



ISO 9001:2008



# Practitioners Workshop on CDM Methodologies on Household Cooking Energy Supply

Organized by UNFCCC Secretariat

Presentation  
on

Experience from Biogas CDM Projects in Nepal

Biogas Support Programme  
(BSP)

Funded/Assisted Mainly by:

AEPC/GoN

SNV/DGIS

KfW



Implemented by:



BSP-Nepal

Presentation by

**Saroj Rai**

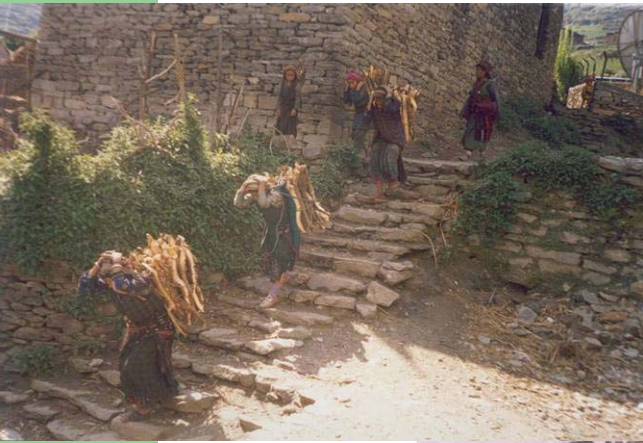
Bonn, Germany

Oct 26, 2009

# Presentation Overview

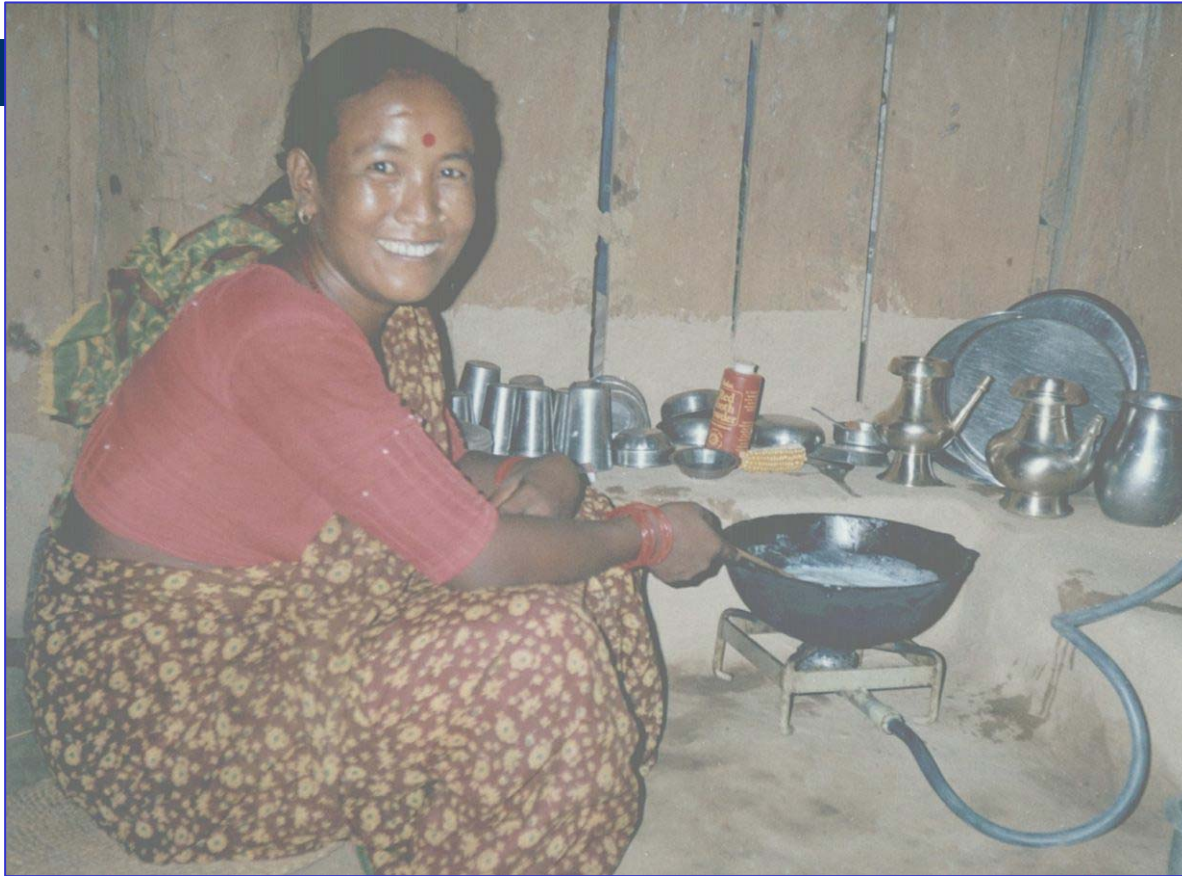
- **Introducing Biogas and the Programme**
- **Status of CDM Projects**
- **Lessons Learnt & Challenges in Doing CDM in Biogas Programmes in Nepal**
- **Wrapping Up**

