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EVALUATION OF THE RURAL WATER AND SANITATION PROGRAMMES

Shinyanga and Morogoro Regions

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LIST OF ABBREVIATIONS AND ACRONYMS

Afya	Ministry of Health
AMREF	African Medical Research Foundation
CDA	Community Development Assistant
CVF	Counter Value Funds (local counter value from balance of payments aid)
DA	District Advisor
DCDO	District Community Development Officer
DCDOI	District Community Development Officer In-charge of RWSP
DDC	District Development Committee
DED	District Executive Director
DFA	District Field Assistant (under Maji)
DHO	District Health Officer
DHOI	District Health Officer In-charge of RWSP
DHV	DHV Consultants, The Netherlands
DOI	District Officer (from Maji, under RWE) In-charge of RWSP
DPM	District Programme Manager
DPO	District Planning Office(r)
DWSC	District Water and Sanitation Committee
DWE	District Water Engineer
DWSSC	District Water and Sanitation Steering Committee
HA	Health Assistant (field team)
IRC	International Reference Centre, The Netherlands
IWACO	IWACO Consultants, The Netherlands
Maendeleo	Ministry of Community Development
Maji	Ministry of Water, Energy and Minerals
ONV	Organization of Netherlands Volunteers
OOPP	Objective Oriented Project Planning
PA	Programme Advisor
PC	Programme Coordinator
RALG	Ministry of Regional Administration and Local Government
RC	Regional Commissioner
RCDO	Regional Community Development Officer
RCDOI	Regional Community Development Officer In-charge of RWSP
RDC	Regional Development Committee
RDD	Regional Development Director
RHO	Regional Health Officer
RHOI	Regional Health Officer In-charge of RWSP
ROI	Regional Officer (from Maji, under RWE) In-charge of RWSP
RNE	Royal Netherlands Embassy
RWE	Regional Water Engineer
RWE	Rural Water Engineer
RWSP	Rural Water and Sanitation Programme Shinyanga & Morogoro
RWSSC	Regional Water and Sanitation Steering Committee
SC	Steering Committee
SWN80	Handpump used in RWSP
TWSSC	Handpump factory, Morogoro
VHW	Village Health Worker
VWSC	Village Water and Sanitation Committee

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DFL 1,- = TShs 112

TShs 100 = US\$ 0.52

TShs 100 = DFL 0.89

Acknowledgement

In view of the very limited time available to the mission, the evaluation has relied quite heavily on the input from those who are directly involved in the RWSP programme execution. The mission regretted that, in spite of the debriefing meeting organized in the regions and in Dar es Salaam, time was lacking for thorough two-way discussion of the findings. In order to rectify this shortcoming, the field staff involved and the Programme Coordinator have submitted extensive comments on the first draft of the report. The mission is most grateful for the time and energy spent by many to contribute also in this manner to the evaluation. All comments have been studied seriously and a thorough editing of the draft report resulted. It is felt that the present report has benefitted substantially, and it is hoped that this may make it easier for various readers to consider the product theirs.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Programme preparation and objectives

A number of problems observed during programme execution have to be explained by shortcomings in its preparation. In the phase of finalizing the Plan of Operations there has been lack of consultation, causing friction with the collaborating parties. The tender procedure was organized in such a way that the consultant's conceptual input was virtually eliminated. The mission concluded that the Plan of Operations is sound in concept but poor as management structure. The present formulation of objectives is somewhat ambiguous on the relative priority to be attached to water-supply objectives vis-a-vis community development objectives. For the future a strategic choice is to be made in this respect. The application of a process approach without performance indicators and service targets, makes it difficult to keep the programme on track.

Performance and achievements

The progress of activities got delayed for almost one year. The expenditures by the end of 1990 are only 63 % of the approved budget for the corresponding period. Only 2 out of 160 water-points have been handed over to the villages as yet. Various reasons can be mentioned for the delays such as late approval of the Plan of Operations, the collapse of the supply agreement with TWSSC and slow budgeting and disbursement processes. A spirit of 'common purpose' and genuine collaboration appears to lacking.

The major achievement of the present phase is that the step-by-step approach, in which community involvement is solidly built in, has proven to be sound. All parties concerned appear to be convinced of its merit.

The strict procedures of the Plan of Operations resulted in excessive workload for the consultants team. This reduced their professional contribution to the Programme to an unjustifiably low level. Performance in data-collection and analysis has been very poor. It is most unsatisfactory that basic questions on sustainability (eg. average maintenance cost, affordability, acceptance) cannot yet be answered.

Institutional framework

The present institutional structure is cumbersome. The organization is top-heavy, too many people are in the drivers' seat without one of them clearly in charge. There is confusion about distribution of tasks in the Programme, which hampers clear demarcation of responsibility. This creates a management vacuum, drawing the advisors into executive roles. This, in turn, reduces the sense of responsibility of the officers in charge. Undue complexity of functional relations within the structure makes that the system consumes a lot of energy just to keep it going and to keep everybody informed.

The district focus is not sufficiently realized, because the regional level is still featuring prominently in decision-making, programme design and implementation. The coordination role of Maendeleo was found to be effective and useful on field-level. On higher level it is constrained by its limited authority over other implementing parties.

It is recommended that Programme managers shall be established on District and Regional level. District and Regional Programme activities are to be clearly distinguished. The District Programme Managers should in principle be fully responsible for programme planning and implementation, with supporting services by the region to be rendered on transaction basis. To make it work, tailor made training is required for district staff involved in the Programme. Simplification of funding, budgeting and disbursement procedures is required to drastically

reduce the friction within the funding machinery.

Within the mission various views existed as to which Ministry should be assigned the coordinating role on the national or regional level. Some members felt a neutral core Ministry at the central level could be assigned as contract partner for the donor, so as to avoid unequal status of implementing Ministries. Others thought that one of the implementing Ministries could assume the leading role. This issue needs to be investigated more thoroughly during formulation. Separation of the two regions into independent programmes may be considered during formulation of a new phase, in view of the differences between the regions and the marginal net advantages of combination.

Water supply and sanitation aspects

The SWN80 handpump used in the Programme turns out to be a durable pump, which limits maintenance requirements. Meanwhile even more maintenance-friendly hand pumps have been developed, and hence the present choice should not be unchallenged. The Programme is still not capable of providing an estimate for the average maintenance cost of the SWN80. The mission's estimate amounts to some TShs 19,000 annually. Whether this is affordable to the villagers cannot yet be ascertained, but the mission's has no reason to believe that it is beyond reach for villages with average income standards. Availability of pumps and spareparts is a major problem. A break through in this field is a precondition for success of any future activity. It is recommended that a special mission be fielded, to deal with this issue.

The question whether 'water for all in 2001' can be achieved is hard to answer. In Morogoro it would require the construction of some 25 wells and 7 piped supply scheme per district per year. In Shinyanga these figures are 106 and 6 respectively. The Morogoro target may be feasible, the Shinyanga target appears to be not attainable. The number of sanitary facilities in the villages is increasing, but health education is not really developed as yet.

Community participation, women involvement and sustainability of the village water supply system

The step-by-step approach works well in practice, and safeguards that minimum conditions for community involvement and motivation are being met. Women are still very marginally involved, however. Development of skills on village level (caretakers, village mechanics) has been satisfactory. The technology is considered to be appropriate from a users (ie. women's) point of view. The pump cannot be maintained by the users, since strong men are needed for dismantling of the pump. Non-availability of spares is mentioned by the villagers as the major handicap for proper maintenance.

Strengthening of community involvement is recommended, especially through further training of VWSC members and health assistants. Improvement of the influence of women is required, but this can only be achieved through better organization. Stimulation of private sector involvement in pump and sparepart supplies would be conducive for sustainability on village level.

Programme extension and formulation

It is concluded that ample justification for extension of the Programme exists, on the basis of a number of factors;

- The O&M concept has proven to be sound.
- Water is considered among the most essential village level facilities.
- Present distribution of water-supply facilities is very uneven.
- Replicability, which is not yet achieved, should be the final objective for donor intervention.

It is recommended that a new phase of five year shall be formulated.

In view of the fact that almost all rehabilitated water-points still need to be handed over, and that rehabilitation is still under way for many villages, a prolongation of the present phase until 31st December 1991 is recommended. It is envisaged that by this date all rehabilitated systems will be handed over to the villages.

Prior to formulation of the new phase, a mission should be fielded to identify local production, assembly and distribution capacity for pumps and spares.

The formulation of a new phase will require substantial input, so as to properly structure the new Programme, and delineate achievable targets and budgets. Streamlining of budgeting and disbursement procedures needs to be undertaken. The use of Counter Value Funds should be studied seriously as a means to safeguard timely disbursement of local contributions.

*** * * * ***



The environment of the RWS80 pump is well kept; the drain is kept clean and drainage water is used for gardening.

1. INTRODUCTION

1.1 Background

Construction of water supply facilities

In the early 70's the Government of Tanzania declared a policy to provide all inhabitants with improved water supply by 1991. The Netherlands assistance to the water sector in Tanzania dates back to 1971 with the following activities:

1971-1973	Shinyanga Water Resources Survey; resulting in a Water Master Plan for the region
1974-1978	Shinyanga shallow wells project
1980-1982	Shinyanga Rehabilitation Project
1977-1979	Morogoro Region Domestic Water Supply Plan
1978-1984	Morogoro Wells Construction Project
1982-1985	Morogoro Piped Water Supplies Project
1985-1987	Morogoro/Shinyanga Rural Water Supply Programme

In this period of cooperation the project objectives were clearly defined in terms of physical outputs such as:

- construction of shallow wells;
- rehabilitation of piped water supply schemes;
- setting up of a handpump production unit.

Towards operations and maintenance on village level

In 1982 an evaluation mission recommended that the responsibilities for the schemes should be delegated to the district and the village level so that the users in the villages would become more involved in the projects. The District Authorities Act did indeed in 1982 delegate almost all the relevant functions of the central government to the local authorities at the village and district level. This included the operation and maintenance of drinking water schemes.

In the same year it was decided to add a new objective to the programme namely: "to develop a maintenance system for rural water supply based on the capacities of the villages, districts and regions. A guiding principle should be the self-reliance of the villages. The supporting role of the districts and the regions should be clearly defined".

This phase of the programme was evaluated in 1987 and the conclusions of the mission can be summarized as follows:

- as the system for operation and maintenance is developing there is a need for further support, especially to guarantee the availability of spare parts in such a way that they are easy to purchase by the villagers;
- the best results were obtained there where a really felt need (for water) was addressed;
- district level is seen as the centre for further development;
- the department of Community Development needs to be supported further;
- more attention must be given to health education.

While the mission indicated that there was room for improvement it recommended that the project be continued with more emphasis on the district as focal point. Furthermore it was advised to separate the manufacturing of pumps and spare parts from the project.

1.2 Terms of reference

Purpose of the evaluation mission is to advise the Netherlands Government whether and how assistance to the water sector is to be continued. At the same time it aims to advise the Tanzanian implementing authorities on strength and weaknesses, so as to provide a useful basis for policy making and future programme management. Moreover a Terms of Reference is to be provided for a formulation of the next phase. In view of the complexity of the programme, a certain limitation of the scope of the mission was considered inevitable. The following three points of attention were stressed in the Terms of Reference.

Scrutinize objectives and programme concept

In view of widened scope of objectives of the present phase, they need to be reviewed both in terms of consistency (logical framework) and practicability within the institutional framework of the programme. Other questions to be addressed are:

- Do project activities tie up with formulated project purpose and objectives?
- Have recommendations of the previous evaluation mission sufficiently been incorporated in the present Plan of Operations?
- Is the 'end of project status' clearly defined, and have indicators of achievement been developed?
- Indicate, to the extent possible on the basis of existing data whether the various objectives have been reached and indicate reasons for differences in success.

Institutional framework and programme organization

The mission has to assess whether the present institutional arrangement is satisfactory. In particular it is requested to evaluate:

- the present distribution of tasks among participating Ministries and administrative levels;
- whether the objectives of the project are compatible with those of the participating organizations;
- whether this division of tasks and actual task-performance have been compatible with programme objectives;
- whether logistic support for the programme has been in line with the tasks.

Furthermore the mission has to pay attention to procedures regarding the financial planning, management and administration of the project.

Sustainability of village water supply

In order to assess sustainability on village level, the mission needs to address the major factors determining both technical and financial sustainability, as well as the degree of community involvement. Technical sustainability is assessed on the basis of:

- scope and limitations for village level operations and maintenance;
- spare parts availability - how is the present plan implemented, and why have the proposals of the last evaluation mission not been implemented;
- assessment of the technical concept.

Financial sustainability is to be judged on factors such as:

- degree of cost recovery and community self-help;
- current level of maintenance expenses;
- present Government budgets for this purpose.

Community involvement will have to be assessed by investigating the existing procedures and practices, such as:

- selection of villages and priority setting;
- planning of village coverage, including rehabilitation and new construction;
- training of users in installation and maintenance of the pumps (the selection of the pump attendant);
- health education.

