# Using Scientific Integrity to Combat Greenwashing and Meet Growing Voluntary and Regulatory Requirements

Christie Pollet-Young, Vice President, Climate

Heather Rosa, Program Manager, Energy, Industry and Agriculture Offsets

Alexa Dugan, Technical Manager, Nature-Based Solutions Offsets

SCSglobal SERVICES 40 CELEBRATING FORTY YEARS

# Agenda

- 40 years of SCS Global Services!

- Regulatory and Voluntary Landscapes

- Combating Greenwashing: the Importance of High-Quality Verification

- Verification: GHG Emissions Inventory

- Verification: Carbon Offset

- Robust Verification Process

- Other Science-based Approaches

**SCSglobal** SERVICES
*Setting the standard for sustainability*

# About SCS Global Services

International leader in third-party sustainability certification, testing, and standards development

**30,000+**
Certifications in 125 countries

**15,000+**
Clients – Corporate, Government, NGOs

**40 Years**
Sustainability Leadership

**Auditors**
Every major market

**B Corp**
Benefiting People and the Environment

# Key Services



## Green Building and Consumer Products

- Apparel, Fabrics and Textiles
- Biobased Products
- Environmental Product Declarations
- Flooring and Carpet
- Furniture
- Health Product Declarations
- Indoor Air Quality
- Jewelry
- Material Transparency
- Metals and Mining
- Paints and Adhesives
- Plastic Waste Reduction
- Recycled Content
- Sustainable Supply Chains
- Wall and Ceiling Coverings

## Food & Agriculture

- Better Bee Certified
- Certified Sustainably Grown
- Cut Flowers & Horticulture
- Equitable Food Initiative
- Fair Trade USA
- Food Safety Training/Certification
- Gluten-Free
- Non-GMO
- Organic
- Pesticide Residue Free
- Plant-Based
- Rainforest Alliance
- Regenerative Organic Certified
- Responsible Sourcing
- SMETA Audits

## Natural Resources & Energy

- Aquaculture Stewardship Council (ASC)
- Biofuels
- Carbon Offset Verification
- Fiber Sourcing
- Responsible Forestry (FSC, SFI)
- Forest Products Chain of Custody
- ISCC EU and ISCC Plus
- Low Carbon Fuel Standard
- Marine Stewardship Council (MSC)
- Responsibly Sourced Palm Oil
- Timber Legality
- Water Stewardship Programs

## Corporate Sustainability

- Amazon Technical Services
- Amazon Pledge Friendly
- Amazon Compact By Design
- Carbon Footprint
- Carbon Offset
- Carbon Neutral
- Green Retail Consulting
- Life Cycle Assessment
- Responsible Sourcing Strategies
- Sustainable Supply Chains
- Sustainability Report Assurance
- Zero Waste Project & Facility

4

# Driven by Science

SCS stands for Scientific Certification Systems. Our work is firmly rooted in scientific integrity

- SCS upholds the pillar of quality, ensuring climate change solutions that are

  - Transformative
  - Innovative
  - Scalable

- Public Comments, Peer Review and Stakeholder feedback is welcome—It's the scientific method to iterate and refine testing

# Why is science-based verification important?

Comply with government requirements

Meet purchaser specifications

Stand out in your market

Add value to your products

Demonstrate environmental and social achievements

Satisfy UN Sustainable Development Goal (SDG) targets

6

# Enabling Transparency and Accuracy

SCS clients make accurate science-based claims

## CERTIFICATION

SCS validates a wide variety of environmental, social compliance, and sustainability claims. Each certified claim is accompanied by supportive language and our Kingfisher certification mark or other approved scheme logo.

