South Asia Webinar - December 22, 2022
14.00 IST, SLT; 14.30 BST; 14.15 NST

Reflections after COP27
Eco-Village Development,
Climate Mitigation & Development

Eco-Village Development (EVD) and climate mitigation, EVD solutions' contributions to reduce emissions. What are opportunities for earning climate credits with EVD solutions?

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INFORSE-South ASIA

International Network for Sustainable Energy

ecovillagedevelopment.net

SUPPORTED BY:

How Eco Village Development (EVD) can help in

the race against the climate crisis

- Prime Focus on solution for needs of the communities unlike technologies developed for mitigation and adaptation and then trying to see for additionality or co-benefits
  - **which focuses** on local people (***people who need it the most)***, especially **women, poor, marginalized**, and **weaker sections**
  - of **eco-friendly, low carbon, green technologies** *within villages.*
  - which can be **easily implemented** and replicated.
  - that **helps** in **mitigation of climate impact** or adaptation of new solutions to **build climate resilience.**
  - Covers **energy, water, agriculture, livestock, fodder, food processing (drying)**
  - Provides **sustainable livelihood** by **income generation – dryer, kitchen garden, etc.**
  - **Many solutions use local resources specially Bamboo in place of bricks which use clay and coal/ wood**

Advantage of Bamboo

- **Drawdown CO2**
- **Environment restoration**
- **Soil rejuvenation**
- **Reforestation and erosion control**
- **Moisture conservation**
- **Adding source of income for farmers and women**
- **Improves the local and surrounding environment**

Environment and Social Impact

- **Increased climate resilience, mitigation and adaptation**
- **Reduction of GHG emissions and pollution.**
- **Conservation of water and soil.**
- **Improved soil health .**
- **Carbon sequestration.**
- **Enhanced income of poor communities.**
- **Clean kitchen Improved health of women and children and reduced drudgery.**

Low carbon, Climate Resilient Eco-Village Development in South Asia Since 2015

Rolled out NextGen EVD project in July 2020 for village-based, local, low-carbon development **in four South Asian countries :**

- **INSEDA** – India
- **CRT** - Nepal
- **Grameen Shakti** – Bangladesh
- **IDEA** – Sri Lanka
- **INFORSE-South Asia -** Regional
- **CANSA** – Regional

- **With programme management support by DIB Denmark and**
- **Technical Support by INFORSE**

Support by CISU, Denmark

South Asia Webinar 22-12-22: ***Reflections after the UN Climate COP27- Eco-Village Development, Climate Mitigation and Development***

EVD Solutions in India – INSEDA, India


Bamboo reinforced Biogas – Gremmenbandu


Bamboo reinforced Rainwater Harvesting


Solar Poly Green House – Bamboo frame

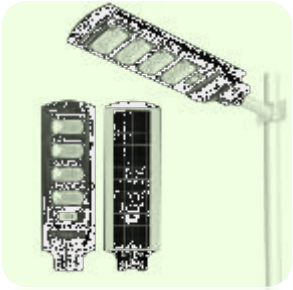

Solar Tunnel Dryer – Bamboo frame

Bamboo house/ shelter

Bamboo Compost Basket

Vermi-compost

Organic Kitchen Garden




Solar Street light and lantern

Day-night Solar cooker with battery


HEERA Hybrid and JWALA Improved Cookstove

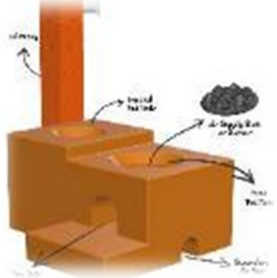
Energy plantation, horticulture, bamboo, household forestry

EVD Solutions in Nepal - Centre for Rural Technology, Nepal

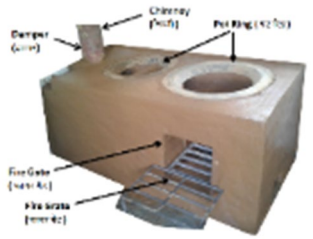
Hydraulic Ram Pump (Hydram)

Improved Water Mill (IWM)

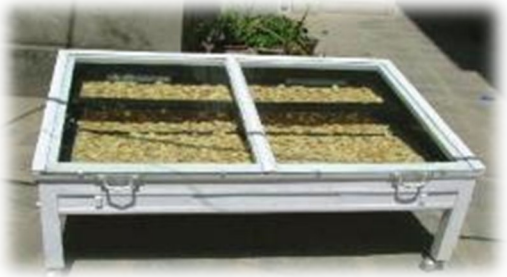
SF2 Solar Water pumps



Matribhumi Improved Cook Stove (M-ICS)



