolve the issue of data management, in order to avoid double counting. One indicator on ER transactions changed from No to YES, the three indicators on data management require improvements in the final ER-PD.

In this section 5 indicators are met, 3 indicators are not met, and 3 are considered as not applicable at this stage

#### **SUMMARY SCORE and overall comment:**

In total, 21 indicators changed from No to YES in the second draft ER-PD, compared to the first draft.

In the second draft, 40 indicators are now completely met, 20 indicators need improvements in the document (of which various indicators in the Carbon Accounting section are correlated) and 18 do not apply at this stage of the ER-PD.

The general idea of the ER-PD is interesting and proposes novel ideas of how to develop a subnational REDD+ program on a significant scale, incorporating many autonomous government structures. The ER-PD is envisioned to be part of a national REDD+ program. There are some important issues in some sections of the ER-PD that can be resolved in due time, in order to comply with the criteria and indicators of the methodological framework.

#### PART 2 OF TECHNICAL ASSESSMENT: DETAILED ASSESSMENT

C. 1 The proposed ER Program is ambitious, demonstrating the potential of the full implementation of the variety of interventions of the national REDD+ strategy, and is implemented at a jurisdictional scale or programmatic scale.

**Ind. 1.1** The ER Program Measures aim to address a significant portion of forest-related emissions and removals

YES

[Ambition and strategic rationale for the ER Program – 2.2]

As stated by the ER-PD, the ER Program has as the overall goal the reduction of forest-based emissions from the accounting area by 21.1 Mt CO<sub>2</sub>e (16.6 Mt CO<sub>2</sub>e excluding the uncertainty/buffer) during 5 years while improving food security and the conservation of biodiversity. According to INETER, approximately 80% (3.16 million ha) of Nicaragua's forests are found in the accounting area (ENDE-REDD+, 2017). The area is undergoing high levels of deforestation, with almost 65% (2.8 million ha) of the 4.32 million ha of forests lost at the national level between 1983 and 2015 (Table 3). With time, the importance of the Caribbean as a source of deforestation has increased as the deforestation front has advanced from the Pacific coast to the country's Central Region and then to the Caribbean Coast. Deforestation in the Caribbean region represented half of the national deforestation between 1983 and 2000, but grew to 70% in 2000-2005, 85% between 2005 and 2010, and more than 100% between 2010 and 2015 (the rest of Nicaragua seems to gain forests between 2010-2015, see Table 3)

**Ind. 1.2** The ER Program is ambitious, uses new or enhanced ER Program Measures to reduce Emissions or enhance removals, is undertaken at a jurisdictional scale and/or takes a programmatic approach (i.e., involves multiple land areas, landowners or managers within one or several jurisdictions), and reflects a variety of interventions from the national REDD+ strategy in a coordinated manner.

YES

[Ambition and strategic rationale for the ER Program – 2.2, 2.3]

The ER Program incorporates all six strategic pillars, as well as various of the 37 strategic actions of the national REDD+ Strategy. It also focuses on the highest priority geographical area for reducing forest-based greenhouse gas emissions in Nicaragua - the Caribbean Coast. The latter includes the North Caribbean Autonomous Region (RACCN) and the BOSAWAS Biosphere Reserve (Sub-region 1) and the South Caribbean Autonomous Region (RACCS) and the Indio Maiz Biological Reserve (Sub-region 2).

#### C. 2 The Accounting Area matches a government- designated area that is of significant scale

**Ind. 2.1** The Accounting Area is of significant scale and aligns with one or more jurisdictions; or a national-government-designated area (e.g., ecoregion) or areas.

YES

[Accounting Area of the ER Program – 3.1]

The accounting area is of significant scale and comprises about 54% of the national territory, 80% of the forests, the majority of indigenous populations and all indigenous and afro-descendant autonomous territories. It also accounts for the large majority of national deforestation. The area contains 54% of the national territory and a large share of the national indigenous and Afro-descendant populations and has been singled out within the National Humar Development Plan as a high priority area, due to the high poverty levels, vulnerable populations, and natural resource and forest wealth. The high biological value and richness of the BOSAWAS Biosphere Reserve in the RACCN and the Indio Maíz Biological Reserve in the RACCS have also been recognized internationally.

C. 3 The ER Program can choose which sources and sinks associated with any of the REDD+ Activities will be accounted for, measured, and reported, and included in the ER Program Reference Level. At a minimum, ER Programs must account for emissions from deforestation. Emissions from forest degradation also should be

#### accounted for where such emissions are significant.

**Ind. 3.1** The ER Program identifies which anthropogenic sources and sinks associated with any of the REDD+ Activities will be accounted for in the ER Program

**YES** 

[Description of Sources and Sinks selected – 8.1]

Yes, all sources and sinks associated with any of the proposed REDD+ activities are accounted for in the ER program. The program includes Deforestation, Forest Degradation, and Stock Enhancement. Forest degradation is now considered as an important source of emissions, but has not been incorporated in the estimation of the reference scenario and as such needs more attention, as the emissions derived from forest degradation has been preliminarily estimated at more than the 20% of total forest related emissions. Sustainable Forest Management is considered as a key alternative to avoid deforestation and as such is not considered as a separate REDD+ activity.

Ind. 3.2 The ER Program accounts for emissions from deforestation.[Description of Sources and Sinks selected – 8.1]

YES

The ER-PD program accounts for both emissions from deforestation and removals of non-forestland and tacotal converted to forestland. However, since degradation has not been incorporated in the analysis, the estimation of emissions due to deforestation may change, as the emission factors and LU-transition data may change.

**Ind. 3.3** Emissions from forest degradation are accounted for where such emissions are more than 10% of total forest-related emissions in the Accounting Area, during the Reference Period and during the Term of the ER-PA. These emissions are estimated using the best available data (including proxy activities or data).

NO

[Description of Sources and Sinks selected – 8.1]

The ER Program identifies the anthropogenic sources and sinks associated with emission reductions of deforestation and stock enhancement. Emissions from degradation are not included yet. In the first draft of the ER-PD, forest degradation was considered as not-significant, but after discussions with the TAP during the country visit, the Nicaraguan government agreed to revise the data presented. In the second draft a new preliminary analysis indicates that emissions from degradation may be more than 20% of total forest-related emissions. In the second draft of the ER-PD, Nicaragua states that it is planning to improve the estimation of emissions due to degradation, using a new approach, in which satellite images will be used to separate forests in three cover classes for which biomass will be estimated based on forest inventory data. This new approach will have an impact on how the reference scenario of deforestation has been calculated, as new Land Use-transitions (LU-transitions) will have to be included in the analysis, which changes the stratification procedure used. LU-transitions between non-forest and tacotal are also required to take into account emissions and removals from these transitions. The new approach will also change the emission factors used to estimate the emissions from deforestation. It is recommended to include data of transitions between 2005-2010 and 2010-2015 to add in the stratification. According to the updated ER-PD, all the new EF will be estimated, based on the national forest inventory. These estimations of emissions from forest degradation (loss of forest cover in closed forests and changes from closed forests to agroforests) will substitute the proxy approach used to estimate emissions due to degradation, as presented in the first and updated draft.

Since this indicator is very relevant, the non-conformity is considered as a MAJOR NON-CONFORMITY.

C. 4 The ER Program should account for, measure and report, and include in the ER Program Reference Level, significant carbon pools and greenhouse gases, except where their exclusion would underestimate total emission reductions.

**Ind. 4.1** The ER Program accounts for all Carbon Pools and greenhouse gases that are significant within the Accounting Area, both for Reference Level setting and Measurement, Monitoring and reporting (MMR).

NO

#### [Description of Carbon Pools and greenhouse gases selected – 8.2]

Only aboveground and belowground biomass pools are taken into consideration, as no data are available to estimate potential emissions or removals from litter, dead wood or soil organic matter. Regarding greenhouse gases, only CO2 is taken into consideration. The insignificance of methane and NOx emissions from forest fires is not demonstrated in the ER-PD and as such their exclusion from the accounting is not justified. We suggest to include a proxy approach in the ER-PD that demonstrates that the exclusion does not significantly change the Reference Scenario (e.g. the area affected by forest fires is equal to the proportion of forests in the accounting area in relation to national forest).

The non-conformity is considered a MINOR NON-CONFORMITY, as this issue may be clarified with existing data.

Ind. 4.2 Carbon Pools and greenhouse gases may be excluded if:

YES

- I. Emissions associated with excluded Carbon Pools and greenhouse gases are collectively estimated to amount to less than 10% of total forest-related emissions in the Accounting Area during the Reference Period; or
- II. The ER Program can demonstrate that excluding such Carbon Pools and greenhouse gases would underestimate total emission reductions.

[Description of Carbon Pools and greenhouse gases selected – 8.2]

- i) It is expected that the exclusion of methane of nitrogen oxide emissions from forest fires amount to less than 10% of total forest-related emissions in the accounting area during the reference period. Any reductions in the amount of areas affected by forest fires due to the ER-program will underestimate possible ERs.
- ii) The ER program demonstrates that the excluded pools are underestimating total emission reductions.
- C. 5 The ER Program uses the most recent Intergovernmental Panel on Climate Change (IPCC) guidance and guidelines, as adopted or encouraged by the Conference of the Parties as a basis for estimating forest-related greenhouse gas emissions by sources and removals by sinks.

**Ind. 5.1** The ER Program identifies the IPCC methods used to estimate emissions and removals for Reference Level setting and Measurement, Monitoring and reporting (MMR).

YES

[Description of method used for calculating the average annual historical emissions over the Reference Period – 8.3]

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area—9.1]

Yes, the ER-PD mentions the application of IPCC guidelines throughout the document. In the estimation of LU-transitions the Olofsson (2014) approach was applied, which in general can be considered as Approach 3. Emission factors are based on the national inventory data, and as such can be considered as Tier 2 data, whereas the removal factors in the first draft were based on IPCC tables, which are TIER 1 data, whereas in the updated ER-PD these are based on published data from Nicaragua and as such are Tier 2. The emission factors are now based on the most recent general allometric equation of Chave (2014), which is considered as a significant improvement on the previous equation the country used, as Chave (2014) uses much more tree sample data, and allows adjustments of biomass estimations according to two factors that influence these estimations: 1) wood density (directly correlated to total biomass estimation) of individual species and 2) precipitation classes (water deficits affect tree architectural characteristics, such as diameter-height relations).

C. 6 Key data and methods that are sufficiently detailed to enable the reconstruction of the Reference Level, and the reported emissions and removals (e.g., data, methods and assumptions), are documented and made publicly available online. In cases where the country's or ER Program's policies exempt sources of information from being

publicly disclosed or shared, the information should be made available to independent reviewers and a rationale is provided for not making these data publicly available. In these cases, reasonable efforts should be made to make summary data publicly available to enable reconstruction.

NO

#### **Ind. 6.1** The following methodological steps are made publicly available:

- Forest definition;
- II. Definition of classes of forests, (e.g., degraded forest; natural forest; plantation), if applicable;
- III. Choice of activity data, and pre-processing and processing methods;
- IV. Choice of emission factors and description of their development;
- V. Estimation of emissions and removals, including accounting approach;
- VI. Disaggregation of emissions by sources and removal by sinks;
- VII. Estimation of accuracy, precision, and/or confidence level, as applicable;
- VIII. Discussion of key uncertainties;
- IX. Rationale for adjusting emissions, if applicable;
- X. Methods and assumptions associated with adjusting emissions, if applicable.

[Forest definition used in the construction of the Reference Level 9.2]

[Description of method used for calculating the average annual historical emissions over the Reference Period 8.3] [Activity data & emission factors used for calculating the average annual historical emissions over the Ref. Period 8.3] [Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 9.1]

The data that are publicly available do not allow us to reconstruct the reference level and the reported emissions and removals, due to the following shortcomings:

- i. The definition of "tacotal" is not clear, as it may be considered as a temporal state of non-tree land cover that will be covered rapidly with trees, and as such could be considered as forestland temporarily without tree cover. The carbon density reported for "tacotal" indicate that at least part of the plots may be considered as forest. Also the forest inventory data that were made available to the TAP (only a part of the collected data), indicate that many plots identified as "tacotal" have a tree cover > 5m. The definition of perennial crops as forest has not been used in the LU-transition analysis and emission factors, where these LU types are considered as non-forest.
- ii. Data available on land cover and land use are different from the data that are presented in the calculations of the reference level. It is not clear why none of the estimated areas of stable land cover and transition between land covers derived from the maps are outside the confidence interval ranges of the sampling method used. It seems that the "open Forest" is treated inconsistently, as the inventory plots identified as open forest are excluded from the emission factor estimation of forest, whereas the open forests of the maps are aggregated to closed forest.
- iii. Transitions between non-forest and tacotal and between forest and degraded forest are not included in the choice of activity data.
- iv. Emission and removal factors are lacking for transitions between non-forest and tacotal and between forest to degraded forest.
- v. See ii and iv.
- vi. Estimations of emissions and removals have been calculated separately.
- vii. There is no estimation of accuracy, which is an important concern, as many data are aggregated, without explaining how and what effect the aggregation has on the accuracy of the emission/removal estimation. The TAP is very concerned about the discrepancy between map-based estimations of LU transitions and sampling-based estimations of these transitions. None of the map-derived classes are within the 90% confidence interval from the sampling-based estimates, even the stable classes are outside the range. Possible sources of error include:
  - a. Stratification according to map classes not correct, due to large errors in maps.

