



Local Solutions & Adaptation in Reconstruction after Earthquake in Nepal by Niraj Shrestha, CRT Nepal

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Position Brief and the NGO advocacy EVD project:
“Evidence based advocacy for low-carbon, pro-poor sustainable
“Eco-Village Development “ (EVD) in South Asia“
www.inforse.org/asia/EVD.htm

Full Proceedings: www.inforse.org/europe/conf15_PreCOP21-Bonn.htm
More: www.inforse.org/asia www.cansouthasia.net





Local Solutions & Adaptation in Reconstruction after Earthquake in Nepal

Presented at the Side-Event of the
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OUTLINE

- Introduction to CRT/N
- Aftermath of earthquake and its affect
- Challenges in resurrection after disaster
- Proven EVD solutions in Nepal
- Contribution of EVD solution to climate change
- Adaptation measures in reconstruction activities
- Conclusions





INTRODUCTION

Establishment

- Initiated as a private sector organisation in 1989
- Registered as a national NGO in 1998

Aim

- Develop, promote and disseminate environmentally sound rural/appropriate technologies

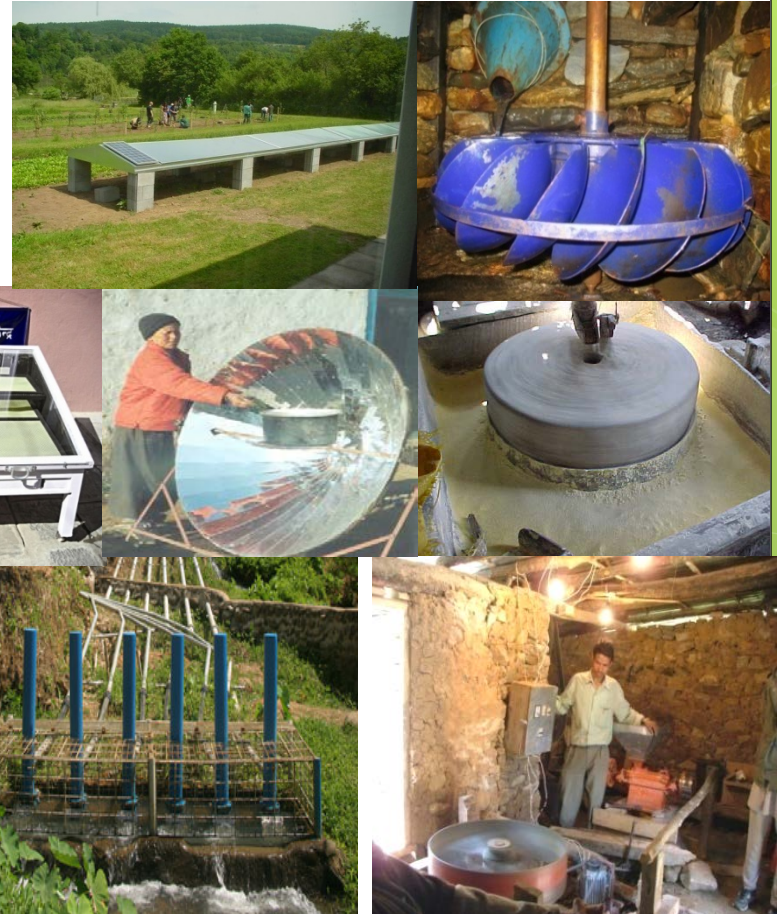
Staff Strength

- Around 60 (Engineers, Environmentalists, Livelihood experts, Technicians; Management Experts; Socio-economists; Advocacy and Gender Experts)
- Operational experiences over 26 years working with rural community in rural technology development, promotion and application.