Moreover actual records and field observations can be used to assess the degree of community involvement.

1.3 Mission composition and timing

The field-evaluation was carried out from 3 up to 14 December 1990. The composition of the team was as follows:

J. de la Rive Box	Team leader, Matrix Consultants
D. M. Ishengoma	Ministry of Water, Energy and Minerals
Ms. V. Kimei	Ministry of Community Development, Women and Children
F. Mowo	Ministry of Water, Energy and Minerals
D. Bekker	For Matrix Consultants (from IWACO)

The following distribution of work was used, in accordance with disciplines and fields of experience of the team members:

- Institutional development; Mr. Ishengoma and J. de la Rive Box
- Community development and women involvement; Ms. Kimei
- Rural water supply technology; Mr. Mowo and Mr. Bekker

1.4 Scope of the evaluation report

Set-up

The report is confined to observations on the key elements mentioned in the Terms of Reference, and corresponding recommendations. No attempt has been made to report on the details of the activities undertaken by the advisory team. The Position Paper written by the Programme Coordinator in October 1990 provides a good overview of events. Issues related to the preparation of the programme and the formulation of objectives are taken together in chapter 2. The next chapter gives a very brief overview of performance from mid 1988 up to the end of 1990, and discusses achievements in general terms. The three chapters that follow (4, 5, 6) contain the bulk of the evaluation effort, dealing with the institutional issues, the technical aspects and the wider sustainability analysis including the community participation and women involvement. The last chapter gives conclusions and recommendations on the programme extension and the way the next phase should be formulated.

Evaluation could not be done as it should be done

It was observed that in the Plan of Operations no logical framework of activities has been worked out, with measurable indicators for achievement. In a 'programmatic approach' without pre-determined output targets, this is the only way to objectively evaluate performance. Moreover at the time of evaluation hardly any quantitative O&M data were available, which makes evaluation of this aspect very difficult.

A third handicap for the mission was the very short period available for execution of the mission, which excluded the possibility of any primary data-collection. As a consequence evaluation could not be done as it should have been done. There is no conclusive answer on the questions pertaining to financial sustainability, affordability and cost-effectiveness. A rather unsatisfactory situation for a programme in which so much energy and money has been invested. In order to deal with these shortcomings, it is recommended that the formulation mission, shall re-assess these issues, on the basis of the first results of the monitoring system.

2. RURAL WATER AND SANITATION PROGRAMME SHINYANGA & MOROGORO (RWSP) PREPARATION AND OBJECTIVES

2.1 Preparation of the Plan of Operations

The Plan of Operations has been prepared by the Dutch water-sector specialist attached to the Netherlands Embassy. During the phase of project preparation there has been insufficient consultation with the Tanzanian implementing parties. Although reportedly copies of the draft Plan of Operations were mailed to the Ministries involved, no consultations were held. The delay of approval of the Plan of Operations for almost half a year, needs to be viewed in that light. In August 1988 the draft Plan of Operations was first discussed with Maji, Maendeleo and Afya. Maji raised a number of issues for alteration, the most important alterations proposed were:

- Inclusion of a resident engineer in each of the two regions for day to day monitoring of the RWSP.
- The role of Maendeleo as coordinating Ministry was not acceptable, and would need to be reassessed during the mid term review.
- The position of District advisors needed to be reviewed.

As a consequence of discussions on these issues the Plan of Operations was signed only late November 1988, whereas the programme was due to start on 1st July 1988. In the end, after much delay, Maji agreed that Community Development would take the coordination under condition that the mid-term Review Mission planned should also review this function, as stated in their acceptance letter. Before Maji signed the Plan of Operations, it found that the tender had already been concluded without consulting them. The contract DGIS-DHV was signed 24/10/1988. The Plan of Operations was signed on 25/11/1988. In September 1988, the disputed Programme Advisor arrived. Thus Maji felt pressurised to accept a Plan of Operations it did not really agree to.

The tender procedure eliminated consultant conceptual input

On the basis of the draft Plan of Operations three consultants were invited by DGIS to submit a proposal. The selection was done by DGIS in accordance with the technical assistance procedure. No Tanzanian party was involved in the appraisal of proposals and bid selection. One of the proposals was reportedly rejected because it did not comply with the Plan of Operations. It should be noted that this proposal was addressing some of the issues that in the present evaluation are considered conceptual weaknesses. It is remarkable that this clear quality of the proposal led to its disqualification. In view of the above sequence of project preparation, the Plan of Operations was at the same time project formulation (pre-tender) and project Plan of Operations for implementation. This has reduced the role of the consultant in the proposal stage to almost nil ^[1]. In so doing DGIS effectively took over (or took away) a large part of the typical responsibility of the consultant for the proposal presented, and the role of the consultant is reduced to mainly staffing and procurement services.

^{1]} It is quite likely that the consultant had influence on the drafting of the proposal during the previous phase. Since formally DGIS was preparing the Plan of Operations, the consultant cannot be held responsible for the conceptual and organizational structure of the project.

The Plan of Operations is sound in concept but poor as management structure

As explained in chapter 3, the programme organisation structure laid down in the Plan of Operations is considered inappropriate from a management point of view. The document has provided the conceptual and operational translation of the recommendations of the 1987 evaluation mission, from a construction oriented project towards Operations and Maintenance. One of the purposes was also to integrate decision making into the governmental structure prevalent in Tanzania. This integration was a primary objective based upon the change from a parallel structure of previous project implementation with a top bottom approach to a bottom up approach that would give a say to the direct beneficiaries, the villagers.

However, the Plan of Operations is not very practical: it has maximized financial control procedures but it has not sufficiently considered the management requirements within the proposed set up. As a consequence too many people were in the driver's seat, making it very difficult too keep the vehicle on track. Moreover, the consultants team got loaded with administrative work which greatly reduced their professional input to the RWSP. The mission believes that alternative modes of RWSP organisation are conceivable, that would improve effectiveness of RWSP management, without jeopardizing its integration in the existing Government apparatus. The fact that water programmes of various other donors are organized quite differently, suggests that scope for alternative solutions exists.

The Plan of Operations became too inflexible

Although the Plan of Operations allows for adjustments, the embassy made decisions on adjustments dependent upon findings of the review mission. As the mid term review did not materialize, these decisions got postponed until the evaluation. Hence in effect the Plan of Operations could not be adjusted.

2.2 RWSP objectives

Long and short term objectives

In the Plan of Operations a distinction is made between long term and short term objectives of the programme. The long term objectives have been formulated as follows:

- a. To develop a functional village-based, district-supported system for the operation and maintenance of rural water supply facilities, so as to ensure (to the maximum extent possible) a continuous supply of clean potable water, in adequate quantities and with ease of access for drinking, domestic purposes and personal hygiene; and for other related uses, where this is technically and economically feasible.
- b. To promote community development, through the full participation of the participating village communities in all stages of the water supply, planning implementation, so as to enhance self-reliance of the village communities regarding their water supplies and the sustainability of these.
- c. To promote sanitary conditions through health education and sanitation and drainage/waste disposal improvements
- d. To strengthen the capacity of the regions to provide the necessary support to the districts for them to meet their expanded responsibilities for rural water supply development
- e. To strengthen the capacity of the districts and the related support capacity of the regions to plan, design and implement new construction of rural water supplies.

Subsequently a list of short term objectives is provided specifying the type of assistance rendered to the villages, the districts and the regions. For the full text of these objectives reference is made to appendix 3.

The following observations can be made with respect to the description of short and long term objectives:

1. The distinction short and long term is not very meaningful in the way the objectives have been formulated. The phrasing 'to assist' and 'to support' in the short term objectives refer to open ended activities without specific time horizon. The 'end of project status' is not defined and hence 'short term' loses meaning. In line with common practice in project design, the distinction of development objectives and project purpose is considered more appropriate, especially when they are used in a logical framework of project design.
2. The most important development objective (for the long term), derived from the village water policy 1971-1991 (resulting from the 1971 Arusha Declaration) is not explicitly mentioned. In 1988 a new water policy was adopted, providing a clear statement on village water supply for domestic purposes.
3. The formulation of the long term objectives does not make clear whether the community development and health objectives are in support of the water supply objective, or 'equal' objectives in their own right. This issue has far reaching consequences both for planning of project activities and for evaluation. Whereas the history of the project points at the first interpretation, the community development and health officers tend to use the latter. They stress the need for a more integrated approach with income generating activities and substantive community development effort.
4. The framework of objectives lacks a clear reference to the 'end of project status' spelling out what can reasonably be expected after three years of programme execution. Neither are measurable indicators defined for achievement of programme purpose and objectives.

In a process approach, the formulation of objectives and proper measurable indicators of success is even more important than in a 'blue print' type of project. Without indicators, and without unambiguous objectives it becomes virtually impossible to distinguish between success and failure. This situation should not be acceptable in a programme with such crucial facilities for the rural population at stake. A clear sense of achievement is also crucial for motivation of participants in the RWSP, and creation of a 'common purpose'. It is concluded that, if a new phase is to be undertaken, a reformulation of objectives is desirable to accommodate the above remarks.

2.3 Future cooperation

The 'Water Policy' document of 1988 states; "The aim is to take clean safe water within 400 metres from everybody's home by the year 2001, so that it is possible for each household to use an average of 20 to 30 litres per day". The document also indicates that a domestic water point should serve 200 to 250 people.

A new phase is justifiable

The long history of Dutch development assistance in water supply for Shinyanga and Morogoro region, the 'investments' that have been made already in the departments concerned and the expertise built up during almost twenty years of involvement, make the mission conclude that extension of the programme within the framework of the water policy is to be recommended. Since the proportion of villages receiving safe water supply in both regions is below the national average of 52%, with Shinyanga not even reaching half of this figure, there is ample justification for continued donor support of a programme that also includes new construction of water supply systems.

A significant contribution towards the water policy targets, can only be made when the RWSP moves to a higher gear. The most modest objective of 'keeping pace with population growth' in the two regions would require the construction of over 300 wells or waterpoints annually. Two very distinct strategies can be envisaged to deal with the challenge of the water policy.

Alternative strategies

One strategy would be to combine the 'old' construction approach, leading to substantial numbers of new wells, with the new participatory O&M set-up. In this approach, the government would be involved for construction, the villagers for Operations and Maintenance (with limited support from the district authorities). An alternative strategy could be to start with community development, including income generating activities, and to let the villagers pay for the water-supply systems, through involvement of private sector contractors. The latter would have more lasting results, and would be more significant in terms of development, but it would be a slow process. The disadvantage of the latter strategy is that people living in rich agricultural areas would have much more chance to succeed than people in poor areas. Moreover, income generating activities tend no longer to be communal activities but private enterprises. Hence the conversion of profit on those activities to 'communal facilities' is no longer realistic. In view of the urgency of the problem in many areas without any form of safe water supply, the mission favours the first strategy. This means that community development is undertaken as a means to secure sustainability at village level, not as an objective in its own right. However, it should be investigated whether elements of the 'self reliance strategy' could be adopted in areas with sufficient income potential.

2.4 Recommendations

Do not over-formulate

The formulation of the next phase should leave leeway for the consultant to work out practical details of the proposal. Only then a consultant can be made answerable for the (lack of) progress made. The formulation mission should work out (an outline of) a logical framework with measurable indicators for achievement.

Consultative formulation approach

The proposal for the next phase should preferably be drawn up in such a way that the existing parties at all levels (including the advisors) are thoroughly involved. This approach is necessary to create the proper sense of responsibility at district and regional level, to draw to the maximum extent on experience built up under the previous phases and to take into account the differences that exist between region and even between districts within these regions. On the other hand specialist expertise will be required in the formulation process, to establish realistic targets and activity plans. Adoption of an Objective Oriented Project Planning approach (OOPP) should be considered.

External monitoring/review

In order to avoid inflexibility of the Plan of Operations, and to allow for adjustments in budgets or institutional arrangements, it is recommended that external monitoring be conducted /annually. In a process approach monitoring is providing the feed-back, which is essential for 'process-control'. It is a crucial function in support of decision-makers (ie. local authorities and donor), and to maintain a minimum standard of answerability for the consultant involved. Without monitoring, the consultant is either pushed into a rigid structure (as in the current phase), or it is given a free hand to do whatever it thinks fit. Neither situation is quite satisfactory.

Distinguish between sustainability and replicability

In discussions confusion arose from different interpretations of the concept of sustainability. For our purpose, sustainability refers to the ability to keep the water systems operational. Replicability refers to the capacity of the local organizations to implement a similar programme elsewhere on their own strength. For the evaluation sustainability is used as the yardstick. Also the institution development component is assessed in this light. This means that replicability is not yet achievable in this phase. The institutions involved are expected to be capable of implementing current programme activities, but not to replicate these in other areas at their own strength. This would require local training capabilities of a magnitude well beyond the scope of the present programme.