- b. Difficulty to separate tacotal from forest on a pixel basis
- c. Only forested pixels were extrapolated to 1 ha to determine coverage, but non-forest pixels could in effect be forests, if taken into account the 3\*3 pixels around the sample
- d. Sample size too small and distribution not according to expected error.
- viii. Accuracy has not been estimated, which may be of concern, as many data sources have been aggregated.
- ix. There is no discussion on key uncertainties available and how these will be attended. Particularly the discrepancy between the maps and sampling analysis is of concern, as this has important implications for other parts of the ER-PD, such as benefit sharing, property rights of verified emission reductions, among others.
- x. Does not apply
- xi. Does not apply

This is considered as a MINOR non-conformity.

**Ind 6.2** For the following spatial information, maps and/or synthesized data are displayed publicly, and reasonable efforts are made to explain how these were derived from the underlying spatial and other data, and to make key data sets or analyses publicly available:

NO

- I. Accounting Area
- II. Activity data (e.g., forest-cover change or transitions between forest categories)
- III. Emission factors
- IV. Average annual emissions over the Reference Period
- V. Adjusted emissions

Any spatial data used to adjust emissions, if applicable.

[Forest definition used in the construction of the Reference Level 9.2]

[Description of method used for calculating the average annual historical emissions over the Reference Period 8.3] [Activity data & emission factors used for calculating the average annual historical emissions over the Ref. Period 8.3] [Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 9.1]

- i. Yes
- ii. No maps or matrices are available that can be used to assess land-cover changes over time. As such, it is not possible to reconstruct the procedures used to determine the reference scenario. In annex 2 a table is presented with area estimations of each land-cover class, but not all possible transitions are assessed. The definition of forest includes perennial crops, but these are treated as non-forest in the reference scenario analysis.
- iii. No data are available how the EF were calculated.
- iv. See iii and iv
- v. Does not apply

This is considered as a MINOR non-conformity.

C.7 Sources of uncertainty are systematically identified and assessed in Reference Level setting and Measurement, Monitoring and reporting

**Ind 7.1** All assumptions and sources of uncertainty associated with activity data, emission factors and calculation methods that contribute to the uncertainty of the estimates of emissions and removals are identified.

NO

[Activity data and emission factors used for calculating the average annual historical emissions over the Reference Period 8.3]

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 9.1]

[Identification and assessment of sources of uncertainty 13.1]

In the uncertainty analysis, only errors associated to precision of activity data and emission factors are taken into consideration. Due to the fact that many data sources have been aggregated and not always consistently, many sources of uncertainty in relation to accuracy can be expected and as such should be taken into account. Using an average EF of forests in various states of degradation (eg. open and closed forests) may cause an overestimation of emissions if mainly open forests are deforested and an underestimation if only closed forests are deforested. Degradation has not been included in the reference scenario, as such uncertainties associated to these emissions are also lacking. There are various other sources of error associated with the estimation of the emissions factors, such as the possible errors due to aggregation of LU classes from the inventory data, exclusion of the open forest data in the calculations of the ER, whereas most of the forest plots are considered as open forest (see inventory data), which gives a bias to overestimating carbon densities. Considering Tacotal as a non-forest seems doubtful, as the average density is similar to coniferous forests, which is considered forest. A more detailed analysis of the Tacotal plots in the forest inventory is required to show that none of the plots comply with the forest definition, such as tree height and estimated canopy cover. The error in the estimations of area under Tacotal are extremely high, with the lower limits of the confidence interval of forests converted to Tacotal almost 100% above the map estimate and error of the area estimates of Tacotal converted to forests much more than 100%!! This may be due to the fact that Tacotal in reality in many cases is considered as forest with Landsat. If there are no maps available for future monitoring, it will be very difficult to assign any result to specific activities carried out in the different municipalities, as all reference level estimations are based on sampling (Olofsson 2014).

It is not clear how the error of activity data and EF were calculated, as the aggregation procedure of the data (both for activity data and EF) is not explained.

This is considered as a MAJOR non-conformity.

Ind 7.2 The sources of uncertainty identified in Indicator 7.1: are assessed for their relative contribution to the overall uncertainty of the emissions and removals.

[Identification and assessment of sources of uncertainty 13.3]

NO

See 7.1 for details. As the sources of uncertainty identified in indicator 7.1 are incomplete, the assessment for their relative contribution to the uncertainty is also incomplete.

Both 7.1 and 7.2 are correlated and as such this indicator is also considered as a MAJOR non-conformity.

C 8 The ER Program, to the extent feasible, follows a process of managing and reducing uncertainty of activity data and emission factors used in Reference Level setting and Measurement, Monitoring and reporting.

**Ind 8.1** Systematic errors are minimized through the implementation of a consistent and comprehensive set of standard operating procedures, including a set of quality assessment and quality control processes that work within the local circumstances of the ER Program.

NO

[Activity data and emission factors used for calculating the average annual historical emissions over the Reference Period, 13.2]

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area]

There are no SOPs or QA/QC procedures available at the time of this review. In some sections of the ER-PD improvements of data or data collection procedures are mentioned, but not presented as SOP. As mentioned under 7.1 and 7.2, the importance of each source in the total uncertainty estimation has not been assessed nor the effect of systematic errors, such as averaging EF and activity data of various forest- and forest cover types. There is no quality control assessment of the sampling procedure used to estimate reference scenario land-use transitions and their confidence intervals. Only qualitative criteria are mentioned, such as the use of Remote Sensing experts. As mentioned under 6.1, the discrepancy between map-based and sampling-based transition estimations are of concern.

The elaboration of SOPs and QA/QC procedures are standard requirements and as such it should not be difficult to take corrective actions, and as such this indicator is considered as a MINOR Non-Conformity.

**Ind 8.2** Random errors and other uncertainties are minimized to the extent practical based on the assessment of their relative contribution to the overall uncertainty of the emissions and removals.

NO

[Activity data and emission factors used for calculating the average annual historical emissions over the Reference Period 10, 13]

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 9.1]

[Identification and assessment of sources of uncertainty 13.1]

The overall contribution of the random errors to the overall uncertainty has not been assessed. A Monte Carlo analysis has been performed to analyze the total uncertainty for emissions from deforestation, but not been explained how this was performed, which variables were included in the analysis and their respective type and level of uncertainty. The assumption that the biomass densities in the land-cover types are normally distributed, is doubtful, as in most cases these are not-normally distributed. Particularly the uncertainty associated with the aggregation of land cover types and their possible effect on the uncertainty has not been included.

Once the assessment of the relative contribution of random errors and other sources of uncertainties as mentioned under Indicator 7.1, the required actions to comply with this indicator is considered as MINOR Non-Conformity.

C 9 Uncertainty of activity data and emission factors used in Reference Level setting and Measurement, Monitoring and reporting is quantified in a consistent way, so that the estimation of emissions, removals and Emission Reductions is comparable among ER Programs

Ind 9.1 Uncertainty associated with activity data and emission factors is quantified using accepted international standards, for example by providing accuracy, confidence interval, distribution of error, and propagation of error. Where errors in data and methods are considered large as defined in IPCC Guidelines, Monte Carlo methods (numerical simulations) should be used to estimate uncertainty

NO

[Activity data and emission factors used for calculating the average annual historical emissions over the Reference Period 13.1]

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER

Program within the Accounting Area 9.1]	
The procedures applied to assess the uncertainties are according to accepted international procedures. How all sources of uncertainties are included in the analysis, in particular those associated to accuracy ( Procedures to include accuracy in the overall uncertainty analysis will put the analysis in another a dimension. Also, the distribution of error of each emission factor needs to be assessed, as these are gene normal as assumed in this study. A Monte Carlo analysis was performed, but without providing information variables included in the analysis and the relative contribution of each variable to the overall estimation uncertainty.	see 7.1). analytical rally not- on on the
Once the overall uncertainty analysis is improved, according to indicators 7.1 and 7.2 among others, the procedure to assess the uncertainties according to international procedures is considered as a MIN Conformity.	
Ind 9.2 Uncertainty of the estimate of Emission Reductions is quantified using Monte Carlo methods. Underlying sources of error in data and methods for integrated measurements of deforestation, forest degradation and enhancements (e.g., as in a national forest inventory) are combined into a single combined uncertainty estimate and are reported at the two-tailed 90% confidence level	N.A
[Quantification of uncertainty in Reference Level setting 13.2]	
Does not apply at this stage	
<b>Ind 9.3</b> Uncertainty of Emissions Reductions associated with deforestation, forest degradation and enhancements are reported separately if measured through separate (i.e., non-integrated) approaches and when degradation is estimated using proxy data.	N.A
[Quantification of uncertainty in Reference Level setting 13.2]	
Does not apply at this stage	
C 10 The development of the Reference Level is informed by the development of a Forest Reference Emission or Forest Reference Level for the UNFCCC	ion Level
Ind 10.1 The Reference Level is expressed in tons of carbon dioxide equivalent per year [Estimated Reference Level 9.7]	YES
The Reference level estimation methodology, activity data and emissions factors is presented in chapter 8 of 1 t considers the emissions from deforestation activity and enhancement of carbon stocks (conversion	

forestland to forestland).

The Reference level is expressed in tons of carbon dioxide, and no equivalence procedure was applied to non-CO2 GHG, since the Program does not include emissions of non-CO2 gases resulting from forest fires or any other forest related activity.

In conclusion, the indicator is accomplished and the reference level is expressed in tons of carbon dioxide per year, starting in 2005 and finalizing in 2015. In the first submission the reference level has the same value of 13,563,879.97 tCO2/year for every year, but it has been modified as per the following table of the ERPD:

Year of the reference period	Average annual historical emissions from deforestation over the Reference Period	Average annual historical removals by sinks over the Reference Period	Rataranca	
yr	(t CO₂e/yr)	(t CO₂e/yr)	(t CO₂e/yr)	
1	13,807,236	-236,020	13,571,216	
2	13,807,236	-708,059	13,099,177	
3	13,807,236	-1,180,098	12,627,138	
4	13,807,236	-1,652,137	12,155,099	
5	13,807,236	-2,124,176	11,683,060	
6	13,807,236	-2,596,215	11,211,020	
7	13,807,236	-3,068,254	10,738,981	
8	13,807,236	-3,540,293	10,266,942	
9	13,807,236	-4,012,333	9,794,903	
10	13,807,236	-4,484,372	9,322,864	

Note that the Reference level is not including the emissions from forest degradation, which will be included in following submissions of the ER-PD

Ind 10.2 The ER Program explains how the development of the Reference Level can inform or is informed by the development of a national Forest Reference Emission Level or Forest Reference Level, and explains the relationship between the Reference Level and any intended submission of a Forest Reference Emission Level or Forest Reference Level to the UNFCCC

YES

[Relation between the Reference Level, the development of a FREL/FRL for the UNFCCC and the country's existing or emerging greenhouse gas inventory 9.8]

Nicaragua has not sent a National Forest Reference Level to UNFCCC yet. But the country is working on it. The Emissions Reductions Program Document (ERPD) states that Nicaragua is also working on the alignment of the National Reference Level, the National Greenhouse Gas Inventory, and the Reference Level of the ERPD.

They also explain that they will update its National Forest Reference Level and the National GHG Inventory taking into account the methodological improvements implemented for the construction of the Program's reference level. That means that the comments and observations done by the TAP in relation to carbon accounting and other topics will also serve as material for those other documents.

Nicaragua presents a very useful table showing the correspondence among the national FRL, GHG Inventory and ERPD reference level for: forest definition, forest categories, REDD+ activities, pools, gases, emissions factors allometric equations (the use of Chave et. al (2014) in all cases is an improvement in relation to the first draft), emission factors non-forest classes, removal factors, activity data, reference period, tier method and uncertainty analysis. Moreover, the second submission of the ERPD to the TAP presents a more detailed roadmap to harmonize the Reference Level of the ER-PD with the National GHG Inventory, compared to the brief roadmap presented in the first draft. This new roadmap includes the tasks of each institution, its objectives, responsible institution and date.

As it is stated in the ERPD, Nicaragua believes that the REL/FRL of the Emissions Reduction Program will eventually be consistent with the REL/FREL of ENDE-REDD+ (which is still in preparation), since the same technical and

methodological guidelines, as well as the information sources, are being used (input data, causes of deforestation and scope) by both.

**Ind 10.3** The ER Program explains what steps are intended in order for the Reference Level to achieve consistency with the country's existing or emerging greenhouse gas inventory

YES

[Relation between the Reference Level, the development of a FREL/FRL for the UNFCCC and the country's existing or emerging greenhouse gas inventory 9.6]

Nicaragua has submitted two National Communications to the UNFCCC, the first in 2001 and the second in 2011. Both Communications include a National GHG Inventory. At the moment they have not submitted a Biennial Update Report to the UNFCCC.

As expressed in the previous indicator, the Emissions Reductions Program Document (ERPD) states that Nicaragua is working on the alignment of the National Reference Level, the National Greenhouse Gas Inventory, and the Reference Level of the ERPD.

They also explain that they will update its National Forest Reference Level and the National GHG Inventory taking into account the methodological improvements implemented for the construction of the Program's reference level. That means that the comments and observations done by the TAP in relation to carbon accounting and other topics will also serve as material for the National GHG Inventory.