## TECHNICAL GUIDANCE

SCS offers technical guidance to clients, helping them communicate their claims in an accurate, measured manner.
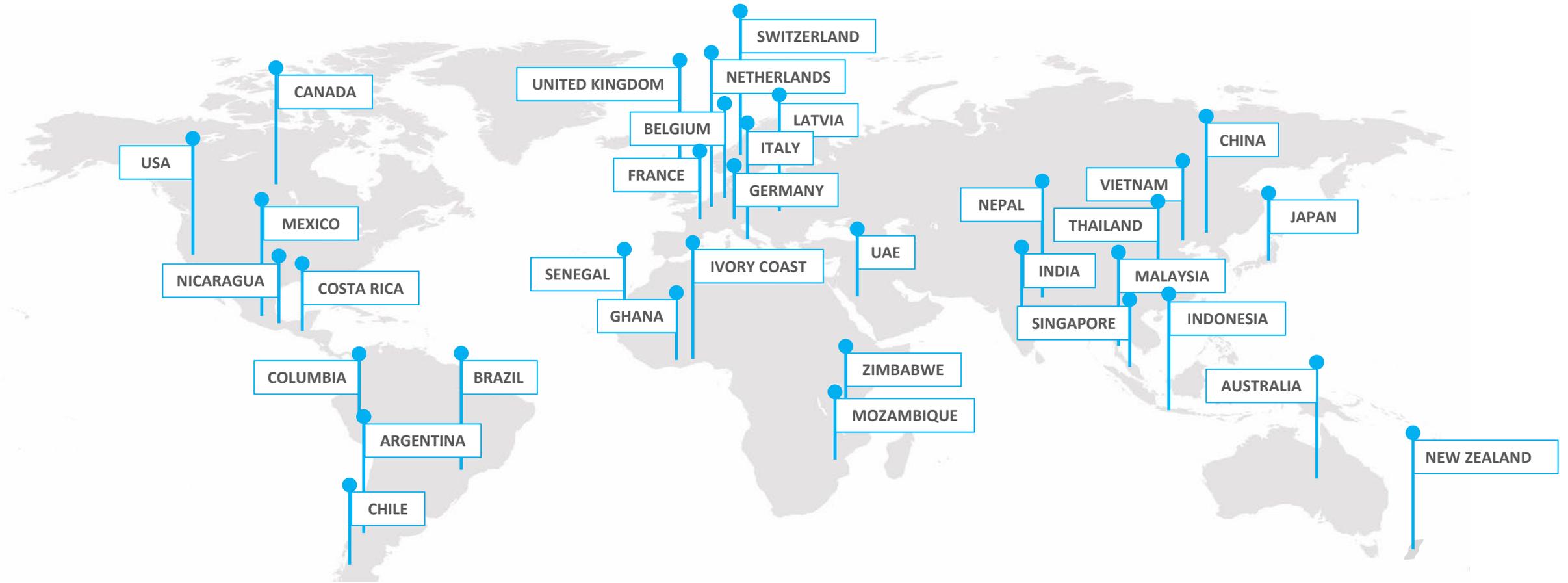
## SUPPLY CHAIN

SCS provides supply chain services to retailers and brands seeking to substantiate the claims of their suppliers.

## EDUCATION

SCS communicates and informs on the importance of making responsible market claims to separate fact from fiction and incentivize continued improvement.

# SCS Global Presence



CANADA

SWITZERLAND

UNITED KINGDOM

NETHERLANDS

USA

BELGIUM

LATVIA

ITALY

FRANCE

CHINA

GERMANY

MEXICO

VIETNAM

NEPAL

JAPAN

THAILAND

NICARAGUA

COSTA RICA

SENEGAL

IVORY COAST

UAE

INDIA

MALAYSIA

GHANA

SINGAPORE

INDONESIA

COLUMBIA

BRAZIL

ZIMBABWE

AUSTRALIA

ARGENTINA

MOZAMBIQUE

NEW ZEALAND

CHILE

SCSglobal
SERVICES
CELEBRATING FORTY YEARS

8

# The Regulatory Landscape is Evolving

- SEC: Climate risk reporting in 2025 + Emissions reporting in 2026

- European Union
  - Corporate Sustainability Reporting Directive and European Sustainability Reporting Standards: Scopes 1, 2, 3

- California
  - SB 253: Scopes 1, 2 in 2026 and Scope 3 in 2027
  - SB 261: Climate-related financial risk
  - AB 1305: Net-zero and Carbon Neutral claims which may include carbon Offsets
  - SB 1036: remove nature-based offsets (introduced)

# The Voluntary Landscape is Evolving

## Integrity Council for the Voluntary Carbon Market

Core Carbon Principles

**Emissions Impact**
- Additionality
- Permanence
- Robust quantification of emissions reductions and removals
- No double counting

**Governance**
- Effective governance
- Tracking
- Transparency
- Robust Independent third-party validation and verification