Differentiation of alternative strategies

The formulation mission should give proper attention to the alternative strategies, especially with respect to the relative importance of community development vis-a-vis the more limited basic needs (water/health) approach (reference is made to the third observation under paragraph 2.2). Although on the basis of existing information the mission favours the latter, the argument pro and con should be thoroughly assessed. This issue is of great importance for the question where the boundaries of the RWSP programme need to be drawn (i.e. which activities should and which should not be supported by the RWSP).

3. PERFORMANCE AND ACHIEVEMENTS

3.1 RWSP performance

RWSP activities in 1988

The programme was scheduled to commence on 1st of July 1988, but it took until November 1988 to reach agreement with Maji on the Plan of Operations. This was because Maji had raised several queries including the selection of the consultant, in which Maji had not played a role, qualifications of the consultants personnel were not clearly stipulated and needed further elaboration. The coordination function of Maendeleo in the programme was questioned (particularly at National level). For this reason, the Programme Advisor for Shinyanga who arrived in September was not allowed to start work principally because of a dispute with Maji over qualifications on her experience as a researcher. In November 1988, she was finally cleared on grounds that she had already arrived in the country.

The other advisors organized a seminar in July with the regional teams to discuss the set up of the present phase and to identify the intervention areas in all districts. In this phase the criteria for the selection of intervention areas were established. These criteria were necessary not only to assess relative priority but also to suit practical consideration for intervention (eg. all villages must be accessible to the field teams by foot or bicycle). Also the issue of the District Advisor had to be resolved, since the original idea of assigning Dutch ONV volunteers for these functions was abandoned. By December 1988 in each district an officer from the District Planning Office had been assigned for full time involvement in the RWSP. During the fourth quarter preparations were made for implementation of the rehabilitation programme. The Community Development Department started to collect socio-economic data on villages in the intervention areas.

One of the problems experienced was delay in budget preparation. The Plan of Operations required that workplans and budgets should be prepared bottom up by the districts in consultation with the villages and assisted by the Region and the Advisors. The procedure is correct if one wants to achieve participation. It is however long and this process got consistently delayed by the signing of the Plan of Operations in the first place and the late approvals of the budgets. Thus it interfered from the beginning with the timing of the budgetary processes of the Districts and the Region. The result, due to pressure to get the plans and budgets out within reasonable time was hasty planning by the districts. Since there was no time for feedback and corrections, much more activities were planned than could possibly be implemented (although that could not be foreseen in the first plans). There was too little insight in actual capacity at that stage.

A particular problem in Shinyanga arose because the RWSP advisors decided to change the existing office in Maji for an independent office in the living quarters of the Senior RWSP Advisor. This move was resented by Maji and the RDD did not agree with the RWSP advisors holding office in private dwellings. Although the mission appreciates the argument of 'neutrality' (in order not to identify too much with one of the implementing agents) the move to private dwellings appear not to be conducive to closer cooperation. It was expected that the issue of office premises would be taken up during the mid term review. Since this review was not carried out, the issue could not be resolved.

RWSP activities in 1989

Due to the late signing of the Plan of Operations various activities planned for 1988 could only be undertaken in 1989. These included:

- The first meeting of the Regional Water and Sanitation Steering Committees. The meeting dealt with the action plans, it approved District Programme Funds and it approved the 1989 donor budgets. The scheduled frequency of quarterly meeting was not maintained.
- Seminars with the Regional Programme teams to introduce the Plan of Operations.
- Training workshops for the Regional Teams on their tasks (ie. training District Teams, planning, budgeting, monitoring and reporting).
- Training workshops for District Teams (training Village Water and Sanitation Committees and field teams, planning, budgeting, monitoring and reporting).
- Training workshops for field teams.

Consequently it was not before March 1989 that the 1989 budgets could be submitted to the RNE. It should be noted that these budgets are based upon the planning of the programme implementors at district and regional level, and approved by the DWSC's and RWSSC's.

Purchase

Orders for RWSP materials that were submitted late 1988 from the '88 budget were followed up in 1989 (checking price quotations, tendering etc.). More orders were placed in 1989. Imported materials were procured through the consultant DHV, but the major part of total procurement for wells rehabilitation was done through TWSSC. These orders were made and pre-paid in September 1988 and January 1990. No date of delivery was apparently agreed because in March 1989 TWSSC was requested to indicate when the factory could deliver the goods. In the following months TWSSC supplied pumps and spares, but according to the RWSP not fully. What followed was a lengthy dispute about delivery and payments, which resulted in the collapse of cooperation with TWSSC. Immediate importation was initially held up by the fact that the budget for 1989 got approved only in July 1989. Procurement in The Netherlands got subsequently delayed because DHV first wanted to clear its account with TWSSC before engaging in any new procurement. The purchase requests for 1989 were submitted only in December 1989. The procurement budget for 1989 was subsequently transferred to 1990.

RWSP activities in 1990

Budgeting for 1990 started late 1989 and was only completed in March 1990. Even in 1990 implementation of the rehabilitation programme got handicapped by the fact that importation of pumps and spares took extremely long. Part of the supplies had still not arrived. Early 1990 the PA in Shinyanga spent about three months on the women's study (discussed further in chapter 6). In May a workshop was held for the introduction of the Monitoring and reporting system, completed by the advisors. AMREF carried out a consultancy on Health Education and Sanitary aspects of the RWSP.

Rehabilitation of water supply schemes has been seriously delayed.

The project is approximately one year behind on its own activity schedule. A variety of reasons can be mentioned such as problems in supply of spare parts and pumps (mainly for the shallow wells component) and problems in the cooperation and work-planning with participating departments at regional level (mainly for the piped water supply schemes).

Rehabilitation of handpump schemes is mainly delayed because of lack of handpumps and spares. The status of rehabilitation activities by December 1990 is summarized below:

- Morogoro: 98 villages covered out of a total of 416 (24%), 1 handpump scheme handed over.
- Shinyanga: 70 villages covered out of a total of 627 (11%); 118 handpumps were rehabilitated against a planned number of 287; 24 new wells were constructed against a planned number of 95; 1 handpump scheme was handed over.

416
627

1043

1043

The collapse of the collaboration with the TWSSC factory has cut off the lifeline of material supplies to the project. As a consequence, the situation with respect to spare-parts availability has not improved since 1987. This was already indicated by the previous evaluation missions as the major bottleneck for proper maintenance.

For rehabilitation of the piped supplies only one design has been received by the Programme Advisors in Morogoro in December 1990. The cost estimate for the scheme dating back from 1988, amounts to TShs 7.3 million. Today's prices will probably increase the amount to TShs 14.6 million or Dfl 130,000. Two other piped schemes appeared technically infeasible. In Shinyanga materials for two piped schemes have been ordered before 1988 and one scheme is nearing completion. The main reason given for the little progress in rehabilitation of piped supply schemes is the lack of support from the Region in design and preparation of bills of quantities, and organizational problems. In Shinyanga they were delayed because Maji Shinyanga stores were considered insufficiently guarded against theft and the delay in rehabilitating the stores took over a year.

The common denominator in these cases of delay is lack of decisive management of the RWSP. There is not one executive officer in charge of the programme, capable of working out a clear line of action in cases the work is stagnating. The cost of delay for the Tanzanian Government (and the donor) is equivalent to approximately TShs 100 million, being the loss of technical assistance grants that could have been used elsewhere if progress had been according to plan. The cost to the villages is not only delay in water supply, but also reduced motivation for community participation in the RWSP.

Budget and actual expenditure

As shown in Appendix 1 actual expenditures have been far below budget. Especially 1989 expenditures were far behind with only 29% depletion of the budget. Expenditure of 1990 picked up to 83% of the original annual budget, but compared to the available budget (i.e. including moneys carried over from 1988 and 1989) the depletion is only 42%. For the whole period up to the end of 1990 it is envisaged that 63% of the original budget has been spent.

Excessive workload RWSP advisors

Excessive workload of the programme advisors resulted from the lack of trained personnel in the Districts and Region as well as in the consultants office itself. This training in procedures took time, firstly because of the need to establish the procedures themselves, then to identify the persons to whom these tasks can be delegated to and their training, and thirdly to create the environment in which these tasks can be performed in a disciplined way. Each of these tasks were to be worked out in a form that sustainability and participation was ensured which, in most cases, boiled down to following government procedures and obtaining the discipline to enforce them. The absence till today of regular audits did aggravate the matter. Moreover, due to the fact that the advisors had to ensure timely submission of all district budgets for three Ministries and strict financial control procedures needed to be followed, initially hardly any time for professional advisory activities could be found. Gradually the local capacity to deal with these administrative issues increased, and the pressure on the advisors eased.

3.2 Achievements

Major objective achieved

Upon recommendation of the 1987 evaluation, the objective for the RWSP was widened so as to incorporate the element of community participation and health. In the 1987-1991 phase, the objective was not only 'to develop a village based and district supported system for operation and maintenance of rural water supply facilities' (the objective taken over from the previous phase), but also 'the full participation of village communities in all stages of water supply planning and implementation'. Moreover the objective was added 'to promote sanitary conditions, through health education, sanitation and drainage/waste water disposal. The 'system design' has been adjusted to this wider objective and has consistently been practised in over 160 villages. Although only two of the water supply systems have officially been handed over to the villages, it can be observed that the new approach works well. The system is fully accepted and appreciated by all parties interviewed, and the mission feels confident to conclude that the system, as laid down in the 'step-by-step' approach is sufficiently mature and hence ready for replication.

Training, monitoring and reporting

The training of district teams and field teams for their implementing tasks had been undertaken already in the period 1985-1988. Hence training work in this phase could concentrate on Monitoring and Reporting. For this purpose a Dutch institute (IRC) was engaged to design the monitoring system, and local consultants were engaged to support the training. In view of these heavy inputs, it is disappointing to observe that full proof results of monitoring are still lacking. The reporting and monitoring system serves two purposes. The main aim is to have the target group deal with their own constraints. To this end the various reports are channelled through the different institutional levels. (Bottom-up: from village to district to region). Each level being instructed to show a "problem solving" attitude will make efforts to solve the problems which are reported. Secondly the data from village level are used by the Programme Advisors to assess the villagers' capability of maintaining their own water supply facilities and to assess the impact of the programme on community development and the health conditions of the villagers. This information is of interest to the Regional steering Committee and to the donor.

To initiate the monitoring system workshops have been organized on all three levels where the aim of the system was explained and the different reporters were instructed on how to complete the forms that had been developed. The reporting and monitoring system is operational since August 1990. In both regions over 90% of the village reports over this period were completed and collected. In Shinyanga the first tentative results have been compiled by the field team, showing that the system is taking off, but the reliability of some data appears to be poor. For the second aspect a computerized database is being developed. Preliminary results are not to be expected before March 1991.

It would be wrong to blame the training programme for the lack of performance with respect to monitoring and reporting. In fact the training effort has proven to be effective in Shinyanga, where the regional team drafted its first field data analysis independently. Moreover the training turned out to be a useful refresher course for the step-by-step approach. The problem appears to relate to the level of sophistication in the monitoring concept. If a simple system would have been worked out with the field-staff, it could have been operational from early 1989 onwards since in that case the training requirements would also have been more limited. Since it is not the intention to set up a scientific research project, a simple system would have served the purpose. With a foreign institute being engaged to work out the concept, a long period of preparation was required and the results could not be readily applied.

*If a monitoring in T2.
The original
forms in T2. still
were used as
base: 7 pages
from Shinyanga
so the system
was simplified with
the help of
IRC now advice
contacted by the
evaluation mission.*

Since the modification by IRC took too long (until now no final version has been submitted by IRC), the team has modified it, which took considerable effort. The mission has doubts however whether this elaborate system of questionnaires is sustainable. It is to be expected that after some time, especially when no more rehabilitation or construction is undertaken, the villagers will cease to submit their reports or fill it out carelessly. It must be concluded that the achievements in this respect are far from satisfactory.

was never intended to be used for this purpose

by

Recommendations of previous evaluation only partly followed up

Below the major recommendations of the 1987 evaluation mission are compared with the actual 1990 situation:

- | | |
|--|-----------------------------|
| - Community development must be more integrated | Done |
| - Sanitation and health must be integrated | Done, though limited |
| - Women should be actively involved | Little done |
| - Maendeleo to be given coordinating role | Done, only partly effective |
| - Investigate traditional water supplies as alternative solution | Not done |
| - Promote village financial contributions | Done |
| - Formulate District Plan of Operations | Only annual plans |
| - Monitoring of RWSP cost per activity | Not done |
| - Training (administration and management skills) | Start was made |
| - Establishment of a monitoring system | Still in development |
| - Define who is responsible for RWSP management | Unsatisfactory solution |
| - DED to become chairman DWSC | Done |

It can be concluded that the most crucial components of the recommendations have been followed up, but major weaknesses persist, as discussed below.

