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AFFORDABLE WATER SUPPLY AND SANITATION



## Institutional strengthening for rural water supplies

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THIS PAPER OUTLINES an assessment methodology for developing an institutional strengthening programme for the management of the operation and maintenance of regional rural piped water supplies schemes (RRPWSS). This method has been used to do an institutional analysis of organisations responsible for regional schemes in rural areas of North-West Maharashtra in India. Some of these RRPWSS cover large areas serving up to 50 or 60 villages. The institutional strengthening proposals for the participating organisations in NW Maharashtra, are discussed as well as experiences to date in evolving, planning and implementing these and other proposals.

### Regional rural piped water supply schemes in North West Maharashtra

In the drought prone areas of NW Maharashtra, village drinking water supplies with ground water sources have become unreliable in some areas, due to over-exploitation by farmers irrigating cash crops, plus the general population growth in the area. A programme of RRPWSS is under way to serve problem villages. The local Zilla Parishads (District Councils) have been made responsible for the operation and maintenance (O&M) of these regional schemes, some of which involve expensive water treatment and high lift pumping. The increase in responsibility for the Zilla Parishads (ZPs) and the villages is part of the Government's decentralisation policies.

Jalgaon ZP, for example, will be responsible for O&M of 20 RRPWSS serving 216 villages. At present it has taken over O&M of 10 of the smaller RRPWSS. Eight of the remaining schemes which are soon to be handed over, are currently managed by the Maharashtra Water Supply and Sewerage Board (MWSSB), who designed and supervised the construction of these schemes, as well as two ODA supported schemes currently under construction, in Jalgaon District, which will serve approximately 130 villages. The Overseas Development Administration (ODA) financed project has a number of components including construction, community development, health education and preparation for O&M. The Zilla Parishads are responsible for the RRPWSS from the source up to the elevated service reservoirs in each village. Individual village water committees are responsible for the O&M of the piped water distribution system within their own village and water tax collection.

It is necessary to examine the capacity of the Zilla Parishads to take on these new responsibilities and de-

velop, through an adaptive process approach, an institutional strengthening programme to ensure sustainable and reliable water supplies.

### Identification of institutional strengthening (IS) proposals

In order to identify suitable IS proposals that take account of the complexities of the systems within which the potential IS programmes will develop, a methodology for the identification of IS programmes for institutions engaged in the management of RRPWSS is proposed. The methodology is intended to be comprehensive but not be too demanding on resources. To endeavour to achieve a holistic view, it is proposed that the existing situation and the potential for change be examined from a number of different perspectives including:

- (a) **Background** - Existing and proposed future demands to be placed on the relevant institutions or departments.
- (b) **The Broader Perspective** - Examine the physical, socioeconomic and political environment in which the relevant institutions are functioning. Using the Systems Approach, identify key decision makers and processes. Undertake a Stake Holder Analysis to determine to what extent the key organisations have vested interest in the success of the project/programme.
- (c) **The Local Perspective** - Case Studies of typical systems that are currently being managed by the relevant institutions, such as regional piped water supply schemes, examining problems that emerge. Consideration should be given to what, why, how and when important factors and events occur and who is responsible. These studies should be prepared on the basis of site visits and consultations. There should be a focus on the level of service provided to the users. System performance indicators are helpful in this regard.
- (d) **The Economic Perspective** - Cost recovery and sustainability should be examined, both in the short and long term, under this heading. This would involve an examination of predicted costs, tariff design options, cost recovery strategies, and measures needed to achieve sustainability, including community development. An assessment of the overall or national economic environment in which the systems are being managed, can be useful in indicating the scale of the problems to be dealt with and the likelihood of success.

(e) **The Organisational Perspective** - An assessment of the capabilities of the relevant institutions to meet existing and proposed future demands placed on them, focusing on the area of interest, for example, water supply. The following key areas which are critical to an institution's success should be examined:

- organisational autonomy
- leadership
- management and administration
- consumer and commercial orientation
- technical capability
- developing and maintaining staff
- organisational culture
- interactions with key institutions

(Wash technical report no 37, 1988)

(f) **Options for Change** - Different management options, perhaps involving other institutions and the private sector should be considered. Issues such as cost effectiveness, level of service, meeting of basic human needs, community participation, regulatory frameworks, ownership of assets and accountability need to be borne in mind. Options for potential institutional strengthening programmes should then be examined.

