PROJECT REVIEW REPORT

Project ID	1558
Project Name	Agroforestry and forest restoration for ecological connectivity, poverty reduction and biodiversity conservation in Cerro San Gil, Caribbean Guatemala.
Program(s)	VCS
Verification Period	20-July-2016 to 8-July-2021
Project Proponent	Livelihoods Fund
Methodology	AR ACM0003 "Afforestation and reforestation of lands except wetlands, version 02.0."
Sectoral Scope(s)	VCS sectoral scope 14 (Agriculture, Forestry and Other Land Use): Afforestation, Reforestation, and Revegetation
Validation/Verification Body (VVB)	Aenor Internacional S.A.U.

Assessment Criteria	VCS Standard, v4.1
Date of First Issue	January 5, 2022
Date of Final Issue	17 June 2022

Summary:

An accuracy review of the Agroforestry and forest restoration for ecological connectivity, poverty reduction, and biodiversity conservation in Cerro San Gil, Caribbean Guatemala verification approval request has been conducted by Verra in accordance with Section 4.3 of the Registration and Issuance Process.

The accuracy review has raised **nine** assessment findings and **no** minor findings, detailed below. The VVB, in coordination with the project proponent, is hereby required to provide a response to the assessment findings presented in Section 1. The **nine** assessment findings must be addressed to the satisfaction of Verra. Please note, however, that where Verra finds consistent minor findings by the VVB in future reviews, minor findings shall be escalated to assessment findings.

This project review report will be made publicly available. Confidential information may be provided as separate attachments.

1. ASSESSMENT FINDINGS

Finding 1

Section 1.7 of the *VCS Monitoring Report Template v4.0* states to indicate the project location and the geographic boundaries including the .kml file.

The .kml file that was provided by the PP shows the outermost boundary of the project region but does not indicate the areas of the project (as shown in figure 1 of the monitoring report).

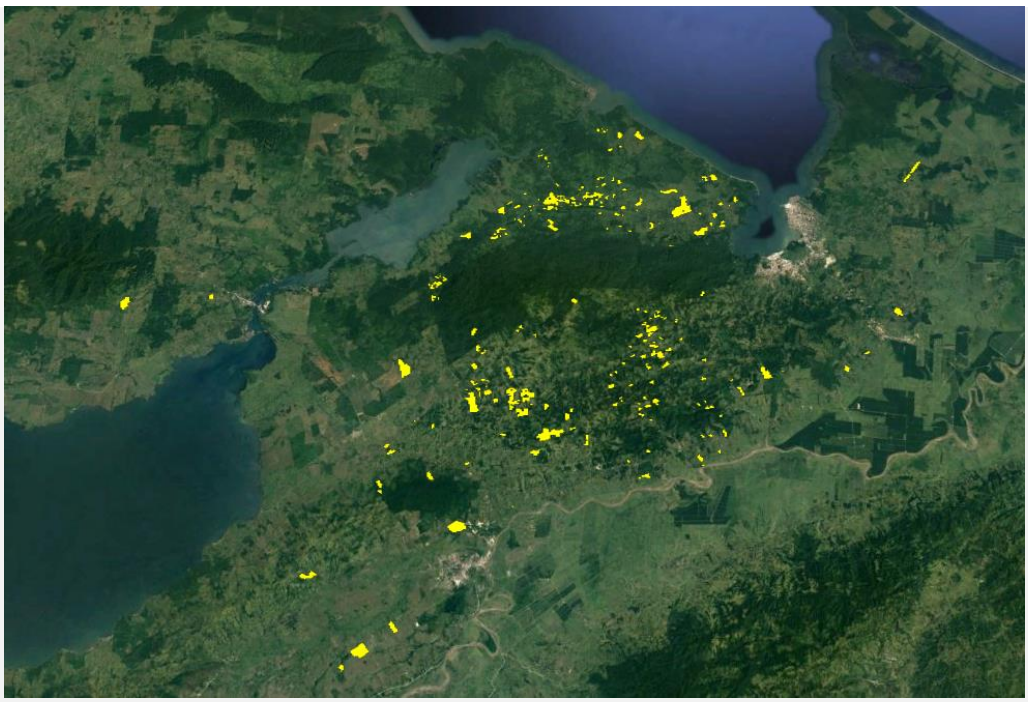
The PP is requested to provide the appropriate .kml file that shows the areas of the project.