In table 54 of the ERPD (version "ERPD\_inglés\_final\_210118 11 pm.docx"), Nicaragua shows the correspondence among the national FRL, GHG Inventory and ERPD reference level for: forest definition, forest categories, REDD+ activities, pools, gases, emissions factors allometric equations, emissions factors of non-forest classes, removal factors, activity data, reference period, tier method and uncertainty analysis. In relation to the allometric equations used to calculate the EF, the National GHG Inventory uses Chave et al. (2014). The TAP suggested to use the Chave et al (2014) equation in the ERPD instead of Brown et al (1997), as it is more up to date and can be adjusted to trees species (wood density) and precipitation class. The modification was done accordingly.

The TAP scored the indicator as a MINOR non-conformity in the first assessment and encouraged Nicaragua to complement this section with further information. The indicator is now accomplished, given the actualization done in the ERPD and explained in the previous indicator.

#### C 11 A Reference Period is defined

Ind 11.1 The end-date for the Reference Period is the most recent date prior to two years before the TAP starts the independent assessment of the draft ER Program Document and for which forest-cover data is available to enable IPCC Approach 3. An alternative end-date could be allowed only with convincing justification, e.g., to maintain consistency of dates with a Forest Reference Emission Level or Forest Reference Level, other relevant REDD+ programs, national communications, national ER program or climate change strategy

YES

[Reference Period 9.1]

The end-date of the Reference period is 2015.

This end-date complies with the Methodological Framework requirements that establish that the end-date for the Reference Period is the most recent date prior to two years before the TAP starts the independent assessment of the draft ER Program Document and for which forest-cover data are available to enable IPCC Approach 3. The independent assessment of the ER-PD performed by the Technical Advisory Panel (TAP) started in November 2017.

Areas of each of the REDD+ activities were obtained from reference points obtained from visual interpretation of high resolution images. The reference points are a stratified random sample obtained using the map of land use change for 2005-2015. This map was obtained from land cover maps produced by INETER from Landsat satellite images. This is in

line with IPCC approach 3 for consistent representation of lands "spatially-explicit land-use conversion data".

**Ind 11.2** The start-date for the Reference Period is about 10 years before the end-date. An alternative start-date could be allowed only with convincing justification as in Indicator 11.1, and is not more than 15 years before the end-date.

YES

[Reference Period 9.1]

The start-date of the Reference period is 2005, which is exactly 10 years before the end-date.

As stated in the indicator before, areas of each of the REDD+ activities were obtained from 2005 to 2015. This map was obtained from land cover maps produced by INETER from Landsat satellite images. This is in line with IPCC approach 3 for consistent representation of lands "spatially-explicit land-use conversion data".

#### C 12 The forest definition used for the ER Program follows available guidance from UNFCCC decision 12/CP.17

**Ind 12.1** The definition of forest used in the construction of the Reference Level is specified. If there is a difference between the definition of forest used in the national greenhouse gas inventory or in reporting to other international organizations (including an Forest Reference Emission Level or Forest Reference Level to the UNFCCC) and the definition used in the construction of the Reference Level, then the ER Program explains how and why the forest definition used in the Reference Level was chosen.

YES

[Forest definition used in the construction of the Reference Level 9.2]

The definition of forest used by Nicaragua in the context of the ERPD is: a continuous area, equal to or greater than 1 hectare, with canopy cover equal to or greater than 30% and an average tree height of 4 meters or greater.

As specified in the ER-PD, this definition includes ecosystems of bamboo, mangroves, natural palms, dry forests, perennial crops, scrub and riparian vegetation. However, perennial crops (cacao and coffee) are considered as part of the non-forest in the ER-PD.

The definition of forest was established for the National REDD+ Program (ENDE-REDD+) and is applied in the construction of Reference level of the ERPD and it will be applied to the National GHG Inventory and National Forest Reference Level.

For the second assessment of ERPD, the definition of forest has been improved, as suggested by the TAP. It is now explained that forest does not include land cover class "tacotal", which refers to non-forest areas, covered with natural secondary vegetation including trees but which does not comply with the forest definition detailed before.

The ER-PD explains how this definition is translated to the identification of forest or non-forest area. Land cover categories together with forest types were identified using manual/visual interpretation of available high resolution imagery, Rapideye 2015, and Google Earth images. Categories were created based on national expert knowledge and key factors including color, shape, roughness and other spatial and physical features commonly used in manual photointerpretation. High resolution imagery with a minimum resolution of 10 m enabled interpretation of the minimum mapping unit of 1 hectare used in the definition of forest. A canopy threshold of 30% was interpreted through colors, the presence of shadows, roughness and other landscape information available. Auxiliary information such as National Forest Inventory plots and MAG (Ministry of Agriculture) field databases of land cover types were used to support the interpretation of average tree height in the imagery.

Notwithstanding, the TAP maintains its recommendation to Nicaragua (as agreed during the missions) to adjust the definition of forest in the ER-PD to clarify the non-exclusion of perennial woody-crops. And to include in section 8.3 of the ER-PD the definition of perennial woody crops, indicating the principal types, how emission factors were

estimated for the deforestation reference level and for enhancement in secondary forests. See indicator 6.1 concerning the definition of "tacotal", which is still considered as controversial (as also shown in section 6.1). For example, transitions between the non-forest class and "tacotal" are not assessed, but may have important impacts on ER estimations and monitoring.

C 13 The Reference Level does not exceed the average annual historical emissions over the Reference Period. For a limited set of ER Programs, the Reference Level may be adjusted upward by a limited amount above average annual historical emissions. For any ER Program, the Reference Level may be adjusted downward.

Ind 13.1 The Reference Level does not exceed the average annual historical emissions over the Reference Period, unless the ER Program meets the eligibility requirements in Indicator 13.2. If the available data from the National Forest Monitoring System used in the construction of the Reference Level shows a clear downward trend, this should be taken into account in the construction of the Reference Level

YES

[Average annual historical emissions over the Reference Period 9.6, 13.2]

The Reference level is the average annual historical emissions over the Reference Period, without adjustments or tendencies. It uses only two data pints in time, which does not allow for adjustments or analysis of tendencies

#### This indicator is met

Ind 13.2 The Reference Level may be adjusted upward above average annual historical emissions if the ER Program can demonstrate to the satisfaction of the Carbon Fund that the following eligibility requirements are met:

N.A

- (i)Long-term historical deforestation has been minimal across the entirety of the country, and the country has high forest cover (country or jurisdictional area);
- (ii) National circumstances have changed such that rates of deforestation and forest degradation during the historical Reference Period likely underestimate future rates of deforestation and forest degradation during the Term of the ERPA.

[Explanation and justification of proposed upward or downward adjustment to the average annual historical emissions over the Reference Period, Quantification of the proposed upward or downward adjustment to the average annual historical emissions over the Reference Period 9.6].

NA

Ind 13.3 For countries meeting the eligibility requirements in Indicator 13.2, a Reference Level could be adjusted above the average historical emission rate over the Reference Period. Such an adjustment is credibly justified on the basis of expected emissions that would result from documented changes in ER Program circumstances, evident before the end-date of the Reference Period, but the effects of which were not fully reflected in the average annual historical emissions during the Reference Period. Proposed adjustments may be rejected for reasons including, but not limited to:

N.A

- i. The basis for adjustments is not documented; or
- ii. Adjustments are not quantifiable.

[Explanation and justification of proposed upward or downward adjustment to the average annual historical emissions over the Reference Period, Quantification of the proposed upward or downward adjustment to the average annual historical emissions over the Reference Period 9.6]

NA

Ind 13.4 An adjustment of the Reference Level above the average annual historical emissions during the Reference Period may not exceed 0.1%/year of Carbon Stocks

N.A

[Explanation and justification of proposed upward or downward adjustment to the average annual historical emissions over the Reference Period, Quantification of the proposed upward or downward adjustment to the average annual historical emissions over the Reference Period 9.6]

NA

C 14 Robust Forest Monitoring Systems provide data and information that are transparent, consistent over time, and are suitable for measuring, reporting and verifying emissions by sources and removals by sinks, as determined by following Criterion 3 within the proposed Accounting Area

**Ind 14.1** The ER Program monitors emissions by sources and removals by sinks included in the ER Program's scope (Indicator 3.1) using the same methods or demonstrably equivalent methods to those used to set the Reference Level.

NO

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 10.1]

As per the ER-PD, section 9.1, the National Monitoring, Reporting, and Verification Systems (NMRVS) will be congruent with the methodologies and protocols used for the estimation of the Reference Level, which is based on IPCC 2006 guidelines. Thus, comparable and consistent measurements of performance during the periods evaluated are guaranteed.

The ER-PD also presents a calendar for monitoring events and includes a summary table with the procedures for the generation of activity data, emissions factors (broadleaf and conifer forest, tacotal and other non-forest covers), and removal factors (broadleaf and conifer forest).

During the TAP field visit it was possible to appreciate the National Forest Monitoring System that Nicaragua has implemented and which has been included in the ER-PD. After the recommendation from the TAP, the ERPD presents more clear information of:

- National Forest Monitoring System
- National monitoring plan,
- National inter-institutional MRV roundtable
- National Forest Inventory,
- Other topics

It was possible to understand the methodological congruence between the Reference level and monitoring events expressed in the ER-PD but only for deforestation activity. The only issue to comment is the lack of monitoring that the emission factors will have since the National Forest Inventory is in the process of being updated, but until now it has not been possible to complete a new measurement of the total network of forest inventory plots. But this is not being analyzed in this criterion. However, the ERPD also says that with the additional funds of the FCPF, the NFI network of plots will be measured in order to update the EF and Removal factors.

Since degradation is in process of being analyzed for its inclusion and not all transitions were taken into account in the reference scenario (non-forest – tacotal), at this stage we classify it as not met.

The Non-Conformity level is deemed MAJOR. Corrective actions include the analysis of degradation already mentioned in indicator 3.1

Ind 14.2 Activity data are determined periodically, at least twice during the Term of the ERPA, and allow for ERs to be estimated from the beginning of the Term of the ERPA. Deforestation is determined using IPCC Approach 3. Other sinks and sources such as degradation may be determined using indirect methods such as survey data, proxies derived from landscape ecology, or statistical data on timber harvesting and regrowth if no direct methods are available

YES

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 9.1]

Deforestation emissions and carbon removals will be estimated from activity data derived from the analysis of Landsat satellite images as well as those of higher resolution, via the application of national protocols for classification and quality control, as stated in the Program Document. Spatial monitoring will be performed annually but national reports of forest cover, deforestation, and carbon emissions and removals will be prepared on a biannual basis.

The procedures for the generation of activity data during the monitoring period is presented in a detailed table in section 9.1 of the ER-PD, which includes, among other items: source of data, frequency of monitoring, monitoring equipment, QA/QC procedures applied, identification of sources of uncertainties and the process of managing and reducing uncertainty.

At the moment of performing the first evaluation of the ER-PD, forest degradation was not considered as part of the program. In the second submission, it was included to the Program. However, there is still no information on how the emissions from degradation will be determined, and how this analysis will affect the activity data and emission factors for deforestation.

Ind 14.3 Emission factors or the methods to determine them are the same for Reference Level setting and for Monitoring, or are demonstrably equivalent. IPCC Tier 2 or higher methods are used to establish emission factors, and the uncertainty for each emission factor is documented. IPCC Tier 1 methods may be considered in exceptional cases

NO

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 10.1]

Emissions factors that will be used for monitoring are exactly the same as the emission factors used for the construction of the Reference Level.

As it was presented in previous criteria and indicators in this TAP assessment, emissions factors of carbon stocks in forest and secondary vegetation ("tacotales") were obtained from the National Forest Inventory, carried out by INAFOR in 2007. It also explicitly states that during the implementation of the ER Program, the re-measurement of the National Forest Inventory is not considered, nor the establishment of temporary plots to update the emissions factors for the forest categories.

During the TAP country visit, INAFOR's experts explained the situation of the National Forest Inventory, how it is programmed, which are the variables measured, who are the responsible of conducting the actualization, but also the lack of funds to re-measure the plots. The TAP request the country to introduce this issue in the ER-PD indicating the existence of the National Forest Inventory and that it is already implemented in 2007 (plots allocated and protocols established). Also indicating what was mentioned during the TAP visit that the additional funds of the FCPF could be used to update the emission factors. The TAP acknowledges the introduction of the suggestion but maintains the recommendations to include a preliminary design of this update, including what will be measured and tentative deadlines. The TAP suggested Nicaragua to consider performing this update from a subset of INF plots, representative of the accounting area. How to separate emission factors due to forest degradation and deforestation of degraded

forests from the emissions factors currently used for deforestation need to be clarified, once it is reconfirmed that degradation is important.

On the other hand, Nicaragua does not have official allometric equations, calibrated with national data, for tree biomass. There have been few field studies of tree volume and biomass carried out in Nicaragua to be used as references, as per the ER-PD. The TAP encourages the use of a nationally calibrated equation for the estimation of the emissions and removals in the Reference Level. In the case this equation cannot be obtained, the TAP suggests including an explanation of the inconvenience to find one. In this case, the TAP will accept the same allometric equation from the National Greenhouse Inventory: *Chave et al.* (2014), which is a more updated equation and is already used in the estimations.

The non-conformity level is deemed MAJOR and is linked to the consideration of degradation as a REDD+ activity in Nicaragua's ERPD. The TAP encourage Nicaragua to update emission factors for the reference level setting, maintaining the same values or the method to determine them for the monitoring.

#### C 15 ER Programs apply technical specifications of the National Forest Monitoring System where possible

**Ind 15.1** ER Programs articulate how the Forest Monitoring System fits into the existing or emerging National Forest Monitoring System, and provides a rationale for alternative technical design where applicable.