Improved Institutional Cook Stove



Cabinet Solar Dryer

Rooftop Rainwater Harvesting

Vermi composting

Homebiogas

Greenhouse Tunnel with drip irrigation

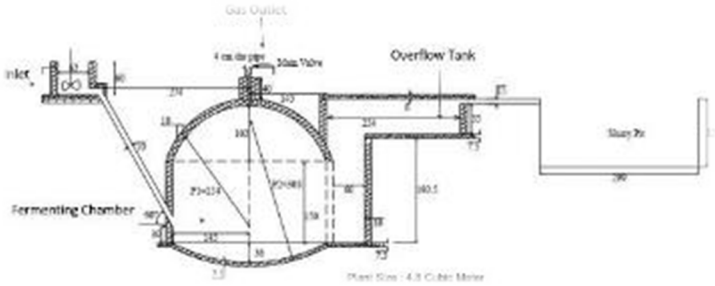
High-value Tree plantation

Induction Cook Stove

Renewable water lifting system

EVD Solutions in Bangladesh - Grameen Shakti, Bangladesh

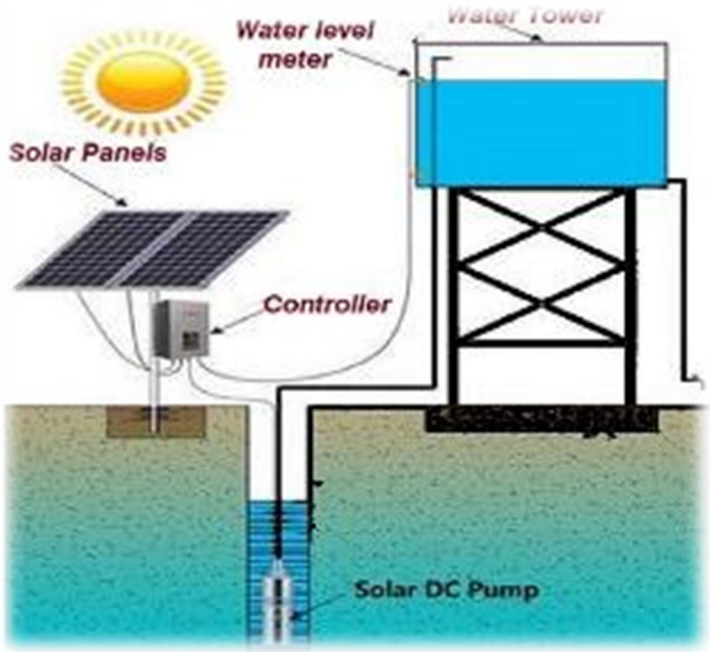
Grameen Shakti



Household Biogas Plant

Solar Home System

Bamboo reinforced Slurry Pit



Solar water pump

Solar Street Light

Retained Heat Cooker

Improved cookstove (single Burner, with chimney)

Rainwater Harvesting System

Kitchen garden

Solar System for village shop

EVD Solutions in Sri Lanka – IDEA, Sri Lanka

Anagi- Improved Biomass Stove

Movable and sunken type institutional stove

Roof rainwater harvesting.

Non portable Bio-mass dryer

Improved Kitchens

Movable Institutional Biomass stove with Chimney

Mushroom cultivation

Composting

Home gardening and sustainable paddy farming

Improvement in brickmaking

EVD Model - an integrated development approach to help reducing emissions and to provide social benefits

Huge potential to reduce GHG emissions using local solutions as 60% to 80% population is in rural areas in four countries

Improved Cookstove –150 million families in India can save

- **100 Mt** firewood and **150 M t CO_2** per year

Biogas - 75 m BGP (2cum) from 300 million bovine population

- Can save at least **200 Mt of firewood** and **300 M t CO_2 Per year**

Rooftop rainwater harvesting

- 150 m families in India **can save 1.5 b cum water**

Solar Home System

- the 6 m SHSs have reduced GHG emissions by 10 M **t CO_2 per year**.

