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Basic Assessment of Community Based Water Projects in Sri Lanka to Analyze Impacts of it for Health and Social Development and Sustainable Community Development Approaches

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ABSTRACT

Community Based Water Projects are now doing a major role in supplying safe drinking water among both rural and estate communities. Apart that, these Community Based Water Societies are doing a huge task to improve hygienic practices, community development, community voice for water and other social needs, social capital and behavioural change etc.. In Sri Lanka, many community based water societies are success and some of them are failed due to miscellaneous reasons. This study reveals some reasons for the success and some reasons for the failure, expecting further study on that. As same as this study will focus to measure the level of community based water society's contribution to improve safe drinking water, hygienic practices, behavioural changes, community development, social capital, peace building, community voice and community development.

1. INTRODUCTION

Community Based Water Projects are functioning in many rural areas of Sri Lanka and the whole world, benefitting different kinds of rural and estate communities, in miscellaneous ways like, providing safe drinking water, Facilitating for hygienic practices among rural communities, Social mobilization, Develop Community Leaderships and sustainable community development etc..

In many parts of the world, Community Based Water Systems are encouraged by governments and different non-governmental organizations as a participatory approach for both infra-structure and community development.

In Sri Lanka, most of these societies are closely monitored by relevant local government and since recently, as State Responsible Organization, National Community Water Supply Department. Under that suitability of water and financial status of these societies are monitored.

This Community Based approach for water and sanitation is important in both, to provide safe drinking water and empower communities to address their problems for sustainable development.

In recent history, there is a village named Gangadevipally in India. This village also was as other villages in India with regular social, economic and political problems. Further this village was not having sufficient drinking water, health and education facilities. One organization assisted to them to start a Community Based Water System to solve their problem related to water and sanitation. This initial step brought them forward mentoring for community based development with their unity and using available resources. This unity in the community could ban selling and consumption of illegal alcohol in this village as the next steps and this development brought them forward in miscellaneous sector development by themselves.

- There are several objectives of starting Community Based water Projects in Sri Lanka as, reduce poverty and improve the quality of life of rural and estate communities, through the provision of safe drinking water, adequate sanitation facilities, hygiene practices, environment conservation, and promote economic,

religious and cultural practices in relevant communities. Further gender, peace and disability are crosscutting themes which are addressed through Community Based Water Projects.

It is clear that Community Based Water Systems are a good approach for community development in different sectors while mainly addressing for water and sanitation needs of people. Both Sri Lanka and whole World, there are different organizations like World Bank, JICA, AUS AID and World Vision which is starting and supporting to Community Based Water Projects targeting multi-sector community development addressing mainly for water and sanitation problems.

There are many Community Based Water Projects which could reach in to this potential targets while some of them are becoming fail due to different reasons. This study will be based on the points of success and failed of different Community Based Water Projects in Sri Lanka located in different geographical locations.

2. RESEARCH BACKGROUND

On the planet 75% of the surface area is covered by water. But water which can be consumable, is very limited and it is nearly 1% of the total water resources covered by the planet. As UNICEF records revealed, in the year of 2017, 663 million of the world people are not having safe drinking water.

In Sri Lanka, as records of the department of census and statistics revealed, there are no safe drinking water for 14.1% of rural households and 49.4% of estate households.

Climate change, problem of water utilization pattern and environmental degradation are major causes recognized as reasons for the scarcity of safe drinking water.

Since recent history, many governments got a new approach to solve the problem of safe drinking water for rural and estate households, encouraging communities to start drinking water projects with community participation.

These water societies were able to provide safe drinking water to the most rural communities, reducing the possibility to get different infections,

which is coming due to lack of safe drinking water.

As same as in the other hand, these societies did a major role to empower communities to find solution for their problems by themselves, taking lead role of their social development. Some water societies got further step to develop their communities due to the empowerment made through water societies.

While most of the communities are getting victories for their community development, some of them are failed due to miscellaneous reasons. It may due to the problem in approach, which is taken with different parties like community, government and other stakeholders or different gaps and contextual framework.