MAJOR TECHNOLOGIES PROMOTED

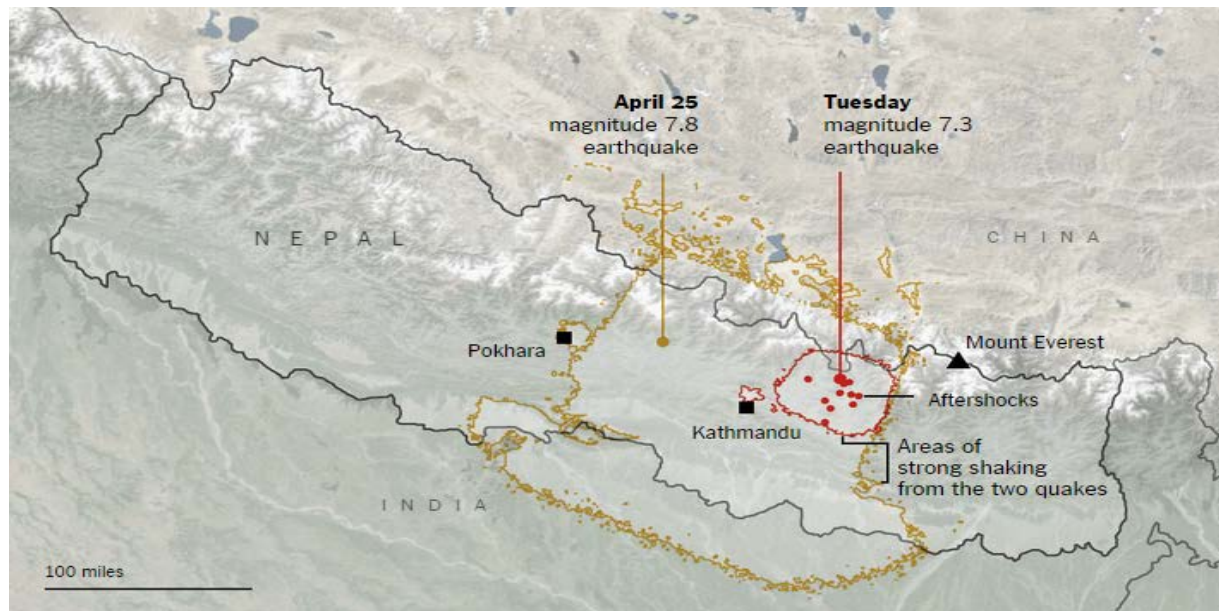
- Solar cookers/dryers
- Improved Water Mill and Improved Water Mill Electrification
- Hydraulic Ram Pump
- Improved Cook Stove
- Bio-briquette





EARTHQUAKE IN NEPAL

- A massive 7.8 magnitude earthquake had struck Nepal on 25 April 2015
- More than 270 aftershocks (>4 Magnitude) has been felt till this date
- 7.3 magnitude was the largest recorded aftershock that hit Nepal on 12 May 2015





- As of May 31, 2015
 - 8,700 people has lost their life
 - 22, 495 people are injured
 - 469,539 buildings has been damaged or inhabitable

(source: Nepal Police, 2015)



EARTHQUAKE: EXTENT OF DAMAGE



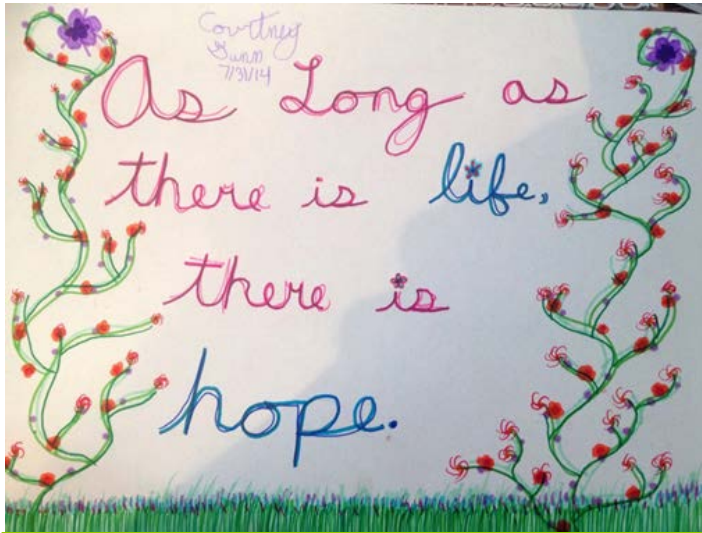
EVD PROJECT IN NEPAL

- EVD project villages are not an exception to wrath of nature
- In three villages there are 38 completely destroyed house, 34 house are inhabitable and 28 house are habitable after repair
- 615 people has been affected by disaster
- Unfortunately the need of people have changed
- Delay and difficulty in implementing EVD project





Earthquake: Resurrection



HOPE to rise again better and stronger

But, there are challenges to overcome and realize quick and effective rehabilitation of Nepal





CHALLENGES

- Support victims from approaching monsoon rain
- Difficulty in getting over mental trauma of victims
- Risk of landslides
- Building shelter and life saving rural infrastructure for supporting rural livelihoods
- Victims expectation from I/NGOs in rehabilitation program
- Victims depending on relief for their survival
- Government alone cannot contribute for quick rehabilitation
- I/NGOs are not relief organization therefore need support to facilitate rehabilitation and sustained livelihood program





CONTD...