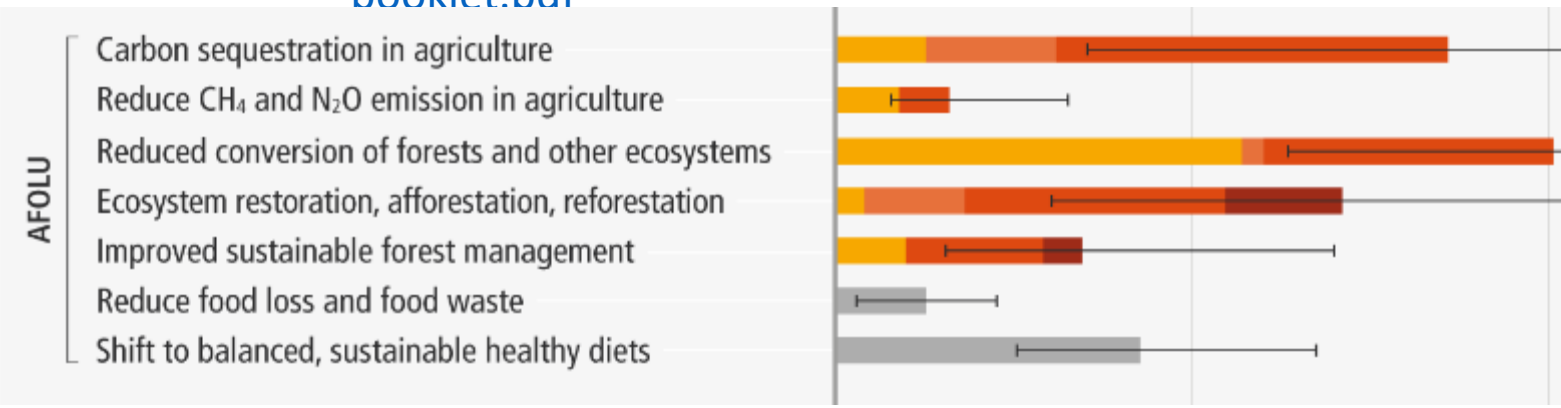
Induction cookstoves

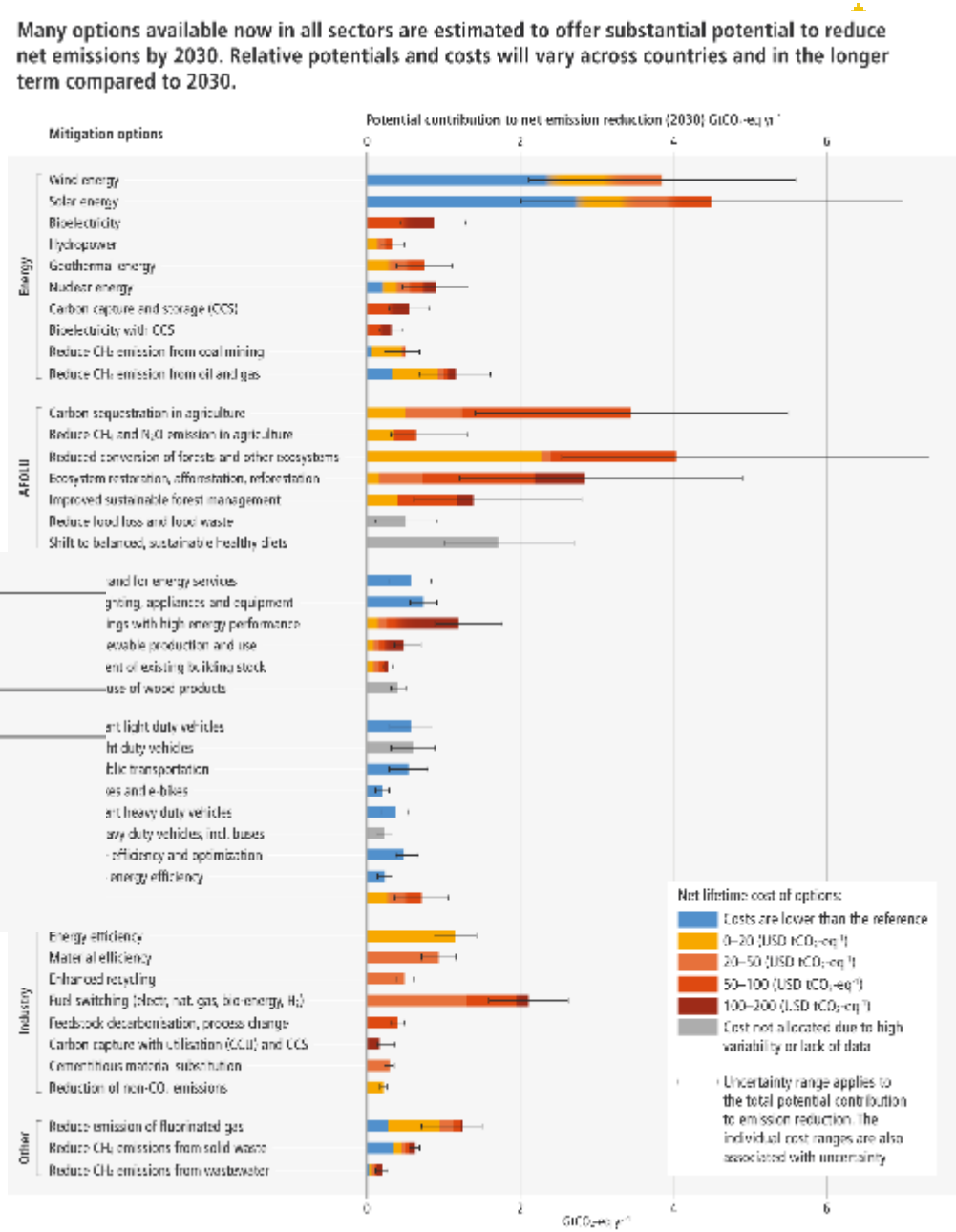
- 25% (1.5 m) households in Nepal can use electric cooking by 2030, saving GHG

