UNFCCC SB58, SIDE EVENT: 8/6 2023 16:45-18.00
Room: Kaminzimmer, Bonn, Germany

100 % Renewables, Local Climate Solutions in East Africa, South Asia

Welcome by organisers: SusWatch Kenya, INSEDA, Nordic Folkecenter for Renewable Energy (NFRE). Moderator: Judit Szoleczky, INFORSE

Global Transition to Renewable Energy

Gunnar Boye Olesen, INFORSE, NFRE, SE, Denmark

East Africa:

Promoting Local Solutions as Important Climate and Development Solutions in East Africa – Online Catalogue

Mary Swai, TaTEDO, INFORSE East Africa, Tanzania

Transition of Kenya to 100% Renewable Energy with Focus on Local solutions. Key Messages

Nobert Nyandire, Suswatch Kenya

Transition to 100 % Renewable Energy in Uganda with Local Solutions, Sustainable Biomass

Richard Kimbowa, UCSD Uganda INFORSE East Africa Chair

More: https://inforse.org/SB58.php

South Asia

Promoting Local Activities in South Asia Supported by Eco-Village Development Initiatives

Anzoo Sharma, Center for Rural Technology (CRT), Nepal

Successes with Local Climate Solutions in South Asia & their Promotion

Sanjiv Nathan, INFORSE South Asia & INSEDA, India

Database Online, Documenting Successful Local Climate Solutions in South Asia

Abdul Arif, Grameen Shakti, Bangladesh

Local Solutions in the GST, Why and How

Dumindu Herath, IDEA, Sri Lanka

Dialogue, Conclusion

Thanks to CISU CIVIL SOCIETY IN DEVELOPMENT

SB58 2023

Thurs., 8 June 2023 - 16.45 - 18.00
Room: Kaminzimmer

100% Renewables, Local Climate Solutions in East Africa, South Asia

Successes with local solutions in South Asia (India Nepal, Bangladesh and Sri Lanka) and promotion of them

Dr. Raymond Myles and Sanjiv Nathan

Integrated Sustainable Energy and Ecological Development Association

INSEDA & INFORSE South Asia, INDIA

Project supported by CISU CIVIL SOCIETY IN DEVELOPMENT

About INSEDA

- INSEDA is an **NGO Registered in 1995, w**orking in **India and South Asia**
- **INSEDA** has an **observer status** at **UNFCCC since 2015**.
- **Dr. Raymond Myles,** President-cum-Chief Executive, INSEDA is **one of the Founder members** of **INFORSE**
- Hosting the **Regional Secretariat of the INFORSE-SA** since 1995
- **Dr Myles is the innovator** of **low carbon, bamboo-based affordable green technologies** developed by INSEDA **.**
- Designed developed **three kinds of biogas plants** namely, **Deenbandhu, Grameen Bandhu and High-rate Bi-phasic**
- **Innovated** 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 Conference

International training on EVD conducted by INSEDA

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

EVD NextGen EVD project started 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**

EVD consists of a package

- 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**
- **focuses** on local people, especially the **poor, marginalized**, **women** and weaker sections of local community

Support by CISU, Denmark

CISU CIVIL SOCIETY IN DEVELOPMENT

inseda CRT Grameen Shakti IDEA INFORSE-South ASIA International Network for Sustainable Energy CANSA CLIMATE ACTION NETWORK South Asia dib

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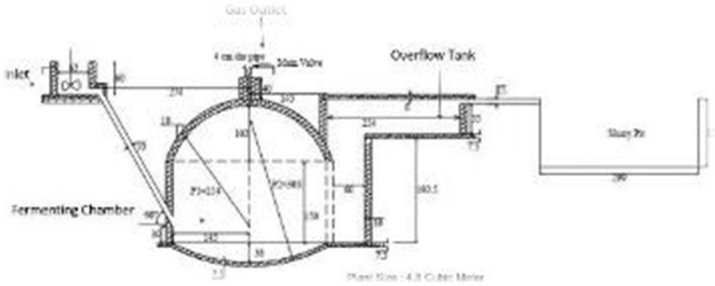
EVD Solutions in Bangladesh - Grameen Shakti, Bangladesh

Grameen Shakti



Household Biogas Plant

Solar Home System

Bamboo reinforced Slurry Pit

Solar Street Light

Retained Heat Cooker

Improved cookstove (single Burner, with chimney)

Solar water pump

Rainwater Harvesting System

Kitchen garden

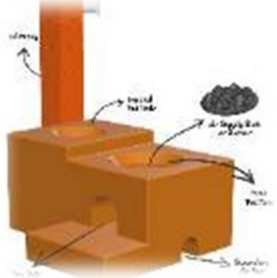
Solar System for village shop

EVD Solutions in Nepal - Centre for Rural Technology, Nepal

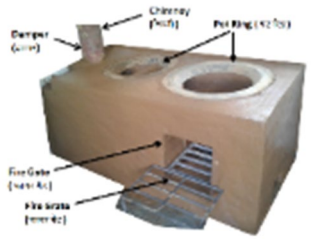
Hydraulic Ram Pump (Hydram)

Improved Water Mill (IWM)

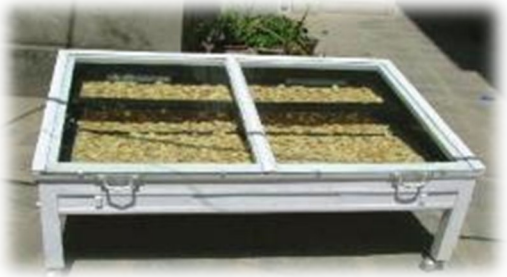
SF2 Solar Water pumps



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

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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 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

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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

Bamboo plantation helps in:

- **Reducing use of environmentally harmful brick that consumes topsoil baked using coal & wood**
- **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.**

EVD Solutions as climate change mitigation and adaptation

Biogas plant

- Helps in **mitigation** - firewood eliminated and adaptation as wood availability is becoming scarce.
- Slurry adds humous and improved soil quality thus adapting to climate change by reducing use of chemical fertiliser
- **Adaptation** - Families are not dependent on energy supply from outside and will not get impacted in case of extreme climate event.

Improved Cookstoves

- Reduction in use of firewood - **mitigation** (saves CO_2) and **adaptation** - as wood availability is becoming scarce.

Rooftop Rainwater Harvesting

- Helps in **adaptation** in the scenario of water scarcity to some extent due climate change event.
- Saving in energy in water pumping

Solar tunnel dryer

- Helps in climate change **adaptation** by providing additional income with better quality produce while utilising solar energy
- Reduces the wastage of crops by drying perishable items

Bamboo compost basket

- Manure helps in soil rejuvenation, Reduced use of chemical fertilizer

Other EVD solutions	Emission reduction
Solar streetlight/ lanterns	• Reduced use of dry batteries
Vermi compost	• Reduced use of chemical fertiliser
Poly Green House - SHG	• Reduces chances of crop damage in extreme climate event • Off season crops can be grown • Less use of insecticide/ pesticides • Increased yield means less energy consumption • Less water consumption
Plantations (Energy +horti)	• Works as carbon sink • Conserves soil and moisture
Greenhouse nursery	• Less chances of crop damage • Off season crops can be grown • Less use of insecticide/ pesticides • Increased yield means less energy consumption in crop production • Less water consumption
Bamboo Bus Shelter	• Less use of brick which is environmentally harmful as topsoil is baked using coal and wood in making bricks

Thank you

Read More: www.inforse.org/SB58.php

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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

Publications

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.