VVB Response:

A .kml file including project area as shown in figure 1 of the monitoring report has been attached.

Verra Response:

The PP has provided the proper KML file that indicates the project areas as shown in figure 1, section 1.7 of the MR. Furthermore, the VVB has approved the updated KML file. The KML file can be seen below:



Finding 1 has been addressed adequately and is now closed.

Finding 2

Section 3.2.2 of the monitoring report states “an alternative aboveground biomass allometric equation to the stem volume equation included in the PD was used for the larger forestry plantation trees”. Furthermore, section 3.2.2 of the monitoring report also states that the equation is appropriate to be used according to the applied CDM A/R Methodological Tool “Demonstrating appropriateness of allometric equations for estimation of aboveground tree biomass in A/R CDM project activities” with a coefficient of determination of (R^2) 0.95.

The project proponent is requested to further explain how the results of the aboveground biomass compared between the equation that was used in the project description and the equation that is used in the monitoring report. Furthermore, the VVB is requested to verify whether the results of the new equation for the aboveground biomass calculation are appropriate.

VVB Response:

Results of aboveground biomass from the new allometric equation proposed for forest trees larger than 10 cm in dbh (Arreaga, 2002) were compared to the ones obtained in the first verification event. Thus, we compared aboveground biomass of trees in forestry and agroforestry groups with a diameter at breast height from the first monitoring event using both allometric equations (Arreaga, 2002 and equation used in the project description).

In addition to the fact that results of Arreaga (2002) equation are expected to be more accurate because they were developed in a zone close to the project area and including species planted in the project, the results obtained show that their use is conservative. Thus, the aboveground biomass obtained using the equation of Arreaga (2002) was 13% lower than using the equation used in the first verification. These results are available in the provided spreadsheet

"Allometric_comparative_first_verification"

Verra Response:

The PP has explained that the calculation of the biomass at the current verification period is more accurate and conservative, which has been indicated in the calculation spreadsheet for the two aboveground biomass calculation methods provided by the PP. Verra has checked the calculation spreadsheet and the current aboveground biomass calculation is 13% lower than the aboveground biomass calculated using the old formula. Finding 2 has been appropriately addressed and is now closed.

Finding 3

There are differences between data/parameters that are listed in sections 4.1 and 4.2 of the monitoring report and data/parameters that are listed in sections 4.1 and 4.2 of the project description.

The project proponent is requested to describe such deviation in section 3.2.2 of the monitoring report. Furthermore, the project proponent is requested to explain why such deviations occur in section 3.2.2 of the monitoring report. The VVB is requested to verify whether such deviation is appropriate.

VVB Response:

Section 4.1 of the MR has been modified. Now, there are no differences between data/parameters that are listed in section 4.1 of the monitoring report and data/parameters that are listed in sections 4.1.

Data/parameters in section 4.2 of monitoring report were the same as in project description except for n_i and s_i that were not included. In the new version of monitoring report, these parameters were added by the PP. On the other hand, in section 4.2 of project description it is listed X_i (Variables measured per tree for the calculation of above-ground biomass an allometric equation for species), while in section 4.2 of monitoring report it was disaggregated into three different data/parameters (*DBH*, D_{30} *and H*). Thus, there are no differences in the data/parameters monitored, but that it is simply a problem of nomenclature. This problem was solved by the PP and section 4.2 of the monitoring report was homogenized with that of the project description.

AENOR has verified that there are not deviations with the parameters in section 4.1 and 4.2 of the MR.

Verra Response:

The PP has updated section 4.1 on which there are no more deviations between the MR and the PD. The PP has provided explained that the parameters that were monitored were separated into three data/parameters. The VVB has also assessed that such distinctions are not project description deviations. Finding 3 has been addressed appropriately and is now closed.

Finding 4

Section 5.3 of the monitoring report states “In the project area of the first activity instance, as described in sections 1.1, 1.13 and 2.4. of the PD, there was not any agricultural activity pervious to the project activity. Therefore, there has not been displacement of agricultural activities and leakage for the first instance will be set equal to zero (LK ,t =0)”.

