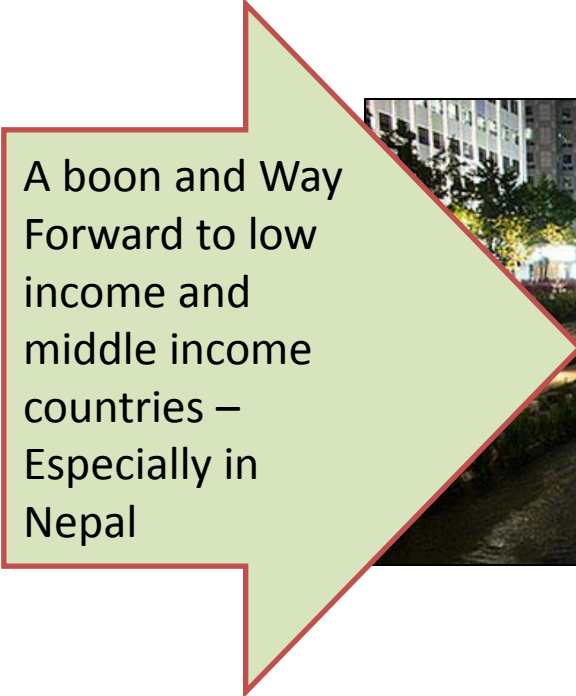


**Highlighting the Significance of  
Promotional measures and effective O&M  
in sustaining DEWATS – Study from Nepal**

Luna K. Kansakar and Yasoda Shrestha  
**Environment and Public Health Organization**

# Prospect of DEWATS in Nepal

- No to low electricity consumption
- Low Operation and Maintenance Cost
- Simplicity in design, construction and operation
- Usage of natural process
- Added benefit – Aesthetically pleasing
- Natural terrain of Nepal aids to the performance and designing of the system



A boon and Way  
Forward to low  
income and  
middle income  
countries –  
Especially in  
Nepal



# Brief overview of DEWATS in Nepal

- DEWATS was introduced in Nepal in the form of PhD research project in 1997 at Dhulikhel Hospital
- Till date over 20 systems have been designed and constructed by ENPHO and others.
- DEWATS in Nepal is gradually getting its pace – Nepal showcases some success stories and some lessons to be learnt

EXISTING DEWATS IN NEPAL			
S.N	Location	Type	Year Built
1	Dhulikhel Hospital	Hospital	1997
2	Dallu, private house	Domestic	1998
3	Kathmandu University	Institutional	2001
4	ENPHO Laboratory	Institutional	2002
5	Malpi International School	Institutional	2002
6	Sushma Koirala Memorial Plastic & Reconstructive Surgery Hospital	Hospital	2002
7	Kapan Monastery	Institutional	2002
8	Private house at Dallu	Domestic	2002
9	Septage Treatment, Pokhara	Community	2003
10	Shuvatara School, Lamatar	Institutional	2004
11	Surya Tobacco	Industrial	2005
12	Private House, Bishal Nagar	Domestic	2005
13	Sunga, Thimi	Municipal	2006
14	Kirtipur Housing community	Community	2006
15	Kusunti Housing	Community	2007
16	Ilam Polyclinic	Hospital	2007
17	Sano Khokana community	Community	2008
18	Srikhandapur	Community	2008
19	Monastery in Pharping, Dakshinkali	Institutional	2009
20	Private house at Kritipur	Domestic	2010

# Study on existing DEWATS in Nepal

Monitoring visits were made to some of the existing DEWATS to understand:

- Their existing condition
- Conduct their performance evaluation
- Understand existing O&M Practices

This presentation was thus made based on the field visits made to those systems. Linking their condition and performance from the perspective of owner's attitude and existing O&M. Thus analyzing future prospect of DEWATS in Nepal – What would help and What not!!!

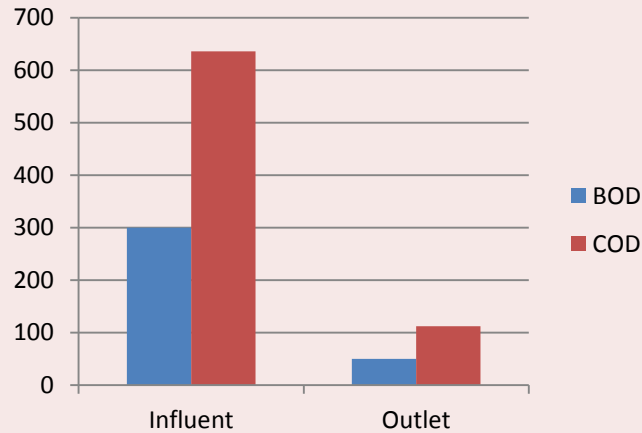
# Following types of systems were monitored

