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THE WATER SECTOR PROGRAMME IN RUKWA

Report

Joint NORAD-Tanzanian Review

1991

Norwegian Agency for Development Cooperation (NORAD)
Norwegian Water Resources and Energy Administration (NVE)

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June 1991

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FOREWORD

The water sector programme under the NORAD funded regional development programme (RUDEP) was reviewed by a joint Norwegian - Tanzanian review mission in May/June 1991. The review was undertaken in two phases. The first phase was a one week fact finding mission, during which the team visited regional offices, three districts, and a number of villages. The second phase was a five-days Logical Framework Analysis (LFA) workshop convened at the Sumbawanga regional office, with participants drawn from the offices of the regional administration, Regional Water Engineer (RWE), District Water Engineers (DWEs), the Department of Community Development, Sumbawanga Rural District Council, and RUDEP staff.

The conclusions and recommendations from the LFA workshop, together with the team's own findings and conclusions, form this report. The report of the LFA workshop is presented as Annex 1 to this report.

The review team comprised the following members:

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Mr. A. Kruger	NORAD, Oslo, Team Leader

The team would like to express its thanks to the Acting Regional Water Engineer in Rukwa, Mr. G.E.A. Iddo, and the Assistant Regional Water Engineer, Mr. B.T. Smith for their assistance to the team. We will also commend the RWE's staff, the DWEs and their personnel for the material prepared, the participation in the workshop and for assistance and information given to the review team in Rukwa, and all others who assisted the team with information and hospitality.

The conclusions and recommendations in this report are the team's conclusions based on the findings in Rukwa and Dar es Salaam and should not be seen as NORAD or Tanzanian Government policy, or as decisions regarding the future of the water sector in the region. However, it is the team's hope that the recommendations presented in this report should be referred to and reflected in the future development of the water sector in the Rukwa region.

P. Evans

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Annex 1: Report of the LFA workshop

Annex 2: Terms of reference

Annex 3: Summary of community survey results

1. SUMMARY

In view of the many changes the Rukwa water programme has undergone since NORAD support begun, and the difficult problems faced, the review team found much to commend in the current approach. Changes of direction have taken place which make the long-term prospects for sustainability more promising than in the past. Nevertheless, many problems still have to be overcome.

The review team's conclusions and recommendations are contained in section 5 of this report. In summary, the team would like to draw particular attention to the following key recommendations:

- * RUDEP should make active efforts to strengthen and streamline its financial, planning, and coordination procedures, bringing them as closely as possible to standard government procedures.
- * Districts should be kept fully informed of all policy developments and decisions which affect them. NORAD should ensure that its communications reach beyond the region and include districts in all important decisions.
- * The current share of total RUDEP funds currently allocated to the water programme should not be further reduced in the immediate term.
- * The Department of Community Development should be given a stronger and acknowledged role in the operational coordination of the water programme, and RUDEP activities in general.
- * All field activities in the community participation component of the water programme should be decentralised to the district level.
- * Serious consideration should be given to introducing "participatory" methods into the CP programme.
- * In order to sustain community confidence in the water programme, Maji should ensure the highest possible standards of construction in the implementation of water schemes.
- * The principles and philosophy expressed in the RUDEP "Policy Document on People's Participation" should be actively taken up, and support given to further developing this into concrete strategies.
- * More explicit steps should be taken to ensure the maximum participation of women in the water programme.
- * The current focus on simpler and lower cost

technologies should continue, with first preference being given to shallow wells and spring protection wherever feasible.

- * Project allocations should be made for the provision of point-source water supplies in all "urban" areas, including Sumbawanga.
- * Systematic follow-up activities should be introduced to provide long-term support to village scheme attendants.
- * A system should be developed to permit communities to rapidly convert Village Water Funds into stocks of spare parts.
- * The sanitation programme should be swiftly expanded to all districts.
- * Particular attention should be paid in the development of the sanitation programme to the creation of income-earning opportunities for rural artisans in latrine construction and slab production.
- * The sanitation programme should be seen as a vehicle for strengthening the field activities of health extension workers.
- * Further involvement of the private sector should be actively pursued, with top priority being given to local suppliers and contractors, particularly in the rural areas.
- * The construction by Maji of the simpler water supply technologies should include an explicit training element to allow a transfer of skills to the rural community.

2. INTRODUCTION

2.1 Purpose of the review mission

NORAD has supported the development of the water sector in Rukwa since 1979. The sector programme is now integrated in the Regional Development Programme in the Rukwa region (RUDEP), Phase 1 of which will be completed in 1991. Planning of Phase 2 has already started. A review of RUDEP, carried out in 1990, recommended that the water sector programme should be reviewed before a new phase of RUDEP was agreed.

In light of the new Tanzanian water policy endorsed by the Tanzanian Cabinet, NORAD's policy of supporting sustainable development, and the development of a new approach in water supply implementation in the Rukwa region, the aim of this

review has been to assess the achievements made, the problems encountered, and the prospects of establishing sustainable water supply schemes in the region.

The Terms of Reference for the Review Team (attached as Annex 2) state that the team should focus on process rather than product, which implies that organisational approach, technology choice and involvement of communities will be most extensively discussed in this report. The evaluation exercise in the first part of the LFA workshop forms an important input to discussions in the report.

