ASSESSMENT REPORT

The World Bank Group's BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)

Oromia Forested Landscape Program

Prepared for:

World Bank Group

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Program	Oromia Forested Landscape Program
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Assessment Team	Lead Auditor: Francis Eaton Auditor: Alexa Dugan Auditor: Zane Haxtema Local Technical Expert: Mesele Negash Technical Reviewer: Letty Brown

Executive Summary

SCS Global Services (SCS) was retained by the Initiative for Sustainable Forest Landscapes (ISFL) of the World Bank Group to perform an independent assessment of the Oromia Forested Landscape Program ("the Program") against the ISFL Emission Reductions Program Requirements and associated guidelines. The scope of this assessment was to confirm that the information provided in the emission reductions program document is correct and complete and to apply expert judgement to evaluate the feasibility of program design aspects and identify areas of improvement to inform the World Bank Group's and ISFL contributors' review of the Program. While this is an independent assessment, it should be noted that the assessment team worked closely with the ISFL staff and others at the World Bank Group to develop the findings and conclusions described in this report.

This report presents an overview of the assessment process and its conclusions, as well as a summary assessment opinion. The assessment checklist, audit plan and a detailed list of all findings issued during the assessment process are included as appendices.

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Please make use of the following conventions:

Item	Conventions
Nomenclature/capitalization	▪ The program is always referred to as "the ER Program" and capitalized as such. ▪ Where "program" is used in combination with other words, the "ER Program" nomenclature is to be used (e.g., it should be "ER Program personnel", not "program personnel") ○ The exception to this general rule is when a defined term including the word "program" is used (e.g., "program area"; in this case, just use the lowercase version of the defined term and do not proceed this with "ER". ▪ Aside from the above, standard capitalization rules are to be followed.
Font/styles	▪ Always use the following styles: ○ "Body Copy" for narrative descriptions ○ "List bullet" for bullet-pointed lists

1 Introduction

SCS Global Services (SCS) is a global leader in third-party certification, auditing, testing services, and standards. Established as an independent third-party certification firm in 1984, our goal is to recognize the highest levels of performance in environmental protection and social responsibility in the private and public sectors, and to stimulate continuous improvement in sustainability by recognizing and certifying achievements which align with the United Nations Sustainable Development Goals (SDGs). An internationally recognized verification body, SCS is currently accredited to ISO 14065 for Greenhouse Gas Validation and Verification by the American National Standards Institute (ANSI), offering carbon offset project validation and verification under such voluntary carbon programs as the Verified Carbon Standard (VCS), the American Carbon Registry (ACR), and the Climate, Community and Biodiversity (CCB) standards. SCS is also an accredited verification body for the Cap-and-Trade Program of the California Air Resources Board and has conducted jurisdictional assessments in Colombia and Ecuador under the REDD Early Movers Program.

SCS was commissioned by the World Bank Group to undertake an assessment of the Oromia Forested Landscape Program (OFLP) ("the ER Program"). The ER Program consists of agricultural intensification, sustainable forest management, sustainable livestock production, energy efficient technology, and implementation of sound land use planning & tenure security, family planning service & increasing job opportunity in the Oromia National Regional State of Federal Democratic Republic of Ethiopia. This report

covers review of the ER Program, as described in the emission reductions program document, as a project deliverable.

1.1 ER Program Description

The ER Program consists of the entire Oromia region state, which is the largest region state in Ethiopia in terms of area, containing around 30 million hectares. Agriculture, livestock, and service comprise the dominant economic sectors of the region, and as a result the main sources of GHG emissions are due to agriculture expansion, livestock and associated land-use changes. The ER Program activities seek to reduce GHG emissions by adopting smarter land use practices to minimize forest loss and by implementing more sustainable agricultural production.

1.2 Assessment Team

The assessment team consisted of the following individuals:

- Lead Auditor: Francis Eaton
- Auditor(s): Zane Haxtema, Alexa Dugan
- Local Technical Expert: Mesele Negash
- Technical Reviewer: Letty Brown

2 Assessment Details

2.1 Scope and Objectives

The objectives of the assessment are as follows:

- Ensure, according to the applicable level of assurance, that the information provided in the emission reductions program document is correct and complete (i.e., not leaving out information that might affect the opinion of the reader).
- Conduct an independent assessment of the compliance against the approved ER Program Requirements and associated guidelines.
- Apply expert judgement to evaluate the feasibility of ER Program design aspects and identify areas of improvement to inform the World Bank Group's and ISFL contributors' review of the ER Program.

The scope of the assessment entails review, as required, to achieve the above objectives. The following areas were particularly emphasized. In some cases, consideration of the areas indicated below extend the scope of the assessment beyond a strict assessment for conformance to the assessment criteria. The assessment of the aspects indicated with a "*" was informed, as applicable, by the due diligence process of the World Bank Group.

Aspect	Expected Scope of the Assessment
Drivers of AFOLU emissions and removals	▪ Correctness and completeness of the analysis on historic and future trends (qualitative and quantitative) in drivers of AFOLU emissions and removals ▪ Expert judgement of the analysis, including the barriers to mitigation
Description and justification of the ISFL ER Program's planned actions and interventions	▪ Expert judgement whether the proposed actions and interventions address drivers of emissions and are informed by the contribution of key sources and sinks to the total GHG emissions and removals in the Program GHG Inventory and the analysis of trends ▪ Expert judgement of continued private sector engagement achieved or planned in addressing drivers of emissions ▪ Expert judgement of risks to implementation and potential benefits of planned actions and interventions
Financing plan for implementing the planned actions and interventions of the ISFL ER Program	▪ Correctness and completeness of information on the transaction costs and the identified funding gaps for the ISFL ER Program and the plan for mitigating gaps ▪ Expert judgement whether the identified sources of finance are sufficient to affect the land use activities and drivers of emissions and removals ▪ Expert judgement of the financial and economic analyses, discount rates, and flows of funds
Analysis of laws, statutes, and other regulatory frameworks	▪ Correctness and completeness of the information provided in the Program document ▪ Expert judgement to identify any known legal or regulatory issues in the program area that can affect the program design, including benefit sharing
Risk for displacement	▪ Correctness and completeness of the information provided in the analysis of displacement risk ▪ Expert judgement on the effectiveness of the proposed strategy to mitigate and/or minimize, to the extent possible, potential displacement
Description of stakeholder consultation process*	▪ Correctness and completeness of the information provided on the stakeholder consultation process ▪ Expert judgement if the full, effective, and on-going participation of relevant stakeholders has occurred

Aspect	Expected Scope of the Assessment
Description of the Feedback and Grievance Redress Mechanism (FGRM)	▪ Expert judgement whether the FGRM is operational and accessible to relevant stakeholders, or if not yet in place, whether the proposed mechanism is technically feasible and builds on existing structures that are tested ▪ Assess whether a description of FGRM procedures has been made public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders
Assessment of land and resource tenure in the Program Area*	▪ Correctness and completeness of the analysis. ▪ Assess whether (i) the assessment of the land and resource tenure regimes has been made publicly available, (ii) if the assessment sufficiently includes land and resource tenure rights, the legal status of such rights, areas subject to significant conflicts or disputes, and any potential impacts of the ISFL ER Program on existing land and resource tenure in the Program Area; and (iii) that the assessment has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from relevant stakeholders ▪ Expert judgement of the implications of the land and resource tenure assessment for program design, and for the ISFL ER Program's ability to transfer title to emission reductions (ERs) to the ISFL
Benefit Sharing Arrangements	▪ Assess whether the Benefit Sharing Arrangements have been designed in a consultative, transparent, and participatory manner appropriate to the country context and that reflects inputs and broad community support by relevant stakeholders ▪ Assess whether the description of the Benefits Sharing Arrangement contains the required information and the information provided is correct and complete ▪ Expert judgement whether the Benefit Sharing Arrangements will provide incentive structures and contribute to the sustainability of the program ▪ Expert judgement whether the proposed benefits correspond with the drivers of emissions analysis and anticipated ERs

Aspect	Expected Scope of the Assessment
	▪ Expert judgement whether the benefit sharing arrangements are technically feasible, including mechanisms for distributing benefits and any issues related to nested projects, etc.
Ability to transfer title to ERs*	▪ Expert judgement whether the analysis of the ability to transfer title to ERs or any roadmap towards demonstrating such ability prior to the Emission Reductions Payment Agreement (ERPA) signature is comprehensive and conclusive. ▪ Expert judgement on risks of contests/disputes to title to ERs and mitigation measures.
Participation under other GHG initiatives	▪ Correctness and completeness of the information provided whether parts of the program area, or projects in the program area, are included in other GHG initiatives and if this creates a risk of double counting, and/or double payment
Data management and registry systems to avoid multiple claims to ERs	▪ If applicable, expert judgement whether the Program and Project's Data Management System is sufficient, secure, and robust ▪ If the ISFL ER Program is not using the World Bank's transaction registry for the World Bank Forest Carbon Partnership Facility (FCPF) and ISFL ER Programs, expert judgement whether the transaction registry is sufficient, secure, and robust ▪ If applicable, expert judgement of the data management and registry systems to recognize nested projects and avoid multiple claims to ERs
ISFL Reporting	▪ Assess whether the GHG Inventory is comparable in its use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and Ethiopia's Biennial Update Report (pending) ▪ Assess whether the best available data sets, methods, models and assumptions have been used in the ISFL Reporting and that the inventory applies the general IPCC principles of transparency, completeness, consistency, accuracy and comprehensiveness.
Selection of subcategories for accounting	▪ Correctness and completeness of the data and information provided on the choice of the subcategories

Aspect	Expected Scope of the Assessment
	▪ Assess whether the quality and baseline setting requirements have been applied correctly and the choice of the subcategories is correct and justified ▪ Assess whether all significant pools and sources of greenhouse gas emissions are included. If a major carbon pool/ or gas is excluded, assess whether this has been sufficiently explained and justified, provided it is not a significant pool.
Emissions baseline	▪ Assess whether the methods used to construct are in line with the IPCC and best practice approaches as defined, for example by the Global Forest Observations Initiative (GFOI) ▪ Correctness and completeness of the data used to construct the baseline ▪ Assess whether the baseline requirements have been applied correctly and the Emissions Baseline estimate is calculated correctly ▪ Assess whether the uncertainty in the Emissions Baseline has been correctly identified and assessed in accordance with IPCC good practice
Time-bound plan to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases during the ERPA Term	▪ Expert judgement whether the proposed plan is feasible, addresses priority subcategories and is likely to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases
Ex-ante estimation of the emission reductions	▪ Expert judgement if the assumed effectiveness of the program in addressing the drivers and its impact on the emissions is justified and based on reasonable assumptions
Monitoring approach	▪ Assess whether the data and methods proposed for monitoring are consistent enough with the data and methods used for the determination of the baseline to allow for meaningful comparison and calculation of the emission reductions ▪ Assess whether the proposed monitoring methods and arrangements are in place as described in the Program Document and are technically capable of collecting the data

Aspect	Expected Scope of the Assessment
	▪ Assess whether the uncertainty in the data and parameters to be monitored has been correctly identified and assessed and if the proposed approach to manage and reduce uncertainty reflects good practice
Reversals	▪ Correctness and completeness of the data and assumption used in the assessment of the reversal risk ▪ Assess whether the ISFL Buffer Requirements have been applied correctly

2.2 Criteria

The criteria for the assessment were as follows:

- The approved ISFL ER Program Requirements, version 1.2, January 2021 ("the Program Requirements")
- The following associated guidelines:
  - ISFL Buffer Requirements, February 2018 ("the Buffer Requirements")
  - ISFL Program Document Template, Version 2, January 2020 ("the PD Template")[1]

2.3 Good Practice Guidance

The following guidance documents were referenced as good practice in undertaking the assessment, though said documents were not formally considered to be part of the assessment criteria. Where it was appropriate to apply professional judgment in assessing against the indicators set out in SCS' assessment checklist (see Appendix C below), methodological approaches that appropriately followed good practice were automatically assumed to meet the intent of a given indicator.

- 2006 IPCC Guidelines for National Greenhouse Gas Inventories ("the IPCC 2006 Guidelines")
- The following ISFL Program documents:
  - Guidance Note on the Preparation of Financing Plan of REDD+ and Landscape Emission Reduction Programs, August 2017 ("the Financing Plan Note")
  - Note on the Ability of Program Entity to Transfer Title to Emission Reductions, March 2018 ("the Title Transfer Note")
  - Note on Benefit Sharing for Emission Reductions Programs Under the Forest Carbon Partnership Facility and BioCarbon Fund Initiative for Sustainable Forest Landscapes, January 2019 ("the Benefit Sharing Note")

[1] Noting that any guidance within the PD Template pertaining to brevity or word count was not considered part of the auditable criteria, though said guidance was referenced in determination of the level of detail that should be within the ERPD.

  - Guidance note on application of IPCC guidelines for subcategories and carbon pools where changes take place over a longer time period, January 2021, ("the Carbon Pools Note")
- GFOI 2016, Integration of remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests: Methods and Guidance from the Global Forest Observations Initiative, Edition 2.0, Food and Agriculture Organization, Rome ("GFOI").

2.4 Normative Assessment References

The following normative references guided SCS' assessment approach:

- Terms of Reference, updated 14 December 2018
- SCS' Program Quality Manual and Auditor Manual
- The following normative references of the International Organization for Standardization (ISO):
  - ISO 14065:2013, Greenhouse gases — *Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition*
  - International Accreditation Forum Mandatory Document 6: 2014 —*Application of ISO 14065: 2013*
  - ISO 14064-3:2006, Greenhouse gases — *Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions* (note that the Terms of Reference includes a reference to "ISO 14064-3:2013" but the most recent update to ISO 14064-3 is dated 2006)
  - ISO 14066:2011, Greenhouse gases — *Competence requirements for greenhouse gas validation teams and verification teams*

2.5 Level of Assurance

Both a reasonable and limited level of assurance were selected for the assessment work described in this report and were determined at the indicator level as set out in the assessment checklist (see Appendix C below).

2.6 Materiality

The term "discrepancy", as implicitly defined in Section 2.30 of ISO 14064-3:2006, encompasses the terms "error", "omission" and "misrepresentation" (i.e., these three types of distortion are different categories of discrepancies). Any discrepancies which also presented clear divergence from stated requirements of the assessment criteria were treated as non-conformities in the assessment process. Any other discrepancies identified during the course of the assessment were subject to the following materiality assessment.

- In respect of quantitative matters:

  - A discrepancy in the program GHG inventory and/or the process used to select subcategories eligible for ISFL accounting was considered material if it resulted in an incorrect determination of the subcategories eligible for ISFL accounting.
  - A 1.00% materiality threshold applied to any over-estimation of the emissions baseline.[2]
- Regarding reporting of information in the Emission Reduction Project Documentation (ERPD):
  - Any factual errors in the reporting of information in the ERPD were considered material if the incorrectly reported information was directly or indirectly required to be reported in the ERPD by the assessment criteria.

Any discrepancies identified as material through application of the above criteria were treated as non-conformities in the assessment process. Any discrepancies not identified as material through application of the above criteria were inherently considered immaterial. In the event that discrepancies were identified that did not require immediate correction but that required corrective action or mitigation at some later time, a special type of finding, termed an Observation, was issued by SCS (see Section 3.5, below, for a description of findings).

3 Assessment Process

The assessment described in this report were performed through a combination of document reviews, interviews with relevant personnel, and on-site inspections. At all times, SCS assessed the conformance of the ER Program, as described in the ERPD, to the assessment criteria. The assessment team issued findings to ensure that the ER Program fully conformed to all requirements. The assessment included the following steps.

3.1 Methodology

The assessment was performed through a combination of document review and interviews with relevant personnel, as discussed in Sections 3.2 through 3.4 of this report. At all times, the ERPD and the ER Program described therein were assessed for conformance to the criteria described in Section 2.2 of this report. As discussed in Section 3.5, findings were issued to identify any actual or potential areas of risk or concern.

A risk assessment was conducted, and a sampling plan produced, in accordance with Sections 4.4.1 and 4.4.3 of ISO 14064-3:2006, respectively, following a proprietary approach developed by SCS. The process involved identification of key areas of "residual risk" (areas where there exists risk of a material discrepancy that is not prevented or detected by the QA/QC processes of the ER Program). Sampling and data testing activities were planned to address any risk where the likelihood of an area of

[2] The materiality analysis was carried out by first calculating the difference between the reported Emissions Baseline and the assessment team's calculation of the same quantity, and then dividing by the reported Emissions Baseline. If the resulting quantity was greater than 1.00%, the discrepancy was considered material. Otherwise, the discrepancy was not considered material. Under-estimation of the Emissions Baseline was not considered a material discrepancy.

nonconformance or material discrepancy (see Section 2.6 above regarding what constitutes a material discrepancy) going undetected by the assessment team was judged to be unacceptably high. An audit plan was created that took the sampling plan into account.

3.2 Document Review

The ERPD (OFLP- Draft ERPD 27052021.docx, dated 27 May 2021) was carefully reviewed for conformance to the assessment criteria. The following additional documents, provided by ER Program personnel in support of the ERPD, was also reviewed by the assessment team:

Document	File Name (If Applicable)	Ref.
Presentations for the assessment team regarding procedures, methods and data inputs applied.	Oromia ERPD_audit session 1_Completeness of Reporting.ppt Oromia ERPD_audit session 2_Baseline.ppt Oromia ERPD_audit session 3_Methods and data in Agriculture.ppt Oromia ERPD_audit session 4_Methods and data in LULUCF.ppt	/1/
Spatial land use change data derived from Collect Earth	ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV.shp	/2/
Spatial datasets for the program area including inventory plots, program area boundary, and stratums	ParcelasINF_WGS84.shp Oromia_Biomes.shp Stratums_WGS84.shp	/3/
Calculation workbooks for baseline emissions and emission factors	Oromyia LULUCF GHG Inventory 21042021.xlsx Results_EFs_Ethiopia_Sardnal_OROMIA_v2	/4/
Collect Earth User Manual	Collect_Earth_User_Manual_20150618_highres_full.pdf	/5/
Ethiopia's National Forest Inventory Report and field manual	Ethiopia_NFI_Final_Report.pdf National_Forest_Inventory_Field_Manual.pdf	/6/
Ethiopia's woody biomass inventory and strategic plan (WBISP)	WOODY BIOMASS INVENTORY AND STRATEGIC PLANNING PROJECT_NATIONAL STRATAGIC PLAN.docx	/7/
Evaluation of the forest carbon content in soil and litter in Ethiopia	Soil and Litter Carbon Assessment Report.pdf	/8/
Ethiopia's Forest Reference Level Submission to the UNFCCC (FREL)	2016_submission_frel_ethiopia.pdf	/9/
Instructions on how to make a land cover map and a forest cover change map in SEPAL	SEPAL_Change_Manual-Final.pdf	/10/
Project Appraisal Documents	PAD OFLP - Grant - P156475 Final 16 March 2017	/11/
Ethiopia's Central Statistical Agency Agriculture Sample Surveys 2007-2017	[Various files]	/12/
Oromia Agriculture GHG Inventory	Oromiya Agriculture GHG Inventory (1).mdb	/13/
Agriculture emissions data workbooks	Rice Cultivation data_Oromiya.xlsx Use of Fertilizer_Oromiya.xlsx Fraction of Crop residue_Oromiya_01062020.xlsx	/14/

Document	File Name (If Applicable)	Ref.
Stakeholder engagement and consultation plan for the Oromia Forested Landscape Program	Final OFLP Consultation and Participation strategic document.docx Summary Report of Consultation and Participation – Ethiopia – REDD+	/15/
Ethiopia National REDD+ Grievance Redress Guideline	GRM-2.pdf	/16/
Strategic Action Plan to Engage Private Sector in Oromia Forest Landscape Program	Private Sector Engagement_OFLP_Revised Document_ Final_19.06.1209.docx	/17/
Regulation to establish the Oromia Regional State Forest and Wildlife Enterprise	Regulation to establish OFW.pdf	/18/
Memorandum of Understanding for development of tier 2 livestock emission factors	Interganecy MoU for Dev. of tyre 2 EF for livetsock	/19/
Coverletter for ERPD submission to EFCCC	Cover letter for submitted ERPD to the EFCCC	/20/
Draft Forest Regulation (2019)	Final Draft Forest Regulation as of the date, 3-10-2019 in Adama (3).docx	/21/
Forest Proclamation of Oromia	Forest law Oromia.pdf	/22/
Ethiopia Forest Development, Conservation and Utilization Proclamation	Ethiopia-Forest Proclamation 2018.pdf	/23/
	Biennial_Update_Report_TOR_Ethiopia.pdf	/24/

3.3 Interviews

3.3.1 Interviews with ER Program Personnel

The process used in interviewing ER Program personnel was a process wherein the assessment team elicited information regarding (1) the ERPD and any supporting work products or documents and (2) actions undertaken to conform to various requirements.

The following personnel associated with (a) the program entity, (b) any organizations responsible for managing/implementing the ER Program and/or (c) any partner organizations involved in the ER Program were interviewed.

The phrase “throughout audit”, under “Date(s) Interviewed”, indicates that interviews took place throughout the assessment process.

1. Program Personnel

Individual	Affiliation	Role	Date(s) interviewed
Yitebitu Moges (PhD)	Federal Environment, Forest and Climate Change Commission, program entity	National REDD+ Secretariat Coordinator	Throughout audit

Bona Yadessa	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity	Deputy Director of OEFCCA	Throughout audit
Didha Dirriba	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity	Advisor to Deputy Director of OEFCCA	Throughout audit
Tesfaye Gonfa	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity	OFLP Coordinator	Throughout audit
Dereje Likassa	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity	OFLP MRV Specialist	Throughout audit
Getu Shiferaw	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity	OFLP forest resource specialist	Several times
Fekadu Legesse	Oromia Environment Forest and Climate Change Authority (OEFCCA), program entity/personnel	OFLP environmental safeguard specialist	Several times
Motuma Tolera (Dr.)	Hawassa University, Wondo Genet College of Forestry and Natural Resources (Academia),	Dean, Wondo Genet College of Forestry and Natural Resources	Several times
Aseffa Seyoum (Dr.)	Private Consultancy – Addis Ababa University, partner organization	Consultant - Academics	Several times
Feyera Senbeta (Dr.)	Private Consultancy -Addis Ababa University (Academia), partner organization	Associate Professor, College of development Studies and Forester	Several times
Agustin Inthamoussu	World Bank Group	Program manager	Throughout audit

2. Program Partners

Individual	Affiliation	Role	Date(s) interviewed
Lulu Likassa	Norwegian Embassy (partner -RIP financier),	Program Office	Several times
Ararsa Regasa	Oromia Forest and Wildlife Enterprise (OFWE)	Director General of OFWE	22/10/2020
Kemal Oumer	Adaba -Dodola (West Arsi Zone in Oromia) Forest Union,	Forest Union Manager	22/10/2020
Ayana Gadisa	Oromia Bureau of Agriculture and Natural Resources – SLMP/RLLP Project,	Expert	22/10/2020

Yasmin Abdulwassie	FARM Africa (International NGO),	Director of Operation and Business Development	22/10/2020
Afework Hailu	Ethio- Wetlands and Natural Resources Association (NGO/CSO),	Executive Director	22/10/2020
Fisseha Dibissa	Techno Serve Ethiopia – international NGO working with unions and coops (coffee),	Stakeholders' Manager	22/10/2020

3. World Banks task team

Individual	Affiliation	Role	Date(s) interviewed
Maria Catalina	World Bank Group		Throughout audit
Hailu Tefera	World Bank Group		Throughout audit
Marco Van Der Linden	World Bank Group		Throughout audit
Shimeles Sima	World Bank Group		Throughout audit

3.3.2 Interviews with Individuals Other Than ER Program Personnel

The process used in interviewing individuals other than ER Program personnel was a process wherein the assessment team made inquiries to check the validity of information provided to the assessment team.

No additional individuals other than the ER program personnel described in section 3.3.1 above were interviewed.

3.4 Site Inspections

Due to the COVID-19 pandemic and the civil strife taking place near the program area, no site visit occurred during this assessment. In lieu of a site visit, the assessment team performed web-based meetings with program personnel and program partners. In addition, the assessment team utilized remotely sensed imagery to assess land use classes in the program area.

3.5 Resolution of Findings

Findings are the formal mechanism used by SCS to identify any actual or potential areas of risk or concern. The following discusses the types of findings that may arise from the assessment process.

New Information Requests (NIRs)

If the assessment team determined that they have not been furnished with sufficient information to make a decision regarding conformance, a New Information Request (NIR) was issued. After a response

was received, the assessment team evaluated the submission and determined if adequate information had been provided or if additional findings (NIR, NCR, OBS) were warranted.

Non-Conformity Reports (NCRs)

When the assessment team identified (1) a clear non-conformity with respect to a specific indicator (where a given indicator was of the "binary" conformance type) or (2) a material discrepancy (see "Materiality", above, for more information), a Non-Conformity Report (NCR) was issued. Closure of an NCR required that the assessment team be provided with evidence that the underlying issue resulting in issuance of the NCR had been duly addressed.

Observations (OBSs)

An OBS indicated one or more of the following:

- An area where immaterial discrepancies existed between the observations, data testing results or professional judgment of the assessment team and the information reported or utilized (or the methods used to acquire such information) within the ERPD.
- An area where the expert judgement of the assessment team suggested that there were opportunities for improvement in the areas falling within the assessment scope.
- An area which presented a risk of future non-conformance.

Where an OBS was written against an indicator of the "professional judgement" conformance type, the OBS was written when a low (III) or medium (II) conformance rating had been assigned. Annex A's General Guidance section contains more detail regarding the two conformance types and ratings.

4 Assessment Findings

The major findings of the assessment are described below for each category included in the scope of the assessment (see "Scope and Objectives", above). The assessment findings at the indicator level are described in Appendix C below.

4.1 Determination of ISFL Accounting Scope

4.1.1 ISFL Reporting

The following findings from Appendix C are relevant to this sub-section:

- NIR: 1, 38
- OBS: 23

The assessment team took the following steps to assess the program GHG inventory for comparability with use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and the Biannual Update Report:

- Independently reviewed Ethiopia's Forest Reference Level Submission to the UNFCCC (FREL, 2016) which includes REDD+ activities to assess the comparability of definitions, uses, and categories with the ISFL program.
- Carefully reviewed and took inventory of the program datasets and determined that there is considerable consistency between the national GHG inventory and the program GHG inventory. For instance, the program utilizes national GHG inventory datasets including Ethiopia's National Forest Inventory and parameters from the FREL.
- In cases where datasets were developed specifically for this program, such as the land use land cover change (LULUCF) activity data, the assessment team compared definitions of various land use classes (e.g., forest definition) applied to the activity data to the definitions applied to other components in the program's quantification (e.g., emission factors) to evaluate consistency both within the programs applied definitions and with other national processes.

The assessment team took the following steps to assess whether the best available data sets, methods, models and assumptions have been used and that the inventory applies the general IPCC principles of transparency, completeness, consistency, accuracy and comprehensiveness:

- Held meetings with the program's technical team to gain a clear understanding of the process in determining the best available data sets, methods and models to be employed by the program.
- Independently reviewed available literature regarding the availability of datasets pertaining to forest inventory, land use change, and agriculture in Ethiopia to confirm that the best available data sets have been utilized by the program.
- Independently reviewed Ethiopia's Forest Reference Level Submission to the UNFCCC (FREL, 2016) to assess whether similar data sets, methods, and assumptions have been used for the national GHG inventory, and represents the best available data in the country.
- If no country specific or region-specific information was available, the assessment team independently confirmed that the most relevant and accurate default values from the 2006 IPCC Guidelines were applied.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The best available data sets, methods, models and assumptions have been used and that the inventory applies the general IPCC principles of transparency, completeness, consistency, accuracy and comprehensiveness.
- Given that the program is directly employing several national GHG inventory datasets, the program GHG inventory inherently applies comparable use of definitions, categories and subcategories as other national processes related to GHG inventory and REDD+.
- However, there are several potential areas of improvement related to the consistency in definitions and development of nationally-consistent data described in section 5.2 below.

4.1.2 Selection of Subcategories for Accounting

The following findings from Appendix C are relevant to this sub-section:

- NIR 42

The assessment team took the following steps to assess the correctness and completeness of the data and information provided on the choice of the subcategories:

- Independently assessed the datasets used for each land use subcategory to determine the IPCC tier, availability, and vintage of the data sources.
- Independently quantified the emissions baseline for each subcategory to check the absence of errors in the quantification of net emissions and removals per subcategory as well as the relative contribution to total GHG emissions and removals associated with all land use conversions.
- Independently identified and selected subcategories in accordance with the section 4.3.4 of the ER Program Requirements to assess the step 1 selection of subcategories as indicated in the ERPD and calculations workbooks.

The assessment team took the following steps to assess whether the quality and baseline setting requirements have been applied correctly and confirm that the choice of the subcategories is correct and justified:

- Classified each subcategory by IPCC tier and independently assessed whether only subcategories that utilized data and procedures that comply with the minimum IPCC Tier 2 methods and data were selected.
- Classified each subcategory by the vintage of available data sources to independently assess whether only subcategories that have sufficient historic data available to construct an Emission Baseline over a Baseline Period of approximately 10-year period at the start of a ISFL ERPA Phase were selected.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The selection of subcategories is in conformance with the procedures outlined in the ISFL Program Requirements and free from material error.

4.1.3 Time-Bound Plan to Increase Completeness Accounting Scope

The following findings from Appendix C are relevant to this sub-section:

- NIR 38

The assessment team took the following steps to assess whether the proposed plan is feasible, addresses priority subcategories and is likely to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases:

- Reviewed the time-bound plan for the forestland remaining forestland subcategory as described in section 4.3 and Annex 8 of the ERPD. Determined that the plan which includes NFI remeasurements is feasible, it was confirmed that a third remeasurement is already underway, and will enable a stock change approach which will improve the data and methods for subsequent Phases.
- Independently reviewed the advanced image analysis algorithms referenced in the time-bound plan for forestland remaining forestland to assess their feasibility and likelihood to increase the completeness and improve data and methods.
- Reviewed the time-bound plan for emissions from enteric fermentation in cattle as described in section 4.3 and Annex 8 of the ERPD. Determined that the plan, which involves collaborative efforts among national agricultural agencies, new research by regional agricultural research institutions, support from the World Bank, is feasible based on a review of institutions referenced, and will increase the completeness of the accounting scope through improved data quality pertaining to livestock emissions.
- Reviewed the memorandum of understanding between the Ministry of Agriculture and the Oromia Environment, Forest, and Climate Change Authority to develop tier 2 emission factors and emission baseline for livestock /19/.
- Ultimately, applied expert judgement whether the proposed plan is feasible, addresses priority subcategories and is likely to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- Time-bound plans proposed in section 4.3 of the ERPD are feasible, address priority subcategories, which would have been selected had they met data quality requirements, and are likely to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases.

4.2 Design of Planned Actions and Interventions

4.2.1 Drivers of AFOLU Emissions and Removals

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the analysis on historic and future trends (qualitative and quantitative) in drivers of AFOLU emissions and removals:

- Review of ERPD and cross check against ER program requirements.
- Review of pertinent literature.

- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The information provided in the ERPD is correct and complete.
- The information in the ERPD provides an appropriate analysis of the historic and future trends(qualitative and quantitative) in drivers of AFOLU emissions and removals.

4.2.2 Description and Justification of the Program's Planned Actions and Interventions

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess whether the proposed actions and interventions address drivers of emissions and are informed by the contribution of key sources and sinks to the total GHG emissions and removals in the program GHG inventory and the analysis of trends:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel.
- Review of contributor feedback.

The assessment team took the following steps to assess the extent and effectiveness of private sector engagement (either achieved or planned) in addressing drivers of emissions:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

The assessment team took the following steps to assess the magnitude of risks to (a) ER Program implementation and (b) the potential benefits of planned actions and interventions and the extent to which mitigation mechanisms have been included in ER Program design:

- Review of ERPD and cross check against ER program requirements.
- Review of pertinent literature.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The proposed actions and interventions address drivers of emissions and are informed by the contribution of key sources and sinks to the total GHG emissions and removals in the program GHG inventory and the analysis of trends.
- The private sector includes a wholistic group of private entities appropriately designed to address the extent of potential requirements of potential drivers of emissions.

4.2.3 Financing Plan for Implementing the Planned Actions and Interventions of the Program

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of information on projected costs, revenues and funding gaps or surpluses:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.
- Review of the project financial plan.
- Review of associated grant documents.

The assessment team took the following steps to assess whether the identified sources of finance are sufficient to affect the land use activities and drivers of emissions and removals:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.
- Review of the project financial plan.
- Review of associated grant documents.

The assessment team took the following steps to assess the financial and economic analyses (including discount rates and other parameters):

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.
- Review of the project financial plan.

- Review of associated grant documents.

The assessment team took the following steps to assess the arrangements for flow of funds:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.
- Review of the project financial plan.
- Review of associated grant documents.
- Web based meetings with project partners.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The projected costs, revenues and funding gaps or surpluses are correct and complete.
- The identified sources of finance are sufficient to affect the land use activities and drivers of emissions and removals.
- The economic analysis includes appropriate discount rates and parameters.
- The economic analysis includes appropriate arrangements for necessary flow of funds.

4.2.4 Risk for Displacement

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the information provided in the analysis of displacement risk:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

The assessment team took the following steps to assess the effectiveness of the proposed strategy to mitigate and/or minimize, to the extent possible, potential displacement:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The assessment team agrees that displacement risk is negligible based on the design of the program area.
- The analysis of displacement is appropriate based on the program design.

4.2.5 Description of Stakeholder Consultation Process

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the information provided on the stakeholder consultation process:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

The assessment team took the following steps to assess whether the full, effective, and on-going participation of relevant stakeholders has occurred:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The description provided is appropriate and complete.
- The World Bank due diligence is sufficient for assessing the stakeholder consultation process.

4.2.6 Description of the Feedback and Grievance Redress Mechanism (FGRM)

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess whether the FGRM is operational and accessible to relevant stakeholders:

- Review of ERPD and cross check against ER program requirements.

- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

The assessment team took the following steps to assess whether a description of FGRM procedures has been made public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The description provided is appropriate and complete.
- The World Bank due diligence is sufficient for assessing the FGRM.

4.3 Tracking, Management, Disbursement and Reduction of Risks to Emission Reductions

4.3.1 Analysis of Laws, Statutes, and Other Regulatory Frameworks

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the information provided in the ERPD in respect of laws, statutes, and other regulatory frameworks:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.
- Review of contributor feedback.

The assessment team took the following steps to assess the existence and extent of any known legal or regulatory issues in the program area that could affect the ER Program design, including benefit sharing, and the existence and effectiveness of any mitigation mechanisms to address such issues:

- Review of national and region laws applicable to the project area.
- Cross check of national and regional laws against the project activities in the ERPD.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The analysis provided in the ERPD includes a complete list of laws applicable to the program activities.
- Given that no site visit occurred no potential issues were realized by the assessment team.

4.3.2 Assessment of Land and Resource Tenure in the Program Area

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the land and resource tenure assessment:

- Review of ERPD and cross check against ER program requirements.
- Use of professional judgement.
- Web-based meetings with program personnel and program partners.

The assessment team took the following steps to assess whether the assessment of the land and resource tenure regimes has been made publicly available:

- Assertions from project personnel.
- Given that no site visit occurred, the assessment was unable to confirm that this occurred firsthand.

The assessment team took the following steps to assess whether the land and resource tenure assessment includes a comprehensive description of the range of land and resource tenure rights, including the legal status of such rights:

- Web-based review of Ethiopian laws and regulation regarding land and resource tenure.
- Cross check against ER program requirements.

The assessment team took the following steps to assess whether the land and resource tenure assessment includes a comprehensive description of areas subject to significant conflicts or disputes:

- Review of ERPD and cross check against ER program requirements.
- Used professional judgment based on the experience of the assessment team.

The assessment team took the following steps to assess whether the land and resource tenure assessment includes an appropriate description of any potential impacts of the Program on existing land and resource tenure in the Program Area:

- Review of ERPD and cross check against ER program requirements.
- Used professional judgment based on the experience of the assessment team.

The assessment team took the following steps to assess whether the assessment of the land and resource tenure regimes has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from relevant stakeholders:

- Assertions from program personnel.
- Review of ERPD and cross check against ER program requirements.
- As no site visit occurred, the assessment team was unable to ascertain conformance with this criterion.
- Reliance on the World Bank due diligence.

The assessment team took the following steps to assess the implications of the land and resource tenure assessment for ER Program design, and for the Program's ability to transfer title to emission reductions to the ISFL:

- Assertions from program personnel.
- Review of ERPD and cross check against ER program requirements.
- As no site visit occurred, the assessment team was unable to ascertain conformance with this criterion.
- Reliance on the World Bank due diligence.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The program is generally in conformance with the requirements of these criteria.
- The assessment team believes that this shall be evaluated further during the verification phase of this process.

4.3.3 Ability to Transfer Title to Emission Reductions

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the whether the analysis of the ability to transfer title to emission reductions, or any roadmap towards demonstrating such ability prior to execution of an emission reductions purchase agreement, is comprehensive and conclusive:

- Web-based interviews with project personnel.
- Review of Ethiopian law governing the ability to transfer title (as described in the ERPD).
- Review of the ERPD and cross check against the program requirements.

The assessment team took the following steps to assess the existence of risks of contests and/or disputes regarding title to emissions reductions (i.e., title is clear and uncontested), and, if applicable, the existence and effectiveness of appropriate mitigation mechanisms:

- In lieu of a system being currently in place for the program to transfer title at this time, an assessment of risk cannot be undertaken.
- No tracking or registry system in place at this time.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The information provided in the ERPD provides a detailed analysis of the ability of the program to transfer title.
- The assessment team believes that this shall be re-assessed at the time of verification.

4.3.4 Benefit Sharing Arrangements

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess whether the benefit sharing arrangements have been designed in a consultative, transparent, and participatory manner appropriate to the country context and that reflects inputs and broad community support by relevant stakeholders:

- Review of section 3.2 of the ERPD.
- Review of a large sample of consultation documentation.
- Review of section 3.6 of the ERPD.
- Interviews with project personnel and project partners.

The assessment team took the following steps to assess whether the description of the benefit sharing arrangements contains the required information and whether the information provided is correct and complete:

- Review of the ERPD and cross check of program requirements.
- Review of a large sample of consultation of documents.
- Given the lack of site visit, the assessment team cannot fully assess conformance of this criterion.

The assessment team took the following steps to assess whether the benefit sharing arrangements will provide incentive structures and contribute to the sustainability of the Program:

- Review of section 3.2 of the ERPD.
- Review of a large sample of consultation documentation.
- Review of section 3.6 of the ERPD.
- Interviews with project personnel and project partners.

- Given the lack of site visit, the assessment team cannot fully assess conformance of this criterion.

The assessment team took the following steps to assess whether the proposed benefits correspond with the drivers of emissions analysis and anticipated emission reductions:

- Review of Annex 4 of the ERPD.
- Expert opinion of SCS team's social scientist (Dr. Laura Kowler) with a long history of developing and implementing benefit sharing mechanisms.
- World Bank due diligence.

The assessment team took the following steps to assess whether the benefit sharing arrangements are technically feasible:

- Review of Annex 4 of the ERPD.
- Expert opinion of a social scientist with a long history of developing and implementing benefit sharing mechanisms.
- World Bank due diligence.

- In summary, based on the processes and procedures conducted, the assessment team concludes the following:
  - The benefit sharing mechanism as described, appears to have been designed in a consultative, transparent, and participatory manner appropriate to the country context and reflecting inputs and broad community support by relevant stakeholders.
  - The benefit sharing arrangements will provide incentive structures and contribute to the sustainability of the Program.
  - The benefit sharing arrangement is designed to provide incentive structures and contribute to the sustainability of the Program.
  - The benefit sharing arrangement appears to be technically feasible as designed.

4.3.5 Participation Under Other GHG initiatives

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the information provided whether parts of the program area, or projects in the program area, are included in other GHG initiatives and if this creates a risk of double counting, and/or double payment:

- Review of the ERPD and cross check of program requirements.
- Interviews with program and World Bank personnel.
- World Bank due diligence.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The risk of double counting is extremely low as designed.
- Further assessment of these criteria shall be conducted upon the verification phase of this process.

4.3.6 Data management and Registry Systems to Avoid Multiple Claims to Emission Reductions

The following findings from Appendix C are relevant to this sub-section:

- N/A

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- As no registry system was in place at the time of this assessment, no conclusion is offered.

4.3.7 Reversals

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess the correctness and completeness of the data and assumptions used in the assessment of the reversal risk:

- Applied expert judgement when reviewing the assessment of the reversal risk as described in section 4.7.2 of the ERPD.
- Reviewed section V of the OLPD Project Appraisal Document (PAD)/11/ which includes a thorough assessment of risk that is referenced in the ERPD, to assess the correctness and completeness of the data and assumptions used.
- Independently reviewed data regarding the risk of natural disasters such as fires, droughts, and pests in the program area.

The assessment team took the following steps to assess whether the Buffer Requirements have been applied correctly:

- Applied expert judgement to determine whether the Reversal risk assessment tool was applied correctly.
- Independently recalculated the total reversal set-aside percentage for the whole ER program as evaluated in Table 19 of the ERPD, using the Reversal risk assessment tool.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The assessment of the reversal risk used complete and correct data and assumptions.
- The Buffer Requirements have been applied correctly.

4.4 Quantification of Emission Reductions

4.4.1 Emissions Baseline

The following findings from Appendix C are relevant to this sub-section:

- NIR: 2-6, 9-10, 11-12, 14, 16-17, 19-22, 26-30, 32, 37-38, 40, 44, 48, 51-52, 54
- NCR: 10-11, 13, 15, 18, 24, 31, 39, 43, 45-47, 49
- OBS: 23, 33-36, 41, 53

The assessment team took the following steps to assess whether the methods used to construct are in line with the IPCC and best practice approaches:

- Reviewed the application of the methods and datasets, including assumptions and selection of parameters used to construct the emissions baseline to assess whether they are in line with IPCC methods and best practice approaches.
- Assessment team applied the IPCC and best practice approaches to independently quantify the emissions baseline using the complete datasets or samples of data utilized by the program team.

The assessment team took the following steps to assess the correctness and completeness of the data used to construct the baseline:

- Independently assessed the land use land cover (LULC) classification from a one percent sample with the use of ancillary imagery sources (i.e., Google Earth), to determine whether the Collect Earth tool, as well as the training and QA/QC processes employed, were appropriate to ensure high-quality data and minimize the impact of any measurement errors.
- Independently reviewed the data sources and assumptions used to develop the emission factors for all land cover classes and carbon pools.
- Independently assessed the number of sample points within the Oromia boundary by performing an intersection of the sample points within the boundary.

The assessment team took the following steps to whether the baseline requirements have been applied correctly and the emissions baseline estimate is calculated correctly:

- Independently replicated the quantification of the emissions baseline using a combination of the complete datasets (e.g., land use conversions) and/or a sample of the datasets (e.g., sample of

years of livestock emissions) for the subcategories, applied by the program team to verify that the emissions baseline estimate is free of material discrepancies.

- The replication of the quantification included recalculation of the following: activity data, emission factors for live, dead and soil pools, the number of sample points within the program boundary, program area boundaries (Oromia boundary, stratum and biome boundaries), area expansion factor per sample point, subcategory selection (described above in section 4.1.2 above), and the emissions and removals.

The assessment team took the following steps to assess whether the uncertainty in the emissions baseline has been correctly identified and assessed in accordance with IPCC good practice:

- Reviewed the ERPD (section 4.5.3) to verify that all potential uncertainties arising in the baseline scenario as well as measurement, monitoring and reporting have been identified and assessed in accordance with IPCC good practice.
- Assessed whether a comprehensive approach to mitigate key areas of uncertainty has been addressed in a time-bound plan to increase the completeness and improve data and methods (see section 4.1.3 above for the time-bound plan assessment).
- Independently determined the ex-ante uncertainty set-aside factor in the table in section 4.6.4 of the Program Requirements to assess whether the correct factor was applied. Independently recalculated the ex-ante estimation of the quantity of total net emission reductions allocated to the Uncertainty Buffer for each ERPA year.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The methods, including assumptions and selection of parameters, used to construct the emissions baseline are in line with the IPCC and best practice approaches.
- The data used to construct the emissions baseline is correct and complete for the subcategories ultimately selected.
- The baseline requirements have been applied correctly and the emissions baseline estimate has been calculated correctly as is free of material discrepancies.

4.4.2 Monitoring Approach

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess whether the data and methods proposed for monitoring are consistent enough with the data and methods used for the determination of the baseline to allow for meaningful comparison and calculation of the emission reductions:

- Reviewed and independently identified the key datasets and methods used for the baseline determination which will be needed for continued monitoring. For the most part these include

that National Forest Inventory for emission factors and parameters and Collect Earth for the detection land-use and land-use change, among others (e.g., livestock reports, Woody Biomass Inventory and Strategic Planning Project).

- Reviewed the monitoring approach in section 4.5.1 in the ERPD to determine whether it is consistent with these key datasets and methods used for the baseline determination.
- Reviewed documentation to determine that an appropriate party is delegated as responsible for carrying out the monitoring strategy. As indicated in section 4.5.1 of the PD, the Environment, Forest and Climate Change Commission (EFCCC) is responsible for coordinating and undertaking the national REDD+ monitoring strategy for which the OFLP is embedded within.

The assessment team took the following steps to assess whether the proposed monitoring methods and arrangements are in place as described in the ERPD and are technically capable of collecting the data:

- We independently assessed whether the data needed for monitoring will be continually updated and available by reviewing the monitoring frequency of the NFI and Activity Data including LULC (Google Earth with Collect Earth), and agricultural sector data collected and reported by the Central Statistical Agency (CSA).
- Applied expert judgement to assess whether the proposed monitoring methods and arrangements are in place as described in the ERPD and are technically capable of collecting the data.

The assessment team took the following steps to assess whether the uncertainty in the data and parameters to be monitored has been correctly identified and assessed:

- Independently identified the sources of uncertainty and compared to those identified in section 4.5.3 of the ERPD. The main sources of uncertainty identified are those associated with the activity data (livestock and land use) and the emissions factors.
- Compared the identified sources of uncertainty for each data and parameter to be monitored to determine whether they were identified following approaches from the most recent IPCC guidance and guidelines.
- Applied expert judgement to conclude that the assessment of sources of uncertainty in construction of the Emissions Baseline is justifiable.
- Compared the monitoring plan to the elements of the time-bound plan described in section 4.1.3 above to assess whether there is consistency in the identification of data and parameters that have the highest uncertainty and that are most critical to improving accuracy and increasing completeness of the accounting scope.

The assessment team took the following steps to assess whether the proposed approach to manage and reduce uncertainty reflects good practice:

- Evaluated the time-bound plan described in section 4.1.3 to assess whether the most critical areas for reducing uncertainty have been included and appropriate procedures have been identified.

- Compared the proposed approach to manage and reduce uncertainty to the guidance set out in the IPCC 2006 Guidelines to determine whether such guidance has been considered and applied.
- Applied expert judgement to assess whether the proposed approach to reduce uncertainties reflects good practice and are relevant and feasible for each data and parameter.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- All monitoring procedures are appropriate to the stated tasks.
- The monitoring procedures are technically capable of collecting the data needed to allow for meaningful comparison and calculation of the emission reductions from the baseline.
- The appropriate institutional framework and organizational structure is in place to make monitoring of the data and parameters feasible.
- The uncertainty in the data and parameters to be monitored has been correctly identified and assessed.
- The proposed approach to manage and reduce uncertainty generally reflects good practice.

4.4.3 Ex-Ante Estimation of the Emission Reductions

The following findings from Appendix C are relevant to this sub-section:

- N/A

The assessment team took the following steps to assess whether the assumed effectiveness of the Program in addressing the drivers and its impact on the emissions is justified and based on reasonable assumptions:

- Reviewed the Project Appraisal Document (PAD) /11/ to assess the relevancy of the program interventions in addressing the drivers of deforestation and subsequent emissions.
- Independently reviewed the Climate Resilient Green Economy Strategy (CRGE) and the Growth and Transformation Plan (GTP), and the National REDD+ Strategy, the country's key national strategies to reduce emissions while achieving economic growth and green development.
- After reviewing these national strategies, applied expert judgement to determine whether the assumed effectiveness of the program in addressing the drivers and its impact on the emissions is justified and based on reasonable assumptions.

In summary, based on the processes and procedures conducted, the assessment team concludes the following:

- The program activities are directly in-line with the objectives of the country's broader strategies for economic growth and emissions reductions and are directed at the largest emission sources in the country: forestry and agriculture.

- The assumed effectiveness of the Program in addressing the drivers and its impact on the emissions (10% emissions reduction, as described in section 4.6 of the ERPD) has been justified and is considered to be feasible.

5 Conclusion

5.1 Assessment Opinion

SCS Global Services (SCS) was retained by the Initiative for Sustainable Forest Landscapes (ISFL) of the World Bank Group to perform an independent assessment of the Oromia Forested Landscape Program against the ISFL Emission Reductions Program Requirements and associated guidelines. During the review of the ERPD, the assessment team was informed by the due diligence processes of the ISFL team in the World Bank Group and others at the World Bank Group to develop the findings and conclusions described in this report.

The conclusions of the assessment engagement differ between the two levels of assurance utilized in the assessment. The conclusions are set out according to each level of assurance in the table below.

Applicable Level of Assurance	**Conclusions**
Reasonable	Based on the processes and procedures conducted, and with the exception of any potential or actual areas of risk or concern as documented in Section 5.2 below: ▪ The information provided in the ERPD is correct and complete (i.e., not leaving out information that might affect the opinion of the reader). ▪ The Program, as described in the ERPD, complies with the assessment criteria as described above.
Limited	Based on the processes and procedures conducted, and with the exception of any potential of actual areas of risk or concern as documented in Section 5.2 below: ▪ There is no evidence that the information provided in the ERPD is incorrect and/or incomplete (i.e., leaving out information that might affect the opinion of the reader). ▪ There is no evidence that the Program, as described in the ERPD, does not comply with the assessment criteria as described above.

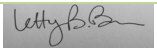
The reader is encouraged to refer to Appendix C below for information regarding the level of assurance applied to any indicator of interest.

In addition, the following summary conclusions are made, with a limited level of assurance, regarding those areas in which the scope of the assessment extends beyond a strict assessment for compliance to the assessment criteria:

Area	Conclusions
Effectiveness of achieved or planned private sector engagement in addressing drivers of emissions	Based on the processes and procedures conducted: ▪ Based on interviews with program partners and review of program activities in place or planned, the ERPD provides a complete description of the planned private sector engagement in addressing drivers of emissions ▪ The private sector included at this time includes the expertise necessary to provide the described activities ▪ The private sector included at this time includes support from a wholistic range of entities necessary to implement the program activities necessary to address the drivers of emissions
Risks to (a) program implementation and (b) the potential benefits of planned actions and interventions	Based on the processes and procedures conducted: ▪ As stated above, the activities and private sector engagement at this time lay the foundation for the success of the program implementation ▪ In country turmoil may prohibit access to the program area for continued implementation the program activities ▪ As funding gaps currently exist, the assessment team believes this to be the highest risk factor ▪ The assessment team believes that the lack of site visit has resulted in a situation where a detailed risk assessment was not performed
Plan for mitigating funding gaps	Based on the processes and procedures conducted: ▪ Whereas, the gaps in funding are stated to exist as a result of future annual contributions that are not currently available it is difficult to assess the mitigation plan at this time. The entirety of the funding gaps are intended to be

Area	Conclusions
	covered by budgets that are updated annually and therefore not available at the times of this assessment.
Plan whether the identified sources of finance are sufficient to have a meaningful impact on the land use activities and drivers which cause emissions and removals	Based on the processes and procedures conducted: ▪ The identified sources of financing appear at this time to be sufficient to have a meaningful impact on the land use activities and drivers which cause emissions and removals
Financial and economic analyses	Based on the processes and procedures conducted: ▪ The economic analysis provided is well designed and supported by a wealth of documentation supporting the data inputs
Arrangements for flow of funds	Based on the processes and procedures conducted: ▪ The arrangement for flow of funds is well documented and described in the economic analysis described above
Any known legal or regulatory issues in the program area that can affect the program design, including benefit sharing, and the implications thereof	Based on the processes and procedures conducted: ▪ No known legal or regulatory issues in the program area that can affect the program design, including benefit sharing, and the implications thereof, were identified by the assessment team
Effectiveness of the proposed strategy to mitigate and/or minimize, to the extent possible, potential displacement	Based on the processes and procedures conducted: ▪ The program is designed specifically to minimize potential displacement as described earlier in this report
Whether the full, effective, and on-going participation of relevant stakeholders has occurred	Based on the processes and procedures conducted: ▪ Based on the documentation provided, the assessment team believes that the claims in the ERPD are accurate regarding this criterion ▪ On site analysis should occur during the verification phase of this process
Where an FGRM is not yet in place, whether the proposed mechanism is technically	Based on the processes and procedures conducted:

Area	Conclusions
feasible and builds on existing structures that are tested	▪ N/A
Implications of the land and resource tenure assessment for program design, and for the Program's ability to transfer title to emission reductions to the ISFL	Based on the processes and procedures conducted: ▪ Whereas, the program is still developing this mechanism, this criterion should be further assessed during the verification phase of this process
Whether the benefit sharing arrangements will provide incentive structures and contribute to the sustainability of the program	Based on the processes and procedures conducted: ▪ The eligibility criteria for beneficiaries and the types and scale of potential benefits are technically feasible and appropriate. The proposed benefits are also commensurate with the drivers of emissions and anticipated ERs to be received and therefore are designed to contribute to the sustainability of the program
Whether the proposed benefits correspond with the drivers of emissions analysis and anticipated emission reductions	Based on the processes and procedures conducted: ▪ Same as above
Whether the benefit sharing arrangements are technically feasible, including mechanisms for distributing benefits and any issues related to nested projects, etc.	Based on the processes and procedures conducted: ▪ The criteria and processes for the distribution of benefits are technically feasible and appropriate
Whether the analysis of the ability to transfer title to emission reductions or any roadmap towards demonstrating such ability prior to ERPA signature is comprehensive and conclusive	Based on the processes and procedures conducted: ▪ The analysis provided is well researched and thorough ▪ The results will be further assessed once the formal process for transferring title is in place
Presence and, if applicable, mitigation of risks of contests/disputes to title to emission reductions and mitigation measures	Based on the processes and procedures conducted: ▪ The information provided in section 4.2.1 of the EROD provide a detailed analysis of the potential risk of disputes in the program area ▪ As no site visit occurred, this criterion shall be further assessed during the verification phase of this process

Lead Verifier's Approval	 Francis Eaton, 22 July 2021
Technical Reviewer's Approval	 Letty Brown, 22 July 2021

5.2 Potential or Actual Areas of Risk or Concern

This section contains a summary description of areas of potential opportunity for improvement as well as areas of current non-conformance or potential risk of non-conformance in the future.

The column headers in the below table have the following meanings:

- No: The number of the area of risk or concern (assigned in consecutive sequence).
- Indicator(s): A cross-reference to any applicable indicators in the assessment checklist (see Appendix C below for more information).
- Finding(s): A cross-reference to the unresolved finding to which the area of risk of concern is related. This column also indicates the reason for this area of concern (areas of potential opportunity for improvement, areas of potential risk of non-conformance in the future, and/or areas of current non-conformance).
- Sec: A cross-reference to the applicable section of the requirement against which the unresolved finding was issued, as pasted from the applicable indicator(s) in Appendix C; note that the one- or two-character alphabetical codes at the beginning of each section reference have the following codes:
    - T : PD Template
    - PR : Program Requirements
    - BR : Buffer Requirements
- Requirement Text: The text of the requirement against which the unresolved finding was issued, as pasted from the applicable indicator(s) in Appendix C.
- Potential or Actual Area of Risk or Concern: A description of the potential or actual area of risk or concern.

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
01	RA-02	OBS 23 (Area of potential opportunity for improvement)	PR§4.1.2	The Program GHG Inventory should be comparable in its use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and the Biannual Update Report	There are two definitions of "forest" used in the program GHG inventory: one definition (as quoted in the ERPD) has been used to derive activity data and another definition (as quoted in the National Forest Inventory report) has been used to derive emission factors. The effect of the two different definitions is that the emission factors do not correspond exactly to the land use changes derived from the activity, leading to uncertainty in the baseline emissions and emissions reductions involving forest land cover classes. An opportunity exists to improve consistency through adoption of a consistent definition for "forest" in future revisions to the National Forest Inventory (while keeping in mind the requirements of Section 4.5.2 of the ER Program Requirements).

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
02		OBS 25 (area of potential opportunity for improvement)	PR§4.2.2	ISFL ER Programs are encouraged to improve data and methods, and to move to a higher tier over time, as possible.	As indicated in section 4.1.1 of the ERPD “Soil organic carbon data in forest area is obtained from the document “Evaluation of the forest carbon content in soil and litter in Ethiopia” (implemented by Natural Resources Institute Finland - Luke)" and are used to define the reference soil organic carbon stocks. As indicated in volume 4, chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the reference condition is native lands (i.e., non-degraded, unimproved lands under native vegetation), used for evaluating the relative effect of land-use change on the amount of soil C storage. There is no indication that the sampling frame of the research used was limited to "non-degraded, unimproved lands,” resulting in a lower reference soil carbon stock than had the reference soil carbon stock been generated from non-degraded forests.