# Life without Biogas ...





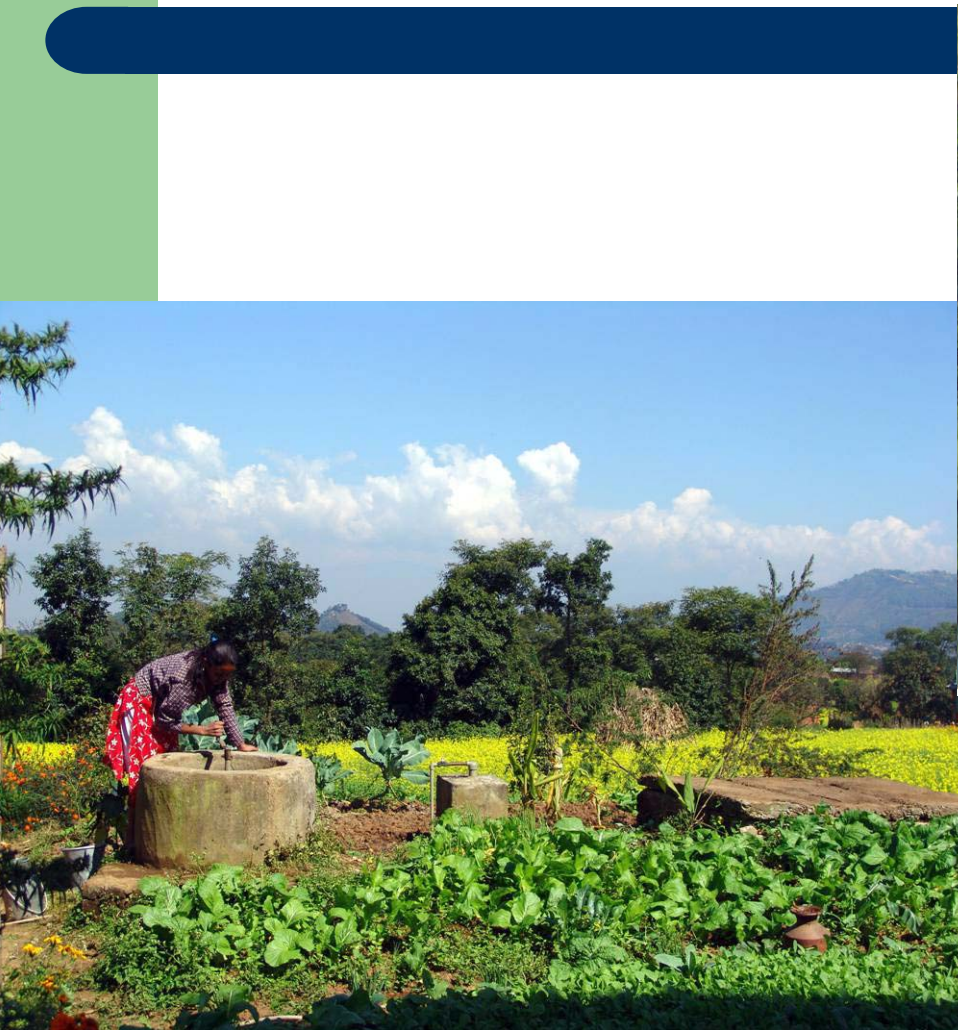
# And Life with Biogas.



- Biogas brings multiple Socio-economic & environmental benefits.
- Bio-slurry or bio-compost is equally useful product.