**Sustainable Development**
- Sustainable Development benefits and safeguards
- Contribution to net zero transition

# GHG Emission Inventory Verification

Robust Evaluation of Entity Emissions Reporting

- Approved Verification Body for Voluntary and Regulatory Reporting

- Mandatory reporting for California and Washington for emitters of 10,000 metric tons of CO2e

- Mandatory reporting in 2027 of International Flight emissions to the ICAO

# Sample Clients
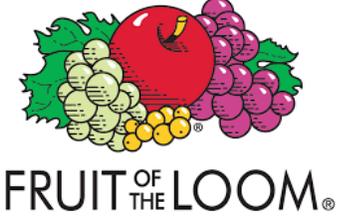
# Carbon Offset Verification

International leader in third-party carbon offset project validation and verification

- World's leading verifier of forest carbon offsets

- Verified greater than 380 million tons of offsets

- ISO-Accredited VVB since 2009

- Best-in-class network of experts globally

- Voted Best Verification Body several times by Environmental Finance

# Registries and Schemes

# Sample Clients

# SCS Verified Carbon Offset Projects



**MAP LEGEND**

- Afforestation or Reforestation
- Avoided Conversion
- Blue Carbon
- Conservation-Based Forest Management
- Electric Vehicle
- Grasslands
- Improved Forest Management
- Landfill Methane
- Ozone-Depleting Substances
- Reduced Emissions from Deforestation and Forest Degradation
- Sustainable Agricultural Land Management

SCSglobal SERVICES

CELEBRATING FORTY YEARS

16

# Non-Forestry Carbon Offset Project Types

| | | |
|---|---|---|
| �🏡 | **Agriculture and Other Land Use** | Grasslands, Blue Carbon, Regenerative Agriculture, and Livestock |
| 🔥 | **Industrial Processes** | Mine Methane Capture, Refrigerants, Landfills, Plastic Waste, and ODS Destruction |
| � | **Energy** | Electric Vehicles, Energy Efficiency |

# Forestry Carbon Offset Project Types

| | | |
|---|---|---|
| 🪵 | **Improved Forest Management (IFM)** | - Reduced harvesting, extended rotations, conservation. |

| | | |
|---|---|---|
| 🌲 | **Reducing Emissions from Deforestation and Degradation (REDD)** | - Planned & unplanned deforestation, enforcement & surveillance, alternative livelihood. |

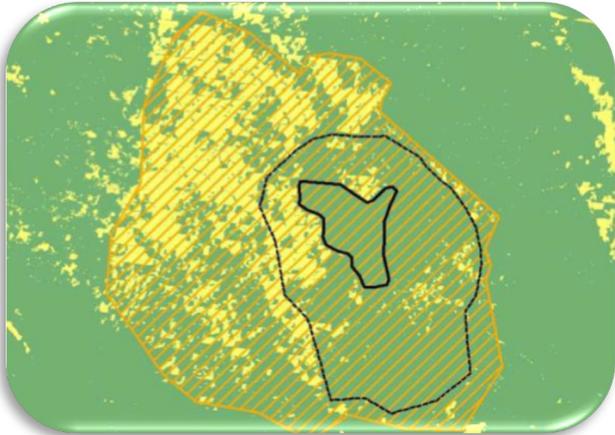| | | |
|---|---|---|
| 🌱 | **Afforestation, Reforestation & Revegetation (ARR)** | - Tree planting, mangrove restoration, agroforestry |

