

Local Climate & Sustainable Energy Solutions in South Asia
Eco-Village Development ToT
UN Climate Dialogue 2020 Side Event
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By

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Proceedings: <https://www.inforse.org/cd2020.php3>

UNFCCC: <https://unfccc.int/cd2020/specialevents>



Integrated Sustainable Energy And Ecological Development Association (INSEDA)

- INSEDA is an **NGO Registered** in India in **1995**
- Working in **India**, as well as **South Asia**
- **Founder member** of **INFORSE**
- Hosting the **Regional Secretariat** of the **INFORSE** since 1995
- Member of networks - **BigFIN, VANI, CANSA, and GENOA**
- An **observer** at **UNFCCC** since **2015**.
- **Designed, developed and promoted two** different **models** of **household biogas plants**, namely, **Deenbandhu** and **Grameen Bandhu**
- **Innovator** of **low carbon, bamboo-based, affordable green technologies**
- **Innovator** of the **Climate-Friendly, Eco Village Development (EVD) Model** as effective **Mitigation & Adaptation** solution
- **Transferred technologies** to different countries - **Cameroon and Uganda**
- Implementing **carbon credit projects** in India under **Gold Standard**.



UNFCCC Conferences

Why Eco Village Development (EVD)

- **Climate Change** has created more visible **negative impacts** on the lives of rural people.
- It is **necessary** to find **local solutions** apart from macro-level solutions since more than **70% population lives in rural India**.
- **Covid-19 pandemic** has also shown that **local solutions are necessary**.
- This concept considers village as the **smallest unit of Development**, which is **affordable, viable**, can be **easily monitored and managed**.
- **EVD is a package:**
 - of **eco-friendly, low carbon, green technologies** *within villages*,
 - which can be **easily implemented** and replicated in other parts of the country
 - that **help in mitigation of climate impact** or adaptation of new solutions to **build climate resilience**
 - which **focuses** on local people, especially the **poor, marginalized, women** and weaker sections of local community

Ranichauri, Tehri Garhwal District Of Uttarakhand State In Sub-Himalayan Region Of India

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Some of The EVD Solutions



Biogas



Rooftop Rainwater Harvesting



Multipurpose Hybrid Improved Cookstove



Bamboo Compost Basket



Organic Kitchen Garden



Solar Poly Green House



Solar Tunnel Dryer



Organic Agriculture

Construction of Grameen Bandhu Biogas Plant

Women weaving structures for bamboo reinforced cement mortar biogas plant



Construction of Other EVD Solutions



Rooftop Rainwater Harvesting Unit



Solar Tunnel Dryer



Bamboo Compost Basket



Solar Poly Green House



Heera Improved Cook Stove (HICS) - A Multipurpose Hybrid

- It has **tank** for **warming water** using **waste heat** from flue gases,
- There is a **solar panel with battery** which is used for **led light** and **mobile charging** and to
- **Run a fan** for **forcing flue gases** to a **bucket of water** to **absorbs** carbon and other **particulates** to reduce atmospheric pollution & carbon emission



Bi-phasic Biogas Plant-on- Wheels

Designed, developed and innovated by INSEDA for multi-feed mixed biodegradable waste from kitchen as well as mixed biomass waste generated from fruit & vegetable market



Technology Transfer by INSEDA to Cameroon



Bamboo reinforced cement Biogas Plant



Rooftop Rainwater Harvesting



Multipurpose Hybrid Improved Cookstove



Solar Tunnel Dryer



Solar Poly Green House



Bamboo Compost Basket

Technology Transfer by INSEDA to Uganda



Feasibility Study

Eco-village Development (EVD) Concept in Margul Panchayat, Bajna Block, Ratlam District, MP, India

Feasibility - Economic, Technical, Organizational, Cultural and political



PRA and Focus Group Discussion (FGD)



Project area Dung cakes Traditional cookstove

https://www.inforse.org/asia/pdf/EVD_Feasibility_Study_INSEDA_India_July_2020_DRAFT_Summary.pdf