“How could we all support the affected people in Nepal as they’ ve lost everything and paying is not an option for the victims”



“How could the international community support these life saving initiatives in Nepal?”

Possible EVD Solutions in Rebuilding Process



LOCAL SOLUTION: NATIONAL STATUS

Biogas

- 295,310 (1986-2014)

IWM

- 9,577 (till July 2014)

ICS

- 892,838 (till July 2014)

Micro-Hydro

- 2,818, 41.98 MW (1962-2014)

Solar

- 470,459 HH solar PV, 11,687 SSHS, 496 institutional solar PV, 131 solar pumping and 2,132 solar dryer/cooker (till July 2014)

Hydram

- 21 units; 437 households, 4 schools, 18 hectares of farmland

Source: www.aepc.gov.np, Alternative Energy promotion Center (AEPC) and NRREP, Annual progress Report (AEPC, July 2013-2014)





SOLUTIONS

The basic energy needs that could be met relatively quickly through simple products like



Solar Lantern



Solar Mobile Charger

- In most of the areas grid line have been damaged
- Unable to charge cell phones
- People involved in illegal practice of hooking
- Threat of snake bites and encounter with wild animals

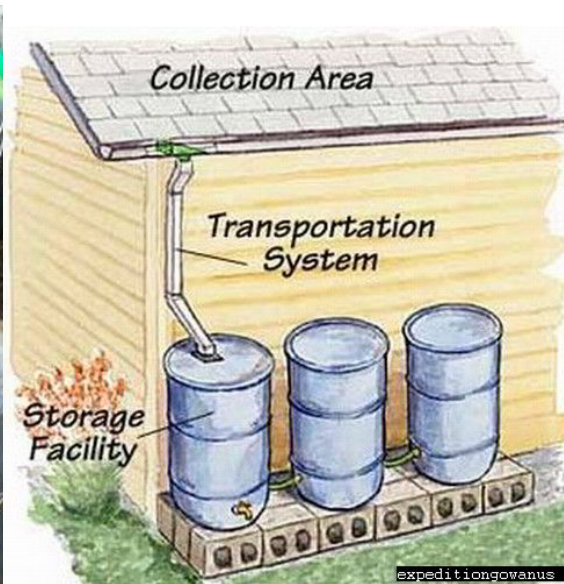




1. Portable
ICS



2. Biogas



3. Rain Water
Harvesting



1. Open fire or fire inside a makeshift kitchen pose health and life hazard, in particular, to the women and girls
2. Sources of water and pipelines has been damaged so to collect rainwater from approaching monsoon and fulfill domestic water need



CONTD...



1. Solar PV for local health clinics

2. Water lifting technology like Solar-powered water systems & Hydraulic ram pump



1. Vaccines and medicines vital in affected areas needs to be stored in bulk
2. No access to electricity and therefore clean water supply for drinking and irrigation for agriculture are vital for their livelihood and ensure food security





CONTD...

Technologies to be integrated with rural livelihood practices



1. IWM and IWME



2. Plastic tunnel house for vegetables



3. Tomatoes grown in plastic house

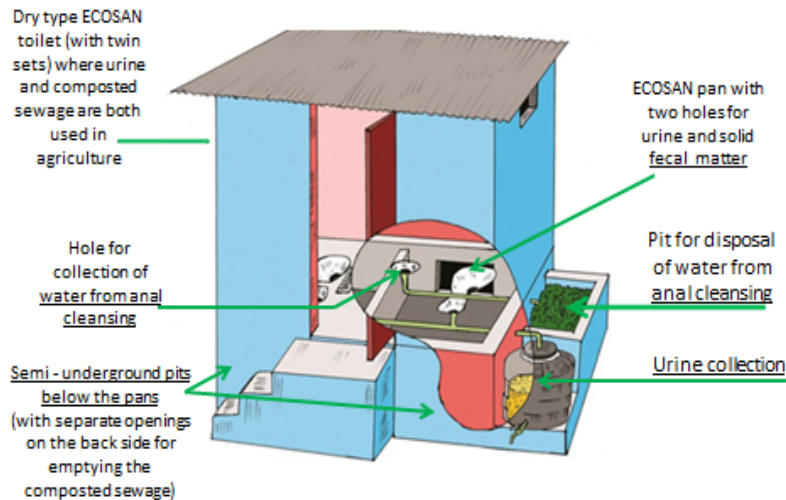


1. IWM contributes to agriculture value chain
2. People are taking refuge in the plastic greenhouses where they grow vegetables

