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SANITATION AND WATER FOR ALL

Appraisal of rural water supply schemes

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CONSIDERING THE LIMITATIONS in the available resources and the aspirations of the people, it is necessary to strike a balance between peoples' needs and available resources. The rural water supply sector in Nepal is constantly faced with this dilemma. Therefore, agencies active in the delivery mechanism of rural water supply schemes in the country have been trying to develop a methodology to appraise community rural water supply schemes and prioritize them as per some priority index. Appraisal of such schemes and their prioritization has been done primarily with respect to major factors like technical viability, needs assessment / hardship, community's willingness to participate, financial resources, etc.

Some of the major sectoral institutions and projects have developed their own criteria for appraisal based on cost economy, hardship to the community and community's participation in all aspects of scheme identification, development and implementation. The paper intends to assess and compare scheme appraisal criteria developed and followed by some leading programs in the sector in Nepal like the Rural Water Supply and Sanitation Fund Development Board (HMG / IDA) under the Ministry of Housing and Physical Planning (MHPP), the Fourth Rural Water Supply and Sanitation Sector Project (HMG / ADB) under the Department of Water Supply and Sewerage, etc. This paper intends to examine the process and assess the strengths and weaknesses of these approaches in the context of national development.

The rural water supply and sanitation fund development board

The IDA supported RWSSFDB has developed its own set of scheme eligibility criteria which are employed to appraise rural water supply schemes for further development and implementation. Accordingly, schemes proposed by support organizations are appraised on the basis of felt needs and economic viability, technical feasibility, sustainability and willingness to pay by the community. The Board does not have a priority index for all the proposed and eligible schemes, rather it follows the principle of accommodation and tries to accommodate as many eligible schemes as possible subject to scheme eligibility and budgetary resources. Appraisal of schemes are based on the following criteria:

i. Need and Economic Viability

Average Time Saving per Household per day

Gravity Schemes:	2 Hours
Shallow Tubewells	3/4 Hours
Dug Wells	1.75 Hours

Per Capita Costs

Gravity Schemes	NRs. 1600.00
Deep Tubewells	NRs. 1300.00
Shallow Tubewells	NRs. 230.00
Dug Wells	NRs. 1000.00

or

Average Per Capita Water Availability is < 15 liters / capita / day.

or

A majority of households are dependent upon heavily polluted sources.

ii. Technical Viability

iii. Sustainability and Willingness to Pay

Community Contribution to Capital Cost

Satisfactory O&M Arrangements

Establishment and Registration of Water Users Group and Water User Committee

The fourth rural water supply and sanitation sector project

The Fourth Rural Water Supply and Sanitation Sector Project (FRWSSSP) executed with the support of the Asian Development Bank has also developed its own set of priority index and a set of objective scoring criterion, which is employed to prioritize eligible schemes. Accordingly, the FRWSSSP gives sixty percent weightage to the ratio of hardship scores to per capita costs and the remaining 40 percent weightage is allocated to community participation. The three factors as defined by the FWRSSP are as follows:

Cost Economy
- The score for per capita cost is allocated in a continuous scale.
- Score is allocated for per capita cost at the base year alone.

Hardship
- Time required to travel
- Time required to wait at source
- Quantity of water available
- Quality of water

Community Participation
- Community contribution assessment scores have been allocated in terms of work items to be executed free of cost rather than their cost value in the sub-project cost estimate. This would provide an equal comparison between communities in the remote and easily accessible areas.
- Weighting has been provided to the community willingness component, as it is an important part of participation leading to sustainability.

Features

All the adopted approaches have given mandatory consideration to the issues of hardship faced by the community, quality and quantity of water available and the involvement of the community during all phases of development. However, limitations of financial resources often restrict the number of schemes that can be taken up for implementation. Thus, all the projects have a direct or indirect "ceiling" on the per capita investment cost, which forms the "ultimate" litmus test for eligibility of the schemes proposed for implementation. Although all approaches of development of the rural water supply sector follow the now widely advocated and successful policy of community-based approach, there are a few issues which could be considered for the future.