# Slurry, As A By-Product: High Quality Organic Fertilizer

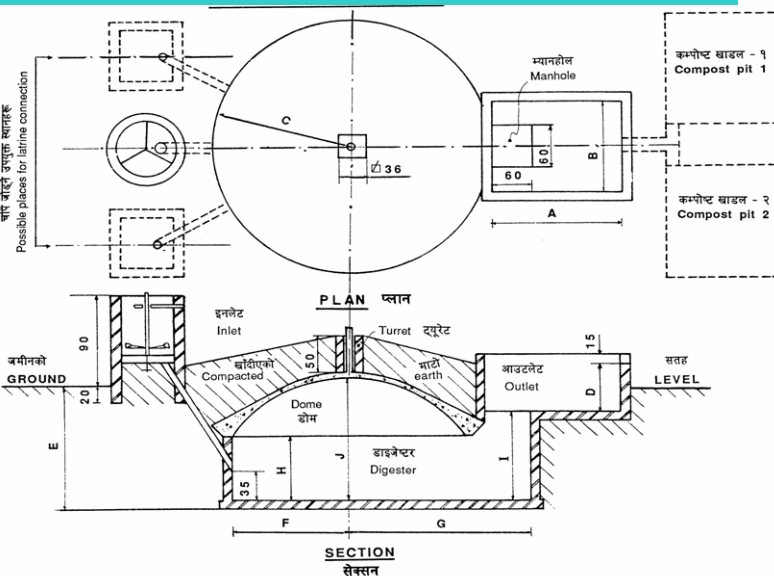




# Biogas Plant Design in Nepal (1)

- Biogas Plant (GGC 2047 Design)

## Plant Drawing



Plant construction almost final.