By viewing and analysing a complex situation from a number of different perspectives in the manner suggested above, a better understanding should result; in rather the same way that a variety of views of a complicated object can lead to more comprehensive understanding. A clear appreciation of the analysis of the problems and the resultant proposals is required, particularly by the organisations that need strengthening, because it should be these institutions who plan and implement any institutional strengthening programmes.

The above categories (a to f) are intended to form the main sections of an identification report and have been used in the assessment of the management of O&M of RRPWSS in NW Maharashtra. The following section is a summary of that assessment.

## The need for institutional strengthening in NW Maharashtra

The lack of capacity in the Zilla Parishads to undertake the management of the O&M of the RRPWSS and provide reliable supplies, stems from a lack of financial and human resources. These are problems with the reliability in terms of quality, quantity and distribution on some existing RRPWSS. On those schemes currently managed by Jalgaon ZP, the engineers responsible for management are seconded from the Irrigation Department. Despite being hard working, they have a diverse range of responsibilities and are, therefore unable to concentrate on O&M. Technical O&M staff in the field are paid very low wages, about a third of what equivalent MWSSB staff receive.

Staff numbers are less than half of what was recommended by the MWSSB. Limited "on the job training" is the only training provided to date, although there are plans for O&M training as part of the ODA project.

The lack of resources is due mainly to poor tax recovery and low water taxes. There are plan to increase tax levels. Persuading the people to pay the much higher taxes is a big challenge, involving the provision of reliable supplies and community development work. Subsidies may be required at least in the short term.

The constraints to effective management and provision of reliable supplies are also institutional in nature including the following:

- (a) There is a multitude of departments, organisations and committees responsible for drinking water supplies in rural areas. There is, therefore, a lack of accountability and clear lines of responsibility.
- (b) The hierarchical nature of local government inhibits adequate delegation of duties, as well as vertical and horizontal communication.
- (c) The decision making processes for important aspects such as investigating inadequate supplies and planning scheme augmentation are reactive and rather long, involving many organisations. A more proactive streamlined approach would assist in being more responsive to problems and securing reliable supplies.
- (d) The commercial and consumer orientation of the water supply institutions could be improved. This is particularly true in terms of their relationship with villages who are responsible for the management of the piped distribution systems within the village. A more contractual relationship would be preferable, to ensure both parties benefit, so that greater commitment should result.
- (e) The limited organisational autonomy of the Zilla Parishads to agree their own objectives and policy, as well as plan and implement is a constraining factor. Considerable cooperation between the State and District level organisations will, therefore, be necessary.

Many of these constraints are common to other states and countries. The MWSSB generally have good technical and managerial capability, although improvements could be made in monitoring against performance indicators, management information, and community participation. It also has limited organisational autonomy from the State Government.

## Institutional strengthening proposals

On the basis of the writers investigations and consultations, the institutional strengthening proposals for NW Maharashtra are summarised below under five main headings. Experience has shown the need to address institutional problems through system wide efforts as part of an integrated design, it is important, therefore that

improvements be made in each of the following five areas:

(Wash technical report no 49, 1986)

### **Structural and organisational adjustments**

**A Separate Water Supply Division** should be created in the ZP to develop expertise and ensure managers are not distracted with other tasks. This will also improve accountability. Experienced staff should be seconded or transferred from the MWSSB.

**A Cooperation Agreement** between the ZP and the MWSSB is proposed to clearly establish how the two organisations should cooperate on such matters as: training, monitoring, data collection, planning scheme augmentation, provision of advice, conducting studies, transfer of staff etc. This is proposed as an interim arrangement until an integrated river basin authority or a rural water supply authority is established.

### **Management development**

A more systematic use of the following ideas should be encouraged.

- management by objectives, perhaps using techniques such as the logical framework;
- development of strategies to overcome persistent problems;
- adoption of the cyclic process of - evaluate current practices - set objectives - define priorities - develop a detailed plan in terms of programme, resources and costs - check plan against objectives - implement plan - monitor plan and systems being managed - provide appropriate feedback to staff and senior management - revise plans and priorities;
- development of comprehensive handover agreement with villages;
- delegation of duties, preferably mutually agreed with the subordinate and in writing;
- a flexible approach to village problems and a preparedness to consult all sections of the community.

### **Systems and procedures**

Effective management of water supply institutions requires information on whether or not an organisation is meeting its objectives, on how efficiently an organisation's resources are being used to meet these objectives, and the basis for taking timely corrective action when Objectives are not being met effectively. Systems and procedures should be designed so this information can be obtained by the simplest means.