Anagi cookstove

- There is potential of installation of at least 1.5 m anagi stoves in Sri Lanka

- We need to enhance focus on other solutions like AFOLU (Agriculture, Forestry and Land Use) – These could be soil and water conservation, low carbon agriculture where we need to build capacity of partners .
- For carbon credit projects we need to select specific solutions and plan for implementation in large numbers
- https://cdm.unfccc.int/methodologies/documentation/methbooklet.pdf



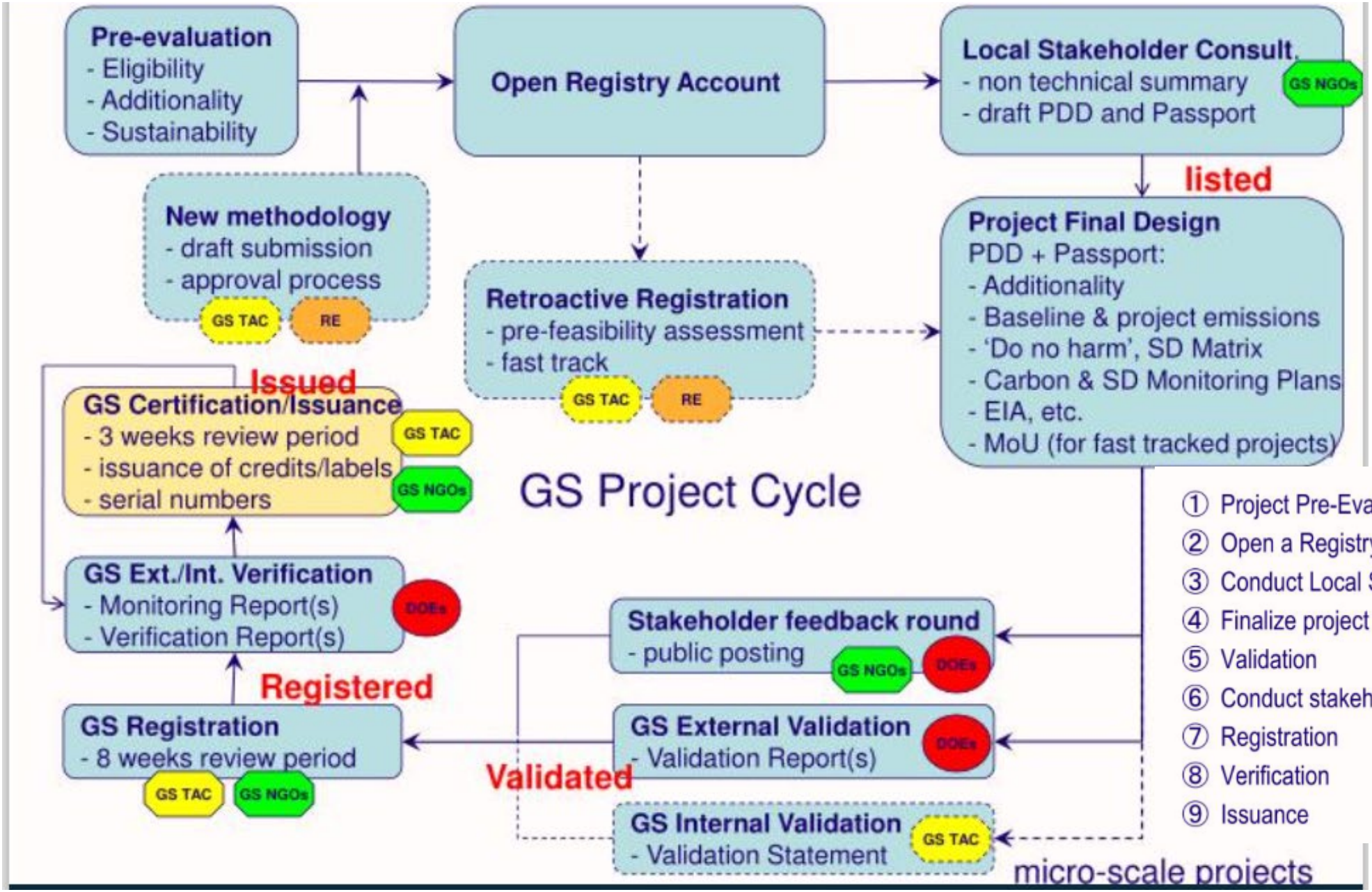


IPCC WGIII Technical Summary
Figure TS.23: Overview of emission mitigation options and their cost and potential for the year 2030.

Opportunities to earn Carbon credit from

- For carbon credit projects we need to select specific solutions and plan for implementation in large numbers
- https://cdm.unfccc.int/methodologies/documentation/methbooklet.pdf

- Collection of data on the biogas built by INSEDA members and partners and Creating database.
- Development of Project Design Document (PDD) and Passport and submitted to Gold Standard Foundation (GSF) for pre-feasibility assessment.
- Baseline survey using independent external organisation to authenticate the information
- After receiving the positive pre-feasibility assessment report from GSF and after completion of Baseline survey, the PDD is revised.
- Main stakeholder consultation are held including several international agencies of GSF
- Identify the DOE (Designated Operational Entity, an evaluator) accredited by UNFCCC and sign Agreement for carrying out validation.
- PDD and the Passport are finalized along with local stakeholder consultation report.
- Final PDD and Passport are uploaded on the organisation website.
- Successful completion of the validation process and report is uploaded onto the website of the Gold Standard Foundation (GSF) for their internal review.
- Formal letter of communication from the Gold Standard Foundation (GSF) is issued
- Based on the formal undertaking to GSF, the project is uploaded onto the GS website