Section 1.10 of the project description states “Agricultural lands in the project area are croplands (mainly corn and beans) and grasslands (cattle ranching). Home gardens, which consist of medicinal plants and food use, are frequent in the project area. Plants grown in home gardens include corn (Zea mays), beans (Phaseolus vulgaris), coconut (Cocus nucifera), banana (Musa sapientum), mangoes (Manguifera indica), yucca (Manihot sculenta), malanga (Colocassia sculenta), ñame (Dioscorea alatta), chico (Manilkara sapota), caimito (Cryssobalanus caimito), sapodilla (Pouteria zapota), jocotes (Spondias sp.), citrus (Citrus spp.), cocoa (Theobroma cacao) and papaya (Carica papaya), among others.”

The project proponent is requested to clarify whether or not there is agricultural activity before the implementation of the project. Furthermore, the project proponent is further requested to justify how there is no leakage due to the displacement of agricultural activities.

VVB Response:

There was an error in the wording of section 5.3 of the monitoring report. Indeed, as mentioned in sections 1.10, 1.1, 1.13 and 2.4 of the project description, there were degraded crops and grasslands prior to the start of the project. However, as it was demonstrated in section 3.3 of the project description, leakage attributable to the displacement of agricultural activities can be accounted as zero. Thus, the PP has changed the wording of this section in the monitoring report to comply with reality and with what was established and validated in the project document.

Verra Response:

Section 3.14.5 of the VCS Standards v4.2 states “The potential for leakage shall be identified for AFOLU projects, and projects are encouraged to include leakage management zones as part of the overall project design. Leakage management zones can minimize the displacement of land use activities to areas outside the project area by maintaining the production of goods and services, such as agricultural products, within areas under the control of the project proponent or by addressing the socioeconomic factors that drive land use change.”

Section 3.3 of the Joint PD-MR states “In future project activity instances, if displacement of agricultural activities occurs, then leakage will be calculated using AR-TOOL15.”

The PP has clarified that prior to the start of the project there were degraded crops and grassland prior to the start of the project in the updated version of the MR. However, it has been identified that there have been a potential land-use change that could possibly result in leakage emission outside the project boundaries (see the 5 potential leakage samples in the KML file sent to the PP/VVB).

The PP is requested to further explain whether the land-use change that is indicated in the KML file was not the result of displacement of agricultural activities in the leakage section of the MR. Furthermore, the VVB is requested to assess whether such land-use changes were not due to the displacement of agricultural activities in the VR.

VVB Response:

Project region is located in an area with high deforestation rates. For this reason, FUNDAECO has

developed two VCS projects there, this ARR project and a conservation project (REDD+ Project for Caribbean Guatemala: The Conservation Coast). The 5 potential leakage samples in the KML file sent to the PP/VVB are within the leakage belt of the REDD project developed by FUNDAECO (ID 1622), which has been three times verified. The three verification periods encompass the period April 2012-July 2020. Since none of the verifications have reported leakage, i.e., deforestation levels above the baseline, it cannot be demonstrated that the deforestation events are due to displacement leakage from any of the projects.

On the other hand, only Point 3 changed from forest to other land use since the project start date. Points 1 and 5 were not forest at the project start date, so there has not been any deforestation event that can be attributed to leakage due to displacement of prior activities. Point 4 has not changed from forest to any other land use and Point 2 has changed from Humid Forest to a forest plantation, which cannot be interpreted as a displacement of any activity prior to the project implementation.

Finally, proposing agroforestry systems reduces the risk of displacement from agriculture, and today the project's farmers continue their practices in the plantations (cardamom production, etc.) even under rubber plantations.

For these reasons, AENOR, after checking the 5 potential leakage samples, deems correct that none of the KML points have been deforested as a result of the displacement of agricultural activities prior to the implementation of the project.

Verra Response:

The VVB has verified that the deforested areas that were chosen as samples are not a result of the project activities. The PP has also provided statement that some of the areas were part of the leakage belt of another project (VCS ID 1622, REDD project). Finding 4 has been addressed and is now closed.

Finding 5

Section 5.4 of the *VCS Monitoring Report Template v4.0* states “Attach the non-permanence risk report as either an appendix or a separate document”.

The PP is requested to submit the non-permanence risk report to Verra.

VVB Response:

The non-permanence risk report has been attached as a separate document.