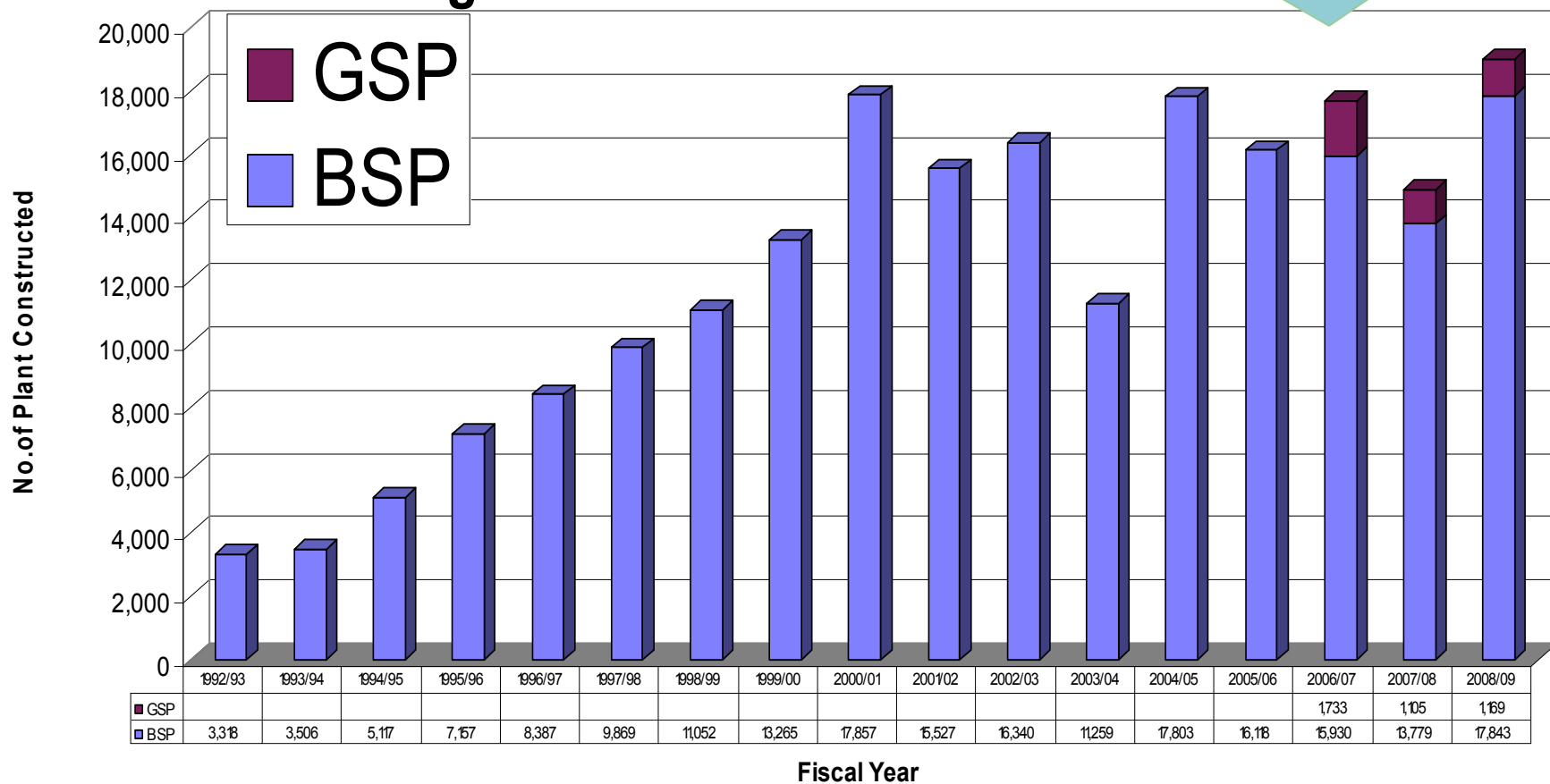


Plant in operation

# Biogas Plant Construction Trend

*Annual average plant construction rate in the last 6 years (Phase IV period) has been around 16,000.*

## Biogas Plant Construction Trend



# District Wise Distribution of Potential and Constructed Biogas Plants

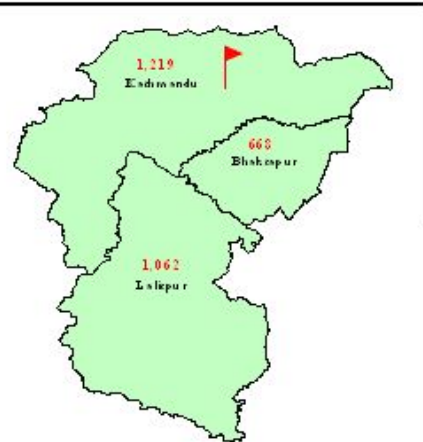
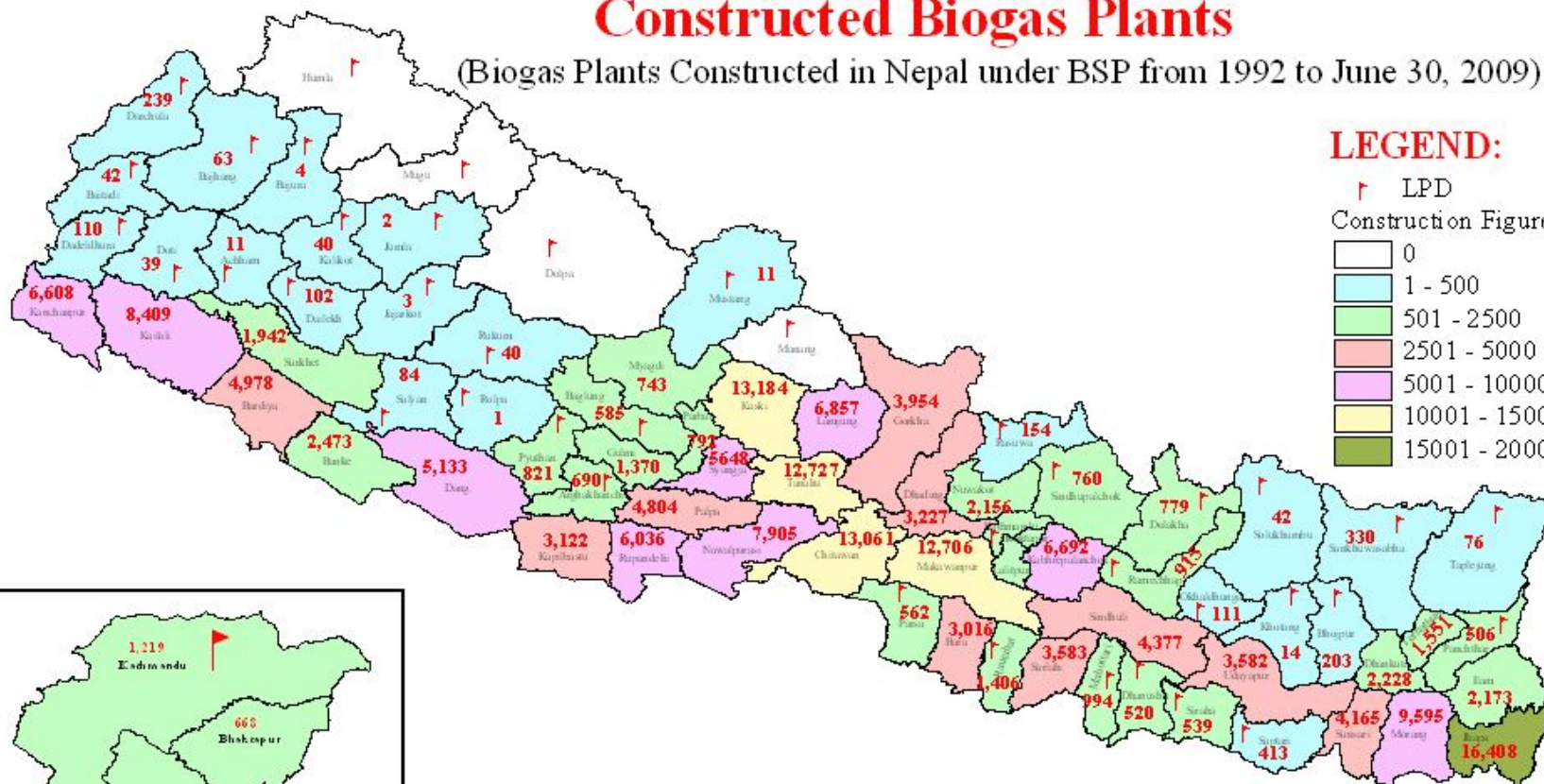
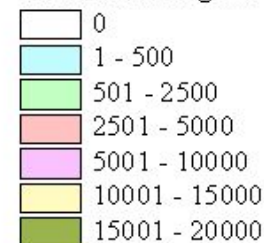
(Biogas Plants Constructed in Nepal under BSP from 1992 to June 30, 2009)