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
03		OBS 25 (area of potential opportunity for improvement)	PR§4.2.2	ISFL ER Programs are encouraged to improve data and methods, and to move to a higher tier over time, as possible.	The results in the "Evaluation of the forest carbon content in soil and litter in Ethiopia" report which were used to determine the reference soil carbon stocks, are not reported by soil type or climate regions. One opportunity for improvement in future research efforts would be to differentiate soil organic carbon stock results by soil type. This could then be used to aggregate and report soil organic carbon stock change estimates by soil type for more accurate accounting.

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
04		OBS 25 (areas of potential opportunity for improvement)	PR§4.2.2	ISFL ER Programs are encouraged to improve data and methods, and to move to a higher tier over time, as possible.	The results in the "Evaluation of the forest carbon content in soil and litter in Ethiopia" report were used to determine the reference soil carbon stocks. However, default IPCC stock change factors (FLU, FMG and FI) were applied. Thus, an area for further refinement would be to develop country-specific stock change factors. Likewise stock change factors vary significantly for the proposed management systems, thus another area of improvement could be the disaggregation of management systems into a finer categorization that better represents management of impacts on soil organic C stocks in the region.

05		OBS 34 (potential risk of non-conformance in the future)	PR§4.1.2	ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.	The calculation of carbon stock change in aboveground biomass for the Grassland Remaining Grassland subcategory was included following the IPCC Tier 2 approach. The IPCC Tier 2 approach requires that activity data consist of “areas of Grassland Remaining Grassland summarised by major grassland types, management practices, and disturbance regimes." In differentiating between shrubland and other grassland, the activity data have differentiated according to "major grassland types.” However, the activity data have not been disaggregated according to management practices or disturbance regimes. Thus, given that the activity data are not sufficiently disaggregated, the category "grassland remaining grassland" does not comply with tier 2 method and data data according to the ISFL requirements resulting in a discrepancy between the approach and method. However, the discrepancy is highly unlikely to affect the selection of subcategories included in the initial selection of subcategories for ISFL accounting. There is an opportunity to more completely adhere to the most recent IPCC guidance and

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
					guidelines, until such time as adequate data are available to completely support Tier 2 quantification for this subcategory.

No.	Indicator(s)	Finding(s)	Sec.	Requirement Text	Potential or Actual Area of Risk or Concern
06		OBS 41 (area of potential opportunity for improvement)	PR§4.1.2 PR§4.1.4	“In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC." The principle of "consistency" is defined by the IPCC, in part, as follows: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions."	The assessment team has significant concerns that the "Grassland" and "Shrubland" sub-categories may have been inconsistently differentiated between analysts. There does appears to be inadequate written documentation regarding how these sub-categories are to be differentiated in future classification efforts, leading to a potential for violation of the principle of "consistency", as defined by the IPCC. Therefore, the assessment team is concerned that, in practice, the establishment of a "shrubland" land-use class does not increase the likelihood of being able to assess the impacts of ISFL interventions but in fact, may have the converse effect. While the assessment team believes that use of a stand-alone "shrubland" category will increase the likelihood of being able to assess the impacts of ISFL interventions, there is an opportunity for action to increase the consistency of differentiation between shrubland and other forms of grassland.

Appendix A: Assessment Checklist

The column headers in the below checklist tables have the following meanings. See Annex A of SCS' inception report for more information.

- No: The number assigned to the indicator.
- Sec: The section reference to the applicable requirement text, using the following coding system:
  - T : PD Template
  - PR : Program Requirements
  - BR : Buffer Requirements
- Requirement Text: The text of the applicable requirement.
- Indicator: The text of the indicator.
- Assessment Findings: A summary of the assessment team's findings in respect of the indicator.
- LA (Level of Assurance): R (for reasonable level of assurance) or L (for limited level of assurance)
- CT (Conformance Type), defined as follows:
  - Binary (Type B) means that conformance to the indicator is binary: it has been achieved or not. The B code identifies indicators that are tied to prescriptive requirements within the assessment criteria.
  - Professional Judgment (Type P) means that professional judgment will be applied to determine indicator conformance.
- CC (Conformance Code), using the following codes:
  - For both Type B and Type P:
    - N/A: Not applicable
  - For Type B:
    - C means that the evidence collected by the assessment team suggests that a state of conformance exists with respect to the applicable requirement.
    - NC means that the evidence collected by the assessment team suggests that a state of non-conformance exists with respect to the applicable requirement.
  - For Type P:
    - Ratings of 'I', 'II' and 'III' signify a high, medium and low level of conformance to the indicator, respectively.

Cross-Cutting Documentation Requirements

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
CC-01	T§1	Please complete all sections of this PD. If sections of the PD are not applicable, explicitly state that the section is left blank on purpose and provide an explanation why this section is not applicable.	All applicable sections of the PD Template are completed; if any section(s) of the PD Template are not applicable, it is explicitly stated that "this section is left blank on purpose" and an explanation of why the section is not applicable is provided.	The ERPD is considered complete, as all sections of the ERPD are completed as required by the program rules	L	B	
CC-02	T§1	Provide definitions of key terms that are used and use these key terms, as well as variables etc., consistently using the same abbreviations, formats, subscripts, etc.	Key terms[3] are defined and used consistently, with the same spelling, formatting and/or abbreviations, throughout the ERPD.	The ERPD includes sufficient definitions for key words and terms and is consistent throughout the document	L	B	
CC-03	T§1	Provide definitions of key terms that are used and use these key terms, as well as variables etc., consistently using the same abbreviations, formats, subscripts, etc.	Mathematical variables are presented consistently, with the same notation, throughout the ERPD.	The variables are presented consistently, with the same notation, throughout the ERPD.	L	B	
CC-04	T§1	The presentation of values in the PD, including those used for the calculation of emission reductions, should be in international standard format e.g.,,, 1,000 representing one thousand and 1.0 representing one.	All values in the ERPD are in international standard format, as in the following examples: (a) 1,000 represents one thousand and (b) 1.0 represents one. Values are not presented in the format that reverses the use of the comma and period (e.g.,,, 1.000 representing one thousand).	All values in the ERPD are in international standard format	L	B	
CC-05	T§1	Please use International System Units (SI units – refer to http://www.bipm.fr/enus/3_SI/si.html) and if other units are used for weights/currency (Lakh/crore etc.), they should be accompanied by their equivalent S.I. units/norms (thousand/million).	All values in the ERPD are presented using SI units; if values are presented using different units (which is acceptable at the discretion of the ERPD preparer), such values are accompanied by a presentation using SI units.	All values in the ERPD are presented using SI units	L	B	
CC-06	T§1	If the PD contains equations, please number all equations and define all variables used in these equations, with units indicated.	Any equations included in the ERPD contain the following attributes: (1) numbered in sequential order; (2) all variables defined, and (3) units indicated for all variables.	The ERPD provides a sequential presentation of equations, with well defined variables and units	L	B	

[3] A "key term" has the following attributes: (1) not within the standard American or British English lexicon; (2) important for an understanding of how the Program, as described in the ERPD, is compliant with the assessment criteria; and (3) not defined in the Program Requirements glossary.

ISFL ER Program Design Requirements

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-01	T§2.1.1	Name of the ISFL ER Program	The name of the ER Program is reported in the provided table in Section 2.1.1 of the ERPD.	The name is provided appropriately in the required section of the report.	L	B	C
PD-02	T§2.1.1	Name of the Program Area	The name of the jurisdiction constituting the Program Area is reported in the provided table in Section 2.1.1 of the ERPD.	The jurisdiction (Oromia National Regional State) is provided as required in the appropriate section.	L	B	C
PD-03	T§2.1.1	Geographic area of the Program Area (hectares)	A "justifiable" estimate of the size of the Program Area (in units of hectares) is reported in the provided table in Section 2.1.1 of the ERPD.	The program acreage estimate of 29.991 million ha is provided in the appropriate section as required.	L	B	C
PD-04	T§2.1.1	Population of the Program Area	A "justifiable" estimate of the population of the Program Area is reported in the provided table in Section 2.1.1 of the ERPD.	A population estimate of over 30 million is provided in the appropriate section of the PD	L	B	C
PD-05	T§2.1.1	Ex-ante estimate of emission reductions (ERs) for the ISFL ER Program (tonnes of CO2e)	An ex-ante estimate of Emission Reductions for the ISFL ER Program,[4] in units of tCO2e, is reported in the provided table in Section 2.1.1 of the ERPD. The information provided is consistent with that provided in Section 4.6 of the ERPD.	An estimate of the emission reductions have been provided for this section, however it is not clear if this is the estimate for the project lifetime, as the value is not consistent with the values provided in section 4.6 of the ERPD	L	B	C
PD-06	T§2.1.2	Please provide a brief description (roughly 150 words or less) of the rationale for the selection of the jurisdiction for the Program Area for an ISFL ER Program, including its unique characteristics that align with the ISFL Vision.	A description of the rationale for the selection of the jurisdiction for the Program Area, including a description of the unique characteristics of the jurisdiction that align with the ISFL Vision, has been provided in Section 2.1.2 of the ERPD.	A description of the rationale for the selection of the jurisdiction for the Program Area has been included in section 2.1.2 of the ERPD. A description of the unique characteristics of the jurisdiction that align with the ISFL Vision is provided in the ERPD	L	B	C
PD-07	T§2.1.3	Please provide a brief summary (roughly 300 words or less) of… The drivers of AFOLU emissions and removals, including deforestation and forest degradation	A summary of the drivers of AFOLU emissions and removals, as identified in indicator PD-27, is provided in Section 2.1.3 of the ERPD.	A summary of the drivers of AFOLU emissions and removals is provided in the ERPD.	L	B	C
PD-08	T§2.1.3	Please provide a brief summary (roughly 300 words or less) of… The broader vision of the ISFL ER Program, including the proposed interventions to address AFOLU emissions and the impact they will have in the jurisdiction on sustainable land use	A summary of the broader vision of the Program, including the proposed interventions to address AFOLU emissions and the impact they will have on sustainable land use in the jurisdiction, is provided in Section 2.1.3 of the ERPD.	A summary of the broader vision of the Program in line with the indicator requirements has been included in section 2.1.3 of the ERPD.	L	B	C
PD-09	T§2.1.3	Please provide a brief summary (roughly 300 words or less) of… How the ISFL ER Program will engage stakeholders, including Indigenous Peoples (if relevant), women, marginalized groups, and the private sector	A summary of how the ER Program will engage stakeholders, including Indigenous Peoples (if relevant), women, marginalized groups, and the private sector, is provided in Section 2.1.3 of the ERPD.	A summary of how the ER Program will engage stakeholders, including Indigenous Peoples (if relevant), women, marginalized groups, and the private sector, is provided in the ERPD.	L	B	C
PD-10	T§2.1.3	Please provide a brief summary (roughly 300 words or less) of… The expected outcomes of the ISFL ER Program and how they will be sustained beyond the lifetime of the ISFL ER Program	A summary of the expected outcomes of the ER Program, and how they will be sustained beyond	A summary of the expected outcomes of the ER Program, and how they will be sustained beyond the lifetime of the ER Program, is provided in Section 2.1.3 of the ERPD.	L	B	C

[4] See indicators RA-60 through RA-62 for requirements for ex-ante estimates of Emission Reductions.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			the lifetime of the ER Program,[5] is provided in Section 2.1.3 of the ERPD.				
PD-11	T§2.1.4	Estimate of costs and revenues of planned actions and interventions, including institutional, implementation, and transaction costs	An estimate of costs and revenues of planned actions and interventions, including institutional, implementation, and transaction costs, is reported in the provided table in Section 2.1.4 of the ERPD. The information provided is consistent with that provided in Section 3.1.3 of the ERPD.[6]	An estimate of costs and revenues of planned actions and interventions, including institutional, implementation, and transaction costs is reported in the provided table in Section 2.1.4 of the ERPD and is consistent with Section 3.1.3	L	B	C
PD-12	T§2.1.4	Amount of financing identified/secured financing for planned actions and interventions	The amount of financing identified or secured for planned actions and interventions is reported in the provided table in Section 2.1.4 of the ERPD. The information provided is consistent with that provided in Section 3.1.3 of the ERPD.[6]	An estimate of the amount of financing identified or secured for planned actions and interventions is reported in the provided table in Section 2.1.4 of the ERPD and is consistent with Section 3.1.3.	L	B	C
PD-13	T§2.1.4	Financing surplus or gap amount	The amount of financing surplus or gap is reported in the provided table in Section 2.1.4 of the ERPD. The information provided is consistent with that provided in Section 3.1.3 of the ERPD.[6]	An estimate of the amount of financing surplus or gap is reported in the provided table in Section 2.1.4 of the ERPD and is consistent with Section 3.1.3.	L	B	C
PD-14	T§2.1.4	Please provide a brief summary (roughly 100 words or less) of the measures proposed to address financing gap, if any and arrangements for flow of funds.	A summary of (1) the measures proposed to address the financing gap (if applicable)[7] and (2) arrangements for flow of funds is provided in Section 2.1.4 of the ERPD. The information provided is consistent with that provided in Section 3.1.3 of the ERPD.	A summary of the measures proposed to address the financing gap and arrangements for flow of funds is provided in the ERPD. Section 3.1.3 (Table 6 provides details on the financing plan for implementing planned activities as well as an indication of the financing gap and is consistent with the information provided in section 2.1.4.	L	B	C
PD-15	T§2.2.1	Program entity that is authorized to negotiate/sign the ERPA with the ISFL	The indicated details in the template are provided in Section 2.2.1 of the ERPD.	Program entity that is authorized to negotiate/sign the ERPA with the ISFL is indicated in section 2.2.1 as Mr. Admasu Nebebe.	L	B	C
PD-16	T§2.2.2	Organization(s) responsible for managing/implementing the ISFL ER Program (if more than one, please list all)	The indicated details in the template are provided in Section 2.2.1 of the ERPD.	The organization(s) responsible for managing/implementing the ISFL ER Program is indicated as the Environment, Forest and Climate Change Commission (EFCCC), Oromia Environment and the Forest and Climate Change Authority (OEFCCA) in this section.	L	B	C
PD-17	T§2.2.3	Partner organizations involved in the ISFL ER Program: Please list existing partner agencies and organizations involved in the design and implementation of the ISFL ER Program or that have executive functions in financing, implementing, coordinating and/or controlling activities that are part of the proposed ER Program	Information regarding the existing partner agencies and organizations involved in the design and implementation of the ER Program or that have executive functions in financing, implementing, coordinating and/or controlling activities that are part of the ER Program is	The five partner organization involved in the ISFL ER Program are listed in section 2.2.3 of the ERPD.	L	B	C

[5] The "lifetime of the Program," for purposes of this indicator, must extend at least to the end of the ERPA Term, and could optionally extend beyond that period if ER Program activities are planned to take place after the end of the ERPA Term.

[6] See indicators PD-34 through PD-40 for criteria against which financial data are to be assessed.

[7] See indicator PD-41 through PD-44 for criteria against which the plan for mitigating the financing gap (if applicable) is to be assessed.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			included in the provided table in Section 2.2.3 of the ERPD.				
PD-18	T§2.2.4	Please provide a brief description (roughly 150 words or less) of coordination within the government (across ministries/departments) for the management/implementation of the ISFL ER Program. For example, how do ministries focused on environmental issues, agriculture, finance, etc. coordinate formally or informally on this program, including through coordination platforms or shared responsibilities.	A description of coordination within the government (across ministries/departments) for the management/implementation of the ER Program, as indicated in the PD Template, is provided in Section 2.2.4 of the ERPD.	A description of coordination within the government (across ministries/departments) for the management/implementation of the ER Program is indicated in Section 2.2.4.	L	B	C
PD-19		Please provide a brief description (roughly 150 words or less) of coordination between the government and other organizations (including civil society, the private sector, and other stakeholders) for the management/implementation of the ISFL ER Program.	A description of coordination between the government and other organizations (including civil society, the private sector, and other stakeholders) for the management/implementation of the ER Program is provided in Section 2.2.4 of the ERPD.	A description of coordination between the government and other organizations for the management/implementation of the ER Program is provided in Section 2.2.4.	L	B	C
PD-20	PR§3.1.1	ISFL ER Programs are required to demonstrate that they are undertaken using a jurisdictional and Integrated Landscape Management approach, in accordance with the ISFL's Vision.	The ER Program design is aligned with the Integrated Land Management approach, including collaboration among various stakeholders with the purpose of achieving sustainable landscapes.	The ER program design includes a collaboration among various stakeholders with the purpose of achieving sustainable landscapes.	L	P	I
PD-21			The ER Program design is aligned with concepts described in the ISFL Vision, including its intention to reduce greenhouse gas emissions at the jurisdictional scale.	The ER Program design is aligned with concepts described in the ISFL Vision.	L	P	I
PD-22	PR§3.2.1	The design of the ISFL ER Program shall be informed by the contribution of key sources and sinks to the total GHG emissions and removals in the Program GHG Inventory (described in section 4.1).	The subcategories included in the Step 1 selection (see indicators RA-16 through RA-19) are identified for the purposes of ER Program design.	The subcategories included in the Step 1 selection are identified in section 4.2.1 of the ERPD and the corresponding emissions calculation workbook /4/.	L	B	C
PD-23	PR§3.2.2	For the analysis of trends, ISFL ER Programs shall identify the key drivers of AFOLU emissions and removals, by performing a qualitative historical analysis (or quantitative if data are available) to identify those subcategories for which emissions or removals have changed significantly over the base period, and a qualitative analysis of the subcategories likely to show a significant increase of emissions or decrease of removals in the future.	Subcategories that have been subject to significant increases in emissions or decreases in removals during the Baseline Period (see indicator RA-20 for guidance regarding specification of the Baseline Period) are identified in an analysis of trends using one of the following approaches:	A qualitative analysis of trends to identify subcategories that have been subject to significant increases in emissions or decreases in removals during the Baseline Period are identified in section 3.1.1 of the ERPD and the conclusions drawn from the analysis are justifiable. Additional quantitative information is also provided /4/ and included in the analysis of trends presented in section 3.1.1.	L	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			1. A quantitative analysis, if quantitative data are available to support such an analysis. 2. A qualitative analysis,[8] if quantitative data are not available to support a quantitative analysis. The conclusions drawn from the analysis (i.e., the specific identification of subcategories) are "justifiable".				
PD-24			Subcategories that are likely to show a significant increase in emissions or decrease in removals in the relatively near future[9] are identified in the analysis of trends.[10] The conclusions drawn from the analysis (i.e., the specific identification of subcategories) are "justifiable".	Subcategories that are likely to show a significant increase in emissions or decrease in removals in the relatively near future are identified in the analysis of trends in section 3.1.2 of the ERPD.	L	B	C
PD-25			The data constituting inputs to the analysis of trends are the "best available" data.	The inputs to the analysis of trends constitute the best available data. Some datasets used such as the Woody Biomass Inventory and strategic Planning Project is likely outdated (from 2004) and is not considered of high quality, but is still the best available data. The data inputs constituting the analysis of trends are not explicitly stated nor is the qualification as the best available data described, which could be an area of improvement.	L	P	II
PD-26			The analysis of trends has appropriately identified any subcategories not included in the Step 1 selection meeting one or more of the following criteria: 1. The subcategory has been associated with a significant increase in emissions or a significant decrease in removals during the Baseline Period.	N/A. No additional subcategories have been selected.	L	P	I

[8] The qualitative analysis may (1) be based on expert judgement and (2) include consideration of whether emissions from a subcategory have decreased or removals have increased through the use of mitigation techniques, such as technology adoption or a coordinated change in land management practices.

[9] The temporal scale of the analysis should probably roughly align with the anticipated duration of the ERPA Term unless there is good reason to do otherwise. The intent is that the projection include all phases of the ERPA Term, not just the first phase, in order to appropriately consider any circumstances that may not occur in the immediate future but can reasonably be projected to occur by the end of the ERPA Term.

[10] The qualitative analysis may (1) be based on expert judgement and (2) include consideration of any barriers that prevent mitigation policies and measures to be implemented in the absence of the proposed Program (i.e., it is permissible to project likely future conditions under a scenario in which such barriers remain in place).

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			2. The subcategory is likely to be associated with such an increase in emissions or decrease in removals during the relatively near future.[11]				
PD-27	PR§3.2.2; T§3.1.1	For the analysis of trends, ISFL ER Programs shall identify the key drivers of AFOLU emissions and removals, by performing a qualitative historical analysis (or quantitative if data are available) to identify those subcategories for which emissions or removals have changed significantly over the base period, and a qualitative analysis of the subcategories likely to show a significant increase of emissions or decrease of removals in the future. Please provide a brief description… of the identified drivers of land use change that contribute to GHG emissions and removals associated with AFOLU (e.g., deforestation and forest degradation and other aspects of land use change) in the Program Area… include more information on the drivers of AFOLU emissions and removals in Annex 1.	The key drivers of land use change associated with the subcategories identified in indicators PD-23 through PD-26 are identified in a "justifiable" fashion and described in the ERPD, as follows: 1. A brief description of identified drivers is provided in Section 3.1.1 of the ERPD. 2. A longer description of identified drivers is provided in Annex 1 of the ERPD.	The key drivers of land use change associated with the subcategories identified in indicators PD-23 through PD-26 are identified with a brief description in section 3.1.1 of the ERPD and a longer description in Annex 1.	L	B	C
PD-28	PR§3.2.1	The design of the ISFL ER Program shall be informed by the contribution of key sources and sinks to the total GHG emissions and removals in the Program GHG Inventory (described in section 4.1) and an analysis of trends. Together these shall be the basis to specify interventions to address the key drivers of AFOLU emissions and removals and to identify the entities that would undertake them.	The subcategories identified in indicator PD-22, and the key drivers of land use change identified in indicators PD-23 through PD-27, have been considered in design of the ER Program (i.e., consideration has been given to the design of activities that are intended to mitigate the emissions or reduced removals associated with any such subcategories or drivers).	The subcategories identified and the key drivers of land use change identified have been considered in design of the ER Program such that program activities include those that will reduce emissions from forestland through degradation, reduce the conversion of forestland to grassland and cropland, and will reduce livestock emissions.	L	B	C
PD-29			One of the following is true for every subcategory identified in indicator PD-22 and/or every key driver of land use change identified in indicators PD-23 through PD-27: 1. One or more ER Program activities has been specifically designed to mitigate the emissions or reduced removals associated with the subcategory or driver.	1. ER program activities have been specifically designed to mitigate emissions associated with each subcategory or drivers as detailed Table 5 in section 3.1.2 of the ERPD. 2. N/A	L	P*	I

[11] An example of such a subcategory would be Forest Land to Cropland, in the case where deforestation rates within the jurisdiction have historically been low but where a significant improvement in access, such as with the recent completion of the Interoceanic Highway between Brazil and Peru, is projected to be accompanied by an increase in deforestation rates.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			2. Otherwise, a compelling rationale can be provided in support of the decision not to address the emissions or reduced removals associated with the subcategory or driver in the ER Program design.				
PD-30	T§3.1.2	Please provide a description (roughly 1,000 words or less) of planned actions and interventions (including existing, improved, and/or new activities; investments; measures; and governance, regulation, and/or policy interventions) for the ISFL ER Program. Include: i. A description of how these actions and interventions impact the main factors influencing emissions or address the drivers of land use change, deforestation, and forest degradation (identified in a. above) in the subcategories targeted by the ISFL ER Program ii. A description of the prioritization and timelines of the planned actions and interventions based on implementation risks for the activities and their potential benefits.	A description is provided in Section 3.1.2 of the ERPD regarding the planned actions and interventions[12], including the following: 1. A description of how said actions and interventions impact the main factors of land use change, deforestation, and forest degradation in the subcategories targeted by the program. 2. A description of the following: a. The priority placed on each of the planned actions and interventions based on implementation risks for the activities and their potential benefits. b. The timelines of the planned actions and interventions based on implementation risks for the activities and their potential benefits.	Section 3.1.2 contains a description and justification of the program's planned actions and interventions. It references Annex 1 for greater detail on the as it states "AFLOU mitigation measures, planned actions and interventions are described in detail in Annex 1: Drivers of AFOLU Emissions and Removals)." The planned interventions as well as how they would impact the main drivers of land use change deforestation and forest degradation in each subcategory is described in detail in Table 5 of the ERPD. Annex 1 also provides greater detail on the main drivers of AFOLU emissions in each of the subcategories. There is no description of the priority placed on the planned actions and interventions and the timelines of the actions based on implementation risk for the activities is not described in this section.	L	B	C
PD-31			Partnerships have been entered into with private sector actors, or there are concrete plans to pursue such partnerships.	Section 2.2.4 of the ERPD describes how partnerships with private sector actors have been entered into to coordinate relevant agriculture and forest landscape initiatives in the region. The OFLP Strategic Action Plan to Engage Private Sector /17/ provides greater description of how private sector can contribute to program initiatives.	L	P*	I
PD-32			Where partnerships have been entered into or are planned, these partnerships are likely to be effective in addressing the drivers of emissions.	In reviewing the ERPD and the Strategic Action Plan to Engage Private Sector /17/, expert judgement was applied to determine that where the partnerships have been entered into, they	L	P*	I

[12] It is acceptable to group actions and interventions for purposes of satisfying this indicator, so long as the clarity of the analysis is not degraded (e.g., it is not necessarily that a separate description be provided regarding how each action or intervention impacts "the main factors influencing emissions or address the drivers of land use change, deforestation").

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
				are likely to be effective in addressing the drivers of emissions as the actors are commercial landowners, investors, wood processing industries, commercial agricultural firms, etc, who are the agents of emissions themselves.			
PD-33			Risks to (a) ER Program implementation and (b) the potential benefits of planned actions and interventions have been adequately considered in planning the actions and interventions, and appropriate mitigation mechanisms have been incorporated into Program design, where feasible.	Expert judgement was used to conclude that risks to the ER program implementation and potential benefits of planned interventions have been adequately assessed as described in sections 4.7.1-4.7.2 of the ERPD and in the OFLP Project Appraisal Document. For each risk the appropriate mitigation mechanisms are detailed and incorporated into the Program design.	L	P*	I
PD-34	T§3.1.3[13]	Please outline the financing plan for the ISFL ER Program. A guidance note on the preparation of financing plans for REDD+ and landscape emission reduction programs provides the details of the steps to be followed in the preparation of the financing plan. Please include the following information: i. Costs of program implementation (sum of implementation costs, institutional costs and transaction costs) ii. Sources of financing (public and private sources, reinvestment of revenue from program and amount of ER revenue proposed for use in program implementation) iii. Financing surplus or gap of the ER program; and options for addressing financing gap, if any	A specific time period covered by the financing plan has been identified, and this time period is "justifiable". It is generally expected that this period commences at the date of effectiveness of the ER Program (as defined by ER Program personnel) and extends past the end of the ERPA Term;[14] where a shorter time period is covered by the financing plan, the following are true: 1. The time period covered by the financing plan is appropriate to the circumstances of the ER Program. 2. The time period covered by the financial plan is unlikely to result in the conclusion that the ER Program enjoys a financing surplus where use of a longer time period would result in the conclusion that the ER Program is faced with a financing gap.	Annex 2 in the ERPD details the Financing Plan for the OLFP program.	L	P*	
PD-35			A "justifiable" estimate of the costs of ER Program implementation (sum of implementation costs, institutional costs and transaction costs) is reported in the provided table in Section 3.1.3 of the ERPD.	A "justifiable" estimate of the costs of ER Program implementation (sum of implementation costs, institutional costs and transaction costs) is reported in the provided table in Section 3.1.3 of the ERPD.	L	B	C

[13] Assessment of all indicators related to T§3.1.3 will be determined by consultation with the World Bank Group.

[14] From Section 1 of Annex 2 of the Financing Plan Note: "It is useful to define the Program period of the financing plan which may cover the period from the date of effectiveness of an ER Program until the end of Program implementation which is expected to be longer than the period covered under the emission reduction payment agreement (ERPA). Therefore, the Program period of the financing plan needs to be realistic and consider the duration and circumstances of Program implementation."

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-36			The estimate of the costs of ER Program implementation is comprehensive; that is, it (1) covers the entire time period covered by the financing plan (as assessed in indicator PD-34) and (2) includes all of the types of costs identified in Section 2.2.1 of the Financing Plan Note unless any omitted costs are not relevant to ER Program implementation.	The cost estimate of the ER program implementation (Tables 2 and 6 in ERPD) is comprehensive in that it is financing corresponds to the amount of budget that the OFLP needs to achieve the emissions reductions by the end of the program period (2030) and includes all types of costs identified in Section 2.2.1 of the Financing Plan Note. A further breakdown of the costs by type (e.g., operational, institution) could be clearer.	L	P*	II
PD-37			A "justifiable" determination of the sources of financing is provided in the provided table in Section 3.1.3 of the ERPD.	Table 3 in section 3.1.3 of the ERPD includes the source of financing for each planned action. The sources range from international government institutions, corporations, NGOs, the World Bank and the Ethiopian government which are considered to be justifiable.	L	B	C
PD-38			1. The quantity of unsecured financing[15] has been conservatively determined; i.e. it includes only funding sources that are very likely to materialize. 2. Unsecured financing[15] that is unlikely to flow during the 2-3 years from the start of an ER Program or until after the first verification event has been excluded as a source of funding (such funding may be included in the sensitivity analysis) unless a compelling rationale can be provided for its inclusion. 3. Documentary evidence can be provided to support any claimed secured financing. 4. Financing that will not flow until after the time period covered by the financing plan (as assessed in indicator PD-34) is excluded from the reported information.	The quantities of unsecured financing has been conservatively reported and is based on the uncertainties of annual budgets from OWE and other organizations. The financial plan is well supported by documentation. The plan provided in the ERPD excludes areas not covered by the initial assessment period	L	P	
PD-39			The identified sources of finance are sufficient to have a meaningful impact on the land use	The identified sources of finance as described in Table 6 of the ERPD appear to be appropriate	L	P*	I

[15] The Financing Plan Note suggests unsecured financing be defined as "The sources of financing that are anticipated during Program period but cannot be verified at the beginning of an Program."

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			activities and drivers which cause emissions and removals, as determined in indicator PD-27.	and sufficient to have a meaningful impact on the drivers which cause emissions and removals.			
PD-40			A "justifiable" estimate of the financing surplus or gap of the ER Program, calculated as the difference between funding financing available and ER Program cost (both for each year of the time period covered by the financing plan and across time periods) is reported in the provided table in Section 3.1.3 of the ERPD.	The funding gap is calculated correctly based on the program design at this time	L	B	C
PD-41			If funding gaps exist, a plan for mitigating them is presented in Section 3.1.3 of the ERPD.	A brief mitigation plan is provided as required. This should be updated as future funding becomes available	L	B	
PD-42			If funding gaps exist, the plan for mitigating them, as presented in Section 3.1.3 of the ERPD, is concrete, making clear the specific actions to be taken to mitigate gaps.	See above	L	P*	
PD-43			If funding gaps exist, the plan for mitigating them, as presented in Section 3.1.3 of the ERPD, is time-bound, with specific milestones provided for additional funding to be secured.	See above	L	P*	
PD-44			If funding gaps exist, the plan for mitigating them, as presented in Section 3.1.3 of the ERPD, is realistic and reasonably capable of being implemented.	See above	L	P*	
PD-45	T§3.1.3	Please briefly describe the following (roughly 150 words or less): i. Financial and economic analysis (e.g.,, NPV, IRR) ii. Sensitivity analysis (to assess the influence of changes in costs, revenues, funding sources and discount rates on program financing) iii. Proposed fund flow arrangements	A "justifiable" financial analysis and economic analysis, as generally described in Section 2.7 of the Financing Plan Note[16], is described in Section 3.1.3 of the ERPD.	The information provided is consistent with the financial plan assessed by the audit team and is in conformance with the program rules	L	B	
PD-46			The discount rate used for the financial analysis has the following attributes: 1. The selection of the discount rate is "justifiable". 2. The discount rate is reflective of the expectations of the Program Entity for return on long-term investments[17], as	In general, the required information is provided in the ERPD. Given, that this is a first of implementing activities on this scale, interest rates and other rates of return may need to be updated in the future.	L	P*	

[16] In assessing against these indicators, the assessment team is not to assess against the Financing Plan Note, but merely to confirm that described analysis follows the general form as set out in the Financing Plan Note.

[17] Such an expectation is referred to as the "time value of money" in the economics literature.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			determined using one of the following sources of information: a. An internal discount rate used by the Program Entity in financial planning and analysis. b. The interest rate charged by financial institutions in the host country on long term loans for forestry or agriculture or other land use projects.[18] c. Any other source that, as accurately as possible, reflects the expectations of the Program Entity for return on long-term investments.				
PD-47			The calculation of net present value or internal rate of return in the financial analysis is "justifiable" and is carried out according to good practice in the field of financial investment analysis.	The NPV analysis is based on standard accounting practices.	L	P*	
PD-48			Any values for externalities[19] in the economic analysis are "justifiable" (the "base" prices for carbon, as set out in Section 2.7.4 of the Financing Plan Note, are automatically deemed "justifiable").	The information provided in the EROD is consistent with the guidance provided in the Financing Plan Note.	L	P*	
PD-49			The calculation of net present value or internal rate of return in the economic analysis is "justifiable" and is carried out according to good practice in the field of financial investment analysis.	The NPV analysis is based on standard accounting practices.	L	P*	
PD-50			A "justifiable" sensitivity analysis[20] (to assess the influence of changes in costs, revenues, funding sources and discount rates on ER Program financing), as generally described in Section 2.7 of the Financing Plan Note[16], is described in Section 3.1.3 of the ERPD.	The sensitivity analysis was performed in conformance with the Financing Plan Note as required.	L	B	

[18] As suggested in Section 2.7.3.1 of the Financing Plan Note.
[19] Externalities, in this context, are costs and benefits not directly paid by or flowing to the Program Entity, respectively.
[20] The assessment criteria does not clarify whether it is required that the uncertainty analysis pertain to the financial analysis, the economic analysis, or both; therefore, the uncertainty analysis may pertain to only one, or both, of the above.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-51			The range of discount rates used for the sensitivity analysis is "justifiable" and adequately captures the range of variability that could reasonably be expected in the discount rate.[21]	The discount rates provided in Annex 2 for the sensitivity analysis planned actions and interventions are free from actual or potential entanglement with legal and/or regulatory gaps.	L	P*	
PD-52			The "parameters" included in the sensitivity analysis include changes in costs, revenues, financing sources, discount rates, and other ER Program specific "parameters" that have significant influence on the ER Program.	The parameters provided in Annex 2 are in conformance with the Financing Plan Note and include changes in costs, revenues, financing sources, discount rates, and other ER Program specific "parameters" that have significant influence on the ER Program.	L	P*	
PD-53			The impact of a "justifiable" range of upper thresholds for costs, and a "justifiable" range of lower thresholds for benefits, are tested in the uncertainty analysis to assess whether there is an impact on the outcome of the analysis.	While a range of costs and revenues, including multiple appropriate discount rates have been considered in the sensitivity analysis however, the uncertainty analysis shall be considered in the verification phase of this process.	L	P*	
PD-54			Key variables that have major influence on costs, revenues, cash flow and the calculated net present value or internal rate of return are identified through the uncertainty analysis, and the identification of such variables is reasonable.	See above	L	P*	
PD-55			The proposed fund flow arrangements are described in Section 3.1.3 of the ERPD.	The required information is included in section 3.1.2 of the ERPD.	L	B	
PD-56			The description of the proposed fund flow arrangements in 3.1.3 of the ERPD provides a description of plans for the dissemination of funds from the sale of Emission Reductions between any relevant entities involved in operation of the Program.	The required information is included in section 3.1.3 of the ERPD.	L	B	
PD-57			The proposed fund flow arrangements, as described in Section 3.1.3 of the ERPD, are appropriate in light of the formal and informal institutional arrangements between entities involved in operation of the Program.	Based on professional experience with AFOLU projects, the assessment team agrees that the proposed fund flow arrangements, as described in Section 3.1.3 of the ERPD, are appropriate in light of the formal and informal institutional arrangements between entities involved in operation of the Program.	L	P*	
PD-58	TAnnex2	Please include the summary financing plan according to the template below.	The summary financing plan is included, according to the provided template, in Annex 2 of the ERPD.[22] The information provided is more detailed than, but consistent with, the information provided in Section 3.1.3 of the ERPD	The information provided in Annex 2 is more detailed than the information in the ERPD, however the information in the ERPD is in conformance with the Program rules.	L	B	

[21] The default range of -/+2 percent as lower and upper bound discount rates, as suggested in Section 2.7.3.3 of the Financing Plan Note, should automatically be assigned a conformance ranking of I for purposes of this indicator.

[22] In areas where there exists lack of clarity regarding how the provided template is to be filled out, any reasonable interpretation of the provided template will be considered acceptable for purposes of this indicator.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			(e.g., the same total ER Program costs are reported in the two sections).				
PD-59			The presentation of information in the financing plan included in Annex 2 of the ERPD follows the categories set out in the Financing Plan Note[23] unless a compelling rationale can be provided in support of a deviation from the categories set out in the Financing Plan Note.	The presentation of information in the financing plan included in Annex 2 of the ERPD follows the categories set out in the Financing Plan Note.	L	P	
PD-60	T§3.1.4[24]	Please provide an analysis (roughly 500 words or less) of the planned actions and interventions in the context of relevant local, regional and national laws, statutes and regulatory frameworks, including relevant international conventions and agreements. Please identify any potential compliance issues of the actions and interventions with these laws, statutes, regulatory frameworks, conventions and agreements; and identify legal and regulatory gaps. If applicable discuss how these issues will be addressed.	A "justifiable" analysis of the planned actions and interventions in the context of relevant legal requirements[25] is provided in Section 3.1.4 of the ERPD.	See Below.	L	B	
PD-61			The following information is provided in Section 3.1.4 of the ERPD: 1. A "justifiable" analysis of whether any of the planned actions and interventions has the potential to result in noncompliance with a relevant legal requirement. 2. If any such potential has been identified, a description of the situation of potential noncompliance and the proposed means for addressing it.	The information provided in section 3.1.4 of the ERPD provides a justifiable analysis of whether any of the planned actions and interventions has the potential to result in noncompliance with a relevant legal requirement. No potential has been identified at this time.	L	B	
PD-62			The following information is provided in Section 3.1.4 of the ERPD: 1. A "justifiable" analysis of whether there are any legal or regulatory gaps that may impact the implementation of the planned actions and interventions (e.g., if there is lack of regulatory clarity on the management responsibilities of the various agencies involved in implementation).	The information provided in section 3.1.4 of the ERPD provides a justifiable analysis of whether any gaps of regulatory clarity areas exist. No gaps were noted or found by the assessment team.	L	B	

[23] For example, the determination of what constitutes "multilateral" funding follows Section 2.3.2 of the Financing Plan Note.
[24] Assessment of all indicators related to T§3.1.4 will be determined by consultation with the World Bank Group.
[25] The term "legal requirements," in the context of the indicators in this checklist, is very broad and includes local, regional and national laws, statutes and regulatory frameworks, including relevant international conventions and agreements.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			2. If any such gap has been identified, a description of the situation and the proposed means for addressing it.				
PD-63			The planned actions and interventions are free from the actual or potential compliance issues in respect of relevant legal requirements[25] or, if this is not the case, an appropriate mitigation plan with a reasonable possibility of success is in place to address any issues.	The information provided in the ERPD shows that the planned actions and interventions are free from the actual or potential compliance issues in respect of relevant legal requirements.	L	P*	
PD-64			The planned actions and interventions are free from actual or potential entanglement with legal and/or regulatory gaps or, if this is not the case, an appropriate mitigation plan with a reasonable possibility of success is in place to address any issues.	The information provided in the ERPD shows that the planned actions and interventions are free from actual or potential entanglement with legal and/or regulatory gaps.	L	P*	
PD-65	T§3.1.5; PR§3.2.5	Please describe (roughly 500 words or less) the following: i. GHG sources and sinks that may be impacted by the proposed ISFL ER Program and an assessment of their associated risk for displacement ii. A strategy for mitigating and/or minimizing, to the extent possible, potential displacement, prioritizing key sources of displacement risk iii. How the ISFL ER Program's planned actions and interventions have been designed to address displacement	1. A "justifiable" identification of the subcategories[26] that can reasonably be projected to be impacted by the Program[27] is provided in Section 3.1.5 of the ERPD. 2. For each subcategory identified in step (1) above, a "justifiable" assessment of the risk of the subcategory for Displacement[28] is provided in Section 3.1.5 of the ERPD.	Section 3.1.5 of the ERPD provides the required information.	L	B	
PD-66			A strategy for mitigating and/or minimizing, to the extent possible, potential displacement, prioritizing key sources of displacement risk, is provided in Section 3.1.5 of the ERPD.	As the Program is designed to avoid displacement, the assessment team agrees that a strategy is spelled out in the program design.	L	B	
PD-67			A "justifiable" assessment is provided in Section 3.1.5 of the ERPD regarding how the ER Program's planned actions and interventions have been designed to address Displacement.	See above	L	B	

[26] The term "sources and sinks" is used in the Program Requirements and the PD Template, but review of the IPCC 2006 Guidelines suggests that these terms are used somewhat interchangeably with the term "category" (of which a subcategory would be a component).
[27] Note that the list of such subcategories may or may not be identical to the list of subcategories eligible for ISFL Accounting. It is quite possible that the ER Program will impact subcategories that are currently not included in the accounting scope.
[28] Emissions occurring outside the host country are not considered to be Displacement unless it is completely evident that they are a consequence of land use activities moving from inside the Program Area to an area outside the Program Area.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-68			The planned actions described in Section 3.1.5 of the ERPD are likely to be effective in to mitigating and/or minimizing potential Displacement.		L	P*	
PD-69	T§3.2	Please describe (roughly 500 words or less) the stakeholder information sharing and consultation mechanisms or structures that have been used in the design of the ISFL ER Program. As part of this description, explain how the information sharing and consultation mechanisms or structures were in a form, manner and language understandable to the affected stakeholders for the ER Program. Please also describe how stakeholder feedback was incorporated in the design of the ISFL ER program. Additionally, for the implementation phase of the ER Program, provide an overview of the plans for consultations and meetings, a description of publications and other information used and the mechanisms for receiving and responding to feedback, in order to show how the consultation process will be structured and maintained during this phase. Describe how the sum of these actions will result in the full, effective and on-going participation of relevant stakeholders. Provide information on how the process builds on the stakeholder outreach and consultation process implemented as part of national REDD+ Readiness activities.	A description of the stakeholder information and consultation mechanisms or structures that have been used in the design of the ER Program have been described in Section 3.2 of the ERPD, including the following: 1. An explanation of how the information sharing and consultation mechanisms or structures were in a form, manner and language understandable to the "affected stakeholders" for the ER Program. 2. A description of how stakeholder feedback was incorporated in the design of the ER Program. 3. The following information regarding the ER Program implementation phase: 4. An overview of the plans for consultations and meetings during the implementation phase. 5. A description of publications and other information used and the mechanisms for receiving and responding to feedback, in order to show how the consultation process will be structured and maintained during the implementation phase. 6. A "justifiable" description of how the sum of the actions described in Section 3.2 of the ERPD will result in the full, effective and on-going participation of "relevant stakeholders". 7. A "justifiable" assessment of how the process described in Section 3.2 of the ERPD builds on the stakeholder outreach and consultation process	Whereas, the assessment team was unable to confirm through on-site activities, the information provided in the ERPD is appropriate for meeting the requirements of these criteria.	L	B	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			implemented as part of national REDD+ Readiness activities.				
PD-70			1. The consultations previously carried out, as described in Section 3.2 of the ERPD, included appropriate representatives of the groups constituting “relevant stakeholders”. 2. The consultations and meetings planned for the implementation phase of the ER Program, as described in Section 3.2 of the ERPD, will include appropriate representatives of the groups constituting “relevant stakeholders”.	The ERPD, Section 3.2 (Table 3 , pg.18-27; 46) and the records of the many consultations with "relevant stakeholders" provide sufficient information regarding the inclusion of appropriate representatives of these groups of stakeholders.	L	P*	I
PD-71			Where necessary, the venues for the consultations described in Section 3.2 of the ERPD provided appropriate access to, and made appropriate accommodation for participation by, vulnerable or disadvantaged groups (e.g., disabled individuals, women, minorities); any appropriate actions to safeguard the personal safety of members of such groups, so as to afford full and equal participation, were likewise undertaken.	In review of Section 3.2 and 3.6 of the ERPD and records of consultations, it is unclear how the venues provided appropriate access and guarantee equal participation of disabled individuals and provide little information on how venues were made accessible and enabled equal participation to all disadvantaged groups. Section 3.6 (pg.50) does state that "community level consultations were designed and conducted considering inclusiveness as much as possible; no one is left out within those selected localities/kebeles (women, men, young, and those considered vulnerable without distinction)." Records of consultations and/or Section 3.2 of the ERPD could include details on access to venues for those with disabilities.	L	P*	II
PD-72			Any documentation used for the stakeholder consultations described in Section 3.2 of the ERPD was made publicly available in a timely fashion and in a form, manner, and language understandable to the “affected stakeholders”.	In review of Section 3.2 (pg.40) of the ERPD and records of consultations, it is clear that documentation on consultations was made publicly available in a form, manner and language understandable to the "affected stakeholders" and shared on a regular basis.	L	P*	I
PD-73			The outcomes of the stakeholder consultations described in Section 3.2 of the ERPD were carefully documented (including information on participants, purpose of meetings, documentation used, etc.) and such minutes or	Based on a review of Sect. 3.2, Annex 4 and Annex 5 of the ERPD, the outcomes of stakeholder consultations were carefully documented including information on	L	P*	I

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			agreements for future actions were disclosed publicly or made available to participants.	participants, purpose of meetings, dates, and meeting minutes were disclosed publicly.			
PD-74			Stakeholder feedback was sought in good faith during the stakeholder consultations described in Section 3.2 of the ERPD, and such feedback was duly incorporated, where relevant, into the design of the Program.	Based on a review of Annex 4, Sect. 3.2, 3.6 and records of consultations, stakeholder feedback was sought in good faith during consultations and such feedback was duly incorporated into the design of the program.	L	P*	I
PD-75			If necessary, Section 3.2 of the ERPD contains a description of plans for future stakeholder consultations, including the stakeholders who will be consulted, the issues that will be discussed, and any relevant timelines.	Section 3.2 of the ERPD does not clearly state plans for future stakeholder consultations and does not provide relevant timelines. Missing information on plans for future consultations.	L	P*	III
PD-76	T§3.4	Please describe (roughly 500 words or less) the identified appropriate FGRM(s) to be utilized for the ISFL ER Program, including any applicable customary FGRMs…	The following is provided in Section 3.4 of the ERPD: 1. For any Feedback and Grievance Redress Mechanism(s) (FGRM(s)) that is/are currently in place, a description of such mechanism(s).[29] 2. For any FGRM(s) that is/are not yet in place, a description of the proposed mechanism to be developed into a full-fledged FGRM.	Based on a review of Section 3.4 of the ERPD, a description of the FGRM currently in place is included in conformance with the requirement.	L	B	C
PD-77	PR§3.4.1	ISFL ER Programs are required to identify an appropriate Feedback and Grievance Redress Mechanism (FGRM) before implementation of ISFL ER Program activities.	If implementation of any actions and interventions of the ER Program have already commenced, an FGRM was identified prior to implementation of any ER Program activities.	N/A	L	B	
			Any FGRM that is currently in place is…[30]				
PD-78			**Participatory**: designed in consultation with "relevant stakeholders".	In review of the FGRM in the ERPD, it is unclear who was involved in this specific design process (although it is clear who was involved in the general stakeholder consultation process which presumably includes the FGRM)	L	P*	II
PD-79			**Legitimate**: having clear and transparent governance structures to ensure that no party to the process can interfere with the fair conduct of process.	In review of the FGRM in the ERPD and the Consultation and Participation Plan (pg.37-41), the governance structures outlined in the FGRM process are clear and transparent.	L	P*	I
PD-80			**Transparent**: providing sufficient transparency of process and outcome to meet the public interest	In review of the FGRM in the ERPD and the Consultation and Participation Plan (pg.40-41),	L	P*	I

[29] Note that the ERPD Template does not necessarily require that the FGRMs be described in exhaustive detail in Section 3.4. Particularly if there are multiple FGRM and/or if the mechanisms involved are complex, it may not be feasible for a comprehensive description to be provided within the suggested 500-word limit. It is acceptable for a summary description to be provided in the ERPD, with the actual FGRM(s) described in a greater level of detail elsewhere.

[30] These indicators are not applicable where no FGRMs are currently in place.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			concerns at stake, with transparency presumed wherever possible.[31]	the governance structures and procedures outlined provide for sufficient transparency of the process and outcome to meet the public interest concerns at stake.			
PD-81			**Equitable**: ensuing that aggrieved parties have reasonable access to sources of information, advice, and expertise necessary to engage in a grievance process on fair and equitable terms.	In review of the FGRM in the ERPD and Consultation and Participation Plan, it is unclear how aggrieved parties will have reasonable access to sources of information, advice and expertise necessary to engage in a grievance process on fair and equitable terms.	L	P*	III
PD-82			**Predictable**: 1. Providing a clear and known procedure, with identified time frames for each stage. 2. Providing clarity on the types of process and outcome it can (and cannot) offer. 3. Providing a means of monitoring the implementation of any outcome.	In review of the FGRM in the ERPD (pg. 161) and the Consultation and Participation Plan (pg. 40-41), procedures and monitoring of outcomes are clear. Timelines for each stage is two weeks according to the FGRM but could further be clarified.	L	P*	I
PD-83			**Appropriate** given cultural context, local customs, and ER Program conditions and scale.	The FGRM (ERPD, Sect.3.4 42-43) provides options for grievances that are appropriate given the cultural context, local customs and the conditions and scale of the ER Program.	L	P*	I
PD-84			Inclusive of **local, customary ways of grievance resolution** (such customary resolution mechanisms should be evaluated and incorporated into the system).	Section 3.2 of the ERPD (pg. 42-43) provides sufficient information on the local, customary ways of grievance resolution.	L	P*	I
PD-85			**Flexible**: offering a variety of grievance resolution approaches (not just a single grievance procedure), where appropriate.	The FGRM is flexible in that it offers a variety of grievance resolution approaches, as described in the ERPD, Section. 3.2 (p.42-43).	L	P*	I
PD-86			**Monitored**: having a process designed to systematically monitor the overall effectiveness of the FGRM and identify procedures to improve the FGRM.[32]	In review of the ERPD, Section 3.2, it is unclear how the FGRM process will include monitoring of its overall effectiveness.	L	P*	III
			Where no FGRMs are currently in place…[33]				
PD-87			Any proposed mechanisms are technically feasible.	N/A	L	P*	

[31] In other words, wherever a choice is made, in designing the process, between greater and lesser levels of transparency, the choice toward greater transparency is always made unless there is a compelling rationale to proceed otherwise.
[32] The identification of this process will, ideally, include the involvement of the "relevant stakeholders".
[33] These indicators are not applicable where at least one FGRM is currently in place.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-88			Any proposed mechanisms are appropriate in light of the principles set out above (e.g., participatory, legitimate, transparent, equitable, predictable).	N/A	L	P*	
PD-89			Any proposed mechanisms build upon existing structures.	N/A	L	P*	
PD-90	T§3.4; PR§3.4.2	Please describe the FGRM procedures and the process taken to make these procedures public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders.	For any FGRM(s) that is/are currently in place[30], a description of the process taken to publicize the FGRM procedures at the local, jurisdictional[34] and national levels, in a language understandable to "relevant stakeholders", is provided in Section 3.4 of the ERPD.	The assessment team agrees that the suite of FGRM's described are sufficient for addressing potential grievances in the Program area. While, links are provided in the ERPD that technically meet the program requirements, the lack of investigation on site, leaves these criteria lacking. Further investigation should be performed during the verification portion of this process	L	B	
	PR§3.4.2	A description of FGRM procedures must be made public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders.	For any FGRM that is currently in place…[30]				
PD-91			A description of FGRM procedures is made public and accessible at the **local level** in a language understandable to "relevant stakeholders".	See above	L	B	
PD-92			A description of FGRM procedures is made public and accessible at the **jurisdictional level** in a language understandable to "relevant stakeholders".	See above	L	B	
PD-93			A description of FGRM procedures is made public and accessible at the **national level** in a language understandable to "relevant stakeholders".	See above	L	B	
PD-94			The FGRM is publicized and accessible to any parties, including to remote and diverse members of the community, vulnerable groups such as women, poor, youth, and people with disabilities and special needs.	See above	L	P*	
PD-95	PR§3.5.1; T§3.5.1; TAnnex3[35]	Please describe (roughly 500 words or less) the land and resource tenure regimes in the Program Area, including… 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 Program Area (including Indigenous Peoples and other relevant communities);	A "justifiable" description of 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 Program Area (including Indigenous Peoples and other relevant communities) is provided in Section 3.5.1 of the ERPD and elaborated on in Annex 3 of the ERPD.	Whereas, the assessment team agrees that the information provided in the ERPD is sufficient for meeting the requirements of these criteria, the team relied on the World Bank due diligence to determine full conformance.	L	B	
PD-96	PR§3.5.1; T§3.5.1; TAnnex3	Please describe (roughly 500 words or less) the land and resource tenure regimes in the Program Area, including… The legal status of such rights, and any significant ambiguities or gaps in the	A "justifiable" description of the legal status of land and resource tenure rights, and any significant ambiguities or gaps in the applicable legal framework (especially as pertaining to the	See above	L	B	

[34] I.e., within the jurisdiction within which the ER Program is to be implemented.