Summary: EVD Solutions – Level of feasibility in the surveyed villages

EVD Solutions	Feasibility				
	Economic	Technical	Organisational	Cultural	Politically
Heera's Multipurpose Hybrid Improved Cookstove (HIC 3)	30 % families could afford	Feasible for all families	Training required	benefits showcase positive feedback	Government distributed LPG but not used
Regular IC 3	All families can afford	All families can use the	Training required	benefits showcase positive feedback	Government distributed LPG but not used
Biogas	Only 10% could afford	There are animals, but only 10 % where water is available	Intensive Training	Motivation required	promoted under government schemes.
Solar PV streetlight	Requires external funding	villages are electrified, but erratic supply	Training in maintenance	safety of equipment against theft	villages are electrified hence low support
Solar lantern LED with mobile charger	All families can afford	no technical limitation	Requires training	No cultural limitation	There are no political limitations
Natural daytime lighting	All can afford	Leak proofing required	Required training	Some may not like to disturb roof	There are no political limitations
Solar drier	SHG* can afford	Anyone can install	Training required	Need to showcase its benefits	There are no political limitations
Vermicompost with shade and concrete floor	SHG* can afford	feasible for 50% families where water is available	Support for earthworms procurement and Training	Need to create awareness to handle the vermicompost	There is support available under government schemes
Vermicompost - earth worms only	All can afford in small spaces	feasible for 50% families - water is available	Support for earthworms procurement/ Training	awareness to handle the vermicompost	support available under govt schemes
Bamboo compost	All can afford,	Feasible for all	Training required	families are making pit compost	There are no political limitations
Poly Green House	5% of farmers can afford	Few can be installed, where water is available	Intensive training is required	Awareness creation required	funding opportunities under govt schemes
Rooftop Rain Water Harvest Tank, Bamboo based	30-40% families can afford	All can install	Training required	motivation required	There are no political limitations
Kitchen garden	Families can afford in small spaces	Can carry out where water available	need to distribute good quality seed	already doing but not organically	There are no political limitations
Day and night indoor solar powered cooker + solar home light	Needs financial support	All can use	training required	Food habits and adaptation	There are no political limitations
Energy plantation/ Household Forestry	Community can do it with external support	Feasible in common land	sapling available with horticulture/forest dept	community responsibility	Local government support needed
Horticulture	All families can plant	30% can plant where water is available	Sapling to be organised	several fruit trees already available	There are no political limitations
IGP - Mushroom, poultry, trading, basket making	SHGs can initiate with initial financial support	Several Income Generation Programme (IGP) technically possible	Training/ hand holding marketing support	SHG strengthening required	Government schemes are available
Solar pumps	Funding required	Some farmers can avail having water source	Training required	Security issue is there	Government scheme available
Guilty plugging	Funding required	Several sites available	Organising community	Community needs to involve	To be included in Panchayat plan
Micro hydro	Large Funding required	Low flow in river	Lack Capability	No awareness	No scheme as region not suitable
Hydraulic ram Pump	Large Funding required	Low flow in river	Lack Capability	No awareness	No scheme as region not suitable
Micro and Mini hybrid wind (combination of wind + solar PV system) turbines	Large Funding required	There are big wind mills in area	Lack Capability	No awareness	No scheme
Drip/ sprinkler irrigation	Large Funding required	10 % area can be covered	Training required	Awareness required	Govt. support available
Bamboo Housing	Funding required	families can construct small room	Training required	Awareness required	Govt. support available
Solar Box Cooker	All families can install if financial support is available	Enough available sunlight	Extensive training required in motivating to new food habits	food habits and cooking sming do not match	Govt. support available
Solar parabolic cooker	Large funding required	Enough available sunlight	Extensive training required in motivating to new food habits	food habits and cooking sming do not match	Govt. support available

*SHG- Self Help Group ** IGP- Income Generation Programme

High Feasibility level Medium feasibility level Low Feasibility level
Colour coding for feasibility level

Next generation low carbon, climate resilient Eco-Village Development in South Asia

Roll out a concept for village-based, local, low-carbon development in four South Asian countries with support from CISU, Denmark by:

- **INSEDA** – India
- **CRT** - Nepal
- **Grameen Shakti** – Bangladesh
- **IDEA** – Sri Lanka
- **CANSA** - India

With programme management support by DIB Denmark and

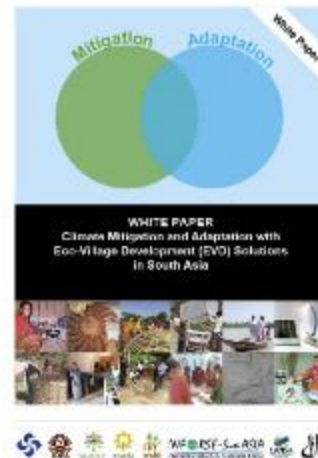
Technical Support by INFORSE Denmark



Publications under partnership project

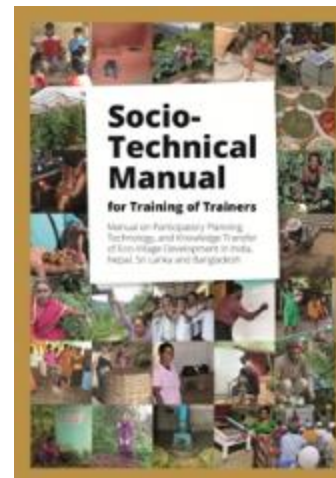
White Paper: Mitigation and Adaptation with Eco-Village Development (EVD) Solutions.

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

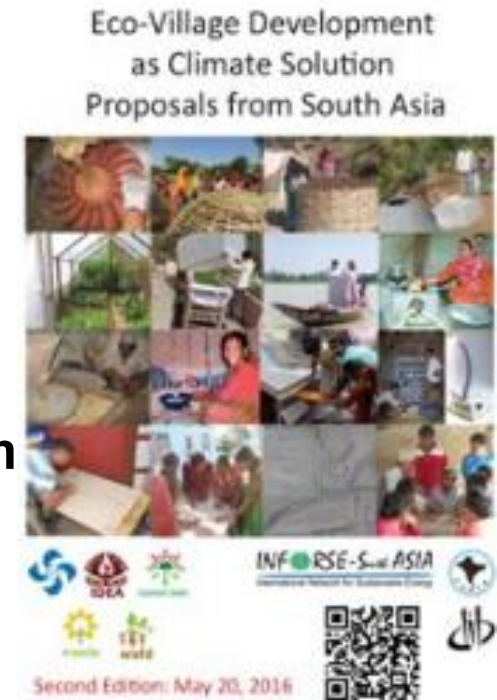


Training of Trainers (ToT) Manual on

- Eco-Village Development in South Asia Available in English and four South Asian languages - Hindi, Bangla, Nepali, Sinhala.



Eco-Village Development as Climate Solution Proposals from South Asia



Thank You



More information:

www.inseda.org

www.inforse.org/asia/EVD.htm

www.ecovillagedevelopment.net