# Carbon Offset Audit Process



19

# Carbon Offset Audit Process – Desk Review

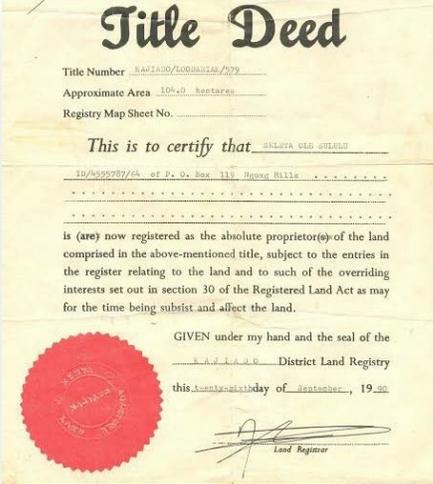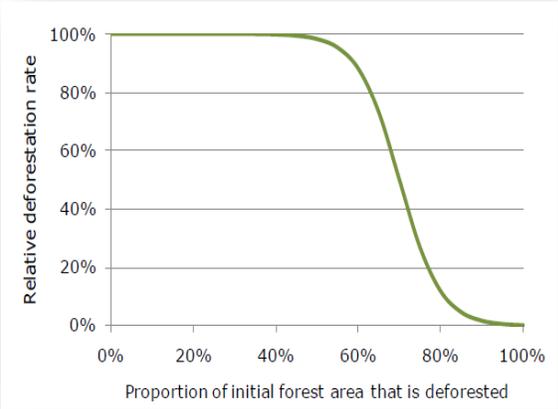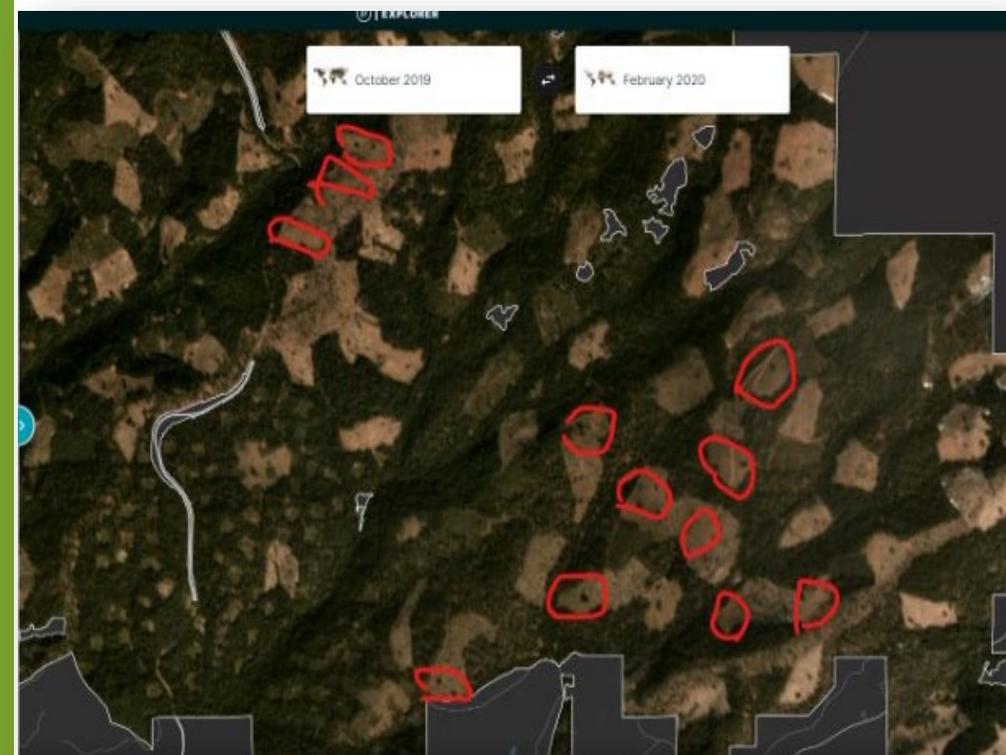**Spatial Checks**

**Modeling & Quantification Checks**

**Document Review**

# Carbon Offset Audit Process – Desk Review



**Spatial Checks**

- Project boundaries
- Disturbances & harvesting
- Land use and land cover change
- Forest inventory plots
- Forest stratification

21

# Carbon Offset Audit Process – Desk Review

## Modeling & Quantification Checks

- Growth and yield modeling
- Land use change and risk modeling
- Recalculation of methodology equations
- Application of allometric equations
- Evaluation of model and quantification assumptions
- Quantification of uncertainty

FVS
Forest Vegetation Simulator
Forest Management Service Center

```python
    return W

def aggregatePlots(measures):
    grouped = measures.groupby(['plotnum'])
    biomass = grouped.apply(
            lambda x: np.sum(x['Biomass']/x['SizeClassArea'])*10000/1000
            ).to_frame(name='tCO2Ha')
    return grouped.agg({'ForestCode':lambda x: x.mode()}).join(biomass)


def getForestPlotsLahiruJune2023(filename, sheetname):
    measures = pd.read_excel(filename, sheet_name=sheetname)
    """
    measures.columns = ["No", "Team leader name", "Recorder Name", "Zone No.", "
                        "Location name", "Forest type", "GPS No.", "X", "Y", "Da
                        "Start time", "End time", "Tree species local name", "Tr
                        "Khmer name Eng", "Common Name English", "Scientific nam
                        "Photo N", "Photo E", "Photo S", "Photo W", "photographe
    """
```