YES

[Relation and consistency with the National Forest Monitoring System 10.3]

The ER-PD states that Nicaragua has formulated the National Forest Monitoring System, which will monitor, administer, process, and supply information on forest cover, non-carbon benefits (biodiversity and food security) and safeguards during the implementation of the ER Program.

The System is composed of 3 sub-modules: The Carbon Module, the Multiple Benefits Module and the Safeguards Module. The Carbon Module will measure, monitor, report, and verify (M-MRV) the state and condition of Nicaragua's forests, as well as deforestation and forest recovery. It will report avoided emissions as well as those emissions and removals that occur due to changes in carbon stocks at the national level.

The ER-PD also mentions the existence of the National Forest Inventory and that it is in the process of being updated, but until now it has not been possible to complete a new measurement of the total network of forest inventory plots. The Forest Monitoring System fits into the National Forest Monitoring System because additional funds of the FCPF will be used in the NFI network of plots to measure them, in order to update the EF and RF.

#### C 16 Community participation in Monitoring and reporting is encouraged and used where appropriate

**Ind 16.1** The ER Program demonstrates that it has explored opportunities for community participation in monitoring and reporting, e.g., of ER Program Measures, activity data, emission factors, safeguards and Non-Carbon Benefits, and encourages such community participation where appropriate

YES

[Measurement, monitoring and reporting approach for estimating emissions occurring under the ER Program within the Accounting Area 10.1, 10.3]

The ER-PD mentions that local communities will be involved in the field validation of the land cover map. Community-based monitoring involves the recruitment of local monitoring teams, the establishment of collaborative agreements with local organizations involved in this activity, and the preparation of simple monitoring protocols that will be validated by INETER or INAFOR. Finally, the data and information collected by the local teams will be registered in an electronic platform that will enable the subsequent evaluation of the accuracy of the land cover maps.

When referring to organizational structure for measurement, monitoring and reporting, the ER-PD also says that Nicaragua has established an inter-institutional platform for forest and land use monitoring, consisting of the

following institutions: INAFOR, MARENA, INTA, MAG, INETER, major municipalities, regional and territorial governments, and indigenous communities. Figure 36 of the ER-PD shows the relation between these actors in the organizational structure of the MRV and table 58 describes the responsibilities and functions of each institution, including Indigenous Territorial Governments (ITG).

The TAP found during the country visit, that communities in general have also other functions when referring to forest monitoring. This is the case when reporting forest fires: any person detecting forest fires can communicate the incident. There is an android application (app) called ODK, which is a tool to facilitate community monitoring. The TAP encourages the country to include in the ER-PD a description of the current links and protocols with the various actors involved in the monitoring, including the particular cases of already existing community activities. The TAP acknowledges the improvement done in this section of the ERPD.

#### C 17 The ER Program is designed and implemented to prevent and minimize potential displacement

**Ind 17.1** Deforestation and degradation drivers that may be impacted by the proposed ER Program measures are identified, and their associated risk for displacement is assessed, as well as possible risk mitigation strategies. This assessment categorizes Displacement risks as high, medium or low.

**YES** 

[Identification of risk of Displacement 11.1]

The risk for displacement of deforestation and degradation drivers is almost inexistent in the Program, for the simple reason that the accounting area embraces almost all the forest area of the country.

Notwithstanding, the ERPD performs an analysis of the risk of displacement of the ER Program, analyzing the drivers of deforestation and degradation as: extensive cattle production and commercial and subsistence farming with an extensive approach; population growth and migration; forest degradation due to logging and firewood extraction; under valuated forest lands; low-priced local and regional markets undermining of product quality; institutional weakness in lands monitoring and control and forest fires. The risks are assessed as "low", "medium" or "high".

The drivers of deforestation were already explained in chapter 4 of the ERPD "Analysis of drivers and underlying causes of deforestation and forest degradation, and existing activities that can lead to conservation or enhancement of forest carbon stocks". In the first submission of ERPD, the TAP encouraged that the ratings of the risks of displacement as "low", "medium" or "high" needs to be improved with more justifications, to make it understandable for an external reader. The TAP also requested the country to perform a deeper analysis for each of the deforestation drivers, focusing in non-sustainable livestock production is the main driver of deforestation. All this requests were fulfilled in the second submission of the ERPD, which is now more complete and understandable for external readers.

**Ind 17.2** The ER Program has in place an effective strategy to mitigate and/or minimize, to the extent possible, potential Displacement, prioritizing key sources of Displacement risk.

YES

[ER Program design features to prevent and minimize potential Displacement 11.2]

Continuing with the argumentation in previous criteria, the ERPD also describes the activities aimed at minimizing the risk of displacement. The interventions incorporating positive incentives to mitigate deforestation are apt to diminish displacement, but decreased access to forests and greater enforcement (disincentives or control measures) may tend to displace farmers unable to participate in the economic benefits associated with more sustainable production systems. Despite all, the TAP finds that the risk of displacement is almost inexistent given the lack of forest outside the accounting area. Thus, the proposed mitigation activities are sufficient to diminish it.

**Ind 17.3** By the time of verification, the ER Program has implemented its strategy to mitigate and/or minimize potential Displacement

N.A

Only applicable at the time of verification.

**Ind 17.4** ER Programs are also invited to report on changes in major drivers in the ER Accounting Area, any Displacement risks associated with those drivers, and any lessons from the ER Programs' efforts to mitigate potential Displacement

N.A

Only applicable at the time of verification.

# C 18 The ER Program is designed and implemented to prevent and minimize the risk of reversals and address the long-term sustainability of ERs

**Ind 18.1** The ER Program has undertaken an assessment of the anthropogenic and natural risk of reversals that might affect ERs during the Term of the ERPA and has assessed, as feasible, the potential risk of reversals after the end of the Term of the ERPA

NO

[Identification of risk of Reversals 12.1]

The ER Program has undertaken an assessment of the anthropogenic and natural risk of reversals that might affect Emissions Reductions during the Term of the ERPA in section 11 of the ERPD.

In order to evaluate the risk of these reversals (non-permanence), the Carbon Fund tool for evaluating the risk of reversals was used. The risk factors analyzed include the following:

- Lack of comprehensive and sustained support of the relevant stakeholders
- Lack of institutional capacities and/or ineffective vertical/inter-sectoral coordination, which has been evaluated by the following indicators:
- Lack of long-term effectiveness in addressing the underlying causes of deforestation and
- Exposure and vulnerability to natural phenomena

However, the TAP understands that the potential risk of reversals has not been assessed for the period after the end of the term of the ERPA. Given that the indicator establishes that the assessment is done if feasible, this is considered a MINOR NON-CONFORMITY.

Ind 18.2 The ER Program demonstrates how effective ER Program design and implementation will mitigate significant risks of Reversals identified in the assessment to the extent possible, and will address the sustainability of ERs, both during the Term of the ERPA, and beyond the Term of the ERPA

NO

[ER Program design features to prevent and mitigate Reversals 12.2]

The ERPD has a complete section dedicated to the analysis of actions to prevent and mitigate reversals (chapter 11.2).

In previous chapter "identification of risk of reversals" it was clarified that reversals of emissions reductions are the product of changes in the conditions that underlie previously achieved emissions reductions. These changes can be anthropic or natural and can come from inside or outside the accounting area. However, in the analysis of the actions to prevent and mitigate reversals, the ERPD focus it reversal efforts on preventing and mitigating risks endogenous to the accounting area.

The document presents a table with the measures that are considered to combat and prevent reversals, according to the risk factors mentioned in section 11.1 of the ERPD.

The TAP commends Nicaragua for improving the justification elements proposed as mitigation actions, as reference to

other sections of the document, increasing the capacity of an external reader to understand the final score for setaside percentage.

However, the AP repeats the necessity to include in the analysis how the permanence of the actions is guaranteed also beyond the term of the ERPA. The non-conformity level is deemed MINOR.

## C 19 The ER Program accounts for Reversals from ERs that have been transferred to the Carbon Fund during the Term of the ERPA

**Ind 19.1** During the Term of the ERPA, the ER Program accounts for Reversals from ERs using one of the following options:

YES

- Option 1: The ER Program has in place a Reversal management mechanism (e.g., buffer reserve or insurance) that is substantially equivalent to the Reversal risk mitigation assurance provided by the 'ER Program CF Buffer' approach referred to in option 2 below, appropriate for the ER Program's assessed level of risk, which in the event of a Reversal during the Term of the ERPA will be used to fully cover such Reversals.
- Option 2: ERs from the ER Program are deposited in an ER Program-specific buffer, managed by the Carbon Fund (ER Program CF Buffer), and based on a Reversal risk assessment. ERs deposited in the ER Program CF Buffer (Buffer ERs) will not be transferred to the Carbon Fund. In the event that a Reversal event occurs during the Term of the ERPA, an amount of Buffer ERs will be cancelled from the ER Pro

[Reversal management mechanism, Selection of Reversal management mechanism 12.3]

Nicaragua has chosen to account for Reversals from ER using option 2: ERs from the ER Program are deposited in an ER Program-specific buffer, managed by the Carbon Fund (ER Program CF Buffer), and based on a Reversal risk assessment. ERs deposited in the ER Program CF Buffer (Buffer ERs) will not be transferred to the Carbon Fund. In the event that a Reversal event occurs during the Term of the ERPA, an amount of Buffer ERs will be cancelled from the ER Program.

C 20 The ER Program, building on its arrangements put in place during the readiness phase and during the Term of the ERPA, will have in place a robust Reversal management mechanism to address the risk of Reversals after the Term of the ERPA

Ind 20.1 At the latest 1 year before the end of the Term of the ERPA, the ER Program will have in place a robust Reversal management mechanism or another specified approach that addresses the risk of Reversals beyond the Term of the ERPA

N.A

Only applicable before the end of the ERPA term.

Ind 20.2 If the ER Program has selected option 2 under Indicator 19.1, all or a portion of the Buffer ERs of the ER Program, subject to a Carbon Fund review of the Methodological Framework and a decision of the parties to the ERPA in 2019, will be transferred to the mechanism identified in Indicator 20.1 at the end of the Term of the ERPA. If the ER Program fails to meet the requirements of Indicator 20.1, all remaining Buffer ERs in the ER Program CF Buffer will be cancelled

N.A

Only applicable before the end of the ERPA term.

C 21 The ER Program monitors and reports major emissions that could lead to reversals of ERs transferred to the Carbon Fund during the Term of the ERPA

**Ind 21.1** The ER Program Monitoring Plan and Monitoring system are technically capable of identifying Reversals

NO

[Monitoring and reporting of major emissions that could lead to Reversals of ERs 12.4]

As it is mentioned in the ERPD, the ER Program is capable of detecting early significant reversals. This will be achieved through the vigilance of the occurrence of potential reversals carried out by the National Forest Monitoring System, within the framework of ENDE-REDD+.

The National Forest Monitoring System has the capacity to detect early significant reversals via the early warning system combined with local monitoring. Monitoring events will detect early Reversals of ERs via biennial estimate of emissions form deforestation (as it was described in indicator 14.2). When reversals are detected, the Carbon Fund will be notified within the time limit described in the Methodological Framework.

Despite that this section in the ERPD is correct, the TAP considers it has to be improved. For example, linking this topic with other sections of the document: "definition of deforestation" and "community participation in monitoring and reporting", etc. In the first case, deforestation definition must include the consideration of "temporary unstocked forest land" to differentiate the detection of a reversal from the temporary loss of carbon stocks in forest land. In the second, the ERPD mentions that an early warning mechanism will be established, based on the periodic assessment of the institutional capacities for forest protection, promotion and development of local (Territorial Governments) and national agencies (MAG, INETER and INAFOR), but it does not consider the participation of communities in monitoring and reporting, which was understood by the TAP that this actually happens.

The criterion is also not accomplished because it has also to be improved with the inclusion of degradation activity in this second submission of the ERPD.

The non-conformity level is deemed MINOR.

Ind 21.2. The ER Program reports to the Carbon Fund within 90 calendar days after becoming aware of any emissions in the Accounting Area or changes in ER Program circumstances that, in the reasonable opinion of the ER Program, could lead to Reversals of previously transferred ERs by the next Monitoring event. The ER Program explains how the potential Reversals would be addressed by additional ER Program Measures or by the Reversal management mechanism described in Indicator 19.1.

N.A

Only applicable at the time a reversal occurs and at the time of verification.

#### C 22 Net ERs are calculated by the following steps:

- 1. Subtract the reported and verified emissions and removals from the Reference Level
- 2. Set aside a number of ERs from the result of step 1, above, in a buffer reserve. This amount reflects the level of uncertainty associated with the estimation of ERs during the Term of the ERPA. The amount set aside in the buffer reserve is determined using the conservativeness factors for deforestation listed in the MF. For estimated emissions reductions associated with degradation, the same conservativeness factors may be applied if spatially explicit activity data (IPCC Approach 3) and high-quality emission factors (IPCC Tier 2) are used. Otherwise, for

proxy-based approaches, apply a general conservativeness factor of 15% for forest degradation Emission Reductions.

3. Set aside a number of ERs in the ER Program CF Buffer or other reversal management mechanism created or used by an ER Program to address Reversals

#### [Ex-ante estimation of the Emission Reductions 14.3]

YES

The total estimated net Emissions Reductions/carbon removals benefit (tCO2/year) is calculated according to the procedure established in the Carbon Fund Methodological Framework.