- Appointment of the same DOE to undertake the verification based on field visits to a certain percentage of biogas plants
- Based on the on-site verification and on clarification of various points, and submission of monitoring report and other documents, DOE finalises the verification report for submission to GSF for issuance of VER credits
- The DOE's verification report supported by monitoring report and other documents are uploaded on the website of GSF. The Gold Standard communicates that project status had changed to 'Registered, verification process complete, ready issuance of VER by GS'.
- GSF issues VER credits
- Based on the VER credits, buyers pay the appropriate fees to GSF, after which the VER issuance are credited.
- The buyers then transfer the money for the VER due.
- Need to transferred the amount due to each stakeholder as per the percentage share agreed.


Pre-evaluation
- Eligibility
- Additionality
- Sustainability
Open Registry Account
Local Stakeholder Consult.
- non technical summary
- draft PDD and Passport
GS NGOs
listed
New methodology
- draft submission
- approval process
GS TAC
RE
Retroactive Registration
- pre-feasibility assessment
- fast track
GS TAC
RE
Project Final Design
PDD + Passport:
- Additionality
- Baseline & project emissions
- 'Do no harm', SD Matrix
- Carbon & SD Monitoring Plans
- EIA, etc.
- MoU (for fast tracked projects)
Issued
GS Certification/Issuance
- 3 weeks review period
- issuance of credits/labels
- serial numbers
GS TAC
GS NGOs
GS Project Cycle
GS Ext./Int. Verification
- Monitoring Report(s)
- Verification Report(s)
DOEs
Stakeholder feedback round
- public posting
GS NGOs
DOEs
Registered
GS Registration
- 8 weeks review period
GS TAC
GS NGOs
GS External Validation
- Validation Report(s)
DOEs
Validated
GS Internal Validation
- Validation Statement
GS TAC
micro-scale projects
① Project Pre-Evaluation
② Open a Registry Account
③ Conduct Local Stakeholder Consultation (LSC)
④ Finalize project documentation (PDD, Passport)
⑤ Validation
⑥ Conduct stakeholder feedback round
⑦ Registration
⑧ Verification
⑨ Issuance