$$CE_{transition}(CS1 \to CS2) = \frac{\sqrt{\sum_o \left(HWCI(OM_o(CS1))^2 + HWCI(OM_o(CS2))^2\right)}}{\left|\sum_o OM_o(CS2) - \sum_o OM_o(CS1)\right|}$$

|  | Cons#1 | Cons#2 | San Regis | Total |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
|  | 6,348.86 | 1,578.11 | 1,406.20 | 9,333.17 |  |  |  |  |

ing in Year 1

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
|  | Stock after | Emissions -> |  |  |  |  |  |  |
| Dead wood slash and residual damage (tC) | 158,773 | 15,877 | 15,877 | 15,877 | 15,877 | 15,877 | 15,877 | 15,877 |
| Dead wood infrastructure (tC) | 65,121 | 6,512 | 6,512 | 6,512 | 6,512 | 6,512 | 6,512 | 6,512 |
| Wood waste from logs (tC) | 20,050 |  |  |  |  |  |  |  |
| Long-lived wood products (tC) | 19,719 | 986 | 986 | 986 | 986 | 986 | 986 | 986 |
| Forest regrowth (tC) | - 9,490 | - 9,490 | - 9,490 | - 9,490 | - 9,490 | - 9,490 | - 9,490 | - 9,490 |
| Total net C emission Logging Year 1 | 33,935 | 13,885 | 13,885 | 13,885 | 13,885 | 13,885 | 13,885 | 13,885 |

|  | Cons#1 | Cons#2 | San Regis | Total |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
| Year 2 Areas to be logged | 8,513.79 | 1,532.03 | 1,456.26 | 11,502.08 |  |  |  |  |

Carbon stock changes from Logging in Year 2

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
|  | Stock after | Emissions -> |  |  |  |  |  |  |
| Dead wood slash and residual damage (tC) | 195,670 | 19,567 | 19,567 | 19,567 | 19,567 | 19,567 | 19,567 | 19,567 |
| Dead wood infrastructure (tC) | 80,254 | 8,025 | 8,025 | 8,025 | 8,025 | 8,025 | 8,025 | 8,025 |
| Wood waste from logs (tC) | 24,709 |  |  |  |  |  |  |  |
| Long-lived wood products (tC) | 24,302 | 986 | 986 | 986 | 986 | 986 | 986 | 986 |
| Forest regrowth (tC) | - 11,696 | - 11,696 | - 11,696 | - 11,696 | - 11,696 | - 11,696 | - 11,696 |  |

Chart legend:
- LARCH PLANTED
- PINE PLANTED
- SPRUCE PLANTED
- HE_RS HERB
- SPR_FIR HERB
- SPR_FIR PCT

# Carbon Offset Audit Process – Desk Review

**Document Review**

- Ownership checks
- Regulatory compliance checks
- Legal agreements
- Certification checks
- Additionality & baseline assumptions
- Financial checks
- Non-Permanence Risk Assessments

# Carbon Offset Audit Process

# Carbon Offset Audit Process – Site Visit



**On-site
Document Review**



**Field Measurements
& Observations**



**Stakeholder
Interviews**

# Carbon Offset Audit Process – Site Visit



**Field Measurements & Observations**

- Project area boundaries
- Plot locations
- Forest inventory (tree measurements)
- Drivers of deforestation
- Land use and land cover change
- Project activities
- Baseline scenario

26

# Carbon Offset Audit Process – Site Visit

**Stakeholder Interviews**

- Government officials
- Local communities
- Forest inventory team
- Project employees
- Forest rangers
- Project partners
- Non-profit organizations

# Carbon Offset Audit Process – Site Visit



Live Tree and Palm Datasheet (5 sheets per plot, page 1 of 5)

| Project ID | Plot ID | GPS serial number |
|---|---|---|
| BMF and #1326 REDD+ | 02 | #1 |