Limitations

- Unlike the Fourth Rural Water Supply and Sanitation Sector Project, the RWSSFDB approach does not involve assigning specific values to issues like hardship for the community or even quantity / quality of water available for consumption. The RWSSFDB approach is more subjective and relies on assessment of needs in terms of time savings or per capita consumption or water quality. On the other hand, FRWSSSP has a more objective approach and combines the "effects" of all issues and comes up with a combined score for the individual scheme. In this approach the total hardship score is not equitable and more weightage is given to time required to fetch water and less to quality and quantity of water available for consumption. This combined approach can often tilt the balance one way or the other and genuine "effect" of one factor may get overlooked.
- Similarly, in the FRWSSSP approach there are scores assigned to the community participation aspect as well. The scores for community contribution are divided into various activities linked with the implementation of the scheme. Therefore, on one hand the community is not bound to specific activities, on the other hand subject to the hardship scores the community contributions can be "flexible". Further, schemes to be implemented under the same program may have different levels of community contribution and there could be lack of uniformity in the implementation process.
- The RWSSFDB approach involves assessment of economic viability, which is linked with the amount of time savings and the per capita cost ceiling. Thus, the ceiling on the per capita cost often becomes the ultimate test for the selection of a scheme. Remote schemes which may "pass" the scheme eligibility criteria and are technically feasible may be excluded because of the higher cost involved. In other words the effect of higher cost is only reflected through the exclusion of the scheme, unlike the FRWSSSP approach, where there is no cost ceiling but a higher per capita cost interprets into lower scores in the overall scheme prioritization process.
- Further, the RWSSFDB approach regarding the community's contribution is mandatory in terms of provision of unskilled labour, local materials and cash contributions. Lack of certain inherent flexibility here can often lead to the exclusion of schemes, which other wise would have been implemented. An example of this is the unavailability of sand (classified as local material), which in certain cases may not be available locally and may have to be procured from outside after paying the requisite amount in cash.

Strengths

- The RWSSFDB approach of involving Support Organizations (SOs) is geared towards mobilizing resources to the utmost and provide the requisite services to the community. Except for some anomalies, this approach has been successful in mobilizing the community and the local resources in an comprehensive manner. As the community in association with the SOs are extensively involved in the identification and development of the schemes, a lot of interest and ownership feeling is generated.
- Scheme eligibility under the RWSSFDB approach involves giving equal importance to the various hard ship factors like time taken to fetch water, quantity and quality of available water for consumption. Therefore, equal importance to all the three issues mentioned above is given in the appraisal of a particular scheme.
- The FRWSSSP approach involves the cost factor, which is adequately reflected in the overall scheme prioritization criteria. There is no cost ceiling as such, which gives a certain degree of flexibility to the entire planning and implementation process.
- Similarly, the community's contribution in terms of providing unskilled labour and local materials for the FRWSSSP approach is relatively more flexible and gives the community more options.
- Both the RWSSFDB and FRWSSSP approaches have made contribution of cash and establishment of a registered water users committee a mandatory criteria for appraisal and prioritization, which are very strong indicators for the sustainability of the schemes.

Common platform

Approaches adopted in the implementation of rural water supply and sanitation schemes in Nepal have similar inherent characteristics. However, due to lack of effective existence of a national policy framework, variations in the general approach are often observed. In the overall context of community based rural water supply schemes in Nepal, the following factors are now inherent in the development process:

- Prioritization in implementation based on needs defined by accepted hardship indicators.
- Community's participation in all phases and aspects of scheme development and implementation.

- Total responsibility of the concerned users committees in the subsequent O&M of the schemes.
- Involvement of community organizations, NGOs and similar organizations in mobilizing resources in the planning and implementation of rural water supply scheme.
- Diminishing role of the Government as the "provider".

Recommendations

Even though the factors mentioned above have indeed become visible in the development process, certain weaknesses are also existing. Different funding agencies through individual projects may be adhering to the above principles, but the detailed approach often varies from project to project. On the other hand, despite the efforts of the sector lead agency (Department of Water Supply and Sewerage, DWSS), duplication of efforts are also reported. Therefore, to get over these uncertainties and anomalies, it is imperative that a comprehensive policy as well as procedural document be developed, which can account for these weaknesses. In concrete terms it is proposed that the following recommendations be considered for all future development in the sector:

- Development of a comprehensive policy framework especially for the rural water supply sector where line agencies, international development agencies, bilateral support organizations and others can identify their roles vis-à-vis the development of the sector in the national context.
- Development of a clearly articulated procedural document for identification, development and execution of programs for the rural water supply and sanitation sector.
- Formation and strengthening of a coordination council at the district level in the leadership of the sector lead agency, Department of Water Supply and Sewerage, focusing primarily on coordination, avoiding duplication of efforts, maintaining certain degree of uniformity in development approaches and technical efficiency.
- Formation of a national level forum where ideas, experiences, innovations and approaches can be presented and discussed for further development of the sectoral issues.

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