To address these effects the proposed study will give a scientific justification and will emphasize the necessity to develop and empower community based water societies, as groups of distributing safe drinking water and promote hygiene practices among their communities while they are becoming in to leaders of addressing for their social problems and issues taking them lead role in their development and sustainability.

3. LITERATURE REVIEW

3.1 Addressing for safe drinking water and public health

WHO/UNICEF, 2014, Common recommendation for safe drinking water is not dwelling Faecal indicator bacteria in a 100 mL of water. (WHO, 2011) As guidelines which are recommended by National Water Supply and Drainage Board, there are water quality criteria for the water supply in Sri Lanka.

As (M. W. C. Dharma-wardana 2015) revealed, there is a correlate with CKDu and present irrigation activities and water contamination in irrigated and natural water sources. Mostly the water source of these Community Based Water Projects are river, spring, canal or a well.

Climate change is a major incident of making water deteriorate. As study reveals, it changes water quality through both heavy rain and temperature rising. Increases of the number of cyanobacterial blooms will be made water quality deteriorate

through both above mentioned phenomena (Hunter 2003)

3.2 Community Participation and Development

As a result of beneficiaries organizing both men and women equally participated for leadership roles in the Community Based Water projects in Anuradhapura district. (Ministry of Finance & Planning in Sri Lanka, 2014)

Further this study was done to measure sustainability and the reasons for sustainability, is revealed that the projects which were employed demand - responsive approach was highly sustainable. Some projects were failed due to the lack or lower level participation in each decision making and monitoring processes. (Kähköne 1999)

For the performance of Community Based Water Projects, Social Homogeneity of water users (Watson, Jagannathan, Gelting and Beteta ,1997), Operational rules of the society (Sara and Katz ,1998); Isham and Kähkönen,1998), Prior organization of users (Narayan, 1995), Participation of users in other community groups (Isham and Kähkönen,1998), Coordination with government (Sara and Katz ,1998; Isham and Kähkönen,1998), Legal recognition of water user group (Watson, Jagannathan, Gelting, and Beteta, 1997), Skills and knowledge of users (Rondinelli, 1991; Sara and Katz, 1998; Isham and Kähkönen, 1998) and Appropriate technology and access to spare parts (Rondinelli, 1991), are main factors.

In the project of Community Based Water Projects started in Northern and Eastern provinces by National Water Supply and Drainage Board with the support of AUS AID, shows success in community mobilization and community leadership in development. (I.V.W.Ediriweera 2016) Further this study revealed the point of social harmony and transforming technology with outsourcing contracts. As same as women leadership came out and they compel to cultivate food stuffs in their home gardens improving health status of their families.

3.3Challenges

Further in Sri Lanka there is other Community Based Water projects constructed using supply responsive approach was failed. Especially these

projects are implemented with the full support of different NGOs and government. (H.K.S. Shanthasiri 2004)

As a disadvantage mentioned here is maintaining water quality due to miscellaneous reasons. Previous practices of using non-chlorinated water and difficult situation to change the mind sets are the main reasons for this situation. (H.K.S. Shanthasiri 2004)

4. METHODOLOGY

This research will be done based on Community Based Water Projects in Sri Lanka. GIS based database and mapping will be used to store collecting data from each Community Based Water Project. This mapping will be done in all 24 districts in Sri Lanka.

Community approach will be done through National Community Water Supply Department and National Water Supply and Drainage Board. Information will be gathered from selected each Community Based Water Project through the support of National Community Water Supply Department. Random sampling technique will be applied to select samples.

First Mapping will be done using the questioner for each Community Based Water Project in Badulla District, Mannar District, Matale and Nuwara Eliya Districts. This data collection and mapping would be a trial and further consideration will be identified for further development and changes of questioner and the database.

4.1 Data Collection

In that research, basic data collection was done in Badulla district, to develop basic concept for this research.

Under that, concern was given for the success and failed community based water projects.

According to that, this will be further studied and the research will be extended step by step.

In that attempt, first Mapping will be done using the questioner for each Community Based Water Project in Badulla District, Mannar District, Matale District and Nuwara Eliya District. This data collection and mapping would be a trial and further considerations will be identified for fur-

ther development and changes of questioner and the database.