## LEGEND:

↑ LPD

Construction Figures overall



### Summary:

<b>Total Technical Potential</b>	<b>1,023,366</b>
<b>Total Construction</b>	<b>199,368</b>
<b>Progress</b>	<b>19.48 %</b>
<b>Total Market Potential</b>	<b>504,291</b>



**BSP-Nepal**



Production Map  
June 30, 2009



# Status of CDM Projects (1)

- **Two CDM Projects Registered in 2005**
  - With an old Methodology *I.C.: Switch from Non-Renewable Biomass to Renewable Energy Sources.*
  - Technically, 7.40 t-CO<sub>2</sub> eqv. GHGs/year/plant
  - Actually claimed, 4.99 t-CO<sub>2</sub> eqv.
  - Issuance of Certificate of ERs pending due to monitoring issues.

## Status of CDM Projects (2)

### New CDM Projects with the Programme Approach Being Readied for Registration

- With new Methodology *I.E: Switch from Non-Renewable Biomass for Thermal Applications by the User.*
- Hypothetical Baseline of Kerosene or LPG
- Around 2 t-CO<sub>2</sub> eqv. GHGs/year/plant.



# Lessons Learnt & Challenges in Doing CDM in Biogas (1)

- CDM can make such capital intensive programmes financially self-reliant in long-run, while meeting
  - The environmental integrity and
  - Sustainable development criteria.
- However, implementation is hilarious due to
  - High expectations from developers of methodologies and regulators, including DOEs.
  - And limited resources and other ground realities.

# Lessons Learnt & Challenges in Doing CDM in Biogas (2)

- **Capacity building at a project host country is slow or not effective**
  - Everyone is learning.
  - Half like of CDM knowledge is short.
  - Experts are highly mobile.
- **How to improve the communication between the two worlds? So that**
  - Effective inter-learning takes place, and
  - Miscommunications are avoided in time.



# Lessons Learnt & Challenges in Doing CDM in Biogas (3)

- **DOEs Need to Deliver Quality in Time**
  - Problem with accountability and control.
  - Experts are highly mobile.
- **Monitoring is Highly Challenging & Costly**
  - How to translate a certain requirement to the field level?
  - And get the essence without distortion and at minimum cost.
  - Why not to think of simplifying things?

# Lessons Learnt & Challenges in Doing CDM in Biogas (4)

- **Monitoring is Highly Challenging & Costly (contd..)**
  - Measurement is too costly or not practical.
  - What is gotten from survey is often perceptual.
  - There are more than one way to establish NRB, and
  - Reconciling the often contradicting or largely differing figures are sometimes mind-boggling!



# Lessons Learnt & Challenges in Doing CDM in Biogas (5)

- **Building a Working Monitoring System is Costly and Challenging**
  - Despite all good intention and efforts, things in the field are far from ideal.
  - One way-out could be “low-cost-low-revenue”.
    - Simplification that leads to low cost and
    - Taking conservative figures in ER calculation that leads to low revenue.