[35] Assessment of all indicators related to T§3.5.1 will be determined by consultation with the World Bank Group.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		applicable legal framework, including as pertains to the rights under customary law;	recognition of rights under customary law), is provided in Section 3.5.1 of the ERPD and elaborated upon in Annex 3 of the ERPD.				
PD-97	PR§3.5.1; T§3.5.1; TAnnex3	Please describe (roughly 500 words or less) the land and resource tenure regimes in the Program Area, including… Areas within the Program 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 ISFL ER Program, how such conflicts or disputes have been or are proposed to be addressed	A "justifiable" description of areas within the Program Area that are subject to significant conflicts or disputes related to contested or competing claims or rights is provided in Section 3.5.1 of the ERPD and elaborated upon in Annex 3 of the ERPD.	See above	L	B	
PD-98	PR§3.5.1; T§3.5.1; TAnnex3	Please describe (roughly 500 words or less) the land and resource tenure regimes in the Program Area, including… Any potential impacts of the ISFL ER Program on existing land and resource tenure in the Program Area.	A "justifiable" description of any potential impacts of the ER Program on existing land and resource tenure in the Program Area is provided in Section 3.5.1 of the ERPD and elaborated upon in Annex 3 of the ERPD.	See above	L	B	
PD-99	PR§3.5.1; T§3.5.1; TAnnex3	Please elaborate how the assessment has been conducted in a consultative, transparent and participatory manner, reflecting inputs from relevant stakeholders.	A description of the process undertaken to ensure that the assessment has been conducted in a consultative, transparent and participatory manner, reflecting inputs from "relevant stakeholders", is provided in Section 3.5.1 of the ERPD and elaborated upon in Annex 3 of the ERPD.	See above	L	B	
PD-100	PR§3.5.1; T§3.5.1; TAnnex3	Please describe any relevant issues gaps, conflicts, contested claims and potential impacts related to land and resource tenure regimes in the Program Area that have been identified and that are considered critical for the successful implementation of the ISFL ER Program and explain how these have been or will be taken into consideration in the design and implementation of the ISFL ER Program.	The following is provided in Section 3.5.1 of the ERPD and elaborated upon in Annex 3 of the ERPD: 1. A "justifiable" description of any relevant issues, gaps, conflicts, contested claims and/or potential impacts related to land and resource tenure regimes in the Program Area that have been identified and that are considered critical for the successful implementation of the ER Program. 2. An explanation of how such issues, gaps, conflicts, contested claims and/or potential impacts have been or will be taken into consideration in the design and implementation of the ER Program.	See above	L	B	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-101	PR§3.5.1	ISFL ER Programs are required to undertake and make publicly available an assessment of the land and resource tenure regimes present in the Program Area, including land and resource tenure rights, the legal status of such rights, areas subject to significant conflicts or disputes, and any potential impacts of the ISFL ER Program on existing land and resource tenure in the Program Area. ISFL ER Programs should demonstrate that the assessment has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from relevant stakeholders. ISFL ER Programs are required to provide a description of the implications of the land and resource tenure assessment for program design, and for the ISFL ER Program's ability to transfer title to ERs to the ISFL (see 3.7.1 below).	The land and resources tenure assessment, as summarized in Section 3.5.1 of the ERPD and Annex 3 of the ERPD, is publicly available.[36]	See above	L	B	
PD-102			The outcomes of the following processes are reported on in the land and resources tenure assessment, as summarized in Section 3.5.1 of the ERPD and Annex 3 of the ERPD: 1. A "justifiable" assessment of the various categories of land and resource tenure[37] rights[38] within the Program Area. 2. A "justifiable" assessment of the legal status of each category of rights identified in step (1) above.[39]	See above	L	B	
PD-103			A "justifiable" assessment of areas[40] subject to significant conflicts or disputes is reported on in the land and resources tenure assessment, as summarized in Section 3.5.1 of the ERPD and Annex 3 of the ERPD.	See above	L	B	
PD-104			A "justifiable" assessment of any potential impacts of the ER Program on existing land and resource tenure in the Program Area is reported on in the land and resources tenure assessment, as summarized in Section 3.5.1 of the ERPD and Annex 3 of the ERPD.	See above	L	B	
PD-105			The publicly available assessment has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from "relevant stakeholders".	See above	L	P	
PD-106			A "justifiable" description is provided[41] of the implications of the land and resource tenure	See above	L	B	

[36] At minimum, this documentation must be prominently posted on the internet in order to be considered publicly available.
[37] A helpful overview of land and resource tenure rights is found under "Land tenure" in Chapter 3 of the book "Land Tenure and Rural Development," which may be accessed at http://www.fao.org/docrep/005/y4307e/y4307e05.htm.
[38] In this case, "rights" refers to the different types of interest one may hold in the land or the resources thereupon (e.g., fee simple ownership, rights-of-way, easements, rights to harvest and/or gather resources).
[39] E.g., whether or not a given category of rights is recognized by law (or merely customary), and whether or not a given category of rights is prone to overlapping and/or ambiguous legal status.
[40] It is expected that "areas" will typically be interpreted as referring to geographic areas, but perhaps this term could also be interpreted as applying to certain categories of ownership interest.
[41] Technically speaking, this description is not required to be included in the land and resources tenure assessment.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			assessment for ER Program design, and for the ER Program's ability to transfer title to ERs to the ISFL				
PD-107			Any relevant conclusions of the land and resources tenure assessment have been appropriately taken into account in ER Program design.	See above	L	P*	
PD-108	T§3.5.2	Please describe (roughly 300 words or less) how the outcomes of the land and resource tenure assessment have been incorporated in program design, including how the planned actions and interventions will address issues identified in the assessment.	Section 3.5.2 of the ERPD includes a description of how the outcomes of the land and resource tenure assessment have been incorporated in ER Program design, including how the planned actions and interventions will address issues identified in the assessment.	See above	L	B	
PD-109	T§3.6.1	Please provide a description of the benefit sharing arrangements for the ISFL ER Program, including: i. The categories of potential Beneficiaries, eligibility and the types and scale of potential benefits. Please include detail on how these benefits will take into account beneficiary demographics (gender, age), drivers of net emissions from land use, and sustaining successful program interventions. ii. Criteria, process and timelines for the distribution of benefits. iii. Monitoring provisions for the implementation of the Benefit Sharing Plan, including, as appropriate, participation by the beneficiaries themselves.	Section 3.6.1 of the ERPD contains a description of the benefit sharing arrangements for the ER Program, including a description of the following: 1. The categories of potential Beneficiaries, eligibility and the types and scale of potential benefits, including detail on how these benefits will take into account beneficiary demographics (gender, age), drivers of net emissions from land use, and sustaining successful ER Program interventions. 2. Criteria, process and timelines for the distribution of benefits 3. Monitoring provisions for the implementation of the Benefit Sharing Plan, including, as appropriate, participation by the beneficiaries themselves. 4. When the Benefit Sharing Plan is expected be finalized.	Section 3.6 of the ERPD provides a detailed description of the following: 1. The categories of potential Beneficiaries, eligibility and the types and scale of potential benefits, including detail on how these benefits will take into account beneficiary demographics (gender, age), drivers of net emissions from land use, and sustaining successful ER Program interventions. 2. Criteria, process and timelines for the distribution of benefits 3. Monitoring provisions for the implementation of the Benefit Sharing Plan, including, as appropriate, participation by the beneficiaries themselves. 4. When the Benefit Sharing Plan is expected be finalized.	L	B	
PD-110	T§3.6.2	Please provide a summary of the overall process of designing the benefit sharing arrangements, including who has been participating in this process. Please describe how the process was informed by and builds upon existing processes, including the strategic environmental and social assessment (SESA), where applicable. Please describe how the benefit sharing arrangements	Section 3.6.2 of the ERPD contains the following information: 1. A summary of the overall process of designing the benefit sharing arrangements, including an identification of the individuals or	1. Section 3.2.6 of the ERPD provides a detailed description of the overall process. 2. The information provides a stepwise approach to the implementation of the benefit sharing. 3. The description includes of the consultation process; and 4. A description pf which stakeholders are included in the process throughout	L	B	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		have been prepared as part of the consultative, transparent and participatory consultation process for the ISFL ER Program. Please specify how the process reflects inputs by relevant stakeholders, including broad community support by affected Indigenous Peoples (if relevant).	entities that have been participating in this process. 2. A description of how the process was informed by and builds upon existing processes, including the strategic environmental and social assessment (SESA), where applicable. 3. A description of how the benefit sharing arrangements have been prepared as part of the consultative, transparent and participatory consultation process for the ER Program. 4. Clarification regarding how the process reflects inputs by "relevant stakeholders", including broad community support by affected Indigenous Peoples (if relevant).				
PD-111	TAnnex5	Please describe and provide evidence of the process for designing the benefit sharing arrangements for the ISFL ER Program, including how the process reflects inputs by relevant stakeholders, including broad community support by affected Indigenous Peoples (if relevant).	Annex 5 of the ERPD includes a description, with accompanying evidence, of the process for designing the benefit sharing arrangements for the ER Program, including how the process reflects inputs by "relevant stakeholders", including broad community support by affected Indigenous Peoples (if relevant).	Annex 5 of the ERPD includes a detailed description of process for designing the benefit sharing arrangements for the ER Program, including how the process reflects inputs by "relevant stakeholders", including broad community support by affected Indigenous Peoples. The information includes accurate flow diagrams and table replete with communities comprising the program.	L	B	
PD-112	T§3.6.3	Please describe (roughly 500 words or less) how the design and implementation of the Benefit Sharing Plan complies with relevant applicable laws, including relevant international conventions and agreements and customary rights if any.	Section 3.6.3 of the ERPD contains a description of how the design and implementation of the Benefit Sharing Plan complies with relevant applicable laws, including relevant international conventions and agreements and customary rights.	Section 3.6.3 provides a complete list of laws affecting the benefit sharing arrangements. The assessment team agrees that the laws provided are a wholistic list of the potential laws affecting any benefit sharing mechanism	L	B	
To the extent that the benefit sharing mechanism has been finalized at the time of ERPD submission:							
PD-113	PR§3.6.1	ISFL ER Programs are required to develop a benefit sharing mechanism outlining the means by which benefits (both monetary and non-monetary) from ERs will be distributed in the Program Area. This benefit sharing mechanism must be clear, effective, and transparent and have broad support from relevant stakeholders. The design of the benefit sharing mechanism should respect	The benefit sharing mechanism is **clear**, with provisions that can be readily understood by "relevant stakeholders".	~~This including t~~he following criteria for PD requirements PD-113-PD138 is based on the profession experience of the assessment team. The ERPD, Section 3.6 indicates that the benefit sharing mechanism and the forms of communication relayed to "relevant stakeholders" is clear.	L	P*	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		customary rights to lands and territories so that incentives are applied in an effective and equitable manner.		Given that no site visit occurred during the assessment, any alluding to relevant stakeholder on site (communities) are not considered in detail here and shall be assessed during the verification phase of this process			
PD-114			The benefit sharing mechanism is **effective**, with disbursement procedures that reflect any stated objectives of the ER Program and increase the likelihood that such objectives will be achieved.	Annex 4 of the ERPD (pg.181;183; 185) includes a description of how the disbursement procedure reflects stated objectives of ER program, thus substantiating how the BSM is effective with increased likelihood that objectives will be achieved.	L	P*	
PD-115			The benefit sharing mechanism is **transparent**: resulting from a clearly defined decision-making process, the details of which are publicly available, in which "relevant stakeholders" have had meaningful opportunities to contribute input.	In review of Section 3.6 of the ERPD and the records of consultations, "relevant stakeholders" had meaningful opportunities to contribute input into the decision-making process of the Benefit sharing arrangements	L	P*	
PD-116			The design of the benefit sharing mechanism received broad support from "relevant stakeholders".	Annex 4 of the ERPD Section 3.6 indicates that the BSM received broad support from "relevant stakeholders".	L	P*	
PD-117			The benefit sharing mechanism recognizes and respects customary rights to land and territories of beneficiaries.	Annex 4 of the ERPD, Section 3.5 (pg. 43-45) clearly recognizes customary rights of land and territories of beneficiaries.	L	P*	
PD-118			Incentives are distributed equitably and designed with the participation of beneficiaries and "relevant stakeholders".	Annex 4 of the ERPD, Section 3.6 demonstrates how incentives are to be distributed equitably (pg.182, 183, 193) and designed with the participation of beneficiaries and "relevant stakeholders" (pg. 191-193).	L	P*	
PD-119	PR§3.6.1	The benefit sharing mechanism should take into account ways to sustain successful program interventions in order to further reduce emissions and potentially attract additional finance for related results.	The benefit sharing mechanism creates sustainable incentives for beneficiaries to participate and change behavior, if necessary (i.e., the mechanism considers opportunity costs for not engaging in other land use activities).	In review of the ERPD, Annex 4 (pg. 180-181), the benefit sharing mechanism creates sustainable incentives for beneficiaries, particularly due to its reward for performance based on the level of effort to address the drivers of deforestation and other factors to incentive positive efforts.	L	P*	
PD-120			Incentives appropriately reward behavior aimed at reducing emissions, and do not provide perverse incentives.	Annex 4 of the ERPD (pg.182, Table 6 - pg.183) presents metrics and explains how perverse incentives will be prevented through performance at different levels.	L	P*	
PD-121			The benefit sharing mechanism creates or strengthens governance structures to involve beneficiaries in decision making and managing the benefit sharing mechanism.	Annex 4 of the ERPD (pg. 185 & 187) mentions which communal or local-level entities will be involved in disbursement, but more information is necessary to explain how these entities will be strengthened or supported to manage the benefit sharing arrangements	L	P*	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
Where a Benefit Sharing Plan has been finalized:							
PD-122	PR§3.6.2	An ISFL ER Program's benefit sharing mechanism should be described in detail in a plan (Benefit Sharing Plan) that is designed in a consultative, transparent, and participatory manner appropriate to the country context and that reflects inputs and broad community support by relevant stakeholders.	The Benefit Sharing Plan describes the how monetary and non-monetary benefits will be distributed in the Program Area.	The Benefit Sharing Plan describes how monetary and non-monetary benefits will be distributed in the Program Area in Annex 4, Sect.3.6 (pg. 189-192).	L	P	
PD-123			The design of the Benefit Sharing Plan involved the consultation of different stakeholders in determining what and how benefits are distributed.	Annex 4 of the ERPD [pg. 189; horizontal share (135); vertical share (195)] includes explanation of how different stakeholders were involved in consultation in determining what and how benefits are distributed.	L	P	
PD-124			All relevant information regarding benefits in the Benefit Sharing Plan was shared in an accessible, clear and comprehensible manner and language with beneficiaries.	Annex 4 of the ERPD indicates that all relevant information regarding benefits in the BSP was shared in an accessible, clear and comprehensible manner and language with beneficiaries.	L	P	
PD-125			The design of the Benefit Sharing Plan involved "relevant stakeholders" and reflects their input.	According to Annex 4 of the ERPD (pg. 186; 191) of the BSP included "relevant stakeholders" and their input.	L	P	
PD-126			The design of the Benefit Sharing Plan received broad community support from "relevant stakeholders".	Annex 4 of the ERPD (pg. 174, 190-192, 197) indicate the number of stakeholders involved in the consultations around benefits.	L	P	
PD-127	TAnnex4; PR§3.6.2(i)	The Benefit Sharing Plan shall contain the following information: The categories of potential beneficiaries, describing their eligibility to receive potential benefits under the ISFL ER Program and the types and scale of such potential benefits that may be received, taking into account beneficiary demographics (gender, age), drivers of net emissions from land use, and sustaining successful program interventions, amongst other considerations.	The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains information on the categories of potential beneficiaries, describing their eligibility to receive potential benefits under the Program.	Based on a review of Annex 4 (pg.179), the BSP contains sufficient information on the categories of potential beneficiaries and describes their eligibility to receive benefits under the Program.	L	B	
PD-128			The Benefit Sharing Plan included in Annex 4, or referenced therefrom, takes beneficiary demographics (gender, age) into account in an appropriate manner.	In review of Annex 4 of the ERPD (pg. 177, 41) takes demographics (gender, age) into account in the BSP.	L	P	
PD-129			The Benefit Sharing Plan included in Annex 4, or referenced therefrom, takes drivers of net emissions from land use into account in an appropriate manner.	The BSP presented in Annex 4 takes drivers of net emissions from land use into account in an appropriate manner.	L	P	
PD-130			The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains information on the types and scale of potential benefits.	Annex 4 of the ERPD (pg. 187 (benefits), Table 8; 180-181 (explanation of horizontal share); pg. 178-180) provides Sufficient information on the types and scale of potential benefits.	L	B	
PD-131			The eligibility criteria for determination of beneficiaries, along with the types and scale of potential benefits, are technically feasible and appropriate; the proposed benefits are commensurate with the drivers of emissions and	In review of Annex 4, the eligibility criteria for beneficiaries (pg.177) and the types and scale of potential benefits (186-188) are technically feasible and appropriate. The proposed benefits are also commensurate with the drivers of emissions and anticipated ER to be received.	L	P	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			with the anticipated quantity of Emission Reductions to be received.				
PD-132	TAnnex4; PR§3.6.2(ii)	The Benefit Sharing Plan shall contain the following information… Criteria, processes, and timelines for the distribution of benefits.	The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains criteria for the distribution of benefits.	Annex 4 contains criteria for the distribution of benefits.	L	B	
PD-133			The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains information on processes for the distribution of benefits.	Annex 4 contains information on processes for the distribution of benefits.	L	B	
PD-134			The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains information on the timelines for the distribution of benefits.	Annex 4 contains criteria for the distribution of benefits.	L	B	
PD-135			The criteria, processes and timelines for the distribution of benefits are technically feasible and appropriate.	Annex 4 contains information on the timelines for the distribution of benefits.	L	P	
PD-136	TAnnex4; PR§3.6.2(iii)	The Benefit Sharing Plan shall contain the following information… Monitoring provisions for the implementation of the Benefit Sharing Plan, including, as appropriate, participation by the beneficiaries themselves.	The Benefit Sharing Plan included in Annex 4, or referenced therefrom, contains mechanisms for monitoring of its implementation that includes the participation of beneficiaries.	Annex 4 contains mechanisms for monitoring of its implementation that includes the participation of beneficiaries.	L	B	
PD-137	PR§3.6.2	At least an advanced draft of the Benefit Sharing Plan will be made publicly available prior to ERPA signature, and disclosed in a form, manner and language understandable to the affected stakeholders of the ISFL ER Program.	The Benefit Sharing Plan is… disclosed in a form, manner and language understandable to the "affected stakeholders" of the Program.	Annex 4 contains information on how the benefit plan was disclosed in a form, manner and language understandable to the "affected stakeholders" of the Program.	L	B	
PD-138	PR§3.6.3	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.	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 (e.g., FPIC).	Annex 4 contains information that 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	L	B	
PD-139	T§3.7.1	Please demonstrate the ISFL ER Program entity's ability to transfer title to ERs to the ISFL and describe the associated risks that this ability is clear or uncontested. As part of this demonstration, include a discussion on the implications of the land and resource regime on the ability to transfer title to ERs to the ISFL (as identified by the assessment described in Section 3.5.1). If significant difficulties in the ability to transfer ER titles have been identified, please indicate what proportion of the Program Area might be affected and what measures will be taken to establish this ability.	Section 3.7.1 of the ERPD contains a "justifiable" demonstration of the Program Entity's ability to transfer title to the Emission Reductions to the ISFL (the process of so transferring title is referred to in this indicator as "transferring title"), including the following: 1. A discussion of the implications of the land and resource regime on the ability to transfer title. 3. A description of the associated risks that the ability to transfer title is unclear or uncontested. 4. If significant difficulties in the ability to transfer title has been identified:	The criteria described in items PD-139 – PD-141 was assessed by the assessment team to be in conformance with the requirements as designed in the program rules, however proper implementation of such was dependent on the World Bank due diligence.	L	B	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			a. Results of an analysis as to what Program Area might be affected. b. A description of measures to be taken to establish ability to transfer title.				
PD-140			Based on information provided in Section 3.7.1 of the ERPD: 1. It will be possible for the Program Entity to transfer title to the Emission Reductions using one or more of the options set out in Annex 1 of the Title Transfer Note, or using a different set of mechanisms based on the host country's specific legal context. 2. In demonstrating the Program Entity's ability to transfer title to the Emission Reductions to the ISFL, due consideration has been given to the possibility that title to the Emission Reductions may be partially or completely severed from land tenure within the context of the applicable legal framework. 3. The analysis provided in Section 3.7.1 of the ERPD is comprehensive and conclusive.	See above	L	P*	
PD-141			There are no risk of contests or disputes regarding title to Emissions Reductions (i.e., title is clear and uncontested), or if such risks are present, appropriate mitigation mechanisms have been employed in order to ensure that the residual risk of any contests or disputes is low.	See above	L	P*	
PD-142	T§3.7.2	Please indicate whether the ISFL ER Program, or any part of the Program Area, has transferred, or is planning to transfer, any ERs to, or received or is planning to receive otherwise payment for, ERs from any other GHG mitigation initiative. This would include parts of the Program Area that are registered or are seeking registration under project	A "justifiable" search for any instance whereby the ER Program, or any part of the Program Area, has transferred, or is planning to transfer, any ERs to, or received or is planning to receive otherwise payment for, ERs from any other GHG	As described above, the assessment team agrees that the program is designed to avoid double counting and is adequately designed in the ERPD.	L	B	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		or program level standards such as the Clean Development Mechanism (CDM), the Verified Carbon Standard (VCS), the Green Climate Fund (GCF) or others.	mitigation initiative[42] has been performed and Section 3.7.2 of the ERPD contains an indication of whether any such instances were noted.				
PD-143		Please also indicate any actions that might not be included in the ISFL ER Program but which could address the drivers of land use change, deforestation, and forest degradation within the Program Area and that are generating ERs that may be transferred to, or be otherwise paid for by, other GHG mitigation initiatives (e.g., improved cook stoves programs under the CDM).	Section 3.7.2 of the ERPD contains a description of any actions that might not be included in the ER Program but which could address the drivers of land use change, deforestation, and forest degradation within the Program Area and that are generating ERs that may be transferred to, or be otherwise paid for by, other GHG mitigation initiatives (e.g., improved cook stoves programs under the CDM).	See above	L	B	
PD-144		Where the ISFL ER Program, or any part of the Program Area, has been registered under any other GHG mitigation initiative, provide the registration number(s) and details for each of these.	Where the ER Program, or any part of the Program Area, has been registered under any other GHG mitigation initiative[42], the following are provided for each such instance in Section 3.7.2 of the ERPD: 1. Registration number(s), if relevant. 2. Project/Program ID numbers, if relevant. 3. Any other details that are important to understand the extent of any potential for double-counting (or references to where such information is publicly available), including the following: a. The spatial extent of the project or Program Area. b. The monitoring or reporting period(s) for which credit issuance has been sought and/or obtained and, for each monitoring or reporting period, the number of credits sought and/or	N/A	L	B	

[42] Any parts of the Program Area in which individual projects or jurisdictional programs have been registered, or are currently seeking registration, under greenhouse gas programs or schemes such as the Clean Development Mechanism (CDM), the Verified Carbon Standard (VCS) or the Green Climate Fund (GCF), must be identified for purposes of this indicator.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			obtained, if known to the Program Entity.				
PD-145	T§3.7.3	Please describe the selected appropriate arrangement to avoid having multiple claims to ER title generated under the ISFL ER Program, including the implementation process for a Program and Projects Data Management System.	Section 3.7.3 of the ERPD contains a description of the selected appropriate arrangement to avoid having multiple claims to ER title generated under the Program.	See above	L	B	
PD-146			Section 3.7.3 of the ERPD describes the implementation process for an ER Program and Project's Data Management System.	Section 3.7.3 provides an adequate description of the program implementation process	L	B	
PD-147		In addition, please indicate the choice and implementation of an ER Transaction Registry to ensure that any ERs from planned actions and interventions under the ISFL ER Program are not accounted for/registered more than once; and that any ER from the planned actions and interventions under the ISFL ER Program sold and transferred to the ISFL are not used again by any entity for sale, public relations, compliance or any other purpose.	Section 3.7.3 of the ERPD identifies the ER Transaction registry to be used and describes the implementation status of such use.		L	B	
PD-148	PR§3.7.1	ISFL ER Programs shall work with the host country to select an appropriate arrangement to avoid double counting, including double issuance, double selling/use, or double claiming, in order to track the emission reductions to ensure that any emission reductions that have been generated, monitored and verified under the ISFL ER Program and paid for by the ISFL are not used again by any entity for sale, public relations, compliance or any other purpose unless otherwise agreed by the parties to the ERPA and, where relevant, consistent with any applicable guidance adopted under the Paris Agreement. For this purpose, ISFL ER Programs will identify a Transaction Registry to register, track, and as appropriate retire or cancel ER units generated under the ISFL ER Program.	Evidence is provided that an appropriate arrangement has been selected in coordination and consultation with the host country order to fulfill the following objectives: 1. Avoid double counting, including double issuance, double selling/use, or double claiming. 2. Track the Emission Reductions to ensure that any Emission Reductions that have been generated, monitored and verified under the ER Program and paid for by the ISFL are not used again by any entity for sale, public relations, compliance or any other purpose unless otherwise agreed by the parties to the ERPA and, where relevant, consistent with any applicable guidance adopted under the Paris Agreement.	Whereas the registry system is not currently in place at the time of this assessment, the assessment team was provided with claims that the World Bank Registry will be employed for the program.	L	B	
PD-149			If the World Bank's registry system is not to be used as a Transaction Registry...				
PD-150			There is a good likelihood that the Transaction Registry to be used by the ER Program will be operational by the time of verification.	N/A	L	P*	

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
PD-151			The Transaction Registry to be used by the ER Program will have an appropriate procedure in place to address double-counting, such as may occur where voluntary carbon projects may potentially be located within the jurisdiction within which the ER Program is operating.	N/A	L	P*	
PD-152			The Transaction Registry to be used by the ER Program will encompass all of the necessary sectoral scopes pertaining to the ER Program (e.g., the Transaction Registry permits crediting of Emission Reductions pertaining to both avoided deforestation and livestock management).	N/A	L	P*	
PD-153			The Transaction Registry to be used by the ER Program will be sufficient, secure and robust.	N/A	L	P*	
PD-154	PR§3.7.2	Based on national needs and circumstances, the Transaction Registry might be complemented with the use of a (national) Program and Projects Data Management System that supports registering of and reporting on projects/programs.	If applicable (i.e., if an ER Program and Project's Data Management System has been or will be implemented), the ER Program and Project's Data Management System is or will be sufficient, secure, and robust.	The information provided in the ERPD is sufficient for ensuring the appropriate security and robustness	R	P	

Requirements for Greenhouse Gas Reporting and Accounting

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
RA-01	PR§4.1.1	ISFL ER Programs shall report on all AFOLU related emissions and removals in the Program Area (ISFL Reporting).	The Program GHG Inventory reports on all emissions and removals associated with each category identified as "AGRICULTURE, FORESTRY, AND OTHER LAND USE" (i.e., with a category code beginning with 3) in Table 8.2, Volume 1, Chapter 8 of the IPCC 2006 Guidelines.	Table 10 in section 4.1.1 of the ERPD as well as the table in Annex 6, section 1.3, lists all the categories and subcategories reported on in the GHG inventory. All categories relevant in the Table 8.2, Volume 1, Chapter 8 of the IPCC 2006 Guidelines are represented in the GHG inventory.	R	B	C
RA-02	PR§4.1.2, PR§4.1.4	ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) ... The Program GHG Inventory should be comparable in its use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and the Biannual Update Report. The Program GHG Inventory Programs may select definitions, categories, or subcategories that are different from the ones that have been used in national processes, if this increases the likelihood	If a national-level GHG inventory reporting document[43] exists, either one of the following two options is the case: 1. Both of the following are true: a. All categories and subcategories listed in the national-level GHG inventory reporting document are also included in the Program GHG Inventory; and	A national-level GHG inventory reporting document does exist in the form of Ethiopia's Second National Communication (accessed 14 April 2020 from https://unfccc.int/resource/docs/natc/ethnc2.pdf). All categories and sub-categories listed in Table 3-30 in the Second National Communication are also listed in the table in the section entitled "Oromia GHG emissions and removals – summary" in Annex 6 of ERPD, except that the second-order subcategories Wetlands (3 B 4) and Settlements (3 B 5) in the Second	R	B	C

[43] E.g., the National GHG Inventory, the Biennial Report or formally submitted REDD+ readiness documentation such as the Forest Reference Emissions Level.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		of being able to assess the impacts of ISFL interventions. In that case, an explanation should be provided to clarify how methodological consistency will be maintained with the national GHG inventory so that Program GHG Inventory can be integrated with and inform the national GHG inventory.	b. The definitions used in the Program GHG Inventory are the same as those used in the national-level GHG inventory reporting document. 2. Otherwise, a compelling rationale for any variation relative to the national processes can be provided, unless all of the following are true: a. The variation relative to the national processes increases the likelihood of being able to assess the impacts of ISFL interventions[44]. b. An explanation has been provided to clarify how methodological consistency will be maintained with the national GHG inventory so that Program GHG Inventory can be integrated with and inform the national GHG inventory (e.g., any definitions used in the Program GHG inventory are consistent with, and/or readily nest into, the definitions used in the national GHG inventory).	National Communication are omitted and, in their place, there are the third-level subcategories Wetlands Remaining Wetlands and Settlements Remaining Settlements. It is stated in Section 1.3 of Annex 6 of the ERPD that "The categories' and subcategories' definitions are the same as in the 2006 IPCC Guidelines and are presented with the same format as in the ISFL requirements." The caption for Table 3-29 (which also applies to Table 3-30) in the Second National Communication clarifies that the categories and subcategories used are "the various IPCC categories". Therefore, given that the definitions used in both sources follow the 2006 IPCC Guidelines, it stands to reason that the definitions are identical between Annex 6 of the ERPD and the Second National Communication.			
RA-03	PRAnnex1	ISFL ER Programs may choose to use the terminology from their national greenhouse inventory [in lieu of the table in Annex 1] as long as the principles of these ISFL ER Program Requirements are adhered to (for example the level of aggregation an analysis is performed) and the documents submitted to the ISFL clearly outline the countries' own terminology and different levels of aggregation.	Subcategories are differentiated to at least the level of specificity set out in Annex 1 of the Program Requirements.[45]	In the table in the section 1.3 in Annex 6 of ERPD, the subcategories are differentiated to at least the level of specificity set out in Annex 1 of the Program Requirements.	R	B	C
RA-04			Where subcategories are differentiated to a finer level of detail than is set out in Annex 1 of the Program Requirements, this differentiation has the potential to increase the accuracy and/or completeness of the accounting of emissions and removals.	The only instance in which subcategories are differentiated to a finer level of detail in the table in Section 1.3 of Annex 6 of the ERPD than in Annex 1 of the Program Requirements is that the table in Annex 6 includes finer differentiation as to the land-use category being transitioned away from in the land-use conversions; e.g., "Land	R	B	C

[44] E.g., a broad transition category such as Land Converted to Cropland in the national-level GHG inventory reporting document is sub-divided into Forest Land Converted to Cropland (FC) and Grassland Converted to Cropland (GC) in the Program GHG Inventory, thus allowing for more accurate quantification of emissions (this is the example provided in Volume 4, Chapter 3, Section 3.2 of the IPCC 2006 Guidelines).

[45] For example, in respect of enteric fermentation by livestock, it is necessary to discriminate between fermentation by the major types of livestock (e.g., cattle, sheep and swine).

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
				converted to grassland" is differentiated into "Cropland converted to grassland" and "Forestland converted to grassland" in Annex 6. This is explicitly permitted in the Note to the table in Annex 1 and, in any case, certainly has the potential to increase the accuracy of the accounting of emissions and removals.			
RA-05	PR§4.1.2	ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines. In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC.	The Program GHG Inventory has been compiled in a manner consistent with the IPCC 2006 Guidelines[46].	The assessment team confirmed through an independent review of the Program GHG Inventory that it has been compiled in a manner consistent with the IPCC 2006 Guidelines. However, note that as stated in the OBS findings in (Appendix C) opportunities exists to improve consistency across several areas.	R	B	C
RA-06			In compiling the Program GHG Inventory, the following inventory quality indicators established by the IPCC 2006 Guidelines[47] are adhered to, as applicable, unless a compelling rationale can be provided to support a deviation from these indicators: **Transparency**: There is sufficient and clear documentation such that individuals or groups other than the inventory compilers can understand how the inventory was compiled and can assure themselves it meets the good practice requirements for national greenhouse gas emissions inventories. **Completeness**: Estimates are reported for all relevant categories of sources and sinks, and gases. Geographic areas within the scope of the national greenhouse gas inventory are recommended in these Guidelines. Where elements are missing their absence should be	The assessment determined that the Program GHG Inventory adhered to the following indicators of transparency, completeness, consistency, comparability, and accuracy, except in the areas listed below: • The assessment team found that there was a lack of **transparency** regarding the methodologies and procedures used and applicability of the Woody Biomass Inventory and Strategic Planning Project Report (WBISPP). The limitations of this report are documented in the ERPD and identified as a reason for the exclusion of the forestland remaining forestland subcategory. However, this report remained as the dataset in estimation of the percent yield for determining steady state emissions in land use classes (pre and post conversion) and was ultimately	R	P	II

[46] In this context, "consistent with" means that the selection of subcategories included in the Step 1 selection (see indicators RA-16 through RA-19) is equivalent to the selection that would have resulted had the IPCC 2006 Guidelines been duly followed to the letter. This may require the assessment to independently recompile the inventory according to the guidance of the IPCC 2006 Guidelines and determine whether there is a difference in the Step 1 selection.
[47] Volume 1, Chapter 1, Section 1.4

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			clearly documented together with a justification for exclusion. **Consistency**: Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions. Inventory annual trends, as far as possible, should be calculated using the same method and data sources in all years and should aim to reflect the real annual fluctuations in emissions or removals and not be subject to changes resulting from methodological differences. **Comparability**: The national greenhouse gas inventory is reported in a way that allows it to be compared with national greenhouse gas inventories for other countries. This comparability should be reflected in appropriate choice of key categories, and in the use of the reporting guidance and tables and use of the classification and definition of categories of emissions and removals. **Accuracy**: The national greenhouse gas inventory contains neither over- nor under-estimates so far as can be judged. This means making all endeavors to remove bias from the inventory estimates.	determined to be the best available source of data. • While the National Forest Inventory was utilized for determination of emission factors for conversions, the WBISPP was used for estimation of the steady state emissions, which may compromise the principle of **consistency** due to differences in source data and definitions and classification of land use classes. As stated above, this WBISPP was ultimately determined to be the best available source of data for steady state emissions, although this source has limitations. • Due to a lack of available historical aerial imagery, the assessment team found there were instances where a sample point had only one image available, leaving some doubt as to the land-use class of the sample plot before and after the image was acquired, which may ultimately impact the **accuracy** of the GHG inventory estimates. However, the program team provided a compelling rationale and approach to assessing the uncertainty regarding incomplete aerial imagery.			
RA-07	PR§4.1.3	The Program GHG Inventory shall utilize best available methods and existing data. This may include the use of Activity Data Proxies if needed, and IPCC Tier 1 data and methods if no data are available to apply higher Tier methods.	In compiling the Program GHG Inventory, the "best available"[48] methods and existing data are utilized.	Determined through the review of available data that the Program GHG Inventory applied the best available methods and existing data possible for this assessment.	R	B	C
RA-08	PR§4.1.5	The Program GHG Inventory shall be compiled during ISFL ER Program design and every second	A Program GHG Inventory has been compiled during ER Program design.	Determined a Program GHG Inventory has been compiled during ER Program design for which the	R	B	C

[48] In this case, "available" means data that were readily available at the time of inventory compilation and did not require substantive additional cost or other resources in order to acquire (this definition supersedes the generalized definition provided in the "General Guidance" section of this checklist, above). It is expected that, in many cases, assessment teams will see data from older GHG inventories utilized in the Program GHG Inventory, and this is acceptable to the intended users in the absence of ready availability of more accurate and/or up-to-date data. Activity Data Proxies (see definition of "Activity Data Proxy" in the Program Requirements) or Tier 1 data and methods may be used if more accurate data and methods are not available.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		year during the ERPA Term following the national GHG inventory process.		assessment team reviewed and utilized to independently quantified the emissions baseline.			
RA-09	T§4.1.1	Please provide a short description (maximum three pages) of the approach used to compile the GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory). Please provide… A description of the general approach applied to compile the Program GHG Inventory including: o an overview of the definitions, categories and subcategories used; o a general overview of the type, Tier and vintages of the data sources used (details to be provided in the next section);	A description of the general approach applied to compile the Program GHG Inventory is provided in Section 4.1.1 of the ERPD.	Section 4.1.1 of the ERPD includes a general description of the program GHG inventory.	R	B	C
RA-10	T§4.1.1	Please provide a short description (maximum three pages) of the approach used to compile the GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory). Please provide… an overview of the definitions, categories and subcategories used;	An overview description of the definitions, categories and subcategories used to compile the Program GHG Inventory is provided in Section 4.1.1 of the ERPD.	Section 4.1.1 of the ERPD contains an overview description of the definitions, categories and subcategories used to compile the Program GHG Inventory	R	B	C
RA-11	T§4.1.1	Please provide a short description (maximum three pages) of the approach used to compile the GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory). Please provide… a general overview of the type, Tier and vintages of the data sources used (details to be provided in the next section);	A general description of the type, Tier and vintages of the data sources used to compile the Program GHG Inventory is provided in Section 4.1.1 of the ERPD.	Section 4.1.1 of the ERPD contains a general description of the type, Tier and vintages of the data sources used to compile the Program GHG Inventory	R	B	C
RA-12	T§4.1.1	Please provide a short description (maximum three pages) of the approach used to compile the GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory). Please provide… If applicable, an overview of definitions, categories, or subcategories that are different from the ones that have been used in national processes and an explanation that clarifies how methodological consistency could be maintained with the national GHG inventory.	If any definitions, categories, or subcategories that are different from the ones that have been used in national processes (as determined in indicator RA-02), an overview of such, and an explanation that clarifies how methodological consistency could be maintained with the national GHG inventory, has been provided in Section 4.1.1 of the ERPD.	Section 4.1.1 contains an explanation regarding how methodological consistency is maintained with the national GHG inventory by maintaining an MoU with the GHG team and working in close collaboration with Environment, Forestry and Climate Change Commission (EFCCC). Annex 6 is referenced in section 4.1.1 which contains greater detail regarding the differences between the Program GHG inventory and the national GHG inventory, such as the use of Collect Earth tool for the Oromia inventory, emission factors, scope and the activities included.	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
RA-13	PR§4.1.7	The results of the Program GHG Inventory shall at least be reported at the level of subcategories with their associated carbon pools and gases…	The Program GHG Inventory, as reported in Annex 6 of the ERPD, includes estimates of emissions or removals, for the applicable inventory year(s), for every subcategory included in the scope of the Program GHG Inventory.	Annex 6 of the ERPD, includes estimates of emissions or removals, for the applicable inventory year(s), for every subcategory included in the scope of the Program GHG Inventory.	R	B	C
RA-14	PR§4.1.7	…the activity data, emission factors, methods, information on the underlying assumptions used, and results shall be provided to the national government of the program to inform the national GHG inventory as appropriate.	1. An inventory report document, reporting on the compilation of the Program GHG Inventory in a sufficient level of detail that a reader having expert knowledge of the IPCC 2006 Guidelines could recompile the inventory based on the information provided, has been presented in Annex 6 of the ERPD. 2. Evidence is provided that the contents of Annex 6 of the ERPD have been received by appropriate personnel at the agency or ministry responsible for compiling the national GHG inventory for the host country within which the ER Program is located.	Annex 6 of the ERPD includes a reporting on the compilation of the Program GHG Inventory in a sufficient level of detail that a reader having expert knowledge of the IPCC 2006 Guidelines could recompile the inventory, including the activity data and emission factors for the agriculture and LULC subcategories based on the information provided.	R	B	C
RA-15	PR§4.3.1, PR§4.3.2	ISFL ER Programs shall identify the subcategories eligible for ISFL Accounting in an ERPA Phase according to the following 3 steps: Step 1: Initial selection of subcategories; Step 2: Review of the available data and methods for the subcategories from the initial selection against the quality and baseline setting requirements for ISFL Accounting; Step 3: Final selection of the subcategories eligible for ISFL Accounting. The identification of subcategories eligible for ISFL Accounting shall be performed during program design and shall be updated before the start of each ERPA Phase.	Subcategories eligible for ISFL Accounting in an ERPA Phase are identified during ER Program design according to three steps, termed Steps 1-3[49].	Subcategories eligible for ISFL Accounting in an ERPA Phase are identified during ER Program design according to three steps, termed Steps 1-3.	R	B	C
RA-16	PR§4.3.3; T§4.1.2	ISFL ER Programs shall list all the subcategories from the Program GHG Inventory, with the associated carbon pools and gases, in order of the relative magnitude of contribution of these subcategories to the absolute level of the total GHG emissions and removals in the Program GHG Inventory.	The following procedure, or a different procedure that, in conjunction with other procedures, results in an identical Step 1 selection and identical reporting within the ERPD, has been followed:	1. The GHG emissions and removals associated with each subcategory have been calculated from the Program GHG inventory and included in section 4.1.2 (Table 5 of the template has been updated to Table 11).	R	B	C

[49] The outcome of each step is a list of selected subcategories. For each step, this list is referred to as "the Step X selection" in these indicators, where X is the number associated with each step. For example, the list of subcategories that is an outcome of Step 1 is referred to as "the Step 1 selection."

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			1. Using information in the Program GHG Inventory, determine the GHG emissions or removals associated with each subcategory included in the scope of the Program GHG Inventory. This value is the "Net emissions and removals" as referenced in the provided table in Section 4.1.2 of the PD Template (Table 5)[50]. In completing this step, ensure that net emissions are represented as a positive value and net removals are represented as a negative value.[51] 2. Identify the greenhouse gases associated with the subcategory and, if any carbon pools[52] are associated with the subcategory, identify those as well. 3. Calculate the absolute value of each quantity determined in step (1) above. 4. Rank the absolute values calculated in step (3) above, and the associated subcategories, from highest to lowest. 5. Sum the absolute values calculated in step (3) above. This sum is the "absolute level of the total GHG emissions and removals in the Program GHG Inventory" as referenced in Table 5[53]. 6. Divide each value calculated in step (3) above by the value calculated in step (5) above and multiply by 100 to convert to a percentage; this value is	2. Table 11 also includes the associated carbon pools and greenhouse gases for each subcategory. 3. The absolute value of each quantity determined in step (1) was calculated in the workbook /4/. 4. The absolute values calculated in step (3) above, and the associated subcategories, have been ranked from highest to lowest /4/. 5. The sum of the absolute values calculated in step (3) is shown as the absolute level of the total GHG emissions and removals in the Program GHG Inventory in table 9 in section 4.2.1 of the ERPD as required by the template as well as the calculations workbook /4/ 6. Each value calculated in step 3 has been divided by the value calculated in step 5 and multiplied by 100 to convert to a percentage /4/. This is reported in Table 11 as the Relative contribution to the absolute level of the total GHG emissions and removals in the Program GHG Inventory. 7. Table 11 of the ERPD (table 5 in the template) has been populated according to the requirements. a. The value for the total "Net emissions and removals" is the sum calculated in step (5) above.			

[50] The table in question is referred to as Table 5 in the PD Template and will be referred to as such within this checklist, for purposes of brevity. If additional tables have been added to the ERPD under assessment, said table may be been assigned a different number.

[51] This is consistent with the convention set out in the IPCC 2006 Guidelines. For example, Section 2.2.3, Chapter 2, Volume 4 of the IPCC 2006 Guidelines states that "…increases in C stocks, i.e. positive (+) stock changes, represent a removal (or 'negative' emission) from the atmosphere, while decreases in C stocks, i.e. negative (-) stock changes, represent a positive emission to the atmosphere."

[52] "Carbon pool," for these purposes, means one of five pools identified in Table 1.1, Section 1.3, Chapter 1, Volume 4 of the IPCC 2006 Guidelines (above-ground biomass, below-ground biomass, dead wood, litter and soil organic matter), noting that it is permissible for the definitions of specific pools used in the Program GHG Inventory to be different from those set out in Table 1.1 (per the guidance provided in Section 1.2.2).

[53] This phrase is present both in Section 4.3.3 of the Program Requirements and Section 4.1.2 of the PD Template. It is ambiguously worded, so the assessment team may see different interpretations of it, but SCS has confirmed with the World Bank that the interpretation provided in this indicator is the intended one. It is also the interpretation affirmed in the final sentence of footnote 6 within the PD Template.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			reported in Table 5 as the "Relative contribution to the absolute level of the total GHG emissions and removals in the Program GHG Inventory." 7. Populate Table 5 with the list determined in the above steps. Note the following regarding the "Total" row: a. The value for "Net emissions and removals" must be given as the sum calculated in step (5) above, for consistency with the presentation of information in Section 4.2.1 of the ERPD. b. The value for "Relative contribution to the absolute level of the total GHG emissions and removals in the Program GHG Inventory" must be 100% (any other value indicates a calculation error).	b. The value for the contribution to the absolute level of the total GHG emissions and removals in the Program GHG Inventory is 100%			
RA-17	PR§4.3.4; T§4.2.1	From this list, all ISFL ER Programs shall initially select the following subcategories: i. Any subcategories involving conversions from or to forest land; ii. Forest land remaining forest land; iii. Any subcategories involving conversions between land-use categories other than forest land that, cumulatively with the conversions from or to forest land, amount to 90% of the absolute level of the total GHG emissions and removals associated with all land use conversions in the Program GHG Inventory; and iv. The single most significant of the remaining subcategories in order of the relative magnitude of contribution of these subcategories to the	The following procedure, or a different procedure that, in conjunction with other procedures, results in an identical Step 1 selection and identical reporting within the ERPD, has been followed: 1. From Table 5, identify any subcategories associated with conversions[54] from or to forestland. For each such subcategory, transcribe the information in the two left-most columns in Table 5 to the corresponding columns in the first provided table in Section 4.2.1 of the PD Template (Table 6)[55], preserving	1. Subcategories present in the Program Area associated with conversions from or to forestland have been identified in Table 12 in section 4.2.1 of the ERPD preserving the ranking of subcategories as provided in Table 11. 2. Subcategories present in the Program Area associated with conversions between land-use categories other than forest land have been identified in Table 12 in section 4.2.1 of the ERPD preserving the ranking of subcategories as provided in Table 11. 3. The absolute value of the value in the "Net emissions and removals" of the categories	R	B	C

[54] "Conversion," as used in this indicator, means a change from one land-use category to another, consistent with the usage of this term on page 3.7, Chapter 3, Volume 4 of the IPCC 2006 Guidelines.

[55] The table in question is referred to as Table 6 in the PD Template and will be referred to as such within this checklist, for purposes of brevity. If additional tables have been added to the ERPD under assessment, said table may be been assigned a different number.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		absolute level of the total GHG emissions and removals in the Program GHG Inventory.	the ranking of subcategories as provided in Table 5.[56] 2. From Table 5, identify any subcategories associated with conversions between land-use categories other than forest land. For each such subcategory, transcribe the information in the two left-most columns in Table 5 to the corresponding columns in Table 6, preserving the ranking of subcategories as provided in Table 5, as in step (1) above. 3. For each subcategory in Table 6, calculate the absolute value of the value in the "Net emissions and removals." Note that this information is not directly reported in Table 6. 4. Sum the absolute values calculated in step (3) above. This sum is reported in Table 6 as the "Total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory." 5. Divide each value calculated in step (3) above by the value calculated in step (4) above and multiply by 100 to convert to a percentage; this value is reported in Table 6 as the "Relative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory." 6. For each subcategory in Table 6, populate the "Cumulative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" column by summing, from top to bottom, all values of the "Relative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG	in Table 12 have been calculated in the workbook /4/ 4. The sum of the absolute values calculated in step (3) above is reported in Table 9 as the "Total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory." 5. Each value calculated in step (3) above was divided by the value calculated in step (4) above and multiply by 100 to convert to a percentage; this value is reported in Table 12 as the "Relative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory." This is also shown in the calculation workbook /4/. 6. The "Cumulative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" column of Table 12 is the sum of the values of the "Relative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" up to and including the subcategory in question. This is also shown in the calculation workbook /4/. 7. The following subcategories have been included in step 1/4/: a. Any subcategories from Table 12 involving conversions from or to forest land – These include the following for subcategories: forestland converted to grassland, forestland converted to cropland, grassland converted to forestland and cropland converted to forestland b. Forest land remaining forest land c. No subcategories from Table 12 involving conversions between			

[56] I.e., the ranking of the subcategories in Table 5 must be the same as the relative ranking of those same subcategories in Table 6.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			Inventory" up to and including the subcategory in question.[57] 7. Include the following in the Step 1 selection: a. Any subcategories from Table 6 involving conversions from or to forest land. b. Forest land remaining forest land.[58] c. Any subcategories from Table 6 involving conversions between land-use categories other than forest land meeting the following criteria: i. The associated value of "Cumulative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" is less than 90.000%. ii. The subcategory is the first subcategory encountered in Table 6, when reading from top to bottom,	land-use categories other than forest land meeting the criteria listed were included d. The first subcategory encountered in Table 5, when reading from top to bottom, that is not already included in the Step 1 – which is Enteric fermentation			

[57] An example of this operation is given in Table 4.5, Section 4.5, Chapter 4, Volume 1 of the IPCC 2006 Guidelines. Columns F and G in Table 4.5 correspond to the columns entitled "Relative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" and "Cumulative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" in Table 6, respectively.

[58] If the subcategory "Forest land remaining forest land" has been further disaggregated in the Program GHG Inventory (e.g., if this subcategory has been disaggregated into subcategories pertaining to forest type), the reference to "Forest land remaining forest land" in this indicator should be read as referring to all of the subcategories that, together, can be aggregated as "Forest land remaining forest land."

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			for which the associated value of "Cumulative contribution to the total absolute GHG emissions and removals associated with all land use conversions in the Program GHG Inventory" is greater than or equal to 90.000%. d. The first subcategory encountered in Table 5, when reading from top to bottom, that is not already included in the Step 1 selection through application of the above steps.				
RA-18	PR§4.3.5	Additional non-forest related subcategories may be included at the discretion of the ISFL ER Program if the quality requirements in Section 4.2 are met, provided there is a clear rationale for including these subcategories in terms of improving ISFL ER Program mitigation performance.	If a voluntary decision is made to include any non-forest related subcategories in the Step 1 selection, additional to those included in the Step 1 selection through application of the above indicators, a "justifiable" determination has been made that there is a reasonable expectation that Emission Reductions related to the subcategory will be generated within the ERPA Term.	No additional subcategories included.	R	B	N/A
RA-19	T§4.2.1	For additional non-forest related subcategories included at the discretion of the ISFL ER Program, provide a clear rationale for including these subcategories in terms of improving ISFL ER Program mitigation performance.	The second table in Section 4.2.1 of the PD Template is populated with a list of non-forest related subcategories that have been voluntarily included in the Step 1 selection, along with a justification for such inclusion.	No additional subcategories included.	R	B	N/A
RA-20	PR§4.2.2, PR§4.2.5-4.2.6, PR§4.3.7, PR§4.3.8, PR§4.3.9	ISFL ER Programs shall review the historic activity data and emission factors available for the subcategories selected in step 1, and the methods used to collect these activity data and emission factors against the quality and baseline setting requirements for ISFL Accounting listed in Section 4.2. ISFL ER Programs shall account for the total net emission reductions across eligible subcategories	The following procedure, or a different procedure that, in conjunction with other procedures, results in an identical Step 3 selection, has been followed for each subcategory included in the Step 1 selection, in order to determine whether each subcategory will (a) be retained in the selection (in which case it is termed a "retained subcategory" and considered to have "RET status" or (b) be	For the subcategories selected in Step 1, the following was identified /4/: 1. Whether data was available to quantify an average annual estimate of GHG emissions and removals across the Baseline Period, which must be 10 years in length. All 6 of the subcategories met this requirement. 2. Whether the subcategory "meets Tier 2" (i.e., can be quantified using higher tier methods) at a	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		by estimating the baseline and monitoring emissions and removals for the eligible subcategories using at minimum IPCC Tier 2 methods and data. Subcategories are considered to meet Tier 2 if all the significant pools and gasses are estimated using Tier 2 methods and data. For Subcategories referenced in paragraph 4.3.4ii, jurisdiction-specific Activity Data Proxies may be considered if Tier 2 methods and data are not available to meet the requirement of paragraph 4.2.2. The Emissions Baseline should be constructed based on the average annual historical GHG emissions and removals (or, where legacy effects are significant, the GHG emissions and removals resulting from average annual historic activities if it can be documented that this is more conservative for the relevant subcategory(ies) and the required data is available) over a baseline period (Baseline Period) of approximately 10 years. This Emissions Baseline should be constructed based on at least two data points. The end date for the Baseline Period for each ERPA Phase is the most recent date prior to two years before the submission of the ISFL ER Program document for each ERPA Phase for independent technical assessment. An alternative start-date of the Baseline Period could be allowed only with a convincing justification, and is not more than 15 years before the end date of the Baseline Period. For Subcategories listed in paragraph 4.3.4iv, if 10 years of historical data are not available at the beginning of the first ERPA Phase to construct the Emissions Baseline, a Baseline Period of 5 years may be considered for the first ERPA Phase with sufficient justification, with the requirement to construct the Emissions Baseline using an approximate 10-year Baseline Period for subsequent ERPA Phases where possible.	provisionally considered for removal from the selection (in which case it is termed a "provisionally removed subcategory" and said to have "PREM status"): 1. Identify the section(s) of Volume 4 of the IPCC 2006 Guidelines that contains guidance required for quantification of emissions or removals related to the subcategory[59]. For each area where applicable guidance is provided, review the descriptions of higher tier methods[60]. 2. Note the following requirements for quantification of baseline emissions: a. Data must be available to quantify an average annual estimate of GHG emissions and removals across the Baseline Period[61], using at least two data points, according to one of the following methods: i. Direct quantification of average annual historical GHG emissions and removals within the Program Area during the Baseline Period; or ii. Quantification of GHG emissions and removals resulting from average annual historic activities within the Program Area during the Baseline Period where all of the following criteria apply:	minimum. Forestland remaining forestland did not meet this requirement. Enteric fermentation – cattle also does not meet this requirement as several of the data inputs were from IPCC default parameters. 3. All subcategories meet this requirement as spatially explicit activity data was used, except for Enteric fermentation – cattle which does not require LULC activity data. 4. Whether the subcategory meets the requirements of the above 3 steps. For those subcategories meeting the above requirements, it was assigned a category as retained (eligible for ISFL accounting). We determined that the subcategories were accurately assigned as retainable. The final selected subcategories eligible for ISFL accounting are reported in Table 16 in section 4.2.3 of the ERPD.			

[59] For example, for subcategories pertaining to land conversion to cropland, one would refer to Chapter 5.3, "Land Converted to Cropland." One would also refer to other portions of the IPCC 2006 Guidelines as needed. For example, if biomass is burned in the process of converting forest land to cropland, one would refer to Chapter 5, Section 5.3.4 of the IPCC 2006 Guidelines for quantification guidance.

[60] Following IPCC convention, "higher tier" refers to either Tier 2 or Tier 3.

[61] See step (2)(b) below for requirements regarding the determination of the Baseline Period.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			1. Legacy effects[62] are likely to impact the Emissions Baseline. 2. Required data are available, following the requirements on data quality set out below, in order to implement the approach. b. The Baseline Period must meet the following temporal requirements: i. The Baseline Period must be approximately[63] 10 years in length, unless all of the following are true: 1. The subcategory was added to the Step 1 selection per indicator step (7)(d) in indicator RA-17. 2. Sufficient data for a Baseline Period of approximately 10 years are not available at the beginning of the first ERPA Phase. 3. Sufficient data for a Baseline Period of at least 5 years[64]				

[62] Legacy effects are emissions during the Baseline Period that are a result of land-use change that occurred before the start of the Baseline Period. Legacy effects are most likely to occur in the below-ground biomass, dead wood and soil organic matter pools, for which emissions attributable to land-use change may occur over extended periods of time.

[63] For the purposes of this indicator, "approximately" refers to a period of time within 365 days of the indicated number of years (e.g., "approximately 10 years" means a period of time that is exactly between 9 and 11 years).

[64] Baseline Periods less than five full years (e.g., in general, five consecutive periods of 365 days) in length are not permitted.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			are available at the beginning of the first ERPA Phase. 4. The Baseline Period is set to between 5 and 10 years in length. 5. A compelling rationale[65] is provided regarding the propriety of a Baseline Period of between 5 and 10 years for this subcategory. 6. Where possible, a commitment is made to construct the Emissions Baseline using an approximate 10-year Baseline Period for subsequent ERPA Phases. ii. Both of the following must be true regarding the date falling exactly two years before the date of submittal of the ERPD for quality review by the World Bank (referred to in this step (2) as the "date of interest"): 1. The Baseline Period must end on or earlier than the day				

[65] It is expected that the most common reasons that may be given for a shorter Baseline Period will be related to lack of data availability. The assessment team should closely scrutinize any claims made but should be prepared to accept any justifiable explanation for lack of feasibility.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			just before the date of interest. 2. If the Baseline Period does not end on the day just before the date of interest, the Baseline Period must end as recently as possible prior to the day just before the date of interest, and good reason must be provided for why the Baseline Period cannot end on the day just before the date of interest. iii. If the start date of the Baseline Period is not approximately 10 years before the end of the baseline period, all of the following are true: 1. A compelling rationale can be provided regarding why it would be infeasible[66] for the start of the Baseline Period to be within approximately 10 years of the end of the baseline period.				

[66] It is expected that the most common reasons that may be given for lack of feasibility will be related to lack of data availability, but perhaps other reasons may be given for lack of feasibility. The assessment team should closely scrutinize any claims made but should be prepared to accept any justifiable explanation for lack of feasibility.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			2. The start date of the Baseline Period is not more than 15 years before the end data of the Baseline Period. 3. Use the following procedure for determining whether the subcategory "meets Tier 2" (i.e., can be quantified using higher tier methods) and, thus, adheres to the requirements of this step (3): a. Refer to Table 5 to identify any greenhouse gases or carbon pools (referred to in the remainder of this indicator as "G/Ps") associated with the subcategory.[67] b. Of the G/Ps identified in step (3)(a) above, assess whether there are any G/Ps for which higher tier methods are not available for the entire process of quantifying both (a) baseline emissions (in consideration of the data requirements for baseline quantification as identified in step (2) above) and (b) monitoring emissions related to the subcategory. c. If no such G/Ps exist, the subcategory meets Tier 2; skip to step (4). Otherwise, the following significance testing procedure must be applied: i. Using information in the Program GHG Inventory, determine the GHG emissions or removals associated with each greenhouse gas or carbon				

[67] For any subcategory with one or more associated carbon pools, the greenhouse gas CO_2 must be disregarded for purposes of assessing whether the subcategory meets Tier 2 (double-counting in the significance testing would otherwise result).

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			pool identified in step (3)(a) above. ii. Calculate the absolute value of each quantity determined in step (3)(c)(i) above. iii. Rank the absolute values calculated in step (3)(c)(ii) above, and the associated G/Ps, from highest to lowest. iv. Sum the absolute values calculated in step (3)(c)(ii) above. v. Divide each value calculated in step (3)(c)(ii) by the value calculated in step (3)(c)(iv) above and multiply by 100 to convert to a percentage. This is the relative contribution to the absolute level of the total GHG emissions and removals in the subcategory. vi. Work through the list of G/Ps in sequential order from top to bottom, adding, for each G/P, the value calculated in step (3)(c)(v) for that G/P to the sum of the corresponding values across all G/Ps that are higher-ranked (i.e., that appear higher in the ranked list).[68] The result of this operation, for each G/P, is the calculation of the cumulative contribution of that G/P to the total absolute GHG emissions and removals.				

[68] This is the same operation as that set out in Step (6) of indicator RA-17. An example of this operation is given in Table 4.5, Section 4.5, Chapter 4, Volume 1 of the IPCC 2006 Guidelines.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			vii. Identify all G/Ps meeting at least one of the following criteria (such G/Ps are considered "significant"): 1. Having an associated relative contribution to the absolute level of the total GHG emissions and removals in the subcategory, as calculated in step (3)(c)(v) above, that is greater than or equal to 25.000%. 2. Having an associated cumulative contribution to the absolute level of the total GHG emissions and removals in the subcategory, as calculated in step (3)(c)(vi) above, that is less than 60.000%. 3. Being the first G/P encountered, when reviewing the list of values calculated in step (3)(c)(vi) from top to bottom, for which the calculated value				

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			is greater than or equal to 60.000%. viii. For each G/P identified in step (3)(c)(vii) above, determine whether higher tier methods are available for the entire process of quantifying both (a) baseline emissions (in consideration of the data requirements for baseline quantification as identified in step (2) above) and (b) monitoring emissions related to the subcategory. 1. If an affirmative determination is made for each G/P identified in step (3)(c)(vii) above, the subcategory meets Tier 2. 2. Otherwise, the subcategory does not meet Tier 2. 4. If the subcategory is related to land use change[69], determine whether the following requirements for quantification of activity data, in respect of Approaches 1, 2 and 3 as described in Volume 4, Chapter 3, Section 3.3.1 of the IPCC 2006 Guidelines, can be adhered to for the entire process of quantifying both (a) baseline emissions (in consideration of the data requirements for baseline quantification as identified in step (2) above) and (b) monitoring emissions related to the subcategory: a. Quantification of activity data using Approach 1 is not permitted.				