Verra Response:

- In the section: Internal Risk, project management point F of the non-permanence risk report, the adaptive management plan is not provided the non-permanence risk report, MR, or VR. The PP is requested to describe the adaptive management plan in the non-permanence risk report, furthermore, the VVB is requested to assess whether such adaptive management plan is appropriate for the non-permanence risk assessment.

Otherwise, the PP is requested to deduct the (-2) in the risk assessment and make the appropriate risk assessment calculation.

The VVB has assessed the mitigation plan of fire prevention measures in section 4.6 of the VR. However, the VVB has not assessed the significance and the likelihood of fires in the Natural risk (Fire) in the VR. The VVB is requested to assess the significance and the likelihood of fire occurrence of the project in section 4.6 of the VR.

- The likelihood of the pest outbreak was not described in the non-permanence risk report. The PP is requested to describe the likelihood of the pest outbreak in the non-permanence risk report. VVB is also requested to assess whether such a likelihood of pest outbreak in the region is appropriate as described in the non-permanence risk report.

- In the non-permanence risk report, it was stated that extreme weather causes major loss with the likelihood of 10-25 years and should have a mitigation plan score of 5*0.5 = 2.5. However, the score of the extreme weather in the non-permanence risk tool was indicated as 2 instead of 2.5. Furthermore, the information between the extreme weather section in the non-permanence risk report and the table in section 4.6 of the VR is not consistent. The PP is requested to make a correction in this section of the non-permanence risk report. Furthermore, the VVB is also requested to make a correction regarding the extreme weather non-permanence risk in section 4.6 of the VR.

  Finally, the PP is requested to provide the appropriate final score of the non-permanence risk report. The PP is also requested to calculate the final ERR with the appropriate non-permanence risk score. Furthermore, the VVB is requested to assess and provide a concluding statement regarding the non-permanence risk report and the final ERR calculation.

VVB Response:

- Adaptive management plan is provided (LIVELIHOODS_FUNDAECO_Management_&_Financial_plan_20160908.pdf).
- The likelihood of the pest outbreak is now described in its corresponding section within the non-permanence risk report. The likelihood of pest outbreak in the region has been considered “every 10 to less than 25 years” as a conservative approach.
- In the extreme weather section of the non-permanence risk report, there was a misinterpretation of both the significance of the damage and the score (LS). The significance has now been corrected according to the damage described in the text. It has been set to "Minor (5% to less than 25% loss of carbon stocks)". According to significance, likelihood (“Every 10 to less than 25 years”) and mitigation actions, the final score is 2*0.5=1.

Final score of the non-permanence risk report has been provided, as well as final ERR with the appropriate non-permanence risk score have been modified in non-permanence risk report, monitoring report and the verification report.

AENOR after checking the documentation provided, deems correct that the mitigation score for the extreme weather has been modified, therefore the final score for the non permanence risk is 12%.

Verra Response :

The PP has provided justification and correction for the risks in regard to the management plan, pests outbreak, and extreme weather. Furthermore, the VVB has provided an assessment that the final discount rate is 12%. The VVB has also confirmed and adequately assessed that the final number of GHG that has been removed/reduced for this current verification period is 226,665 t CO2e. However, the final ERR from the current monitoring report for this monitoring period does not take into account the loss event (see finding 9). Because of this, the VVB is requested to ask the project proponent to re-calculate the total ERR so the project emissions/removals deducts the amount of ERR that has been lost (3,693 tCO2).

Furthermore, the VVB is also requested to ask the project proponent to make the GHG ERR consistent in sections 1.1 and 5.4 of the monitoring report.

VVB Response:

The total ERR has been corrected by deducting the lost amount of ERR (3,693 tCO2) during the loss event. Sections 1.1 and 5.4 has been updated considering the new final estimation of GHG ERR. The verification report has been updated with the correct total ERR accordingly.

Verra Response:

Finding 5 is now closed. The GHG ERR been deducted by the total amount of loss event and is now correctly fixed.

Finding 6

Section 3.2.21 of the *VCS Standard v4.1* states "Where ARR or IFM projects include harvesting, the loss of carbon due to harvesting shall be included in the quantification of project emissions. The maximum number of GHG credits available to projects shall not exceed the long-term average GHG benefit."