☐ There are no trees with a DBH greater than or equal to 5 cm in this plot
☐ There are no palms greater than 0.3 m in height in this plot

| Species | DBH (cm) | Tree Tag # if found | Height if Palm |
|---|---|---|---|
| unknown #1 | 34.5 | 577 | – |
| unknown #1 | 20.8 | 578 | – |
| cedrillo | 5.5 | | |
| give & take | 5.3 | | |
| give & take | 5. | | |
| white my body | 9. | | |
| Zapatillo hoja ancha | 31.6 | | |
| Cedrillo | 7.7 | | |
| give & take | 6.0 | | |
| | 7. | | |

## On-site Document Review

- Official government records (harvests, agreements)
- Financial records including receipts and invoices.
- Data collection/monitoring sheets
- Informational documentation provided to stakeholders
- Technical meetings with project team



28

# Carbon Offset Audit Process



29

# Carbon Offset Audit Process – Findings

**NIR 29 Dated 24 Dec 2020**
**Standard Reference:** VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest
**Document Reference:** Project Description.pdf; section 1.14
**Finding:** Section 1.14 of the PD template requires "Identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks." Section 1.14 of the PD states "Green Gold Forestry is fully compliant with all the relevant regulations. This is demonstrated by the fact that there are no outstanding issues with the Government regulators (OSINFOR). The company's FSC certification is further evidence that it is fully compliant."

The audit team reviewed relevant Peruvian law along with the concession contracts (e.g. Tacsha 01, Tacsha 02.pdf) and approved PGMFs (e.g., RJ-004-2020-GRL-GGR-GRDFFS-ODPM), provided to the audit team. The Forestry and Wildlife Law No.29763 (Article 52) states "The holders of forest concessions include, in their management plans or in complementary plans, the carrying out of any forest and wildlife activity compatible with the corresponding zoning or management category." Additionally, Article 42(e) of this law states that the holders of titles to forest concessions have the right to "Sell or give in guarantee the fruits, products or subproducts, present or future, that are in the approved management plan."

Section 2.2. of the PGMF (PGMF_GGF_2018_009.pdf) provided for the concession N° 16-LOR-MAY/CON-MAD-2018-009 indicates that this concession has been approved for 3 specific objectives (indicated by X's next to each objective): (1) Use of wood for processing outside the UMF, (2) Use of waste product of the transformation in the UMF (firewood, coal, broomstick, among others), (3) Use of residues from harvesting (branches, fins, stumps, among others). There are several other potential approval categories that were not checked, including the use of nontimber products, management for conservation purposes, management for ecotourism purposes, ecosystem services, etc. As a result, it appears that the management plan corresponding to this concession contract does not permit the use of the concession for project activities (non-timber products, conservation, ecotourism).

The audit team understands that this PGMF precedes the start of the project, however, it remains unclear whether the implementation of project activities will be in legal compliance. The audit team intends to discuss this topic in greater detail with the appropriate regional officials (Loreto Gore) and/or national officials (SERFOR). However, we would also like to request additional evidence or justification from the project team supporting that the implementation of project activities is in compliance with these requirements of the Peruvian Forestry and Wildlife Law No.29763.
**Project Personnel Response:** We are in the process of adapting the plan for the Carbon Project. The main difference will be that we will additionally employ Forest Rangers who will have a continual presence in the whole area of the project. They will not act as "policemen" but will have the responsibility of continuous interaction with the communities gathering information and informing about the project. They will install and maintain the physical notices we have around the project and be part of a permanent interaction with the local communities and stakeholders. If there are signs of illegal intensions or activity the Rangers will report back according to our protocol and action will be taken.

**Auditor Response:** The response to this finding does not seem to totally relate to the finding. The finding pertains to whether the project is in compliance with the Peruvian Forestry law. Forestry and Wildlife Law No.29763 (Article 52) requires that "The holders of forest concessions include, in their management plans or in complementary plans, the carrying out of any forest and wildlife activity compatible with the corresponding zoning or management category." This finding has been responded to through email correspondence: on 25 February 2021, the project team sent 4 PGMFs, 3 of which are recent updates to previous approved plans. These three plans now show that ecosystem services and nontimber forest products are includes in the management objectives. However the plans still indicate that there will be harvesting in the project areas, which is not in conformance with the methodology. However, the project team has indicated that there is no intention to carry out harvesting (according to email on 1 March 2021). Thus, the management plans do not correspond to the management that is taking place under the project activities, which is not in compliance with legal Timber forest Concession agreements.

