

INNOVATIVE APPROACHES IN WATER SUPPLY**AND SANITATION PROGRAMME:**

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Abstract:-

With the onset of the International Drinking Water Supply and Sanitation Decade (IDWSSD), 1981-1990, global policies and strategies were evolved for the effective planning, implementation of monitoring of water supply and sanitation programmes. In the introduction of IDWSSD policies in water supply programmes, socio-economic aspects have been given equal importance to the hardware aspects. The responsible water bodies and donor countries realised the need for an integrated approach in the water supply sector ultimately.

Socio-economic Units in Kerala was conceptually formulated during 1984-85 in order to meet the guidelines under IDWSSD. In 1984 both the governments of the Netherlands and Denmark launched a joint mission to develop a systematic frame work for the implementation of three Socio-Economic Units and a Co-ordinating office to work jointly with the Kerala Water Authority (KWA). The three units are located in the North, Central and Southern parts of Kerala State. Each units covered a project area which consists of 600000 population. The activities are mainly concentrated in 73 panchayaths, where the 11 bilateral water supply schemes are under implementation. The activities includes community education, community mobilization, inter-sectoral and intra-departmental co-ordination and collaboration, human resources development and institutional development including appropriate training programmes, establishment of viable and realistic management information systems etc. The major thrust of the programme interventions are on developing micro-level planning and implementation systems and procedures at the ward level. The results of these experiments would be available by the end of 1990.

INTRODUCTION:

1. Along with the International Drinking Water Supply and Sanitation Decade (IDWSSD), 1981-1990 global policies and strategies have been evolved

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in the water supply and sanitation programme. Many countries including India adopted the goals of the IDWSSD and were committed to providing clean water and sanitation to all by the year 1990. Due to practical realisation and for a comprehensive coverage the decade period has been extended beyond 1991. It is not even enough to plan for "coverage" of the population with facilities, we must also plan for sustained functioning of the facilities, such as feasible operation and maintenance, cost recovery etc. In providing safe water and improved sanitation facilities to poor rural communities, slum dwellers and other weaker sections in the urban localities, the so called appropriate facilities such as public standposts, handpumps or public latrines are often specified according to standard designs. Moreover, the community as a whole must be educated to realise that clean water is a scarce and costly commodity for which they are liable to pay for the cost based on the quantity consumed, and that it should be used with little or no waste at all. Further, they must also become conversant with the necessary precautions to avoid pollution of water before use and ways of ensuring protected water supply or safe water for drinking. It has generally been noticed that improvements in water supply and sanitation have a crucial role to play in reducing the high levels of morbidity and mortality that prevail in many poor countries today. It is essential that for the success of the programme (it is imperative that) both the water supply and sanitation activities should implement simultaneously. It is needless to mention that laying emphasis only on hardware part of the programmes will not yield tangible results without giving equal importance to software aspects of the programme. In all the hardware programme minimum 10% of the total budget should be earmarked for software and awareness programme. The software activities includes community education, community mobilization, community participation, inter-sectoral and intra-departmental co-ordination and collaboration, human resources development and institutional development including appropriate training programmes, establishment of a viable and realistic management information system etc.

2. For improving the implementation of water supply and sanitation Socio-economic Unit (SEU) have been established as an integral part of the

water supply and sanitation programme.(1)¹ In 1984 both the Governments of Netherlands and Denmark launched a joint mission to develop a systematic framework for the implementation of three Socio-economic Units and a Co-ordinating office to work jointly with the Kerala Water Authority (KWA). One unit each is located at the project areas which consists of 600,000 population each. The units are managed by experienced Social Scientists and other supporting staff in the field of community organization, health education, social work etc. The three units are located in the North, Central and Southern parts of Kerala State. The initial duration of the SEU funded by the Dutch and Danish Governments is three years. The chances are that the units will then be integrated with KWA to function as a Social wing.

3. The principal objectives behind the SEUs are to develop and test creative and innovative approaches in the following areas:

- to create the basis for the community participation and mobilisation in all activities under the SEU umbrella;
- to involve the communities especially the women folks in the site selection of standposts, coverage study of rural water supply schemes, operation and maintenance etc;
- to closely follow the implementation of the schemes with participation of Ward water committees and be directly involved in working out detailed designs for providing 90% coverage to the community;
- to introduce meaningful and appropriate hygiene education activities (cost effective) with more focus on traditional and local media;
- to implement cost effective sanitation programmes (household, institutional latrines in the selected pilot areas;
- to develop a systematic in built monitoring and evaluation mechanism for periodically assessing the progress,

¹ Kurup, K.B. - People's Participation in drinking water and sanitation programme: An Institutional Approach, Journal of Indian Water Works Association, July - September 1989.

weaknesses, failures, etc. of the schemes;

- to strengthen the capacity of existing government departments and local organisations to plan and implement their activities related to drinking water and sanitation.