Poor performance in data-collection and analysis

The major shortcoming observed is the continued lack of data, due to the delay in implementation of the monitoring system, and lack of simple sample surveys to compensate its absence for the time being. Another weakness of the RWSP is its inability over the years to produce field data on investment and recurrent expenditure of the water supply systems installed. This issue has been brought up by successive missions, and to date still no basis for analysis of cost recovery, affordability and cost effectiveness exists. On RWSP cost, expenditures are being recorded, but no differentiation is made for type of activity as recommended (eg cost of well rehabilitation, cost of training, cost of monitoring etc.). Hence still no proper costing can be done of facilities rehabilitated or newly constructed, as separated from the institution development components. This, it must be stressed, is most unsatisfactory for a programme of this magnitude and duration.

Progress reporting

Until now reporting is undertaken by the Programme Coordinator on a monthly basis. The reporting is very extensive and provides, a.o. daily reports of the coordinators activities. On the one hand the reports are much too elaborate, with operational details that are not of any use for those to whom the report is addressed (Ministries, donor, Embassy) and on the other hand there is no formulation for concise progress reporting against targets and agreed objectives. This makes that reader 'drowns' in data, without getting insight into the crucial parameters of progress. Obviously, what lies to the ^{heart} of it is the lack of a logical framework with measurable indicators, on the basis of which progress can be monitored objectively.

It is recommended that reporting shall be undertaken on a quarterly basis, on the basis of a standard format, providing only essential data for the participating funding agencies. Specific problems that need to be brought to the attention of decision makers, can better be dealt with in separate memoranda.

Overall impression

The observation that the concept of village level O&M has proven to be sound, is an important finding, but it is at same time the only major achievement that can be reported right now. This positive conclusion is even somewhat surprising in view of the fact that almost anything that could go wrong, has gone wrong:

- The objections of Maji against the Plan of Operations.
- Disputes in Shinyanga on office space and living quarters.
- The collapse of the supply agreement with TWSSC.
- Failure to establish the monitoring system in time, and subsequent inability to say anything of substance on sustainability.
- Substantial delay on modest rehabilitation targets.

Although elaborate explanations have been provided for each of these problems, it does not make the outcome any better. What is wrong? The fact that problems arise is quite common in development projects and no reason for serious concern. But normally, when parties are facing these problems, creative solutions are invented and support is mobilized to find ways and means to make them work. In this programme the atmosphere appears not to be like that. What appears to be lacking are inspiring new approaches to overcome the obstacles. Also no unexpected cases of mutual support could be traced to tackle urgent problems. However, cases of the opposite were observed both in Morogoro and Shinyanga. In such a situation a tremendous amount of energy needs to be put in to rectify the situation and the final results are still not really satisfactory.

It is not quite clear what conclusions can be drawn from these observations. One conclusion could be that the cooperation between the parties has not been satisfactory. Another that the organisation structure inhibited creative action. Another perhaps, that the consultant (the advisory team and their backstopping from DHV) has not been able to play a 'bridging' function, to inspire people for their tasks and to convince all participants that what, needs to be done is meaningful. Before continuing into a new phase, it is essential that all participants have a chance to address these issues and air their views. It seems a 'healing' of relations is required, before cooperation can be fully fruitful.

4. INSTITUTIONAL FRAMEWORK

4.1 Findings

The present institutional structure creates a management vacuum

The mission observed that a host of people are involved in coordination and consultation, but that not one single person is ultimately responsible for the RWSP. As a consequence decisive decision making is lacking, and obstacles can be observed and discussed, but not decisively removed.

The problem is rooted in the formulation of the Systems design. It states that: "Programme management and control is with the District Councils, delegated to the DWSC's of which Programme Advisors are members, with the supporting role of the central government. For central government support, and support from other sources including the donor support, management and control will be with the Regional Development Committee, delegated to the RWSSC". The following parties have substantial decision making power on the course of action in the RWSP:

- Steering Committee/Regional Development Director;
- Regional Heads of Departments;
- Programme Coordinator and Programme Advisors;
- Regional Programme team;
- DED/DWSC;
- District advisor and district team.

The steering committees have a policy-making and evaluation function. Through the chairman, the Regional Development Director, directives can be given to Regional Heads of Departments, but since the steering committee meets quarterly, this way the programme cannot be managed. The RDD and the DED's control the Heads of Department and their authority is again delegated within their departments. This delegation, especially visible now in the Maji department but also in the other departments, is problematic as the Regional and District Team members tasks in their departments are not yet integrated in the hierarchical structure as far of the programme is concerned. Thus their authority, through the Head of Department to which they are officially responsible, is often ineffective to the other sectors of the department, because the line through the Head of department is not followed.

The Programme Coordinator is employed by the consultant, and hence her authority does not extend to any of the implementing Ministries. The expatriate advisors are not responsible for active intervention. On the other hand, their control over donor funds gives them an air of executive authority in the perception of the implementors. The actors within the line Ministries have a responsibility over their respective tasks, but none of them can assume responsibility for the programme as a whole. Hence the question arises, who actually is in control?

In view of the management vacuum, Programme Advisors are drawn back into semi-executive functions, which in turn reduces the sense of responsibility of other parties. Modification of the institutional structure is required to place the programme on a proper footing. Within the present Government structure, a more effective mode of day-to-day Programme management is to be looked for. The mission recommends that a formulation mission shall look into the possibility that on district and regional level one single person shall be put in charge as Programme Manager. When these managers operate under delegated authority of the DED or the RDD, the danger of creating a parallel structure can be avoided.

The district focus is not sufficiently realized.

The heavy structure on the regional level is not in proportion with the type of tasks to be performed in the villages. Hand-drilled or hand-dug wells are relatively simple operations that can be dealt with on the district level. So is the community development and health education part. Only for piped water supply the regional level should be involved still in assisting the district with implementation. Depending on the technology used, also piped supplies should gradually be constructed by the districts.

Confusion about distribution of tasks in the RWSP

At the regional level alone the following officers have a say in programme components concerning water supply:

- Regional Water Engineer (Maji-regional);
- Resident Engineer (from Maji-Central for monitoring of the RWSP);
- Regional Programme Advisor (under RDD in Morogoro);
- Expatriate Advisor (Programme);
- Head of the design department (Maji regional);
- Regional Officer In charge (for the Programme, from Maji).

The present division of tasks in the programme on the regional level between these officers is utterly unclear. There has been tension between the RWE's and the PA's because of confusion about the definition of their roles. The one who is supposed to advise is also playing an executive role.

The confusion about tasks can partly be explained by undue complexity of functional relations within the structure. The procedures worked out refer to a host of functions;

- lines of command;
- lines of consultation;
- lines of financial planning and control;
- lines of reporting;
- advisory lines.

Since these lines do not follow one organizational pattern, a network of functional lines developed, in which officers (and evaluation missions for that matter) are bound to get confused.

Coordination role Maendeleo is constrained

The coordinating role of community development is not materializing on all levels. On grassroot level their role is thought to be very effective. However, various factors inhibited this function to be performed as planned on the district and regional level. Structurally Maendeleo is 'equal' to Maji and Afya. Hence the coordinating role could only be performed if the other Ministries would invite Maendeleo to do so. This did not happen. Moreover, the coordinating role was not sufficiently backed by delegated authority from the RDD or the DED. In the future it is important that the coordinating function of Maendeleo in the field is effected, and that the step-by-step approach remains the basis for activity planning. On district and regional level, priority should be given to shaping up of the RWSP management function. With the format on of the Directorate of Health Sanitation and Water under the Ministry of Community Development, Women Affairs and Children, it is clear that these community based activities will be coordinated under this newly formed Ministry.

Consultants role unclear

The system used for contracting out the project was ambitious in the sense that it combined elements of direct exertion by the donor with tendering. As indicated above the formal role of the consultant in proposal writing was effectively eliminated by the procedure followed. Although it may well have been that the consultant in the previous phase has exerted some influence on the first draft, the proposal was drafted under responsibility of the Water Sector Coordinator at the Netherlands Embassy. Consequently the consultant cannot be held responsible for problems related to the way the RWSP is structured and organized. In execution of the RWSP, the consultant and its experts also have no formal responsibility. In practice they are perceived as still being in control however, since they still have controlling power over finance. Although the consultant is not to blame for this situation, it is to be regretted that the consultant has not in an inception report formulated a clear stand on these issues. In not doing so, it has at least in part accepted responsibility for the situation that developed.

Programme Coordinator

The present PC function incorporates a host of tasks, that, taken all together, result in a heavy job to be executed. The PC is heading the consultants team of advisors. As such the PC is in charge of both the advisory and supporting activities undertaken by the consultant. Moreover a coordinating role is envisaged on the national level, and even on the lower levels. Particularly heavy components in terms of workload are the procurement function and activities related to the funding of the RWSP Programme (eg. budgeting, disbursement). The PC is also involved in reporting and liaison between the RNE and the various Ministries involved.

The structural position of the PC is ambiguous. The ambiguity refers both to the coordinating role and the team leaders function. The scope of the coordinating role extends beyond the consultants team, because it encompasses the Ministries as well as the regions and the districts. This role cannot be executed in the formal sense, since Tanzanian authorities cannot be coordinated by a consultant. Rather the function is geared towards proper information of, and consultation with the parties involved at all levels. If coordination in the formal sense is required at the national level, it seems the coordinator would have to be employed by the Tanzanian Government. The need for 'informal' coordination could not be clearly established by the mission.

As far as the team leaders function is concerned, the question arise how much the teams in the regions need to be led from the national level. On the one hand it is generally acknowledged that the regions need to be very independent in view of their widely differing circumstances. The advantages of doing certain tasks together are not very pronounced at present, and they need to be balanced against the disadvantage of an extra consultative and decision making level in Dar es Salaam. The formal decision making structures at District and Regional level, implicitly leave little room for programme decision-making (ie regarding advisory and supporting tasks) at the national level. For these reasons it is recommended that the role and position of a PC at the national level is reconsidered during formulation of the new phase, in conjunction with the question whether or not the activities for the two regions need to be combined in one programme.

4.2 Recommendations

Programme Managers to be established

The function of district advisor and regional advisor (up to now only in Morogoro) needs to be better defined. They are not advisors, but planning officers in charge of financial coordination, monitoring and control. This structure has proven to be suitable, because these functions cannot be carried out by any of the implementing Ministries. The strength of these officers as coordinators is based upon a number of factors:

- they operate under delegated authority from the RDD and DED respectively;
- as planning officers they are used to budget preparation, budget coordination, disbursement procedures, monitoring and control;
- they have no ambition to be implementors and hence as coordinator they do never 'compete' with the implementors.

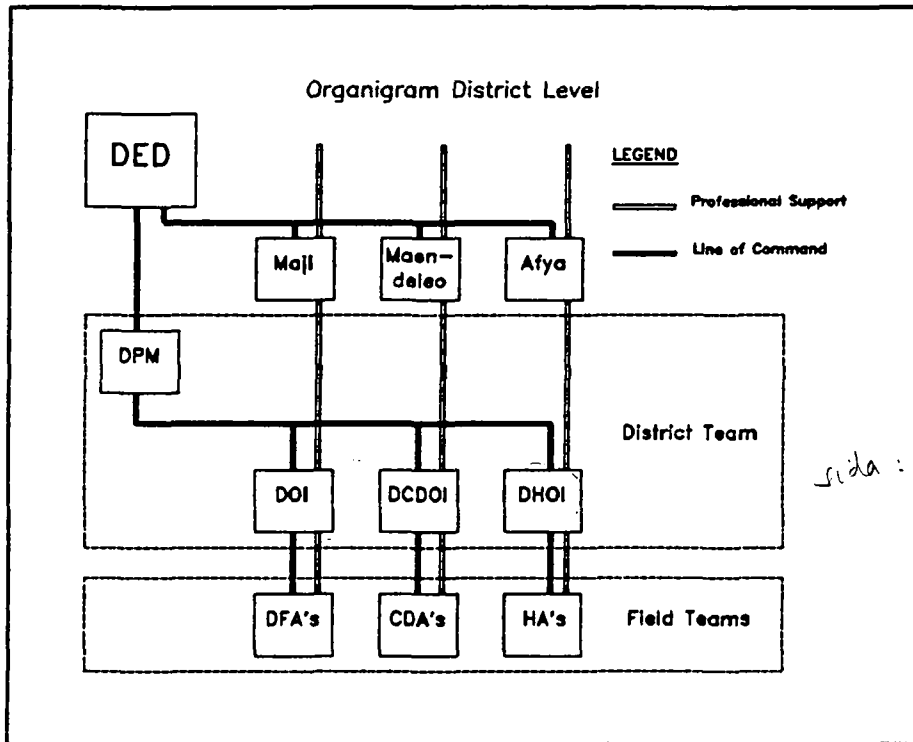
The proposed position of the District Programme Managers (DPM) is illustrated in figure 1. It shows that the District Team-members (DOI, DCDOI and DHOI) are operating under direct control of the DPM, although they still maintain their professional lines of communication with their Heads of Department. The District Water Engineer, in this model, can supervise the quality of the work done by the DOI, but he cannot determine the work-programme of the DOI.