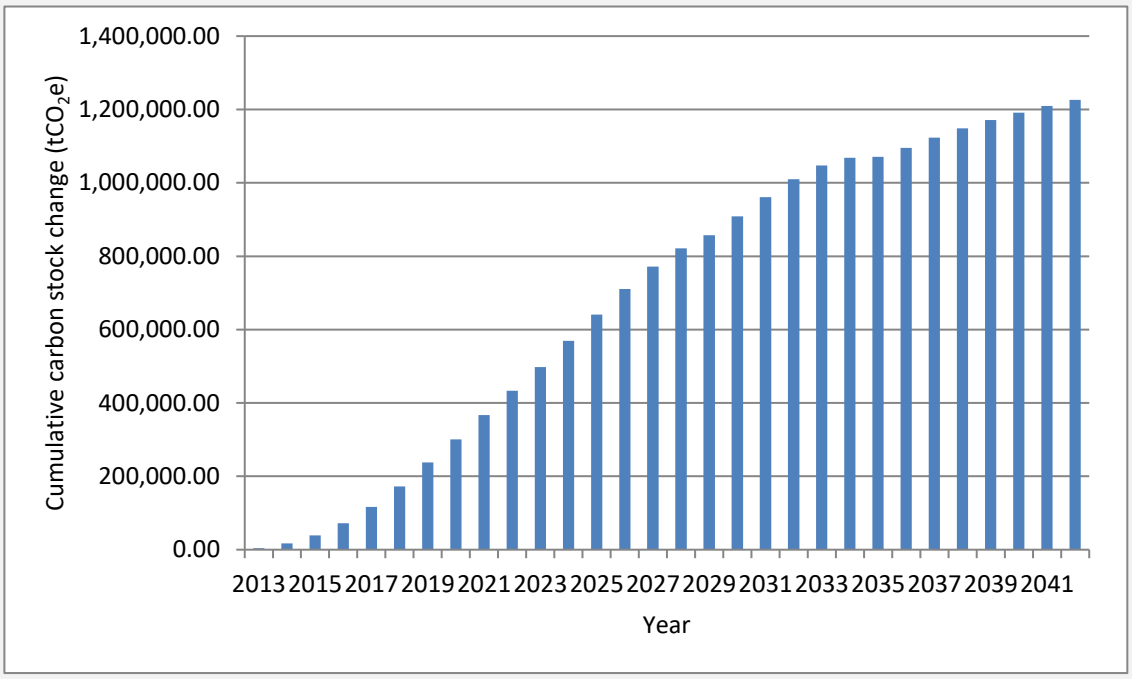
The monitoring report has not calculated and discussed the long-term average GHG benefit of the project. Furthermore, the monitoring report does not indicate whether the ERR of the current monitoring period is above/below the long-term average.

The PP is requested to calculate the long-term average GHG benefit of the project. Furthermore, the project proponent is requested to indicate whether the ERR of the current monitoring period is above/below the long-term average and describe how the amount of the VCUs that is going to be issued are in accordance with the 3.2.20 and 3.2.21 of the *VCS Standard v4.1*.

VVB Response:

Long-term average calculate was not included since following the forest management plan agreed between FUNDAECO and LIVELIHOODS, all plantation systems are under conservation easements with no intention to harvest after the project crediting period. Only forest plantations system includes intermediate thinning every 6 years since year 9 until reaching a planting density of 200-250 trees per hectare. However, neither rubber, agroforestry systems nor orchards, which account for more than 70% of the area and 79% of the projected change in carbon stocks, will be thinned or removed. Moreover, although intermediate partial thinnings are planned for forest plantations, these will not be fully harvested and the carbon stock in the long term will always be increasing. Thus, as can be observed in the following graph and reassessment of ex-ante estimations of Net

GHG Emission Reductions and Removals, total net removals are always increasing and in the long term there will be no single year with a net reduction in the carbon stock.