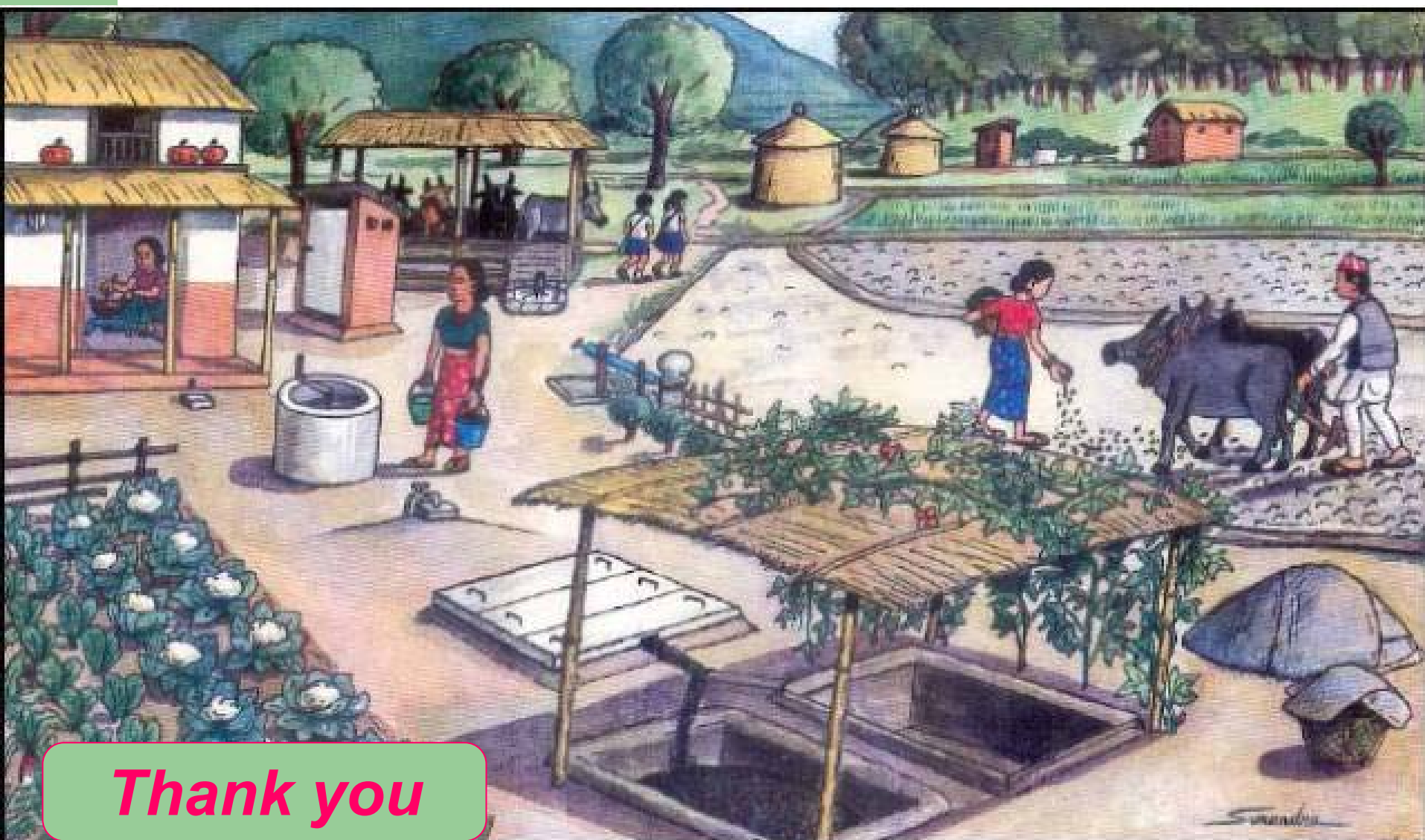
## Wrapping up (1)

- **Need to work on capacity building and Improve interactions/communication**
- **Why not to build a working system with good investment?**
  - **A high-risk-high-return proposition, not easily acceptable.**
  - **First movers invest and followers reap the benefit.**

## Wrapping up (2)

- **Then why not create demonstration effects and best practices with external funding?**
- **Doing CDM is still development, for host countries**
  - The business logic of investing now for return later is not well accepted or understood in the development world.
- **Guidelines, tools and capacities needed to improve accountability and control of DOEs.**

# Biogas for Better Life!



*Thank you*