COMMUNITY PARTICIPATION & MOBILIZATION:

4. The core element of the project is to ensure community participation through the involvement and mobilisation of the communities in the selection of public standposts, location of sites for latrines, organization of hygiene education programmes and beneficiary meetings at the ward (2)² level (local level). To improve the conditions of life of people and implement activities effectively at the local level some sort of a set up or organisational net work or social group based at the local level is imperative. However, still there is no established definition of a local area and the term "local" has a variety of meanings: settlement, village, ward, panchayat, area of a chief or sub-chief (traditional native administrators), district, even province. (3,4)³

⁴ The local unit should be given structural identity, delegation of power in principle and practice, decision making power on socio-economic development of the locality, required financial resources to develop community consensus and commitment in the management of the social and economic upliftment of the area. For practical reasons appropriate areas are to be selected based on the local need, local variations, land scape etc. In this programme a ward has been considered as the lowest local level unit. There should be sufficient amount of flexibility for learning from mistakes or learning through experiences.

² ward is the smallest administrative unit in the local government system in Kerala with a population of about 2500.

³ Kurup, K.B, - Henry Malual and Wolf Scott, - Social Monitoring in Southern Sudan: First Steps and Results, UNICEF Social Statistics Bulletin, Vol.5, No.1, 1982.

⁴ Kurup, K.B, - Development of a Social Monitoring System at the Local Level: An Experiment in the Southern Region of the Democratic Republic of Sudan, Journal of Social Indicators Research, Vol.15, No.2 1984.

5. With the help of the established group, such as ward water committees, it is possible to promote effective dialogue and articulation of interest of the community in the scheme. It is important to consider that participation as an end may appear only in part as in designed programme output, while in other forms it usually appears as a by-product of the programme. In connection with this, Coombs has stated that

" The formation of local pressure groups is necessary to bring about structural changes and reforms, to achieve a more suitable sharing of the benefits of development, to demand better services from government agencies, or to exercise a larger voice in policy and programme decisions affecting their lives"- (5) "

6. Community participation is regarded as the main spring of social development, yet this is more often rhetoric than reality. One way by which practical community participation in water supply and sanitation scheme can be encouraged is by the involvement of ward committees. There are representative groups from each ward who determine the patterns by which water supply and sanitation programmes can be implemented in their locality. WWCs are involved in site selection for public taps and latrines, distance criteria discussions, survey of existing water points, identifying and resolving problems of water, providing training and information regarding operation and maintenance of public taps and latrines and establishing links between users and relevant institutions such as panchayats, KWA, departments of rural development, social welfare voluntary organization etc.

7. In some other selected panchayats attempts have been made to study the effectiveness of committees by only with women members. In the SEU activities great emphasis have been given to promote the role of women since they are the main users and managers of water resources who could influence family sanitary habits, and effect changes in basic hygienic behaviour. The time and effort taken by women in water collection and storage can affect socio-economic and health condition in many ways. Proper community involvement has enormous potential and there is

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Coombs, H, Philip, (ed) - Meeting the basic needs of the Rural poor - The integrated community based approach.

experience to define conditions under which local people can indeed be in charge of successful rural water supply projects. The Hand pump project in several countries has promoted the concept of Village Level Operation and Maintenance (VLOM) as a means of overcoming some of the obstacles to sustainable water supply schemes. The sustainability is more often subject to the capacity or the mechanism available to provide required support for operation and maintenance of the facilities, people do want improved services but only if these meet their perceived needs. The members for this committee will be selected democratically while looking into their competency, dedication, motivation etc. The SEU has developed a manual and curriculum for training the selected members. The experience with more than 60 ward committees (for the past 8 months) proved that with their support and involvement it is realistic and possible to implement the anticipated activities and they have shown interest to pay for the water charges based on the consumption pattern. In order to provide adequate support to these committees, panchayats and district level committees have been established and this will be strengthened simultaneously with the ward committees.

LOCATION OF PUBLIC STANDPOSTS AND COVERAGE STUDY

8. SEU has added a social dimension to engineering activities: central involvement of people in the selection of the location of public standposts. The SEU's in consultation with the Ward Water Committees and Kerala Water Authority, introduced the process of socio-economic site selection to better cater for the need of the poor sections of the population. This process closely involves the community in the planning and design of water supply scheme. It is also the entry point for preparing the uses of water source to contribute for local maintenance and fault reporting. Before the inception of SEU, the procedure for locating standposts was based upon KWA's request, panchayat would issue a list of locations for fixing the standposts according to the number of taps allotted by KWA. The KWA, with the help of a Contractor, would install the taps at sites recommended by the Panchayats. The criteria for the Selection of Public Standposts and the norms adopted by the KWA are not convincing or known. A study of the areas (in the Dutch assisted Water Supply Schemes) where public standposts were installed without the involvement of SEU revealed that those standposts

were not located in the ideal places or deserving areas.