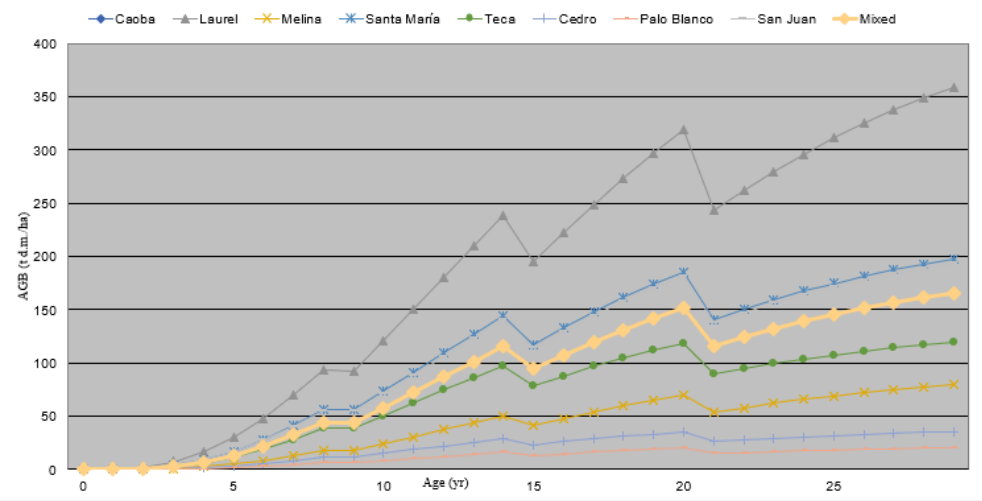
For these reasons, the long-term average calculation has not been included and a maximum value of GHG credits eligible to be issued as VCUs has not been considered.

Verra Response:

Section 3.2.20 of the VCS Standard v4.2 states "ARR and IFM projects with harvesting activities shall not be issued GHG credits above the long-term average GHG benefit maintained by the project." Furthermore, section 3.2.21 of the VCS Standard v4.2 states "Where ARR or IFM projects include harvesting, the loss of carbon due to harvesting shall be included in the quantification of project emissions. The maximum number of GHG credits available to projects shall not exceed the long-term average GHG benefit."

Table 17 in section 3.4 of the Joint PD-MR indicates that from the year 2032 until 2034, the ex-ante estimated GHG project removals and the net GHG ERR is negative. Furthermore, section 3.4 of the joint PD-MR states "Following sections 3.1.9 of AFOLU Requirements v3.5, as this is an ARR or IFM projects with harvesting activities, it is necessary to calculate the long-term average GHG benefit maintained by the project. It is necessary to demonstrate that GHG credits are not issued above this value. Calculations of the long-term average GHG benefit have been done following Section 4.5.5. of AFOLU Requirements v3.5 in the Excel file "Ex_ante_GHG_assessment" (worksheet Long Term Average). The long-term average GHG benefit maintained by this project is 698,310 tCO2e"

In the worksheet "Forestry" under the spreadsheet that was provided by the PP titled 'FUNDAECO_Ex-ante 2nd Verification" displayed a graph that shows the cumulative aboveground biomass against age. The graph shows that the aboveground biomass is decreasing in the years 15 and 21 of the project:



Based on section 3.4 of the PD-MR and the spreadsheet that was provided by the PP, there is an indication of loss of biomass within the crediting period. Therefore, it is necessary for the PP to provide a long-term average, according to sections 3.2.20 and 3.2.21 of the VCS Standard v4.2.

The PP is requested to calculate the long-term average GHG benefit of the project. Furthermore, the project proponent is requested to indicate whether the ERR of the current monitoring period is above/below the long-term average and describe how the amount of the VCUs that is going to be issued are in accordance with the 3.2.20 and 3.2.21 of the *VCS Standard v4.1*. Finally, the VVB is requested to provide an assessment of this matter.

VVB Response:

Forest plantation system is the only one where thinning is planned. Thus, the long-term average has been calculated by the PP as per sections 3.2.20 and 3.2.21 of the VCS Standard v4.1 only for this plantation systems areas within project area. All calculation procedures has been included in the Annex of Monitoring Report and an excel spreadsheet ("FUNDAECO_Long_Term_Average_2022_04_04_MR.xlsx") describing all calculates is provided to the VVB and Verra.

A brief discussion indicating whether the ERR of the current monitoring period is above/below the long-term average has also been included in Section 5.4 of the Monitoring Report.

The verification report has been modified in section 4.4 to include this issue.

AENOR, after checking the MR and the excel spreadsheet, deems correct the calculation of the long term average for the forest plantation system that is the one that has thinning planned.