The total estimated net emission reduction in five years is presented in the following table:

Net Reference emission level (tCO2e/yr)	Reference level annual GHG emissions (tCO2e/yr)	Reference level GHG removals (tCO2/yr)	Estimation of expected emissions under the ER Program (tCO2e/yr)	Estimation of expected removals (tCO2e/yr)	Estimation of total expected emissions (incl. removals) under the ER Program (tCO2e/yr)	Total Estimated net Emission Reductions /carbon removal benefit (tCO2e/yr) (without setaside)	Expected setaside to reflect the level of uncertainty associated with the estimation of ERs during the Term of the ERPA (4%) (tCO2e/yr)	Expected setaside buffer to reflect the level of reversal risks (22%) (tCO2e/yr)	Total Estimated net Emission Reductions /carbon removal benefit (tCO2e/yr)
13,571,216.05	13,807,235.62	-236,019.57	11,158,261.96	-391,852.90	10,766,409.06	2,804,806.99	112,192.28	592,375.24	2,100,239.47
13,099,176.92	13,807,235.62	-708,058.70	11,180,094.91	-1,175,558.70	10,004,536.21	3,094,640.71	123,785.63	653,588.12	2,317,266.96
12,627,137.79	13,807,235.62	-1,180,097.83	10,681,156.07	-1,959,264.50	8,721,891.57	3,905,246.22	156,209.85	824,788.00	2,924,248.37
12,155,098.65	13,807,235.62	-1,652,136.96	10,702,575.80	-2,742,970.29	7,959,605.51	4,195,493.15	167,819.73	886,088.15	3,141,585.27
11,683,059.52	13,807,235.62	-2,124,176.09	10,723,791.90	-3,526,676.09	7,197,115.81	4,485,943.72	179,437.75	947,431.31	3,359,074.65
63,135,688.93	69,036,178.08	-5,900,489.15	54,445,880.63	-9,796,322.48	44,649,558.15	18,486,130.78	739,445.23	3,904,270.82	13,842,414.73

C 23 To prevent double-counting, ERs generated under the ER Program shall not be counted or compensated for more than once. Any reported and verified ERs generated under the ER Program and sold and/or transferred to the Carbon Fund shall not be sold, offered or otherwise used or reported a second time by the ER Program Entity. Any reported and verified ERs generated under the ER Program that have been sold and/or transferred, offered or otherwise used or reported once by the ER Program Entity shall not be sold and transferred to the Carbon Fund

#### (i) [Participation under other GHG initiatives 18.1]

YES

No other REDD+ initiatives are present or will be developed in the accounting area that will transfer emission reductions, thus there will be no problem with double-counting or double-transfer as long as this will be the case. If for some reason this condition may change, the registration system that will be developed needs to be able to cope with this change in conditions (from an exclusive ER right to an open ER system, which allows other REDD+ initiative to take place within the accounting area). The TAP suggest to investigate if there are any legal restrictions to negotiate other REDD+ initiatives within the accounting area that may be considered as a guarantee that this exclusive condition will remain so in the future. In other words, is it legally justified to guarantee the exclusive rights to ER reductions?

#### (ii) [Data management and Registry systems to avoid multiple claims to ERs 18.2]

A data management system is not yet in place. Data management systems needs to be closely aligned with the MRV system to be implemented, carbon rights, activity transactions (contracts with land owners).

Nicaragua is planning to use the FCPF Carbon Fund registry system for ER transfer. A consultant will be contracted to delineate the registry options for Nicaragua that meet the MF criteria of transparency and other linkages to the ER program registries.

The non-conformity level is deemed MINOR.

C 24 The ER Program meets the World Bank social and environmental safeguards and promotes and supports the safeguards included in UNFCCC guidance related to REDD+

Ind 24.1 The ER Program demonstrates through its design and implementation how it meets relevant World Bank social and environmental safeguards, and promotes and supports the safeguards included in UNFCCC guidance related to REDD+, by paying particular attention to Decision 1/CP.16 and its Appendix I as adopted by the UNFCCC

**YES** 

[ Description of how the ER Program meets the World Bank social and environmental safeguards and promotes and supports the safeguards included in UNFCCC guidance related to REDD+ 15.1]

Section 14.1 introduces an appropriate identification and interpretation of the safeguards promoted by the Program and its relationship with the country's regulatory framework.

The safeguards included in Nicaragua's Emission Reduction Program are derived from the environmental and social management framework (ESMF) of Nicaragua's National REDD+ Strategy (ENDE-REDD+). The Environmental and Social Management Framework has been formulated and is included as an Annex of the ER PD document. The ESMF covers the requirements for each of the safeguard policies applicable to the ERP accountability area and the procedures to reduce the environmental and social risks during intervention activities.

The Program includes an Indigenous Peoples Planning Framework (IPPM), Procedural Rules for Involuntary Resettlement (IPPR) and the Feedback Mechanism that will allow stakeholders to gather information and register complaints or suggestions.

A Social and Environmental Evaluation Strategy has been developed to integrate social and environmental considerations, to identify benefits and risks and propose actions to drive the former and reduces the risks. The SEES analysis includes the social problems related to the advance of the agricultural frontier to risks derived from the institutional capacity of the actors involved to carry forward the foreseen actions.

Regarding Safeguards Plans implementation, it is established that the general process will be assumed by MARENA, in coordination with MHCP, MEFCCA, SDCC, INETER, INAFOR, and the regional and territorial governments, which will act according to their institutional mandates and their connection in the ERPD, and the signing of an interinstitutional agreement will be promoted, once the ERPD is approved, that defines the responsibilities of each institution in the fulfilment of the Safeguards.

The rural development activities will be under the responsibility of MEFCCA, and the activities related to silviculture will be under the responsibility of INAFOR. Monitoring will be directed by INETER and the forest management activities on a local level will be conducted in coordination between MARENA and the Regional Governments of the Caribbean Coast.

To define the framework that will guide good environmental and social management during the implementation of the Emissions Reduction Program, an analysis of the relation between activated safeguards and strategic lines was carried out.

Safeguards policies applicable to the ERP accountability area are shown, indicating which safeguards apply to each of the lines of intervention proposed in the ERP.

Ind 24.2 Safeguards Plans address social and environmental issues and include related risk mitigation measures identified during the national readiness process, e.g., in the SESA process and the ESMF, that are relevant for the specific ER Program context (e.g., land tenure issues), taking into account relevant existing institutional and regulatory frameworks. The Safeguards Plans are prepared concurrently with the ER Program Document, and are publicly disclosed in a manner and language appropriate for the affected stakeholders

**YES** 

[Description of how the ER Program meets the World Bank social and environmental safeguards and promotes and supports the safeguards included in UNFCCC guidance related to REDD+ 15.1]

An Environmental and Social Management Framework has been formulated that involves the integration of environmental and social considerations in the formulation and implementation of the ERPD.

The analysis that has been performed includes social problems related to the advance of the agricultural frontier to risks derived from the institutional capacity of the actors involved to carry forward the planned actions. It is considered that the negative impacts linked to the ERPD will be low and mitigation measures have been foreseen, as well as the positive impacts associated with the implementation of the actions.

The document presents the Matrix of environmental and social risks and impacts of the Emissions Reduction Program and their mitigation measures.

The Safeguards Plan has foreseen different risk situations related to the activation of the safeguards and measures pointed out for the mitigation of possible negative impacts.

Faced with the pressure of migration and the actual or potential use of land due to demography, poverty and markets, institutional needs were identified regarding the management and control of land use and natural resources, increasing monitoring, control and regulation of the use of land and natural resources at the local (territorial and communal) and regional levels through better coordination and institutional capacities, as mentioned in the previous sections.

A Safeguards Plan is detailed, which indicates the degree of impact that each one will have on the Emissions Reduction Program and the measures to address their activation. Tables 14.1.3 and 14.1.5 presents a risk analysis by each line of intervention.

Although an impacts and risks analysis are performed, it is considered that the Document needs to include more considerations on social risks deriving from the existing tensions, in some territories involve in the Program, between indigenous communities and third-party settlers. It is recommended to proper asses that situation and evaluate its potential relation with proposed Program activities.

As concerns ERPD consultation process, the design and implementation of the ER programs are based on and use transparent consultation and information exchange mechanisms between actors involved, in particular the affected local communities and indigenous peoples (section 5).

The Framework of Environmental and Social Management Framework was widely consulted with the original and afro-descendant peoples and communities of the Caribbean Coast (section 5 and Annex 12).

In the analysis of social and environmental impacts, the Program considered the information generated in the broad process of dialogue and consultation with the various stakeholders involved, including farmers, cocoa producers, women, communicators, academies, leaders and community members of indigenous and Afrodescendant peoples (Section 5).

The participatory process undertaken involved a total of 94 workshops, of which 79 took place on the Caribbean Coast. Workshops were attended by leaders of indigenous groups, women, young adults, communities, universities, local government authorities and members of the Nicaraguan Army and National Police. Consultations that took place in 2016 and 2017 included matters such as safeguards, mechanisms by which to strengthen communication and an analysis of proposals for strategic lines linked to causes.

C 25 Information is provided on how the ER Program meets the World Bank social and environmental safeguards and addresses and respects the safeguards included in UNFCCC guidance related to REDD+, during ER Program implementation

**Ind 25.1** Appropriate monitoring arrangements for safeguards referred to in Criterion 24 are included in the Safeguards Plans

YES

[Description of arrangements to provide information on safeguards during ER Program implementation 15.2 and 6.1]

It is established (section 6.1) that MARENA, in line with its institutional mandate, besides overall administrative oversight of the ER Program as well as its planning, coordination, and implementation, will also be directly involved in the monitoring of safeguards, and non-carbon benefits, communication of this information to stakeholders.

Section 14.2 states that MARENA, as the lead ERPD institution, will be the Nicaraguan state entity charged with providing official information regarding the approach to and compliance with the Safeguards. MARENA will, establish collaborative agreements with the institutions that will participate in monitoring safeguard indicators. SINIA (Environmental National Information System) is the institution that will concentrate on following-up and reporting the environmental indicators and will be the agency charged with providing official information.

MARENA, through the National System of Monitoring, Reporting, and Verification, with the Sub-System of Safeguards, will monitor the compliance of the safeguards, in alliance with the Regional, Territorial, and Municipal Governments.

Since August 2016, the System of Safeguard Information (SIS) has been in the process of design, which is an integral part of the National System of Monitoring, Reporting, and Verification (SNMRV) of the Emissions Reduction Program. The principal objective of the National System of Safeguard Information (SIS), is to provide and manage the information regarding how the safeguards are approached and respected during the implementation of the ERPD, in agreement with the local legal framework.

The SIS will permit the reporting of compliance of the safeguards, assuring the coverage of all actions and measures of REDD+, independently of the source of financing or of the initiative. Likewise, it will facilitate a framework of indicators that will serve to monitor the fulfilment of the safeguards on national, sub-national, and community levels.

The SIS will include exit strategies that will generate summaries or reports for the monitoring of the compliance of the activated safeguards.

Section 14.2 presents the structure for the SIS defined in sessions of the MRV and EESA working groups. Also, is presented indicators for the monitoring of compliance of the Safeguards during the implementation of the Emissions Reduction Program (Table 79). The information comprises indicators that will be monitored, responsibilities, procedures and frequency of data collection, sources of information and reports to be produced.

**Ind 25.2** During ER Program implementation, information on the implementation of Safeguards Plans is included in an annex to each ER monitoring report and interim progress report. This information is publicly disclosed, and the ER Program is encouraged to make this information available to relevant stakeholders. This information is also made available as an input to the national systems for providing information on how safeguards are addressed and respected (SIS) required by the UNFCCC guidance related to REDD+, as appropriate.

N.A

Only applicable at the time of verification.

C 26 An appropriate Feedback and Grievance Redress Mechanism (FGRM) developed during the Readiness phase or otherwise exist(s), building on existing institutions, regulatory frameworks, mechanisms and capacity

Ind 26.1 An assessment of existing FGRM, including any applicable customary FGRMs, is conducted and is made public. The FGRM applicable to the ER Program demonstrates the following:

i) Legitimacy, accessibility, predictability, fairness, rights compatibility, transparency, and capability to address a range of grievances, including those related to benefit-sharing arrangements for the ER

**YES** 

ii) Access to adequate expertise and resources for the operation of the FGRM

[Description of the Feedback and Grievance Redress Mechanism (FGRM) in place and possible actions to improve it 15.3]

Section 14.3 summaries the local legal framework related to the right for Nicaraguans to submit complaints. Institutional experiences are briefly described, including MARENA and INAFOR practice in dealing with environmental or forest complaints. The information provided includes such about existing mechanisms in the indigenous and Afrodescendant territories of the Caribbean coast, for the administration of justice and the resolution of conflicts, which are in accordance with the obligatory uses and customs of the community members and are approved by the community assemblies. These norms are not written or codified but are transmitted orally and preserved by the collective memory.

A Mechanism of Communication Strengthening (MFC) for the ERPD Program has been designed that integrates a variety of channels for the reception, attention, and feedback of complaints based on traditional and non-traditional communication channels. An explanatory diagram of the proposed channels for receiving complaints is presented (Figure 37).

Four entry points of communication are established for communication from stakeholders to the institutions responsible for attending, responding to, and following up on the complaints or suggestions:

- a) Authorities and traditional leaders.
- b) Assemblies.