Steps in Carbon Credit project

Step 1: Evaluate your project

Eligibility

- RE or Energy efficiency etc/
- Already operating?
- Size
- Project Gases eligible – CO2, CH4, N2O
- Location – Does your country have a cap?

Additionality

- UNFCCC approved tools
- Investment analysis
- Barrier Analysis
- Common practice Analysis

Sustainability

- Impact on local host community

Step 2: Open a Registry Account

Step 3: Conduct LSC

Discuss the impacts of project with community

Overview

- Two rounds of consultation
- At least one live meeting
- Invite NGO supporters, local NGOs, local residents and officials
- Diversity should be ensured – skills, gender

After LSC

- Local Stakeholder Consultation Report to be uploaded in the GS or VERRA Registry
- Upon approval, project will be listed
- Project becomes public in the registry (basic information only at this stage

Steps in Carbon Credit project

Step 4: Finalise Project documents

And get ready to submit for validation

- **PDD**
- **GS Passport**
  - Deviation from CDM methodology
  - Sustainability Assessment
    - LSC report
    - DS matrix
    - SD monitoring plan
    - DO not Harm Assessment

Step 5: Conduct SFR

- Second round of stakeholder consultation
- Follow up from the LSC and address how account was taken of stakeholders' comments
- Project document must be available for at least 2 months on registry before completion of validation (and via other means if not all stakeholders have access to internet)
- This can be completed in conjunction with validation

Steps in Carbon Credit project

Step 6: Validation

- **Purpose:** To review the project and project documentation at the outset to ensure eligibility, additionality, sustainability and the rules
- This is first third party audit
- Need to hire a UNFCCC- accredited DOE who must visit the site
- Micro-scale projects can apply for internal validation

Step 7: Registration

- After successful completion of validation, a formal request for registration is to be sent to GS or VERRA. This takes the form of a cover letter (fixed template) which is a legal document
- Require to upload all documents to the registry
- GS, VERRA will review for completeness and initiate an 8 week review period during which the secretariate and technical advisory committee of regetry body and supporter NGOs will review the documents and ask questions or make comments
- The registry body will consolidate all feedback and send to project owner
- The review period ends when all comments have been addressed and all questions have been answered.

Steps in Carbon Credit project

Step 8: Verification

- **Purpose:** To review the project is operating in accordance with the PDD and that sustainability has been properly accounted for
- This is second third party audit and pre-requisite to issuance
- UNFCCC-accredited DOE is to be hired for this
- This is required al least once in first two years and thereafter every three years

Step 9: Certification/ Issuance

- Upon successful completion of verification, all documents are uploaded and the certification body will check for completeness
- A three week review period follows, during which the secretariate, technical advisory committee and supporter NGOs may have comments of questions
- They will send feedback at the end of three week period
- Review period will end whenever all the comments and questions have been addressed and answered

- **GSF issues VER credits**
- **Based on the VER credits, buyers pay the appropriate fees to GSF, after which the VER issuance are credited.**
- **The buyers then transfer the money for the VER due.**
- **Need to transferred the amount due to each stakeholder as per the percentage share agreed.**

Thank you

For more information please contact:

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Relevant websites:

- www.inforse.org/asia/EVD.htm
- www.ecovillagedevelopment.net
- www.inforse.org/asia/Pub_EcoVillageDev_TOT_Manual_SouthAsia.htm
- **EVD Catalogue** www.inforse.org/evd
- **INFORSE COP27 Side Event Proceedings**: www.inforse.org/cop27.php

Publications under the partnership project

Eco-Village Development as Climate Solution Proposals from South Asia

White Paper: Mitigation and Adaptation with Eco-Village Development (EVD) Solutions.

- Describes calculation for CO2 reduction through various EVD solutions
- The calculations can be used in NDCs

Training of Trainers Manual on Eco-Village Development in South Asia

Available in English and four South Asian languages - Hindi, Bangla, Nepali, Sinhala.