Verra Response:

Section 3.4 of the PD-MR states "The long-term average GHG benefit maintained by this project is 698,310 tCO_2e". However, the current calculation of the LTA is 1,102,524 tCO2e according to appendix 2. The reason for such a significant difference in LTA was not explained and indicated in the project description deviation. The VVB is requested to ask the PP to explain the different approaches to calculating the LTA in the current monitoring period and in the original PD-MR. Furthermore, the VVB is requested to ask the PP if this project description deviation is in accordance with section 3.18 of the *VCS Standard v4.1*. Please provide such explanation and justification in section 3.2.2 of the monitoring report.

The VVB is also requested to provide an assessment if this deviation is in accordance with section 3.18 of the *VCS Standard v4.1.* Please assess this matter and describe how such assessments are made in section 3.3 of the verification report.

VVB Response:

Justification on the reasons for significantly differences in LTA between validation/first monitoring report and second monitoring report is provided as a project description deviation in section 3.2.2 of the monitoring report. The explanation includes a statement on compliance with section 3.18 of the *VCS Standard v4.1*.

Section 3.3. of the verification report has been reinforced and compliance with section 3.18 of the VCS Standard v4.1 has been included.

Verra Response

Finding 6 is now closed, the project deviation regarding the LTA has been indicated in the current monitoring report.

Finding 7

Section 4.1 of the *VCS Verification Template v4.0* states "Identify the implementation status of the project activity(s) and describe the steps taken to assess the sustainable development contributions."

Section 4.1 of the verification report does describe the steps taken to assess the sustainable development contributions.

The VVB is requested to describe the steps taken to assess the sustainable development contribution of the project.

VVB Response:

Section 4.1 of the Verification Report has been modified according to the requirements and the need to assess the contribution of SDGs to the project implementation.

Verra Response:

Section 4.1 of the VR has described the steps taken to assess the sustainable development contributions. Finding 7 has been addressed adequately and is now closed.

Finding 8

Section 4.3 of the *VCS Verification Template v4.0* states "describe the steps taken to assess the activities implemented by the project proponent to mitigate risks local stakeholders face due to project implementation."

Section 4.3 of the verification report does not describe the steps taken to assess the activities implemented by the project proponent to mitigate risks local stakeholders face due to project implementation.

The VVB is requested to describe the steps taken to assess the activities implemented by the project proponent to mitigate the risks that the local stakeholders faced due to project implementation. Furthermore, the VVB is requested to explain whether such mitigation steps are appropriate to be conducted.

VVB Response:

Section 4.3 of the verification report has been completed in accordance with the VCS template.

Verra Response:

Section 4.3 of the verification report has been updated appropriately. Finding 8 has been addressed and is now closed.

Finding 9

Section 5.2 of the monitoring report and section 3.3 of the loss event report indicate that there is an estimated loss of ERR of 3,693 t CO2e from the previous verification period, due to the loss of the project area.

The project proponent is requested to clarify whether the calculation of ERR that was conducted in

tables 15 and 16 of the monitoring report deducts 3,693 tCO2e due to loss event.
VVB Response: The estimated loss of ERR in Section 5.2 of the monitoring report and Section 3.3 of the loss event report were not deducted in tables 15 and 16 of the monitoring report. Table 16 of the monitoring report has been corrected to take into account a deduction of 3,693 tCO2e due to loss event to comply with section 3.2.16 of the VCS Standard v4.2.
Verra Response: The final ERR in the updated MR has been updated accordingly under section 3.2.16 of the VCS Standard v4.2. The final ERR was deducted accordingly. Finding 9 has been appropriately addressed and is now closed.

2. MINOR FINDINGS

N/A

3. ASSESSMENT CONCLUSION

On January 5, 2022, Verra conducted a review of the verification approval request for project ID 1558, Agroforestry and forest restoration for ecological connectivity, poverty reduction and biodiversity conservation in Cerro San Gil, Caribbean Guatemala, the results of which can be found above. The project review report was sent to Livelihoods Fund (the project proponent) and Aenor Internacional S.A.U. (the VVB) with nine assessment findings and no minor findings.

Verra has received the first response of the PRR on the 2nd of March 2022.

Verra has submitted the second round of PRR for verification approval requests for project 1558 to the PP and the VVB on the 21st of March 2022. There are 3 remaining assessment findings (Findings 4, 5, and 6).

Verra has submitted the third round of PRR on 10 June 2022. There are 2 remaining assessment findings (Findings 5 and 6).

Verra has closed the final 2 findings on 17 June 2022. The project may proceed for issuance.