Program;

- c) Boxes in institutional offices.
- d) Electronic access (SINIA-MARENA web page). This access presently is limited in the most remote communities, but internet access is expected to increase in the future. An application for accessing the complaint/suggestion registry form by smartphones is also being developed.

All statements, complaints or complaints received will be registered centrally and regionally in the sub-system for Safeguards of the Monitoring and Verification System. The concerns received in the mailboxes, the electronic access and the report of the indigenous leaders and the assemblies will be registered in the same format, which will allow to standardize the follow-up and report. A diagram with the response procedures is shown (Figure 38).

The information provided in section 14.3 gives a very brief description of the existing mechanisms in MARENA and INAFOR, but it not includes the required assessment that allows to point to the existing capacity in the institutions involved to receive and handle grievances and to identify necessary adjustments and to how the MRR will build on them (or not).

On the other hand, although it is stated that the "Mechanism of Communication Strengthening" objective is to provide options for the reception of and response to requests for information, questions, suggestions, and complaints from the interested parties related with the design and execution of the Program, is considered that the proposed

name might generate confusion regarding its main objective. Even though is adequate to relate the development of a Feedback and Grievance Redress Mechanism with a strengthening communication strategy, the name for the mechanism fails to focus on its specific objective that is to is offer a process for receiving, evaluating, and addressing project-related grievances from affected communities or stakeholders at the level of the community or project, region, or country.

Ind 26.2 The description of FGRM procedures, included in the Benefit-Sharing Plan and/or relevant Safeguards Plans, specifies the process to be followed to receive, screen, address, monitor, and report feedback on, grievances or concerns submitted by affected stakeholders. As relevant, the Benefit-Sharing Plan and/or relevant Safeguards Plans and/or ER Program Document describe the relationship among FGRM(s) at the local, ER Program, and national levels

NO

[Description of the Feedback and Grievance Redress Mechanism (FGRM) in place and possible actions to improve it 15.3]

Section 14.3 describes the Mechanism of Communication Strengthening (MFC) for the ERPD Program. Section 15.3 and 15.4 presents a description of the process for the development of the Benefit Sharing Plan and its legal framework. It is established that BSP will have the option of utilizing the MFC that provides options for the reception of and response to requests for information, questions, suggestions, complaints and grievances, from the interested parties related with the design and execution of the Program.

No references are made regarding the FGRM that will apply for the Safeguards Plans.

The TAP scores the indicator as a MINOR non-conformity and encourages to establish in the Document that the MFC will also apply for complaints and grievances related to the Involuntary Resettlement Policy Framework and the Indigenous Peoples' Planning Framework of the Program. If those plans will include any characteristic regarding the MFC, it should also be described.

**Ind 26.3** If found necessary in the assessment mentioned in Indicator 26.1, a plan is developed to improve the FGRM

NO

[Description of the Feedback and Grievance Redress Mechanism (FGRM) in place and possible actions to improve it 15.3]

As the document doesn't includes an evaluation of the existing Grievance Mechanisms in the involved institutions, there is no action plan to improve the FGRM for the Program.

The TAP encourages Nicaragua to complement section 14.3 with an assessment of the existing Grievance Mechanisms in the institutions involved in the ER program to identify: a) priority areas where the existing mechanisms needs to be strengthened, and b) the existing capacity in the institutions involved to receive and handle grievances.

It is considered that the following actions will be useful to develop the FGRM of the Program:

- Based on the results of the recommended assessment, develop an action plan to identify priority areas where the existing mechanisms needs to be strengthened.
- The action plan should include specific actions to be taken regarding procedures, responsibilities, resources and institutional arrangements needed to implement the GM of the Program.

The TAP scores the indicator as a MINOR non-conformity.

#### C 27 The ER Program describes how the ER Program addresses key drivers of deforestation and degradation

**Ind 27.1** The ER Program identifies the key drivers of deforestation and degradation, and potentially opportunities for forest enhancement

YES

[Analysis of drivers and underlying causes of deforestation and forest degradation, and existing activities that can lead to conservation or enhancement of forest carbon stocks 4.1]

The document proposes a very fine analysis of the direct drivers and main causes of deforestation. At that point we agree that the operative stakeholders that may cause deforestation are well posed. However, it does not deal with the indirect drivers that influence deforestation and these are just as important as the direct ones.

Outside the protected areas, one way to conserve a good part of the remaining forests is by having the forests generate income for their owners. Otherwise, the forests will most likely be converted to agriculture, livestock or urban areas, since there are no legal restrictions for land use change, as is the case within the protected areas.

Forest management, as one of the options to diminish deforestation is now included in the ERPD. In this context, the area that could be incorporated into sustainable forest management and contribute to stop deforestation is 2 million hectares, however, at present there are only 53,000 hectares under forest management, which represents 2.7% of the potential area. The principal disincentives to community forestry management include lack of capital, lack of technical knowledge, lack of appropriate norms, and according to Cabrera and Terrero<sup>1</sup> (2016), also due to the disincentives that the communities currently face to implement forest management plans. These limitations are recognized in the ER-PD and actions are proposed to reduce these barriers.

Regarding the financial sources to implement the proposed actions, in some it still remains unclear who will finance certain action. Also, some actions depend on the availability of funding from the ER-PD in the third year, which may be too optimistic, as these will only be available once the ER are independently verified and registered.

**Ind 27.2** The ER Program identifies currently planned ER Program Measures and how they address the key drivers identified in Indicator 27.1, and the entities that would undertake them

YES

[Description and justification of the planned actions and interventions under the ER Program that will lead to emission reductions and/or removals 4.3]

[Institutional and implementation arrangements 6.1]

The document has elements that will surely contribute to the compliance with the reduction of emissions within the area. In the TAP mission, it was possible to identify that there are some actions that are already carried out in the area that were not incorporated in the document, which should be accordingly included.

Considering the recommendations to identify indirect drivers and their impact on deforestation, the TAP proposed to include the following actions: a) Implementation of an integral land-use policy that promotes a stabilization of current land-use; that lead to the reduction of emissions while avoiding the occurrence of contradictory policies regarding deforestation, e.g. the forest policy (including promotion of forest management); agricultural policy, making sure that there are no perverse incentives that are fostering the advance of the agricultural frontier; the land policy, which will be discussed later, and the investment attraction policy, promoting the growth of agro-industrial crops without displacing current land-use. The second version has made a good attempt to clarify these issues and plans are underway to tackle these possible barriers

<sup>&</sup>lt;sup>1</sup> CABRERA, C. & TERRERO, O. (2016). Diseño de un esquema de incentivos forestales para la Región Autónoma Costa Caribe Norte. Informe final de consultoría. Unión Mundial para la Naturaleza y Comité Consultivo Forestal Ambiental de la RACCN. Bilwi, Nicaragua. 43p.

Finally, the institutional strengthening of INAFOR in order to achieve better technical assistance and better monitoring of management plans and operational plans would be essential for the promotion of sustainable forest management as a viable option for the program.

C 28 The ER Program has undertaken and made publicly available an assessment of the land and resource tenure regimes present in the Accounting Area

**Ind 28.1** The ER Program reviews the assessment of land and resource tenure regimes carried out during the readiness phase at the national level (i.e., SESA) and, if necessary, supplements this assessment by undertaking an additional assessment of any issues related to land and resource tenure regimes in the Accounting Area that are critical to the successful implementation of the ER Program, including:

YES

- The range of land and resource tenure rights (including legal and customary rights of use, access, management, ownership, exclusion, etc.) and categories of rights-holders present in the Accounting Area (including Indigenous Peoples and other relevant communities);
- II. The legal status of such rights, and any significant ambiguities or gaps in the applicable legal framework, including as pertains to the rights under customary law;
- III. Areas within the Accounting Area that are subject to significant conflicts or disputes related to contested or competing claims or rights, and if critical to the successful implementation of the ER Program, how such conflicts or disputes have been or are proposed to be addressed; and
- IV. Any potential impacts of the ER Program on existing land and resource tenure in the Accounting Area.

The ER Program demonstrates that the additional assessment has been conducted in a consultative, transparent and participatory manner, reflecting inputs from relevant stakeholders

[Description of land tenure systems, analysis of laws and regulatory framework 4.4 and 4.5, stakeholder consultation process 5.1]

The ERPD provides a good introduction in different land titles, the recent land reforms on titling of property for indigenous communities (now recognized as holders of communal property), and the difference between private property and communal property. It also gives a solid summary of constitutional provisions, environmental and nature protection laws, including details on enforcement, as well as regulatory mechanisms for individuals and groups to resolve land tenure conflicts on the ground, and a wide range of policy planning documents.

Concrete usages of land (e.g. smallholder farming, plantations, protected areas) are mapped and explained. Secured land titling levels are found to be high (98%), in part due to land reforms from the past decades which recognized traditional community titles for indigenous and Afro-descendant peoples and turned them into formal law positions.

More generally, rights of indigenous and Afro-descendant peoples appear widely protected through legal provisions, with high levels of self-governance ensuring substantial decision-making powers over natural resource development. Tensions stem from the occupation of communal land by "third parties", a reference to groups with no ancestral or otherwise recognized original claim to the land. While the presence of these groups does not put in question the property situation *de iure*, it does create pressure on forests and planned land-use. Local authorities have been trying to address the situation by allocating land and issuing land lease contracts, among others.

The ERPD lists a number of positive impacts that will emanate from the ER Program to further advance public efforts on law enforcement, institutional prowess, zoning and planning capacity, as well as conflict resolution strategies with

respect to "third parties". From the perspective of land tenure consolidation and dispute settlement, it is suggested that as part of the ER Program implementation a legal roadmap to address land disputes with "third parties" and offer concrete dispute solutions, including through the involvement of all levels of government be established and built into the ER Program architecture.

It is further recommended that during program implementation more clarity is gained concerning the status of land planning (zoning, land demarcation, classification, infrastructure development plans, etc), the impact for the ER Program, as well as vice versa. Both the lack of detailed plans as well as plans not wholly chimed with the objectives of the ER Program, may present substantial challenges, and forward mitigation plans may need to be developed by the program.

Generally, on the side of stakeholder engagement, the document includes useful references to the consultative nature of the assessment process. During implementation, efforts should be made to broaden the scope of stakeholders so as to ensure that representatives of all groups affected by the program are engaged with.

Ind 28.2 The ER Program explains how the relevant issues identified in the above assessment have been or will be taken into consideration in the design and implementation of the ER Program, and in the relevant Safeguards Plan(s). If the ER Program involves activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples have traditionally owned or customarily used or occupied, the relevant Safeguards Plan sets forth an action plan for the legal recognition of such ownership, occupation, or usage. Beyond what is required for the successful implementation of the ER Program, the ER Program is encouraged to show how it can contribute to progress towards clarifying land and resource tenure in the Accounting Area, where relevant.

[Assessment of land and resource tenure in the Accounting Area 4.4]

[Description and justification of the planned actions and interventions under the ER Program that will lead to emission reductions and/or removals 4.3]

The document provides solid information on improving enabling conditions through the ERPA and, in particular, on setting robust safeguards to protect and enhance indigenous and Afro-descendant peoples. Nicaragua offers a welcoming institutional framework for safeguards management through its design of autonomous regions and the structures established by Law No 445 (Communal Property Regime of the Native Peoples and Ethnic Communities of the Autonomous Regions).

Of particular concern throughout program implementation will be the settlement of conflicts, and the engagement with "third parties". As advised above, it will be important to secure and enhance existing land titles, while addressing legitimate needs of third party groups, including through granting lease contracts, where appropriate, and otherwise to enforce the law concerning in compliance with constitutional guarantees and human rights.

**Ind 28.3** The ER Program provides a description of the implications of the land and resource regime assessment for the ER Program Entity's ability to transfer Title to ERs to the Carbon Fund

YES

**YES** 

[Transfer of Title to ERs 18.2]

The document explains that the program still awaits guidance from the Office of the Attorney General concerning emission reductions and title over emission reductions. While the "right to carbon" is not expressly addressed in the laws of Nicaragua, there are ample frameworks and provisions concerning the use of natural resources. All these provisions point to an understanding that forest and soil resources are associated with land ownership. Title to ERs, it is suggested, may be treated as a forest and soil resource linked primarily to the landholders.

However, the document seems to make an important qualification, namely that to be eligible for ER title recognition,

landowners' must be "dedicated to the reduction of emissions..." (p. 264), which we interpret as requiring an active contribution to the REDD+ effort in question. This approach translates into the principle that REDD+ payments constitute results-based finance.

It will be important for the legal implementation of the ER Program to make the *nexus* between land ownership and actual, voluntary contribution and to underwrite this nexus with a mutual agreement between program entity and landowner. This agreement – the document proposes individual contracts (see chapters on benefits sharing (15) and title transfer (17) – will ultimately identify original ER title attribution as well as ER title transfer to the program entity. It will set out the elements of the ER Program, the type of contribution to be made by the landowner(s) in question, a recognition of original ER title as such, coupled with a title transfer commitment made in exchange for the receipt of benefits as expressed in the benefit sharing plan (BSP).

It is noted that otherwise – if ER title was granted on the basis landownership alone – there would be a potential conflict with the concept of result-based finance. At a practical level, this would also create serious challenges to the monitoring system, which at this moment does not have the capacity to estimate carbon related land-use changes at the scale required to assign emission reductions to land ownership (see sections on reference scenario and monitoring).