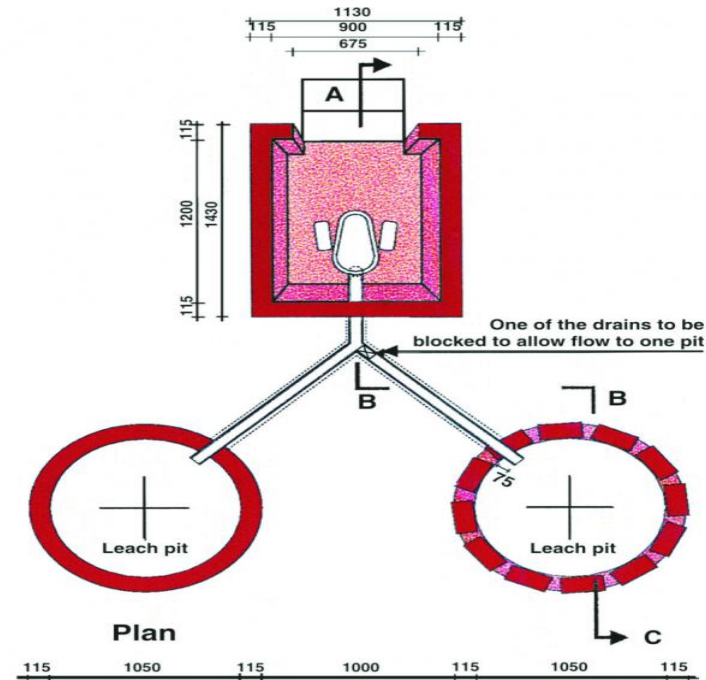


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Fig.1: Features of ECOSAN Toilet - dry type with twin pits set



Eco-san for organic farming



Accessible toilet



1. Sanitation and hygiene is essential as there is no latrines that are essential to prevent waterborne diseases
2. These types of latrine can also contribute in enhancing rural livelihood





CONTRIBUTION TO CLIMATE CHANGE

S.N.	Eco- Solutions	Estimated ER factor (tCO ₂ e/unit/year)
1.	Improved water mill	3.65
2.	Improved Cook Stoves	1.535
3.	Solar PV Home Systems and Small Solar PV Home Systems	0.10
4.	Solar Drinking Water System	0.880
5.	Solar Dryer	6.260
6.	Domestic Biogas Plants	3.000

Source: National Rural and Renewable Energy Program, Annual progress Report (AEPC, July 2013-2014)

Reconstruction and rehabilitation activities will inevitably contribute in minimizing the impacts of climate change





ADAPTATION MEASURES FOR RECONSTRUCTION AND SUSTAINED DEVELOPMENT

- ◉ Knowledge sharing on earthquake for improving mental fitness
- ◉ Assessing immediate energy needs
- ◉ Identification and promoting appropriate, climate friendly technology and improving access to energy services;
- ◉ Integrating technology with rural livelihood practices
- ◉ Assist in developing business model and enterprise development;
- ◉ Linking with Government support and civil societies, services and potential international support;
- ◉ Mainstreaming gender and social inclusion;
- ◉ Subsidy and financing support; and
- ◉ Institutional development





CONCLUSION

- ◉ Lack of energy will impede gradual economic growth.
- ◉ There is strong case for supporting small-scale, sustainable energy solutions for climate friendly Eco- Village Development (EVD) Initiatives
- ◉ Building resilient energy systems will help in quick recovery of Nepal
- ◉ Need support from its international partners for national reconciliation that can contribute quick rehabilitation of the victims
- ◉ Now is the time for development organization (national/international) to double down on embedding support in development efforts.
- ◉ Energy based reconstruction activities on one hand will be contributing in rebuilding process and in other it will lead to development of brand new eco-friendly sustainable villages in Nepal.



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THANK YOU FOR YOUR
PATIENCE



NAMASTE

&

JAY NEPAL



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