In an email dated 3 March 2021, the project team stated "We did not want to eliminate the logging intention whilst we are validating for the simple reason that if we do not achieve validation we need the option to go back to logging." And we certainly understand not wanting to get locked into an agreement to cease harvesting, if the validation would not be successful.

At the time of validation we, the audit team, must be able to confirm that the project activities will be compliance with Peruvian laws. The issue at hand is that we have not been able to confirm that even if and when the project proponent updates the PGMFs to indicate there will be no harvesting in the concessions in the project area, that these management plans will be approved by SERFOR and/or the regional government and be in compliance with the legal requirements of timber concession contracts. At this time, we have received no indication that SERFOR or GERFOR would even approve such alterations to the management plans to cease harvesting. By ceasing logging operations, the essence of those concession contracts is changed, and the contracts could be potentially denaturalized and returned back to the state. This is a point that was made by the GERFOR representatives we spoke to (Hilda). GGF's own legal analysis conducted by Baker & McKenzie (section 7.8 of GGF Peru Echecopar concessions legal status Baker McKenzie.pdf) confirms that "GGF can exploit ecosystem services within the area of the concession, but it cannot avoid the forestry harvesting activities nor eliminate them." Section 7.9 further indicates the need to have SERFOR and GERFOR, the governing bodies of the concession contracts, to be in agreement with these changes.

Thus in order for us to move forward, the audit team requests:
(1)     Written documentation by the relevant governing bodies that ceasing all timber harvest operations within individual concessions is possible, that such amendments to management plans or the concession agreements themselves would be approved. As your legal analysis states "Indeed, SERFOR is the governing authority in forestry matters; hence, it's support is key to the approach the Regional Government of Loreto."
(2)     It has become apparent that this could have implications on the start date of the project, thus we request evidence that such approval (mentioned in item 1 above) could be applied retroactively to the start of the project. As it currently stands the approved PGMFs and corresponding POAs indicate that timber harvesting will occur in the project area both on and after the start date of the project.
**Project Personnel Response 2:** [Response provided outside the cover of this workbook.]

30

# Carbon Offset Audit Process
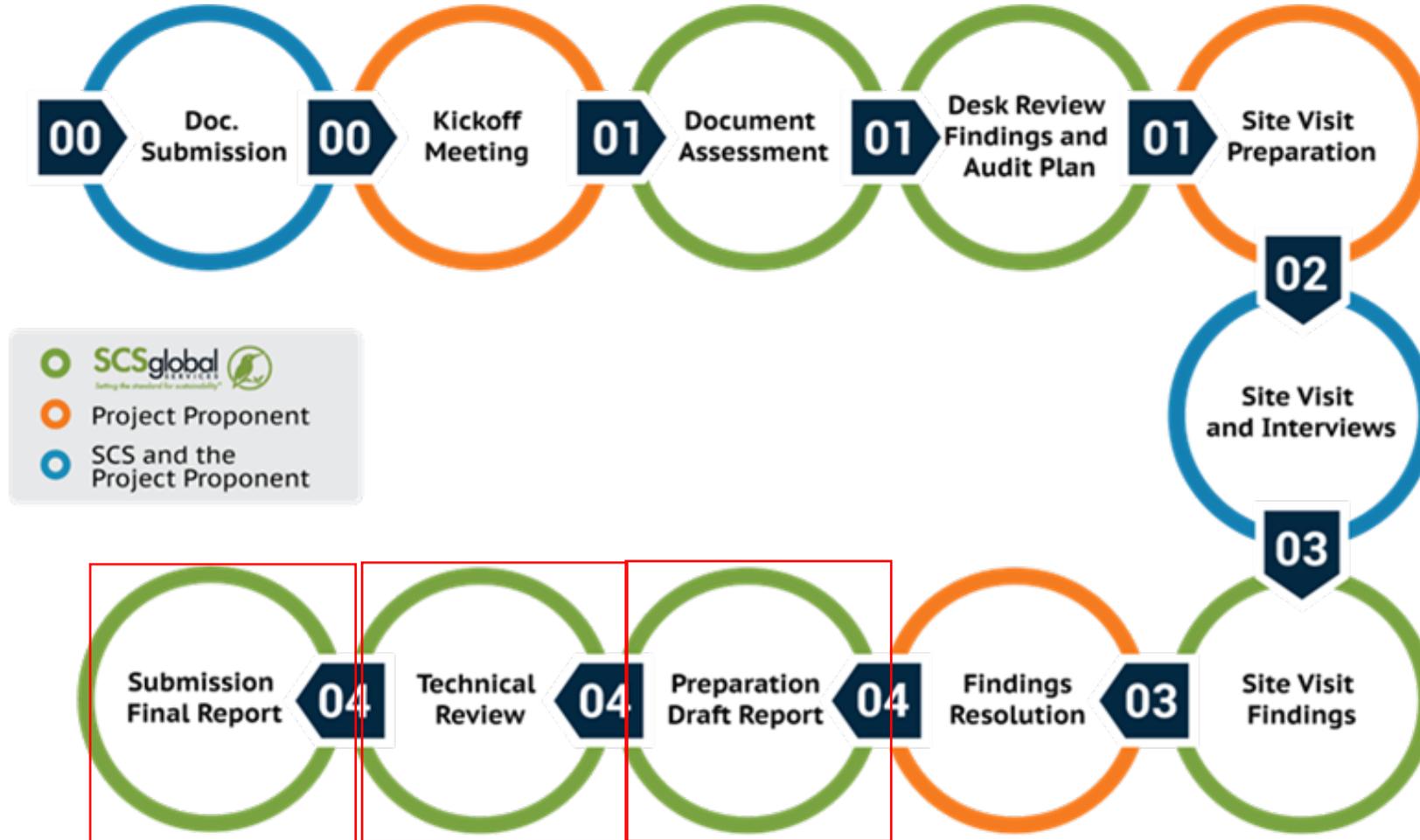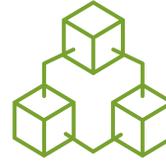
# Lessons Learned: What is the future of carbon offsets?