It is recommended that two options shall be considered during formulation:

- the District Advisors are upgraded to become Programme Managers, either fully assigned or seconded to the RWSP;
- an outsider is employed and fully paid by the RWSP (i.e. by the consultant).

The latter option is not sustainable, but this may be acceptable, since after termination of the RWSP only O&M activities remain that can (by then) be dealt with by the district authorities (planning office, line Ministries). In both the cases the Programme Manager would operate however in a delegated function from the DED's function as manager of the Districts' affairs. He must be fully assigned, but derives his authority from the DED. He cannot function if his function is not part of the DED's responsibility.

Figure 1: Proposed District level Organization



Distinguish district and regional RWSP activities

District level: The shallow wells programme component and the training of field-teams are implemented on district level. On these components no decision making or coordination on regional level is required. In case a district is lacking professional staff (eg technicians) ad hoc arrangements could be made by the DED with the regional line Ministries for support. Continued monitoring of the district programmes by the steering committee on the regional level may be a good tool to ensure that decentralized implementation on district level remains in line with the objectives and approach for the RWSP programme as a whole.

Regional level: Piped water supply schemes will require implementation support from the region, although the district will remain responsible for their implementation. Since these schemes will gain importance (especially when the new phase also involves new construction activities) the regional implementation capacity will also have to be supported by the RWSP.

Other functions carried out on regional level are:

- Training of district staff (by regional line Ministries and Programme Advisors).
- Professional advice for district staff (by regional line Ministries and Programme Advisors).
- Professional supervision of the related line Ministry activities on district level (by regional line Ministries).
- Monitoring, evaluation and policy formulation for the RWSP (Steering Committee).

The role of the region in approval of budgets does not appear to be necessary as far as district-based tasks are concerned. Direct allocation of RWSP funds to the districts, including counterpart allocation, might be preferable. The Steering Committee on regional level would continue to be useful for monitoring, consultation and coordination. It also may continue to have a task in soliciting regional and central government assistance, depending upon the finance procedures agreed upon during the formulation of the next phase.

The allocation of the local component could be secured through counter value funds. Subsequently the district could enter into an agreement with the region to provide certain services against a certain budget. For these services the regional departments involved bill the district, and get paid from the special account.

For the district activities a Programme Manager will be required on district level. For the above regional activities a regional manager is required. From the distinction of tasks between regional and district level it becomes clear that the District Programme Managers operate under the DED/DWSC and not under the Regional Programme Manager. Running of the programme is conducted by a team of four people (present district team), in which the Programme Manager is team leader, and the person answerable in respect of progress control and budget-control.

Tailor made training for district staff involved in the Programme.

In view of the limited capacity in the districts, and the varying capabilities between districts, it is essential for success of the RWSP that the institutional development component on this level is given adequate attention. Since the aim is to make the districts fully responsible for the implementation of the RWSP, the capacity to properly manage it must be created. However, technical services can be obtained from the regions and hence need not necessarily to be established on district level.

A neutral core Ministry at the central level

Within the evaluation team various views existed as to which Ministry should be assigned the coordinating role on the national, regional and district level. Three options were considered for coordinating role: Maji, Maendiko and a neutral Ministry not involved in implementation. The first two options have been used in the past. The advantage of this solution lies in its simplicity. The disadvantage is that the choice between Maji and Meandiko is rather arbitrary, and hence the authority of the coordinator may be challenged. The suggestion of a neutral Ministry is based upon the following considerations:

- The core Ministry has an in line relationship to the Programme Coordinators in the planning offices on district and regional level.
- The Ministry has no implementing role and therefore is well placed for coordination and control.
- The Ministry should be in charge of all funding to regions and districts, and hence is well placed for firm arrangements on the Tanzanian contribution to the RWSP. While the core Ministry is ultimately responsible for RWSP execution, implementation is entirely left to the three existing parties, Maji, Afya and Maendeleo, on the basis of separate agreements.

During formulation all options need to be considered before a final solution is recommended. If the idea of a neutral core Ministry is pursued, the following alternatives are to be investigated:

- The newly formed Ministry of Regional Administration and Local Government (RALG).
- Prime Minister's Office.
- Treasury.

had better
take account
of district
lack
funds

Programme Advisors

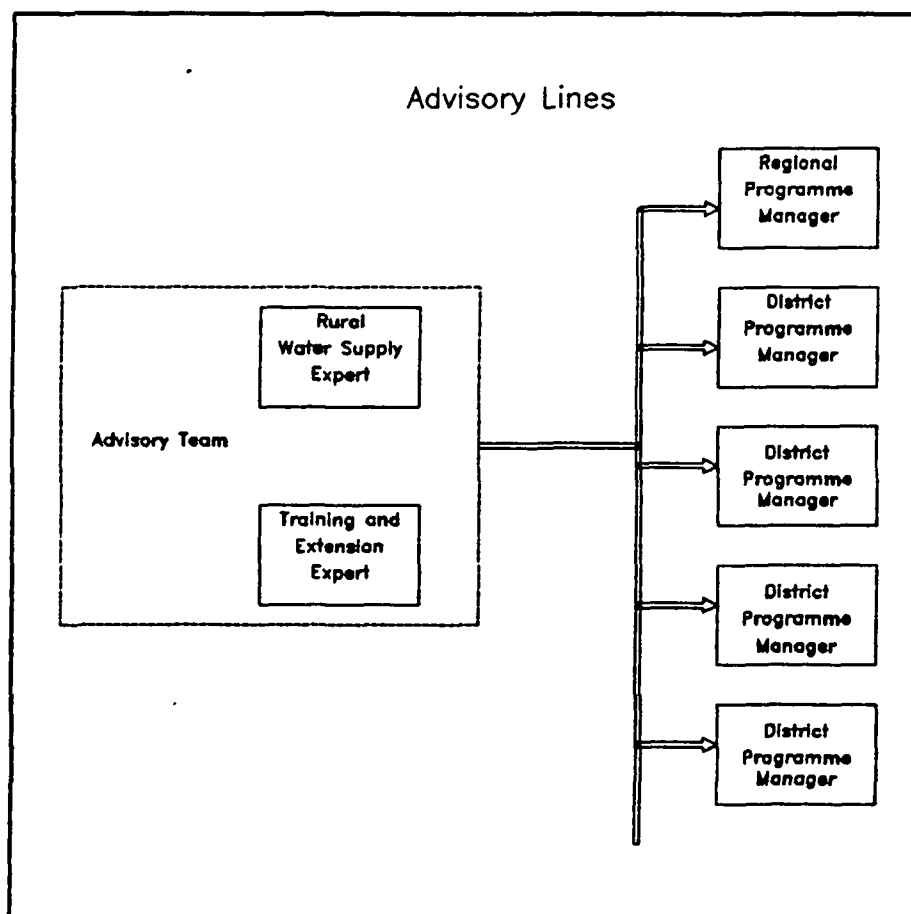
The expatriate staff should become advisors for the Programme Managers and the programme teams (figure 2 refers). Although one of them will be team leader, their is no need to create a hierarchical structure within the consultants team Their professional contribution refers not only and not even mainly, to technical issues, but to all issues of programme development including staff training. The main difference with the present situation would be that they would have hardly any task in budgeting and disbursement. The advisors should gradually hand over parts of their tasks to the District and/or Regional Teams (inclusive Programme Managers). Presently they still have a host of technical and non technical tasks in a temporary function. They will have to phase themselves out after ensuring that the officers to whom the tasks are handed over are sufficiently trained and practised to do the task.

Separation of the two regions into independent programmes

Although this may not have been the intention, within the present organizational set-up the two programmes are quite interdependent . The advantages of integration, such as combined procurement, have been diminished by separating the procurement and transport for the two regions.

The main disadvantage is the need for an extra decision making or consultative level in Dar es Salaam. In view of the widely differing circumstances in the two regions, a large degree of independence is certainly desirable. It is recommended that the formulation mission shall investigate the desirability of separating the two regions into two entirely independent programmes.

Figure 2: Advisors to become counterparts of the Programme Managers

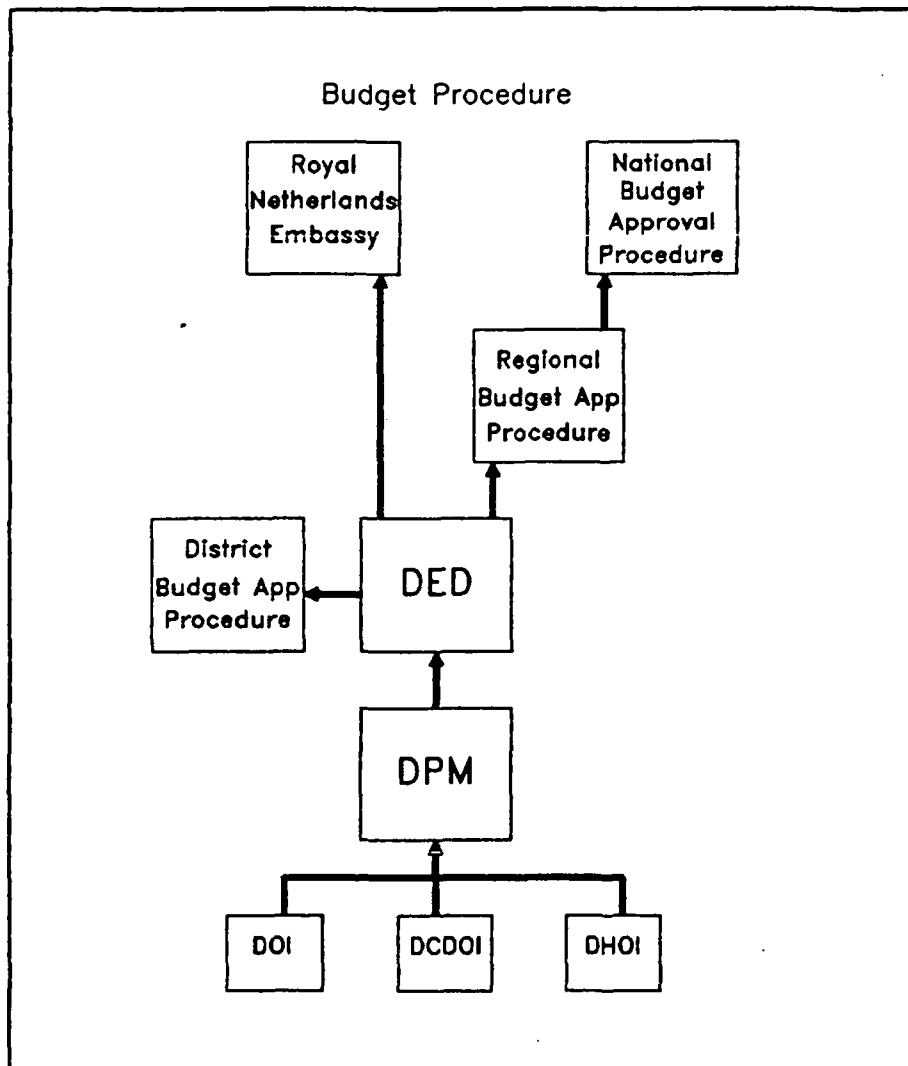


Future functions to be performed on central level

If the region-programmes would be fully separated, the RWSP administration could be done on the regional level, with direct links to the consultant's headquarters. Local procurement might well be subcontracted to an existing local or international procurement firm. If all this is done, it is doubtful whether justification exists for continuation of a full time PC. Instead a contract with a 'support office' in Dar es Salaam could be envisaged, possibly shared by a number of donor-projects.

The mission is not in position to judge how essential the liaison function on the national level is. This would require further consideration. It is recommended that the formulation mission will consider the options 'with' and 'without' coordinator at central level, in conjunction to the issue of regional separation of the RWSP.