We would also like to point out that other groups than landowners who actively contribute to the ER Program may hold certain rights to ERs or rights to be rewarded from program proceeds. As part of the legal implementation, these groups should be addressed for the purpose of benefit sharing and authorization to transfer title.

Prior to ERPA signature, a comprehensive legal architecture needs to be put in place and well documented in order to allow for title transfer (see Indicator 36.2 and 36.3 below).

C 29 The ER Program provides a description of the benefit-sharing arrangements for the ER Program, including information specified in Indicator 30.1, to the extent known at the time.

Description of benefit-sharing arrangements [16.1 in ER-PD of 15 Jan. 2016]

YES

Although the Benefit Sharing Plan (BSP) does not have to be in place at the time of ERPD finalization, section 15 and Annex 10 presents a description of their arrangements to the extent known at the time and a roadmap for the process of the BSP completion.

As part of the preparation of the ENDE-REDD+ Strategy, several options for the distribution of benefits derived from the results-based payments of the Carbon Fund have been discussed. It is presented one option in which benefits are distributed among institutions and actors that participate in the Program at different levels. This potential arrangement includes compensations monetary and non-monetary for the reduction of deforestation and forest restoration (i) by institutions, (ii) in indigenous territories, and (iii) in private property.

This preliminary arrangement seeks to ensure the sustainability of the activities of the ER Program through institutional strengthening, and direct investment in activities that promote sustainable land use, natural regeneration, and forest protection. It is foreseen that approximately a third of the resources would be used to cover the institutional operating costs associated with the Program, including the implementation of the MRV System, regional coordination, promotion of the involvement of the private sector, the operation of the productive trusts, and the mechanism to be used to transfer potential resources to private actors who do not participate in the trusts. Institutional actors involved in operating the Benefit Sharing Mechanism would include: the central government, the regional governments, and the indigenous territorial governments, municipal governments.

C 30 The Benefit Sharing Plan will elaborate on the benefit-sharing arrangements for Monetary and Non-Monetary Benefits, building on the description in the ER Program Document, and taking into account the importance of managing expectations among potential beneficiaries

**Ind 30.1** The Benefit-Sharing Plan is made publicly available prior to ERPA signature, at least as an advanced draft, and is disclosed in a form, manner and language understandable to the affected stakeholders for the ER Program12. The Benefit-Sharing Plan contains the following information:

NA

The categories of potential Beneficiaries, describing their eligibility to receive potential Monetary and Non-Monetary Benefits under the ER Program and the types and scale of such potential Monetary and Non-Monetary Benefits that may be received. Such Monetary and Non-Monetary Benefits should be culturally appropriate and gender and inter-generationally inclusive. The identification of such potential Beneficiaries takes into account emission reduction strategies to effectively address drivers of net emissions, anticipated implementers and geographical distribution of those strategies, land and resource tenure rights (including legal and customary rights of use, access, management, ownership, etc. identified in the assessments carried out under Criterion 28), and Title to ERs, among other considerations.

Criteria, processes, and timelines for the distribution of Monetary and Non-Monetary Benefits.

Monitoring provisions for the implementation of the Benefit-Sharing Plan, including, as appropriate, an opportunity for participation in the monitoring and/or validation process by the Beneficiaries themselves

[Description of benefit-sharing arrangements 16.1]

Nicaragua is preparing a mechanism for the distribution of benefits that will provide incentives to stakeholders involved in sustainable forest management in the accounting area. Section 15 presents the relationship between drivers of deforestation, interventions, and potential elements of benefit sharing.

The majority of the resources will be distributed among communal and private land owners or users, including farmers (of agroforestry and silvopastoral systems), forest owners, cooperatives, indigenous communities, private businesses, and private associations of reforesters.

These resources will be used to finance community development plans, with emphasis on actions that result in greater value of forests in indigenous communities. The remainder would be utilized to provide incentives for the avoidance of deforestation and forest restoration in private property, through the financing of the silvopastoral and agroforestry trusts aimed at small and medium—sized farmers as well as incentives for avoided deforestation on farms larger than 200 hectares.

Section 15 presents the existing distribution mechanisms that are being used in the involved institutions (direct transfers to regional, municipal and territorial governments and distribution of results-based benefits to actors directly involved in the avoidance of deforestation and increased forest cover) and the principles that will guide the distribution of benefits (joint responsibility, the "buen vivir" and the common good philosophy, gender equity, interculturality, citizen participation, transparency, due process, cost-benefit effect).

Potential eligible beneficiaries and activities are identified, as the conditions to receive benefits.

The preliminary proposal and roadmap for the BSP definition includes:

- The use of participative methodologies to design the distribution of benefits.
- Analysis and consideration of the requirements of the Methodological Framework (MM) regarding the distribution of benefits.
- Review of the legal and policy framework.
- Dialogue and consultations with different potential beneficiary groups.

C 31 The benefit-sharing arrangements are designed in a consultative, transparent, and participatory manner appropriate to the country context. This process is informed by and builds upon the national readiness process,

#### including the SESA, and taking into account existing benefit-sharing arrangements, where appropriate

Ind 31.1 The Benefit-Sharing Plan is prepared as part of the consultative, transparent and participatory process for the ER Program, and reflects inputs by relevant stakeholders, including broad community support by affected Indigenous Peoples. The Benefit-Sharing Plan is designed to facilitate the delivery and sharing of Monetary and Non-Monetary Benefits that promote successful ER Program implementation. The Benefit-Sharing Plan is disclosed in a form, manner and language understandable to the affected stakeholders of the ER Program

NA

[Description of stakeholder consultation process 5.1]

[Summary of the process of designing the benefit-sharing arrangements 16.2]

In line with the provisions of criterion 30 about managing expectations of the potential beneficiaries, it is stated that the definition of the Benefit Sharing Plan will be concluded prior to the signature of the Emission Reductions Payment Agreement (ERPA).

The roadmap presented in Annex 10 for the development of the BSP were reviewed and analyzed in detail with the SDCC, MARENA, and representatives of the Regional Governments. The implementation of the road map will allow MARENA and the participating entities to advance in the definition of benefit sharing for the accounting area in the BOSAWAS Biosphere Reserve, the Indio Maíz Biological Reserve, RACCS, and RACCN prior to the signing of the ERPA. It is established that the elaboration of the Benefit Sharing Plan will consider regional instruments and national laws and policies as well as customary rights, recognizing the indigenous and Afro-descendant populations in the accounting area.

Section 15.2, 15.3 y 15.4 presents concrete actions for the development of a participative process in the formulation of the BSP. Key characteristics of the process include the use of participative methodologies to design the distribution of benefits (identification of actors in the participative process, community mobilization, participatory workshops for the definition of local agreements for the distribution of benefits, validation and execution of the agreements, and execution and control of the plan of distribution of benefits).

It is established that dialogue and consultations with different potential beneficiary groups will be continued in order to facilitate the identification of actions and shared priorities for different types of beneficiaries in the communal, territorial, and regional contexts. These consultations will provide beneficiaries the opportunity to negotiate detailed terms for benefit arrangements and ensure the harmonization of the mechanism of distribution of benefits with the territorial and communal development plans.

Strategic decisions regarding design elements (e.g. potential beneficiaries, benefits, criteria, monitoring, access to benefits, and the form of the agreements between the regional and territorial governments as well as with the beneficiaries (e.g. through the signing of agreements) will be consulted, under the responsibility of Group 2.

Dialogue and consultations with potential beneficiaries will be led by the Regional governments, with support from Working Group 2. Models for benefit distribution arrangements will be the responsibility of Working Groups 2 and 3, but it is established that at present requires greater technical discussion and inputs from potential stakeholders. The consultations will be carried out in four stages during a period of six months.

Participants will include different entities (government institutions, traditional forms of government of the indigenous and Afro-descendant peoples), the communities, territories, environmental organizations, producers, via the different working groups established during the national process of Readiness Preparation.

The processes of consultation, dialogue, consensus and agreements on the territorial plans of the specific plans related to deforestation and carbon emissions, will be guided by the following requirements established in Law 28 and Law 445, respectively:

- The agreements must be approved by the corresponding communal / territorial assemblies, and
- Afterwards, they must be approved by the Regional Governments of the North and South Caribbean and in the Case of the Upper Wangki and Bocay, by the respective assemblies.

• In the case that the sector is not indigenous, it will follow the process through the respective Regional Governments.

The beneficiaries have the option of utilizing the mechanism of Communication Strengthening for the RE Program, that will provide options for the reception of and response to requests for information, questions, suggestions, complaints and grievances, from the interested parties related with the design and execution of the Program for the Reduction of Emissions by deforestation and forest degradation.

#### C 32 The implementation of the Benefit-Sharing Plan is transparent

**Ind 32.1** Information on the implementation of the Benefit-Sharing Plan is annexed to each ER Program monitoring report and interim progress report and is made publicly available [16.1]

N.A

Only applicable at the time of verification.

#### C 33 The benefit-sharing arrangement for the ER Program reflects the legal context

**Ind 33.1** The design and implementation of the Benefit-Sharing Plan comply with relevant applicable laws, including national laws and any legally binding national obligations under relevant international laws

**YES** 

[Description of the legal context of the benefit-sharing arrangements 16.3]

Chapter 15 states a roadmap for the establishment of the Benefit Sharing Plan (BSP) in line with applicable national laws and international principles of REDD+. From a legal point of view, the BSP must ensure that all stakeholder who actively contribute to the program must be offered a share in the benefits as well as granted a mechanism to accept or reject such offer. Conversely, stakeholders negatively affected by a program through restrictions of *legitimate* land tenure use or other may claim compensation through the BSP, and a mechanism must be provided that allows them to participate in the decision-making process before the action can be implemented. A separate BSP objective may consist in setting incentives for other affected parties (who do not hold a legitimate tenure claim); this is a matter of effectiveness and efficiency, however, rather than law.

The preliminary BSP considerations choose an adequate starting point listing the project actions and interventions planned and, from there, identifying contributing stakeholders. The list could be extended by differentiating between legitimate and non-legitimate users; the types of incentives, in any case, may be different among these groups.

The chapter makes reference to existing distribution keys for natural resource management, convincingly arguing that these keys do not fully fit with the nature of the ER Program and the needs of the BSP.

The BSP preliminary considerations foresee that "approximately a third of the resources would be used to cover institutional operating costs" (page 248). While the text is not entirely clear on the scope of the "resources", we assume that this figure refers to the program's proposed global budget of about 74 million US\$. The institutional operating costs are notably meant to include trust payments for small- and mid-scale private land-owners (set at 10 m US\$). Much of the rest of the funds seems to be reserved for direct contributions to communal and private land owners. There is some ambiguity concerning the nature of these benefits, as the document suggests that a "considerable percentage" could be distributed in the form of non-monetary benefits. A clear definition of the nature

and scope of the resources which form the basis of the BSP will be needed as part of the built-up of the definite BSP.

The types of distribution mechanisms are identified (direct payments and the use of the pre-existing National Forestry Development Fund) as are the principles of benefit distribution, including compliance with the law, cost-benefit considerations, transparency, gender equality, and others.

The list of eligible beneficiaries in the accounting area is comprehensive and allows for the integration of "third parties", i.e. land users without formal tenure title. We suggest that during the BSP elaboration process clear and extensive eligibility criteria and incentive mechanisms be developed (applied in parallel to enforcement actions by the government). We also suggest that such incentive mechanisms are coupled with all groups of beneficiaries (including those with no legal dominion). As REDD+ results-based finance rewards efforts rather than assets, legal dominion provides a suitable link, but should be coupled with concrete efforts by the right holder in question.

The BSP preliminary plans foresee a distribution priority for indigenous and Afro-descendant peoples that engage in the project. This seems in line with both national and international legal consideration, as long as the priority policy remains inclusive.

The BSP planning process is well explained. For future consultations, efforts should be made to include stakeholders from all levels, including those not represented in recognized bodies.

The BSP will be approved through different levels of government, including at the level of communal assemblies, which reflects decision-making arrangements in Law No 445 and other specific provisions. For communities and areas outside the autonomous regions, the BSP will be approved through "contracts" between the relevant stakeholders and MARENA.

#### C 34 Non-Carbon Benefits are integral to the ER Program

**Ind 34.1** The ER Program outlines potential Non-Carbon Benefits, identifies priority Non-Carbon Benefits, and describes how the ER Program will generate and/or enhance such priority Non-Carbon Benefits. Such priority Non-Carbon Benefits should be culturally appropriate, and gender and intergenerationally inclusive, as relevant

YES

[Outline of potential Non-Carbon Benefits and identification of Priority Non-Carbon Benefits 17.1 in the reviewed ER-PD of 15 January 2016]

The document identifies (section 16.1) potential non-carbon benefits that can be promoted through the Program: improved livelihoods and food security, mitigation of climate change, increase climate resilience of human populations, the protection and recuperation of watersheds and conservation of biodiversity. Within this context, Nicaragua has selected biodiversity and off-farm employment in the accounting area as priority environmental and socioeconomic co-benefits, due to their importance in the National Human Development Plan and considering the existing private and institutional capacity for their monitoring.

The subject of biodiversity and its loss has been raised by local stakeholders during the consultation workshops and sessions of the SESA working group.

On the other hand, the selection of off-farm employment as an important non-carbon benefit is based on its importance as a cross-cutting element within the National Plan of Human Development as well as government policies aimed at the integrated development of the Caribbean Coast.