DEWATS included in the research/monitored

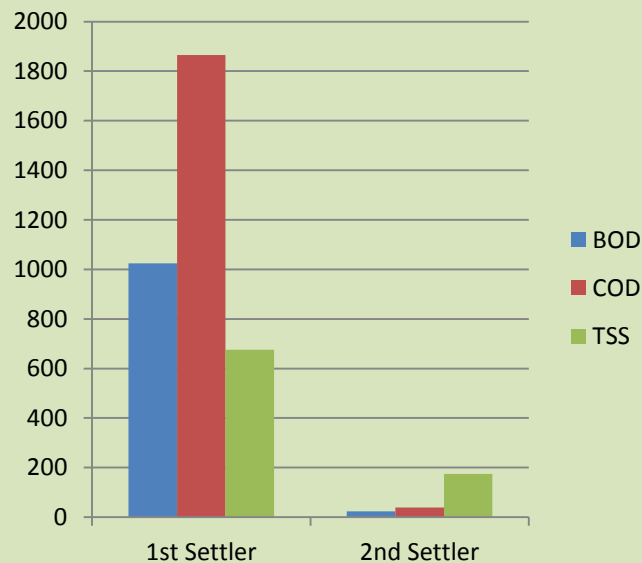
- Dewats installed at Private Households
- Dewats installed at community scale
- Dewats installed at institutions

# Performance Results Vs. Attitude of Owner Vs. O&M

# Dewats installed at Private Households



- Owner is a renown environmentalist
- Maintenance is done regularly
- Enthusiastic and dedicated people behinds its O&M



- Owner is a renown environmentalist
- Maintenance is done regularly
- Ethusiastic and dedicated people behinds its O&M

# Dewats installed at community



## SANO KHOKANA

- Integrated system to manage organic waste and liquid waste
- Donor Driven
- Managed by User's Group – Inactive at the moment
- No Care Taker at the moment
- O&M is completely lacking



## SUNGA THIMI

- Donor Driven
- Managed by User's Group – inactive at the moment
- Municipality separate certain minimal budget for its O&M
- Care taker is responsible for its daily O&M
- Performance evaluation shows wastewater effluent quality within the standards



## SHREEKHANDAPUR

- Donor Driven
- Managed by User's Group – inactive at the moment
- 5 biogas user's households pay the charge that is sustaining the system
- Care taker is responsible for its daily O&M
- Performance evaluation shows wastewater effluent quality within the standards



# Dewats installed at institutions



## **DEWATS at AMA GHAR**

- Built with the demand of the client who is an active waste management enthusiast and wants to set an example
- Care taker is assigned with clearly mentioned JD for Operation & Maintenance of the system



## **DEWATS at WATER FRONT HOTEL, POKHARA**

- Built with the demand of the celebrity who wants to set an example so as to protect the lake phewa
- Care taker is assigned with clearly mentioned JD for Operation & Maintenance of the system

# Summary of Results

- Better Maintenance in those system where owner was enthusiastic (**Owner's attitude plays a huge role**)
- Better maintenance in those system where there is the allocated budget for O&M
- For community based systems, community tends to forget the existence of the system once it is built -> **High risk in sustainability for community handed out systems if the homework for later is clearly planned**
- Demand driven clearly wins over donor driven
- Dewats can be a part of beautiful front yard -> Ama Ghar, Private households, Water Front Hotel Pokhara, Sunga → **People gets attracted to beauty**

# Analyzing **THE WAY FORWARD**

# Create Market : Awareness – Step 1

- What everybody can see and are aware of??
  - Condition of Rivers in Kathmandu Valley
  - Water Pollution
  - Extreme serious
- What everybody needs to see??
  - Environment conservation is everybody business
  - Technologies are there in the market

LET EVERYONE KNOW

# Demand/Market Creating Strategies

- Go beyond the sector
- Package the product we want to sell in such a way that its attractive to its buyers
- Advertise our product -> Good advertisement can sell even the dumbest product ->DEWATS is the smart product for the smart people, its bound to get its right market

# TO ATTRACT MARKET- Flaunt Benefits

**RECYCLED WATER**



**ENERGY**



**FERTILIZER**



**MANAGED WASTE**



## Advocacy: Legal step to promotion – Step 2

- Make local body more liable towards environment
- Legalize the entire matter of liquid waste management and enforce it

- READY TO TAKE A STEP AHEAD
- CREATE OPPORTUNITY FROM CRISIS

FOR

**SUSTAINABLE SOLUTION**

**THANK YOU**