Figure 3: Budgeting concentrated on the district-level



Simplification of funding, budgeting and disbursement procedures

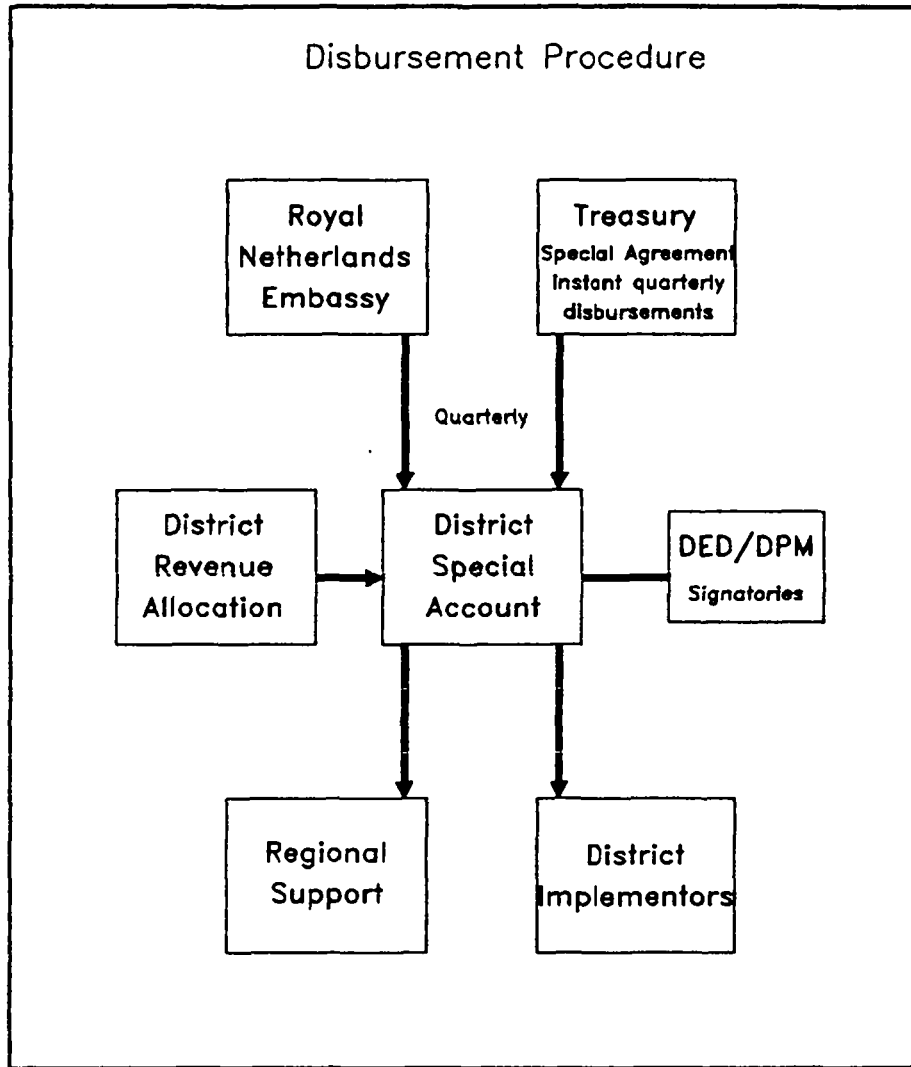
It is recommended that the funding procedures of the RWSP shall be greatly simplified, so as to eliminate avoidable bureaucracy. The following principles of simplification should be further investigated:

- a. In the project proposal for the new phase for eg. five years, total commitments are made both by the donor and the Tanzanian government for foreign and local funding of the RWSP. The local funding component could be backed up by counter-value funds (CVF) from Dutch Balance of Payments support. In the project proposal annual budget allocations are to be specified for each region and each district (forward budget). In annual budgets reallocations on the forward budgets can be made. The annual budgets will specify quarterly disbursements.
- b. Foreign financial assistance is split up in district and regional budgets. The disbursements will be made in lump sum by the RNE to a special district Programme Account, well before the start of each quarter. Signatories to the account could be the DED and the District Programme Manager. Procurement is done on the basis of annually agreed budget figures per district/region.
- c. Local central government funding for the RWSP will also be disbursed quarterly on the special RWSP account of the district and the regions.
- d. For each financial year an audit shall be carried out to verify compliance with the Plan of Operations. In order to ensure accountability, a reputable auditing firm will be assigned in advance with the task to prepare an auditing system that complies with standard government accounting and at the same time provides sufficient insight to Plan of Operations compliance. In preparation of the audit, the districts should prepare a report to account for there expenses and to explain differences with the workplan. Sanctions on non-compliance are to be specified. It is envisaged that field inspection by a local quantity surveyor will be a necessary component of the audit. The possibility should be investigated to spread the audits over four quarters, so as to spread workload.
- e. The auditors report per district and per region (including will be submitted to the DWSC and the Steering Committee. RNE will be a member of the steering committee (SC) as long as Dutch funding continues.

Annual RWSP budgets will be prepared by the districts (for implementation) and by the region (for support services). They will be presented with a detailed work-programme. The proposed budgeting and disbursement procedures are illustrated in figure 3. The Plan of Operations should leave sufficient room for the consultant to make adjustments in the annual plans as and when the need arises. The formulation mission will have to determine to what extend these ideas can be incorporated within the district and regional government structure.

It is recommended that the formulation mission shall investigate the possibility to introduce the use of counter-value funds so as to safeguard quick disbursement of local contributions towards. Delays of disbursement have disastrous effects on the implementation programme of the RWSP since construction of shallow wells needs to coincide with the dry spell (around august) and minor delays can cause an entire production season to be lost. In view of the disappointing speed of implementation during the past three years, which led to a loss of approximately DFL 1 million in terms of technical assistance budgets, strict and effective methods for improvement of RWSP efficiency are called for.

Figure 4: Disbursements done through the District Accounts



5. WATER SUPPLY AND SANITATION

5.1 Observations

The existing water supply systems consist of a mix of technologies.

In Morogoro three types of water supply systems exist:

- handpumps ("Kangaroo" and "SWN");
- gravity (piped) supplies;
- pumped piped supplies; diesel ("Mono"-pumps and "Lister/Petter" diesel engines).

In Shinyanga there are:

- handpumps ("Shinyanga" and "SWN");
- pumped piped supplies; diesel and hydropower-electricity.

Maintenance of handpumps: the SWN80 is a durable pump.

Most common problems with the Kangaroo are wearing of the footplate and rusting/breaking of the spring. Elder women encounter problems in operating this pump. The Shinyanga type with its typical wooden above-ground parts is no longer installed. The most common problems with the SWN80 pump are clogging of the footvalve (where sediment is entering the well), required replacement of rubber piston ring (reportedly every year in some cases), breaking of connecting rods on the threads (mainly in Morogoro) and wearing of bearings. However, the field visit proved that the SWN80 pumps are very durable: pumps installed around 1981 without repairs were still supplying water (2 villages in Morogoro). The introduction of the SWN85 direct action pump in Shinyanga appeared a failure: all 6 installed pumps broke down after a few weeks operation.

Mechanics have been appointed, trained and are in possession of tool-boxes. For dismantling the cylinder a clamp is required. Not in all villages these clamps were provided. This means that in several villages mechanics are not able to repair/maintain the cylinders, unless they find an alternative way of unscrewing foot- or top-cover.

The major constraint so far for maintenance of the handpumps has been the non-availability of spare parts on district or village level.

Cost recovery of handpump schemes: a realistic target?

The actual maintenance costs of a handpump -even after some 12 years of intervention- are still unknown. From the records kept by the maintenance squad that used to make their rounds through Morogoro region in former project days this information cannot be derived. The Programme Advisors are awaiting the outcome of the Reporting and Monitoring System. Theoretical estimates made by the PA's in Morogoro amount to TShs. 3,000 per pump (on 1988 basis). Based on estimated expected lifetime of spares and their 1990 prices the mission prepared an estimate for the maintenance of an SWN80 handpump on an average 8 m deep hand-dug well in Shinyanga (Appendix 2 refers). The recurrent costs for the fast wearing parts during the first 5 years appear to amount to an approximate average of TShs 19,000 per pump per year. Taking replacement costs into account the required average amount would be about TShs 28,000. The village account of the village that was visited by the mission in Kilosa District, Morogoro Region showed a balance of TShs 30,000 for 6 handpumps. Other village accounts show balances between TShs 3,000 and TShs 241,000 (October 1990 in Morogoro; figures for Shinyanga are not available). It appears that recurrent costs are not taken into consideration by Maji on Regional Level when it comes to the choice of technology. There is a policy of minimizing investment costs.

Water for all in 2001?

The Water Policy aims at "water for all by the year 2001". The implications resulting from this policy for Morogoro and Shinyanga Regions regarding construction of new water supply systems cannot be defined clearly, since accurate data on current coverage and the expected number of schemes to be built are lacking. The regional 5 years development plans are not specific on this issue.

Based on available data from the Regional Water Engineer's (RWE) offices and from the PA's the mission arrives at the following tentative indicators to reach full coverage:

- Morogoro: 1,000 shallow wells: 25/district/year;
250 piped systems: 7/district/year;
- Shinyanga: 5,310 shallow wells: 106/district/year;
295 piped systems: 6/district/year.

Estimates for average costs per hand-drilled or hand-dug well vary from TShs 300,000 to TShs 500,000. Average costs calculations based on expenditures in the past have not been made. Despite the mission's explicit request to prepare a breakdown of costs into an institutional development component and a rehabilitation component, this information was not made available by the Programme Coordinator.

The number of sanitary facilities in the villages is increasing

During its field visits the mission assessed that Village Health Workers have been appointed and their input is showing its first results: pit-latrines are being built in villages in Shinyanga. In Morogoro the construction of sanitary facilities has not yet started, but there are plans to start the construction of model latrines of different types in one district.

Health education is not developed as yet

An external consultant has been requested to assess training needs and setting up a training programme for village health workers, health assistants and community development assistants. The PA's were not satisfied with the submitted consultancy report. It indicated who is to be involved in the various workshops to be organised and what the objectives of each of these workshops are, but failed to describe the contents of the training materials.

5.2 Conclusions and recommendations

The availability of handpumps and spares is crucial for success

To make rehabilitation and construction activities of a programme fully dependent on the manufacturing capacity/capability of only one company in Tanzania is in itself a risky undertaking. Even if the factory would satisfactory produce and deliver there is the danger that, due to its monopoly, prices may become exorbitant. In the case the factory does not produce and/or deliver satisfactory, which appears to be the case, the result is that implementation activities are severely delayed. It is therefore strongly recommended to have an expert in handpump manufacturing, possibly in collaboration with other donors active in the rural water sector (DANIDA, UNICEF, SIDA etc.) assess possibilities for local manufacturing of handpumps and spares, preferably on regional (Morogoro, Shinyanga) level.

Particularly for the near future also possibilities for import (not necessarily from The Netherlands, but from e.g. Kenya, Togo, India) should be taken into consideration. The expert's mission should precede the arrival of a formulation mission. The approach and Terms of Reference for this mission are briefly discussed in paragraph 7.3. It is also recommended to have the Maji Ministry use its influence to arrive at a firm agreement with the TWSSC factory.

Recurrent costs to be considered in the choice of technology

The SWN pump has been introduced in the past as a "maintenance-free" device. The reality shows that, although the pump is very robust, it needs maintenance like any device with moving parts. Lack of maintenance in the past has resulted in pumps breaking down: in Morogoro 30% and in Shinyanga 45% of the pumps in the programme villages are currently out of order. For the total number of shallow wells in the districts these percentages are reportedly even much higher. Since the villagers will bear full responsibility for the maintenance of their water supply facilities after these have been handed over to them it is the mission's opinion that the choice of technology should mainly be based on the following criteria:

- minimum recurrent costs;
- ease of above- and below-ground maintenance (preferably to be carried out by a single caretaker).

It is not clear whether the SWN pump in this context is the best choice. It is therefore recommended to take other concepts, like the SITAE or the INDIA MkIII, into consideration for future schemes.

For pumped piped supplies the policy in Shinyanga only to consider these schemes when there is a connection to the national hydro-power electricity grid available, is sound. In areas where this energy source is not available it is recommended to take the latest developments in photovoltaic's (PV) into consideration as well as possible applications of the windmill technologies.

Costing improved water supply systems is to be made available

Despite all efforts made by the PA's to set up a sound budget control and accounting system, average price indications per improved water supply scheme are still lacking. This information is, however, a prerequisite to assess required future financial input to reach the Water Policy's target of "water for all by the year 2001". It is therefore strongly recommended that this information will be made available before the arrival of a formulation mission.

Hygiene education activities require more emphasis

To the mission's opinion hygiene education is more important than construction of latrines. As long as people's understanding of the relationship between health and human waste is lacking, there will not be a felt need for a latrine. This need may be created through hygiene education. Once the need is there the mission agrees with the views of the Programme Advisors that a latrine doesn't necessarily mean a VIP-latrine: the construction of a regular pit latrine is already a major improvement. However, the role of flies in the transmission of diseases should - particularly in the case of a regular pit-latrine- be explained to the villagers amongst all other aspects of the relation between health and human waste or health and water. It is the mission's opinion that the village health workers should not only receive a proper professional training but also training in communication skills and be equipped with appropriate visual aids (e.g. carton figures on flannel boards and posters).

Reliability of reporting and monitoring data should be improved

The assessment of sustainability of the water supply facilities depends entirely on the availability of reliable data. The first results from the reporting and monitoring system show that not all data are reliable. The PA's are aware of this problem and will look into possibilities for improvement. The mission recommends to skip questions which are not required to be answered on a monthly basis (e.g. "how many improved waterpoints are there in the village?") and to simplify questions where possible. In the case that reliability of data cannot be guaranteed, the computer program becomes redundant and other ways of gathering data for progress and impact assessment have to be sought.

