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# STUDY ON CBOS CAPABILITY FOR SUSTAINABLE MANAGEMENT OF RURAL WATER SUPPLY SCHEMES

By

T.W.M.L.P. Wijesundara

M.Sc. in Environmental Engineering and Management



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# STUDY ON CBOS CAPABILITY FOR SUSTAINABLE MANAGEMENT OF RURAL WATER SUPPLY SCHEMES

**BY: MR. T.W.M.L.P.WIJESUNDARA**

A Dissertation Submitted in Partial Fulfillment of the Requirement for the Master of  
Science Degree in Environmental Engineering and Management

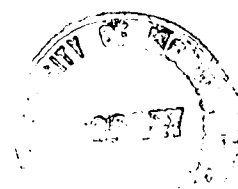


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**Declaration**

I certify that this dissertation does not incorporate without knowledge by any material previously submitted for Degree or Deploma in any university and to the best of my knowledge and belief it does not contain any material previously published or written or orally communicated by another person except where due reference is made in the text.



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Signature of the candidate

To the best of my knowledge the above perticulars are correct.

***UOM Verified Signature***

.....  
Prof. (Mrs.) N. Ratnayake

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## Abstract

Sixty per cent (60%) of the rural population living in the country does not have access to safe and adequate water supply facilities. The rural population is 75% of the total population as per the 2001 census records. The lack of access to safe drinking water directly relates to health, hygiene and income generation of rural community in Sri Lanka. Target Ten of the Millennium Development Goals (MDGs) is to “halve, by 2015, the portion of population without sustainable access to safe drinking water and basic sanitation”. If this target to be achieved, development of rural water supply, sanitation and hygiene are required as more than 70% of poor living in rural areas. This has promoted the government and donors to increase user involvement in water supply sector. In the past two decades many rural water supply projects have been implemented with donor assistance. Experience gained from those projects had provided guidance towards implementation policies in rural water supply and sanitation. The challenge facing the water sector today is how to scale up these experiences in order to meet the MDGs.

Increased financing is clearly needed, but that alone will not meet the challenge. Client capacity to ensure the sustainability of investments is equally important as evident from the experience of many failures made by rural water supply schemes during the last two decades. Therefore development of policies and strategies is needed with the understanding that water supply is a service and the user community should be considered as the core of sustainability. The rural water supply projects were implemented successfully with community involvement during the construction phase with less emphasis on operation and management. However, during the operation and maintenance period, these projects had faced problems and consequently some of these schemes were abandoned within a period of 5 years or less.

The policy for the rural water supply and sanitation sector has recognized the value of water and the need for institutional arrangement for the efficient management of facilities with community participation and the stakeholders. According to the Rural Water Policy, the users should be encouraged to own and manage the facilities and assets.

There are seventy-nine community water supply schemes in the Monaragala district including five small towns implemented by the ADB assisted 3<sup>rd</sup> project completed in the years 2003 to 2005 with community involvement. The community should undertake O&M as per the project policies. Though the ADB assisted 3<sup>rd</sup> project paid attention to sustainability from the start, there are many examples of CBOs failing in O&M. Further criticism from some local government bodies and the National Water Supply and Drainage Board devalued the capacity of CBOs to undertake O&M of completed WSS.

There is strong evidence that supporting agencies are not giving assistance to the CBOs during O&M and the CBOs with committed staff exist many years as if in construction stage. Technical, financial and managerial activities of water supply schemes are directly related to sustainable O&M. Therefore it is needed to assess the CBO's capability in managing water supply schemes with respect to technical, financial, institutional, social and environmental sustainability during the operational stage, in order to ensure sustainability of the project. Even though some indicators for measuring the overall performance of rural water supply schemes have been

developed, a structured methodology is needed to assess the capability of the CBO's in the above aspects.

To assess capabilities of the CBOs for sustainable rural water management a study was undertaken in the Monaragala and Badulla districts selecting eleven water supply schemes managed by the CBOs. The research focused on the CBOs capability in five main areas for sustainability of water supply schemes; 1) Technical sustainability, 2) Financial sustainability, 3) Institutional sustainability, 4) Social sustainability, 5) Environmental sustainability. Data were collected from eleven water supply schemes maintained by CBOs by interviewing consumers and officers on a questionnaire and a structured format respectively. These values were compared with the acceptable values of the indicators in order to assess the technical, financial, institutional, social, environmental and overall sustainability of each scheme.

Sub indicators of each area were analyzed to assess the capability of the CBOs. Qualitative and quantitative analysis of the structured interviews provided insight into the views of the community and officers of the CBOs. The results obtained this way were tested against the situational observations of each scheme in order to check the validity of the specially developed methodology.

The more salient findings were; According to the results of the developed methodology only one scheme was found a failure which was Wila Oya Vilage WSS and the sustainability of Athimale WSS cannot be assured and need urgent attention for the improvement of performance indicators related to financial sustainability and all the other schemes are on the sustainable track with respect to the management of the CBOs. It is identified in the assessment using the developed methodology, most of the CBOs are capable of managing WSS assuring technical, financial, institutional, Social and Environmental sustainability; Inappropriate filtration facilities implemented due to financial constraints, water quality variation and reduction in extraction capacity of deep production bore hole wells being impediments for the capability of the CBOs for sustainable rural water management.

The methodology developed in this study to assess sustainability of WSS covers almost all the important areas of managing WSS by the CBOs. The indicators to be evaluated in the methodology should be assessed from the views of both officers of the CBO and the sample of consumers. The results of the assessment using this methodology in the study recommend that the CBOs are capable of managing WSSs with an assurance of sustainability. The methodology can be implemented for other WSSs managed by the CBOs to assess the capability of the CBO in managing WSS and also can be adopted for future projects implementation policies.

In the study it was identified that it was necessary to establish a support service mechanism for the CBOs during the O&M.

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### **Appendix B**

Information for calculating performance indicators of eleven schemes

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## Abbreviations

ADB	-	Asian Development Bank.
CAP	-	Community Action Plan
CBO	-	Community Based Organization.
Cum	-	Cubic meters.
CWSSP	-	Community Water Supply and Sanitation Project.
DCC	-	District Coordination Committee
DIU	-	Divisional Implementation Unit
DLCC	-	District Level Coordination Committee
GND	-	Grama Niladari Division
IDWSS	-	International Decade for Water Supply and Sanitation
MDG	-	Millennium Development Goals
MOU	-	Memorandum of understanding
MPA	-	Methodology for Participatory Rural Appraisal
MOU	-	Memorandum of Understanding
NGO	-	Non Governmental Organization
NRW	-	Non Revenue Water
NSC	-	National Level Steering Committee
NWS&DB	-	National Water Supply & Drainage Board Sri Lanka.
O & M	-	Operations & Maintenance
PHI	-	Public Health Inspector
PIU	-	Project Implementation Unit
PMU	-	Project Management Unit
PO	-	Partner Organization
PS	-	Pradeshiya Sabha
PRA	-	Participatory Rapid Appraisal
RWS	-	Rural Water Supply
TOR	-	Terms of Reference
TOT	-	Training of Trainers
TWSSP	-	Third Water Supply and Sanitation (Sector) Project
WHO	-	World Health Organization
WSS	-	Water Supply Scheme