[69] This step is not applicable to subcategories not related to land use change.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			b. Activity data using must be quantified using Approach 3, unless this is not possible, in which case Approach 2 may be used, provided that ancillary information is available that allows to land-use conversions to be tracked over time. 5. Determine whether the subcategory meets Tier 2, through application of the procedure set out in step (3) above, and adheres to any applicable requirements for land representation as set out in step (4) above. a. If yes, the subcategory is assigned RET status. b. If not: i. If the sub-category in question is "forest land remaining forest land" and all of the following are true, the sub-category is assigned RET status. 1. The only issue is that sufficient activity data[70] are not available to meet the requirements of higher tier methods for each G/P identified in step (3)(c)(vii) above. 2. Data from an Activity Data Proxy are available to serve as a substitute for the missing				

[70] "Activity data" is defined in Volume 1, Chapter 1 of the IPCC 2006 Guidelines as "information on the extent to which a human activity takes place"; such data are most frequently calculated using units of land area (e.g., hectares).

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			activity data in the implementation of a higher tier method, and are used for this purpose. 3. In respect of baseline emissions, quantification follows guidance for baseline quantification set out in step (2) above. ii. Otherwise, the subcategory is assigned PREM status. 6. The outcome of the above steps is a list of subcategories with a status identifier (either "RET" or "PREM") attached to each); this is termed the Step 2 selection.				
RA-21	PR§4.3.11-4.3.13	For each ERPA Phase, ISFL ER Programs shall only account for those subcategories for which step 2 has shown that the historic activity data and emission factors available, and the methods used to collect these activity data and emission factors, meet the quality and baseline setting requirements for ISFL Accounting listed in Section 4.2 while taking into account the provisions of paragraph 4.3.8 and 4.3.9. If a subcategory selected in step 1 has historic data available to construct an Emission Baseline over a Baseline Period of approximately 10 years but these data do not meet the other quality requirements of Section 4.2, it can only be included for accounting in the ERPA Phase if all the quality requirements can be met through the application of improved methods and data. ISFL ER Programs that intend to include such a subcategory need to ensure that the quality requirements can be met at the latest at the end of the ERPA Phase. In this case, ISFL ER Programs shall provide an interim Emissions Baseline at the	The following procedure, or a different procedure that, in conjunction with other procedures, results in an identical Step 3 selection, has been followed for each subcategory included in the Step 2 selection: 1. If the subcategory has a status of RET, it is included in the Step 3 selection. 2. If the subcategory has a status of PREM: a. If the subcategory was assigned a status of PREM for the sole reason that, while historic data available to construct an Emission Baseline over a Baseline Period of approximately 10 years do exist, these data do not meet the requirements set out in steps (3) and (4) of indicator RA-20, the	1. Determined that the subcategories assigned as RET (retained) have been included in Step 3. 2. Determined that the subcategories were accurately assigned as PREM and accurately excluded from Step 3 following the requirements.	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		beginning of the ERPA Phase using best available data to be able to provide ex-ante estimations of the Emission Reductions. Each relevant subcategory selected in step 1 that does not have sufficient historic data available to construct an Emission Baseline over a Baseline Period of approximately 10-year period at the start of an ERPA Phase (with the exception of the subcategories that meet the requirements of 4.3.9), cannot be included for accounting and the calculation of the emission reductions and removals in that ERPA Phase. In this case the ISFL ER Program shall monitor the emissions for that subcategory in accordance with the quality requirements of Section 4.2 for the ERPA Phase and these monitored data collected during the ERPA Phase (and potentially earlier ERPA Phases) shall be used to estimate the Emissions Baseline during the subsequent ERPA Phase in order to fulfill the baseline period requirements outlined in Section 4.2	subcategory is included in the Step 3 selection if a "justifiable" determination is made that it will be possible to produce an Emissions Baseline adhering to the requirements of the same steps (3) and (4) by no later than the end of the first ERPA Phase. Otherwise, the subcategory is not included in the Step 3 selection. b. If the subcategory was assigned PREM status because, at least in part, historic data available to construct an emission baseline over a Baseline Period of approximately 10 years do not exist, the subcategory is not included in the Step 3 selection. c. If the subcategory was assigned PREM status for any reason other than given in steps (2)(a)-(b) above, the subcategory is not included in the Step 3 selection.				
RA-22	T§4.2.2	For each of the subcategories selected in step 1, provide a summary of the review of the available data and methods for the subcategories against the quality and baseline setting requirements for ISFL Accounting using the table template below. Copy and complete the table for each individual subcategory	For each of the subcategories included in the Step 1 selection, the provided table in Section 4.2.1 of the PD Template is populated (the table is populated uniquely for each such subcategory) with summary information regarding the review of the available data and methods against the quality and baseline setting requirements for ISFL Accounting.	Section 4.2.1 of the ERPD contains a table populated with the with summary information regarding the review of the available data and methods against the quality and baseline setting requirements for ISFL Accounting.	R	B	C
RA-23	TAnnex7	For each of the selected subcategories in Section 4.2.1: • Identify the parameters that were used to determine the activity data and emission factors in the calculation of the emissions and removals for that subcategory;	The following information is included in Annex 7 of the ERPD for each of the subcategories included in the Step 1 selection: 1. Identification of the parameters used to determine the activity data and emission factors in the calculation of	Annex 7 of the ERPD contains the required information regarding the identification of the parameters used to determine the activity data and emission factors and the required details including the description of the historical time series available, data sources, relevant spatial levels, whether it complies with IPCC Tier 2	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		• For each parameter used to determine activity data, describe the historic time series available for that parameter including how they relate to the proposed start date and end date of the Baseline Period (see Section 4.4.1); • Provide details on the source of the parameters (e.g., official statistics) or a description of the method for determining the parameter (e.g., for parameters derived from remote sensing images describe the process applied including details such as the type of sensors and the details of the images used). If proxies have been used, describe the data sources for the proxies and their application to estimate activity data; • Provide details on the spatial level of the parameters (local, regional, national or international) and if they allow for spatially explicit observations of land-use categories and land-use conversions; • Provide an analysis if the parameters comply with the requirements on the use of, at minimum, IPCC Tier 2 methods and data. For parameters used for land use change-related subcategories, also provide an analysis if they data allows for the use of Approach 3 for land representation.	the emissions and removals for the subcategory 2. For each "parameter" identified in (1) above: a. If the "parameter" is used to determine activity data, a description of the historic time series available for that "parameter", including how the available time series relates to the start date and end date of the Baseline Period b. Details on the data source for the "parameter", following one of the below options, as applicable: i. If the "parameter" has been measured, a description of the method for determining the "parameter" (e.g., for "parameters" derived from remote sensing images describe the process applied including details such as the type of sensor and the types of imagery used). ii. If proxies have been used, describe the data sources for the proxies and their application to estimate activity data. iii. For other data sources (e.g., literature or expert judgment), provide a description	methods and data (at a minimum), and whether data provided by the "parameter" allows for the use of Approach 3 for land representation. The information included in the land converted to forestland class is noted as relevant to several of the other categories.			

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			of the source of the data. c. If the "parameter" is spatial in nature, details on the level to which it applies (local, regional, national or international) and clarification as to whether the "parameter" allows for spatially explicit observations of land-use categories and land-use conversions. d. An analysis as to whether the "parameter" complies with the requirements on the use of, at minimum, IPCC Tier 2 methods and data. e. If the "parameter" is used for land use change-related subcategories, an analysis as to whether data provided by the "parameter" allows for the use of Approach 3 for land representation.				
RA-24	T§4.2.3	Based on the analysis above, complete the table below by listing all subcategories from step 1 and identifying those subcategories for which step 2 has shown that the historic activity data and emission factors available, and the methods used to collect these activity data and emission factors, meet the quality and baseline setting requirements for ISFL Accounting.	In the provided table in Section 4.2.3 of the PD Template, list all subcategories included in the Step 1 selection and populate the table according to its instructions, with those subcategories included in the Step 3 selection (and only such subcategories) being identified as "Eligible for ISFL Accounting"[71].	Table 16 in section 4.2.3 of the ERPD contains the final selection of the subcategories eligible for ISFL accounting and is populated with the relevant information for each subcategory.	R	B	C
RA-25	PR§4.3.1; T§4.3; TAnnex8	[For] Each relevant subcategory selected in step 1 that does not have sufficient historic data available to construct an Emission Baseline over a Baseline Period of approximately 10-year period at the start	A description of the time-bound plan to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases during the ERPA Term is provided in	Section 4.3 contains a description of the time-bound plan to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases during	R	B	C

[71] The distinction in the provided table between "Emissions Baseline setting requirement(s)," "Methods and data requirement(s)" and "Spatial information requirement(s)" is not clear, so the assessment team should be flexible regarding how these columns are filled out. The factors of primary importance are that all subcategories included in the Step 1 selection are included in the table and that the "Eligible for ISFL Accounting?" column is correctly populated in respect of whether or not each subcategory is included in the Step 3 selection.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		of an ERPA Phase (with the exception of the subcategories that meet the requirements of 4.3.9)… the ISFL ER Program shall monitor the emissions for that subcategory in accordance with the quality requirements of Section 4.2 for the ERPA Phase and these monitored data collected during the ERPA Phase (and potentially earlier ERPA Phases) shall be used to estimate the Emissions Baseline during the subsequent ERPA Phase in order to fulfill the baseline period requirements outlined in Section 4.2. For subcategories that were included in Section 4.2.1 above as part of the initial selection (step 1) but were not eligible for ISFL Accounting, please provide a summary of the time-bound plan (approximately 500 words) to increase the completeness of the scope of accounting, improve data and methods and start collecting data to be able to estimate the Emissions Baseline for the subsequent ERPA Phases during the ERPA Term. Also, discuss those subcategories selected in step 1 that have historic data available to construct an Emission Baseline over a Baseline Period of approximately 10 years but where these data do not meet the other quality requirements and identify if all the quality requirements can be met through the application of improved methods and data at the latest at the end of the current ERPA Phase. Please include the full GHG Accounting Scope and Improvement Plan in Annex 8 below.	Section 4.3 of the PD Template, and the full plan itself is provided in Annex 8 of the PD Template. The time-bound plan, and the description thereof, have the following attributes: 1. For any subcategory included in the Step 1 selection but not included in the Step 3 selection, concrete actions are identified that will meet the following objectives: a. Increase the completeness of the scope of accounting. b. Improve data and methods. c. Start collecting data to be able to estimate the Emissions Baseline for one or more subsequent ERPA Phases during the ERPA Term. 2. For any subcategory identified in step (2)(a) of indicator RA-21: a. If the subcategory was included in the Step 3 selection, it is affirmed that all the quality requirements can be met through the application of improved methods and data by the end of the first ERPA Phase[72] and concrete actions are identified that will result in the subcategory being granted RET status, upon application of the procedure set out in indicator RA-20, by the end of the first ERPA Phase.	the ERPA Term for the following subcategories: forestland remaining forestland and enteric fermentation in cattle, which include concrete actions that meet the required objectives.			

[72] For such subcategories, this is a precondition for inclusion in the Step 3 selection.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			b. If the subcategory was not included in the Step 3 selection, this is clearly stated and the information requested in (1)(a)-(c) above is provided.				
RA-26			The time-bound plan to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases during the ERPA Term, as described in Section 4.3 of the ERPD and provided in full in Annex 8 of the ERPD, has the following attributes:				
RA-27			The time-bound plan is **specific**, with actions to be taken and responsible parties clearly identified.	The time-bound plan for forestland-remaining-forestland subcategory appears to be specific in that the technologies that will be explored are detailed, the use. However specific information about the responsible parties is lacking. The time-bound plan for the enteric fermentation category appears to be specific in that it lays out that the Central Statistical Agency of Ethiopia along with the Oromia Bureau of Agriculture and Natural Resources will work in collaboration to develop enhanced tier 2 methods for estimation. Specific additional measures and data to be collected are laid out.	R	P*	II
RA-28			The time-bound plan is **measurable**: describing actions to be taken with a sufficient level of detail that it will be possible to objectively measure progress towards any objectives.[73]	The time-bound plans for both forestland-remaining-forestland and enteric fermentation appear to be measurable in that specific actions are described include algorithms and technologies, updated inventory data, and additional datasets to be utilized to achieve tier 2 estimation methods.	R	P*	I
RA-29			The time-bound plan is **achievable**: feasible given resources that can reasonably be assumed to be available to the Program Entity.	Used expert judgement to conclude that the time-bound plan is achievable given the plans for a second NFI remeasurement and the collaboration between key institutions to achieve the objectives.	R	P*	I
RA-30			The time-bound plan is **relevant**, with the largest amount of planned effort granted to	Concluded that time-bound plans were developed for two most relevant subcategories.	R	P*	I

[73] For example, of the two planned actions described below, the second is more measurable than the first.

1. "We will acquire updated medium-resolution imagery for the Program Area."
2. "We will acquire cloud-free medium-resolution imagery from the Landsat-8 sensor as it becomes available, with an objective of having wall-to-wall coverage of the Program Area by 31 March 2019."

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			subcategories that of the highest priority for eligibility for ISFL Accounting.[74]	forestland-remaining-forestland is the subcategory with the largest emissions, which was excluded due to a lack of tier 2 data. Likewise, enteric fermentation is the only other subcategory that would have been included had tier 2 data been available.			
RA-31			The time-bound plan is **time-bound**, with specific milestones provided by which key implementation actions will be completed.	The time-bound plan for forestland-remaining-forestland is time-bound as it is dependent on the completion of additional forest inventories, for which the second has already been completed and the third is planned to be implemented by 2023. The time-bound plan for enteric fermentation does not include the specific timing of the implementation for enhanced cattle characterization to achieve the tier 2 methods.	R	P*	II
RA-32			The time-bound plan is likely to increase the completeness of the scope of accounting.	Used expert judgement to conclude the time-bound plan is likely to increase completeness of the scope of accounting as it targets the two subcategories which would have been included had tier 2 data been available.	R	P*	I
RA-33			The time-bound plan is likely to improve data and methods for the subsequent ERPA Phases.	Used expert judgement to conclude the time-bound plan is likely to improve data and methods for the subsequent ERPA Phases as it targets the two most relevant subcategories and details improvements to the data and methods used for these classes.	R	P*	I
RA-34	PR§1; PR§4.4.1	For each ERPA Phase, ISFL ER Programs shall determine an Emissions Baseline comprising those subcategories that are eligible for ISFL Accounting in the ERPA Phase as determined by the steps in Section 4.3. ISFL ER Programs are expected to demonstrate conformity with this document and apply general principles of… conservativeness in order to be able to receive result-based finance from the ISFL.	For each subcategory included in the Step 3 selection, the following are true, as applicable, regarding the Emissions Baseline for the first ERPA Phase ("the First Phase Baseline"): 1. The First Phase Baseline has been constructed, in respect of the subcategory, following the requirements set out in step (2) of indicator RA-20. 2. If the subcategory was determined to meet Tier 2 in step (3) of indicator RA-20, only higher tier methods are used to construct the First Phase Baseline for any greenhouse gases or carbon	1. For all First Phase Baseline subcategories selected, the requirements in step 2 of RA-20 are met. 2. Only Tier 2 or higher methods are used for any greenhouse gases or carbon pools used to construct the First Phase Baseline. 3. For the subcategory is related to land use change, Approach 3 (spatially-explicit land use conversion data) is adhered to. 4. N/A - Step (5)(b)(i) of indicator RA-20 applies in that the sub-category in question is "forest land remaining forest land", however the requirements in step (5)(b)(i)(1)-(3) are not all true, thus the sub-category "forest land remaining forest land" was not assigned RET status.	R	B	C

[74] The determining of priority is to be made by the Program Entity.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			pools identified in step (3)(c)(vii) of the same indicator (no Tier 1 methods are used for such greenhouse gases or carbon pools). 3. If the subcategory is related to land use change, the requirements of step (4)(a)-(b) of indicator RA-20 are adhered to in constructing the First Phase Baseline. 4. If step (5)(b)(i) of indicator RA-20 applies to the subcategory, the requirements in step (5)(b)(i)(1)-(3) of the same indicator are adhered to in constructing the First Phase Baseline. 5. If step (2)(a) of indicator RA-21 applies to the subcategory, an Interim Emissions Baseline is produced for the sub-category using "best available" data and incorporated into the First Phase Baseline for purposes of ex-ante quantification of Emission Reductions.	5. N/A - Step (2)(a) of indicator RA-21 does not applies to the subcategory "forest land remaining forest land" or the subcategory "enteric fermentation."			
RA-35			The First Phase Baseline is constructed through summation of the individual subcategory-specific baselines across all subcategories included in the Step 3 selection.	Confirmed the First Phase Baseline is constructed through summation of the individual subcategory-specific baselines across all subcategories included in the Step 3 selection.	R	B	C
RA-36			The following guidance is applied in constructing the First Phase Baseline, as applicable: 1. The good practice suggestions of the IPCC 2006 Guidelines. 2. The guidance of Sections 3-5 of GFOI.	It appears that the good practice suggestions of the IPCC 2006 Guidelines and the guidance of Sections 3-5 of GFOI were generally applied.	R	P	I
RA-37			The First Phase Baseline has been constructed using conservative methodological assumptions and approaches in order to ensure that Emission Reductions are not over-estimated (i.e., to err on the side of underestimating baseline emissions).[75]	The assumptions, data utilized, and methodological choices applied when constructing the First Phase Baseline are conservative such that Emission Reductions are not over-estimated.	R	P	I

[75] This language paraphrases Section 3.7 of ISO 14064-2:2006. Note, however, the following:

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
RA-38			Where legacy effects are likely to be present, these have been accounted for in construction of the First Phase Baseline through appropriate implementation of the accounting approach set out in step (2)(a)(ii) in indicator RA-20.	Legacy effects have been accounted for the construction of the First Phase Baseline.	R	P	I
RA-39			In constructing the First Phase Baseline, all emissions from the below-ground biomass, dead wood, litter and soil organic matter carbon pools following land-use change are not assumed to be instantaneous or to occur within a short period of time, but are projected using a decay function over a "justifiable" period of time.[76]	In constructing the First Phase Baseline, all emissions from the below-ground biomass, dead wood, litter and soil organic matter carbon pools following land-use change follow the ISFL Carbon Pools Note such that: <u>Deadwood pools</u> - All emissions from dead wood are excluded for subcategories that involve land remaining within the same land-use category or subcategories that represent transitions between non-forest categories - All emissions from dead wood are included for subcategories involving lands converted from Forest Land to any other land-use category (carbon losses) and for lands converted to Forest Land (carbon gains). In this case the emissions from dead wood are not assumed to be instantaneous or to occur within a short period of time, but are projected using a decay function over the IPCC default period of 20 years. <u>Belowground biomass pools</u> - for subcategories that involve forestland converted to non-forest categories, all emissions from	R	P	I

1. The principle of conservativeness does not necessarily imply that choices leading to a higher Emission Baseline are made at every turn. It simply requires that, in the face of uncertainty, methodological assumptions and approaches are selected that err on the side of over-estimating the baseline.
2. As referenced in this indicator, the principle of conservativeness does not extend to the selection of data sources, such as emission factors. It is not expected, for example, that where an uncertainty range around an emission factor is provided in the literature, the lower bound of that range will be selected for use in quantification. Uncertainty in data sources will be accounted for in the calculation of the uncertainty set-aside factor, per Section 4.6 of the Program Requirements.

[76] Page 3.9 of Chapter 3, Volume 4 of the 2006 IPCC Guidelines suggests a default time period of 20 years for "dead organic matter and soil carbon stocks to reach equilibrium following land-use conversion" and, therefore, a default time period of 20 years will automatically be considered justifiable for purposes of this indicator. However, time periods other than 20 years may also be justifiable.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
				belowground biomass go instantly from the biomass carbon stocks in forest to the average biomass carbons stocks in the new steady state system - For subcategories that involve non-forest categories converted to forest, carbon stocks go from average carbon stocks in non-forest to average carbon stocks in forests during a conservative default period of 20 years. <u>Soil organic matter carbon pools</u> - For all transitions, the Soil organic C stock change during the transition to a new equilibrium SOC occurs in a linear fashion over a period of 20 years.			
RA-40			Emissions Baselines for ERPA Phases after the first ERPA Phase, as reported in Section 4.4.2 of the PD Template, are "justifiable" in light of (a) projected trends in average emissions (over future Baseline Periods as relevant to future ERPA Phases) within the Program Area and (b) subcategories that were not included in the Step 3 selection that are predicted to become eligible for ISFL Accounting in respect of future ERPA Phases.	The Emissions Baselines for ERPA phases after the first phase are reported in Section 4.4.2 of the PD and are considered to be justifiable in that it is assumed that the subcategory "forestland remaining forestland" will be included in year 4, after subsequent NFI data is available, and that the subcategory enteric fermentation in cattle will be available in year 6, which is justifiable given the objectives of the time-bound plan.	L	P	I
RA-41	PR§4.6.1	ISFL ER Programs shall systematically identify and assess sources of uncertainty in the determination of the Emissions Baseline… following most recent IPCC guidance and guidelines…	A "justifiable" assessment of sources of uncertainty in the construction of the Emissions Baseline for the first ERPA Phase has been carried out; this assessment has the following attributes: 1. The assessment is systematic, in that it proceeds in a methodical manner through the various components of the quantification process and assesses uncertainty independently for each component. 2. The classification of uncertainties is undertaken using the "eight broad causes of uncertainty" identified in Section 3.1.5 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines; an exhaustive identification of all	Applied expert judgement to conclude that the assessment of sources of uncertainty in construction of the Emissions Baseline for the first ERPA phase is justifiable. 1. The assessment was systematic in that it was carried out independently for each component (subcategory, and data source). 2. The classification of uncertainties using eight broad causes of uncertainty, as defined in Section 3.1.5 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines, is not provided, which prevents conformity to this requirement.	R	B	NC

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			instances of each of these causes of uncertainty is provided.				
RA-42	PR§4.6.1	ISFL ER Programs shall, to the extent feasible, follow a process of managing and reducing uncertainty in the determination of the Emissions Baseline…	A "justifiable" assessment has been undertaken regarding how uncertainty in the construction of the Emissions Baseline for the first ERPA Phase can be managed and reduced, given the means that can reasonably be made available to the Program Entity. This assessment has been acted upon.	A "justifiable" assessment has been undertaken regarding how uncertainty in the construction of the Emissions Baseline for the first ERPA Phase can be managed and reduced is provided. The assessment has been acted upon in the form of the time-bound plans.	R	B	C
RA-43			The guidance set out in Section 3.1.6 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines has been duly considered in assessing how uncertainty in the construction of the Emissions Baseline for the first ERPA Phase can be managed and reduced.	While an assessment of how uncertainty in the construction of the Emissions Baseline for the first ERPA Phase can be managed and reduced was conducted, it has not been made explicitly clear that guidance set out in Section 3.1.6 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines has been duly considered. For instance, identification of the seven broad ways uncertainties can be reduced and how they are applicable to the uncertainties associated with the ERPA Emissions Baseline could have been provided.	R	P	II
RA-44			The "best available" data have been used in the construction of the Emissions Baseline for the first ERPA Phase.	Through the thorough review of the application of the datasets, including assumptions and selection of parameters, it can be concluded that the "best available" data have been used in the construction of the Emissions Baseline for the first ERPA Phase.	R	P	I
RA-45	T§4.4.1	Building on the information provided in 4.2 above, please provide a short description (maximum two pages) of the approach used for estimating the Emissions Baseline. Please provide: • A description of the general approach applied to estimate the Emissions Baseline in the current ERPA Phase • Identification and assessment of uncertainty in the determination of the Emissions Baseline. • The Baseline Period(s) used in the construction of the Emissions Baseline for the current ERPA Phase by indicating the start-date and the end-date for the Baseline Period(s). If different Baseline Periods are used for different subcategories, explain how this meets the requirements.	The following information is provided in Section 4.4.1 of the ERPD: 1. A description of the general approach applied to estimate the Emissions Baseline in the current ERPA Phase.[77] 2. Identification and assessment of uncertainty in the determination of the Emissions Baseline 3. The start date(s) and end date(s) of the Baseline Period(s) used in the construction of the Emissions Baseline for the current ERPA Phase	Section 4.4.1 of the ERDA includes a description or identification of all six points in this indicator.	R	B	C

[77] All references to the "current ERPA Phase" refer to the first ERPA Phase.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		• In case an interim Emissions Baseline is provided at the beginning of the ERPA Phase, identify those subcategories that led to the use of the interim baseline and describe how best available data have been used. • Ex-ante estimate, including assumptions made, of how the Emissions Baseline will change in future ERPA Phases.	4. If different Baseline Periods are used for different subcategories, clarification regarding how this meets any relevant clauses of the Program Requirements. 5. In case an interim Emissions Baseline is provided at the beginning of the ERPA Phase, identification of those subcategories that led to the use of the interim baseline and a description of how "best available" data have been used. 6. An ex-ante estimate of how the Emissions Baseline will change in future ERPA Phases (with a description of any assumptions made in producing the estimate).				
RA-46	TAnnex9	Please provide a step-by-step calculation of the Emissions Baseline. Provide a transparent, complete, consistent and accurate description of the approaches, methods, and assumptions used and provide an overview of the activity data and emission factors used in a way that is sufficiently detailed to enable the reconstruction of the Emissions Baseline. Identify and asses the sources of uncertainty in the determination of the Emissions Baseline and describe actions that have been taken to manage or reduce uncertainty Attach any spreadsheets, spatial information, maps and/or synthesized data used in the calculation.	A step-by-step calculation of the Emissions Baseline, including the following information, is provided in Annex 9 of the ERPD: 1. A transparent, complete, consistent and accurate description of the approaches, methods, and assumptions used 2. An overview of the activity data and emission factors used in a way that is sufficiently detailed to enable the reconstruction of the Emissions Baseline. 3. An identification and assessment of the sources of uncertainty in the determination of the Emissions Baseline and a description of actions that have been taken to manage or reduce uncertainty. Any spreadsheets, spatial information, maps and/or synthesized data used in the calculation of the Emissions Baseline are incorporated by reference to Annex 9.	Annex 9 of the ERPDA includes a complete, transparent, and consistent step-by-step calculation of the Emission Baseline that includes and overview of the activity data and emission factors and an assessment of the uncertainty. It includes the incorporation of screen shots directly from the calculation workbooks and any synthesized data from other sources that are used in the calculation of the Emission Baseline.	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
RA-47	T§4.4.2	Provide the estimate of the Emissions Baseline in the table below.	An estimate of the Emissions Baseline is provided, for each ERPA Phase included in the ERPA Term, in the provided table in Section 4.4.2 of the PD Template.	An estimate of the Emissions Baseline is provided, for each ERPA Phase included in the ERPA Term, in the table in section 4.4.2 of the ERPD.	R	B	C
RA-48	T§4.5.1	Please provide a description (two pages or less) of the methods and standards for generating, recording, storing, aggregating, collating and reporting data on monitored parameters, including equations if necessary.	Section 4.5.1 contains a description of the methods and standards[78] for generating, recording, storing, aggregating/collating and reporting data on monitored "parameters", including equations if necessary.	Section 4.5.1 of the ERPD contains a broad description of the monitoring approach with details on the coordination between government programs and other agencies. It includes information on recording, generating, storing, and reporting on activity data, forest inventory data, and agricultural sector data.	R	B	C
RA-49	T§4.5.2	Please provide a description or flow diagram (one page or less) indicating how the monitoring system will operate and who will be responsible for monitoring the parameters.	Section 4.5.2 of the ERPD contains a description or flow diagram indicating how the monitoring system will operate and who will be responsible for monitoring the "parameters".	Section 4.5.2 of the ERPD contains a flow diagram indicating how the monitoring system will operate and who will be responsible for monitoring the parameters, followed by a more detailed description of the flow diagram components.	R	B	C
RA-50	TAnnex10; PR§4.6.1	Using the table provided, clearly describe all the data and parameters to be monitored (copy table for each parameter). ISFL ER Programs shall systematically identify and assess sources of uncertainty in the… monitoring of emissions and removals following most recent IPCC guidance and guidelines…	Using the table provided[79] in Annex 10 of the ERPD a clear description is provided of all the data and "parameters" to be monitored (copy table for each "parameter").	The table in Annex 10 provides a clear description of some of the data and parameters to be monitored. However, many parameters that are described in preceding annexes and other sections of the ERPD such as section 4.5 of which describes the monitoring approach, are not included in Annex 10.	R	B	NC
RA-51			A "justifiable" assessment of sources of uncertainty in the monitoring of emissions and removals has been carried out and documented in Annex 10 of the ERPD (under "Identification of sources of uncertainty for this "parameter"…"); this assessment has the following attributes: 1. The assessment is systematic, in that it proceeds in a methodical manner through the various "parameters" used in quantification and assesses uncertainty independently for each component.	The table in Annex 10 contains a justifiable assessment of the sources of uncertainty for each parameter identified. The assessment is systematic and carried out independently for each component. The classification of uncertainties does not include an exhaustive identification of all instances of each of eight broad causes of uncertainty resulting in a nonconformity.	R	B	NC

[78] The definition of "standard" that applies to here is (from Merriam-Webster): "something set up and established by authority as a rule for the measure of quantity, weight, extent, value, or quality." For example, when speaking of collection of remotely sensed data, a standard for pixel size (such as 30 meters) could be described in the ERPD.
[79] An overly-stringent interpretation of the table in Annex 10 would not be in anyone's best interest. While clarity in how the table is populated is important, brevity should be permitted so long as clarity is not degraded. References to external documents (e.g., if a certain section of a Standard Operating Procedures document is referenced under "Quality Assurance/Quality Control procedures to be applied") should be permitted, so long as the external documents are clearly provided.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			2. The classification of uncertainties is undertaken using the "eight broad causes of uncertainty" identified in Section 3.1.5 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines; an exhaustive identification of all instances of each of these causes of uncertainty is provided.				
RA-52	T§4.5.3	The details on all data and parameters to be monitored in Annex 10 below should also provide a systematic identification and assessment of uncertainty in the data and parameters to be monitored. Based on the information provided in the Annex, indicate how uncertainty will be managed and reduced in the monitoring of emissions and removals (roughly 500 words or less). ISFL ER Programs shall, to the extent feasible, follow a process of managing and reducing uncertainty in the… monitoring of emissions and removals.	A "justifiable" assessment has been undertaken, and documented in Section 4.5.3 of the ERPD, regarding how uncertainty in the monitoring of emissions and removals can be managed and reduced, given the means that can reasonably be made available to the Program Entity.	A "justifiable" assessment has been undertaken and documented in Section 4.5.3 of the ERPD regarding how uncertainty in the monitoring of emissions and removals can be reduced.	R	B	C
RA-53			The guidance set out in Section 3.1.6 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines has been duly considered in assessing how uncertainty in the monitoring of emissions and removals can be managed and reduced.	While an assessment of how uncertainty in the construction of the Emissions Baseline for the first ERPA Phase can be managed and reduced was conducted, it has not been made explicitly clear that guidance set out in Section 3.1.6 of Chapter 3, Volume 1 of the IPCC 2006 Guidelines has been duly considered. For instance, identification of the seven broad ways uncertainties can be reduced and how they are applicable to the uncertainties associated with the ERPA Emissions Baseline could have been provided.	R	P	II
RA-54			The "best available" data have been used in the monitoring of emissions and removals.	Through the thorough review of the application of the datasets, including assumptions and selection of parameters, it can be concluded that the "best available" data have been used in the construction of the Emissions Baseline for the first ERPA Phase.	R	P	I
RA-55			The following guidance is applied in constructing the monitoring of emissions and removals, as applicable: 1. The good practice suggestions of the IPCC 2006 Guidelines. 2. The guidance of Sections 3-5 of GFOI.	It appears that the good practice suggestions of the IPCC 2006 Guidelines and the guidance of Sections 3-5 of GFOI were generally applied.	R	P	I
RA-56	PR§4.2.2-4.2.3; PR§4.5.1	ISFL ER Programs shall estimate all the subcategories and their associated carbon pools and gases included in the scope for ISFL Accounting following the quality requirements in Section 4.2.	For each subcategory included in the Step 3 selection, the following are true, as applicable, regarding the planned monitoring data and methods as described in Section 4.5 and Annex 10 of the ERPD:	The planned monitoring of data and methods for the subcategories included in the Step 3 selection and described in Annex 10:	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		ISFL ER Programs shall account for the total net emission reductions across eligible subcategories by estimating the baseline and monitoring emissions and removals for the eligible subcategories using at minimum IPCC Tier 2 methods and data. Subcategories are considered to meet Tier 2 if all the significant12 pools and gasses are estimated using Tier 2 methods and data. ISFL ER Programs are encouraged to improve data and methods, and to move to a higher tier over time, as possible. For accounting emission reductions from land use change-related subcategories, Approach 3 should be used for land representation; Approach 2 may be used if this is not possible if ancillary information is available that allows to track land over time.	1. If the subcategory was determined to meet Tier 2 in step (3) of indicator RA-20, only higher tier methods are planned for monitoring emissions from any greenhouse gases or carbon pools identified in step (3)(c)(vii) of the same indicator (no Tier 1 methods are planned for such monitoring). 2. If the subcategory is related to land use change, the requirements of step (4)(a)-(b) of indicator RA-20 are adhered to in monitoring emissions.	(1) Only include higher tier methods for monitoring emissions (no Tier 1 methods are planned). (2) For determining land use change, all planned monitoring follows Approach 3 (spatially-explicit data), as described in Annex 10.			
RA-57	PR§4.5.2	In estimating the subcategories and their associated carbon pools and gases included in the scope for ISFL Accounting, ISFL ER Programs shall ensure methodological consistency between the Emissions Baseline and the monitored net GHG emissions. Methodological consistency implies that same methods and datasets have been used to calculate the Emission Baseline and the actual GHG emissions and removals. In case methods and/or datasets differs, methodological approaches provided by IPCC Guidelines to ensure time series consistency are applied."	One of the following is true: 1. The planned monitoring methods and data as described in Section 4.5 and Annex 10 of the ERPD are identical to the methods and data that have been used to calculate the Emissions Baseline (with the obvious exception that the temporal scope differs: the monitored data will pertain to the ERPA Phase to which the monitoring applies, while the baseline data pertained to the Baseline Period). 2. There are differences between the planned monitoring methods and data as described in Section 4.5 and Annex 10 of the ERPD and the methods and data that have been used to calculate the Emissions Baseline, in which case either the description in Section 4.5 contains a commitment to either update the Emissions Baseline to use the same methods and data to be	Number 1 is true.	R	B	C

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
			used in monitoring[80], or to use one of the splicing techniques described in Sections 5.3.3-5.3.3.6 of Chapter 5, Volume 1 of the IPCC 2006 Guidelines in order to ensure time series consistency.				
RA-58	PR§4.4.2; PR§4.5.1	The Emissions Baseline shall be expressed as tonnes of CO2e per year. The measured [monitored] emissions and removals shall be expressed as tonnes CO2e per year.	Each Emissions Baseline reported in the ERPD is expressed as metric tons (i.e., megagrams) of CO2-equivalent per year. Greenhouse gases are converted using 100-year global warming potentials derived from one of the two following sources. 1. The IPCC's Second Assessment Report, which has the following global warming potentials: a. Carbon dioxide: 1 b. Methane: 21 c. Nitrous oxide: 310 2. The IPCC's Fourth Assessment Report, which has the following global warming potentials: a. Carbon dioxide: 1 b. Methane: 25 c. Nitrous oxide: 298	The Emissions Baseline is reported as tonnes of CO2e per year in the ERPD. The greenhouse gases are converted using 100-year global warming potentials derived from the IPCC's Second Assessment Report.	R	B	C
RA-59			If a process for quantifying monitored emissions in terms of CO2e per year is documented within the ERPD, that process utilizes the same global warming potentials that are used in construction of the Emissions Baseline.	Section 1.4.1 of the ERPD indicates that greenhouse gases are converted using 100-year global warming potentials derived from the IPCC's Second Assessment Report.	R	B	C
RA-60	T§4.6	Please provide a simplified ex-ante estimation of the expected Emission Reductions of the ISFL ER Program. Where the calculation requires monitored data that is not available yet, use best estimates based on expected impacts of the ER Program and data that might be available from	Section 4.6 of the ERPD contains a simplified ex-ante estimate of the expected Emission Reductions of the ER Program for each year of the ERPA Term, having the following attributes:	Section 4.6 of the ERPD contains a simplified ex-ante estimate of expected emission reductions which assumes the program activities that will be implemented will achieve a 10% reduction in emissions per year. The 4 attributes of the indicator are provided in the ERPD.	R	B	C

[80] Noting, however, that revisions to the baseline during the ERPA Phase should be limited to the following:

- Replacement of emission factors used in the construction of the Emissions Baseline by others that have improved accuracy.
- Corrections to historical activity data resulting from improvements in data accuracy.

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		other actions (either in the country or in other countries). List all assumptions, and provide the values used for each parameter and the sources for these data. Summarize the outcome in the table below.	1. Where the calculation of the ex-ante estimate requires monitored data that are not available yet, best estimates are used based on the expected impacts of the ER Program and/or data from similar circumstances. 2. All assumptions are listed. 3. For each "parameter" included in the analysis, the value(s) used and data sources are provided. 4. The provided table in Section 4.6 is populated.				
RA-61			Assumptions regarding the following, as incorporated into the ex-ante estimate presented in Section 4.6 of the ERPD, are "justifiable": 1. The effectiveness of the ER Program in addressing the key drivers of land use change, as identified in indicator PD-27, considering the planned actions and interventions of the ER Program (as assessed in indicators PD-28 through PD-33) and the financing plan (as assessed in indicators PD-34 through PD-58). 2. The impact of the ER Program on emissions within the Program Area, considering the factors identified in (1) above.	It appears that the assumptions regarding the effectiveness of the ER Program in addressing the drivers of land use change and the impact of the ER program are justifiable.	L	P*	I
RA-62	PR§4.5.3	ISFL ER Programs determine the total net emission reductions across the eligible subcategories by comparing monitored emissions and removals with a baseline as follows: Actual GHG net emissions minus Net Emission Baseline for the Program Area equals Net emission reductions	For each year of the ERPA Term, the total net Emission Reductions are calculated by taking the ex-ante estimate of actual GHG net emissions and subtracting the Emissions Baseline applicable to the corresponding ERPA Phase; the subtraction operation described above is carried out correctly.	The table in Section 4.6 of the ERPD contains an estimate of the total net Emission Reductions for each year of the ERPA Term. We confirmed that the total net Emission Reductions have calculated by taking the ex-ante estimate of actual GHG net emissions and subtracting the Emissions Baseline applicable to the corresponding ERPA Phase.	R	B	C
RA-63	PR§4.6.1	Good practice requires that bias be prevented wherever possible, such as by using appropriate	Sources of bias[81] that can reasonably be projected to impact the estimate of the total net	It appears that the sources of bias that can reasonably projected to impact the estimate of	R	P	I

[81] In the context of this indicator, a "source of bias" is a factor resulting in divergence between the Emission Reductions that will be calculated for each year of the ERPA Term and the theoretically knowable (but, for practical purposes, unknowable) difference between the following quantities:

No.	Sec.	Requirement Text	Indicator	Assessment Findings	LA	CT	CC
		QA/QC procedures. Where biases cannot be prevented, it is good practice to identify and correct them when developing a mean estimate of the emission reductions. In particular, the point estimate of the emission reductions that is used for requesting payment should be free of biases as much as it is practical and possible.	Emission Reductions are identified, and steps are taken to correct them to the extent practical.	net Emission Reductions, such as measurement errors and limited dated as related to the Emissions Baseline have been identified and steps to correct them have been proposed (see time-bound plan).			
RA-64	T§4.7.1	Please provide an assessment (roughly 500 words or less) of the anthropogenic and natural risk of Reversals that might affect emission reductions during the ERPA Term and, as feasible, the potential risk of Reversals after the end of the last ERPA Phase.	A "justifiable" assessment of the anthropogenic and natural risk of Reversals that might affect Emission Reductions during the ERPA Term and, as feasible, the potential risk of Reversals after the end of the last ERPA Phase, is provided in Section 4.7.1 of the ERPD.	Determined that a justifiable assessment of the anthropogenic and natural risk of Reversals during the ERPA Term and the potential risk of Reversals after the end of the last ERPA Phase. These relate to the political instability, economic and social challenges related to resource use, natural disturbance risks (fires), etc.	R	B	C

1. The emissions from the Program Area during the year in question that are attributable to the subcategories eligible for ISFL Accounting.
2. The average yearly emissions from the Program Area during the Baseline Period(s) that were attributable to the subcategories eligible for ISFL Accounting. In practice, some bias in the constructed Emissions Baseline is inevitable, for a multitude of reasons.

The following should be noted:

1. For all practical purposes, bias in the estimated Emission Reductions are inevitable.
2. The focus of this indicator is on bias in the estimated Emission Reductions, rather than on bias in the individual components of that estimate (e.g., in the Emissions Baseline). In theory, if the Emissions Baseline and the monitored emissions were both "off" by the same quantity, the biases would compensate and the estimate of the Emission Reductions would be free from bias.
3. At the time of the assessment, it may not be possible for all sources of bias to be identified and corrected, as only the Emissions Baseline is finalized and the quantification of monitored emissions has yet to occur. Therefore, at this time, the focus should be on identifying and correcting sources of bias in the Emissions Baseline and, to the extent that sources of bias can reasonably be projected to impact the monitoring of emissions based on the monitoring plan as described in Section 4.5 and Annex 10 of the ERPD, such sources of bias are also addressed.

Appendix B: Audit Plan

Program	Oromia Forested Landscape Program (OFLP)
Program Entity	Ministry of Finance and Economic Cooperation
Program Location	Oromia National Regional State, Federal Democratic Republic of Ethiopia

Introduction

This plan provides a description of the assessment services to be performed in respect of the Emission Reductions Program Document (ERPD) submitted for review by SCS Global Services (SCS). The structure of the assessment (e.g., the assessment objectives, scope and criteria), as described in this report, is established in SCS' inception report, dated 6 June 2019 and approved as final by the World Bank Group on 13 June 2019.[82] The reader is directed to SCS' inception report for further background information.

Assessment Objectives

The objectives of the assessment are as follows:

- Ensure, according to the applicable level of assurance (see Section 4, below), that the information provided in the ERPD is correct and complete (i.e., not leaving out information that might affect the opinion of the reader)
- Conduct an independent assessment of the conformance against the approved ER Program Requirements and associated guidelines
- Apply expert judgement to evaluate the feasibility of program design aspects and identify areas of improvement to inform the World Bank Group's and ISFL Contributors' review of the ER Program.

Assessment Scope

The scope of the assessment entails review as required to achieve the above objectives; the following areas will be particularly emphasized. In some cases, consideration of the areas indicated below extends the scope of the assessment beyond a strict assessment for conformance to the assessment criteria. The assessment of the aspects indicated with an "*" will be informed, as applicable, by the parallel due diligence processes of the World Bank Group.

[82] As conveyed via email on 13 June 2019.

Aspect	Expected Scope of the Assessment
Drivers of AFOLU emissions and removals	▪ Correctness and completeness of the analysis on historic and future trends (qualitative and quantitative) in drivers of AFOLU emissions and removals ▪ Expert judgement of the analysis, including the barriers to mitigation
Description and justification of the ISFL ER Program's planned actions and interventions	▪ Expert judgement whether the proposed actions and interventions address drivers of emissions and are informed by the contribution of key sources and sinks to the total GHG emissions and removals in the Program GHG Inventory and the analysis of trends ▪ Expert judgement of continued private sector engagement achieved or planned in addressing drivers of emissions ▪ Expert judgement of risks to implementation and potential benefits of planned actions and interventions
Financing plan for implementing the planned actions and interventions of the ISFL ER Program	▪ Correctness and completeness of information on the transaction costs and the identified funding gaps for the ISFL ER Program and the plan for mitigating gaps ▪ Expert judgement whether the identified sources of finance are sufficient to affect the land use activities and drivers of emissions and removals ▪ Expert judgement of the financial and economic analyses, discount rates, and flows of funds
Analysis of laws, statutes, and other regulatory frameworks	▪ Correctness and completeness of the information provided in the program document ▪ Expert judgement to identify any known legal or regulatory issues in the program area that can affect the program design, including benefit sharing
Risk for displacement	▪ Correctness and completeness of the information provided in the analysis of displacement risk ▪ Expert judgement on the effectiveness of the proposed strategy to mitigate and/or minimize, to the extent possible, potential Displacement
Description of stakeholder consultation process*	▪ Correctness and completeness of the information provided on the stakeholder consultation process ▪ Expert judgement if the full, effective, and on-going participation of relevant stakeholders has occurred
Description of the Feedback and Grievance Redress Mechanism	▪ Expert judgement whether the FGRM is operational and accessible to relevant stakeholders, or if not yet in place,

Aspect	Expected Scope of the Assessment
	whether the proposed mechanism is technically feasible and builds on existing structures that are tested ▪ Assess whether a description of FGRM procedures has been made public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders
Assessment of land and resource tenure in the Program Area*	▪ Correctness and completeness of the analysis ▪ Assess whether (i) the assessment of the land and resource tenure regimes has been made publicly available, (ii) if the assessment sufficiently includes land and resource tenure rights, the legal status of such rights, areas subject to significant conflicts or disputes, and any potential impacts of the ISFL ER Program on existing land and resource tenure in the Program Area; and (iii) that the assessment has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from relevant stakeholders ▪ Expert judgement of the implications of the land and resource tenure assessment for program design, and for the ISFL ER Program's ability to transfer title to ERs to the ISFL
Benefit Sharing Arrangements	▪ Assess whether the Benefit Sharing Arrangements have been designed in a consultative, transparent, and participatory manner appropriate to the country context and that reflects inputs and broad community support by relevant stakeholders ▪ Assess whether the description of the Benefits Sharing Arrangement contains the required information and the information provided is correct and complete ▪ Expert judgement whether the Benefit Sharing Arrangements will provide incentive structures and contribute to the sustainability of the program ▪ Expert judgement whether the proposed benefits correspond with the drivers of emissions analysis and anticipated ERs ▪ Expert judgement whether the benefit sharing arrangements are technically feasible, including mechanisms for distributing benefits and any issues related to nested projects, etc.
Ability to transfer title to ERs*	▪ Expert judgement whether the analysis of the ability to transfer title to ERs or any roadmap towards demonstrating

Aspect	Expected Scope of the Assessment
	such ability prior to ERPA signature is comprehensive and conclusive ▪ Expert judgement on risks of contests/disputes to title to ERs and mitigation measures
Participation under other GHG initiatives	▪ Correctness and completeness of the information provided whether parts of the program area, or projects in the program area, are included in other GHG initiatives and if this creates a risk of double counting, and/or double payment
Data management and registry systems to avoid multiple claims to ERs	▪ If applicable, expert judgement whether the Program and Projects Data Management System is sufficient, secure, and robust ▪ If the ISFL ER Program is not using the World Bank's transaction registry for FCPF and ISFL ER Programs, expert judgement whether the transaction registry is sufficient, secure, and robust ▪ If applicable, expert judgement of the data management and registry systems to recognize nested projects and avoid multiple claims to ERs
ISFL Reporting	▪ Assess whether the GHG Inventory is comparable in its use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and the Biannual Update Report ▪ Assess whether the best available data sets, methods, models and assumptions have been used in the ISFL Reporting and that the inventory applies the general IPCC principles of transparency, completeness, consistency, accuracy and comprehensiveness
Selection of subcategories for accounting	▪ Correctness and completeness of the data and information provided on the choice of the subcategories ▪ Assess whether the quality and baseline setting requirements have been applied correctly and the choice of the subcategories is correct and justified ▪ Assess whether all significant pools and sources of greenhouse gas emissions are included. If a major carbon pool/ or gas is excluded, assess whether this has been sufficiently explained and justified, provided it is not a significant pool

Aspect	Expected Scope of the Assessment
Emissions baseline	▪ Assess whether the methods used to construct are in line with the IPCC and best practice approaches as defined, for example by the GFOI ▪ Correctness and completeness of the data used to construct the baseline ▪ Assess whether the baseline requirements have been applied correctly and the Emissions Baseline estimate is calculated correctly ▪ Assess whether the uncertainty in the Emissions Baseline has been correctly identified and assessed in accordance with IPCC good practice
Time-bound plan to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases during the ERPA Term	▪ Expert judgement whether the proposed plan is feasible, addresses priority subcategories and is likely to increase the completeness of the scope of accounting and improve data and methods for the subsequent ERPA Phases
Ex-ante estimation of the emission reductions	▪ Expert judgement if the assumed effectiveness of the program in addressing the drivers and its impact on the emissions is justified and based on reasonable assumptions
Monitoring approach	▪ Assess whether the data and methods proposed for monitoring are consistent enough with the data and methods used for the determination of the baseline to allow for meaningful comparison and calculation of the emission reductions ▪ Assess whether the proposed monitoring methods and arrangements are in place as described in the Program Document and are technically capable of collecting the data ▪ Assess whether the uncertainty in the data and parameters to be monitored has been correctly identified and assessed and if the proposed approach to manage and reduce uncertainty reflects good practice
Reversals	▪ Correctness and completeness of the data and assumption used in the assessment of the reversal risk ▪ Assess whether the ISFL Buffer Requirements have been applied correctly

Assessment Criteria and Good Practice Guidance

The criteria for the assessment are as follows:

- The approved ISFL ER Program Requirements, September 2017 (“the Program Requirements”)

- The following associated guidelines:
    - ISFL Buffer Requirements, February 2018
    - ISFL Program Document Template, Version 2, January 2020[83]

The following guidance documents (or collections of documents) will be considered to contain *good practice* in undertaking the assessment, though said documents are not formally considered to be part of the assessment criteria. Where professional judgment may be applied in assessing against the indicators set out in the checklist set out in Annex A of SCS' inception report ("the assessment checklist"), methodological approaches that appropriately follow *good practice* will automatically be assumed to meet the intent of a given indicator.[84]

- 2006 IPCC Guidelines for National Greenhouse Gas Inventories
- The following ISFL Program documents:
    - Guidance Note on the Preparation of Financing Plan of REDD+ and Landscape Emission Reduction Programs, August 2017
    - Note on the Ability of Program Entity to Transfer Title to Emission Reductions, March 2018
    - Note on Benefit Sharing for Emission Reductions Programs Under the Forest Carbon Partnership Facility and BioCarbon Fund Initiative for Sustainable Forest Landscapes, January 2019
- GFOI 2016, Integration of remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests: Methods and Guidance from the Global Forest Observations Initiative, Edition 2.0, Food and Agriculture Organization, Rome ("GFOI")

Level of Assurance

Both a reasonable and limited level of assurance have been selected for the assessment work described in this plan and are determined at the indicator level as set out in the assessment checklist.

Treatment of Materiality

Where one or more discrepancies are identified during the course of assessment activities, the following criteria will be abled in order to determine whether said discrepancies are material:

- In respect of quantitative matters, discrepancies will be identified and quantified by the audit team based on the audit team's recalculation, based on the guidance found in the indicators in

[83] Noting that any guidance within the PD Template pertaining to brevity or word count will not be considered part of the auditable criteria, though said guidance will be referenced in determination of the level of detail that should be within the ERPD.

[84] This does not necessarily preclude methodological approaches that do not follow good practice. It does, however, mean that additional professional judgment will be required to determine whether such methodological approaches are in conformance with the assessment criteria.

the assessment checklist. Where the methodology used in production of the ERPD does not follow the guidance in the assessment checklist, a discrepancy between the output produced by the audit team and the information reported in the ERPD will likely result, and any such discrepancies will be evaluated for materiality according to the following criteria:

- A discrepancy in the Program GHG Inventory and/or the process used to select subcategories eligible for ISFL Accounting (including a discrepancy in the ordering of subcategories by total GHG emissions and removals on an absolute basis) will be considered material if it results in an incorrect determination of the subcategories eligible for ISFL Accounting.
- A 1.00% materiality threshold applies to any over-estimation of the Emissions Baseline.[85]

- Regarding reporting of information in the ERPD:
  - Any errors in the reporting of factual information in the ERPD will be considered material if the incorrectly reported information is directly or indirectly required to be reported in the ERPD by the assessment criteria.

Any discrepancies identified as material through application of the above criteria will be treated as non-conformities in the assessment process. Any discrepancies not identified as material through application of the above criteria will inherently be considered immaterial. It is possible that discrepancies may be identified that do not need to be corrected immediately but that will require corrective action or mitigation at some later time. Under this situation, a special type of finding, termed an Observation, will be issued by SCS (see "Description of SCS' Findings Process," below, for more information).

Description of Assessment Process

Introduction

The planned assessment services will be performed through a combination of document reviews, interviews with relevant personnel, and on-site inspections.

Project Kickoff

The assessment process will begin with a "kickoff call" or conference call. This meeting is an opportunity for introductions as well as a chance to ensure that all parties involved are fully informed regarding the basic parameters of the assessment engagement (e.g., scope, criteria, materiality threshold, level of assurance) and to clarify expectations regarding the assessment timeline. A preliminary Gantt chart and logistics regarding milestones as well as any upcoming in-person or remote office meeting(s) and the

[85] The materiality analysis will be carried out by first calculating the difference between the reported Emissions Baseline and the assessment team's calculation of the same quantity, and then dividing by the reported Emissions Baseline. If the resulting quantity is greater than 1.00%, the discrepancy is considered material. Otherwise, the discrepancy is not considered material. Under-estimation of the Emissions Baseline will not be considered a material discrepancy.

one site visit will be discussed during the kickoff call. The Gantt chart will be updated throughout the assessment process as it is subject to changes based on the completion of milestones by participants.

Document Review and Desk Review Findings

Upon receipt of relevant project documentation, including the ERPD, a document review will take place. During this phase of the assessment, the assessment team will likely request additional documentation and information to support this review. The objectives of the document review are as follows:

- Assess conformance for any requirements against which it is possible to check conformance as a desk-based exercise, and:
    - Where conformance is confirmed, document such in the assessment checklist
    - Where clear evidence of nonconformance is identified, document such in the assessment findings (see below)
    - Where more information is needed to clarify whether conformance has been attained, the following options may be taken:
        - Issue a finding (see below)
        - Follow up with a more in-depth investigation during subsequent meeting(s) and/or the site visit
- Identify any circumstances that would threaten the integrity of the planned site visit

The outcomes of the document review are the following:

- A round of "desk review findings,"[86] highlighting any clearly identified areas of nonconformance or formally identifying any areas in which additional information is required in order to assess conformance
- Inputs to inform the development of the risk assessment and sampling plan (see below)

It is important to note that one possible outcome of the document review is that the assessment team determines that the ER Program is not yet ready for the site visit. In such cases, the assessment team would have identified "red flags" which would lead them to determine that the site visit would be premature. Should this situation arise, the assessment team would promptly alert the ISFL team in the World Bank Group of the "red flag" issues and work with them to develop an appropriate course of action. Examples of issues that could preclude a site visit are as follows:

- Documents submitted by ER Program personnel contain non-conformances of a nature that indicate potential ER Program-wide deficiencies or areas of significant risk.
- Documents submitted by ER Program personnel contain significant areas of incomplete information.
- Documents submitted by ER Program personnel fail to meet professional standards (e.g., poor/unclear organization, writing or translation).

[86] See "Description of SCS' Findings Process," below, for a description of the types of findings issued by SCS.

In the absence of such "red flag" issues, the assessment team will alert the ISFL team in the World Bank Group of the intent to proceed with the site visit, and will await approval prior to initiating site visit preparation (e.g., booking airline tickets and coordinating with ER Program personnel). Once clearance is received, there will be a one month to one and a half month window following the delivery of the desk review findings to allow for adequate preparation.

Office Meetings and Site Visit

It is anticipated that the site visit will take place within approximately one month to one and one-half months after initial submittal of this audit plan.

One site visit will be conducted in order to accomplish the following objectives:

- Hold office meetings that are most efficiently held in-person.
- Undertake direct physical observations and/or measurements, and/or hold confirmatory interviews with stakeholders.

The office meeting(s) will begin with an opening meeting, wherein the assessment team reviews the basic assessment parameters (e.g., objectives, scope, criteria, level of assurance), and provides information regarding SCS' assessment approach in a greater level of detail than was provided during the kickoff call.

The office meeting(s) will consist of program personnel being invited to explain various elements of the ERPD and to demonstrate to the assessment team the manner in which assessment criteria have been met. The assessment team will work with personnel being interviewed to identify means of independent confirmation of important assertions (in a manner that does not jeopardize the independence of the assessment engagement).[87] This process will proceed most smoothly when personnel being interviewed are ready to actively engage with the assessment team to provide the requested information. In this sense, personnel being interviewed are invited to work collaboratively with the assessment team to demonstrate, based upon the agreed upon level of assurance, that the criteria requirements have been complied with and that the ERPD is free from material discrepancy.

In planning for the site visit, the assessment team may require different types of assistance as part of this process, including the following:

- Logistical assistance (e.g., transportation, locating safe food and drinking water, and securing safe lodging)
- Assistance facilitating interviews and meeting with stakeholders during the site visit

The assessment team will provide its own accommodation and transport, especially in the main cities.

[87] For example, if it is asserted that certain emissions data originated from a certain government agency, the assessment team may request assistance in making independent contact with said agency.