A Maintenance Management System is proposed, which should include: development of an annual O&M plan, preventative maintenance schedules, work order systems, budgets based on recent experience, performance and cost monitoring, equipment history files, stores and materials inventory files.

### **Resources**

A recruitment and procurement plan should be developed once detailed plans and resource requirements have been agreed. The amount of funds available will of course depend on the expected cost recovery and subsidies. A detailed estimated cash flow programme over the coming years will assist in balancing expenditure with income, particularly where cost recovery and commitments are changing.

### **Training systems development and skill training**

An extensive training programme has begun as part of the ODA project in Jalgaon, Nasik and Dhule Districts, focusing on community development, health education and technical training. A more detailed focus on effective management, motivation theory, leadership, teamwork, delegation, monitoring and feedback, management by objectives, budgeting and maintenance management systems, would be beneficial. Technical training should focus on the application of skills as well as their acquisition.

### **Institutional strengthening process**

As part of the current integrated project in Maharashtra supported by ODA, workshops have been regularly convened to consider problems, coordinate and develop a shared vision among the participating organisations. Discussion papers have been produced to raise anticipated problems and possible solutions. It is important, however, that the preparation of plans and the implementation and monitoring of the plans is done by the local institutions themselves, if we are to achieve commitment and sustainability. Regular meetings are held to coordinate the various components of the project and deal with problems as they emerge. The recruitment of additional staff as well as community development and management consultants is necessary to provide advice and support. In general terms a learning adaptive approach to institutional strengthening is used.

### **Progress**

Detailed District O&M Management Plans are being developed in NW Maharashtra to tackle the difficult task of providing reliable water supplies in the regional schemes. Some additional staff and consultants have been or are in the process of being recruited to provide assistance. Many staff working for the various organisations involved with the project, show a keen interest to participate and contribute, this is despite the many constraining factors to institutional strengthening, some of which are listed below:

- (a) Key staff in participating organisations generally have many other work commitments outside the project, and transfer of key project staff sometimes occurs as part of the usual government practices.

- (b) An important State Government policy document which sets out policy on water taxes, staffing arrangements and the regulatory framework had not been released at the time of writing this paper. The planning of some aspects of O&M and scheme handover has been awaiting this new legislation.
- (c) The local government system of checks and balances that was originally introduced during the colonial period, tends to act against effective management of services and permitting the change necessary for institutional strengthening.
- (d) The regional water supply schemes in this region that cover large areas serving many villages, are generally costly to operate and maintain due to expensive treatment requirements, high lift pumping heads, long leading mains etc. To achieve full O&M cost recovery relatively high water taxes are required. The willingness of people to pay these taxes has yet to be firmly established. There are, therefore uncertainties over cost recovery which leads to a reluctance to plan for the high expenditure necessary to provide reliable supplies.

## Conclusions

When identifying a potential institutional strengthening programme, it is worthwhile to undertake comprehensive investigations examining the situation from a variety of different perspectives as has been discussed, in order to build an understanding of the complexity of the system in which the relevant institutions function. The initial design of the programme can then be done with a better awareness of the scale of the problems and risks involved.

The actual strategies and plans that are developed and implemented should be done by the local institutions themselves, with outside consultants or advisors facilitating the process and providing guidance and suggestions as the need arises. Improving the capacity of the local water supply institutions has been deliberately referred to in this paper as "Institutional Strengthening" rather than the usual "Institutional Development". Development gives the impression of outsiders coming in to

develop as if were considering the development of a piece of land. Institutional strengthening is a better term because it implies building from within - which is what is required for commitment to sustainability.

The Zilla Parishads and Water Board in Maharashtra both have limited organisational autonomy. Experience elsewhere, notably studies undertaken by the WASH organisation, have shown that lack of organisational autonomy is a key constraint to institutional strengthening. It is true that the achievement of results from an IS programme are likely to be considerably slower when an organisation has limited autonomy. But the potential for replicability and benefiting from lessons learned is greater with a series of inter-connecting organisations such as those in Local Government in Maharashtra. Development projects and programmes should be regarded as input into the longer term development process of 10, 20 years or more.

The affordability of the water taxes on the rather expensive regional rural water supply schemes in Maharashtra cannot be fully known until reliable cost effective water supplies are provided and community development work has taken place through strengthening of the local institutions. Cross subsidies from the urban sector may need to be considered in the future, and/or the use of more local Technical Water Supply solutions.

## References

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- <sup>4</sup> WASH Technical Report no 63, *Guidelines for maintenance management in Water Supply and Sanitation Utilities in Development Countries*, Arlington, USA, 1989.