6. COMMUNITY PARTICIPATION, WOMEN INVOLVEMENT AND SUSTAINABILITY OF THE VILLAGE WATER SUPPLY SYSTEM

6.1 Findings

Community participation

The step by step approach can be applied in practice, and guarantees that minimum conditions for community involvement and motivation are being met. In effect, the community development criteria determine whether or not a village is taken up under the RWSP. Village Water and Sanitation sub-committees exist in all RWSP villages, though their strength is varying. The committee is instrumental in promoting village participation with the support of the community development assistants (CDA), eg for keeping the well environment clean. Many villages opened an account to meet O&M expenses. Caretakers and mechanics are trained and fulfil their functions. In some villages Health Assistants have been appointed. Their numbers and capability need to be strengthened through more intensive training efforts. It turns out not to be difficult to find volunteers for these jobs, since it is considered to be and can be easily found, even though no remuneration is offered. The overall assessment of community participation is good. Rapid solutions for the lack of pumps and spares are necessary however, to avoid demoralization of the villagers. Field observation suggest that the efforts undertaken have contributed to a sense of ownership, and hence the necessary supportive attitudes on the side of the villagers appear to exist. Now that the operationalisation of the step-by-step approach has proven the O & M concept to be sound, replication of what was started should be pursued further than experimenting with other new approaches. It must be pointed out that human behavioural changes and adaptation to new systems take time.

Women involvement

Women are still very marginally involved. In most VWSC's two women are appointed, but their effective participation is low. A study of Dr. Chachage on this subject revealed that this phenomenon is caused by a number of factors:

- women's workload;
- subordinate position of women in the power structure of the village;
- failure of village leadership and even CDA's to conceptualize how women could be involved;
- insisting on participation of women in the VWSC, without any such move for the village council.

If women involvement depends on one or two individual women, not much progress can be expected. Influence can only be effective when women are organized and can express their views as a group. Women have little experience with working in groups and committees. Becoming part of an organized group can raise their awareness about themselves, their capabilities and can give them self confidence.

Development of skills

The caretaker and village mechanics training has been done. The mechanics in the villages that were visited by the mission as random and without prior notion, showed good knowledge and ample confidence. Tool boxes were handed out recently.

Appropriate technology

It can be concluded from the observations in chapter 4 that the technical concept is appropriate from a user point of view, since women can handle the pump easily. Reservations were expressed with respect to maintenance, since this can be done by strong men only. Hence the pump cannot be maintained by the users (i.e. women). For this reason the technical concept of the SWN80 pump is clearly less appropriate than pumps that can be maintained by women, like the AFRIDEV.

Affordability

In view of the lack of data, no definite conclusions can be drawn on affordability. Estimates on annual spare part requirements suggest, however, that the cash O&M expenses may considerably exceed the typical contributions that so far have been collected on village level. However, it would not be fair to disqualify the scheme entirely on the basis of this observation, because it is not yet known how in the new set-up villagers react (in terms of cash contribution) when the need for repairs arises. Moreover, financial sustainability could also partly be assured still with financial support from the Government.

Spare part supply

Although the TWSSC factory in Morogoro produces pumps and spares, the project has not procured anything from the factory after the conflict that arose over poor delivery and long delays. In Morogoro imported spares can be obtained from district stores, in Shinyanga not yet. Non-availability of spares is the major threat to sustainability at the moment.

6.2 Recommendations**Strengthening of community involvement**

Follow up training for members of VWSC's and especially of health assistants is necessary. (see par. 5.2) Adherence to the step by step approach must feature dominantly in the project proposal for the next phase, and contracts related to it. In order to make the community participation component more 'visible', it is recommended that peoples' contribution be quantified. People should be informed how many man-hours were spent and what the approximate cost is of village contributions of cement, sand, aggregate, food etc.

Increase the influence of women through organization

Efforts should be made to establish or strengthen women groups. The CDA's should be trained to deal with this task. The assessment whether or not a village without well established women groups is admitted to the RWSP should be left to the Maendeleo staff in the field. Generalized prescriptions in this respect should be avoided. Regulations are not a good substitute for field assessment by community workers.

Stimulate private sector involvement

Long term availability of spare parts and pumps can only be achieved when the private sector is interested in maintaining stocks of pumps and spares. Local fabrication, assembly with imported parts and distribution must preferably be undertaken by the private sector. As a temporary solution, distribution through government stores at district level cannot be excluded, but such solution should not become a barrier for private sector distribution. It is recommended that a mission be fielded to review alternatives and identify local businesses that can render these services.

Review affordability

On the basis of statistics provided by the villages and by the spare parts supplier on district/regional level, actual annual spare part expenses need to be established. Continuation with the present pump should depend upon affordability of these maintenance costs.

7. FUTURE RWSP ACTIVITIES

7.1 Justification for extension

Concept has proven to be sound

In view of the fact that the concept of operation and maintenance turns out to be sound, the major aim of the present phase, i.e. the development of a functional village based and district supported system for O&M of rural water supply, has been achieved. Substantive questions still exist, however, on the side of financial sustainability (eg. the actual O&M expenses per well) and the availability of spare parts. These are general problems of rural water supply in Tanzania however, and it is considered reasonable and fair to continue development of the RWSP and to allow for new construction. Before a new phase is entered into, it should be established, however, what the source of future spare parts supply will be, what the average costs of O&M are and what minimum conditions must be fulfilled to ensure technical and financial sustainability under these circumstances.

Water is considered among the most essential village level requirements

In terms of priorities at village level, water supply facilities score high. It is generally understood that community development activities hinge upon availability of safe water points. Especially when the position of rural women is taken at heart, improvement of water supply is crucial. Enhancement of the position of women and their mobilization for more productive work in many villages would be virtually impossible without improvement of water supply.

Present distribution of water supply facilities is very uneven

Mainly for logistical reasons the RWSP has concentrated its activities on selected intervention areas, leaving a majority of villages untouched. The villages served are generally those in the more accessible areas, where clusters of settlement exist. The allocation of resources has not been done so far on the basis of relative urgency. Many villages exist that rely entirely on traditional water supply still (river, seasonal streams, traditional wells). As indicated above, the targets of the water policy, originally set for 1991, are still far from being satisfied.

Replicability should be the final objective for donor intervention

The Netherlands has been the major donor for water sector interventions in Shinyanga and Morogoro over the past twenty years. In this period gradually the awareness arose that construction alone is not sufficient and that efforts needed to be directed at sustainability of the systems at village level. Construction and rehabilitation of water supply facilities will remain necessary in time. The ultimate objective for the donor therefore should be that construction and rehabilitation on the basis of the system design (step-by-step approach) can be performed by local parties (whether private or public). A possible exception for replicability could be made for the finance component (the need for donor finance is unlikely to cease in the foreseeable future), but the local capabilities should be created to maintain construction in accordance with population growth, improved service standards and rehabilitation requirements. As long as a minimum level of replicability has not been achieved, extension of Netherlands support in this sector should be granted high priority relative to new activities.

Conclusion

On the basis of these considerations, it is recommended that the RWSP shall be extended into a new phase. In view of the fact that the objective of replicability requires a long time horizon, extension for a period of five years is considered both desirable and justifiable [7].

7.2 Completion present phase

It is recommended that a six months prolongation be given until 31st December 1990, as an extension of the present contract. The way the RWSP has been structured the consultant cannot be made responsible for delays in implementation. As it is not possible to leave the present rehabilitation effort halfway finished, a short extension of the present phase is inevitable. If all effort is concentrated on the rehabilitation programme, it is considered feasible to complete the activity schedule for shallow wells construction and rehabilitation and to hand over all shallow wells to the villages before the end of 1991. The piped water supply schemes can probably not be completed by the end of the year. Since this involves only a handful of projects, spill over into the next phase is considered to be manageable, even when another consultant would be contracted.

Procurement of lorries

If extension of the RWSP into a new phase is agreed in principle, it is recommended that as soon as possible (i.e. in 1991) lorries be ordered for each district that has not as yet been supplied with a lorry. This will greatly speed up implementation during the new phase. If one would have to wait with procurement for 1992, the construction season for shallow wells (around August 1992) is likely to be lost.

Office space

Existing plans to construct some additional office space at the premises of the regional planning departments, is in line with the institutional set-up recommended for the future. The mission therefore supports these proposals and recommends their implementation to be undertaken without delay.

7.3 Identification of local production/assembly capacity

Approach

RWSP extension would not be justified if no local solution can be found for the supply of pumps and parts. It is recommended that prior to formulation (or in close conjunction) a mission be fielded to identify local producers and to carry out test production. Ideally a producer should be available in each of the two regions, not only to ensure ease of communication and supply, but also to avoid a complete monopoly situation as experienced so far. The mission should also investigate the possibility to revive collaboration with the (TWSSC), in close cooperation with Maji. It should be noted that TWSSC receives a highly preferential treatment (import duty retention and tax holiday), and hence Maji is in a position to formulate clear conditions for continuation of these special facilities. The condition could be that supply agreements are honoured, both in terms of quantity, quality and time of delivery. One could think of a third party monitoring of procurement with TWSSC eg by a professional quantity surveyor, reporting directly to Maji.

[7] The word **extension** is used for the new phase. The word **prolongation** for the extension of the Programme under the present agreement.

Tasks and Terms of Reference

The tasks of the mission include:

- consultation with other donors regarding supply arrangements;
- consultation with Maji and TWSSC regarding possibilities to arrive at full proof supply arrangements;
- identification of alternative production/assembly workshops and preparation of trial production.

In order to carry out trial production the consultant should be requested by the RNE to keep 4 imported pump stands of different concepts ready to serve as samples for replication by local workshops.

Mission organisation and composition

The mission should consist of:

- enterprise development expert/industrial engineer;
- pump fabrication expert;
- local business consultant with good knowledge of the metal fabrication sector.

The mission will require two to four weeks in the field. The timing cannot be fixed in advance to two weeks since complications may arise.

7.4 Formulation of the programme extension

Approach

As recommended in chapter 2, a consultative approach should be adopted for formulation, in which all parties will have ample chance to express their ideas. Moreover, there should be scope for differentiation of the programme formula between the two regions and even between districts. Increased construction in the new phase (versus rehabilitation in the current phase) could easily lead to a physical output oriented approach, with the danger that the benefits of the step-by-step approach would get lost. Therefore safeguards should be made that, although general targets for construction will have to be formulated, no construction is started in a village unless it is ready for it, according to the criteria of the step-by-step approach. The establishment of two separate regional programmes may be considered. The role of the consultant should be clarified in terms of specific outputs and responsibilities. The consultant should be made explicitly responsible for outputs in terms of training, institutional development, monitoring and reporting systems (progress, financial analysis, sustainability analysis) and technical materials.

In view of the lack of data available for the evaluation mission, a number of crucial facts regarding sustainability should still be checked as part of the formulation. Since the monitoring system is expected to start producing results from March onwards, the formulation mission will be in a better position to do so. This refers specifically to existing fund raising capacity on village level and actual maintenance costs. DHV consultants should be requested to provide a professional estimate on the expected maintenance expenses for the SWN80 pump. The choice of pump should be reviewed in the light of expected O&M expenses vis-a-vis village income generating capacity.

Tasks and Terms of Reference:

The formulation mission should undertake the following tasks:

- analyze the alternative strategies (community development focus versus water development focus);
- formulate a logical framework of RWSP objectives and outputs, including well defined targets, 'end-of-project status' and measurable indicators of achievement. This should be the basis for verifiable action plans and annual budgets;
- determine construction and rehabilitation targets per district;
- determine implementation capacity per district and indicate additional manpower and training needs (outline training requirements);
- determine a proper management structure and the action plan to get it established (Programme Managers at district and regional level), the need for a PC (at national level);
- determine the method and tasks of programme monitoring; annual review missions to reassess the effectiveness of the new set-up;
- differentiate between the autonomous activities at district level (shallow wells, simple piped water supply schemes) and responsibilities of the regional organizations;
- recommend on the organization on the Ministerial level (national level and below): identify the leading Ministry, with which the agreement is to be signed;
- reassess the technical assistance component and its organisation: in particular the possibility to separate the two regional programmes should be considered;
- draw up detailed Terms of Reference for the consultant(s) to be engaged, and define consultant's responsibility and criteria for performance assessment;
- indicate how technological innovation is to be dealt with.

Mission composition and timing

The following fields of expertise should be incorporated in the mission:

- institution/organization development expert (full period, team leader);
- rural water supply expert (full period);
- geo-hydrologist (part of the period);
- training expert (part of the period).

It is desirable that one of the advisors of each region is made available as a resource person for the duration of the fieldwork in their region. In view of the fact that consultation will have to be organized on national, regional and district level, and that activity targets and budgets will have to be estimated per district, it is envisaged that a minimum of six weeks field work will be required, and a month for preparation and reporting. The geo-hydrologist and training expert may be limited to two or three weeks in the field.