9. After formation of SEU, as a first step, a meeting is held with the panchayat authorities along with the Assistant Executive Engineer of KWA. The design drawing is discussed in detail in the meeting with each panchayat ward member. The panchayat members will identify the main areas left out in the design. Ward Water Committee members and SEU, visit all the wards with the help of the design map of KWA. With the help of this map and the village map of KWA, a sketch map will be prepared for each and every ward. Followed by this the field staff will visit all the areas to demarcate the deserving areas (where a concentration of people below the poverty line is dwelling) in the maps. During this exercise the number of potential beneficiaries (households) for private connections (middle income group and above), and people below the poverty line, will be listed in the map. (those who need the service of a public tap). One standpost is meant for approximately 25-40 households (200-250 people) with a distance of 200 meters and majority of them will be the potential beneficiaries. (6) ^e

HYGIENE EDUCATION:-

10. Effective hygiene education requires a combined use of various approaches like interpersonal communication, group discussion and mass approach. There is no inherent contradiction between these approaches; each has its own advantages and limitations. The main consideration should be the right selection of approaches or combination of approaches appropriate to local situation and the ability on the part of the workers to select and use them effectively. It is easy to make changes in technological and other hardware aspects, but making changes in attitudinal and behavioral practices appropriate and sustainable approaches have to be developed. This involves more than simply telling about the importance of hygiene education to the people. An health education sub-committee composed of three people (2 females, 1 male) have been selected from the Neighborhood committees which include women from the locality and trained for the implementation of effective hygiene education programmes. Adequate provisions will be made to study and understand

^e Manual for site selection of public water points (Draft), Socio-economic Units, Kerala, August 1989

how beliefs and attitudes influence behaviour (especially hygienic practices), and thus affect disease transmission. Such feedback may provide useful pointers as well as possibilities for community organization, participation and education.

11. Supportive systems are required to strengthen and enable the communities to respond to the message by organising themselves for active involvement and putting into practice the hygienic practices promoted by health education efforts. Action - oriented and pragmatic health education programmes with the help of local youths (both men and women) have been used to promote the health supportive behaviour. Similarly most of the field activities and production of materials have been carried out through participatory approaches.

12. School Health Club:-

As an initial effort School Health Clubs have been formed in Seven Selected Schools. The objectives are as follows:

- a) To increase the awareness of pupils on the value of water, water management and other associated factors;
- b) To educate them how to use and safely handle drinking water;
- c) To educate the people on the hazards of gastro-enteritis and other water borne diseases, and the need to use sanitary latrines;
- d) To make them aware of the fact that the health of a person is the health and wealth of the family and society.

SANITATION

13. Improved water supply and sanitation are considered to be the prerequisite for better health and socio-economic development. It was realised that satisfactory achievement will not be possible through the water supply schemes without adequate sanitation coverage. Several institutions, government and voluntary organizations are involved in the rural sanitation programme. However a clear picture of the involvement of various bodies in the sanitation programme and what their impact is, is not available. When SEU considered a sanitation programme, it was realised that in spite of all

the efforts the coverage of rural sanitation in Kerala was approximately 22% only. (7)⁷ The challenge was to provide as many households as possible with proper sanitation but in such a way that the beneficiaries understood and appreciated the facility, and used it properly. Right from the beginning, we came to the conclusion that a different approach was required to construct cost effective and technically sound latrines on as large a scale as possible, in as short a time period as possible. Hence, depending on the need and importance, with assistance from SEU, a pilot sanitation programme has been carried out in selected seven panchayats. Through this programme, SEU introduced appropriate technologies and built in monitoring and evaluation procedures for measuring the effectiveness of the pilot programmes. Another aim was to involve beneficiaries and the local populace, as well as governmental and non-governmental agencies directly in this programme.

14. Different approaches were introduced for the implementation of the programme. However, it would be worthwhile to compare and learn from the various technological approaches and programmes. Such comparison might indicate which factors are important in the different situations and what the respective strengths and weaknesses of each approach could be. A detailed study of the various approaches adopted by the SEUs are presented below.

The main intention of the pilot programme was to test and compare the following approaches:-

- Approach 1 - Planning and implementation with voluntary organisations
- Approach 2 - Planning and implementation with Panchayat (Local government)
- Approach 3 - Planning and implementation with a Semi governmental institution (Technical College)
- Approach 4 - Planning and implementation by SEU

⁷ Scott, W & N.T. Mathew, A development monitoring Service at the local level: Vol III, Monitoring Change in Kerala - the first five years, UNRISD, Geneva 1985.

