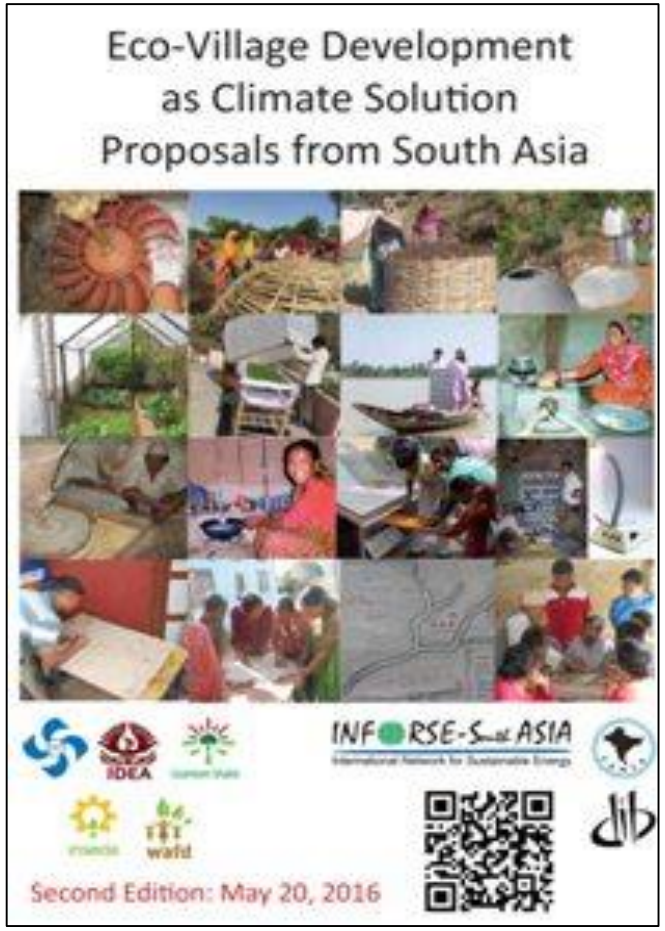
Eco-Village Development in South Asia

Presentation at the COP24, Poland, 7/12 2018 at the side-event Local Benefits of Large-Scale Renewables, Development of a Guideline Based on Experiences from West Africa & Eco-Village Development Activities in India / South Asia"

Publications:
Eco-Village Development Proposals from South Asia



Training of Trainers (ToT)

Available in
English
Hindi
Sinhala
Bangla,
Nepalese.

White Paper on Climate Mitigation and Adaption with Eco-Village Development (EVD) Solutions in South Asia

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International Network for Sustainable Energy

INFORSE

International Network for Sustainable Energy

We reviewed 13 of the most popular EVD solutions and analysed 6 (in bold)

1. **Improved Cookstoves, Household**
2. Large ICS for Rural/village industries
3. **Household biogas**
4. **Solar light in homes**
5. Improved water mills
6. **Solar and hydro micro and mini grids**
7. Hydraulic Ram pumps
8. **Organic farming & gardening, composting**
9. Rainwater harvesting
10. Micro Irrigation
11. **Solar dryer**
12. Greenhouses
13. Improved brickmaking

Main results from the 6 EVD solutions analysed per household that use the solution

<u>Improved Cookstove (ICS)</u>
Mitigate 1 – 3 ton CO_2e/yr (0-66% CO_2)

<u>Household biogas</u>
Mitig. 1 – 4 ton CO_2e/yr (0-70% CO_2)+Adapt.

<u>Solar light in homes</u>
Mitigate 0.34 ton CO_2e/yr (all CO_2)+Adapt.

<u>Solar and hydro micro and mini grids</u>
Mitigate 0.7 ton CO_2e/yr (all CO_2)

<u>Solar dryer</u>
Mitig. 1.3 – 3 ton CO_2e/yr (all CO_2)+ Adapt.

<u>Organic farming</u>:
Mitigation + adaptation

Examples for villages

Example, Nepal, realised:
Village, 50 families with 24 household biogas, 45 improved cookstoves:
Mitigate 550 tons CO_2e/yr

Example, Bangladesh, planned:
Village, 70 families with 60 SHS, 56 ICS of high quality, solar pump:
Mitigate 110 tons CO_2e/yr

Example, India, partly realised:
255 ICS, 31 solar dryers:
Mitigate 1800 tons CO_2e/yr

* GACC = Global Alliance on Clean Cookstoves

Important lessons

- Total greenhouse emission reductions (particles, CH_4, etc.) with improved cookstoves and biogas replacing traditional fire are 50% larger than the reductions of CO_2 alone
- This mean that most methodology only include 2/3 the climate mitigation of local cooking solutions
- The high mitigation of biogas is achievable with up to 7% CH_4 loss
- Organic farming with biogas or compost improves soil and reduces chemical fertiliser use. This gives mitigation and adaptation, which can be equal to but the size effect of the emission reductions are hard to quantify
- There are considerable uncertainty on greenhouse effects of particle emissions and soil improvements

Thank you

Read full report on ww.inforse.org/asia/EVD.htm
www.ecovillagedevelopment.net

"PROMOTE LOCAL CLIMATE SOLUTIONS TO END POVERTY"

UNFCCC COP24
KATOWICE, POLAND

INFORSE - ENDA ENERGIE - INSEDA

SIDE EVENT

December 7, 2018 -15:00-16:30

Room: Warmia

Local Benefits of Large-Scale Renewables
Development of a Guideline
Based on Experiences from West Africa
&
Eco-Village Development in India / S Asia