At the end of the site visit, a closing meeting will be held. The purpose of the closing meeting will be for the assessment team to present their findings and observations, including providing positive feedback, and discuss next steps in the process. The closing meeting will also revisit the Gantt chart and the associated remaining milestones.

Whereas, actual time on site will be ER Program dependent, site visit activities will be limited to the following:[88]

- Interviews with ER Program personnel, including related to identification of any known legal or regulatory issues in the Program Area that can affect the ER Program's design
- Interviews with individuals responsible for conducting stakeholder consultations
- Interviews with knowledgeable individuals regarding the agents and drivers of deforestation
- Assessment of the ER Program's planned actions and interventions
- Ground-truthing any data for which remotely sensed imagery has been used in the estimating carbon stocks
- Field sampling for ER Programs in which physical sampling was employed to estimate carbon stocks
- Office meetings to determine conformance with the Program Requirements

The assessment teams will not conduct stakeholder interviews regarding the extent or nature of stakeholder consultation,[89] to reduce duplication of efforts (in respect of the World Bank Group's due diligence processes).

Site Visit Findings

A second round of findings, termed the "site visit findings" will be issued after the site visit. In conjunction with the desk review findings, the site visit findings constitute the comprehensive listing of all outstanding issues that have been identified as part of the assessment process. It is anticipated that site visit findings will be issued within approximately one to two weeks after the end of the site visit. (This entails an approximately three and one-half month time period from SCS' receipt of the ERPD to issuance of site visit findings.)

Report Writing

In the assessment report, the assessment team will document how conformance with the assessment criteria has been assessed. The assessment report will be supported with the assessment checklist.

Technical Review

[88] Site visits will occur for all ER Programs and an individual ER Program site visit shall not exceed 20 person-days. Additional person-days and/or site visits, if needed, are outside the scope of SCS' proposal.
[89] Per email guidance provided by World Bank Group personnel on 8 February 2019 and 11 February 2019.

An independent technical review will be carried out. This technical review is not intended to be a second iteration of the assessment process, but emphasizes review of the assessment team's activities, findings and conclusions, as well as a review of the assessment report. While the review is targeted more at review of the assessment documentation than the ERPD, it is always possible that additional discrepancies could come to light during the technical review, which may result in issuance of new findings.

Release of Report

Once the technical reviewer has signed off on the assessment report, a draft assessment report and opinion will be submitted to the ISFL team in the World Bank Group. SCS will modify the draft assessment report based on feedback from the ISFL team in the World Bank Group and will then submit a final assessment report and opinion. A videoconference with ISFL Contributors to discuss the assessment findings will also take place at this time.

Description of SCS' Findings Process

Findings Overview

Findings are the formal mechanism used by SCS to either (a) require corrective action, (b) request additional information, analysis or justification or (c) identify areas of risk or concern. Findings will be issued against the relevant text of the assessment criteria (not necessarily against the specific language of the applicable indicator in the assessment checklist); any additional good practice guidance will also be cited.

The findings are issued to ER Program personnel using a proprietary workbook-based approach, termed the Findings Presentation Workbook. This gives ER Program personnel the opportunity to respond to the findings and allows for efficient and transparent tracking of the current status of each finding. With each round of findings (one from the desk review and one from the site visit), the assessment team will typically go over the findings via conference call or webinar with the entity being assessed to ensure that the findings are understood.

Throughout the engagement, SCS strives to keep ER Program personnel informed of the findings and potential findings as soon as any issue arises. This can be done by phone, e-mail or virtual communication such as Skype and GoToMeeting, but should be documented by sending an updated version of the Findings Presentation Workbook. The assessment team will also communicate the potential impact of material findings to ER Program personnel. ER Program personnel will be given a deadline, based on the agreed upon Gantt chart, for providing a written response. After the response is received, the assessment team will evaluate the submission and determine if adequate information has been provided to correct the non-conformity or if additional findings should be issued.

In special cases, findings may be withdrawn if the assessment team finds that the finding itself is no longer relevant.

Certain circumstances may arise under which the steps set out below (report writing, technical review and release of the assessment report) will be completed even though open findings persist.

Potential triggers for issuance of an assessment report and opinion while findings are open are as follows:

- The assessment team receives communication from the World Bank Group and/or the Program Entity indicating a decision not to respond (or respond further, in the case that a response has already been provided) to one or more open findings.
- It is the judgment of the assessment team, in consultation with other parties to the process, that closure of one or more findings would be infeasible, given the time and resources available to the ER Program personnel.
- One or more findings remain open and the time required for issuance and review of responses to findings exceeds the number of days set out in SCS' financial proposal.

Should this situation arise, SCS will consult with the World Bank Group and the Program Entity regarding whether to proceed with issuance of an assessment report and opinion.[90]

When an assessment report and opinion is issued while findings are open, any outstanding issues will be detailed in a designated section entitled "Potential or Actual Areas of Risk or Concern." Here, the assessment team will document conclusions as they relate to any unresolved findings. This section can be considered a summary description of areas of potential opportunity for improvement as well as areas of current non-conformance or potential risk of non-conformance in the future.

Categorization of Assessment Findings

The following discusses the types of findings that may arise from the assessment process.

New Information Requests (NIRs)

When the assessment team determines that they have not been furnished with sufficient information to make a decision regarding conformance, a New Information Request (NIR) will be issued. After the response is received, the assessment team will evaluate the submission and determine if adequate information has been provided or if additional findings (NIR, NCR, OBS) should be issued.

Non-Conformity Reports (NCRs)

When the assessment team has identified (1) a clear non-conformity with respect to a specific indicator (where a given indicator is of the "binary" conformance type) or (2) a material discrepancy (see "Treatment of Materiality", above, for more information), a Non-Conformity Report (NCR) will be issued. Closure of an NCR requires that the assessment team be provided with evidence that the underlying issue resulting in issuance of the NCR has been duly addressed. While SCS' Auditor Code of Conduct

[90] However, SCS reserves the right to proceed with issuance of an assessment report and opinion while findings are open at its sole discretion.

precludes consulting as to how to address non-conformities, the assessment team is encouraged to provide a thorough explanation of the basis of any non-conformities or material discrepancies observed, including a detailed explanation regarding (1) the nature of any discrepancies observed and/or (2) how applicable requirements have not been complied with.

Observations (OBSs)

An OBS indicates one or more of the following:

- An area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the assessment team and the information reported or utilized (or the methods used to acquire such information) within the ERPD.
- An area where the expert judgement of the assessment team suggests that there are opportunities for improvement in the areas falling within the assessment scope.
- An area which may become a non-conformity in the future.

Where an OBS is written against an indicator of the "professional judgement" conformance type, the OBS will be written when a low (III) or medium (II) conformance rating has been assigned. The General Guidance section in the assessment checklist contains more detail regarding the two conformance types and ratings.

Audit Team

The following audit team has been assembled to provide the audit services described in this plan:

- Lead Auditor: Francis Eaton
- Auditor(s): Zane Haxtema, Alexa Dugan
- Technical Expert: Mesele Negash
- Technical Reviewer: Dr. Letty Brown

Dates of Substantive Meetings, Interviews and/or Site Visits

The planned meetings, interviews and/or site visits are listed in the table below. In accordance with SCS' inception report, this table includes the following information:

- Individuals/groups/organizations to be interviewed
- Locations/communities to be visited

Date(s)	Attendees	Purpose
Kick-Off Call	World Bank Group, World Bank FMT, Program Participants	Introductions, scope and criteria review, logistical planning

Meeting and/or Site Visit Agendas

Note: Per the terms of the technical proposal, the following will be met with regard to site visit expectations:

- Sufficient food and water shall be provided for maintenance of the assessment team's comfort and health during all phases of the on-site assessment activities. Food and water that is provided shall not be a cause of illness among the assessment team members
- Assistance with obtaining transportation and lodging shall be provided to the assessment team as necessary to participate in the audit activities set out in the plan
- Assessment team members shall not be placed in life-threatening situations, given all due care and precaution on the part of the assessment team
- Some assessment tasks may take longer than anticipated due to a variety of factors. ER Program personnel shall make themselves available, within reason, to assist with assessment activities in the evening hours as needed to ensure that all assessment activities can be completed during the time of the site visit

Tuesday, 26 May 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review

7:00 am	Completeness of Reporting (PR§4.1.1, PR§4.1.2, PR§4.1.4) ▪ Indicator RA-01 requires the assessment team to assess the extent to which the Program GHG Inventory reports on all emissions and removals associated with each category identified as "AGRICULTURE, FORESTRY, AND OTHER LAND USE" (i.e., with a category code beginning with 3) in Table 8.2, Volume 1, Chapter 8 of the IPCC 2006 Guidelines. ▪ Therefore, program personnel to clarify the following regarding the table in the section entitled "Oromia GHG emissions and removals – summary" in Annex 6 of the ERPD: o For Enteric Fermentation (3 A 1) and Manure Management (3 A 2), program personnel to clarify why cattle, sheep and swine are considered the most important livestock categories and what species of animals are included in the "other livestock" category. o For Forest Land (3 B 1), program personnel to clarify why the following subcategories are not included: ▪ Wetlands Converted to Forest Land (3 B 1 b iii) ▪ Settlements Converted to Forest Land (3 B 1 b iv) ▪ Other Land Converted to Forest Land (3 B 1 b v) o For Cropland (3 B 2), program personnel to clarify why the following subcategories are not included: ▪ Wetlands Converted to Cropland (3 B 2 b iii) ▪ Other Land Converted to Cropland (3 B 2 b v o For Grassland (3 B 3), program personnel to clarify why the following subcategories are not included: ▪ Wetlands Converted to Grassland (3 B 3 b iii) ▪ Settlements Converted to Grassland (3 B 3 b iv) ▪ Other Land Converted to Grassland (3 B 3 b v) o For Wetlands (3 B 4), program personnel to clarify why the only category included is Wetlands Remaining Wetlands (3 B 4 a) o For Settlements (3 B 5), program personnel to clarify why the only category included is Settlements Remaining Settlements (3 B 5 a) o Program personnel to clarify why the following categories are not included: ▪ Other Land (3 B 6) ▪ Biomass Burning (3 C 1) ▪ Liming (3 C 2) ▪ Indicator RA-02 requires the assessment team to assess the extent to which, if a national-level GHG inventory reporting document exists, all categories and subcategories listed in the national-level GHG inventory reporting document are also included in the Program GHG Inventory. ▪ Therefore, please explain, why, in the table in the section entitled "Oromia GHG emissions and removals – summary" in Annex 6 of the ERPD, o The second-order subcategory Wetlands (3 B 4) in Ethiopia's Second National Communication (accessed 14 April 2020 from

	https://unfccc.int/resource/docs/natc/ethnc2.pdf) is omitted and the third-level subcategory Wetlands Remaining Wetlands is included in its place. ○ The second-order subcategory Settlements (3 B 5) in Ethiopia's Second National Communication is omitted and the third-level subcategory Settlements Remaining Settlements is included in its place. ▪ Program personnel to explain the statement in p. 59 of the ERPD that "The National GHG Inventory includes only some categories for Agriculture and LULUCF and does not correspond to IPCC categories, what made the comparison of results not possible", and, for are any areas of deviation between the Program GHG Inventory and the National GHG Inventory, ○ Provide justification that the variation relative to the national processes increases the likelihood of being able to assess the impacts of ISFL interventions. ○ Provide an explanation to clarify how methodological consistency will be maintained with the national GHG inventory so that Program GHG Inventory can be integrated with and inform the national GHG inventory. ▪ Indicator RA-03 requires the assessment team to assess whether Subcategories are differentiated to at least the level of specificity set out in Annex 1 of the Program Requirements. ▪ Therefore, please why, in the following respects, the subcategories are not differentiated in the table in the section entitled "Oromia GHG emissions and removals – summary" in Annex 6 of the ERPD to at least the level of specificity set out in Annex 1 of the Program Requirements: ○ Rice cultivation is disaggregated into subcategories in Annex 1 but these subcategories are missing from the presentation of results in Annex 6. ○ The subcategories "Land converted to wetlands", "Land converted to settlements" and "Land converted to other land" are present in Annex 1 but are missing from Annex 6.
8:00 am	Compilation of Program GHG Inventory and Reporting of Results (PR§4.1.2, PR§4.1.7) ▪ Program personnel to provide an overview of the calculation of the Program GHG Inventory, walking the audit team through any workbooks or other products used in this calculation. ▪ Program personnel to provide evidence that the contents of Annex 6 of the ERPD have been received by appropriate personnel at the agency or ministry responsible for compiling the national GHG inventory for the Ethiopia.
8:45 am	Adjourn

Friday, 29 May 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review
6:00 am	Baseline Period (PR§4.2.6) ▪ The Program Requirements states the following: "The end date for the Baseline Period for each ERPA Phase is the most recent date prior to two years before the submission of the ISFL ER Program document for each ERPA Phase for independent technical assessment. An alternative start-date of the Baseline Period could be allowed only with a convincing justification…" ▪ The assessment team understands that the ERPD was submitted to the World Bank Group on 21 March 2019. The "most recent date" prior to two years before this date is 20 March 2017. Section 4.4.1 of the ERPD states that "The baseline period considered is of 10 years, starting year is 2008 and ending year is 2017." Please clarify the actual end date for the baseline period. If the end date was not 20 March 2017, please provide a convincing justification for the end date of the baseline period (and, therefore, the start date of the baseline period).
6:15 am	Emissions Baseline (PR§4.4) ▪ Program personnel to provide an overview of the calculation of the Emissions Baseline, walking the audit team through any workbooks or other products used in this calculation. ▪ Program personnel to clarify whether legacy effects (emissions during the Baseline Period that are a result of land-use change that occurred before the start of the Baseline Period, which are most likely to occur in the below-ground biomass, dead wood and soil organic matter pools) were taken into account in calculating the Emissions Baseline. ▪ Program personnel to clarify whether or not the Emissions Baseline assumes that emissions from the below-ground biomass, dead wood, litter and soil organic matter carbon pools occur instantaneously or over a short period of time following land-use change.
7:00 am	Adjourn

Monday, 1 June 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review

6:00 am	Best Available Methods and Existing Data (PR§4.1.2, PR§4.1.3) – Livestock Emissions ▪ Program personnel to provide a detailed description of how the "National livestock population data (Dairy cattle, Non-Dairy cattle (Other Cattle), Sheep, Goat, Camel, Horse, Donkey, Mule and Poultry) for Oromia National Regional State was extracted from Ethiopia Central Statistical Agency", including a demonstration of how these data were accessed on the internet, if relevant. ▪ Program personnel to clarify whether the absence of reported data on swine populations is intended to indicate the absence of swine from the program jurisdiction. ▪ Section 10.2.2, Chapter 10, Volume 4 of the IPCC 2006 Guidelines states the following: "Seasonal births or slaughters may cause the population size to expand or contract at different times of the year, which will require the population numbers to be adjusted accordingly. It is important to fully document the method used to estimate the annual population, including any adjustments to the original form of the population data as it was received from national statistical agencies or from other sources." Equation 10.1 is provided for estimating "the annual average of livestock population". Program personnel to (1) clarify whether the procedure suggested by the IPCC 2006 Guidelines has been followed or describe any modifications to this procedure and (2) clarify whether the method used to estimate the annual population has been fully documented. ▪ Program personnel to clarify what review has been undertaken to confirm that data are not available to produce feed intake estimates, as necessary for application of Tier 2 methods (per Section 10.2.2, Chapter 10, Volume 4 of the IPCC 2006 Guidelines). ▪ Program personnel to clarify whether the program jurisdiction has domesticated livestock for which there are currently no Tier 1 or Tier 2 emissions estimating methods (e.g., llamas, alpacas, wapiti, emus, and ostriches) and, if so, whether the emissions estimation guidance from Section 10.2.4, Chapter 10, Volume 4 of the IPCC Guidelines has been followed in this situation. ▪ Program personnel to clarify what review has been undertaken that data are not available to perform higher-tier quantification of o Methane emissions from enteric fermentation. o Methane emissions from manure management. o Nitrous oxide emissions from manure management. ▪ Program personnel to clarify why the "manure management system allocation used for all livestock species", as presented in Annex 6, is different from the allocation in Table 3-12 of Ethiopia's Second National Communication (accessed 14 April 2020 from https://unfccc.int/resource/docs/natc/ethnc2.pdf) and clarify whether these data have been collected in a manner consistent with Section 10.5.3, Chapter 10, Volume 4 of the IPCC 2006 Guidelines. ▪ Program personnel to explain the source for the variable $Frac_{GasMS}$ in Equation 10.26 of Chapter 10, Volume 4 of the IPCC 2006 Guidelines and how Equation 10.27 of the same chapter was used. ▪ Program personnel to clarify whether and how reporting of nitrous oxide emissions from manure management was coordinated with reporting of nitrous oxide emissions

	from managed soils, following the guidance of Section 10.5.4, Chapter 10, Volume 4 of the IPCC 2006 Guidelines.
7:30 am	Best Available Methods and Existing Data (PR§4.1.2, PR§4.1.3) – Emissions from Managed Soils ▪ Program personnel to provide a detailed description of how the "Data on the annual consumption of synthetic fertilizers, which includes UREA, DAP and NPS (Nitrogen, phosphorus and Sulphur) was obtained from published Ethiopia Central Statistical Agency report, Farm Management practice Report, for the year 2003-2016", including a demonstration of how these data were accessed on the internet, if relevant. ▪ Program personnel to clarify the source of information for the assertion that sewage sludge, compost and other organic amendments used as fertilizer are not commonly used in the program jurisdiction. ▪ Program personnel to clarify the sources for $Frac_{FEED}$, $Frac_{FUEL}$ and $Frac_{CSNT}$, as used in Equation 11.4, Chapter 11, Volume 4 of the IPCC 2006 Guidelines. ▪ Program personnel to clarify how the inputs to Equation 11.6, Chapter 11, Volume 4 of the IPCC 2006 Guidelines were "obtained from Statistics Agency, Report on Area and Production, which is published annually". ▪ Program personnel to clarify the source of the information that "In Ethiopia, in general, crop residues are used for different purposes such as feed and construction, therefore only nitrogen content in below ground biomass is considered to estimate N2O emission from crop residues" and clarify how this information was taken into account in the calculations. ▪ Program personnel to clarify the source for the variable F_{SOM}, as used in Equation 11.1, Volume 11, Chater 4 of the IPCC 2006 Guidelines. ▪ Program personnel to clarify what review has been undertaken that country-specific emission factors, volatilization/leaching factors and activity data are not available that would permit Tier 2 quantification of direct and indirect nitrous oxide emissions from managed soils.
8:00 am	Best Available Methods and Existing Data (PR§4.1.2, PR§4.1.3) – Emissions from Urea Fertilization ▪ Program personnel to provide a detailed description of how the "Activity data for applied urea was taken from Ethiopian Central Statistical Agency Report", including a demonstration of how these data were accessed on the internet, if relevant. ▪ Program personnel to describe how the "peculiar data for the years 2014, 2015 and 2016 in the use of urea" were checked.
8:30 am	Adjourn

Thursday, 4 June 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review
6:00 am	Best Available Methods and Existing Data (PR§4.1.2, PR§4.1.3) – Land Representation ▪ Program personnel to provide a demonstration of the process used to detect land-cover and land-use change using Collect Earth, focusing on ○ The process used to define the spatial boundaries of the program area, for purposes of establishing the sampling frame. ○ The process used to create a file "with the location of the sample plots with a systematic sampling design". ○ The process of assessing land-use on individual plots (program personnel to provide a demonstration of how this was done for an example plot), including how percent cover estimates were obtained at each plot. ○ How data from plots were compiled to produce the "Land use and land use change matrix (2000-2017)" presented in Annex 6 of the ERPD.
6:45 am	Best Available Methods and Existing Data (PR§4.1.2, PR§4.1.3) – LULUCF Quantification ▪ Working through each of the subcategories, program personnel to provide a detailed overview of how emissions were calculated in each subcategory, focusing specifically on what efforts were undertaken to either utilize Tier 2 methods or search for available data that could be used to utilize Tier 2 methods. ▪ Project personnel to provide further clarification regarding the statement in Annex 6 that "Emission from biomass burning, rice cultivation and lime application were not considered in this study because of the absence of complete, consistent and reliable information, or simply because the activity does not occur in the Region."
7:45 am	Adjourn

Tuesday, 25 August 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review

6:00 am	Program Implementation Agreements
	• Organization(s) responsible for managing/implementing the Oromia OFLP ER
	  ○ Organizational data flow
	• Partner organizations involved in the ISFL ER Program
	  ○ State and federal
	  ○ Private sector involvement

6:30 am	Financing plan – Discussion to understand the following: • Correctness and completeness of information on the transaction costs and the identified funding gaps for the ISFL ER Program and the plan for mitigating gaps • the identified sources of finance are sufficient to affect the land use activities and drivers of emissions and removals • The financial and economic analyses, discount rates, and flows of funds
7:15 am	Stakeholders - Discussion to understand the following: • Identification of stakeholders - Stakeholder consultation process • Correctness and completeness of the information provided on the stakeholder consultation process • Evidence that the full, effective, and on-going participation of relevant stakeholders has occurred • Discussion of the creation of and implementation plan for the grievance and redress mechanism • Displacement risks – Any currently of future planned programs activities that may lead to displacement of settlements
8:00 am	Adjourn

Thursday, 27 August 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review
6:00 am	Benefit Sharing Arrangements – Discuss and provide evidence that: • The Benefit Sharing Arrangements have been designed in a consultative, transparent, and participatory manner appropriate to the country context and that reflects inputs and broad community support by relevant stakeholders • The description of the Benefits Sharing Arrangement contains the required information and the information provided is correct and complete • the Benefit Sharing Arrangements will provide incentive structures and contribute to the sustainability of the program • The proposed benefits correspond with the drivers of emissions analysis and anticipated ERs • The benefit sharing arrangements are technically feasible, including mechanisms for distributing benefits and any issues related to nested projects, etc.
6:45 am	Monitoring Approach – Discuss and provide evidence that: • The data and methods proposed for monitoring are consistent enough with the data and methods used for the determination of the baseline to allow for meaningful comparison and calculation of the emission reductions • The proposed monitoring methods and arrangements are in place as described in the Program Document and are technically capable of collecting the data • The uncertainty in the data and parameters to be monitored has been correctly identified and assessed and if the proposed approach to manage and reduce uncertainty reflects good practice
7:30 am	Adjourn

Thursday, 27 August 2020; Internet-Based Meeting	
Time	Interviews, Document and Data Review
Time	Drivers of AFOLU Emissions and Removals - Discussion to understand the following: ▪ Correctness and completeness of the analysis on historic and future trends (qualitative and quantitative) in drivers of AFOLU emissions and removals ▪ Barriers to mitigation
Time	Program's Planned Actions and Interventions - Discussion to understand the following: ▪ How proposed actions and interventions address drivers of emissions and are informed by the contribution of key sources and sinks to the total GHG emissions and removals in the Program GHG Inventory and the analysis of trends ▪ Private sector engagement ▪ Risks to implementation and potential benefits of planned actions and interventions
Time	Risk for Displacement - Discussion to understand the following: ▪ Correctness and completeness of the information provided in the analysis of displacement risk ▪ Effectiveness of the proposed strategy to mitigate and/or minimize, to the extent possible, potential Displacement
Time	Description of the Feedback and Grievance Redress Mechanism - Discussion to understand the following: ▪ Whether the FGRM is operational and accessible to relevant stakeholders ▪ Assess whether a description of FGRM procedures has been made public at the local, ISFL ER Program, and national levels, in a language understandable to relevant stakeholders
Time	Assessment of land and resource tenure in the Program Area - Discussion to understand the following: ▪ Correctness and completeness of the analysis. ▪ Whether (i) the assessment of the land and resource tenure regimes has been made publicly available, (ii) if the assessment sufficiently includes land and resource tenure rights, the legal status of such rights, areas subject to significant conflicts or disputes, and any potential impacts of the ISFL ER Program on existing land and resource tenure in the Program Area; and (iii) that the assessment has been conducted in a consultative, transparent, and participatory manner, reflecting inputs from relevant stakeholders ▪ Implications of the land and resource tenure assessment for program design, and for the ISFL ER Program's ability to transfer title to ERs to the ISFL
Time	Ability to Transfer Title to ERs - Discussion to understand the following: ▪ Whether the analysis of the ability to transfer title to ERs or any roadmap towards demonstrating such ability prior to ERPA signature is comprehensive and conclusive. ▪ Risks of contests/disputes to title to ERs and mitigation measures.

Time	Participation Under Other GHG Initiatives - Discussion to understand the following: ▪ Correctness and completeness of the information provided whether parts of the program area, or projects in the program area, are included in other GHG initiatives and if this creates a risk of double counting, and/or double payment
Time	Data Management and Registry Systems to Avoid Multiple Claims to ERs - Discussion to understand the following: ▪ Whether the Program and Projects Data Management System is sufficient, secure, and robust ▪ Whether the transaction registry is sufficient, secure, and robust ▪ Capabilities of the data management and registry systems to recognize nested projects and avoid multiple claims to ERs

Client/Responsible Party Contact

Name of Program Entity	Ministry of Finance and Economic Cooperation
Contact Individual	Tesfaye Gonfa
Contact Information	tesfaye.gonfa@yahoo.com

Audit Schedule

An indicative schedule for the assessment, based on the best knowledge currently available to the assessment team, is included below. This timetable is subject to updates during the assessment process, and such updates will be provided directly to program personnel via email.

Mileston Name	Conditional (y or n)?	Milestone	Start Date	End Date
"Pre-Kickoff" Call	n	"Pre-Kickoff" Call	Monday, March 16, 2020	Monday, March 16, 2020
Kickoff Call	n	Kickoff Call	Monday, March 30, 2020	Monday, March 30, 2020
Document Review and Desk Review Findings/Audit Plan	n	Document Review and Desk Review Findings/Audit Plan	Monday, March 16, 2020	Friday, May 29, 2020
Announce Intent to Proceed	y	*Conditional: Announce Intent to Proceed*	Friday, May 29, 2020	Friday, May 29, 2020
Clearance Rec'd From ISFL Team	y	*Conditional: Clearance Rec'd From ISFL Team*	Friday, June 5, 2020	Friday, June 5, 2020
Preparation for Site Visit by ISFL Team/ER Program	y	*Conditional: Preparation for Site Visit by ISFL Team/ER Program*	Monday, June 8, 2020	Friday, July 3, 2020
Site Visit	y	*Conditional: Site Visit*	Monday, July 6, 2020	Friday, July 17, 2020
Site Visit Findings	y	*Conditional: Site Visit Findings*	Sunday, July 19, 2020	Friday, July 31, 2020
Preparation of Findings Responses	y	*Conditional: Preparation of Findings Responses*	Monday, August 3, 2020	Friday, August 28, 2020
Review of Findings Responses	y	*Conditional: Review of Findings Responses*	Monday, August 31, 2020	Friday, September 18, 2020
Preparation of Further Findings Responses	y	*Conditional: Preparation of Further Findings Responses*	Monday, September 21, 2020	Friday, October 2, 2020
Review of Findings Responses	y	*Conditional: Review of Findings Responses*	Monday, October 5, 2020	Friday, October 16, 2020
Report Writing	y	*Conditional: Report Writing*	Monday, October 19, 2020	Friday, October 30, 2020
Technical Review	y	*Conditional: Technical Review*	Monday, November 2, 2020	Friday, November 13, 2020
Release of Report	y	*Conditional: Release of Report*	Monday, November 16, 2020	Friday, November 27, 2020

Appendix C: List of Findings

Please see Section 3.5 above for a description of the findings issuance process and the categories of findings issued. It should be noted that all language under “Recipient Response” is a verbatim transcription of responses provided to the findings by ER Program personnel.

NIR 1 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.2.6
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that “The end date for the Baseline Period for each ERPA Phase is the most recent date prior to two years before the submission of the ISFL ER Program document for each ERPA Phase for independent technical assessment.” The assessment team understands that the ERPD was submitted to the World Bank Group on 21 March 2019. The date two years before this date is 21 March 2017. Section 4.4.1 of the ERPD states that “The baseline period considered is of 10 years, starting year is 2008 and ending year is 2017.”
In reviewing the process for collecting the activity data used to compile the program GHG inventory, the assessment team has concluded that, given that activity data attributed to a given calendar year were collected throughout that year, the mid-point of a given year most accurately represents the “date” for data reported for that year. In extending this logic, the assessment team concludes that the date representing the year 2017 was 1 July 2017. As this date did not fall prior to 31 March 2017 (the date two years before the submission of the ISFL ER Program document for independent technical assessment), the end date for the baseline period does not seem to be in conformance with the ER Program Requirements. However, the assessment team understands that guidance may be forthcoming to the effect that the word "date" in Section 4.2.6 of the ER Program Requirements should be more loosely interpreted, such that the baseline period as indicated in the ERPD is in compliance with the Requirements. Please provide this guidance.
Project Personnel Response: As per our understanting, the mid-point of a given year does not represent accurately the date for data reported for a year. We will work to identify a more exact date of the satellite images used as the end-point of the analysis. However, if that logic is valid, the end-date of the baseline period is occurring after the two years before the submission of the ISFL ER Program document for each ERPA phase for independent technical assessment (end date: 1st July 2017 versus 2 years prior to submission: 21 March 2017). We understand that the underlying concept for that condition is that the baseline period should not be far from the present. If the end-date of the baseline is 1st July 2017 we are closer to present than other dates (e.g. before 31st March 2017) and is representing better the current landscape GHG emission situation. As we put the focus on "the most recent date", we interpret that the condition is accomplished.

Auditor Response: Unfortunately, there is a mistaken reference to 31 March 2017 in the original finding, which has undoubtedly sowed unnecessary confusion. Any reference to 31 March 2017 should be read as referring to 21 March 2017.
That said, the information request has not been satisfied. While the assessment team appreciates the comments made regarding the intent between the requirements, we are required to conduct an assessment against the language of the ER Program Requirements. The language of the ER Program Requirements is quite clear: "The end date for the Baseline Period for each ERPA Phase is the most recent date prior to two years before the submission of the ISFL ER Program document for each ERPA Phase for independent technical assessment." (Regardless of where the emphasis is placed, the words "prior to" in the ER Program Requirements cannot be ignored.) The only way the ERPD could currently be in conformance with this requirement is if the end date for the baseline period fell before 21 March 2017. The assessment team appreciates that program personnel are working to identify an end date for the baseline period that more accurately reflects the data. However, given that data throughout calendar year 2017 were used to construct the emissions estimate for 2017, as used in the emissions baseline, it seems quite unlikely that the end date for the baseline period would appropriately be determined to fall before 21 March 2017. Therefore, the information presented to the audit team indicates that there is currently a state of non-conformance with Section 4.2.6 of the ER Program Requirements, as written. Therefore, this finding remains open, pending guidance from the World Bank Group as described in the text of the finding.
Project Personnel Response 2: SCS: This findings will be left open, for now, pending official guidance from the World Bank Group; however, you are not expected to provide any further response to these findings at this time!. However, we would like to provide some informatin that could be used as guidance: According to the PR section 4.2.6 the end date of the baseline period for each ERPA phase is the most recent date prior to two years before the submission of the ERPD for independent third-party validation. The FMT would like to clarify that as there is no formal definition of the date in which the ERPD was sent to third-party validation, the FMT will revise the ISFL Program Requirements to clarify that the baseline period end-date refers to the year in which the final advanced draft ERPD was submitted to the FMT, which is the end of the completeness check. So for example if the final advanced draft ERPD was submitted any time in 2019, the end-date of the reference period shall be any time during 2017.
Despite all, clarification must be maid: "submission of the ISFL ER Program document for each ERPA phase for independent technical assessment" is considered the moment when the document is submitted to SCS, which took place in 28th Feb 2020 and not the moment which the document was submited to the World Bank (21 March, 2019)
Auditor Response 2:
Project Personnel Response 3: Section 4.2.6 of the ISFL Programs Requirements has been adjusted to clarify that the end date of the baseline is a recent date prior to two calendar years before the ISFL Fund Management Team shares the complete advanced draft ER-PD with an independent third-party firm for Validation. This clarification is in line with section 7.3 of the ISFL Process Requirements and does not imply any major conceptual change to the ISFL Requirements.
The FCPF Glossary of Terms was revised to consider the definition of the start date of the first ISFL ERPA Phase agreed with ISFL Contributors.
These updated documents will be included soon on the ISFL website

Auditor Response 3: The audit team reviewed the updated ISFL Programs Requirement (version 1.2) which now indicates for section 4.2.6 "The end date for the Baseline Period for each ISFL ERPA Phase is a recent date prior to two calendar years before the ISFL Fund Management Team shares the complete advanced draft ER-PD with an independent third-party firm for Validation. An alternative start-date of the Baseline Period may be allowed only with a convincing justification and is not more than 15 years before the end date of the Baseline Period." The ERPD was submitted to the validation team on 28 February 2020. Therefore 2 years prior to that date is 28 February 2018. The ISFL Glossary of Terms (version 1.2) also states in the definition of the ERPD phase that "These are defined in the ERPA itself and they must cover full calendar years. The earliest possible start date of the first ERPA Phase is the first day of the calendar year following the end of the Baseline Period to avoid overlap." Given that the ERPD phases must cover full calendar years, a recent date prior to this 28 Feb. 2018 would be 31 December 2017 as the end of the baseline period. The audit team confirms that the baseline period end date is now in conformance with the Program Requirements. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 2 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data."
Many of the emission factors for above-ground biomass, below-ground biomass and dead wood utilize averages estimated using a dataset from the Final Report for Ethiopia's National Forest Inventory (2018), as filtered to include only sampling points located in Oromia (these data are in cells J5:J31 in the "EF AGB BGB" worksheet and cells H4:H11 in the "EF DW" worksheet). It appears that, in constructing these averages, the arithmetic mean across sampling units has been utilized. However, this appears to not be the best available method to derive point estimates (and associated uncertainty values) from the National Forest Inventory data. Section 2.7 of the Final Report describes the process used to account for the post-stratification process, stating that "In order to ensure consistency of the estimates, a robust statistical procedure was applied based on the method described by Sarndal et al.(1992)." While complex, the process described in Section 2.7 of the Final Report is evidently feasible. Furthermore, it appears that biased estimates may result from simply applying arithmetic averages to the data. Therefore, please justify why a process involving use of arithmetic averages constitutes use of "best available methods".

Project Personnel Response: Many thanks for noting this.
The chapter 2.7 of the National Forest Inventory Report shows a robust statistical procedure that was needed to ensure consistency between the National Forest Inventory nomenclature used in the sample units and the national biome map used in the elaboration of the National Forest Reference Level: "a post-stratification methodology was applied in order to correctly estimate the results by the biomes. The post-stratification was needed because the NFI design was based on five strata that did not perfectly overlap with the national biome map".
The Oromia LULUCF GHG Inventory did not apply the biome stratification, thus the National Forest Inventory´sampling units did not need to ensure consistency with the biomes. Biomes could be considered as a national classification of ecosystems and are obtained by aggregating the "potential" vegetation types.
The National Forest Inventory applied its own Land use/land cover nomenclature, as it can be seen in Appendix A1 in the National Forest Inventory report. This nomenclature includes a description of each category at all levels (level 1, 2 and 3) and each sample unit is classified accordingly, based on the on-ground classification done by the technicians who visited the sample units.
The NFI sampling design is a systematic cluster sampling with different sampling intensities by strata. These strata are not the biome classes neither the land use/land cover nomenclature. This stratification is only used with the purpose of installing the sample grid and would only be re-considered if the statistical analysis concluded that the estimations were not accurate, which is not the case.
In the end, the Oromia GHG LULUCF Inventory used the information contained in each sample unit (on-ground classification) within the Oromia regional boundaries: level 3 of the NFI land use/land cover nomenclature. The only improvement that could be think is to classify the sample units also by biome, but this will reduce the number of sample units by stata, increasing the level of uncertainty.
The procedure followed to estimate the emission factor is an arithmetic average given that aboveground biomass stocks per plots are a value obtained with the same procedures (forest inventory practices) and sample unit size. No other form of estimation could be more representative than the arithmetic average, there are no models to estimate such variable neither a weighted average would be correct to apply. The uncertainty of the lineal consideration of the above-ground carbon stocks is considered when estimating the uncertainty of the emission factor, which is finally included in the overall results.

Auditor Response: The assessment team appreciates the information provided in response to the finding. However, the information provided, while useful, does not directly address the information request.

The assessment team agrees that "The NFI sampling design is a systematic cluster sampling with different sampling intensities by strata" and that the strata used in the National Forest Inventory "are not... the land use/land cover nomenclature." That is precisely the salient observation from which the finding has originated. (The statement that "The Oromia LULUCF GHG Inventory did not apply the biome stratification..." is correct but not directly relevant.) As documented in Section 2.1 of the Final Report for Ethiopia's National Forest Inventory (2018) ("the Final Report"), sampling intensities differed by stratum: "...stratum I has a grid of 8 minutes in latitude and 8 minutes in longitude, stratum II has sampling units every 30 minutes in latitude and 30 minutes in longitude and strata III and IV have sampling units every 25 minutes in latitude and 25 minutes in longitude due to their seamless nature in terms of landscape mosaic. Stratum V includes sampling units every 60 minutes in latitude and 25 minutes in longitude." The differing sampling intensities have resulted in unequal probabilities of selection between strata. The problem arises when sampling units for a given Level 3 category, which originally located in different strata, are combined in a manner that does not take into account the unequal selection probabilities across the different strata. For example, as indicated in Table 2.2 of the Final Report, sampling units for strata I-IV were located in Oromia. Suppose that the "Annual Crop" Level 3 category include sampling units from strata I-IV. To calculate an arithmetic average across sampling units would fail to take into consideration the different sampling probabilities of the different sampling units, and this could result in significant bias. Therefore, the information request has not been satisfied. Please justify why a process involving use of arithmetic averages constitutes use of "best available methods". Alternatively, given that the sampling design utilized the stratification system described in Table 2-1 of the Final Report, please provide a justification for why the values from the individual sampling units cannot first be aggregated at the stratum level (following this same stratification scheme) and then expanded to an overall total value for the entire Oromia region based on the number of hectares in Oromia falling within each stratum (which would avoid the need for a complex compilation process, as it would then be statistically valid to take the arithmetic average across the sampling units to construct stratum-level means).

Project Personnel Response 2: The Oromia ER Program has been working for the last months to attend the comments from SCS with the intention to develop, improve and deliver a GHG Inventory using the best available methods and existing data.

After revising the auditor´s response and having assesed different alternatives, it was concluded that new emission factors should be estimated.

The team finally obtained the boundaries for the strata used in the Forest Inventory (I to V), which was used as a basis for the aggregation of the sample units at the stratum level to then expand them to an overal total value for the entire Oromia:

The first step was to estimate the EF by strata, agreggating the subplots and it correspondent weighted area. These values were transformed into biome EF with the used of the Sardnal et al. (1992) method. The raw data from the NFI, which was provided by FAO, was filtered in order to have the data for "forest" land class and for Oromia. The Sardnal method allowed the estimation of the carbon stock by biome and its variance and confidence of interval.

After knowing the EF by biome, a weighted average of the forest carbon stock is estimated, using the area data for forest and biome present in the Oromia Forest Reference Level. The Excel file with the EF estimations is attached to these responses: "Results_EFs_Ethiopia_Sardnal_OROMIA.xlsx".

Despite that this EF is now more accurate than the previous EF, the difference is low: 253.37 tCO2/ha(nre value) versus 250.74 tCO2/ha (previous value).

Auditor Response 2: Through review of the workbook entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been undertaken to calculate emission factors using data that are both specific to Oromia and appropriately weighted (taking into consideration the difference in sampling intensity across strata). Therefore, given that it now appears the best available methods have been used to calculate emission factors, the information request is no longer relevant and will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 3 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.2.2
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "ISFL ER Programs shall account for the total net emission reductions across eligible subcategories by estimating the baseline and monitoring emissions and removals for the eligible subcategories using at minimum IPCC Tier 2 methods and data. Subcategories are considered to meet Tier 2 if all the significant pools and gasses are estimated using Tier 2 methods and data." Significance is further defined in footnote 12 as follows: "Significant here refers to the individual pools or gases that make up at least 25% of the absolute level of the total GHG emissions and removals in the subcategory, and the pools and gases that, when listed in the relative magnitude of contribution to the emissions of the overall subcategory, contribute to 60% of the cumulative emissions."
The ERPD states in page 238 that "Annual change in organic carbon stocks in mineral soils follows the equation 2.25 from the 2006 IPCC Guidelines…" As documented in Section 2.3.3.1 in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Equation 2.25 pertains to a Tier 1 approach. Therefore, the soil organic carbon pool is quantified using a Tier 1 method. The ERPD indicates on page 69 that the "Forestland converted to grassland", "Forestland converted to cropland", "Grassland converted to forestland", "Cropland converted to forestland" and "Grassland converted to cropland" subcategories are eligible for ISFL accounting. Therefore, please provide evidence that the soil organic carbon pool is insignificant (following the definition quoted above) in respect of each of the above-named subcategories.
Project Personnel Response: Soil organic carbon has been considered in the subcategories initially eligible for ISFL accounting. The method used is, as correctly referred by SCS, equation 2.25 in section 2.3.3.1 in volume 4, chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. However, on page 2.37 in the same section, it is stated that "a tier 2 approach is a natural extension of the tier 1 method that allows an inventory to incorporate country-specific data, while using the default equations given for mineral and organic soils". "It is good practice for countries (in our case for the region) to use a Tier 2 approach, if possible, even if they are only able to better specify certain components of the Tier 1 default approach. For example, a country may only have data to derive country-specific reference C stocks, which would then be used with default stock change factors to estimate changes in soil organic C stocks for mineral soils".
This is exactly what the Oromiya LULUCF GHG Inventory implemented. National soil organic carbon stocks were obtained from the "Evaluation of the forest carbon content in soil and litter in Ethiopia" (Donor: FAO; Implementing agency: Natural Resources Finland (LUKE) and Ethiopia Environment and Forestry Research Institute (EEFRI); duration of the report: Agust 2017-February 2019; geographical coverage: Ethiopia and Beneficiaries: FAO, MEFCC, EEFRI). Final results are included in the document which is attached to this set of responses, for SCS consideration.
Apart from this, while revising the documentation and the GHG Inventory accounting method, it was discovered that the soil organic carbon estimation could be improved. The values in the "Evaluation of the forest carbon content in soil and litter in Ethiopia" are reported by biomes. These values were only applied to forestland areas in the previous estimation of the GHG Inventory, but after revising the applicability to any other land use, it is concluded that it could be applied to the region. That implies modifying the SOC content of the land use differently than forestland, from a default IPCC value to a country-specific value. This improvement has a small impact in the entire Inventory and also in the baseline: previous baseline estimation resulted in 8,838 ktCO2/year and the current estimation is 8,348 ktCO2/year.

Auditor Response: Upon further review of Section 2.3.3.1 in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the assessment team agrees that the premise behind the findings, that use of Equation 2.25 automatically denotes a Tier 1 approach, was in error. In addition to the text cited in response to this finding, the flowchart in Figure 2.4 specifically indicates that a Tier 2 method is to be implemented where " data to generate country-specific reference C stocks" are available. Given that the country-specific document "Evaluation of the forest carbon content in soil and litter in Ethiopia" has been used as the source for "country-specific reference C stocks", it follows that a Tier 2 approach has been implemented. Therefore, this finding will be withdrawn with the apologies of the assessment team.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 4 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data."
The ERPD states in page 238 that "Annual change in organic carbon stocks in mineral soils follows the equation 2.25 from the 2006 IPCC Guidelines…" Please provide a description of (1) the source of the values used for the F(LU), F(MG) and F(I) variables to calculate Equation 2.25 from the IPCC 2006 Guidelines for each of the various subcategories involving LULUCF and (2) a justification for why the selected source is the best available existing data.
Project Personnel Response: The source of the factors is the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU, chapter 4 Forestland, chapter 5 Cropland and chapter 6 Grassland. As it is mentioned in the response to the NIR 3, it is good practice for countries (in our case for the region) to use a Tier 2 approach, if possible, even if they are only able to better specify certain components of the Tier 1 default approach. In Oromia GHG Inventory, country-specific reference C stocks are applied but default stock change factors to estimate changes in soil organic C stocks for mineral soils. In relation to the second part of the NIR, the selected sources of information are the best available existing data because is approved by the IPCC and internationally validated. Furthermore, there is no other source of data.
Auditor Response: The assessment team requires a more specific description of the sources of the respective variables. For example, the assessment team reviewed Volume 4, Chapter 4 of the IPCC 2006 Guidelines and was unable to find any information regarding these variables. Because the requested information has not been provided, the information request has not been satisfied.
Project Personnel Response 2: In the document "Oromyia LULUCF GHG Inventory 21082020.xlsx", sheet "Land use change - emissions", line 138, it can be seen that the IPCC model to estimate SOC emissions and removals is applied. The SOCREF is a country specific value and the FLU, FI and FMG are the factors obtained from IPCC (applying expert judgement).
For example the FLU, FMG and FI for forest are "1", which are the values suggested by IPCC: 2006 IPCC Guidlines, vol 4, chapter 4.3.3.2 "For native unmanaged land, as well as for managed Forest Land, Settlements and nominally managed Grassland with low disturbance regimes, soil C stocks are assumed equal to the reference values (i.e., land use, disturbance (forests only), management and input factors equal 1), but it will be necessary to apply the appropriate stock change factors to represent other systems which may be converted to Forest Land, such as improved and degraded Grassland, as well as all Cropland systems. See the appropriate land-use section for default stock change factors (Forest Land in 4.2.3.2, Cropland in Section 5.2.3.2, Grassland in 6.2.3.2, Settlements in 8.2.3.2, and Other Land in 9.3.3.2). Default reference C stocks are found in Table 2.3 (Chapter 2)."
Continuing with line 138 of the GHG Inventory excel file, FLU, FMG and FI for annual cropland are obtained from table 5.5 "Relative stock change factors (FLU, FMG, AND FI) (OVER 20 YEARS) for different management activities in cropland". FLU is for "long-term cultivated - tropical montane". Note that this value is the most conservative one among the possible values. FMG is "full - all" (full is refered to tillage) which is 1 and FI is "low-tropical montane" (consistent with FLU) which is 0.94. Note that the uncertainty of the factors are also considered.

Auditor Response 2: The assessment team appreciates the information provided for the specific referenced example. However, through review of the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook, the audit team has noted significant variation in the values used. For example, in cell H622, a value of 1.09, indicating "Primary and/or secondary tillage but with reduced soil disturbance (usually shallow and without full soil inversion)", has been used for the "Grassland to annual cropland" conversion. In cell H735, a value of 1, indicating "Full tillage", has been used for the same conversion. As another example of unexplained differences that require clarification, in cell E795, an initial value of 0.95 is used for F(MG). A value of 0.96 is used for the same variable in cell E739.
In addition, justification for the values used has not been provided to the audit team. For example, the values used for the F(MG) variable for grassland seem to assume "Moderately degraded grassland", but justification for this has not been provided. The audit team will repeat the request to provide a description of (1) the source of the values used for the F(LU), F(MG) and F(I) variables to calculate Equation 2.25 from the IPCC 2006 Guidelines for each of the various subcategories involving LULUCF and (2) a justification for why the selected source (i.e., the specific values as selected from the IPCC 2006 Guidelines) is the best available existing data.

Project Personnel Response 3: After the revision of the GHG Inventory it was understood that the different factors used for the estimation of the SOC pool needed to be revised and clarified. Thus, there is a new worksheet "EF SOC" that includes the SOCREF and factors obtained from the 2006 IPCC Guidelines with background information to support the decision in the use of factors.
This new worksheet allows the direct and global visualization of the different management (FMG), input (FI)and land-use factor (FLU) and it provides the source of each of the values.
Auditor Response 3: The assessment team has confirmed that the latest version of the LULUCF workbook (6 April 2021) now contain a sheet "EF SOC" which contains information on the SOC emission factors values along with justification for each value selected from the IPCC 2006 Guidelines. The assessment team verified these values. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 5 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data."
The assessment team understands that the information from the "Woody Biomass Inventory and Strategic Planning Project" document was used to determine the emission factors for aboveground and belowground biomass (AGB+BGB) stock change in the "forest remaining forest" subcategory. However, it appears that this information is also used as an input to the calculation of emission factors for land use transitions. For example, in cell B104 of the "Land use change - emissions", cells K51 and K59 from the "EF AGB BGB" worksheet in the "Oromia GHG Inventory 03062020" workbook are referenced to calculate the emission factor for "Shrubland to annual cropland". Please clarify why information from the "Woody Biomass Inventory and Strategic Planning Project" document was used for this purpose and why this information constitutes the best existing data (particularly in relation to the data from the Final Report for Ethiopia's National Forest Inventory (2018)).
Project Personnel Response: Sources of information about aboveground (and other pools) are scarce and not always representative of the country or region. The National Forest Inventory and the Woody Biomass Inventory and Strategic Planning Project are the only valid and comprehensive sources of information. However, this information cannot always be combined or compared or directly applied to the land use and land-use change activity data. Thus, there is always an error attributable to extrapolate certain forest inventory information to a specific land-use type.
As it is stated, it is correct that the Woody BIomass Inventory is used as an input to estimate emissions and removals in land-use change categories. The reason for doing that is the need to find a reliable and realistic emission factor applicable to the land-use under consideration. The previous example is referred to the land use change "shrubland to annual cropland". "Shrubland" is not a category in the National Forest Inventory, thus the only available source of emission factor is the Woody Biomass Inventory. Despite it was elaborated some time ago, is the best available data. In order to maintain consistency and comparability, the carbon stock in "annual cropland" is also obtained from the same source. It is important to note that this is the only case where Woody Biomass Inventory information is applied to land-use transition categories, given the lack of information (as explained before).
Auditor Response: Given the response provided, it appears that this NIR 5 and NIR 17 address the same issue. Therefore, while the information request has not been satisfied, this finding has been merged into NIR 17 for administrative purposes. Please see NIR 17 for further information.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 6 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromia GHG Inventory 03062020; OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines."
It appears that the biomass gain-loss method is being used to calculate carbon stock change in biomass in the forest land remaining forest land. Section 4.2.1.1 in Volume 4, Chapter 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that "The annual increase in biomass carbon stock is estimated using Equation 2.9, where area under each forest sub-category is multiplied by mean annual increment in tonnes of dry matter per hectare per year" and that "Annual biomass loss or decrease in biomass carbon stocks is estimated using Equation 2.11, which requires estimates of annual carbon loss due to wood removals (Equation 2.12), fuelwood removal (Equation 2.13) and disturbances (Equation 2.14). Transfer of biomass to dead organic matter is estimated using Equation 2.20, based on estimates of annual biomass carbon lost due to mortality (Equation 2.21), annual carbon transfer to slash (Equation 2.22)." It is stated in page 211 of the ERPD that "The amount of wood that is extracted from the woods is obtained from the Woody Biomass Inventory and Strategic Planning Project (WBISPP, 2004). This project determined the amount of 1) fallen litter or small dead branches, twigs and leaves, or small branches with leaves taken from trees cut for poles, 2) roundwood and 3) wood for charcoal." From review of the quantification in cells G160:G177 of the "Land remaining land - emissions" worksheet of the "Oromia GHG Inventory 03062020" workbook, it appears that Equation 2.11 has been followed in order to calculate annual biomass loss. However, this calculation of annual biomass loss does not appear to be included in the calculation that results in the values in row 9 of the "Land use change - emissions" worksheet (i.e., it does not appear to be accounted for in respect of lands that were converted to land uses other than forest lands between 2000 and 2017). Please clarify how annual biomass loss due to harvesting has been calculated for such lands.
Project Personnel Response: It is correctly stated that the biomass gain-loss method is being used to calculate the biomass carbon stock change in forestland land remaining forestland, but also for grassland remaining grassland and cropland remaining cropland.
Again, the Woody Biomass Inventory for Strategic Planning project is used as the most reliable source of information to consider the amount of wood that is extracted from different land uses. Equation 2.11 "Annual decrease in carbon stocks due to biomass losses in land remaining in the same land-use category" from the 2006 IPCC Guidelines is applied to estimate the annual biomass loss.
This calculation of annual biomass loss is not included in row 9 in "land-use change - emissions" worksheet because the biomass loss is considered to be extracted in the land that remains in the same land use (forestland, grassland and cropland). Thus, this carbon loss is included in "land remaining land emissions" worksheet, row 3,6 and 10 (forest, grass and cropland).
Any land use converted to a different land use (differently than forestland) does not consider biomass loss as fallen litter or small dead branches, twigs and leaves, roundwood or wood for charcoal. The biomass loss when land-use change occurs is the existing biomass stock before the land-use conversion (carbon-stock change method).

Auditor Response: Thank you for clarifying the scope of implementation of the gain-loss method. The assessment team also notes that the gain-loss method appears to be implemented for the "settlements remaining settlements" subcategory. Therefore, this finding pertains to all subcategories that use the gain-loss method (cropland remaining cropland, forestland remaining forestland, grasslands remaining grasslands and settlements remaining settlements). However, the forestland remaining forestland subcategory will be used as an example to illustrate the principles involved.
The finding response indicates the following: "This calculation of annual biomass loss is not included in row 9 in "land-use change - emissions" worksheet because the biomass loss is considered to be extracted in the land that remains in the same land use (forestland, grassland and cropland). Thus, this carbon loss is included in "land remaining land emissions" worksheet, row 3,6 and 10 (forest, grass and cropland)." However, the calculations in row 9 of the "Land use change - emissions" worksheet, for forestland remaining forestland, are included in the summation in row 9 of the "Summary of emissions" worksheet. As mentioned, the inputs to this calculation do not appear to reflect biomass loss. Therefore, the information request has not been satisfied.
Project Personnel Response 2: Many thanks again for raising this point and giving us the opportunity to clarify. As mentioned before, the biomass loss is only included in the areas remaining in the same land use. However, it is true that there is a "forestland remaining forestland" in the sheet "Land use change - emissions", which is somehow confusing. This land use class in this contradictory sheet is because the plots that shows a land use transition in any moment between 2000 and 2017 are put in this sheet. The plot, before the transition belonged to a any land use in a permanent way. For example, a plot that showed a transition between grassland to forestland in the year 2010, before that year the plot was "grassland remaining grassland". But the plots is analzed and considered in the sheet "land use change - emissions".
Having said this, it is also true that the biomass loss is not considered in the "forestland remaining forestland" in the "land use change - emissions" sheet. This is a technicality that could be considered as an error. However, this situation is not an error at the end of the estimation process. In the sheet "summary of emissions", it is included all the gains and losses from "forestland remaining forestland", from "land remaining land emissions" and "land use change emissions". We could have divided the biomass loss and distributed in "land remaining land" sheet and "land use change - emissions" sheet but this would imply and extra step not needed when summming up the emissions and removals in "summary of emissions" sheet.
Auditor Response 2: Thank you for providing additional clarification regarding the quantification process. After reviewing the revised workbook, "Oromyia LULUCF GHG Inventory 25112020_new EF", in light of the new clarification provided, it is clear to the audit team that annual biomass losses, while reported in row 5 of the "Land remaining land - emissions" worksheet, are also applicable to the "Land use change - emissions" worksheet in that the values in cells G160:G177 of the "Land remaining land - emissions" worksheet are for all forestland in Oromia, not just land that remained in the forestland remaining forestland subcategory for the entire analysis period. Therefore, the information request has been satisfied.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 7 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: OFLP- Draft ERPD 10122019 clean; Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
The ERPD states in page 63 that “Data used for this subcategory does not comply with IPCC tier 2 or higher methods and data.” Therefore, the assessment team understands that a Tier 1 approach is used to quantify carbon stock change in the forest land remaining forest subcategory. Section 4.2.2.1 in Volume 4, Section 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that “The Tier 1 method assumes that the dead wood and litter carbon stocks are in equilibrium so that the changes in carbon stock in the DOM pools are assumed to be zero.” The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories makes no refinement to this guidance. The assessment team has confirmed that this assumption has been made in the “Land remaining land - emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook, as zero values are calculated across all years in row 8. However, in the “Land use change - emissions” worksheet, the calculation in row 9 includes, in its summation, the calculation in row 34 of the same worksheet. Row 34 calculates carbon stock change in dead wood. This is not consistent with the most recent IPCC guidance and guidelines.
Project Personnel Response: After evaluating the correct comment made by SCS, we have concluded that deadwood should be considered in land remaining in the same land use.
First of all, it should be clarified that "land-use change - emissions" worksheet does also contain emissions and removals from areas that remain in the same land use. The reason for this is that the sampling plots in Collect Earth that suffered a land-use change during the period under analysis (2000-2017) ended in that worksheet. But that plot, before the land-use change, had a land use that is classified as "land remaining in the same land use". That period of time under the same land use, before the transition, emissions and removals are estimated with the gain-loss method (decision tree in figure 2.3 Vol 4, chapter 2.3.2.1, IPCC 2006 Guidelines). Deadwood is also estimated, considering the country-specific deadwood carbon stock in forest and the annual yield (%) of carbon stock in forest (4.5%) from the Woody Biomass Inventory, using the gain-loss method.
Having said so, it was evaluated and decided that the double criteria applied for land use that remains in the same land use, should be solved by applying the same approach in "land remaining land - emissions" worksheet. The previous version of the GHG LULUCF Inventory was not considering the removals in deadwood in land remaining in the same land use but the current version is. This implies an increase in carbon removals because of this pool in forest land remaining forest land. The overall impact is a reduction in the level of emissions by 6% for the total baseline period of 10 year (or 0.6% annual).