15. Organization and Mobilization: In all the pilot schemes locally-available masons were trained to build the latrines. To ensure comparability and to solve any problems during this programme, we formed the "Sanitation Task Force", in which all partner agencies and the relevant SEU staff met as and when required. Health education, organization, mobilization and motivation were the most time-consuming and crucial activities and the partner agencies were not very enthusiastic or effective in carrying out this. The experience revealed that for carrying out effective implementation of sanitation programme appropriate mobilisation and awareness programme has to be undertaken at least three months before the programme. Appropriate community mobilization and participation helps to overcome all local problems between the people and planners. For effective implementation of the programme an implementation committee at panchayat level and a beneficiary committee at ward level were established to provide the necessary support for carrying out the construction activities as well as the motivation and mobilization work. The Panchayat - based implementation Committee was responsible for procurement of materials, storage, monitoring and supervision of the construction activities. The day to day managerial jobs were carried out by the beneficiary committee at the ward level.

16. Progress:- During the pilot programme SEU experimented with several combinations of kinds of beneficiary contribution. Probably about 50% of the beneficiaries were committed to dig the pit and casual labour, transportation of building materials to site etc.. The imputed value of the labour portion is deducted from the 25% of beneficiary contribution and the remaining portion is accepted in cash. However, exceptions were made for the really poor and other deserving cases. In addition to household latrines, SEU has been involved in the construction of sanitary latrines in schools, Health Units, ICDS Centres, market places etc..

17. From the experience of the pilot sanitation programme, it has been proved that the panchayat would be the most appropriate organization at the local level to implement a cost effective sanitation programme on a mass scale. The hygiene education and awareness programme will be facilitated by the SEU in collaboration with sectoral departments as well as the health

education sub - committee and the ward water committee. The cost of the programme as well as the effectiveness of the programme was very satisfactory.

18. Learning: Through the pilot sanitation programme, we have learnt that constant motivation and mobilisation are required in all the areas, at least 3 months before the implementation of the programme, and for at least for one year latrine use has to be monitored very carefully to achieve the expected results. Long-term follow-up is needed especially to assess how the toilets are being used, to reinforce the hygiene education and deal with any problems that might have arisen. The units have developed appropriate procedures for effectively monitoring the use of latrines. As a result, 95% of the households (out of 4500 latrines) are using their latrines and keeping them clean. Similarly, the incidence of diarrhoeal diseases has been considerably reduced as a result of this programme. We have recognized that in Kerala, sanitation can be used an entry point (like the water supply in African countries) for starting new activities. The Ceramics Pan and trap (rural) has been developed by the Kundara Ceramics (a government concern) with the constant persuasion of SEU, and as a result, Ceramics rural pans and traps have been introduced in the market.

SUMMARY

19. Social and economic aspects should be given equal importance in the water and sanitation programme for getting the full support and commitment of the community at every stage of the programme. This will help a great deal in solving problems connected to selection of sites for public taps or latrines, maintenance, misuse or water management at the local level. In hygiene education, and sanitation programmes, the concurrent monitoring and evaluation of the involvement of the community is quite vital. It is, however, a virtual certainty that social information should be given prior importance in setting objectives, designing, implementing and evaluating water supply and sanitation programmes. In order to meet such requirement a revised programme strategy has to be adopted in line with the realities, and outcome of the results. However, special efforts have to be made for problem solving in a programme by means of increasing the capacity of the institutions at all levels (e.g Ward, Panchayat etc.) to assess their own problems, analyse the problems to identify possible solutions, and act to marshal

the resources necessary to implement those solutions. More important, they must learn to reassess the results of their actions, reanalyse the solutions and modify their actions on a regular basis. It is worthwhile to note that the SEU programme has succeeded in fostering more intersectoral co-operation and co-ordination between Government departments and Voluntary Organisations. There has been considerable progress in this respect over the past year, and, drawing lessons from these experiences, we have incorporated new approaches while planning the activities for the future.

20. Efforts will be made to collect periodically the existing data base, such as sources of water-points, distances, quality, health service coverage, incidence of diarrhoeal diseases, Knowledge, Attitude and Practices (KAP) of various health and sanitary habits, etc..in the SEU programme additional emphasis will be given on the formulation of a broad policy framework with sufficient detailed decisions based on information relevant to each of the local areas of the project. Without such information there will be a danger of applying uniform solutions all over the project area. Monitoring of programme implementation and an evaluation of the impact will be undertaken, with a view to enhancing cost-effectiveness and achieving the maximum possible impact and coverage of the beneficiary population. During the three year demonstration phase the effectiveness of each of the approaches mentioned above will be documented and disseminated for wider replication.