**Government and Corporate Leadership**

**Scaling, Transforming, and Innovating with Quality**

**Insistence on Impact, Improvement, and Integrity**

**Raising the Price of Carbon**

# The SCS Institutional Network

**SCSglobal** SERVICES

Certification, Verification, and Auditing

**SCSstandards**

Sustainability-Based Standards Development

**SCSconsulting** SERVICES℠

Sustainable Business Solutions

**GLOBAL HEAT REDUCTION INITIATIVE™**

Slowing Global Warming with Full Climate Accounting

# SCS: Rooted in Science

SCS stands for Scientific Certification Systems. Our work is firmly rooted in the latest developments in peer-reviewed science.

### GHG Inventories

- Scopes 1, 2 and 3
- Training
- Reduction Strategies

### Science-Based Targets

To limit global warming to 1.5°C (2.7°F) and prevent worst effects of climate change

### CDP

Corporate reporting of Climate, Plastics, Forests, Water

### Carbon Neutral

- Entities
- Products
- Events

### Product Footprint

- Supply chain ESG reporting
- CBAM
- Software tools available

# The SCS Institutional Network

**SCSglobal** SERVICES

Certification, Verification, and Auditing

**SCSstandards**

Sustainability-Based Standards Development

**SCSconsulting** SERVICES℠

Sustainable Business Solutions

**GLOBAL HEAT REDUCTION INITIATIVE™**

Slowing Global Warming with Full Climate Accounting

*SCS stands for Scientific Certification Systems*

35

# Global Heat Reduction Initiative

- New climate accounting approach, based on peer-reviewed, IPCC science
- Measure *all* drivers of global warming over any period of time
- Not all atmospheric heat drivers are equal
  - ~45% of anthropogenic global warming is caused by methane, black carbon, tropospheric ozone and hydrofluorocarbons
  - With SLCP, more potent in the near term

Global Heat Reduction Initiative will enable us to measure, manage and invest in what matters most over the next 10 years to build a bridge to net zero by 2050.

Coming soon to **heatreduction.com**



**GLOBAL HEAT REDUCTION INITIATIVE™**

**THANK YOU**

**Christie Pollet-Young**
*Vice President, Climate Division*
cpollet-young@scsglobalservices.com

**Heather Rosa**
*Program Manager, Climate Division*
hrosa@scsglobalservices.com

**Alexa Dugan**
*Technical Manager, Climate Division*
adugan@scsglobalservices.com

**Visit our website for more information:**
http://www.scsglobalservices.com/