Remained data collection and mapping will be done in randomly sampled Community Based Water Societies in all over the Sri Lanka using developed questioner, Key Informant Interviews and the GIS database.

In the data collection, data will be collected relevant to the water born disease and food transmission diseases before and after water project started, Strengths of the society and capacities of water societies for sustainability and Community development participatory approaches with water society. To assess above mentioned features, tools will be developed using standard methods for Community Development and Community Organizations.

Different qualitative data will be gathered to study factors related to success, sustainability and capacity development under different situations, cultural backgrounds and contexts. Further in some places, qualitative data will be used in a situation that lack of quantitative data for health and behavioral change studies.

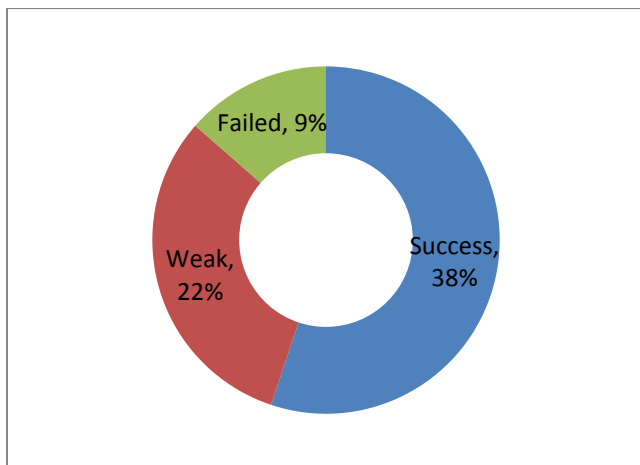
4.2 Analysis

In basic data collection for concept development, collected data from Badulla district. In Badulla district, there are 15 divisions in Badulla district and this district is composed of different climatic zones.

There are 477 community based water projects in Badulla district.

	Total number of CBOs	Success	Weak	Failed
Number	477	183	104	45
%		38%	22%	9%

(Data Source: National Community Water Supply Department)



Community based water projects, which are succeeded are having LKR 500.00 to LKR 45,059,387.00 fundings while weak CBOs are having LKR 1,000.00- LKR 65,000.00 and Inactive CBOs are having LKR 1,000.00 - LKR 12,000.00 funding capacities.

In another aspect, most of these CBOs were inactive and failed due to lack of proper maintenance.

Analysis will be done through both GIS and SPSS. Beyond that, qualitative data analysis will be done.

Analysis will be focus on,

- Performance and functionality of Community Based Water Projects in different districts
- Sustainability of different Community Based Water Projects in different districts
- Supply hygienic safe drinking water by each Community Based Water Projects in different districts
- Water born disease reduction with Community Based Water Project
- Behavioural changes happens with Community Based Water Project
- Community development with Community Based Water Projects

Further expect to identify potential development opportunities and will be identified for the sustainable Community Based Water Projects.

5. DISCUSSION

When we are considering community based water societies and projects, there are large number of CBOs which are successfully and smoothly functioning, while other more than half in becoming inactive and failed due to miscellaneous reasons.

It might be some times, financial capacity, technical capacity, leadership and organizational management etc..

This study will focus for in-depth study of these aspects while facilitating to develop a database through mapping information of Community Based Water Projects in Sri Lanka, opening door for more researches to the persons who are expecting to research on this field in different aspects like scientific, sociological and development etc..

6. BENEFITS OF THE RESEARCH AND CONCLUSIONS

This study will facilitate to develop a database through mapping information of Community Based Water Projects in Sri Lanka, opening door for more researches to the persons who are expecting to research on this field in different aspects like scientific, sociological and development etc..

Further this database might become in to a point which is finding gaps and making decisions for development activities relevant to Community Based Water Projects. In the other hand, more granting and funding opportunities will be created for researches and development, through different proposals will be written using the data in proposed database.

As same as, community empowerment, development and advocacy through community based water projects will become in to a new discussion point among development practitioners increasing potential to further development of community based water systems by different governmental and non- governmental organizations.

As Sri Lanka, relevancy, importance and sustainability of Community Based Water Projects will be measured through this research and impacts made through community based water societies to the development of social, economic and health sector, will be measured in both qualitatively and quantitatively.

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