Special attention will be paid to organized women's conservation organizations and youth groups in the indigenous and Afro-descendant territories due to their active role in the ER Program's dialogue and participation process as well as their future potential to promote community forestry management practices that create employment while conserving biodiversity. Women's organizations will receive special attention for activities related to training and leadership strengthening, while youth groups will be targeted by awareness campaigns in schools as well as conservation field days.

Ind 34.2 Stakeholder engagement processes carried out for the ER Program design and for the

YES

readiness phase inform the identification of such priority Non-Carbon Benefits

[Description of stakeholder consultation process 5.1]

Sections 5 and 16 demonstrates the linkages between non-carbon benefits that have been prioritize by the Program and the Consultation and Participation Process.

The subject of biodiversity and its loss has been raised by local stakeholders during the consultation workshops and sessions of the SESA working group. These stakeholders have expressed the importance of monitoring biodiversity due to their concern regarding the reduction of useful species important for subsistence and their habitats. As part of their worldview, they consider that these changes in the patterns of biodiversity are related to ecosystem level changes associated with rainfall and natural habitat degradation.

It is recommended to include in further consultations to be made as part of the Consultation and Participation Process, information about the Non-Carbon Benefits that have been prioritize.

C 35 The ER Program indicates how information on the generation and/or enhancement of priority Non-Carbon Benefits will be provided during ER Program implementation, as feasible.

**Ind 35.1** The ER Program proposes an approach utilizing methods available at the time to collect and provide information on priority Non-Carbon Benefits, including, e.g., possibly using proxy indicators. If relevant, this approach also may use information drawn from or contributed as an input to the SIS

YES

[Approach for providing information on Priority Non-Carbon Benefits 17.2]

The document identifies methods that will be used to monitor biodiversity and off-farm employment.

In the case of biodiversity, avian biodiversity will be used as an indicator of overall biodiversity. Its monitoring will be carried out between MARENA and INAFOR through the establishment of a base line and 371 permanent plots will be chosen due to their importance for conservation and the areas of implementation of the project. This information will be complemented with that from 28 bird monitoring stations of the Biodiversity Directorate of MARENA.

In relation with data gathering methods, the Program considers: captures, sampling along linear transects and points, quadrants and plots and analysis of satellite imagery.

Variables that might be monitored in relation with avian biodiversity are: avifauna diversity and abundance, presence or absence of indicator species and vegetation index.

Although the information provided regarding methods available to collect information on avian biodiversity is appropriate, it is not clear how that information is going to be reported and delivered during the Program implementation and who are going to be the recipients of it.

With regards to the creation of off-farm employment, indicators being considered are:

- The creation of jobs in forestry and agroindustrial businesses in the accounting area, and
- The number of workers in the forestry and agroindustrial sectors in the accounting area who are registered in the Nicaraguan Institute of Social Security (INSS).

PRONicaragua investment promotion program will provide direct and indirect employment data related to the establishment of new businesses in the accounting area. This information will be provided to MARENA on an annual basis under a formal cooperative agreement. The results will be published on SINIA's website and will be available to the general public.

In the case of employment data originating with the INSS, the Central Bank of Nicaragua has monthly registers of the actives participants in the Social Security system which can be used to prepare annual estimates of the number of workers in the forestry and agroindustrial sectors.

It is anticipated that the final design of the indicators and their monitoring will incorporate inputs from the consultations that will be carried out during 2018.

It is recommended to better indicate how the information of non-carbon benefits will be delivered to the different actors involved in the Program implementation (indicating responsibilities, mechanisms, institutional arrangements).

**Ind 35.2** Information on generation and/or enhancement of priority Non-Carbon Benefits will be provided in a separate annex to each ER Program monitoring report and interim progress report, and will be made publicly available

N.A

Only applicable at the time of verification.

# C 36 The ER Program Entity demonstrates its authority to enter into an ERPA and its ability to transfer Title to ERS to the Carbon Fund

**Ind 36.1** The ER Program Entity demonstrates its authority to enter into an ERPA with the Carbon Fund prior to the start of ERPA negotiations, either through:

YES

- i. Reference to an existing legal and regulatory framework stipulating such authority; and/or
- ii. In the form of a letter from the relevant overarching governmental authority (e.g., the presidency, chancellery, etc.) or from the relevant governmental body authorized to confirm such authority.

[Authorization of the ER Program 18.1]

The document identifies MARENA as the authorized body to enter into the ERPA for and on behalf of the government of Nicaragua. MARENA has subject authority for the implementation of the ERPA and has been specifically granted authorization for ERPA negotiation and signature through Presidential Agreement 21-2018 (copy attached in Annex 11).

Ind 36.2 The ER Program Entity demonstrates its ability to transfer to the Carbon Fund Title to ERs, while respecting the land and resource tenure rights of the potential rights-holders, including Indigenous Peoples (i.e., those holding legal and customary rights, as identified by the assessment conducted under Criterion 28), in the Accounting Area. The ability to transfer Title to ERs may be demonstrated through various means, including reference to existing legal and regulatory frameworks, sub-arrangements with potential land and resource tenure rights-holders (including those holding legal and customary rights, as identified by the assessments conducted under Criterion 28), and benefit-sharing arrangements under the Benefit-Sharing Plan

YES

[Transfer of Title to ERs 18.2]

The ER Program will respect the rights of all landowners (23 communal owners as well as private property holders who participate in the program) when implementing the program and transferring legal title to ERs. Individual contracts will be negotiated with right holders, the nexus between landownership and actual contributions to the ER Program being taken into account (see above Indicator 28.3). The document helpfully references Chapter 15 (Benefit Sharing), in this context, to define the scope and content of the individual contracts to be negotiated as well as the level of benefit allocation (see above on Indicator 33.1).

As discussed under Indicator 28.3, we would reiterate that other groups than landowners who either actively contribute to the ER Program or who are negatively affected may hold certain rights to ERs or rights to be rewarded from program proceeds. Appropriate legal mechanisms to establish and serve such rights should be built into the legal implementation of the ER Program.

Ind 36.3 The ER Program Entity demonstrates its ability to transfer Title to ERs prior to ERPA signature, or at the latest, at the time of transfer of ERs to the Carbon Fund. If this ability to transfer Title to ERs is still unclear or contested at the time of transfer of ERs, an amount of ERs proportional to the Accounting Area where title is unclear or contested shall not be sold or transferred to the Carbon Fund

YES

[Transfer of Title to ERs 17.2]

The document notes that the individual contracts with indigenous communities and afro-descendants mentioned (see above Ind. 36.2) will be mostly concluded prior to ERPA signature. Provided these (23 in total) agreements are concluded and depending on the contractual details (will these contracts specifically mention emission reductions or any ecosystem service derived from government supported programs, that is paying for ER or paying for activities), the ability to transfer title to the ERs is mostly established. The type of contract to be established has important implications for monitoring compliance. Activity based contracts require a more general monitoring system and while there no other REDD+ projects within the region, all Er could be attributed to the activities. However, if the contracts establish specific Carbon o ER transfers from the territory, this will require a monitoring system that is able to track these ER reductions at the scale of the contracts. This is particularly important if contract will also be established with private landowners (see sections on reference scenario and monitoring).

For other land owners, the document foresees the conclusion of contracts "during the implementation of benefit distribution plans". It would seem perhaps more appropriate to conclude said contracts in parallel with the adoption of the benefit sharing plans (BSP) than in the implementation phase only. The same would probably apply to other groups than landowners contributing or affected by the ER Program with certain rights to ERs or to certain rewards from ER Program proceeds.

If the relevant contracts are not concluded by the time of ERPA signature, the ability to transfer *all* ERs will not be demonstrated to the effect that certain amounts (yet to be established) would need to be set aside.

C 37 Based on national needs and circumstances, the ER Program works with the host country to select an appropriate arrangement to avoid having multiple claims to an ER Title.

Ind 37.1 Based on national needs and circumstances, the ER Program host country has made a decision whether to maintain its own comprehensive national REDD+ Program and Projects Data Management System, or instead to use a centralized REDD+ Programs and Projects Data Management System managed by a third party on its behalf. In either case of a country's use of a third party centralized REDD+ Programs and Projects Data Management System, or a country's own national REDD+ Programs and Projects Data Management System, the indicators below apply

YES

[Data management and Registry systems to avoid multiple claims to ERs 18.2]

Currently, a REDD+ program and projects management system is not in place. While the document states that Nicaragua would currently not have "programs or projects oriented towards reductions of emissions due to forest conservation or the increase of forest cover" (p. 264), the existence of a voluntary carbon market project: Plan Vivo Project: Community Reforestation ("CommuniTree"), arguably underlines the need for a comprehensive system. Current land-use emissions reporting is limited to the periodical UNFCCC national communications (the most up-to-date version being the third national communication), which is not sufficient for robust REDD+ management system

#### reporting.

The methodological framework does not require that a sufficient system is in place at the time of the ERPD. Certain preparatory actions or decisions will suffice. Under the present indicator, it should be demonstrated that the host country has assessed national needs and circumstances in order to make the decision whether a national system or a third-party system will be established.

This decision has been provisionally – covering a not further defined "initial phase" – made in favor of a third-party system. The responsible ministry – MARENA – will evaluate over the course of program implementation whether a transfer to a national should be made.

**Ind 37.2** A national REDD+ Programs and Projects Data Management System or a third party centralized REDD+ Programs and Projects Data Management System needs to provide the attributes of ER Programs, including:

NO

- i. The entity that has Title to ERs produced;
- ii. Geographical boundaries of the ER Program or project;
- iii. Scope of REDD+ activities and Carbon Pools; and
- iv. The Reference Level used.

An ER Program for the Carbon Fund should report its activities and estimated ERs in a manner that conforms to the relevant FCPF Methodological Framework C&Is

[Data management and Registry systems to avoid multiple claims to ERs 18.2]

While the data management system does not yet have to be in place, conceptual approaches need to be explored and guarantees given concerning the scope and comprehensiveness of information (see further Ind. 37.1). The document does not provide details on the data design of the future system other than that it will reflect the monitoring requirements of the ER Program.

The non-conformity level is deemed MINOR.

**Ind 37.3** The information contained in a national or centralized REDD+ Programs and Projects Data Management System is available to the public via the internet in the national official language of the host country (other means may be considered as required).

NO

[Data management and Registry systems to avoid multiple claims to ERs 19.2]

The ERPD notes that FCPF transparency needs will be met. It may be helpful, however, to state in detail what this would involve (e.g. internet-based access, languages offered, etc.). No information is provided.

The non-conformity level is deemed MINOR.

Ind 37.4 Administrative procedures are defined for the operations of a national or centralized REDD+ Programs and Projects Data Management System; and an audit of the operations is carried out by an independent third party periodically, as agreed with the Carbon Fund

NO

[Data management and Registry systems to avoid multiple claims to ERs 18.2]

Information is not provided other than concerning current reporting practices to the UNFCCC (performed by MARENA) and concerning a government decision "to prepare a diagnosis of the costs, benefits, and feasibility of a national REDD+ registry for REDD+ data" (p. 264).

The non-conformity level is deemed MINOR.

C 38 Based on national needs and circumstances, ER Program host country selects an appropriate arrangement to ensure that any ERs from REDD+ activities under the ER Program are not generated more than once; and that any ERs from REDD+ activities under the ER Program sold and transferred to the Carbon Fund are not used again by any entity for sale, public relations, compliance or any other purpose

**Ind 38.1** Based on national needs and circumstances, the ER Program host country has made a decision whether to maintain its own national ER transaction registry, or instead to use a centralized ER transaction registry managed by a third party on its behalf

YES

[Data management and Registry systems to avoid multiple claims to ERs 18.2]

The document seems to refer to both the data system and the registry architecture as a single instrument. On that assumption, the two-step approach explained above under Indicator 37.1 is valid for both the data management system and the registry.

Additionally, the risk for double-claiming between the ER Program and the (future) NDC may be explored or – if information on NDC commitments are still unknown – it may be noted that any such risk will be addressed through dedicated registry functions.

**Ind 38.2** The national or centralized ER transaction registry reports ERs for the Carbon Fund using the accounting methods and definitions described above in the MF

NA

[Data management and Registry systems to avoid multiple claims to ERs 19.2]

Details are not provided other than that Nicaragua will facilitate monitoring and verification processes of the FCPF.

While current risks for double-claiming are deemed low given the non-existence of projects within the ER Program and limited, clearly separated forest carbon activities outside the program area (Plan Vivo Project "CommuniTree, (see above under Indicator 37.1), implemented in the departments of Madriz and Estelí, the document should provide information on how the registry will ensure that double-counting will not become an issue of the future, e.g. from other sub-national activities.

This indicator may be considered as not-applicable at this stage

**Ind 38.3** An independent audit report certifying that the national or centralized ER transaction registry performs required functions is made public.

NA

[Data management and Registry systems to avoid multiple claims to ERs 19.2]

Clarification needed.

This indicator may be considered as not-applicable at this stage

**Ind 38.4** Operational guidance exists, or is in advanced stage of preparation, that clarifies the roles and responsibilities of entities involved in the national or centralized ER transaction registry, as well as rules for operation of the registry.

NA

[Data management and Registry systems to avoid multiple claims to ERs 19.2]

Clarification needed, in particular concerning roles of public or private entities potentially charged with registry activities (or focal point activities, if external registry functions will be used. Details are not provided. From the practice of UNFCCC-related reporting, it may be assumed that MARENA will assume registry-related responsibilities. However, information is missing at this stage.

This indicator may	y be considered a	s not-applicabl	le at this stage		

### Annex 1 to the TAP technical assessment