Auditor Response: The response to the finding implies that a Tier 2 approach is used to quantify carbon stock change in the forest land remaining forest subcategory, since Figure 2.3 in Section 2.3.3.1 in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories identifies the Gain-Loss method as "the Tier 2 method". The assertion that sufficient data are available to support Tier 2 calculation is inconsistent with the information in the ERPD (as quoted in the original finding text) and as provided to the assessment team during internet-based meetings, but will be re-evaluated on here on its own merits.

The flowchart in Figure 2.3 indicates that the Gain-Loss method is to be used if "data on managed area and annual transfer into and out of DOM stocks" are available. It is not at all clear to the assessment team that data on managed area are available. Even if such data were available, it is clear that the information available does not support determination of "annual transfer into and out of DOM stocks". The following is indicated in Section 2.3.3.1 of Chapter 2: "The net balance of DOM pools specified in Equation 2.18, requires the estimation of both the inputs and outputs from annual processes (litterfall and decomposition) and the inputs and losses associated with disturbances. In practice, therefore, Tier 2 and Tier 3 approaches require estimates of the transfer and decay rates as well as activity data on harvesting and disturbances and their impacts on DOM pool dynamics. Note that the biomass inputs into DOM pools used in Equation 2.18 are a subset of the biomass losses estimated in Equation 2.7. The biomass losses in Equation 2.7 contain additional biomass that is removed from the site through harvest or lost to

the atmosphere, in the case of fire." From reading this description, it is clear that the Tier 2 method calls for very specific data regarding the dynamics of this carbon pool. Based on the information made available to the assessment team, such information is not available.

In the absence of the detailed information required, the "emission factor" for calculating net biomass gain in dead wood is calculated, in cell D104 of the "Land remaining land - emissions" worksheet of the "Oromyia LULUCF GHG Inventory 21082020" workbook and other locations, by multiplying an estimate of carbon stocking in dead wood (from the National Forest Inventory) by the annual yield of the "Forest, montane broadleaf, open (20-50% crown cover)" category from Table 3.3 of the "Woody Biomass Inventory and Strategic Planning Project" report. This has the net effect of assuming a 4.5% increase in dead organic matter on an annual basis. While the "Woody Biomass Inventory" report is limited on details regarding the source of the data in Table 3.3, it seems highly unlikely that Table 3.3 was intended to provide specific information regarding the net increase in dead organic matter stocks; it is far more likely, given the overall objectives of the report, that Table 3.3 was intended to provided information regarding the overall growth of live biomass stocks (it is not clear whether this estimate accounts for mortality but, based on the high yield estimates, it seems most likely that the estimates are "gross" yield estimates that do not account for mortality). Therefore, such information does not directly satisfy the need for information on "annual transfer into and out of DOM stocks" that would be required in order to implement the Tier 2 method.

Therefore, the assessment team does not agree that adequate data are available to support Tier 2 quantification; given this, the guidance of Section 2.3.3.1 of Chapter 2 is clear: "Countries that use Tier 1 methods to estimate DOM pools in land remaining in the same land-use category, report zero changes in carbon stocks or carbon emissions from those pools." Therefore, the non-conformity has not been resolved; rather, the opposite step has been taken in response to this finding, in that the non-conformity is now consistently implemented across both the "Land remaining land - emissions" and "Land use change - emissions" worksheets.

Project Personnel Response 2: [An additional response to this finding was not provided.]

Auditor Response 2: Subsequent to the issuance of this finding, the audit team revisited SCS' Inception Report and realized that footnote 52 in Annex A of said report provides the following clarifying guidance regarding the meaning of the term "consistent with" in Section 4.1.2 of the ER Program Requirements: "...the selection of subcategories included in [the initial selection of subcategories for ISFL accounting] is equivalent to the selection that would have resulted had the IPCC 2006 Guidelines been duly followed to the letter." In this case, the audit team does not believe that the procedures set out in the IPCC 2006 Guidelines for the forest land remaining forest subcategory are being followed to the letter, for the reasons set out in this finding. However, the discrepancy is highly unlikely to affect the selection of subcategories included in the initial selection of subcategories for ISFL accounting, since the forest land remaining forest subcategory is included by default (per Section 4.3.4(ii) of the ER Program Requirements) and there is little to no possibility that selection of any other subcategories could be affected by the inventory as reported for the forest land remaining forest subcategory. Therefore, in respect of this subcategory, the approaches used in the inventory calculation are consistent with the most recent IPCC guidance and guidelines, and this finding is withdrawn. However, OBS 33 has been issued regarding this matter.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 8 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” The calculation of carbon stock in natural forest (used to calculation emission factors for subcategories involving conversion from forest land) in cell L39 of the “EF AGB BGB” worksheet in the “Oromia GHG Inventory 03062020” workbook reference calculations of area by biome in the Oromia region in cells L34:L37 of the same worksheet. The information in these cells is not consistent with the information for “Forest” in Table A2.3 of the Final Report for Ethiopia’s National Forest Inventory (2018), which the assessment team would presume to be the best available to use for a weighted average, since it presumably has the greatest level of consistency with the per-hectare carbon stock information that was sourced from the same report. For example, a value of 431,237 hectares is provided for the “Forest” FRA Class in the “Acacia-Commiphora” biome in Table A2.3; a value of 3,679,219 hectares is provided in cell L35. Please explain the discrepancy and justify why the values in cells L34:L37 of the “Land use change - emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook are the best available existing data on forest land area by biome in the Oromia region.
Project Personnel Response: Values in cell J34:K37 in "EF AGB BGB" worksheet are obtained from the NFI, chapter 3.8 "Results by biomes - Forest only". Carbon stocks in tCO2/ha in I34:I37 are estimated using the conversion factor 44/12. Area values in cell L34:L37 is obtained from the Oromia FREL elaborated as part of the National FREL submitted by Ethiopia to UNFCCC. The Oromia FREL is attached to this set of responses to SCS.
It has to be said that while doing the revision of the supporting documentation, it was found a discrepancy in the area used in Oromia FREL with the information in the Oromia GHG LULUCF Inventory. This discrepancy has been solved and the weighted average value of aboveground and belowground biomass per hectare is 250.74 tCO2/ha (it was 251.16 tCO2/ha). This modification has an impact of 0.2% over the 10-year period of analysis.
Auditor Response: Thank you for providing an explanation for the discrepancy between information for “Forest” in Table A2.3 of the Final Report for Ethiopia’s National Forest Inventory (2018) and the values in cells L34:L37 of the “EF AGB BGB” worksheet in the “Oromyia LULUCF GHG Inventory 21082020” workbook. However, a justification has still not been provided for why the values in cells L34:L37 of the “EF AGB BGB” worksheet are the best available existing data on forest land area by biome in the Oromia region. It strikes the assessment team as unusual to use a source for area values that is different from the source of the per-hectare carbon stocking values used in the emission factors. The assessment team further notes that there are very significant differences between the information in the two sources (e.g., cell L34 in the “EF AGB BGB” worksheet indicates that there are 3,385,117 hectares of forest in the "Acacia-Commiphora" biome in Oromia, while Table A2.3 of the Final Report for Ethiopia’s National Forest Inventory (2018) indicates a value of 431,237 hectares). Therefore, please provide the requested justification.

Project Personnel Response 2: The information in the NFI related to the area in biomes is odd and cannot be used as a valid source for this variable. The summatory of the "forest" in different biomes is equal to 2,769,187 ha, which is far from the reality in the region. Other classes are "other wooded land" (13,356,910 ha), "other land" (16,621,344 ha) and water (6,252 ha) which are not forestlands. However, the total area of the region is very close to the correct value (32,753,693 ha). The source of information is the maps from the Ethiopian Mapping Agency.
As expressed before, the data used in "EF AGB and BGB" is obtained from the work done between FAO and the Environment, Forest and Climate Change Commission in 2017 "Ethiopia´s Forest Reference Level Submission to the UNFCCC" wit the use of a different method: Collect Earth. AD, EF and results for the Oromia FREL will be shared with SCS.
Auditor Response 2: This finding has been made irrelevant due to the new emission factors that have been calculated in response to NIR 2 and other findings. Therefore, it will be closed without further review of the response.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 9 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” A pivot table approach is used to calculate mean aboveground biomass in different LUCCs in columns A:F of the “EF AGB BGB” worksheet in the “Oromia GHG Inventory 03062020” workbook. Although the assessment team has been unable to trace the calculations for dead wood, the assessment team suspects that a similar approach has been used to calculate mean biomass in dead wood, as pasted into H4:H11 in the “EF DW” worksheet of the same workbook. One weakness of pivot tables can be that sampling units (SUs) without trees (or, in the case of dead wood, Sus without pieces of dead wood) can be mistakenly omitted from the calculation of the average, resulting in overestimates of biomass. There are 188 unique SUs in the data in the “EF - raw NFI AGB” worksheet in the ““Oromia GHG Inventory 03062020” workbook. There are 179 unique SUs in the data in the “EF - raw NFI DW” worksheet in the ““Oromia GHG Inventory 03062020” workbook. Table 2-2 of the Final Report for Ethiopia’s National Forest Inventory (2018) indicates that there were 221 SUs in Oromia. Therefore, it is suspected that the error described above has occurred, either with aboveground and belowground biomass, or dead wood, or both. Please clarify what methods have been employed to guard against the omission of SUs with no trees or dead wood pieces in the calculation of biomass in the aboveground and dead wood carbon pools, respectively.
Project Personnel Response: Dead emission factor is estimated with the information of the NFI (raw data). The worksheet now includes the linkage between the EF value and the raw data.
As per our revision of the raw data, the number of sample units in "EF-raw NFI AGB" worksheet in Oromia GHG Inventory 03062020" workbook is correct (188), and also correct for "EF-raw NFI DW". After revising the GIS information, it was found that the NFI shapefile (location of plots within Oromia region) has 208 plots.
This means that there is a discrepancy between NFI report (table 2-2), the LULUCF GHG Inventory´s geographical information (shapefile with NFI plots - attached for SCS revision) and the worksheets ("EF-raw NFI AGB" and "EF - raw NFI DW). The difference between the NFI report (221 sampling units) and the LULUCF GHG Inventory´s geographical information (shapefile with 208 NFI plots) is because the different political boundaries that both sources could be considering. The difference between the shapefile and the worksheets is the important one. There is also another explanation for the difference: there are some points that were inaccessible and were not reached. So, we have their location but there is not data in Excel. ORCU is working on this topic together with the EFCCC (source of the information) to understand the difference and correct if needed.
In relation to the comment made by SCS, the LULUCF GHG Inventory team can assure that every sample plot is considered for the calculation of the EF for AGB, BGB or DW, even if the plot has no data for trees or dead wood.

Auditor Response: Thank you for clarifying that 208 plots fall within the Oromia boundary used for the program GHG inventory. The assessment team has been unable to open the provided shapefiles "Oromia_region_boundary2" and "ParcelasINF_WGS84", but this will be addressed in future reviews. For now, the assessment team will accept the assertions provided at face value. However, please provide additional information regarding the number of SUs within the Oromia region (based on the boundaries used for the program GHG inventory) that were found to be inaccessible.
In addition, the information regarding accessibility still does not provide information regarding the differing number of SUs represented in the "EF DW" and "EF AGB BGB" worksheets. The total number of SUs represented in the "EF DW" worksheet in the "Oromyia LULUCF GHG Inventory 21082020" workbook is 177. The total number of SUs represented in the "EF AGB BGB" worksheet in the same workbook is 188. In addition, the assessment team notes that there appears to be some sort of error in the data in the "EF - raw NFI DW" worksheet, as the "LU_2013_EMA" field (used to classify plots for use in the calculations in the "EF DW" worksheet) is blank in the case of six SUs and has a value of "#N/D" in the case of 109 SUs. In the understanding of the assessment team, in order to maintain consistency with the live biomass accounting, the plots should be differentiated based on the Level 3 LUCC.
Please address the above requests and concerns.
Project Personnel Response 2: Sampling units without trees or deadwood are considered when applying pivot tables, as it can be seen in the inventory worksheet in the "EF DW" sheet in cell B38 and B39. Despite this, as it will be seen in following NIR and NC, a complete set of EF was estimated, using the processed data from FAO. Deadwood pool has been corrected in the way that the DW stock is estimated by strata and then a weighted average of the pools is estimated. There are many cases where there is no carbon stock for DW in certain strata and that pulls the weighted average value down.
N/D for the classes in deadwood is because the plot is not in Oromia, and have not been used in the GHG Inventory.
In relation to the number of sampling units or plots, this point was raised to a FAO expert who was involved in the NFI from the beginnig. The number of sampling units planned in the NFI for Oromia was 221. The new EFs are estimated on the values that were finally used for the NFI report and includes the data for 199 SU. The difference between 221 and 199 are the inaccessible sampling units. If you see the Excel sheet provided by FAO "Results_EFs_Ethiopia_Sardnal_OROMIA.xls", you will see in the sheet "plots", in column "I" that all cells say "0", which means that these SU were accessible. SU with a "1" are not accessible and they have been filtered and are not in the list.
The 188 SU in the raw data for EF does not apply anymore since this data is not used in the actual version of the GHG Inventory. Despite this, FAO expert said that a difference of 5% (199-188)/199) is very low and any analysis can be done with this 188.
Deadwood has 177 SU, and according to the FAO expert this is totally possible, because not every SU was measured for deadwood. in fact, this 177 are for the entire Oromia. In the "EF DW" of the "Oromia LULUCF GHG Inventory 25112020.xlsx" there are 115 SU with an "N/D" or "blank" which means they have not been considered because they are outside Oromia. Therefore, only 62 SU out of 199 SU are considered.

Auditor Response 2: Thank you for providing this information. Unfortunately, the information provided has not assuaged the concern of the assessment team. The data in the "EF - raw NFI DW" worksheet in the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook suggests that the dataset used for dead wood is comprised of 64 distinct SUs that were not inaccessible. This is less than one third of the 199 SUs that were measured as part of the National Forest Inventory. Nothing in the National Forest Inventory Final Report or the National Forest Inventory Field Manual suggests that dead wood was not measured on all sampling units. Please elaborate on the statement that "not every SU was measured for deadwood" and provide documentary evidence to support this assertion.
Project Personnel Response 3: Based on the analysis of the Nationa Forest Inventory Manual and Final Report, the GHG Inventory is now assuming that there is no deadwood when the plots are not reported. Whenever there was a sampling plot that was not present in the EF - raw NFI DW, the plot was added to the database with a value of zero, which makes conservative the estimation of total dead organic matter. Because of this, the current EF for DW is in average 56% lower than in the last version of the GHG Inventory, which underestimates emissions and underestimates emission reductions since the emission and removal factors are lower.
Auditor Response 3: The assesssment team reviewed the updated EF raw NFI DW sheet in the LULUCF Inventory workbook (dated 11042021) and confirmed that now includes 336 plots with deadwood values marked as zero for plots for which dead wood was not included. This resulted in a much more conservative estimate of total dead organic matter for the baseline scenario. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 10 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
In review of the emission factors used to calculate carbon stock change for subcategories involving conversion to cropland, it appears that carbon stock change in below-ground biomass has been included in the calculations. For example, by tracing the calculation for the emission factor for conversion from natural forest to annual cropland, in cell B103 of the “Land use change - emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook, the assessment team has confirmed that both the calculation of carbon stock in natural forest and the calculation of carbon stock in annual cropland includes belowground biomass. This approach is not consistent with the most recent IPCC guidance and guidelines. Section 5.3.1.1 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for land converted to cropland) states that “the methodology below considers only carbon stock change in above-ground biomass since limited data are available on below-ground carbon stocks in perennial Cropland”. The same is indicated in the same section of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
Project Personnel Response: Many thanks for raising this point.
We agree with the approach showed by SCS and consider that IPCC Guidelines are a good source for guidance in the estimation of carbon stock changes.
However, the reference to the IPCC Guidance has a focus on the tier 1 approach to estimate biomass in cropland areas. The 2006 IPCC Guidelines also states in 5.3.1.1 (VOl 4, Chapter 5) that "It is good practice to consider all carbon pools (i.e., above ground and below-ground biomass, dead organic matter, and soils) in estimating changes in carbon stocks in Land Converted to Cropland" and that "the Tier 2 calculations are structurally similar to Tier 1, with the distinction that relies largely on country-specific estimates of the carbon stocks in initial and final land uses rather than the default data". In the following paragraph it is understood that below-ground (and all carbon pools) are part of the country-specific carbon stocks mentioned above.
In conclusion, the inclusion of the belowground biomass in the estimation of emissions and removals in land-use change categories is in accordance with 2006 IPCC Guidelines and results in a more accurate estimation than a tier 1 approach.

Auditor Response: It is true that Section 5.3.1.1 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that "It is good practice to consider all carbon pools (i.e., above ground and below ground biomass, dead organic matter, and soils) in estimating changes in carbon stocks in Land Converted to Cropland." However, the statement indicates that "It is good practice to consider all carbon pools..." It does not specifically require (or permit) the inclusion of all of the listed carbon pools. Following the statement that "It is good practice to consider all carbon pools...", Section 5.3.1.1 contains a consideration of each of the listed carbon pools and the degree to which data are available to support quantification. The conclusion is reached that "the methodology below considers only carbon stock change in above-ground biomass since limited data are available on below-ground carbon stocks in perennial Cropland". Therefore, the calculation of carbon stock change for land converted to cropland does not follow the "methodology" established in Section 5.3.1.1. Therefore, the calculation approach is not "consistent with the most recent IPCC guidance and guidelines." The non-conformity has not been resolved.

Project Personnel Response 2: [An additional response to this finding was not provided.]

Auditor Response 2: Subsequent to the issuance of this finding, the audit team engaged in additional communication with the World Bank Group regarding Section 4.1.2 of the ER Program Requirements in the context of the emissions baseline. The audit team confirmed with World Bank Group personnel, via email received on 10 November 2020, that the following definition of "consistent with" applies to the interpretation of Section 4.1.2 of the ER Program Requirements in the context of the emissions baseline:

"In this context, “consistent with” means that the difference between the reported Emissions Baseline and the assessment team’s calculation of the same quantity, when duly following the IPCC 2006 Guidelines (as interpreted, where relevant, by the GFOI) to the letter, is less than 1.00% of the reported Emissions Baseline. This may require the assessment to independently recalculate the Emissions Baseline according to the guidance of the IPCC 2006 Guidelines (as interpreted, where relevant, by the GFOI)."

Section 5.3.1.1 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that “the methodology below considers only carbon stock change in above-ground biomass since limited data are available on below-ground carbon stocks in perennial Cropland”. While the Guidelines state that the methodology provided therein “only carbon stock change in above-ground biomass”, inclusion of carbon stock change in below-ground biomass is not specifically prohibited, and the Guidelines also clarify that exclusion of below-ground biomass is related only to data availability limitations, as opposed to any concerns about GHG accounting integrity, for example.

Section 5.2.1 of the GFOI document ("Integration of remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests: Methods and Guidance from the Global Forest Observations Initiative", Edition 2.0, Food and Agriculture Organization, Rome) specifically mentions inclusion of belowground biomass in emission factors. Therefore, the audit team finds that the inclusion of belowground biomass in emission factors pertaining to conversion to cropland is, indeed, "consistent with" the most recent IPCC guidance and guidelines, following the definition of "consistent with" as given above.

Therefore, the audit team concludes that there is no non-conformity with respect to Section 4.1.2 of the ER Program Requirements in this specific context. Therefore, the finding is withdrawn.

Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 11 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 5.3.1.3 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for conversions to cropland) states that “… to allow other pools to equilibrate and for consistency with land area estimation overall, land areas should remain in the conversion category for 20 years (or other period reflecting national circumstances) following conversion.” It is stated in Section 5.3.1.1 that “…in subsequent years accumulations and losses in perennial woody biomass in Cropland are counted using methods in Section 5.2.1 (Cropland Remaining Cropland).” Through review of the calculations in the “Land use change - emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook, it appears that the conversion to cropland is assumed to happen in a single year. For example, cell V19 (which calculates biomass emissions in the forest land converted to cropland subcategory in 2011) sums several values, including that in cell V437. The calculation in cell V437 assumes all emissions occur in a single year, instead of being spread out over 20 years (or another period reflecting national circumstances). This is not consistent with the most recent IPCC guidance and guidelines.
Project Personnel Response: 2006 IPCC Guidelines states in its several volumes that the 20-year transition period is applied to "...to allow other pools to equilibrate and for consistency with land area estimation overall…". And this is done maintain consistency with land area estimations. This means that to classify a piece of land "cropland remaining cropland" it should have been cropland for more than 20 years. As it is stated in chapter 5.2 (cropland remaining cropland): "This section provides guidelines on greenhouse gas inventory for croplands that have not undergone any land-use conversion for a period of at least 20 years as a default period".
On the contrary, a piece of land that has been converted from forestland to cropland, shall remain with that classification for 20 years, even if the new land use (cropland) is stabilized very soon after the conversion. In 2006 IPCC Guidelines chapter 5.3.1.3 states that "land areas should remain in the conversion category for 20 years".
The LULUCF GHG Inventory is following exactly this guidance. The issue is that there has not been any reclassification of land from "land converted to cropland" to "cropland remaining cropland" because the oldest conversion occurred in 2001 (natural forest to annual cropland) and the reclassification would occur in 2021.
One final comment is that, in the example provided by SCS, it is assumed that all carbon stock in forest is released in the same year of conversion, and this is also in accordance with 2006 IPCC Guidelines. As it is stated in 5.3.1.1: "The difference between initial and final biomass carbon pools is used to calculate carbon stock change from land-use conversion; and in subsequent years accumulations and losses in perennial woody biomass in Cropland are counted using methods in Section 5.2.1 (Cropland Remaining Cropland)."

Auditor Response: In reviewing Chapter 5 again in light of the finding response, the assessment team agrees that the assumption of instantaneous emission in the year of conversion is in line with the IPCC guidelines. The assessment team agrees that all land converted to agriculture is accounted as being Land Converted to Cropland, consistent with Chapter 5. Therefore, this finding will be withdrawn. However, a related issue has been identified, as documented in NIR 27.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 12 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.”
From review of the “Land use change - emissions” worksheet of the “Oromia GHG Inventory 03062020” workbook, the assessment team has confirmed that the emission factors for conversion to cropland (for example, in cell B104) assume that the end-use is “Cultivated land, shifting cultivation, lightly stocked” (value in cell K51). From review of Table A1.1 of the Final Report for Ethiopia’s National Forest Inventory (2018), it appears that there are many different types of “Cultivated Land” in Ethiopia, including coffee plantations and other land types with higher carbon stocking. Please justify the choice of the selected carbon stocking value and clarify why use of a single value for cropland constitutes the “best available existing data”. Please note that Section 5.3.1.1 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that “Area estimates for Land Converted to Cropland are disaggregated according to original vegetation (e.g., from Forest Land or Grassland) at finer spatial scales to capture regional and crop systems variations in country-specific carbon stocks values.”
Project Personnel Response: As it is mentioned in NIR 5, the EF used for the conversion from shrubland to annual cropland is the only one that is obtained from the Woody Biomass Inventory. The rest of the EFs are obtained from the NFI. The reason for this is that the different types of "cultivated land" in Ethiopia in Ethiopia´s National Forest Inventory do not seem to be reflecting the reality in Oromia. In worksheet "EF AGB BGB" cells I6:J31 it can bee seen that there are no "shrubland" categories in the NFI. Also, the combination of "shrubland" category from the Woody Biomass Inventory with the "annual cropland" category from the NFI is not feasible given the differences they have: it seems illogic to have more carbon stocked in annual cropland than in shrublands. Expert judgement from ORCU team and EFCCC considered that this exemption in the use of Woody Biomass Inventory carbon stocks would reflect the reality better than combining two sources of EF.
In relation to the last part of SCS NIR, the team understands that disaggregation of land converted to cropland at finner scales than what is done in the GHG Inventory LULUCF (annual cropland, perennial cropland and mixed annual and perennial cropland), is ideal. However, given the methodology applied with Collect Earth, the resources and capacity of the team and the reality in the region, the disaggregation done is consistent, replicable and accurate enough to be used in the program.

Auditor Response: The assessment team appreciates the efforts undertaken to respond to this finding. Unfortunately, a complete response to the information request has not been provided. The finding responses states the following "As it is mentioned in NIR 5, the EF used for the conversion from shrubland to annual cropland is the only one that is obtained from the Woody Biomass Inventory. The rest of the EFs are obtained from the NFI. The reason for this is that the different types of "cultivated land" in Ethiopia in Ethiopia´s National Forest Inventory do not seem to be reflecting the reality in Oromia." The remainder of this paragraph in the finding response contains information regarding the "shrubland" category, which is not relevant to the issue at hand. The assessment team never suggested that combining the "shrubland" and "annual cropland" carbon stocking values would be appropriate or necessary. The assessment team merely noted that there are many different types of "cultivated land" differentiated, at the Level 3 classification level, in Table A1.1 of the Final Report for Ethiopia's National Forest Inventory (2018).

Please elaborate on the statement that "the different types of "cultivated land" in Ethiopia in Ethiopia´s National Forest Inventory do not seem to be reflecting the reality in Oromia" and provide justification that the use of the "Annual crop" value for cropland constitutes the "best available existing data".

When this finding was written, the assessment team did not realize that different values for annual cropland were utilized for the emission factors for forest to cropland and shrubland to cropland (e.g., in cells B103 and B104, respectively, in the worksheet "Land use change - emissions" in the workbook "Oromyia LULUCF GHG Inventory 21082020"). This raises issues of its own, which are addressed in NCR 31.

Project Personnel Response 2: As it is stated in "Oromia_AD_GHG_tutorial_v2.docx" submitted as part of this auditing process, the cropland area identified with the use of Collect Earth does only differentiate "annual cropland" and "perennial cropland". The document also contains some guidacne to the user to interpret the satelite imagine and classify in these two classes. In practical terms, the users have only distinguished between cultivated crops (arable land under tillage practices) and perennial cropland.

Given the activity data collected, its correspondant emissions needs to be applied. The NFI has a class called "annual crop" which apparents to be the correct EF to apply. However, the arithmetic average of the "annual crop" in NFI is 58.75 tCO2/ha which is almost 4 times greater than a bamboo forest, or 65% of the "plantation forest". EFCCC experts considered the value to be incorrect and decided to use the other valid source of information, WBIPSS.

It is worth to mention that tier 1 of the IPCC method suggests to consider 18.3 tCO2/ha (5tC/ha) for carbon stocks after one year of growth in crops planted after conversion. It is assumed that all biomass in cleared when preparing a site for cropland use, thus, the default f Biomass after conversion is 0 t C/ha. - Chapter 5.3.1.2, IPCC 2006, vol 4.

The WBIPSS as it can be seen has multiple EF for different cropland classes. Some of them are automatically discarded and decision must be taken between "Annual Yield (%) of C stock Cultivated land, shifting cultivation, lighlty stocked" 14 tCO2/ha and "Annual Yield (%) of C stock Cultivated land, shifting cultivation, moderately stocked" 55.9 tCO2/ha. This last value is similare to the value that was originally discarded and triggered the search for another value. The EFCCC experts decided that 14 tCO2/ha would be reflecting better the "annual cropland" land use category.

Auditor Response 2: This finding has been made irrelevant due to the new emission factors that have been calculated in response to NIR 2 and other findings, as the revised emission factors differentiate between "Annual crop" and "Mixed anual and perennial crop" (see cells X4 and X17 of the "EF AGB BGB" worksheet in the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook). Therefore, this finding will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 13 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 6.3.1.1 in Volume 4, Chapter 6 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for conversions to grassland) describes a methodology involving Phase 1 and Phase 2 methods (including the conditions under which each is appropriate) and indicates that, for Tier 2 methods, a transitional period is accounted for (i.e., the change is not assumed to happen all in a single year). The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provided no refinement to this guidance.
In the calculations in the “Oromia GHG Inventory 03062020” workbook, it appears that it is assumed that conversion occurs in a single year. For example, by tracing the calculation for the emission factor for conversion from cropland to grassland, in cell B355 of the “Land use change - emissions” worksheet, the assessment team has confirmed that the transition from cropland to grassland is assumed to occur in a single year. This is not consistent with the most recent IPCC guidance and guidelines.
Project Personnel Response: Many thanks for noting this.
Phase 1 is the abrupt immediate and abrupt carbon stock change carbon pools due to the conversion of other lands to Grassland and is estimated at the year of conversion. Phase 2 is for the subsequent 19 years and accounts for gradual biomass loss and gain during a transition period to a new steady-state system. At the end of the 20-year period, the land area for that given year is added to the land area being accounted under the Grassland Remaining Grassland category (as it was already discussed in NCR 11).
In chapter 6.3.1 it is also said that "it is likely that a number of lands converted to grassland will not have an abrupt transition (e.g., Cropland that is abandoned and that reverts to Grassland). In this case, Phase 1 methods will not be appropriate and there will be a gradual transition in biomass pools to a new equilibrium. When this type of conversion occurs, the whole conversion accounting can be treated with Phase 2 methods".
Despite the clear text cited before, the approach followed in GHG LULUCF Inventory took the appraoch to account phase 1 as an abrupt change (taking the ambiguity involved in the word "likely"). The reasons are: 1) the Inventory is elaborated with the ultimate purpose of determining a GHG emissions baseline. This is calculated averaging the emissions in the last 10 years. Estimating emissions in abrupt changes during the baseline period (10 years) will result in approximately the same GHG emission baseline and its estimation is more practical than a gradual transition 2) the land use and land-use change analysis is performed with Collect Earth, visually analyzing sample plots. This means that when the operator detects a new land use, the change has already occurred and the new land use is already "established". At that moment, the year of detection, the conversion is more abrupt than transitional and 3) by applying this approach the team considers that emissions are more conservatively estimated. If transitional changes are considered, some emissions could end being considered outside the baseline period.

Auditor Response: In reviewing Chapter 6 again in light of the finding response, there does not seem to be any ambiguity regarding the guidance provided. It is specifically stated that "...Tier 2 estimates use the two-phase approach described earlier." The only exception mentioned is in the language cited in the finding response: "It is likely that a number of lands converted to grassland will not have an abrupt transition (e.g., Cropland that is abandoned and that reverts to Grassland)." In that case, "Phase 2 methods" are required. There is no mention of the possibility that only Phase 1 methods are to be used.
The assessment team is sympathetic to the points raised. However, the assessment team has the following responses:
1) The accounting framework required for Tier 2 calculation under Section 6.3.1.1 would undoubtedly introduce new complications into the process for calculating the emissions baseline. That said, it is worth emphasizing that Section 6.3.1.1 does not require adoption of this approach; rather, it is specifically stated that "As a simplification for Tier 1, it is assumed that all biomass is lost immediately from the previous ecosystem after conversion". The concern of the assessment team is that Tier 1 methods have evidently been employed, in which case the claims of the ERPD that Tier 2 methods have been employed in respect of these subcategories are not accurate.
2) There is a great deal of validity to this point. However, nothing about this situation is unique to the use of Collect Earth; rather, the tendency to more readily detect conversions between land-use classes after said conversions are almost complete or fully complete (and are therefore most obvious) is inherent in the process of land-use classification, no matter what technology is used. Section 6.3.1.1 makes no exception to its guidance in light of this inevitable reality, and the solution to the situation, following the IPCC guidelines, seems to be to improve the consistency and accuracy of the remote sensing process as much as possible (in order to detect, in this case, the exact year when a given area experiences conversion to grassland) rather than compromising the requirements of Section 6.3.1.1.
3) When an approach is being utilized that is inconsistent with the most recent IPCC guidance and guidelines (and, therefore, is in violation of the ER Program Requirements), appeals to the principle of conservativeness are not persuasive, irrespective of their merit.
Therefore, the non-conformity has not been resolved.
Project Personnel Response 2: After revising again the NCR and second auditor´s response, it can be said that the most important point under consideration is if the calculation method applied is considered to be tier 1 or 2.
It is clear that "tier 2 calculations use the two-phase approach", which has not been applied in Oromia GHG Inventory. But tier 2 also "relies on some country-specific estimates of the biomass in initial and final land uses rahter than the defaults, as in tier 1" (IPCC). Which in our case is not only in "some" country-specific estimates of the biomass but all country -specific biomass (and carbon) stocks.
The IPCC states that "for tier 2, countries may modify the assumption that biomass immediately following conversion is zero". In the case of Oromia GHG Inventory, it is decided not to modify the assumption that biomass immediately following conversin is zero.
It is understood that the method applied is not fully consistent with the tier 2 method from the IPCC. However, it must be said that the method is certainly not a tier 1 method with default values for biomass.
Notwithstanding, in order to improve the GHG Inventory, the Oromia MRV team can introduce a modification to the Inventory, applying a phase 2 with a transitonal period, if SCS understands that is needed to comply with tier 2 method.

Auditor Response 2: Thank you for clearly expressing the Oromia MRV team's position. Given that this matter has materiality implications (i.e., it is currently observed that there is a material error in the calculated emissions baseline), it will be necessary for the IPCC guidelines to be fully complied with in this respect.

Project Personnel Response 3: There is a document that is being drafted by the FMT, called: "Guidance on application of IPCC guidelines in the context of the ISFL Emission Reductions (ER) Program Requirements of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)". As it can be seen, the document clarifies the application of IPCC guidelines to the ISFL Program.

And one of the points addressed is about the two-phase approach in forestlands converted to other land use categories (cropland and grassland).

The document clearly establishes that "ISFL ER Programs in countries that have done multiple GHG inventories which has allowed the country to track land use change over time using Approach 2 or Approach 3 can apply this approach if they also have reliable data that allows for estimations of accumulations and losses in the subsequent years using either the Gain-Loss Method (Equation 2.7 in Chapter 2) or the Stock-Difference Method (Equation 2.8 in Chapter2)." "All other ISFL ER Programs should, both for ISFL Reporting and ISFL Accounting, shall assume that in the year of conversion, the biomass carbon stocks go instantly from the biomass carbon stocks in forest to the maximum biomass carbons stocks in the new steady state system. Within the context of the ISFL (with ISFL ERPA Phases that are shorter than the 20-year transition period) this can be considered as conservative since it leads to lower emissions in the year of conversion. "

In line with this guidance, the Program understands that it will be conservative to assume the conversion in a single year. This is the first GHG Inventory done in Oromia and the first GHG Inventory in Ethiopia covering these amount of transitions, pools and data. And of course there is no reliable data that allows for estimations of accumulations and losses in the subsequent years (gradual biomass loss and gain during a transition period to a new steady-state system) of the the second phase in the two-phase approach.

Auditor Response 3: The assessment team reviewed the draft document titled "Guidance note on application of IPCC guidelines for subcategories and carbon pools where changes take place over a longer time period" which has simplified the original IPCC guidance and thus the original finding is no longer relevant. However, the assessment team will clarify the Guidance Note with regard to the conversions from land to grassland and the original finding. Given that this is the first GHG inventory in the country, Section 5 of the Draft guidance note regarding changes in biomass for land (including forestland) converted to grassland or cropland applies: "All other ISFL ER Programs, both for ISFL Reporting and ISFL Accounting, shall assume that in the year of conversion, the biomass carbon stocks go instantly from the biomass carbon stocks in forest to the maximum biomass carbons stocks in the new steady state system." The assessment reviewed the updated Oromyia LULUCF GHG Inventory 01022021.xlsx and confirmed that the biomass carbon stocks go instantly from the biomass carbon stocks in forest to the maximum biomass carbons stocks in the new grassland steady state system (e.g., cells U427 through cells AB427). Therefore, given this new guidance note, the finding can be closed. However, the assessment team notes that this guidance is a draft version and still requires approval by the ISFL contributors. If it is not approved, the finding will be re-opened.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 14 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
The assessment team understands that a Tier 1 approach is used to quantify carbon stock change in the grassland remaining grassland subcategory. However, in reviewing the “Land remaining land – emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook, it appears to the assessment team that carbon stock change in aboveground biomass is calculated for this subcategory (for example, in cell W46 of this worksheet). This is not consistent with the most recent IPCC guidance and guidelines. Section 6.2.1.1 in Volume 4, Chapter 6 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for grassland remaining grassland) states that “A Tier 1 approach assumes no change in biomass in Grassland Remaining Grassland”. The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provided no refinement to this guidance.
If the assessment team is mistaken in understanding that a Tier 1 approach has been used for grassland remaining grassland, please provide a description of the higher-tier approach that has been used for this subcategory.
Project Personnel Response: The GHG LULUCF Inventory is considering changes in biomass in grassland remaining grassland, thus the tier 1 approach is not being applied in this category.
The emissions and removals in biomass in grassland remaining grasslands follow the IPCC 2006 guidance when: "if information is available to develop reliable estimates of rates of change in biomass in Grassland Remaining Grassland, a country may use a higher Tier, even if Grassland Remaining Grassland is not a key source, particularly if management changes are likely".
The estimation method is aligned with the gain-loss method (equation 2.7 in chapter 2). The removals are estimated using the NFI biomass stock for "natural grassland" and the annual yield (4 %) of carbon stock in grassland (moderately stocked) from the Woody Biomass Inventory. For shrubland, the carbon stock and the annual yield comes from the same source. GHG emissions are considered when accounting the wood removals (in different forms) in grasslands, according to the Woody Biomass Inventory.
As it is said before, the method for this estimation is aligned to tier 2 methods, as it is not exactly following it. Tier 2 method implies "estimating the area of grassland according to management categories and the average annual growth and loss of biomass stocks. This requires an estimate of area under Grassland Remaining Grassland according to a different climate or ecological zones or grassland types, disturbance regime, management regime, or other factors that significantly affect biomass carbon pools and the growth and loss of biomass according to different grassland types". The team that has elaborated the Inventory understands that the Annual yield value summarizes all the variables mentioned before.
Lastly, and most importantly, this combination of sources of information is contributing to the overall uncertainty of emissions and the team acknowledge that further improvements must be done to estimate this category more accurately, for example by implementing a new National (or Regional) Forest Inventory, as suggested in the ERPD.

Auditor Response: Thank you for clarifying the view that Tier 2 methods have been applied to the grassland remaining grassland subcategory.
The assessment team agrees that the gain-loss method has been implemented, albeit incompletely (as there does not seem to be any accounting of biomass losses). However, the assessment team also agrees that the program GHG inventory is "not exactly following" the Tier 2 requirements. The single biggest discrepancy seems to be in respect of the requirements for activity data with application of the Tier 2 method. As quoted in the finding response, Section 6.2.1.3 in Volume 4, Chapter 6 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that "Activity data consist of areas of Grassland Remaining Grassland summarised by major grassland types, management practices, and disturbance regimes." The assessment team agrees that, in differentiating between shrubland and other grassland, the activity data have differentiated according to "major grassland types" (though the assessment team has significant concerns regarding the manner in which this differentiation was made, as documented in NIR 20). However, so far as the assessment team is aware, the activity data have not been disaggregated according to management practices or disturbance regimes. Please note that, if activity data are not sufficiently disaggregated to support calculation at the Tier 2 level, Tier 2 methods cannot be applied.
In addition, it seems curious to state that Tier 2 methods have been applied to the grassland remaining grassland subcategory when the exact same methods have been implemented (at least in terms of the calculation of biomass gain) for the forestland remaining forestland subcategory, and the ERPD states on page 63 that "Data used for this subcategory does not comply with IPCC tier 2 or higher methods and data." The equivalency in methods used is shown below (the references pertain to the "Oromyia LULUCF GHG Inventory 21082020" workbook).
For grassland, the biomass growth is calculated by multiplying the calculated average stock in "Natural grassland" from the National Forest Inventory by the estimated growth in "Grassland, moderately stocked" from Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report (the formula is =-'EF AGB BGB'!$J$21*'EF AGB BGB'!$M$57).
For shrubland, the biomass growth is calculated by multiplying the calculated average stock in "Shrubland, dense (>50% woody cover)" from Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report by the estimated growth in the same category, as sourced from the same table (the formula is =-'EF AGB BGB'!K59*'EF AGB BGB'!M59).
For forestland, the biomass growth is calculated by multiplying the calculated average stock of a variety of categories in the National Forest Inventory data by the estimated growth in those same categories from Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report; for example, the growth in bamboo forest is calculated according to the following formula: =-'EF AGB BGB'!J9*'EF AGB BGB'!M80.
Please address the above concerns in order to demonstrate that Tier 2 methods have been applied to the grassland remaining grassland subcategory.
Project Personnel Response 2: [An additional response to this finding was not provided.]

Auditor Response 2: Subsequent to the issuance of this finding, the audit team revisited SCS' Inception Report and realized that footnote 52 in Annex A of said report provides the following clarifying guidance regarding the meaning of the term "consistent with" in Section 4.1.2 of the ER Program Requirements: "...the selection of subcategories included in [the initial selection of subcategories for ISFL accounting] is equivalent to the selection that would have resulted had the IPCC 2006 Guidelines been duly followed to the letter." In this case, the audit team does not believe that the procedures set out in the IPCC 2006 Guidelines for the grassland remaining grassland subcategory are being followed to the letter, for the reasons set out in this finding and given that data do not seem to be available to support Tier 2 quantification methods for this subcategory. However, the discrepancy is highly unlikely to affect the selection of subcategories included in the initial selection of subcategories for ISFL accounting, since the grassland remaining grassland subcategory would only need to be included if it was the "single most significant of the remaining subcategories in order of the relative magnitude of contribution of these subcategories to the absolute level of the total GHG emissions and removals in the Program GHG Inventory" (per Section 4.3.4(iv) of the ER Program Requirements) and assuming "no change in biomass in Grassland Remaining Grassland", as the IPCC 2006 Guidelines stipulate, would actually make its selection for ISFL accounting a mathematical impossibility. Therefore, in respect of this subcategory, the approaches used in the inventory calculation are consistent with the most recent IPCC guidance and guidelines, and this finding is withdrawn. However, OBS 34 has been issued regarding this matter.

Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 15 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 9.3.1 in Volume 4, Chapter 9 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for land converted to other land) states that “As a result of conversion to Other Land, it is assumed that the dominant vegetation is removed entirely, resulting in no carbon remaining in biomass after conversion”. The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provided no refinement to this guidance.
In review of the emission factors used to calculate carbon stock change for subcategories involving conversion to other land, it appears that the post-conversion carbon remaining in biomass is not assumed to be zero. For example, by tracing the calculation for the emission factor for conversion from shrubland to other land, in cell B185 of the “Land use change - emissions” worksheet in the “Oromia GHG Inventory 03062020” workbook, cell J31 from the “EF AGB BGB” worksheet is referenced for the calculation of the carbon stock in other land, and this cell contains a non-zero value.
Project Personnel Response: After revising chapter 9.3.1 in Volume 4, chapter 9 of the 2006 IPCC Guidelines, it is understood that the Inventory is not following the Guidelines at this point. Biomass in other land must be zero, even under tier 2 method. To apply a Tier 3 method there is a need to collect and process more information, thus it is not applicable.
The GHG LULUCF Inventory is modified at this point and a zero-carbon stock is considered, even if the NFI named some plots as "other land" with certain biomass stock in it.
Auditor Response: Through review of the revised workbook, entitled "Oromyia LULUCF GHG Inventory 21082020", the audit team can confirm that the post-conversion carbon stock in other land, in cell J31 from the “EF AGB BGB” worksheet, has been revised to zero. This cell is still referenced in cell B185 of the “Land use change - emissions” worksheet, and the code in cell B187 of the same worksheet likewise assumes zero post-conversion carbon stocking in dead wood. (This appears to be the only instance of conversion to other land observed during the baseline period.) Therefore, it is assumed that the dominant vegetation is removed entirely (resulting in no carbon remaining in biomass after conversion) in the process of conversion to other land, and the non-conformity has been resolved.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 16 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.4
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states the following: "The Program GHG Inventory Programs may select definitions, categories, or subcategories that are different from the ones that have been used in national processes, if this increases the likelihood of being able to assess the impacts of ISFL interventions. In that case, an explanation should be provided to clarify how methodological consistency will be maintained with the national GHG inventory so that Program GHG Inventory can be integrated with and inform the national GHG inventory." The ERPD does not report on any subcategories that are not included in Ethiopia's national GHG inventory, as confirmed from checking against the subcategories listed in Table 3-34 of Ethiopia's Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC). However, review of the workbook "Oromia GHG Inventory 03062020" has revealed that, in fact, shrubland is treated as a unique land-use category (e.g., "shrubland to annual cropland" is a subcategory for accounting purposes). The assessment team agrees that this is appropriate, as it will increase the likelihood of being able to assess the impacts of ISFL interventions (as shrubland tends to have a different extent of woody biomass than land dominated by annual grasses). However, please provide an explanation to clarify how methodological consistency will be maintained with the national GHG inventory so that Program GHG Inventory can be integrated with and inform the national GHG inventory.
Project Personnel Response: Different capacities have been created during the elaboration of the Oromia GHG Inventory for the ISLF Program. And this has tracked different ideas for improvement of the National GHG Inventory.
As it is stated in the PD, there are only two National Communications with National GHG Inventory. The latest National Communication includes GHG emissions information that is not comparable to the Oromia GHG Inventory. This National GHG Inventory is not as sophisticated as the Regional one.
The Regional GHG Inventory has generated land use and land use change information with the Collect Earth tool, a poweful tool that has never been used at the national level. The study was elaborated with regional and national MRV team, which has now the capacity to replicate the work at national level.
Emission factors were obained majorly from the National Forest Inventoy and a new version of the it is needed to have new information about the carbon stocks in different land use classes.
The new version of the National GHG Inventory will be consistent with the Regional GHG Inventory and MRV system becasue the techinicians from ORCU and EFCCC are in constant commnication and assisting each other at all moment. The National GHG Inventory will use the same IPCC Guidelines, proabably the same method to determine activity data and apply the same source of information for the emission factor.
In the National REDD+ Strategy, it is stated that "at Regional level, similar arrangements as in the federal level were put in place in four regional states (Oromia, Amhara, Tigary and SNNP) to ensure an effective and devolved REDD+ implementation arrangement consistent with the national level organization. Another important document that demonstrate consistency is the MRV plan for the realization of the National GHG Inventory, also prepared by the EFCCC. Such plan explains that there are several MoU signed between the MEFCC and all the Line Ministries and Agencies, that will ensure the use of the same methodological apprach to estimate emissions and removals in the national and regional level.
CAN ORCU put somehing else?
Auditor Response: Thank you for this explanation, which is sufficient to meet the requirements of Section 4.1.4 of the ER Program Requirements. The information request has been satisfied.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 17 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data." The ERPD states in page 261 that "…as there is no information for the shrubland subcategory in the NFI, information from the Woody Biomass Inventory and Strategic Planning Project was obtained". However, through thorough review of Table A1.1 of the Final Report for Ethiopia's National Forest Inventory (2018) the assessment team found that "Woodland", which equates to shrubland, is included as a separate Level 2 classification in the National Forest Inventory. Therefore, the assessment team does not agree that "there is no information for the shrubland subcategory in the NFI". Please provide a rationale for why the information from the Woody Biomass Inventory and Strategic Planning Project constitutes the best available existing data for shrubland.
Project Personnel Response: The information of the NFI has been used to determine the carbon stocks and emission factors of all major land use classes. Level 3 has been always used to maintain consistency across the inventory. If level 2 definition is revised for "Other wooded land" it never says that wooded grassland or wooded wetland includes shrublands (* wooded grassland: Land covered by natural growth of graminea and herbaceous vegetation, with some scattered trees (tree canopy cover between 5-10%); Land not covered seasonally or permanently by water; * wooded wetland: Land seasonally or permanently covered by water with natural growth of graminea and herbaceous vegetation and some scattered trees (canopy cover between 5-10%).). The only mention to shrubland is given at level 1, other wooded land: area ≥ 0.5 ha, tree crown cover 5- 10% or shrubs/bushes canopy cover ≥10%. However, another mention to shrubs is given at the same level in another category "Other land": Land not classified as forest or other wooded land, as described above (Includes land with tree canopy cover <5% or with shrubs/bushes <10% or with predominant agricultural/urban land use or with shrubs/ trees<0.5ha). Shrubs is also part of perennial crops (level 3 in "other land").
Thus, it does not seem very clear that there is an emission factor for shrubland in the NFI, while the Woody BIomass Inventory is exactly referring to it. Just for informational purposes, if this "wooded grassland" carbon stock is applied, the category "grassland remaining grassland" passes from -3,339 ktCO2 in 2017 to -19.557 ktCO2, almost the same level of emissions than the cattle enteric fermentation in Oromia.
Despite it is understood that consistency shall be maintained in the estimation of the Oromia GHG Inventory, including the source of information for EF, the emission factors used appears to be the most appropriate ones to reflect the reality.

Auditor Response: The assessment team reviewed Table A1.1 again in light of the comments made in response to the finding. The assessment team does not perceive the same level of ambiguity regarding the classification of shrubland. Such land has "shrubs/bushes canopy cover ≥10%" and would therefore receive the Level 1 classification of "Other wooded lands". As noted in the finding response, such land would not be classified as "Wooded grassland" or "Wooded wetland" and so logic dictates that any shrubland is included in "Woodland", as it is the only other Level 2 classification within the Level 1 classification of "Other wooded lands". The definition of "Other Land" logically excludes shrubland, since the definition only includes "Land not classified as forest or other wooded land, as described above" and, as previously noted, shrubland is classified as "other wooded land" under the definitions in Table A1.1. Therefore, it seems quite clear that the National Forest Inventory contains a Level 2 classification directly applicable to shrubland.
While Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report does appear to contain information pertaining directly to "shrubland", the other concern of the assessment team, besides the general concern that consistency (as defined in Section 1.4, Chapter 1, Volume 1 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories) may be compromised through the use of different data sources, is that the Woody Biomass Inventory and Strategic Planning Project report contains very little information regarding the source of the data in Table 3.3. This paucity of information does not lend confidence in the accuracy of the results provided. This is in contrast to the Final Report for Ethiopia's National Forest Inventory (2018), which provides a detailed description of all aspects of the inventory process. In addition, it has been observed that data from the National Forest Inventory can be derived that are specific to Oromia, while the data in Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report are not specific to Oromia.
Please address each of the above concerns in justifying why the information from Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report constitutes the best available existing data for shrubland.
Project Personnel Response 2: * We would like to clarify that the WBISPP is a valid source of information. The team has decided to use the NFI as the principal source of information becuase is a more recent work which had the objective to collect new information to elaborate EFs, among other objectives. However, the WBISPP has been also done with a huge sense of professionalism and accuracy. It was not aimed to produce EF but its results have been used for multiple purposes. More information regarding this large study implemented by the country can be provided.
* As it has been said, the team agreed that the defintion for wooded grassland in the NFI, based on a quantitative analysis: area (ha), N of trees/ha, basal area (m2/ha), is not appropriate to define "shrubland" as it was defined by ORCU MRV team while doing the Collect Earth analysis.
* Lastly, the major reason for moving to WBISPP to find a suitable EF is based on expert judgement from the national and regional MRV team. The experts have the knowledge and experience to define that NFI EF - level 2 classification (79.44 tCO2/ha) is not describing "shrubland" and that WBISPP EF "C stock Shrubland, dense (>50% woody cover" (23.2 tCO2/ha) is better reflecting this land use.
* Despite all, the team took note of this point and is including the improvement of the EF in the general improvement plan of the GHG Inventory. The team will communicate this to the EFCCC to include a better classification, and possibly an stratum, to estimate an EF for shrubland from the NFI and maintain consistency.

Auditor Response 2: Through review of the workbook entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been undertaken to calculate emission factors using data that are both specific to Oromia and appropriately weighted (taking into consideration the difference in sampling intensity across strata). Therefore, given that the National Forest Inventory data is now consistently used to calculate emission factors, the information request is no longer relevant and will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 18 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 1
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states in Section 1 that “ISFL ER Programs are expected to demonstrate conformity with this document and apply general principles of… conservativeness in order to be able to receive result-based finance from the ISFL." It is the expectation of the World Bank Group that, in constructing the emissions baseline for the first ERPA phase, all emissions from the below-ground biomass, dead wood and soil organic matter carbon pools following land-use change are not assumed to be instantaneous or to occur within a short period of time, but are projected using a decay function over a justifiable period of time.
From review of the calculation of emissions in the subcategories involving land-use conversions, it appears that emissions from the below-ground biomass and dead wood carbon pools are assumed to be instantaneous following land-use change. For example, in cell Q229 of the worksheet "Land use change - emissions" within the workbook "Oromia GHG Inventory 03062020", it can be seen that a one-time emission factor for "biomass" (which includes belowground biomass) is referenced in cell B241 of the same worksheet.
This is an issue of conservativeness because, as can be seen in the tables on pages 257 and 260 of the ERPD, the rates of land conversion to cropland and from forestland to grassland, respectively, have increased significantly over time. Both of these tables shows the average conversion rate being significantly higher during the period 2008-2017 than during the period 2001-2007. Therefore, assuming instantaneous emissions from the carbon pools in question has resulted in a higher emissions baseline than would result from application of a decay function.
Project Personnel Response: The team has reviewed the ISFL Program requirement (version 1.1) and has not found a reference to a "projection of emissions using a decay function over a justifiable period of time". Can SCS explain where this reference is?
Having said this, it is correct to say that the Inventory is applying an instantaneous emission for deadwood and belowground biomass when land use conversion occurs.
The team understands that this method is more conservative than the decay function over a period of time. The instantaneous oxidation is determining that all emissions are computed within the baseline period. If a decay function is applied, it would end up computing some emissions outside the period of analysis. If a land-use conversion occurs in the year 2017 and a decay function is applied, part of the emissions will be accounted for in 2018 and onwards. And it would be needed to estimate the emissions and removals in the past, since a period equal to the projection (in years) before the period under analysis.
This instantaneous approach, despite simplistic, it reduces the possibilities of error when doing the monitoring of the program. If a decay function is applied, there will have always to keep a record of this postponed emissions.
Finally, the higher average conversion rates in 2008-2017 than 2001-2007 is the reality, that results in higher baseline emissions. In other words, the increase in emissions under the baseline period is because of the increase in the area of conversion, not because an instantaneous emission rate is applied to belowground and deadwood pools. If a decay function is applied to the baseline period, the same approach would need to be applied to the rest of the period. And the emissions in the baseline period would also have the same increase in emissions than the previous period.
In conclusion, we believe that the method applied is correct however, the team is very open to discuss the approach if it is a ISFL Requirement.

Auditor Response: The statement that "It is the expectation of the World Bank Group that, in constructing the emissions baseline for the first ERPA phase, all emissions from the below-ground biomass, dead wood and soil organic matter carbon pools following land-use change are not assumed to be instantaneous or to occur within a short period of time, but are projected using a decay function over a justifiable period of time" stems from indicator RA-39 in the checklist included in Annex A of SCS' inception report. This expectation was made clear to SCS during a workshop held with World Bank Group personnel in January 2019.

All of the points made regarding the complexities introduced by the use of a decay function are noted. However, the assessment team does not agree that the assumption of instantaneous emissions leads to results that are "more conservative" (i.e., lower), in the context of the baseline period, than the use of a decay function. As mentioned in the text of the finding, the conversion rate has increased significantly over time. Given this situation, applying a decay function would result in a reduced calculation of emissions, in the latter portion of the baseline period (and in the overall emissions baseline), than would an assumption of instantaneous emissions.

The assessment team is not suggesting that the differences in emissions between the beginning and end of the baseline period are solely a result of the assumption of instantaneous emissions. The assessment team understands that these differences are largely driven by differences in the conversion rate. However, the assessment team is suggesting that, with a decay function being included, the overall emissions during the baseline period will be lower than with the assumption of instantaneous emissions.

As the non-conformity has not been addressed, the finding cannot be closed.

Project Personnel Response 2: It is drafted in the "Guidance on application of IPCC guidelines in the context of the ISFL Emission Reductions (ER) Program Requirements of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)" that: ISFL ER Programs are allowed to exclude the changes in carbon stocks in dead organic matter from both the ISFL Reporting and ISFL Accounting for subcategories that involve land remaining within the same land-use category (including forest remaining forest) or subcategories that represent transitions between non-forest categories. Changes in carbon stocks in dead organic matter shall only be considered for subcategories involving lands converted from Forest Land to any other land-use category (carbon losses) and for lands converted to Forest Land (carbon gains). DW in these land-use categories has been modified and a zero value is applied.

On ther other hand, changes in carbon stocks in dead organic matter shall only be considered for subcategories involving lands converted from Forest Land to any other land-use category (carbon losses) and for lands converted to Forest Land (carbon gains) in accordance with the guidance:

* ISFL ER Programs can use the Tier 1 assumption that carbon stocks in dead wood and litter pools in non-forest land are zero.
* It is not required to estimate legacy emission and removals from land use changes before the inventory period
* For lands converted to Forest Land during the inventory period, ISFL ER Programs can apply equation 2.23 from the IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4, Chapter 2 to estimate the changes in carbon stocks in dead organic matter during the inventory period. In applying this equation, it can be assumed that carbon in dead organic matter pools increases linearly to the value of mature forests over a specified time period (default = 20 years).
* Similarly, for lands converted from Forest Land to any other land-use category during the inventory period, the assumption can be made that carbon in dead organic matter pools decreases linearly from the value of mature forests to zero over a specified time period (default = 1 year).
* For both conversions, default Tier 1 data can be used for carbon in dead organic matter pools in mature forests unless better data are available through the national GHG inventory or other existing data sets

All these modifications can be seen in "land use change emissions" in Oromia LULUCF GHG Invenotry 01022021.xlsx"

In relation to belowground biomass, as it has also been responded in NCR 13, the "Guidance on application of IPCC guidelines in the context of the ISFL Emission Reductions (ER) Program Requirements of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)" clarifies the procedure to be followed when considering biomass (above ground and below ground): ISFL ER Programs in countries that have not done multiple GHG inventories which has allowed the country to track land use change over time using Approach 2 or Approach 3, should, both for ISFL Reporting and ISFL Accounting, assume that in the year of conversion, the biomass carbon stocks go instantly from the biomass carbon stocks in forest to the maximum biomass carbons stocks in the new steady state system. Within the context of the ISFL (with ISFL ERPA Phases that are shorter than the 20-year transition period) this can be considered as conservative since it leads to lower emissions in the year of conversion.