7.5 Brief outline of future RWSP set-up

Although the formulation mission must be free to consider all alternatives, below the views of the evaluation mission are given on a number of strategic issues. These views are based upon limited information and consultation, and hence they should be seen as preliminary. Nevertheless they may serve as a basis for discussion among the parties, prior to formulation.

The main characteristics must be:

- a. The districts are responsible for implementation. They provide the budgets, receive the implementation funds and hire any services (eg. from the regional level) that may be required.**
- b. Counter Value Funds should be used to obtain a firm guarantee from the Tanzanian Authorities that annual budget allocations are disbursed instantly.**
- c. The focus should remain on water supply, rather than a more general community development orientation. The main reason for this view is that the 'comparative advantage' of the programme is in water, in view of the long experience built up. Turning it into a more general integrated rural development programme, would no longer exploit the large investments made into the water sector in terms of physical infrastructure and institution development. Since these investments that rendered insufficient return until now, the full fruit of these investments is yet to be obtained.**

APPENDICES

- 1. Budgets and actual expenditures RWSP Shinyanga Morogoro**
- 2. Estimate of average annual spare part requirement per pump**
- 3. Long and short term objectives of the RWSP**
- 4. Key elements of water supply sustainability**

Budgets and actual expenditures RWSP Shinyanga Morogoro

The following columns are distinguished;

1. Original budget Plan of Operations
2. Adjusted budget, including transfers from previous year
3. Actual expenditure
4. Actual expenditure as a % of original budget (3/1)
5. Actual expenditure as a % of adjusted budget (3/2)

Alle bedragen in Guldens

Jaar: 1988

Verdeling budget	1	2	3	4	5
National level	431,000.00	431,000.00	250,279.11	0.58	0.58
Morogoro region	70,000.00	70,000.00	65,940.00	0.94	0.94
Morogoro districts	601,000.00	601,461.00	560,276.00	0.93	0.93
Shinyanga region	111,000.00	110,992.95	98,250.15	0.89	0.89
Shinyanga districts	570,000.00	553,020.00	517,843.47	0.91	0.94
Total	1,783,000.00	1,766,473.95	1,492,588.73	0.84	0.84

Jaar: 1989

Verdeling budget	1	2	3	4	5
National level	676,000.00	676,441.12	329,750.94	0.49	0.49
Morogoro region	116,000.00	126,614.44	36,218.16	0.31	0.29
Morogoro districts	588,000.00	672,158.15	158,660.26	0.27	0.24
Shinyanga region	282,000.00	239,000.00	51,028.71	0.18	0.21
Shinyanga districts	556,000.00	583,020.69	76,803.70	0.14	0.13
Total	2,218,000.00	2,297,234.40	652,461.77	0.29	0.28

1.783
4.001.000.

Estimate of average annual spare part requirement per pump

(Based on 1990 TWSSC price list for spares of the SWN80 pump and lifetime estimates by the mission)

Description	Quantity	Exp. Lifet (y)	Unit Price (Dfl)	Total price (Dfl) ¹⁾	Average per year (Dfl/y)	Average per year (TSh/y) ²⁾
Grease, 0.5 kg	1	1	8.00	10.00	10.00	1,120.00
Teflon tape, roll 10 m	1	1	1.80	2.25	2.25	252.00
Washer, M16	4	1	0.30	1.50	1.50	168.00
Lubrication oil, 100 ml	1	1	2.50	3.13	3.13	350.00
Bush bearing "Tufnol"	4	1	12.95	64.80	64.80	7,257.60
Piston seal	1	2	22.80	28.50	14.25	1,596.00
Spare nuts, M16	1	2	7.20	9.00	4.50	504.00
O-ring foot valve	1	2	1.44	1.80	0.90	100.80
Stroke limiter, rubber	2	2	3.96	9.90	4.95	554.40
Seal rubber, 5x390x390	1	2	7.20	9.00	4.50	504.00
O-rings	2	2	2.40	6.00	3.00	336.00
Spare washers, M16	1	2	6.00	7.50	3.75	420.00
Spare nuts, M12	1	2	4.80	6.00	3.00	336.00
PVC riser hanger, O-rings	1	5	18.00	22.50	4.50	504.00
Union	1	5	14.40	18.00	3.60	403.20
Steel connector	1	5	16.80	21.00	4.20	470.40
Nut, M16	4	5	0.60	3.00	0.60	67.20
Protecting hose, 3 m'	2	5	5.52	13.80	2.76	309.12
Stud M12x45	8	5	0.60	6.00	1.20	134.40
Shaft front bearings	1	5	13.20	16.50	3.30	369.60
Nut, stainless steel, M10	1	5	3.12	3.90	0.78	87.36
Socket, HI PVC, 1.5", thr	1	5	6.00	7.50	1.50	168.00
Shaft main bearings	1	5	19.20	24.00	4.80	537.60
Protecting hose, 3 m'	1	5	5.52	6.90	1.38	154.56
Puppet valve rubber	2	5	5.40	13.50	2.70	302.40
Bolt M20x130, nut, washer	1	5	4.32	5.40	1.08	120.96
Reducing socket	1	5	48.00	60.00	12.00	1,344.00
Socket, HI PVC, 1.5", thr	2	5	6.00	15.00	3.00	336.00
Nut, stainless steel, M10	2	5	3.12	7.80	1.56	174.72
Bolt M12x85, nut	1	5	1.44	1.80	0.36	40.32
Foot valve seat	1	10	15.00	18.75	1.88	210.00
Foot valve frame	1	10	10.20	12.75	1.28	142.80
Puppet valve body	2	10	12.00	30.00	3.00	336.00
Piston valve seat	1	10	19.20	24.00	2.40	268.80
Piston frame and rod	1	10	19.20	24.00	2.40	268.80
Cylinder bottom	1	10	48.00	60.00	6.00	672.00
Cylinder top	1	10	43.80	54.75	5.48	613.20
PVC cylinder	1	10	61.20	76.50	7.65	856.80
Rod, stainless steel, 10	1	15	13.20	16.50	1.10	123.20
Nut, st.st., M10, 45 mm	1	15	4.44	5.55	0.37	41.44
Anchorbolt, M16x100	4	15	1.20	6.00	0.40	44.80
Rod, stainless steel, 3 m	1	15	12.48	15.60	1.04	116.48
Riser, HI PVC, 3 m', threa	1	15	17.88	22.35	1.49	166.88
Pump stand for dug well	1	15	151.20	189.00	12.60	1,411.20
Nut, st.st., M10, 45 mm	2	15	4.44	11.10	0.74	82.88
Rod, stainless steel, 3 m	2	15	18.24	45.60	3.04	340.48
Pump head housing SWN80	1	15	81.60	102.00	6.80	761.60
Handle with bearing housi	1	15	91.20	114.00	7.60	851.20
Riser, HI PVC, 3 m', threa	2	15	24.00	60.00	4.00	448.00
Anti-swing pipe	1	15	48.00	60.00	4.00	448.00
					243.10	27,227.20

Required average yearly amount 1st 2 years: 13,498.80
 Required average yearly amount 1st 5 years: 19,022.64
 Required average yearly amount 1st 10 years: 22,391.04
 Required average yearly amount for full cost-recovery 27,227.20

Notes.

¹⁾ 25% added for on-site delivery

²⁾ Exchange rate Dfl 1.00 = TSh 112.00 (December, 1990)

Jaar: 1990

Verdeling budget	1	2	3	4	5
National level	614,000.00	1,234,113.00	710,710.35	1.16	0.58
Morogoro region	107,000.00	260,344.00	100,347.72	0.94	0.39
Morogoro districts	644,000.00	1,052,043.00	309,370.56	0.48	0.29
Shinyanga region	126,000.00	363,975.30	85,638.60	0.68	0.24
Shinyanga districts	493,000.00	965,075.71	439,321.99	0.89	0.46
Total	1,984,000.00	3,875,551.01	1,645,389.22	0.83	0.42

Totaal over de jaren: 1988, 1989 en 1990

Verdeling budget	1	2	3	4	5
National level	1,721,000.00	2,341,554.12	1,290,740.40	0.75	0.55
Morogoro region	293,000.00	456,958.44	202,505.88	0.69	0.44
Morogoro districts	1,833,000.00	2,325,662.15	1,028,306.82	0.56	0.44
Shinyanga region	519,000.00	713,968.25	234,917.46	0.45	0.33
Shinyanga districts	1,619,000.00	2,101,116.40	1,033,969.16	0.64	0.49
Total	5,985,000.00	7,939,259.36	3,790,439.72	0.63	0.48

Legenda:

- 1 = Gepland budget
- 2 = Werkelijk (bijgesteld) budget
- 3 = Werkelijke uitgaven
- 4 = Budget uitputting 3/1
- 5 = Budget uitputting 3/2

Long and short term objectives of the RWSP

3.2 Long-term Objectives

The long-term objectives of the Programmes are:

- To develop a functional village-based, district-supported system for the operation and maintenance of rural water supply facilities, so as to ensure (to the maximum extent possible) a continuous supply of clean potable water in adequate quantities and with ease of access, for drinking, domestic purposes, and personal hygiene, and for other related uses where this is technically and economically feasible;
- To promote community development through the active participation of the village communities in all stages of water supply development, so as to enhance self-reliance and the sustainability of the water supplies, in particular their operation and maintenance;
- To promote sanitary conditions through health education and sanitation and drainage/waste disposal improvements;
- To develop the capacity of the districts to undertake rehabilitation and repair of existing village water supplies that are deficient or out of order;
- To strengthen the capacity of the regions to provide the necessary support to the districts for them to meet their expanded responsibilities for rural water supply development;
- To strengthen the capacity of the districts, and the related support capacity of the regions, to plan, design and implement approved new construction of water supplies.

3.3 Short-term Objectives

The short-term objectives are:

- To assist the villages in making reasoned choices in all stages of development/improvement of their water supplies, and in making the necessary organizational arrangements especially for operation and maintenance of the water supply facilities, as well as in making specific requests for district support;
- To support the village communities in their participation in the planning and decision making, and the implementation of their water supplies, with particular emphasis on the full involvement of the women;
- To support the village communities and the districts in developing health care and hygiene related to personal and domestic water use, and the associated sanitation: to promote health education, with particular emphasis on the full involvement of the women in this component of the overall programme;
- To support the districts in planning, budgeting for, and implementation of water supply activities, particularly for operation and maintenance of existing water supply facilities, and to supplement the resources therefore;
- To support the districts in setting up a system and procedures for procurement, supply, and distribution of spare parts, tools, equipment, and materials as required for ensuring operations and maintenance of existing water supplies, and for construction of approved new construction of water supplies, and to supplement the resources therefore;
- To support the districts in developing their capacity to survey, design and implement approved new construction of water supplies;
- To support the districts in effective coordination for integration of community development, health education/sanitation, and drainage/waste disposal improvement activities;
- To support the regions in providing the necessary technical and financial assistance to the districts for the above-mentioned responsibilities and tasks, including coordination of the various departments involved, and to supplement the regions' resources therefore.

Key elements of water supply sustainability

KEY ELEMENTS OF
WATER SUPPLY SUSTAINABILITY

In order to achieve water supply sustainability, the 10 key elements listed below must be in place. The development and maintenance of these key elements should be stressed during all phases of the project.

No. 1. Community Institutions. Strong Community institutions and administrative mechanisms -- community water/health committees, women's groups, functioning accounts and financial management systems, etc.

No. 2. Developed Skills. All technical and non-technical Community/-Agency skills required to successfully implement community-based management and resources coverage.

No. 3. Supportive Attitudes. General human attitudes essential for successful achievement of sustainability and resources coverage -- understanding, motivation, choice, willingness to assume ownership, management and maintenance responsibilities, etc.

No. 4. Community Extension Services. Important activities -- community organization, mobilization and participation, health education (both initial and ongoing), etc. -- initiated mainly by the Agency and outsiders.

No. 5. Accepted Service Levels. Community understanding, acceptance, and agreement of levels of service and costs associated with water supply facilities being constructed -- continuity and reliability of supply, maintenance requirements, on-going costs, willingness to pay, etc.

No. 6. Appropriate Technology. Water supply technology suitable to the given situation. Along with other technical/non-technical factors, willingness to pay should help determine technology choice.

No. 7. Operational Phase Inputs. All required operational phase cash/-in-kind inputs connected with provision of water supply at agreed-to service levels.

No. 8. O&M-Related Supportive Systems and Services. Backup systems and services provided on a timely basis by others outside the Community-- spare parts, specialty equipment, technical expertise to carry out major repairs, etc. This element includes Agency monitoring of actual system functioning and performance.

No. 9. Allocation of Responsibilities. Formal decisions and allocations of responsibilities between the Agency and the Community at the start of the project. A clear joint understanding, acceptance and agreement as to who is responsible for what, when.

No. 10. Execution of Responsibilities. Timely execution of development and operational phase responsibilities as agreed to in Element No. 9.