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Ensuring sustainability of DEWATS - a community-based O&M strategy in Nala, Nepal

--Manuscript Draft--

Manuscript Number:	
Full Title:	Ensuring sustainability of DEWATS - a community-based O&M strategy in Nala, Nepal
Article Type:	Outline Paper for Oral Presentation
Keywords:	operation & maintenance, financing mechanisms, community participation
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Manuscript Region of Origin:	NEPAL
Abstract:	This presentation introduces a case study on community-based DEWATS operation and maintenance (O&M) from Nala, Nepal. It presents an O&M strategy recently developed by the Nala community in association with the local NGO CIUD (Centre for Integrated Urban Development) under guidance of Eawag-Sandec. The innovative process of elaborating O&M procedures with the participation of the user committee and community members is described, and the potential for replication in other DEWATS projects is discussed. Due to the high ground water table, Nala residents were forced to frequently empty their cesspits - on-site sanitation facilities traditionally used for the collection of household wastewater. Fecal sludge was haphazardly disposed into nearby rivers and fields, causing severe environmental pollution and public health risks. To address this sanitation problem, a people-centered planning process was initiated in Nala in 2009, following the Community-Led Urban Environmental Sanitation (CLUES) planning approach (Lüthi et al., 2011). After 10 months of planning, the outcome was an integrated environmental sanitation plan which is now being implemented (Sherpa et al., 2012). Among several sanitation system options identified as promising solutions during the planning process, a simplified sewerage linked to a DEWATS was preferred by the community. The system is currently in its final stage of construction and expected to be put into operation in July 2012. The sanitation system was financed through users' investments, amounting to around 44% of the total capital expenditures , and external support (56%). To ensure trouble-free operation and longevity of the new system, an O&M strategy is being developed through a series of community consultations. A first participatory O&M workshop increased the community's awareness of the need to properly operate the system and to regularly perform maintenance tasks in order to keep it running. At the same time the prospective users identified several concerns that should be addressed

	to sustainably operate the system. Some of the key issues brought forward during the workshop were i)to set a uniform connection charge for household sewer connection, based on the average distance between the households and the main sewer line; ii)to set a service tariff that is acceptable for all households and covers the costs of routine inspection and periodic maintenance tasks carried out by a local caretaker; iii)to set up a reserve fund for urgent and capital maintenance, based on savings generated from household connection charges and surplus; iv)to merge the sewerage service charges with existing water utility charges. This implies an institutional merger of the two committees, i.e. the water users committee and the sanitation committee; v)to conduct a series of household and community-level awareness activities on proper usage and operation of the simplified sewerage system; vi)to develop technical capacity of the users committee to operate and maintain the treatment system. While these issues will be taken into consideration during the further preparation of the community towards running the system independently, external support will still be in place through the local partner NGO for a year. The support will focus on technical performance monitoring of the system and strengthen community management capacity. This presentation seeks to contribute a promising practical experience to the ongoing initiatives on improving O&M procedures and management mechanisms for community-managed DEWATS. It highlights some of the measures and approaches field-tested in the Nala case, and provides practical recommendations on participatory approaches for the development of O&M structures and capacity.

Ensuring sustainability of DEWATS – a community-based O&M strategy in Nala, Nepal

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Abstract

This presentation introduces a case study on community-based DEWATS operation and maintenance (O&M) from Nala, Nepal. It presents an O&M strategy recently developed by the Nala community in association with the local NGO CIUD (Centre for Integrated Urban Development) under guidance of Eawag-Sandec. The innovative process of elaborating O&M procedures with the participation of the user committee and community members is described, and the potential for replication in other DEWATS projects is discussed.

Due to the high ground water table, Nala residents were forced to frequently empty their cesspits – on-site sanitation facilities traditionally used for the collection of household wastewater. Fecal sludge was haphazardly disposed into nearby rivers and fields, causing severe environmental pollution and public health risks. To address this sanitation problem, a people-centered planning process was initiated in Nala in 2009, following the Community-Led Urban Environmental Sanitation (CLUES) planning approach (Lüthi *et al.*, 2011). After 10 months of planning, the outcome was an integrated environmental sanitation plan which is now being implemented (Sherpa *et al.*, 2012).

Among several sanitation system options identified as promising solutions during the planning process, a simplified sewerage linked to a DEWATS was preferred by the community. The system is currently in its final stage of construction and expected to be put into operation in July 2012. The sanitation system was financed through users' investments, amounting to around 44% of the total capital expenditures , and external support (56%).

To ensure trouble-free operation and longevity of the new system, an O&M strategy is being developed through a series of community consultations. A first participatory O&M workshop increased the community's awareness of the need to properly operate the system and to regularly perform maintenance tasks in order to keep it running. At the same time the prospective users identified several concerns that should be addressed to sustainably operate the system. Some of the key issues brought forward during the workshop were

i) to set a uniform connection charge for household sewer connection, based on the average distance between the households and the main sewer line;

ii) to set a service tariff that is acceptable for all households and covers the costs of routine inspection and periodic maintenance tasks carried out by a local caretaker;
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While these issues will be taken into consideration during the further preparation of the community towards running the system independently, external support will still be in place through the local partner NGO for a year. The support will focus on technical performance monitoring of the system and strengthen community management capacity.

This presentation seeks to contribute a promising practical experience to the ongoing initiatives on improving O&M procedures and management mechanisms for community-managed DEWATS. It highlights some of the measures and approaches field-tested in the Nala case, and provides practical recommendations on participatory approaches for the development of O&M structures and capacity.

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