Following the guidelines, the belowground biomass has gone instantly from the biomass carbon stock in the previous land use to the maximum biomass carbon stock in the new steady state land use. And this is considered conservative.

Auditor Response 2: The assessment team has reviewed the Draft guidance note provided in January 2021 and have derived the following conclusions in relation to this finding:
(1) land converted between non-forest classes: We agree that the draft guidance note clearly states "ISFL ER Programs may use the Tier 1 assumption that carbon stocks in dead wood and litter pools in non-forest land are zero." We confirmed that all deadwood pools are zero for non forest land transitiong to other nonforest land classes in the LULUCF workbook.
(2) Deadwood pool for Nonforest land converted to forest land: We agree that the Guidance note states that in applying equation 2.23, "it may be assumed that carbon in dead organic matter pools increases linearly to the value of mature forests over a specified time period (default = 20 years). " However, in reviewing the updated Oromyia LULUCF workbook (dated 01022021), sheet 'Land use change - emissions' e.g. cell W539-AB539, which is the transition from grassland to natural forest, shows that the dead organic matter pools increase linearly but over a period of 5 years, not the default of 20 years. Another example is cells Y653-AB653 which is a transition from grassland to natural forest, the increase in dead organic matter occurs over a 5 year period and not 20 years. This is not in conformance with the Draft Guidance note. However in cells Q241-AB241, which is a transition from cropland to forest, the dead organic matter pools increase linearly over a value of 20 years, which is inline with the guidance note. Also in cells Y653- AB653 which is also a transition from cropland to forest, the dead organic matter pools increase linearly over a value of 20 years. It is unclear why there is this considerable inconsistency in how the Draft Guidance Note was applied for deadwood in nonforest to forest transitions.
(3) biomass pools for forest converted to nonforest: the assessment team agrees that Section 5 of the draft guidance note states "shall assume that in the year of conversion, the biomass carbon stocks go instantly from the biomass carbon stocks in forest to the maximum biomass carbons stocks in the new steady state system." Instananeous emissions have been demonstrated at the year of conversion followed by steady state carbon stock changes of the nonforest land use thereafter, in the LULUCF workbook. The
Due to item 2 listed above, this nonconformity has not been resolved.
Project Personnel Response 3: There was an error in cells W539-AB539 and Y653-AB53, which were corrected to maintain consistency with the Draft Guidance Note in the 20 year transition from non-forest to forestland.
Auditor Response 3: The audit team confirmed that the DW cells W540 through AB540 (previously row 539) and and Y654-AB654 (previously row 653) have been updated such that the dead wood he increase in dead organic matter occurs over a 20 year period, which is now in conformance with the Draft Guidance note. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 19 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 1
Document Reference: Oromia GHG Inventory 03062020
Finding: This is a follow-up to NIR 12.
The ER Program Requirements states in Section 1 that “ISFL ER Programs are expected to demonstrate conformity with this document and apply general principles of… conservativeness in order to be able to receive result-based finance from the ISFL." As described in NIR 12, from review of the “Land use change - emissions” worksheet of the “Oromia GHG Inventory 03062020” workbook, the assessment team has confirmed that the emission factors for conversion to cropland assume that the end-use is “Cultivated land, shifting cultivation, lightly stocked”. From review of Table A1.1 of the Final Report for Ethiopia’s National Forest Inventory (2018), it appears that there are many different types of “Cultivated Land” in Ethiopia, including coffee plantations and other land types with higher carbon stocking. If, in reality, there are a variety of post-conversion land uses with a variety of associated carbon stock values, the choice of assumed end-use does not seem to be a conservative one. Please provide a justification for the assumed cropland end-use(s) in light of the requirement for conservativeness in quantification of the emissions baseline.
Project Personnel Response: As it is a follow-up from NIR 12, part of the answers provided before applies to this NIR 19.
The use of the "cultivated land, shifting cultivation, lightly stocked" from the Woody Biomass Inventory is to maintain consistency with "shrubland" emission factor, which is thought is not in the NFI.
In addition, EF for different types of cultivated land in NFI seems to have extremely high stocking values: annual crop (58.75 tCO2/ha), perennial crop (131.49 tCO2/ha) or mixed annual and perennial crop (99.26 tCO2/ha), compared to "Cultivated land, shifting cultivation, lighlty stocked" (14 tCO2/ha). By applying the EF from the NFI would increase the emissions when land use is converted from cropland but also the removals when land is converted to cropland. The level of these emissions would not be representative or comparable to other land uses.
In defense of the EF for "Cultivated land, shifting cultivation, lightly stocked" (14 tCO2/ha) it has to be said that it is very close to the average value for all "cultivated" land classes in the Woody Biomass Inventory (14.5 tCO2/ha).

Auditor Response: The assessment team appreciates the efforts undertaken to respond to this finding. Unfortunately, a complete response to the information request has not been provided. The finding requests a justification for the assumed cropland end-use(s) in light of the requirement for conservativeness in quantification of the emissions baseline. Said justification has not been provided. While the assessment team understands that very high values have been calculated based on the National Forest Inventory, as cited in response to this finding, said very high values seem to be a result of a series of errors in the calculation procedures (see NIR 30), so the values will presumably be far lower once the errors are corrected.
Project Personnel Response 2:
Auditor Response 2: This finding has been made irrelevant due to the new emission factors that have been calculated in response to NIR 2 and other findings, as the revised emission factors differentiate between "Annual crop" and "Mixed anual and perennial crop" (see cells X4 and X17 of the "EF AGB BGB" worksheet in the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook). Therefore, this finding will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 20 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Sections 4.1.2 and 4.1.4
Document Reference: ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV; Oromia_AD_GHG_tutorial_v2

Finding: This is a follow-up to NIR 16.
Section 4.1.4 of the ER Program Requirements states the following: “The Program GHG Inventory Programs may select definitions, categories, or subcategories that are different from the ones that have been used in national processes, if this increases the likelihood of being able to assess the impacts of ISFL interventions." However, Section 4.1.2 of the ER Program Requirements states the following: "In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC." The principle of "consistency" is defined by the IPCC, in part, as follows: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions."
As documented in NIR 16, shrubland is treated as a unique land-use class (e.g., “shrubland to annual cropland” is a subcategory for accounting purposes) in the program GHG inventory. As also documented in NIR 16, the assessment team believes that, in theory, differentiating shrubland from other types of grassland should increase the likelihood of being able to assess the impacts of ISFL interventions. However, through a review of the classification in the "land_use12" field in the "ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV" shapefile (which indicates, for land classified broadly as "grassland", whether the land is shrubland) for a sample of the 3,758 sample plots, the assessment team found a number of instances in which sample plots seemed to be dominated by shrub cover but were not classified as shrubland. This led to a more systematic investigation.
The assessment team found that, of the 1,566 sample plots for which that had a label in the "land_use_3" field of "Grassland" and for which the analyst provided data on shrub cover (in the "topogra18" field), there was wide variation in shrub cover for sample plots assigned a "land_use12" label of "Grassland" or "Shrubland". (For purposes of clarity, the value in the "land_use12" field will be termed the "sub-category", for consistency with the "Oromia_AD_GHG_tutorial_v2" document, despite the potential for confusion with the same term as used in the context of ISFL accounting.) One would think that sample plots with a sub-category label of "Grassland" would have a lower shrub cover, while sample plots with a sub-category label of "Shrubland" would have a higher shrub cover, and this is generally the case. However, exceptions exist. For example, of the 514 sample plots with a sub-category label of "Grassland", 21 had an assessed shrub cover of 50% or more. Conversely, of the 1,240 sample plots with a sub-category label of "Shrubland", 134 had an assessed shrub cover of less than 50%. Even though the percentage of sample points with counter-intuitive sub-category assignments is low, it is not insignificant.
In addition, the "Oromia_AD_GHG_tutorial_v2" document, which the assessment team understood to provide training to analysts regarding how to perform land-use assessment, does not provide any information to analysts regarding how to differentiate between the "Grassland" and "Shrubland" sub-categories.
Based on the evidence observed, the assessment team has significant concerns that the "Grassland" and "Shrubland" sub-categories may have been inconsistently differentiated between analysts. Furthermore, there does not appear to be inadequate written documentation regarding how these sub-categories are to be differentiated in future classification efforts, leading to a potential for violation of the principle of "consistency", as defined by the IPCC. Therefore, the assessment team is concerned that, in practice, the establishment of a "shrubland" land-use class does not increase the likelihood of being able to assess the impacts of ISFL interventions but in fact, will have the converse effect. Please address these significant concerns and provide a justification for why the establishment of a "shrubland" land-use class will not degrade the likelihood of being able to assess the impacts of ISFL interventions.

Project Personnel Response: It is true that classification of shrubland in to a single category and differentiating shrubland from other types of grassland should increase the likelihood of being able to assess the impacts of ISFL interventions as recomedned. However, Oromia emissions and removals are estimated only in respect of IPCC/ISFL requirements. The six land-use categories and their transitions (subcategories) are from IPCC 2006 Guidelines which fit with the rquirement of ISFL. In this requirement Grassland category as described in IPCC GPG for Land Use, Land-Use Change and Forestry includes rangelands and pasture land that is not considered as cropland. It also includes systems with vegetation that fall below the threshold used in the forest land category and are not expected to exceed the threshold used in the forest land category. So, the MRV team belived and employed IPCC/ISFL requrment, which classify LULUCF in to six lclasses. In this case shrubland is categorised in to broad sub category of grassland. As documented in 2006 IPCC good practice Guideline, most countries also included these shrubland lands in grassland section of their GHG inventory. In theory this might hide the existing difference between shrubland and grassland in carbon potentials. But, as far as the requirment of ISFL/and IPCC is not improved it might violate their requirment and lacks consistency for ISFL to followup, althogh there is possibility of classifying it to shrubland classes. With respect to labeling of land clases, there was 5 parameters used to fill in the collect earth interface; land use category, land use category accuracy, land use sub-category,land use sub-category accuracy and year of change. The land use and landuse sub category accuracy refers to the confidence of the classification. If the interpreter is sure of the land cover class they assigned? Yes if they are confident about their classification and no if there is doubt about the classification. This is in order to minimise uncertainity while data analysis. However, since the two shrubland and grassland are not different category misclasification of shrub as grassland and/or grassland as shurb based on the threshold might not have large uncertainty and can not violet IPCC/ISFL requirements. Since, they are interprated as grassland category. But, as commented by assessment team uncertaity in labeling might arise due to experience and judgment of the class by data collectors while assigning. This will be improved in our future carer, since the MRV team at national and regional level and oromia OFLP implementing institutions are more enhanced their capacity by training gained from global experienced initatives like FAO, Google and the SilvaCarbon to enhance data collection, analysis and reporting

Moreover, collect earth which geo-synchronizes the visualization of information obtained from satellite images of varying spatial and temporal resolution was best available given the lack of information and the resorces available for data collection. But errors are part of the process, we need to explain that verifications control are or will be applied with cross-checks, independent review, trainings, etc. Oloffsson or other method to determine error should be applied in future land use classifications.
The finer-resolution data will reduce uncertainty levels when associated with carbon accumulation factors defined for those finer-scale land bases. ORCU/EFCCC MRV team check this? It is referred to acitivy data and the use of Collect Earth.

Auditor Response: The assessment team appreciates the efforts made to provide a response to the finding. Unfortunately, the response is confusing to the assessment team. The response implies that shrubland is not treated as a unique land-use class in the calculation of the program GHG inventory. However, the workbook "Oromyia LULUCF GHG Inventory 21082020" suggests the contrary. For example, cell H17 of the "Summary of emissions" worksheet provides the calculation of emissions in the "Grassland converted to cropland" subcategory. Cell H17 references cell U20 of the "Land use change - emissions" worksheet. Included in the summation in cell U20 is cell U388, which calculates aboveground and belowground biomass emissions from "Shrubland to annual cropland". This calculation uses the distinct emissions factor of 9.2 tCO2e/ha, based on the difference in carbon stocks between shrubland, specifically, and annual cropland. Therefore, shrubland is clearly treated as a unique land-use class in the calculation of the program GHG inventory, although the statement "shrubland and grassland are not different category" in response to this finding suggests that this was not intended by the MRV team. If so, that would explain why an emphasis was not placed on ensuring consistency in differentiating shrubland from other types of grassland, but would also raise additional questions regarding whether the results of the classification are being utilized in a manner inconsistent with the design of the classification effort. The information request has not been satisfied.

Project Personnel Response 2: First, the assignment of land use land cover was based on the six IPCC/AFOLU LULUCF categories. Grassland and shrubland are both subcategories within IPCC category "grassland". The sample unit might be categorized to Grassland although other LU classes exist in the plot. When we come to the sub category of grassland, it might be grassland or shrub land based on the majority rule of the two and existing other land cover classes. How this percentage is calculated is the collect earth manual and is done for the 2017 land use classification where more detailed visual information is availble. Example from the total area if grass is 40 and shrub is 20%, sub category goes to grass land with less than 50% threshold from total classes in the sample unit. And Vise versa. As stated the the assessment manual there were some drawbacks on providing clear information to analysts regarding how to differentiate between the "Grassland" and "Shrubland" sub-categories. Now our MRV team are considering the issue and trying to update/develop clear guide line supported with pictures for future assessment where all team have common undertanding in labeling. So, this will be enriched for our future career. While, it is known that Grassland is naturally dominated by grass vegetation, might be with widely dispersed trees with no more canopy cover as in the forest, while shrubland covered by small trees, bushes, and shrubs, in some cases mixed with grasses; less dense than forests. However, when we look beyond the six IPCC land use land cover categories, use of shrubland can undestimate the impact of carbon potential, showing there is possibility of classifying it to shrubland land to one category.

Auditor Response 2: The assessment team appreciates the response provided. It is heartening to understand that this matter is being seriously reviewed and possible improvements considered. This finding will be closed, noting that OBS 41 will be opened to memorialize this as an area for future improvement.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 21 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV; Oromia_AD_GHG_tutorial_v2
Finding: The ER Program Requirements states the following: "In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC." The principle of "consistency" is defined by the IPCC, in part, as follows: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions."
Through a review of the classification in the "land_use3" field in the "ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV" shapefile for a sample of the 3,758 sample plots, the assessment team found a number of instances in which the "Cropland" label was assigned to sample plots that appeared to potentially be reverting to shrubland or forest over time. The "Oromia_AD_GHG_tutorial_v2" document states the following on page 5: Cropland also includes... lands in temporary fallow [condition] or enrolled in conservation reserve programs". However, in the absence of further guidance, it seems that remotely sensed imagery alone is insufficient to determine whether lands are only temporarily fallow (particularly given the apparent rapid regrowth of native vegetation in at least portions of the Oromia region) or are enrolled in conservation reserve programs, particularly when an analyst is frequently required to assign classification based upon only one or two high-resolution images. Please clarify what tools were used by the analysts to determine whether lands that exhibited growth of natural vegetation during the 2000-2017 time period were experiencing conversion to forest land or shrubland or whether such lands remained in within the cropland class. Please clarify whether professional judgment was applied in this context, and if so, provide further details regarding the professional expertise of the analysts and the manner in which professional judgment was applied. Please provide justification that determinations have been made in a manner that ensured consistency between analysts and that will ensure consistency across time (in order to preclude a situation in which one analyst would look at a series of images and conclude that a sample plot was converted away from the cropland class while another analyst would conclude that the sample plot remained in the cropland class).

Project Personnel Response: Before data collection different trainng was provided on how to interprate land use and land cover classes and dynamics. This was used as an inception for the development "Oromia_AD_GHG_tutorial_v2" document. However, We cannot argue that this report is 100% free of errors since the task is accomplished by many analysts. Althogh assigning land cover classes only from imagary is not recommended, the current used collect earth tool geo-synchronizes the visualization of information obtained from satellite images of varying spatial and temporal resolution, including Quickbird, Ikonos, Spot, RapidEye, Sentinel 2, Landsat, MODIS etc., which are stored within Google Earth, Google Earth Engine and Microsoft Bing Maps. Collect Earth leverages the power of Google Earth Engine to not only visualize satellite images, but also to process geospatial information in the cloud to generate inter-annual and intra-annual vegetation indices, such as the Normalized Difference Vegetation Indices (NDVI) (Bastin et al, 2017).
Assignment of Cropland whether it is farming land or fallow land was labeled both baseed on looking information about land cover classes with time from available imageries (listed above) and also professional judgemnts supported with time series NDVI data (from lanndsat, MODIS and spot) in case of geting difficalties of high reolution imagery. First the assessment team review all high-resolution imagery available and check if the current land use land cover is cropland or other. In this case available google earth imagery and bieng map was very crucial. Spanning back in time from Google earth imagery the state of land use in time was visually assesed and recorded if there was change or no change. If change is there the team check if complete convertion to other land like forest or shrub. This can be simply visualised if time series of imageries are available on Google earth. Related to the fallow land, for example there is difference between farmland and falowland due to thier inter annual varation of vegitation indices. On farmland there is high inter annual dynamics of vegitation indecies , while fallow land shows relatively similar or slow change of time seres graph (NDVI Value) between reverting period. So, if continous increment in NDVI value is there it might show crop land is reverting to shrub land or forest and etc(but determined based on NDVI value and state of dynamics). So, this determination needs professional jugment and knowlage of remote sensing land cover information. However, the assessment team might not equally experienced to judge tonal change of imagery, size of shadows, canopy coverage and NDVI time series dynamics (which range from -1 to 1) which awere used as a clue for determination. So, land uses assigned 'fallow lands' migh be permanently croplands.So, as commented by reviewing team assignment of cropland might not escape from uncertanity. There is always omission and commission errors in land monitoring in RS However, in order to ensure consistency between analysts not to interpret the same LULCC differently a preliminary brainstorming training was undertaken. Further more, guidance and experince is crucial and it is good if remotely sensed imagery is suppoted by ground trouthing to detrime whether lands are only temporarily fallow or are enrolled in conservation reserve programs. Overall, to assess each plot, visual interpretation of very high resolution images is aided by referencing vegetation indices derived from low, medium and high-resolution images. Collect Earth geo-synchronizes the visualization of information obtained from different imagries was widely employed for data collection technuque, even if it can not overcome the drawback of expensive ground trouthing data collection.

Auditor Response: The assessment team appreciates the information provided in response to this finding. Specifically, the assessment team has gleaned that the inter-annual changes in the NDVI values were used as an aid in the classification process. However, the information provided does not directly address the information request. The issue is that, as noted in the finding response, "On farmland there is high inter annual dynamics of vegitation indecies , while fallow land shows relatively similar or slow change of time seres graph (NDVI Value) between reverting period." This means that the NDVI information, by itself, cannot be used to differentiate between temporarily fallow land or land enrolled in conservation reserve programs (which is, per "Oromia_AD_GHG_tutorial_v2", classified as cropland) and land that has converted to grassland or forestland, and high-resolution imagery is not adequate for this purpose either.
Therefore, the information request has not been satisfied. Please provide the following information, as requested by the finding, focusing specifically on lands that are temporarily fallow or enrolled in conservation reserve programs and how these lands were differentiated from other land uses.
Please clarify what tools were used by the analysts to determine whether lands that exhibited growth of natural vegetation during the 2000-2017 time period were experiencing conversion to forest land or shrubland or whether such lands remained in within the cropland class. Please clarify whether professional judgment was applied in this context, and if so, provide further details regarding the professional expertise of the analysts and the manner in which professional judgment was applied.
Please provide justification that determinations have been made in a manner that ensured consistency between analysts and that will ensure consistency across time (in order to preclude a situation in which one analyst would look at a series of images and conclude that a sample plot was converted away from the cropland class while another analyst would conclude that the sample plot remained in the cropland class).

Project Personnel Response 2: We appricate the assesment team for providing an information for re clarification, specifically focusing on lands that are temporarily fallow or enrolled in conservation reserve programs and how these lands were differentiated from other land uses. Firstly, the National and regional MRV team engaged in AD collection was aware about data collection protocols before data collection started. Accordingly, we used fallow land as arable land that is set aside for a period of time ranging from one to five or more years before being used again for cultivation. Existing LULC studies also commonly merge the cropped and fallowed fields in a common class, although mapping of them differently is challenging and difficult task due to the complexity of change process. A fallowed field may be confused with land under conservation reserves due to both undergoes natural regeneration. However, despite these difficulties, the MRV team considers different options for fallow characterization using remote sensing, based on the different phenological characteristics of the vegetation, including Normalized Difference Vegetation Index (NDVI) and amplitude. Followed fields generally have a lower NDVI values than protected land under regeneration and its amplitude is also short. Land enrolled under conservation might exibit higher NDVI values after longer fallow. Longer years (probabily more than 8 years) would be needed to reach the same NDVI as forest if the land is under conservation parctice. To track this all informatons 1st we employed the use of both available imagery. Using a combination of very high resolution when available and a consistent time series of small and medium resolution imagery (MODIS, spot and Landsat) time series polts on earth engin integrated on collect earth were used, since they are best practice for assessing activity data. This methodology is endorsed by REDD+ guidance such as GFOI's and the FCPF Meth Frameworks. Secondly, the MRV team employed professional experiences used to judge the class assignment of fallow and land under regeneration, which include tonal change of imagery, smoothnes and NDVI time series dynamics. Prior to data collection these experties took different training, mostly by FAO and are from geoinformation sceince, forestry, geography and Natural resurce diciplens. However, we are not 100% certain that all experties have equally interpreted such informations. Some complexity and confusion of the assignment between fallow land and land under protected regeneration might arise due to varying climatic conditions and undermentioned capacity of analysts (data collectors). As a result, methods to accurately monitor fallowed and land under protected regeneration is crucial, and we will develop consistent methedological guied line for the future. We also appreciate the assessment team if more advise is given.

Auditor Response 2: Thank you for the detailed response to this finding. The assessment team is satisfied that the best available data and methods have been used to measure land-use conversion. In addition, the assessment team notes that this will become less of an issue over time, as more historical high-resolution imagery becomes available. The information request has been satisfied.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 22 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Sections 4.6.1 and 4.6.2
Document Reference: OFLP- Draft ERPD 10122019 clean

Finding: Section 4.6.1 of the ER Program Requirements states the following: "ISFL ER Programs shall systematically identify and assess sources of uncertainty in the determination of the Emissions Baseline and the monitoring of emissions and removals following the most recent IPCC guidance and guidelines." Section 4.6.2 of the ER Program Requirements states the following: "ISFL ER Programs shall, to the extent feasible, follow a process of managing and reducing uncertainty in the determination of the Emissions Baseline and the monitoring of emissions and removals." Section 3.1.5 in Volume 1, Chapter 3 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories describes "eight broad causes of uncertainty"; it describes the cause of "missing data" as follows: "Uncertainties may result where measurements were attempted but no value was available. An example are measurements that are below a detection limit. This cause of uncertainty can lead to both bias and random error. When measured values are below a detection limit, an upper bound on the uncertainty can be estimated. There are rigorous statistical techniques for dealing with non-detected data as well as other types of missing data, such as data that are missing at random (Cohen and Whitten, 1998; Gelfand, 1996; Zhao and Frey, 2004b). These techniques may involve estimation or imputation in portions of the distribution where data are not available."
The ERPD states the following on page 245: "Bing Maps and Google Earth Engines were displayed in every plot and can be used to assist with assessing the land use of it. Bing Maps provides high-resolution imagery, which can supplement the imagery available in Google Earth. Google Earth Engine provides a time series of Landsat imagery, dating back to 1984, although imagery is more consistently available after 2000. The slider bars in the four images in Google Earth Engine can be used to explore different years with medium resolution imagery. Time series graphs for the sample point show the NDVI over time, by using MODIS imagery (500-meter resolution) with fire alerts and Landsat imagery (30-meter resolution)."
From review of the approach described in the ERPD and independent replication of the approach for a sample of data (i.e., a sample of the 3,758 sample plots), the assessment team agrees that it is a very robust approach that has resulted in high-quality activity data, in respect of time periods for which very high-resolution (VHR) imagery is available. Even in respect of time periods where no VHR is available, the ancillary information described in the ERPD (e.g., data from Google Earth Engine) likely provides sufficient information to accurately detect conversion to cropland. Given that conversion to cropland usually takes place over a relatively short period of time, the assessment team agrees that this will likely manifest in a disjunct in various indicators (e.g., reflectance) in Landsat imagery that will allow for reasonably accurate determination of the time of conversion. However, the assessment team is concerned that the methodology described in the ERPD does not seem to be capable of detecting conversions to land-use classes other than cropland. For example, conversion from forest land to shrubland, or its converse, typically takes place over too long a time period to result in a signal that would be evident from analysis of Landsat imagery; the same is true for conversion from cropland to forest land. In review of a sample of sample points, it appears that there are many situations in which very little VHR imagery is available up until circa 2007; there are some sample points in which only a single VHR image is available, leaving significant doubt as to the land-use class of the sample plot before and after the image was acquired.
Based on the review of the assessment team, the situation described above seems to be a situation in which missing data is a cause of uncertainty, since “measurements were attempted but no value was available” (i.e., measurements were attempted but VHR was not available for the entire period of interest) and “measurements [were] below a detection limit” (i.e., the measurement process was not able to detect land-use change taking place over a prolonged period of time). Please provide a description of how this cause of uncertainty has been identified and assessed in the determination of the emissions baseline and in the plan for monitoring of emissions and removals. Please provide

evidence of a process of managing and reducing uncertainty in the determination of the emissions baseline and the monitoring of emissions and removals, in respect of this cause of uncertainty.
Project Personnel Response: There were sample plots for which VHR imagery was not available for the entire period or there was only one VHR imagery. For detecting change in such conditions we tried to get information from GEE application programing interface even though it has coarse resolution images from Landsat, MODIS and Spot. This is the limitation of the tool (OpenForis Collect Earth). However, while Collect Earth interface was used for collecting information about the IPCC classes and labeling for Oromia GHGi, confidence of labeling was assessed and documented . In this case if the interpreter is sure of the land cover class Yes was assigned and no if there is missing of high resolution imagery and can not be realyy sure while labeling and doubt about classification. Land cover classes labeled with low confidence might show that there is uncertain about that land cover, causing both bias and random error. In oreder to complement such drawbacks and minimise uncertainity, sample units were designed using stratified random sampling design because it allows some flexibility: in particular, if a reasonable amount of points get difficulty to assess can be dropped from the calculations without biasing the result (SEPAL user manual). In addition, systematic errors (bias) should be avoided by good Measurement practices. Random errors can be managed by improving sampling and Ground truthing . In our future estimate of such overall uncertainities, a Monte Carlo analysis will be performed to assess the uncertainty and remidate datapoints. Moreover, conversion from forest land to shrubland, or vice-versa was detected by visual interpretation using shadow size, canopy size, etc. The conversion may be due to forest degradation and tree planting so that it can take place over short period of time. Crop-Forest conversion was evident. FAO's TA in this line is crucial to enhance and bettwer improvment of the methedology. Related to the loosly described methodology and discripton of each land cover classes and their detection methods, besides cropland will be more elaborated. In addition, it is true that most imgery were more consistently uploaded to google earth platform and available since 2000. Since our data collection and labeling of IPCC land use alnd cover classes was in line with the availability of the imagery, ERPD should be elaborated in time line of our assessment.

Auditor Response: The assessment team appreciates the information provided in response to this finding. However, the information provided is not sufficient to fully address the information request. The response to the finding states the following: "...while Collect Earth interface was used for collecting information about the IPCC classes and labeling for Oromia GHGi, confidence of labeling was assessed and documented . In this case if the interpreter is sure of the land cover class Yes was assigned and no if there is missing of high resolution imagery and can not be realyy sure while labeling and doubt about classification. Land cover classes labeled with low confidence might show that there is uncertain about that land cover, causing both bias and random error. In oreder to complement such drawbacks and minimise uncertainity, sample units were designed using stratified random sampling design because it allows some flexibility: in particular, if a reasonable amount of points get difficulty to assess can be dropped from the calculations without biasing the result (SEPAL user manual)."

The response suggests two things:

1) Sampling points were the confidence was assessed as "Low" were excluded from further analysis (this was also indicated in an email received by the assessment team on 15 June 2020, which stated that "In the final area estimate, all samples with low confidence (123 samples out of 3745 samples) were excluded").

2) A stratified random sampling approach was employed in selecting the sample units.

Regarding the first point, the assessment team identified the 123 samples referenced in the email received on 15 June 2020, by filtering the "AD - raw data" worksheet in the "Oromyia LULUCF GHG Inventory 21082020" workbook to include only those samples where [land_use_category_confidence_label] (column K) = "Low". However, the assessment team is unable to located anything in the pivot tables in the "Land remaining land - emissions" and/or "Land use change - emissions" worksheets that would exclude the 123 samples in question from the analysis.

Regarding the second point, the information provided is at odds with other information provided to the assessment team, which indicates that a 10 x 10 km grid was used to select the sample units. (Such a grid would be associated with a systematic sample, and in order to be statistically valid a systematic sample must be completed; from a statistical perspective, the flexibility does not exist to remove sample units from a systematic sample as described in response to the finding.) The use of a 10 x 10 km grid is indicated on slide 9 of the "Oromia ERPD_audit session 4_Methods and data in LULUCF" Powerpoint slide deck file, and is also indicated through direct observation of the "ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV" shapefile.

Given the inconsistency between the information provided in response to this finding and the information provided elsewhere, the information request has not been satisfied and this finding must remain open.

Project Personnel Response 2: We appreciating critical comment provided by the assessment team. With regard to sampling approach we clarified that FAO Initially designed a stratified sampling design for testing, but it was determined that stratification was inefficient and ultimately a systematic design with 10 x 10 km grid was chosen. This is also what we actually observe from the distribution of sample plots, althogh some errors are there on the documentation provided to the assessment team regarding the methodology used for the sampling design. The other point is regarding the sampling points were the confidence was assessed as "Low" were excluded from analysis. However, this should be checked if 123 sample plots with low confidence label were excluded from analysis or not.

Auditor Response 2: Thank you for responding to the finding. Unfortunately, the response provided is incomplete. Please provide a complete response so that the finding can be closed.

Project Personnel Response 3: Supplementary documentation is being prepared to demonstrate the quality control and quality assurance that the activity data colkection process followed.
Auditor Response 3: In the program teams first response to this finding it was indicated that land cover classes for which there was limited or no high resolution imagery were labeled as low confidence. It was suggested that sampling points flagged as low confidence would be excluded from the analysis. Later in an email on 15 June 2020, it was further confirmed that 123 samples were excluded as they were flagged as low confidence. While the assessment team did confirm that these 123 sample points were marked as "Low" in the GHG Inventory workbook, we could not confirm that these 123 have actually been excluded from the analysis.
Secondly, the program team also indicated that a stratified random sampling approach was employed in selecting sample units. This is not in line with the other info the assessment team received that a 10 x 10 km grid was used to select sample units. The program team did indicate that this stratified sampling design was originally proposed and tested but ultimately not used. Instead the systematic 10 x 10 km grid was applied. We thank you for the clarification on this matter.

The assessment team concludes that the following issues remain with regard to this finding:
(1) The finding was not completely responded to. It remains unclear if the program team ever checked or confirmed that those 123 points were excluded from the analysis. Thus this must be addressed.
(2) The project response 3 states "Supplementary documentation is being prepared to demonstrate the quality control and quality assurance that the activity data collection process followed" – While such documentation is certainly welcome and would potentially provide additional assurance and assist in closing the NIR, the first item regarding the 123 points is the main reason this finding is open.
See finding 52 below for a continuation of the responses to this finding

Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 23 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Section 4.1.4
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states the following: "The Program GHG Inventory should be comparable in its use of definitions, categories and subcategories with national processes such as the national GHG inventory, REDD+ and the Biannual Update Report." The program GHG inventory, as documented on page 57 of the ERPD, provides the following definition of "forest": "Land spanning more than 0.5 ha covered by trees (including bamboo with a minimum width of 20m or not more than two-thirds of its length) attaining a height of more than 2m and a canopy cover of more than 20% or trees with the potential to reach these thresholds in situ in due course (National Forest Reference Level Submission, 2017; Minutes of Forest sector management, MEFCC, Feb. 2015)." The assessment team confirmed that this definition is identical to the definition included in Section 3.4 of Ethiopia's Forest Reference Level Submission to the UNFCCC (January 2016). However, Section 1.4 of the Final Report for Ethiopia's National Forest Inventory (2018) indicates that the following definition of "forest" was used in compilation of that inventory: "... a land with a tree canopy cover ≥ 10%, a 0.5 ha area and a 5m tree height in average". As Ethiopia's National Forest Inventory is a very important data source for emission factors for the program GHG inventory, the effective result of the situation is that two definitions of "forest" are used in the program GHG inventory: one definition (as quoted in the ERPD) has been used to derive activity data and another definition (as quoted in the National Forest Inventory report) has been used to derive emission factors. This does not constitute a non-conformity to the ER Program Requirements because the assessment team is satisfied that data from the National Forest Inventory constitutes the "existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines", and abandonment of this important data source would therefore result in non-conformance to Section 4.1.2 of the ER Program Requirements. However, an opportunity exists to improve consistency through adoption of a consistent definition for "forest" in future revisions to the National Forest Inventory (while keeping in mind the requirements of Section 4.5.2 of the ER Program Requirements).
Project Personnel Response: Many thanks for observing this, it is of good help. The team will include this observation in the improvement plan for future GHG Inventories.
Auditor Response: While Observations do not require a response, it is encouraging to note that the finding will be considered in future improvements.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 24 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromia GHG Inventory 03062020
Finding: This finding pertains to another aspect of the same topic addressed in NIR 8.
Section 4.1.3 of the ER Program Requirements state that "The Program GHG Inventory shall utilize best available methods and existing data."
The calculation of carbon stock in natural forest (used to calculation emission factors for subcategories involving conversion from forest land) in cell L39 of the "EF AGB BGB" worksheet in the "Oromia GHG Inventory 03062020" workbook reference data on carbon stocking in forest by biome that are sourced from Table A8.2 of the Final Report for Ethiopia's National Forest Inventory (2018). In other words, the per-hectare carbon stocking values are not specific to Oromia, though they are combined with data on forested area in Oromia by biome (see NIR 8) to produce a weighted average carbon stock estimate that is somewhat specific to Oromia.
While it is not ideal to use global average carbon stocking estimates by biome in the calculation process (in place of results that are specific to Oromia), it is not clear that better information is available from the Final Report. While the Final Report for Ethiopia's National Forest Inventory (2018) provides carbon stocking estimates for each region and biome, Section 1.7 of the Final Report states the following: "The data collected during the NFI were processed to produce results that describe the state of forests and trees outside forests at the country level, and by biome. Because the NFI was initially designed to produce results primarily at the country level (and particularly per NFI strata), all the attempts to downscale the results can reduce the accuracy, as for the case of the results presented per region." Therefore, it is unclear that accuracy would be improved through the use of the region-specific results presented in the Final Report.
However, the information in the Final Report does suggest that average carbon stocking varies significantly between regions within a given biome. For example, Table A8.3 indicates that, within the Moist Afromontane biome, the total carbon stocking in the SNNPR region (at 101.0 tC/ha) is almost twice that in the Oromia region (at 54.4 tC/ha).
(While Table A8.3 is not specific to forests, and so there is a possibility that the comparison could be skewed by differences in the relative proportion of area in forests in the two regions, calculations using the information in Table A2.3 indicate that the two regions have roughly similar percentages of area within the Moist Afromontane biome in forestland--the percentage is 31% for Oromia and 28% for SNNPR. Therefore, we do not feel that the differing percentages of area in forest affect the broad conclusion that per-hectare carbon stocking in forests within a certain biome may be significantly different between regions.)
As documented in NIR 2, many Oromia-specific emission factors have been directly obtained from the National Forest Inventory. Therefore, it seems to be feasible to use Oromia-specific data to calculate the carbon stock in natural forest and, as such, the best available existing data have not been used.

Project Personnel Response: Many thanks for raising this point, it has made us re-think the process for estimating emissions and removals in forestland.
In NIR 2, it has been explained that the EF for forest has been recalculated using the Oromia data from the NFI. The data was integrated by strata, then transformed to biome (using Sarndal). The method is included in the file "Results_EFs_Ethiopia_Sardnal_OROMIA.xls", which is attached to this set of responses.
At the end, the total emissions and removals in the GHG Inventory have changed. While in the 03/06/2020 Excel version the average emissions for the last 10 yeras was 37.596 ktCO2/year, the actual values are 48,207 ktCO2/year, 28.23% higher.
Notwithstanding, it is important to remark that this new values has a minor impact in the ISFL baseline estimation (6%)
Auditor Response: Through review of the workbook entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been undertaken to calculate emission factors using data that are both specific to Oromia and appropriately weighted (taking into consideration the difference in sampling intensity across strata). Therefore, given that it now appears the best available methods have been used to calculate emission factors, the information request is no longer relevant and will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 25 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.2.2
Document Reference: OFLP- Draft ERPD 10122019 clean

Finding: Section 4.2.2 of the ER Program Requirements states that " ISFL ER Programs are encouraged to improve data and methods, and to move to a higher tier over time, as possible."
The ERPD states in Section 4.1.1 that "Soil organic carbon data in forest area is obtained from the document “Evaluation of the forest carbon content in soil and litter in Ethiopia” (implemented by Natural Resources Institute Finland - Luke)." The response to NIR 4 indicates that the values used for the F(LU), F(MG) and F(I) variables to calculate Equation 2.25 from the IPCC 2006 Guidelines were obtained from "the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 4 AFOLU, chapter 4 Forestland, chapter 5 Cropland and chapter 6 Grassland".
The following opportunities for improvement in the data utilized have been identified by the assessment team, based on the guidance provided under "Tier 2 Approach" in Section 2.3.3.1 in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories:
1. Under "Reference C stocks", it is stated that "The reference condition is the land-use/cover category that is used for evaluating the relative effect of land-use change on the amount of soil C storage (e.g., relative difference in C storage between a reference condition, such as native lands, and another land use, such as croplands, forming the basis for FLU in Equation 2.25). In the Tier 1 method, the reference condition is native lands (i.e., non-degraded, unimproved lands under native vegetation), and it is likely that many countries will use this same reference in a Tier 2 approach." From review of the document “Evaluation of the forest carbon content in soil and litter in Ethiopia”, it appears that the sampling frame, for purposes of that research, was the entire country of Ethiopia. (It is stated in Section 3.2.1 of that document that "An unbiased subsampling of 100 SU’s of all the SU’s used in the FRL in Ethiopia was determined.") Given the title of the document and the voluminous references to "forest" therein, it appears that the scope of inference of the research was limited to forests. However, as acknowledged in the ERPD (e.g., in Section 3.1.1), forest degradation is a significant factor in Ethiopia. There is no indication that the sampling frame of the research was limited to "non-degraded, unimproved lands" even if it was limited to forests. Therefore, it appears that the value used for SOC(REF) was likely calculated using data collected, at least in part, in degraded forestlands. This can be predicted to have had a conservative impact on the emissions baseline, given that degraded forests may tend to have a lower soil organic carbon stock than non-degraded forests. However, one opportunity for improvement in future research efforts would be to specifically seek to calculate the reference soil organic carbon stock in non-degraded lands (whether forest or grassland).
2. Also under "Reference C stocks", it is stated that "It is important that reliable taxonomic descriptions be used to group soils into categories." Under "Climate regions and soil types", the following is stated: "...it is considered good practice to specify better climate regions and soil types during the development of a Tier 2 inventory if the new classification improves the specification of reference C stocks and/or stock change factors. In practice, reference C stocks and/or stock change factors should differ significantly among the proposed climate regions and soil types based on an empirical analysis." See NIR 26 below regarding climate regions. Regarding soil types, the assessment team agrees that "In practice, reference C stocks and/or stock change factors should differ significantly among the proposed... soil types based on an empirical analysis." The results in “Evaluation of the forest carbon content in soil and litter in Ethiopia” are not reported by soil type. One opportunity for improvement in future research efforts would be to differentiate soil organic carbon stock results by soil type. This could then be used to aggregate and report soil organic carbon stock change estimates by soil type, as set out in Equation 2.25.
3. Under "Defining management systems", it is stated that "...the default systems can be disaggregated into a finer categorization that better represents management impacts on soil organic C stocks in a particular country based on empirical data (i.e., stock change factors vary significantly for

the proposed management systems)". Under "Stock change factors", it is stated that "An important advancement for a Tier 2 approach is the estimation of country-specific stock change factors (FLU, FMG and FI)." One opportunity for improvement, therefore, would be to determine whether the default management systems could be further disaggregated as mentioned, and also to develop country- (or region-) specific stock change factors, as mentioned.
Project Personnel Response: Many thanks for the multiple observations provided. The team has been trying to apply all these comments while doing the GHG Inventory, however, the lack of information resulted in a simplified method with large areas for improvement.
The team is elaborating an improvement plan to address this.
Auditor Response: While Observations do not require a response, it is encouraging to note that the finding will be considered in future improvements.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 26 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 21082020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
From review of the "Land use change - emissions" worksheet in the "Oromyia LULUCF GHG Inventory 21082020" workbook, it is clear that the value of 51.9608 has been used to calculate SOC(REF), the reference soil organic carbon stock. The assessment team has traced this value to Table 3 in the document “Evaluation of the forest carbon content in soil and litter in Ethiopia”. This value is the reported average measured value across biomes.
However, Equation 2.25 in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of soil organic carbon stock in mineral soils) indicates that soil organic carbon stocks are to be separately calculated for each set of "climate zones... soil types, and... management systems that are present in a [region]". While the assessment team understands that separate data are not available to perform calculations for each soil type (see OBS 25), it is not clear that separate data are not available to perform calculations separately by climate zone and management system.
Table 3 of “Evaluation of the forest carbon content in soil and litter in Ethiopia” reports carbon stocking values separately by biome. While the assessment team understands that the different biomes are not purely classified on the basis of climate, they do appear to have a climate component, as seen in the broad relationship between differences in soil organic carbon stocks and aboveground/belowground biomass stocks between biomes (e.g., Table 3-25 in the Final Report for Ethiopia’s National Forest Inventory (2018) indicates that aboveground biomass in forest in the Moist Afromontane biome is approximately four times that in the Acacia-Commiphora biome; Table 3 shows that soil organic carbon stocking in the Moist Afromontane biome is over two times that in the Acacia-Commiphora biome). Moreover, the reported soil organic carbon stock values vary significantly between biomes, suggesting that a significant degradation in accuracy occurs when the mean value is used globally.
Please provide a justification for why the biome classification has not been used as a "climate region" classification in implementing Equation 2.25 (or the alternative formulation for Approaches 2 and 3 in Box 2.1) in Volume 4, Chapter 2 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
Project Personnel Response: There is no solid argument to justify not applying the biome classification as "climate region" when implementing the SOC calculation method.
The reasoning behind the use of a unique SOC stock is because the average value would simplify the estimation calculations procedures with a reduced impact in the accuracy.
However, given that the improvement can be done with the information available, the team has proceed to re-estimate the emissions and removals considering the different carbon stocks in soils by biomes. The impact of this modification has been estimated as a descense of 25% of emissions in this pool. The different SOC stocks and their inlusion in the calculations can be seen in "Oromyia LULUCF GHG Inventory 25112020_new EF.xlsx"

Auditor Response: Through review of the revised workbook, entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been made to consider biome and "climate region" in the calculation of emissions from soil organic carbon, through the use of values for the variable SOC(REF) that vary by biome (according to the values presented in Table 3 of the "Soil and Litter Carbon Assessment Report") and, perhaps, carbon stock change factors that vary by climate region (though the details remain unclear to the assessment team--see NIR 4). Therefore, the information request is no longer relevant and will be withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 27 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 21082020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 5.3.1.4 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for conversions to cropland) states the following: "Calculate the annual change in carbon stocks in biomass in Land Converted to Cropland (ΔCB) using Equation 2.15." Section 5.3.1.1 of the same document states that "The difference between initial and final biomass carbon pools is used to calculate carbon stock change from land-use conversion; and in subsequent years accumulations and losses in perennial woody biomass in Cropland are counted using methods in Section 5.2.1 (Cropland Remaining Cropland)."
Both Equation 2.15 and Section 5.2.1 indicate that gains and losses in biomass are to be estimated following conversion to cropland, and provide an accounting framework in which to do so. However, the audit team is unable to identify any evidence that gains and losses in biomass had been estimated and considered in the quantification of emissions and removals after the conversion event. For example, in row 268 of the "Land use change - emissions" worksheet in the "Oromyia LULUCF GHG Inventory 21082020" workbook (relating to conversion to cropland), emissions and removals after the year of conversion are zero.
The assessment team notes that, in reviewing the activity data, many instances were identified of cropland with trees or shrubs, which could be expected to exhibit biomass gains.
Please provide evidence that gains and losses in biomass have been calculated using Tier 2 methods in accordance with Equation 2.15 and Section 5.2.1.
Project Personnel Response: SCS: "it would still be best if a response could be provided to show how the IPCC Guidelines are being met in respect of this finding, but even if you choose not to provide such a response, we may be able to close out this finding after conducting a materiality assessment and finding that any overestimation error in the baseline is below 1.00%"
Auditor Response: As indicated, a further analysis of materiality was undertaken. Given that this matter has materiality implications (i.e., it is currently observed that there is a material error in the calculated emissions baseline), it will be necessary for the IPCC guidelines to be fully complied with in this respect. Please note that corresponding requirements exist in respect of land converted to forest land (see Section 4.3.1 in Volume 4, Chapter 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for conversions to forest land).
Project Personnel Response 2: The team has made the corresponding changes considering the correct observation of the auditor. The Inventory is now considering the gains and losses in land areas after the conversions. The modifications can be seen in the nrew version of the GHG Inventory Excelsheet: (Oromia LULUCF GHG Invenotry 01022021 .xlsx)

Auditor Response 2: The assessment team has reviewed the draft guidance note provided in January 2021 which relates to this finding.
This finding pertains to transitions to and from cropland, thus below we detail our response to each transition:
(1) Forest to Cropland - In the draft guidance, Section 5, Titled: Changes in biomas carbon stocks for forest land converted to cropland or grassland, it states "All other ISFL ER Programs, both for ISFL Reporting and ISFL Accounting, shall assume that in the year of conversion, the biomass carbon stocks go instantly from the average biomass carbon stocks in forest to the average biomass carbons stocks in the new steady state system. ISFL ER Programs are also not required to assume transfer of carbon stocks between pools based on a disturbance matrix. Within the context of the ISFL (with ISFL ERPA Phases that are shorter than the 20-year transition period) this may be considered as conservative since it leads to lower emissions in the year of conversion." On the contrary, for transitions from forest to cropland, e.g. cells U435 to AB435 and U445 to AB445 it shows that the transition from natural forest to cropland occurs immediately in the year of the transition, and then the area maintains zero carbon stock change thereafter. A value of zero for cropland does not represent the new average steady state cropland system. However in other forest to cropland transitions, e.g, cells V495 to ABV495, it shows the that the transition from natural forest to cropland occurs immediately in the year of the transition, and then the area maintains the steady state carbon stock change per year for annual cropland (a sink). The assessment team notes other areas of inconsistency regarding how forest to cropland transitions are handled. The audit team has issued finding NCR 43 in response to this.
(2) Cropland to Forest - Section 3.2 of the draft guidance note states that "The net annual CO_2 removals shall be calculated using equations 2.15 and 2.16 from the 2006 IPCC Guidelines, Volume 4, Chapter 2. These equations shall be simplified by assuming that during the conversion from non-forest to forest, carbon stocks will go from average carbon stocks in non-forest to average carbon stocks in forests during a period of time. A conservative default period of 20 years is suggested for the forest to grow from the carbon stock levels of non-forest to the level of biomass, stable soil and litter pools of the average forest. Alternative periods may be used but shall be justified." In cells Q235-U235 for annual cropland to forest, it shows that the transition takes place over 5 years, not the default of 20 years. After 5 years, then the steady state forest average forest carbon stock change is achieved (cells V235 to AB235). No justification was provided regarding why a 5 year period was applied.
The audit team opened finding NIR #44 in response to this. Also with regards to transitions from cropland to forest, the assessment team also noted several instances where the pre-conversion carbon stocks in cropland are zero, and therefore do no represent the average carbon stocks in nonforest. For example, rows 651 shows that the biomass in the annualcropland class is zero before the transition to forestland. Other examples of this include rows 781. Thus we issued NCR #49 in reference to this.
This finding has been closed for administrative purposes and NCR #43, NIR #44, NCR #49 have been opened.
The assessment team notes that the Guidance Note is a draft form which is pending approval. If it does not receive approval or if there are changes to these sections, the response to this finding will need to be amended or rescinded.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 28 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 21082020

Finding: Section 4.1.3 of the ER Program Requirements state that “The Program GHG Inventory shall utilize best available methods and existing data.”
The calculation of biomass losses due to harvesting is carried out in rows 160-170 of the worksheet "Land remaining land - emissions" in the workbook "Oromyia LULUCF GHG Inventory 21082020". The calculated values are very high. For example, in cell G177, the calculated value of biomass losses due to harvesting in forestlands in 2017 is 55,987.3 ktCO2e. This is more than twice the absolute value of the sum of the calculated gains due to growth of forestlands, as calculated in cells AN41:AN44 of the same worksheet. While theoretically possible, a prolonged situation in which losses are approximately twice the gains raises an eyebrow. This is particularly the case since Table 5.2 of the Woody Biomass Inventory and Strategic Planning Project report indicates a positive wood balance in Oromia (i.e., indicates that more wood is being "supplied", or grown, in Oromia than is harvested)--at least, indicates that was the situation at the time the report was published (in 2005). This suggests the presence of errors in the accounting framework that, if corrected, would reverse the identification of the forestland remaining forestland subcategory as a significant source of emissions (as represented in Table 8 of the ERPD). The assessment team understands that only Tier 1 methods have been utilized, and therefore some limitations in accuracy are inevitable; however, the methods should not be so inaccurate that they result in a major error in the outcome. The assessment team has the following concerns regarding the analysis. Please address these concerns and ensure that the calculation procedures are as free of error as practicable, given the Tier 1 nature of the calculations.
1. The biggest single source of potential error seems to be in the assumption, in cell B183 of the "Land remaining land - emissions" worksheet, that 71% of all biomass losses related to harvesting removals occur in the forestland remaining forestland subcategory. While the origin of the data feeding into this calculation is not transparent, it appears that this calculation somehow relates to the proportion of the total carbon stock found in forest land, grassland and cropland. As calculated in cell T28 of the "Land Use matrix - dynamic table" worksheet, only approximately 6.3 million hectares (about 20% of the total estimated area of Oromia) fall into this subcategory. Even taking into consideration that natural forests have a significantly higher carbon stock that other land uses, the assumption that 71% of harvest-related removals occur on 20% of the land base still seems questionable, since there is no reason to believe that there would inherently be such a strong relationship between total carbon stocking and proportion of the total harvest-related removals. One would think, intuitively, that accessibility is a far more significant driver in predicting which areas are subject to removals of biomass in leaves and twigs (and, perhaps to a lesser extent, removals of roundwood). In addition, the calculation procedure ignores the potentially significant impact of harvest-related removals in land converted from forestland to cropland or grassland.
2. Another potential source of discrepancy is that, while losses of both above-ground and below-ground biomass are accounted for in the calculations in C160:D177 in the "Land remaining land - emissions" worksheet, it seems likely that only above-ground biomass is included in the data in Table 3.3 of the Woody Biomass Inventory and Strategic Planning Project report that include data used to calculate biomass gain. While Section 4.2.1.2 in Volume 4, Chapter 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories allows for below-ground carbon stock changes to be set to zero, to do this only in respect of biomass gains would not ensure consistency in the calculation procedures.
3. It is cautioned in Section 4.2.1.2 that "In using production statistics, users must pay careful attention to the units involved. It is important to check whether the information in the original data is reported in biomass, volumes underbark or overbark to ensure that expansion factors are used only where appropriate and in a consistent way." The assessment team notes that the units of the data

reported in the Woody Biomass Inventory and Strategic Planning Project report are somewhat opaque, so this may have contributed to error as well.
4. According to the values reported in cells G127 and G139 in the "Land remaining land - emissions" worksheet, the population of Oromia increased by roughly 30% between 2005 and 2017. The calculation procedure takes into account this growth in population over time, but assumes that per-capita use of biomass in leaves and twigs, roundwood and charcoal remained at 2005 levels for the entire period of time covered by the inventory. Perhaps this is a reasonable assumption, but it is one that should be justified. The assessment team notes that Section 6.4 of the report tentatively predicts, regarding urban areas, that "With regard to the supply of wood fuel there are indications that this is not likely to be constrained [i.e., harvest-related removals are not likely to exceed biomass gains] if reductions in per capita consumption continue and as the on-farm plantings of the past decade continue to mature" (though some caveats to this prediction are also expressed).
Project Personnel Response: The GHG Inventory has been done trying to utilize the best available data and methods. Sometimes, the data needed to be adapted to the necessities of the Inventory and expert judgement was the only tool available to make assumptions.
In relation to the points raised by SCS:
1) The assumption made (71%), could result in values that the auditor team think are high. In fact, with the modification of the EF and with the revision of the data from the WBISPP, the carbon emissions due to this pool have increased. In the previous version, 71% of the carbon stock was in the forest, now the share is 83%. However, this values has not been modified. The reasoning behind not changing the value is that it is based in an broad assumption and, what the result is only saying, is that there are more emissions than removals in forestland remaining forestland. The only way to revert this balance is that only 30% of the total wood extractions occur in forestland, which is believed not to happen, according to the national experts. The surplus shown in WBISPP in table 5.2 seems to be very punctual to the moment the report was elaborated. The EFCCC has clear evidences to conclude that the forest is degrading. Even if the emissiions (wood removals(are high, it is a small number compared to the C stocks in forest. The net balance in emissions and removals in forestland is 35.469.000 tCO2 in 2017, and that is 2.18% of total C stock in forest (1.627.923.922 tCO2)
ORCU team has identified these information gaps and is working in resolving them for the monitoring period.
2) as per our understanding, table 3.3 of the WBISPP does not include below-ground biomass, it refers only to aboveground, but the Invenory assumed that this yield is also attributable to both pools, becuase it seems ilogic to think in an increment of aboveground pool without an increase in the belowground biomass pool. Despite this, the emissions from BLT, roundwwod or charcoal in "land remaining land" sheet is independent from the yields in table 3.3.
3) ok. comment received. The values for us looks clear in the Word report of the WBIPSS.
4) the consumption of BLT, roundwood and charcoal is the only data available in Ethiopia or Oromia to predict the consumption and its correspondants emissions.
The forestland remaining forestland is not included in the ISFL baseline because of this type of data problems. There is a need to collect new reliable information to understand the level of emissions and removals in this land use, estimate it accuratley and comply with ISFL quality criteria.

Auditor Response: While the assessment team is not entirely satisfied with the response provided, the assessment team agrees that new reliable information will be important in order to more accurately estimate emissions and removals from this subcategory. Given that plans for collection of the necessary data are included in the "time bound plan" included in Annex 8 of the ERPD, this request can be closed.

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 29 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 21082020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 5.2 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provides the method for calculation of carbon stock change in cropland remaining cropland. These methods appear to be implemented in the "Land remaining land - emissions" worksheet of the "Oromyia LULUCF GHG Inventory 21082020" workbook, which contains calculations for lands that remained as cropland for the period covered under the GHG program inventory. However, these methods do not appear to be implemented, prior to conversion of lands that were converted from cropland to a different class, in the "Land use change - emissions" worksheet of the same workbook. For example, in row 291 of the "Land use change - emissions" worksheet in the "Oromyia LULUCF GHG Inventory 21082020" workbook (relating to conversion from cropland to settlements), emissions and removals before the year of conversion are accounted as zero.
The assessment team notes that, in reviewing the activity data, many instances were identified of cropland with trees or shrubs, which could be expected to exhibit biomass gains.
Please provide evidence that gains and losses have been calculated in accordance with Section 5.2.
Project Personnel Response: [An additional response to this finding was not provided.]
Auditor Response: Subsequent to the issuance of this finding, the audit team revisited SCS' Inception Report and realized that footnote 52 in Annex A of said report provides the following clarifying guidance regarding the meaning of the term "consistent with" in Section 4.1.2 of the ER Program Requirements: "...the selection of subcategories included in [the initial selection of subcategories for ISFL accounting] is equivalent to the selection that would have resulted had the IPCC 2006 Guidelines been duly followed to the letter." In this case, the audit team is concerned that the procedures set out in the IPCC 2006 Guidelines for the cropland remaining cropland subcategory are not being followed to the letter, for the reasons set out in this finding. However, the discrepancy is highly unlikely to affect the selection of subcategories included in the initial selection of subcategories for ISFL accounting, since the cropland remaining cropland subcategory would only need to be included if it was the "single most significant of the remaining subcategories in order of the relative magnitude of contribution of these subcategories to the absolute level of the total GHG emissions and removals in the Program GHG Inventory" (per Section 4.3.4(iv) of the ER Program Requirements) and it is highly unlikely that correction to the calculation procedures for this subcategory would reverse the conclusion that this subcategory does not need to be included. Therefore, in respect of this subcategory, the approaches used in the inventory calculation are consistent with the most recent IPCC guidance and guidelines, and this finding is withdrawn. However, OBS 35 has been issued regarding this matter.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 30 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 21082020; National_Forest_Inventory_Field_Manual
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” The assessment team has noted that the estimated carbon stock values from the National Forest Inventory data, in cells J5:J31 of the "EF AGB BGB" worksheet of the "Oromyia LULUCF GHG Inventory 21082020", seem unusually high, particularly when compared with the data reported in Table A8.1 of the Final Report for Ethiopia’s National Forest Inventory (2018). For example, the value reported for "Annual Crop" in Table A8.1 is 5.6 tCO2e/ha (above-ground and below-ground), compared to a value of 58.8 tCO2e/ha as reported in cell J6 of the "EF AGB BGB" worksheet.
In tracing this discrepancy through the data, the assessment team has determined that the origins of the very high calculated values in "EF AGB BGB" lie, at least in part, in what seems to be a calculation error. Specifically, in column B of "EF AGB BGB", the sum of the per-tree biomass values is calculated across each sampling unit (SU). The values thus calculated are divided by 0.5 in column C. A note in the worksheet indicates that "Las parcelas son de 0.5 ha" ("the plots are 0.5 ha"). In reviewing the National Forest Inventory Field Manual ("National_Forest_Inventory_Field_Manual"), the assessment team has confirmed that it is stated on page 7 that "The plots are rectangles, with surface areas measuring 20 m wide and 250 m long within the SU" (thus, each plot is 0.5 ha in size, as noted). However, because the compilation in the "EF AGB BGB" worksheet are carried out at the SU level, the calculation procedures assume that each SU is 0.5 ha. Since there are actually four 0.5-ha plots in each SU, the reported values seem to up to four times too high for a given SU.
However, this does not tell the complete story. Pages 37-38 of the Field Manual clarify that different sizes of trees were potentially collected on different sizes of plots. (E.g., for the circular subplot, "data on tree regeneration (Dbh < 10 cm and height ≥ 1.30 m) data are collected at this level(only in forest, OWL and woodlots).") Therefore, it would be incorrect to assign a single expansion factor to all trees in the data, since different plot sizes imply differing expansion factors.
As a final complication, it appears that, in some cases, the different Level 3 classifications (LUCCs) were identified within a given plot (e.g., plot 1 in SU 211 has 51 trees assigned to the "Coffee plantation" LUCC and 9 trees assigned to the "Fallow" LUCC). A compilation system free of errors would assign differing expansion factors to each tree on this plot depending on the LUCC that they are assigned to.
Please note that a preliminary inspection of the data in the "EF - raw NFI DW" worksheet suggests that similar types of errors may be affecting the dead wood calculations. For example, it is not clear to the assessment team where the fact that three dead wood transects were installed per plot (and, thus 12 transects were installed per SU) has been accounted for.
Please address the above observations and provide assurance that the calculation methodology has been tailored to fully reflect the sampling design in the National Forest Inventory and, as such, utilizes the "best available methods".
Project Personnel Response: This is one of the things that were corrected when the new EF were estimated.
As you will see in the file: "Results_EFs_Ethiopia_Sardnal_OROMIA.xls", each sub-plot has a relative weighted area, that is different from 0,5ha and is related to quantity of sub-plots measured in each plot.

Auditor Response: Through review of the workbook entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been undertaken to calculate emission factors using data that are both specific to Oromia and appropriately weighted (taking into consideration the difference in sampling intensity across strata). Therefore, the information request has been withdrawn. Please note, however, that the assessment team continues to have questions regarding the calculation of the emission factors, as indicated in NIR 37.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 31 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromia GHG Inventory 03062020
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines. In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by
the IPCC.” The principle of "consistency" is defined in Section 1.4 in Volume 1, Chapter 1 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories as follows: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions."
The assessment team has observed that different values for annual cropland have been utilized for the emission factors for forest to cropland and shrubland to cropland (e.g., in cells B103 and B104, respectively, in the worksheet "Land use change - emissions" in the workbook "Oromyia LULUCF GHG Inventory 21082020"). The result of this is that results between the "forestland to cropland" and "grassland to cropland" subcategories do not completely reflect real differences in emissions. Rather, the variation in the results reflects, in part, the difference in carbon stocking factors utilized. Based on the responses to NIR 19, the assessment team understands the rationale for the decisions made. However, correction of the numerous errors that are evident in the calculation of carbon stocking from National Forest Inventory data (see NIR 30) seems to be the most justifiable means of addressing the situation.
Project Personnel Response: This has been amended with the estimation of the new EF. As it has been said before, the new data comes entirely from the NFI, avoiding different sources of information.
Auditor Response: Through review of the workbook entitled "Oromyia LULUCF GHG Inventory 25112020_new EF", the assessment team can confirm that a good-faith effort has been undertaken to calculate emission factors using data that are both specific to Oromia and appropriately weighted (taking into consideration the difference in sampling intensity across strata), resulting in a consistent set of emission factors for quantification purposes. Therefore, the information request has been withdrawn.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 32 Dated 11 Sep 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: The ER Program Requirements states that "ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines."
During the internet-based meetings that were held in early June, it was communicated to the assessment team that activity data for emissions from livestock were sourced from the livestock reports published by the Central Statistical Agency. However, the assessment team is unclear on the exact source of this information. Using an example year (to be determined by program personnel), please clarify exactly which information from the livestock reports (e.g., which pages or tables) was used to populate the table on pages 220-221 of the ERPD.
Project Personnel Response: Clarifications to SCS were provided by email, explaning the exact source of information for that specific year.
Auditor Response: The assessment team acknowledges that clarification was provided via emailed received on 29 September 2020. The information request has been satisfied.
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 33 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: OFLP- Draft ERPD 10122019 clean; Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: This is a follow-up to NCR 7.
The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
The ERPD states in page 63 that “Data used for this subcategory does not comply with IPCC tier 2 or higher methods and data.” Therefore, the assessment team understands that a Tier 1 approach is used to quantify carbon stock change in the forest land remaining forest subcategory.
Section 4.2.2.1 in Volume 4, Section 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that “The Tier 1 method assumes that the dead wood and litter carbon stocks are in equilibrium so that the changes in carbon stock in the DOM pools are assumed to be zero.” The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories makes no refinement to this guidance.
The calculations in both the “Land remaining land - emissions” worksheet (in row 8) and the “Land use change - emissions” worksheet (in row 9) in the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook include a calculation of carbon stock change in dead wood. This does not follow the most recent IPCC guidance and guidelines. the guidance of Section 2.3.3.1 of Chapter 2 is clear on this point: "Countries that use Tier 1 methods to estimate DOM pools in land remaining in the same land-use category, report zero changes in carbon stocks or carbon emissions from those pools." Therefore, there is an opportunity to more completely adhere to the most recent IPCC guidance and guidelines until such time as adequate data are available to support Tier 2 quantification for this subcategory.
Project Personnel Response: The observation has been considered by the team as an opportunity to adhere to the most recent IPCC guidelines until new data are available to move to a tier 2 quantification method.
Deadwood is not being considered in land remaining in the same land-use category, nor in the "land-use change emissions", neither in "land remaining land -emissions". The only values reported are due to the emissions associated to land-use transitions.
Auditor Response: This observation is no longer relevant given that carbon stock changes in dead wood in forest land remaining forest land (and all land remaining land categories) are assumed to be zero in the calculation workbook.

Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 34 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: This is a follow-up to NIR 14.
The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
The assessment team understands that a Tier 1 approach is used to quantify carbon stock change in the grassland remaining grassland subcategory, as data do not seem to be available to support Tier 2 quantification. (Section 6.2.1.3 in Volume 4, Chapter 6 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that "Activity data consist of areas of Grassland Remaining Grassland summarised by major grassland types, management practices, and disturbance regimes." The assessment team agrees that, in differentiating between shrubland and other grassland, the activity data have differentiated according to "major grassland types", though the assessment team has significant concerns regarding the manner in which this differentiation was made, as documented in NIR 20. However, so far as the assessment team is aware, the activity data have not been disaggregated according to management practices or disturbance regimes.)
However, the calculations in the “Land remaining land – emissions” worksheet in the “Oromyia LULUCF GHG Inventory 25112020_new EF” workbook include calculation of carbon stock change in aboveground biomass for this subcategory (for example, in cell W46 of this worksheet). This does not follow the most recent IPCC guidance and guidelines. Section 6.2.1.1 in Volume 4, Chapter 6 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (which provides the method for calculation of carbon stock change for grassland remaining grassland) states that “A Tier 1 approach assumes no change in biomass in Grassland Remaining Grassland”. The 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provided no refinement to this guidance. Therefore, there is an opportunity to more completely adhere to the most recent IPCC guidance and guidelines until such time as adequate data are available to support Tier 2 quantification for this subcategory.
Project Personnel Response: In our understanding, there could be a missunderstanding from our side when quantifying and reporting the Oromia GHG Inventory versus the quality and baseline setting requirements for ISFL accounting.
The category "grassland remaining grassland" has been estimated with a IPCC tier 2 method, but does not comply with tier 2 method and data, according to the ISFL requirements.
Thus, the GHG Invenotry Report (pdf document) is modified to clarify the discrepancies.
Auditor Response:
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 35 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: This is a follow-up to NIR 29.
The ER Program Requirements states that “In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC.” The principle of "consistency" is defined as follows in Volume 1, Chapter 1, Section 1.4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions. Inventory annual trends, as far as possible, should be calculated using the same method and data sources in all years and should aim to reflect the real annual fluctuations in emissions or removals and not be subject to changes resulting from methodological differences. "
Section 5.2 in Volume 4, Chapter 5 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories provides the method for calculation of carbon stock change in cropland remaining cropland. The methods required by Section 5.2 appear to be implemented in the "Land remaining land - emissions" worksheet of the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook, which contains calculations for lands that remained as cropland for the period covered under the GHG program inventory. However, these methods do not appear to be implemented, prior to conversion of lands that were converted from cropland to a different class, in the "Land use change - emissions" worksheet of the same workbook. For example, in row 148 of the "Land use change - emissions" worksheet in the same workbook (relating to conversion from cropland to settlements), emissions and removals before the year of conversion are accounted as zero. Thus, there is a methodological inconsistency in terms of the quantification of emissions and removals in the cropland remaining cropland subcategory, depending on whether a given area remains in the cropland remaining cropland subcategory for the entire period of analysis or whether there is a conversion at some point during the period.
Project Personnel Response: There has been an error in the estimation of the GHG emissions and removals in cropland remaining cropland. The error in row 148 of the "land use change - emissions" has been corrected. This same error has been found and corrected in row k315. In line 420, the error has occurred inversely and also corrected.
Auditor Response:
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 36 Dated 31 Dec 2020
Standard Reference: SCS' Inception Report
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: As set out in SCS' Inception Report, SCS is required to issue Observations to indicate "An area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the assessment team and the information reported or utilized (or the methods used to acquire such information) within the ERPD."
During review of the calculation of the emissions baseline, the assessment team has identified an error in the calculations for the year 2013 in the "Forest land to cropland" subcategory. Specifically, the calculation in cell X592 of the "Land use change - emissions" worksheet only takes into account the conversion of 31,689 hectares (the sum of the values in cells B595:B596 in the same worksheet), when in fact the inventory data shows that an additional 10,563 hectares were converted in the same year (as indicated in cell B600 of the same worksheet). This has resulted in an approximate 25% underestimate of emissions for this specific subcategory and year.
Please note that this error is not required to be corrected because it has resulted in an understimate of the emissions baseline (per Footote 9 in SCS' Inception Report, "Under-estimation of the Emissions Baseline will not be considered a material discrepancy").
Project Personnel Response: The observation is correct and the calculation has been corrected in the new version of the Oromia LULUCF GHG Invenotry 01022021 .xlsx
Auditor Response: The assessment team confirmed that the updated LULUCF inventory workbook shows that the emission from the transition from Natural forest to annual cropland - LAC tropical montane was included in 2013. This was an observational finding and addressing it was not required. However, this finding is closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 37 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Results_EFs_Ethiopia_Sardnal_OROMIA
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” The assessment team has encountered difficulty in tracing the calculation of the biomass emission factors using the National Forest Inventory data. For example, for plot 3 from sampling unit 213, the audit team has calculated a total aboveground biomass value of 24.5 t/ha, which is equal to the sum of the tree-level values calculated for this plot and sampling unit in the column BZ in the worksheet "EF - raw NFI AGB" of the workbook "Oromia GHG Inventory 03062020". However, this is significantly different than the value of 15.0 t/ha, which seems to be the calculated biomass value in cell R928 of the worksheet "plots" of the workbook "Results_EFs_Ethiopia_Sardnal_OROMIA". Please explain the discrepancy and provide the assessment team with the information needed to recalculate the emission factors.
Project Personnel Response: The raw data from the NFI is not being used in the current version of the GHG Inventory. The EF for each plot and sampling unit is obtained from FAO and applied to the GHG Inventory. FAO prepared the NFI and elaborated the correspondents EF for the National FREL. Notwithstanding, when revising the raw data in "Oromia GHG Inventory 03062020", in column BY it can be seen the aboveground biomass per tree. If those values are added for that plot (213_3) the result is 12.25 tdm/plot. When looking at the same plot in "Results_EFs_Ethiopia_Sardnal_OROMIA.xls", the total is 12.11 (cell Q928). This differnece (1.14%) can be explained for the basic wood density applied to each species.

Auditor Response: The audit team has confirmed that the worksheeet EF - raw NFI AGB values have been updated. When adding the aboveground tree-level biomass for unit 213, plot 3, the audit team confirmed a value of 12.25 was achieved. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 38 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
The following is stated in Section 4.3 of Volume 4, Chapter 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: "Unmanaged forests are not considered as anthropogenic greenhouse gas sources or sinks, and are excluded from inventory calculations. Where these unmanaged forests are affected by human activities such as planting, thinning, promotion of natural regeneration or others, they change status and become managed forests, reported under the category Land Converted to Forest Land, whose greenhouse gas emissions and removals should be included in the inventory and estimated with the use of the guidance in this section." This guidance is reinforced by the document "Integration of remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests: Methods and Guidance from the Global Forest Observations Initiative", which states in Section 3.1.4 that "Consistent with the GPG2003 and the 2006GL, emissions and removals on unmanaged... land are not included in GHG inventories so it is assumed that forest expansion on unmanaged land will not count towards this activity." This is more broadly echoed by Section 1.3.4 of Volume 4, Chapter 1 of the 2006 IPCC Guidelines, in which the first step in preparing a GHG inventory is given as "Divide all land into managed and unmanaged". Thus, it also appears that unmanaged grassland should be excluded from the inventory estimate.
Through review of the process of constructing the program GHG inventory and the resulting emissions baseline, the assessment team is unaware of any process used to differentiate managed forest land and grassland from unmanaged forest land and grassland. Please provide the following information:
1. Please clarify what actions have been taken to differentiate managed and unmanaged land, using definitions of each that are consistent with the IPCC rules.
2. Please clarify what actions have been taken to track conversions between unmanaged and managed forest land, so as to account for such conversions under the category Land Converted to Forest Land.
3. Please clarify what actions have been taken to exclude emissions or removals from unmanaged forest land or grassland from the program GHG inventory and resulting emissions baseline.

Project Personnel Response: The 2006 IPCC GL indicates that it is good practice to delineate managed and unmanaged lands to separate anthropogenic from non-anthropogenic emissions. Very few countries have defined managed or unmanaged lands (https://cbmjournal.biomedcentral.com/articles/10.1186/s13021-018-0095-3), only countries that have large areas of inaccessible land such as the US (Alaska), Canada, Russia or Brazil, so it is a concept that is being applied in very extreme cases which are not applicable to Ethiopia. Ethiopia has not defined managed/unmanaged lands in their GHG inventories and has assumed that all land is managed (c.f. second national communication https://unfccc.int/sites/default/files/resource/ethnc2.pdf and first national communication https://unfccc.int/sites/default/files/resource/Ethiopia%20INC.pdf). The ER Program aligns to national definitions as required by section 4.1.4 of the ER Program requirements and considers all lands as managed.

Anyway, we would like to clarify that the PROJECT APPRAISAL DOCUMENT (PAD) on a PROPOSED GRANT FROM THE BIOCARBON FUND PLUS TO THE FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA FOR THE OROMIA NATIONAL REGIONAL STATE FORESTED LANDSCAPE PROJECT (paragraph 8 in page 4 and paragraph 22 in page 9) and Ethiopia´s Climate Resilient Green Economy outlines the plan to develope a national green economy considers that all forest is managed.

Auditor Response: The assessment team has reviewed the response to this finding including the sources referenced. We have confirmed that designation of managed versus unmanaged forest land in Ethiopia would not be possible given the available data. We also confirmed by reviewing the PAD indicates that all forest land in Ethiopia is considered managed. However, no information regarding the designation of unmanaged versus managed grassland was provided in this response, thus the finding was not completely responded to. This finding remains open.

Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 39 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.2
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”
Section 4.3.1.1 of Volume 4, Chapter 4 of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories states that, where Tier 2 methods are employed, "...changes in carbon stocks in biomass are calculated with the use of Equation 2.16 in Chapter 2. This requires estimates of biomass stocks on land type i before.. and after... the conversion." As suggested. Equation 2.16 in Chapter 2 indicates an abrupt transition between land uses. There is nothing in the IPCC guidance and guidelines to suggest that a gradual transition between a non-forest land use and forest land is to be modeled for the biomass pool in respect of land converted to forest land.
In review of the calculation workbook, the assessment team has noticed that a transition period of five years is assumed for biomass pool (for example, in cell P209 of the "Land use change - emissions" worksheet). This is not consistent with the most recent IPCC guidance and guidelines.
Project Personnel Response: This NCR still needs to be revised agains the "Guidance on application of IPCC guidelines in the context of the ISFL Emission Reductions (ER) Program Requirements of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)"
Auditor Response: The ISFL Note on application of IPCC guidance which was recently issued (January 2021) and pertains to this finding. The audit team continues to note that a transition period of 5 years is applied to land converted to forest. The guidance note indicates that applying a period that differs from the default of 20 years but be justified. Therefore this finding has been closed for administrative reasons, however see finding NIR 44 below.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 40 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” As indicated in cell J22 of the "REDD activities" worksheet of the "Oromyia LULUCF GHG Inventory 25112020_new EF" workbook, an area of 32,238,018 hectares has been assumed for purposes of compiling the program GHG inventory and resulting emissions baseline. The assessment team has been unable to obtain clear information regarding the source of this value. In correspondence sent to the assessment team, it has been suggested that there is an "official area value" for Oromia that diverges from the official boundary of Oromia.
It is the understanding of the assessment team that, consistent with best practices for GIS, there should not be a divergence between the official boundary for Oromia and the area value that would be calculated from said boundary. Please provide a clear description of the exact source of the calculated value of 32,238,018 hectares and a justification as to why this value constitutes the "best available... existing data" regarding the total area within the external boundaries of Oromia.
Project Personnel Response: The Oromia area has been modified so that it reflects the map presented in the PAD. The final Oromia area is 29.991.384 ha and is obtained from the shapefile that has been already shared with SCS.
Auditor Response: The assessment team confirmed that the Oromia boundary provided (oromia_region_boundary2.shp) has an area of 29,991,384 ha. We also confirmed that this area was applied in the LULUCF workbook. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 41 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Sections 4.1.2 and 4.1.4
Document Reference: ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV; Oromia_AD_GHG_tutorial_v2

Finding: This is a follow-up to NIR 20.
Section 4.1.4 of the ER Program Requirements states the following: “The Program GHG Inventory Programs may select definitions, categories, or subcategories that are different from the ones that have been used in national processes, if this increases the likelihood of being able to assess the impacts of ISFL interventions." However, Section 4.1.2 of the ER Program Requirements states the following: "In accordance with the IPCC guidance and guidelines, the Program GHG Inventory should apply the basic principles of transparency, accuracy, completeness, consistency over time and comparability as defined by the IPCC." The principle of "consistency" is defined by the IPCC, in part, as follows: "Estimates for different inventory years, gases and categories are made in such a way that differences in the results between years and categories reflect real differences in emissions."
As documented in NIR 16, shrubland is treated as a unique land-use class (e.g., “shrubland to annual cropland” is a subcategory for accounting purposes) in the program GHG inventory. As also documented in NIR 16, the assessment team believes that, in theory, differentiating shrubland from other types of grassland should increase the likelihood of being able to assess the impacts of ISFL interventions. However, through a review of the classification in the "land_use12" field in the "ALL_collectedData_earthipcc_oromia_on_210818_131253_CSV" shapefile (which indicates, for land classified broadly as "grassland", whether the land is shrubland) for a sample of the 3,758 sample plots, the assessment team found a number of instances in which sample plots seemed to be dominated by shrub cover but were not classified as shrubland. This led to a more systematic investigation, as documented in NIR 20 and repeated here.
The assessment team found that, of the 1,566 sample plots for which that had a label in the "land_use_3" field of "Grassland" and for which the analyst provided data on shrub cover (in the "topogra18" field), there was wide variation in shrub cover for sample plots assigned a "land_use12" label of "Grassland" or "Shrubland". (For purposes of clarity, the value in the "land_use12" field will be termed the "sub-category", for consistency with the "Oromia_AD_GHG_tutorial_v2" document, despite the potential for confusion with the same term as used in the context of ISFL accounting.) One would think that sample plots with a sub-category label of "Grassland" would have a lower shrub cover, while sample plots with a sub-category label of "Shrubland" would have a higher shrub cover, and this is generally the case. However, exceptions exist. For example, of the 514 sample plots with a sub-category label of "Grassland", 21 had an assessed shrub cover of 50% or more. Conversely, of the 1,240 sample plots with a sub-category label of "Shrubland", 134 had an assessed shrub cover of less than 50%. Even though the percentage of sample points with counter-intuitive sub-category assignments is low, it is not insignificant.
In addition, the "Oromia_AD_GHG_tutorial_v2" document, which the assessment team understood to provide training to analysts regarding how to perform land-use assessment, does not provide any information to analysts regarding how to differentiate between the "Grassland" and "Shrubland" sub-categories.
Based on the evidence observed, the assessment team has significant concerns that the "Grassland" and "Shrubland" sub-categories may have been inconsistently differentiated between analysts. Furthermore, there does not appear to be inadequate written documentation regarding how these sub-categories are to be differentiated in future classification efforts, leading to a potential for violation of the principle of "consistency", as defined by the IPCC. Therefore, the assessment team is concerned that, in practice, the establishment of a "shrubland" land-use class does not increase the likelihood of being able to assess the impacts of ISFL interventions but in fact, will have the converse effect.
While the assessment team believes that use of a stand-alone "shrubland" category will increase the likelihood of being able to assess the impacts of ISFL interventions, there is an opportunity for action

to increase the consistency of differentiation between shrubland and other forms of grassland. From the response to NIR 20, the assessment team understands that the Oromia MRV Team is working to make appropriate improvements to the methodology.

Project Personnel Response: The Collect Earth is a very good, cost-effective tool to generate land use and land-use change information in countries where there is a lack of such nformation.

One of the multiple benefits is that the tool releases the user from deciding the final land use classification of the asmple unit analyzed when manualy assessing the satellital image. The user does only specifies the share of every land use type in the sample unit and the program classifies it according to a pre-establsihed hierarchy rules. The explanation of this hierarchy rules are present in the "GHG_AD_Introduction_YF.pdf" already shared to the assessment team. The hierarchy rules system could be explaining the "inconsistencies" found when analyzing "All_collecteddata_earthipcc_oromia_on_210818_131252_csv" shapefile.

In relation to the analyst´s assessment and their capacity to differentiate grassland from shrubland and vice versa, it must be said that the land use classification was done by National and Regional MRV specialist that have a good knowledge of their landscape through satelital imagery. This land use classification exercise was intensively performed in 9 days by 9 users, working side by side and supervised by FAO. The probabilities of having a missclassification exists but were minimized with this colaborative method.

Notwithstanding, it is also recognized that there is room for improvement. The principle of consistency is not assured and there is a need to elaborate Standard Operational Procedures for future classifications. The consistency principle will be kept when doing the activity data monitoring if the analysis is performed back to the baseline start date again. This, and other QA/QC methods will be implemented in future exercises.

Auditor Response:

Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 42 Dated 31 Dec 2020
Standard Reference: ER Program Requirements, Sections 4.3.4 and 4.3.5
Document Reference: Oromyia LULUCF GHG Inventory 25112020_new EF
Finding: Section 4.3.4 of the ER Program Requirements states the following: "From [the list of the subcategories from the Program GHG Inventory in order of the relative magnitude of contribution], all ISFL ER Programs shall initially select the following subcategories:
i. Any subcategories involving conversions from or to forest land;
ii. Forest land remaining forest land;
iii. Any subcategories involving conversions between land-use categories other than forest land that, cumulatively with the conversions from or to forest land, amount to 90% of the absolute level of the total GHG emissions and removals associated with all land use conversions in the Program GHG Inventory; and
iv. The single most significant of the remaining subcategories in order of the relative magnitude of contribution of these subcategories to the absolute level of the total GHG emissions and removals in the Program GHG Inventory."
While there is some ambiguity in the text of the ER Program Requirements, the ISFL PD Template clarifies that the intent is for any subcategories involving conversions from or to forest land to first included in the ordered list. Other subcategories conversions between land-use categories other than forest land are included when, cumulatively with the conversions from or to forest land, they amount to 90% of the absolute level of the total GHG emissions and removals associated with all land use conversions in the Program GHG Inventory. Another way to view this requirement is that, when conversions from or to forest land amount to at least 90% of the absolute level of the total GHG emissions and removals associated with all land use conversions in the Program GHG Inventory, no other subcategories involving conversions between land-use categories other than forest land are selected under Section 4.3.4.
As can be confirmed by summing the values in cells J37, J38, J40 and J41 in the "ISFL" worksheet in the "Oromyia LULUCF GHG Inventory 25112020_new EF", as currently calculated, the conversions from or to forest land amount to at least 90% of the absolute level of the total GHG emissions and removals associated with all land use conversions in the Program GHG Inventory. (Note that it is possible this situation may change when adjustments to the program GHG inventory are made in response to various open findings.)
Section 4.3.5 of the ER Program Requirements does state that "Additional non-forest related subcategories may be included at the discretion of the ISFL ER Program if the quality requirements in Section 4.2 are met, provided there is a clear rationale for including these subcategories in terms of improving ISFL ER Program mitigation performance." Therefore, if there is a desire to retain the "Grassland converted to cropland" subcategory for ISFL accounting, please provide a clear rationale for including this subcategory in terms of improving ISFL ER Program mitigation performance.
Project Personnel Response: After all the modifications to the GHG Invenotry, the new baseline is formed following the ISFL requirements and grassland converted to croplands has not fell below the 90% of the absolute level of the total GHG Emissions and Removals associated with all land use conversions in the Program GHG Inventory. Thus, in this first period only land use conversion from or to forestland is included.
The last version of the baseline was a average value of 8.838.692 tCO2/year (including grassland onverted to forestland). The current value is 8.645.891 tCO2/year. There are differences in each category but the largest impact is in the categories with conversions to forestland, becasue the 20 year period transition that has been applied.

Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory dated 6 April 2021 and confirmed that only the subcategories containing conversions to and from forest land were first selected. It was demonstrated in this workbook and confirmed by independent quantification of emissions that these 4 subcategories account for over 90% of the emissions from land use conversions and thus no other nonforest land use conversion subcategories are selected. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 43 Dated 22 Feb 2021
Standard Reference: ISFL Note on application of IPCC guidelines
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx
Finding: This finding is related to the finding NIR 27 above and pertains to the Draft Guidance note titled "Guidance note on application of IPCC guidelines for subcategories and carbon pools where changes take place over a longer time period." The assessment team notes that his guidance note is only in draft form and pending approval. In the event that the note is note approved, this finding will be rescinded. In the Draft Guidance note, Section 5, Titled: Changes in biomas carbon stocks for forest land converted to cropland or grassland, it states "All other ISFL ER Programs, both for ISFL Reporting and ISFL Accounting, shall assume that in the year of conversion, the biomass carbon stocks go instantly from the average biomass carbon stocks in forest to the average biomass carbons stocks in the new steady state system. ISFL ER Programs are also not required to assume transfer of carbon stocks between pools based on a disturbance matrix. Within the context of the ISFL (with ISFL ERPA Phases that are shorter than the 20-year transition period) this may be considered as conservative since it leads to lower emissions in the year of conversion."
On the contrary, cells U435 to AB435 and U445 to AB445 it shows that the transition from natural forest to cropland occurs immediately in the year of the transition, and then the area maintains zero carbon stock change thereafter. A value of zero for cropland does not represent the average steady state cropland system and therefore is not in conformance with the Draft guidance note. However in other forest to cropland transitions, e.g. cells V495 to AB495, it shows the that the transition from natural forest to cropland occurs immediately in the year of the transition, and then the area maintains the steady state carbon stock change per year for annual cropland. This is in line with the guidance. Thus there is inconsistency in how the guidance note has been applied for forest to cropland transitions.

Project Personnel Response: There was an error in cells U435 to AB435 and U445 to AB445 which was already amended. Many thanks for noting it.
Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory dated 6 April 2021 and confirmed that for the LUC -emissions pertaining to forest land to cropland conversions, the post-conversion steady state emissions associated with cropland have been applied. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 44 Dated 22 Feb 2021
Standard Reference: ISFL Note on application of IPCC guidelines
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx
Finding: This finding is related to finding NIR27 above and pertains to the Draft Guidance note titled "Guidance note on application of IPCC guidelines for subcategories and carbon pools where changes take place over a longer time period." Section 3.2 of the ISFL Note on Application of IPCC guidelines states "The net annual CO_2 removals shall be calculated using equations 2.15 and 2.16 from the 2006 IPCC Guidelines, Volume 4, Chapter 2. These equations shall be simplified by assuming that during the conversion from non-forest to forest, carbon stocks will go from average carbon stocks in non-forest to average carbon stocks in forests during a period of time. A conservative default period of 20 years is suggested for the forest to grow from the carbon stock levels of non-forest to the level of biomass, stable soil and litter pools of the average forest. Alternative periods may be used but shall be justified." In the LULUCF workbook, it appears that the conversion from non-forest to forest, carbon stocks go from average carbon stocks in non-forest to average carbon stocks in forest over a period of 5 years, which is less than the 20 years. For example, cells Q235-U235 for annual cropland to forest, it shows that the transition takes place over 5 years, not the default of 20 years. After 5 years, then the steady state forest average forest carbon stock change is achieved (cells V235 to AB235). Assuming 5 year conversion from the biomass carbon pools in question has resulted in a higher emissions baseline than would result from application of the 20 year default period, thus this application is not conservative. No justification was provided regarding why a 5 year period was applied. As indicated in the guidance note, alternative periods may be used but shall be justified. The assessment team requests a justification for this shortened transition period.
Project Personnel Response: The use of a 5 year transition period simply corresponds to a reasonable period, different from instantaneous, that the GHG compiler understood as correct. However, given the guidance note, the transition has been changed to a 20 year period.
Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory dated 6 April 2021 and confirmed that for the LUC -emissions and confrimed that for transitions from cropland or grassland to forestland, a transition period of 20 years has been applied for biomass, SOC and deadwood pools, thus no justification for a different period was needed. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 45 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: NIR40, Oromia_region_boundary2.shp; Results_EFs_Ethiopia_Sardnal_OROMIA.xlsx
Finding: This finding is related to NIR40 above. The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data." The total area of the Oromia region according to the boundary shapefile is 29,991,384 ha. However in the emissions factors calculation workbook Results_EFs_Ethiopia_Sardnal_OROMIA.xlsx, sheet results_other LU, the emission factors for non forest land uses are being weighted by stratum areas that total 32,238,018 ha, which is the area from an outdated version of the Oromia boundary. In recalculating emission factors, the audit team found that this would result in a significant difference.
Project Personnel Response: The workbook "Results_Efs_Ethiopia_Sarndal_Oromia.xlsx" has been modified to comply with the most acurate Oromia area. The file is submitted to the auditors for their review.
Auditor Response: While the assessment team confirmed that the emission factors have been weighted by the updated Oromia program area (29 million ha) in the workbook Results_EFs_Ethiopia_Sardnal_OROMIA.xlsx, the audit team found that these updated forest areas have been applied for all emission factors. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 46 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Results_EFs_Ethiopia_Sardnal_OROMIA.xlsx
Finding: The ER Program Requirements states that "The Program GHG Inventory shall utilize best available methods and existing data." In confirming the aboveground and belowground emission factors for other land uses, the audit team found that incomplete data was used to calculate the Broadleaved planted forest emission factor. The NFI data shows that Stratum 1 contains a plot classified as Broadleaved Planted (see worksheet 'plots', row 1632). However, this plot was excluded from the aboveground and beloground emission factor calculation. This results in a significantly different emission factor and potentially a material discrepancy
Project Personnel Response: The error was found and corrected in "Results_EFs_Ethiopia_Oromia.xlsx" and in the GHG Inventory (bre version "Oromyia LULUCF GHG Inventory 08032021.xlsx".
Auditor Response: The audit team confirmed that the AGB BGB emission factor for Broadleaved Planted forest has been updated accordingly. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 47 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Ethiopia_NFI_Final_Report.pdf; Oromyia LULUCF GHG Inventory 01022021.xlsx
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” In confirming the deadwood emission factor calculations, the assessment team found that inconsistent methodologies have been used when calculating and applying density reduction factors to deadwood. In the LULUCF woorkbook, for some records in sheet "EF - raw NFI DW" in column M, fdensity reduction is calculated by multiplying the dry wood density depending on the decomposition class (90% for sound, and 50% for rotten) by the 0.613 g/cm3 which is the average wood density for species in Ethiopia as taken from the FREL. However, for other records, a density reduction factor of 1 is applied to sound wood and 0.45 is applied to rotten wood. It was indicated during a call with the program team on 18 February 2021 that this inconsistency is a calculation error that will be corrected
Project Personnel Response: There was an error in the determination of the density reduction factor, that was corrected in the last version of the GHG Inventory.
Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory 26032021.xlsx and found that 1 set of density reduction factors has been applied to all deadwood records (1 for sound wood and 0.45 for rotten). These reduction factors are sourced from a CDM afforestation methodology, that utilizes a tool named "Estimation of carbon stocks and change in carbon stocks in deadwood and litter in A/R CDM project activities". However, as the original finding indicates, the ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” Given that the deadwood data originate from the NFI, it would appear to be reasonable to apply the NFI methods that corresponds to this data. The assessment team found that NFI indicates that the decay reduction factors are 0.9 for sound and 0.5 for rotten wood. The ER Program Requirements states in Section 1 that “ISFL ER Programs are expected to demonstrate conformity with this document and apply general principles of… conservativeness in order to be able to receive result-based finance from the ISFL." In applying these NFI decay factors of 0.9 and 0.5, it results in lower EFs across all land uses than using the values of 1 and 0.45 from the CDM methodology and are therefore also more conservative. As a result, this finding remains open.
Project Personnel Response 2: [Finding addressed outside the cover of this workbook]
Auditor Response 2: The WB team provided an updated calculations workbook Oromyia LULUCF GHG Inventory 11042021.xlsx, which includes the quantification of dead wood EFs using the density reduction factors that correspond to the NFI program procedures (0.9 for sound and 0.5 for rotten) in the sheet EF - raw NFI DW. The corresponding pivot table was also updated with these new values and the final DW EFs were calculated from these updated values. Therefore this finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 48 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx
Finding: The ER Program Requirements states that “The Program GHG Inventory shall utilize best available methods and existing data.” Page 312 of the ERPD states "The annual gain of carbon is estimated based in the carbon stocks from the NFI and the annual yield for every land-use obtained from WBISPP (see table below)." In the LULUCF workbook, sheet 'EF AGB BGB' this same table (table 3.3. from the Woody Biomass Inventory..) is shown. In calculating the steady state emission factors in the sheet "Land use change - emissions" each emission factor is multiplied by the percent annual yield from this table 3.3. However, it is unclear why the percent annual yields for some land cover categories were utilized from this table. For instance, for annual cropland, an % yield of 1.0% associated with the land cover "Afro-alpine, Erica/hypericum" is applied. The assessment team requests clarification regarding how these annual percent yields from this table were selected for each land cover class.
Project Personnel Response: In this specific example, the value applied to annual cropland is due to the fact that it is the most conservative value. Any other value linked to "cultivated land" in the WBISPP is at minimum 2%. We conducted an expert elicitation with several local experts who confirmed that 1% is the closest value to what could be happening on the fields, i.e. it is not a steady state but it should be lower than annual 2%.
In the rest of land use categories, the same approach was followed: the annual yield was selected via an expert elicitation participated by several local experts who confirmed the values from the possible list of values from the WBISPP; the slection of values were based on the conservative principle. In the future, the GHG Inventory will have to maintain the values applied or modify them recalculating the historical emissions and removals.
Auditor Response: The assessment team has reviewed the response provided along with the yield's applied in the workbook. It is clear that the most conservative yield percentage has been applied for each land use category. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 49 Dated 22 Feb 2021
Standard Reference: ISFL Note on application of IPCC guidelines
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx
Finding: Section 3.2 of the Draft Guidance note (Change in biomass carbon stocks for land converted to forest land) states that "The net annual CO2 removals shall be calculated using equations 2.15 and 2.16 from the 2006 IPCC Guidelines, Volume 4, Chapter 2. These equations shall be simplified by assuming that during the conversion from non-forest to forest, carbon stocks will go from average carbon stocks in non-forest to average carbon stocks in forests during a period of time. A conservative default period of 20 years is suggested for the forest to grow from the carbon stock levels of non-forest to the level of biomass, stable soil and litter pools of the average forest. Alternative periods may be used but shall be justified. However in Row 651, row 781 in the LULUCF workbook, sheet 'Land use change - emissions" the average biomass carbon stocks of annual cropland are shown as zero for the period prior to the conversion, which does not represent the average carbon stocks in the non-forest land use and therefore is not in conformance with the Draft Guidance note. The assessment team also would like ot point out row 318 which shows that the steady state of the grassland biomass fluctuates annually before the conversion to cropland. This does not represent the average carbon stocks in the non-forest land use.
Project Personnel Response: The modifications have been made in the last version of the GHG Inventory.
Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory dated 6 April 2021 and confirmed that the pre-steady state emissions associated with the cropland and grassland land use classes have been applied consistently. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 50 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx, Oromiya Agriculture GHG Inventory.mdb; livestock reports (e.g, AGRICULTURAL SAMPLE SURVEY 2011/12 [2004 E.C.], Volume II, REPORT ON
LIVESTOCK AND LIVESTOCK CHARACTERISTICS
Finding: This finding relates to finding #32 above. The ER Program Requirements states that "ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines." In an email from the program team on 29 September 2020, the source of the livestock activity was clarified. In tracking this livestock activity from the reports (e.g., AGRICULTURAL SAMPLE SURVEY 2011/12 [2004 E.C.]) it was clear that the population of swine was zero in that year and all other years. However in the LULUCF workbook, sheet 'Summary of emissions', it shows that from 2004 through 2016 there are manure management emissions associated with swine. The audit team requests clarification on the source of these swine emissions.
Project Personnel Response: This is clearly a typying error in the GHG Inventory (Oromyia LULUCF GHG Inventory 18022021.xlsx). It has been corrected in the last version of the GHG Inventory (Oromyia LULUCF GHG Inventory 08032021.xlsx)
Auditor Response: The assessment team reviewed the updated workbook Oromyia LULUCF GHG Inventory dated 6 April 2021 and confirmed that the emissions associated with swine, both manure management and enteric fermentation have been updated to zero which corresponds to the lack of swine according to the country's agriculture sample survery reports used as input data. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 51 Dated 22 Feb 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 01022021.xlsx, Oromiya Agriculture GHG Inventory.mdb; livestock reports (e.g, AGRICULTURAL SAMPLE SURVEY 2011/12 [2004 E.C.], Volume II, REPORT ON
LIVESTOCK AND LIVESTOCK CHARACTERISTICS
Finding: This finding relates to finding #32 above. The ER Program Requirements states that "ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines." In an email from the program team on 29 September 2020, the source of the livestock activity was clarified. In tracking this livestock activity from the reports (e.g., AGRICULTURAL SAMPLE SURVEY 2011/12 [2004 E.C.]), the assessment team found that only the poultry (indigenous) has been utilized. For example, the 2012 report indicates that there are 18,850,439 head of poultry in total, which includes hybrid, indigenous, and exotic breeds of poultry. However the livestock database used in the IPCC Inventory Tool shows that 18,398,495 head were included, which is corresponds to the indigenous variety. The assessment team requests additional information regarding why only indigenous breeds of livestock were included.
Project Personnel Response: It seems that some of the figures were wrongly transcribed when compiling the GHG Inventory. The values were double-checked against the Agricultural sample survey and the database is now considering the correct values and the Oromia GHG AFOLU Inventory has been updated. The category manure management (including poultry) is now -in average- 2,2% lower than the previous estimation. The IPCC software databse is again submitted to the auditors for their review.
Auditor Response: It is unclear what has changed in the database. The number of poultry used in the IPCC software database for 2012 is still 18,398,495 head which corresponds to the indigenous breed of poultry, and not to the total poultry. However, by only including indigenous breeds, it results in a more conservative estimation of GHG emissions from manure management and enteric fermentation. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 52 Dated 1 Jul 2020
Standard Reference: ER Program Requirements, Sections 4.6.1 and 4.6.2
Document Reference: OFLP- Draft ERPD 10122019 clean
Finding: This row is utilized as a continuation of the project team and assessment team's responses to finding #22 above. It does not represent a new finding.
Project Personnel Response: We would like to clarify hat those 123 plots were not excluded and are part of the database. Removing these plots would not be a good practice as per the GFOI (2018, https://www.reddcompass.org/documents/184/0/ActivityData_Inference_FAQ.pdf/8e93e100-c46b-4ff9-946b-6d0972fd50da#page=26) as it would mean that certain sample units would have a probability inclusion of zero. The best practice is to keep them and improve them which was done via QA/QC procedures implemented by FAO. After the data collection, the whole set of sample units were ploted against a time series set of landsat imagery and identified the sample units with concerns so that they were reviewed. Moreover, the sample units with low confidence were reviewed in order to confirm the data. This process was implemented during the data collection stage, so the final dataset that has been shared already reflects these QA/QC procedures. In any case, it is worth noting that low confidence sample units represent 3.5% of the sample units, and that only 4% of these or 0.13% are related to land use conversions, therefore the impact of extracting the low confidence units would be negligible.
Regarding how the uncertainty was assessed, QA/QC procedures were implemented but these would not be enough in order to address the difficulty of detection of certain types of land use conversion with Landsat 5 or 7 imagery. However, we would like to note that this would mean that less conversions would be detected and that emissions are underestimated making the baseline conservative. Monitoring will be based on higher temporal, spectral and spatial resolution imagery (Sentinel 2 and Planet) so the ability to detect changes during the monitoring period would be higher, so emissions will be more accurate. This means that Emission Reductions related to Land Use conversion will be underestimated since the baseline underestimates and monitoring is accurate. Therefore, we consider that the estimates will be conservative which is a way to compensate the high uncertainty pointed in the finding.
Auditor Response: The audit team reviewed the Low confidence analysis provided in the LULUCF workbook. We confirmed that the 123 low confidence plots were not excluded, but that this approach was rather a means of classifying the plots. We confirmed that including these low confidence plots is in line with the good practices as per the GFOI (section 4.1.4). We also confirmed that the land use change plots with low confidence represent a very small percentage of the total plots, most of which are land remaining land. The assessment team agrees with the analysis that the original issue identified (only 1 image) would reduct the ability to detect changes and thus result in a more conservative baseline estimate. Overall, we conclude that this finding has been adequately addressed and has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 53 Dated 9 Apr 2021
Standard Reference: Guidance on application of IPCC guidelines in the context of the ISFL Emission Reductions (ER) Program Requirements of the BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL)
Document Reference: Oromyia LULUCF GHG Inventory 26032021.xlsx,
Finding: Section 4 on the document "Guidance note on application of IPCC guidelines for subcategories and carbon pools where changes take place over a longer time period" states that "Changes in carbon stocks in dead organic matter shall only be considered for subcategories involving lands converted from Forest Land to any other land-use category (carbon losses) and for lands converted to Forest Land (carbon gains) in accordance with the guidance below. When considering dead organic matter for these subcategories, paragraph 4.2.2 of the ISFL ER Program Requirements shall still be applied to determine the significance of this pool." Later in section 4.1 of this document it states that "Similarly, for lands converted from Forest Land to any other land-use category during the inventory period, the assumption may be made that carbon in dead organic matter pools decreases linearly from the value of mature forests to zero over a specified time period (default = 20 years)." In the LULUCF workbook, sheet 'Land use change -emissions" cell B468, a value of zero is applied for the deadwood emission factor for Natural Forest to mixed annual and perennial cropland, and the guidance note is referenced. The assessment team is issuing this finding as an observation as the error does not result in a material descrepancy as it only affects 1 record of land use change.
Project Personnel Response:
Auditor Response:
Bearing on Material Misstatement or Conformance (M/C/NA):

NIR 54 Dated 12 Apr 2021
Standard Reference: ER Program Requirements, Section 4.1.3
Document Reference: Oromyia LULUCF GHG Inventory 06042021.xlsx
Finding: The ER Program Requirements states that “ISFL ER Programs shall, for the purpose of ISFL Reporting, compile a GHG inventory of all AFOLU categories, subcategories, gases and pools in the Program Area (Program GHG Inventory) utilizing existing data that have been collected using best available methods and approaches that are consistent with the most recent IPCC guidance and guidelines.”In the ERPD (pg 66) states the following: “Losses are not accounted because it is assumed that biomass harvested is zero in young forests, and gains are derived from the WBISPP.” However, in the LULUCF calculation workbook, it appears that biomass harvested from these lands recently converted from cropland/grassland to forestland are being accounted for. For instance, in the “Summary of Emissions” sheet, cells K5-T6 include the addition of emissions from harvested biomass values from the “Emissions in forest” sheet. The losses calculated are also quite high, such that even when grassland is converted to forestland, over the baseline period, this conversion averages as a source (positive value). The high emissions due to biomass harvesting was brought up in finding #28. In fact in your response to that finding it states that “There is a need to collect new reliable information to understand the level of emissions and removals in this land use, estimate it accurately and comply with ISFL quality criteria.” It is unclear whether the inclusion of biomass removals from harvesting on lands converted to forestlands was intended. If so, then the ERPD must be updated to reflect this accounting. If not, then the calculations workbook must be updated to reflect the ERPD.
Project Personnel Response: [This finding was addressed outside the cover of this workbook]
Auditor Response: In an email from the project team on 21 April 2021, the following was stated "We have internally discussed the options and decided to go for option 1: update the calculation workbook. The reasons are obvious and part of them was in your email:

- grassland and cropland converted to forestland signify very young forest, and it is highly improbable to have such harvested volumes
- these harvested volumes were making the categories a net source of emission, where - applying common sense -they should be a net sink
- the quality of harvested volume data is extremely low, as it is a proxy

As a result, the baseline is 11% lower. The harvested volumes represented an emission that is not considered now. So we have lower emissions in the four categories initially selected for the ISFL baseline." The assessment team reviewed the updated workbook "Oromyia LULCF GHG Inventory 21042021.xlsx" and confirmed that the accounting of emissions due to harvesting of biomass on lands converted to forestland have been removed. This finding has been closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

OBS 55 Dated 22 Apr 2021
Standard Reference: ER Program Requirements, Section 4.6.2
Document Reference: Calculations workbooks (e.g., Oromyia LULUCF GHG Inventory 01022021.xlsx; Oromyia LULUCF GHG Inventory 06042021.xlsx)
Finding: Section 4.6.2 of the ER Program Requirements states "ISFL ER Programs shall, to the extent feasible, follow a process of managing and reducing uncertainty in the determination of the Emissions Baseline and the monitoring of Emissions and Removals20." Footnote 20 then states "Good practice requires that bias be prevented wherever possible, such as by using appropriate QA/QC procedures." Throughout the course of this review, the assessment team has uncovered several data management errors such as not updating pivot tables, incorrect cell references, data entry or data referencing errors, inconsistent application of emission factors, etc, which have added to the time required to complete each round of review. These errors would have been avoidable with appropriate database management and QA/QC procedures of the ER Program. The assessment team only highlights this issue as an opportunity of improvement that would likely reduce assessment time and subsequent costs.
Project Personnel Response: According to 4.61. and 4.6.2 of the ISFL requirements, programs shall systematically identify and assess sources of uncertainty and, to the extent feasible, follow a process of managing and reducing uncertainty. However the quantification of the uncertainty in 4.6.3 only relates to the emission reductions. The quantification of the ERs and therefore the uncertainty associated with the ERs will happen in the monitoring report and will be assessed during the verification. So the ERPD template in section 4.5.3 does not ask for a uncertainty calculation.
Auditor Response: This finding does not pertain to the quantification of uncertainty. Rather it pertains to the QA/QC procedures of the program team to reduce errors and uncertainty in the quantification of GHG emissions. This finding was issued as an observation as it is an area for potential improvement and increased efficiency.

Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 56 Dated 22 Apr 2021
Standard Reference: ISFL Emission Reductions (ER) Program Document (PD) Template, Section 1
Document Reference: OFLP- Draft ERPD 10122019 clean.pdf
Finding: Section 1 of the ERPD Template states "The PD should contain the most relevant data and information to assess the ISFL ER Program. Supporting data and information should be presented in specified annexes, when necessary." This section later states "Considering comments received from the public, the Trustee, the World Bank, ISFL Contributors, and the independent third party entity (this assessment will be made public), the ISFL host country will revise the PD for resubmission." Since the start of this assessment, the program has experienced numerous changes including updated to the datasets used, methodologies and procedures applied, subcategories selected, and changes to the quantification of the emission baseline, as documented in the above findings in this workbook. As a result the ERPD no longer corresponds to the latest calculation workbooks that the assessment team has evaluated and found to be free from material error (e.g., Oromyia LULUCF GHG Inventory 21042021.xlsx) and is therefore not in conformance with the requirements of the PD template. The ERPD must therefore be updated to reflect the latest calculation workbooks and any changes to the Program.
Project Personnel Response: The ERPD has been updated with the latest calculation workbook and all the NCRs, NIRs and OBS found during the independent third-party assessment.
Auditor Response: The audit team confirmed that the ERPD has been updated accordingly. This finding is closed.
Bearing on Material Misstatement or Conformance (M/C/NA):

Appendix D: Responses to Contributor Comments

Written comments by the ISFL Contributors were submitted to the audit team prior to the outset of the assessment process. Where relevant, all such comments were taken into due account during the assessment process. The below table provides a brief description, for each comment received, of (1) how the comment was addressed during the assessment process, if said comment was deemed relevant by the assessment team, or (2) if said comment was deemed not relevant by the assessment team, the assessment team's reasons for this determination.

Populate the table below. "Contributor" is the name of the country that submitted the comment (Norway, Germany, etc.). "Comment Type" is the type of comment (as identified by the Contributor), either Major or Minor. In "Text of Comment", insert the verbatim text of the comment. Under "Audit Team Response", provide a brief response to each comment, as specified above. If a response to the comment is effectively provided elsewhere in the assessment report, it is acceptable to provide a brief reference to the location wherein the comment is addressed.

No.	Comment Type	Contributor	Text of Comment	Audit Team Response
1	Major	N/A	• Currently, only five years of total ERPA period will include livestock and agriculture into the baseline. At our last annual meeting (2019) we had discussed inclusion of livestock and agriculture in the second ERPA period. What efforts can be undertaken to include these categories during Phase 2? Does the program plan to measure reductions from these activities in an indicative manner (not for inclusion as part of ER results but to inform stakeholders about the effectiveness of interventions and collect lessons for future activities) • If degradation, livestock, and agriculture are not included in the reference level, how does the program plan to incentivize activities addressing these areas?	The assessment team reviewed the program response and agree that it is not unusual for the program to adapt as reality becomes more apparent. Given the intention to include degradation and livestock in future phases of the program, the concerns of the contributors are addressed

			• Phasing: Can cattle be included earlier that five years in?	
2	Major	N/A	• Out of the 22 programs/projects listed, 10 will seemingly have ended by end of 2020. • Rely heavily on external donors. 316 mill. USD of 1.15 billion is to come from government. Out of these 316 mill. – there is a funding gap (the entire funding gap of program) of 98.5 mill. • The financial plan fails to identify and provide a comprehensive analysis of the options to address the financial gap • What about private sector contributions? • Expect 50 mill in ER sales, mostly to cover institutional and transaction costs of program. They expect ER sales from 2022. Risk of not accomplishing this. Identification of financing risks and proposed measures are missing. • There are quite a few gaps in the financing plan where numbers are lacking. This not only makes it hard to read/follow, but we would expect the financing plan to be more detailed and complete at this point.	The assessment team has review the program response and from professional experience agree that many activities are short lived and may indeed need to be replaced by future activities. As stated earlier in this report, it is the understanding of the assessment team that this gap will be addressed each year as government budgets are updated. It is important to understand from an assessment perspective that realize the potential impacts of the funding gaps cannot be fully understood without the ability to be onsite and test the pulse of the communities impacted by the program activities. The assessment team has reviewed the updated financial plan and agree that the plan has been updated to better understand the impact of these gaps on the financial future of the program. The assessment team suggests that this be revisited on an annual basis in order to understand the true financial gaps once government funding becomes available
3	Major	N/A	• According to the program requirements for BioCF we "Note that while policy measures, monitoring,	The assessment tem has reviewed the program response and agree that the information provided shows that World

			and safeguards should apply to the full jurisdiction, specific on the ground activities may cover only portions of the jurisdiction." • Given that Ethiopian government have had a strong focus on tree planting the last few years, this has been rolled out across the country. • However, for these activities we have no overview of the area this may cover in Oromia and whether safeguards linked to these activities have been carried out. Linked to World Bank safeguards approach, this would be a "Type C activity" that could generate ERs. • We therefore need an overview of what extent these activities have been carried out in Oromia and whether safeguards have been followed. We see this as a key issue that needs to be resolved.	Bank Safeguards have been considered as stated. In addition, the assessment team suggests that in the occurrence of short falls in monitoring, that a random approach to monitoring could be used to ensure that no bias exists in which areas are monitored and therefore reduce the risk of over reporting. As the function of this assessment is to assess to design of the program and therefore cannot speculate on the possibility of the inclusion of changes to the monitoring protocols into the future. Finally, in the absence of going on site, the assessment team can only rely on the assertions of the World Bank and program teams to ensure conformance to the program rules governing monitoring.
4	Major	N/A	•Given that there are forest areas outside OFLP, but that are on the border, would communities living in overlap areas be able to make use of the FGRM? If not, how will we ensure these communities are also covered by safeguards?	The assessment team has a suite of experience working with AFOLU and agree that the sharing of program information is not likely to exist only in the program area. In addition, given that the GGRM is based on the suite of grievance mechanisms included in the program, including local, regional, and national systems, that the FGRM would be extended outside the borders of the program.

5	Major	N/A	• More information is needed on addressing demand side factors. • The success in producing ERs from what are primarily supply-side interventions, relies a lot on demand drivers remaining constant over time. The draft does not convincingly identify how the interventions will produce long term emissions reductions based on the evidence outline so far. Perverse incentives due to an inherent moral hazard issues may render all these supply side interventions ineffective. For example, reforestation/afforestation/restoration projects are being implemented to address demand for wood fuel and timber, the draft doesn't address the underlying climate change issue here and leaves to question whether this intervention may prove to fuel future demand. Similar issue with cattle production, increasing efficiency may worsen emissions if demand for cattle produce isn't mitigated properly.	The assessment team agrees that the analysis of demographic changes in the future are an important factor in understanding demand side factors. The analysis provided is sufficient in design, however the uncertainties surrounding the changes cannot be assessed at this time by the assessment team. Therefore, the assessment team suggests that this be re-assessed during the verification phase of this process. With respect to afforestation and reforestation efforts, it is important to realize that reductions are based on long term stock averages, so that timber output will be accurately accounted for in the program calculations. Furthermore, the increased soil carbon associated with forested landscapes when compared with agriculture should not be affected by demand side factors.
6	Major	N/A	• Ability to transfer rights to ERs.	As the ability to transfer ER rights falls under the purview of the World Bank due diligence and the assessment team is tasked with assessing these criteria only on a prima facia level. That being said, the assessment team agrees that the analysis provided to understand these abilities is sufficient for

				understanding the process of the program design.
7	Major	N/A	• "A web-based registry system has been developed with technical support of the FAO and the Bale REDD+ information has been uploaded at this stage; however, the registry is not operational and will not be used for the OFLP." o Why is the registry not operational? And why will it not be used? o Is there a need for a new registry? Or will the bank registry be used? • …"one centralized national web-based registry system at EFCCC." Is this the same as the FMIS? Where will this be placed? And what are timelines for it to be operational?	It is the understanding of the assessment team the World Bank Registry will be employed and shall be re-assessed once the registry is officially in use.
8	Major	N/A	•Existence of functioning registry (it's not clear why the web-based registry isn't being used?)	The assessment team agrees that the information provided in response to the contributor feedback address the concern raised here.