2.2 Itinerary of the review team

The review team convened in Dar es Salaam on the 21st May and arrived in Sumbawanga the same day.

The findings during the first week enabled the team to get a general overview of the status of the sector programme in the different districts. In general terms, the implementation of new schemes was regarded as satisfactory, with the exception of Nkansi District which has been effectively without a DWE and assistant DWE for several months. The DWE has been acting District Executive Director (DED) for more than one year, and the expatriate assistant DWE left at the end of his contract earlier this year. However, the operation and maintenance of the water supply schemes were below acceptable standard in all districts. This was also emphasized in the LFA workshop's evaluation of the programme so far.

The second week's LFA workshop confirmed many of the impressions of the programme the team had got in the first week. The workshop also contributed in broadening the knowledge of achievements and problems in the programme. The extensive discussions among the participants in the workshop also confirmed the complexity of the water sector programme itself, and the added complexity of developing an operational integration of all development activities under RUDEP. As will be seen in the workshop report, the analysis of the programme and the planning matrix provide invaluable information for the team's assessments and recommendations concerning the future development of the water supply sector in Rukwa. The team highly recommends this type of cooperation between the review team and the programme staff, and NORAD should be encouraged to use a similar approach in other programme reviews. The team also recommends a follow-up LFA workshop in October/November as a means of coordinated development of the workplan for the next financial year. If possible, the same team of facilitators should be used for this exercise.

The last days of the mission were spent in Dar es Salaam, meeting NORAD officers, and completing the draft of this report.

Mrs. Hilda Gondwe had to leave the team after the first week due to other commitments, but her contribution to this report has been extremely valuable.

3. BACKGROUND INFORMATION ON THE PROGRAMME

3.1 Brief History.

NORAD's involvement in the water sector in Rukwa dates back to 1979 when the Water Supply Rehabilitation Project was initiated. One of the major outcomes of this project was the Rural Water Supply Master Plan commissioned in 1980 and completed in 1982. The Master Plan has until recently been the main document for development of the water sector in the region and still represents an important source of data and information regarding the availability of water resources in Rukwa. However, the experiences gained, the change in water policy in Tanzania, and the general drive towards closer co-operation with the beneficiaries and their involvement in setting priorities in all development programmes, have contributed to a policy in the water sector programme where more emphasis will be laid on the beneficiaries need and priorities rather than the following of a central plan. Since this policy is fairly new, it is appreciated that it will take time before habits, routines and technology are fully adapted in the programme.

After the completion of the Water Master Plan the programme has undergone some administrative changes which also have participated in stirring up administrative routines, reduced the employees confidence in the programme and lowered the general morale among the involved personnel. In 1981 the Implementation Unit was established to implement the water supply in the region. In 1985 the Implementation Unit was integrated in the Tanzanian governmental administration under the Regional Water Engineer. In 1988 the programme then was integrated into a new regional development organisation RUDEP. These changes in methods of operation and organisation have all been based on orders from outside the region and have only to a very limited degree allowed for transition periods and adjustments of procedures before becoming effective. These disturbances in the programme have most likely contributed to a reduction in the morale and working spirit of the personnel in the programme, as much as the general decline in the national economy.

3.2 Current objectives of the programme

The general objective of the water sector programme is still to provide clean and safe water to the majority of the population in Rukwa. However, based on experience in the programme and in general, the policy is now focused more on establishing sustainable supplies. This implies

that more emphasis has to be given to the beneficiaries' assessment of need, a more appropriate level of technology linked to community capacity to maintain the supplies with minimum input from agencies outside the community. These objectives necessitate changes in attitude among the implementers, closer cooperation with the beneficiaries, and an heightened awareness of their priorities. The programme has already achieved remarkable changes in procedures for cooperation with the beneficiaries and choice of technology, but there is still a lot to be done before an acceptable level of sustainability of the water supply will be reached.

3.3 The water sector in RUDEP.

As mentioned in section 3.1, the water sector programme was incorporated into RUDEP in 1988. The water supply programme is by far the biggest component within RUDEP. The programme therefore should be seen as an entry to other development activities in the villages. The present drive towards a closer cooperation between villages and the water programme will increase the need for exchange of information on development activities in the villages, coordination of village planning and interaction with other RUDEP activities. The operative part of the integration is at present not fully adopted as RUDEP still is seen by Maji as more of an obstacle than an asset in its management of the sector programme. In particular, RUDEP's weak planning coordination at district and village level contributes to the anomaly between strong sectoral interests of Maji and RUDEP's general approach to multisectoral development. This is further elaborated on in this report. The present organisational setup of RUDEP does not fully fit into an integration of all development programmes in Rukwa. There is still room for improvement of RUDEP as a programme for regional development. Particularly in the role of sector coordination at district and village level, RUDEP should play a more active role in enhancing maximum benefits from donor funds.

4. ASSESSMENT OF THE CURRENT SITUATION.

4.1 Organisation, finances and planning

4.1.1 Regional and district coordination

Under the decentralized government structure, the regional water department headed by RWE is administratively under the Regional Development Director (RDD). However, on matters concerning technical issues, training, and transfer of personnel, the water department communicates directly with Maji.

At district level, the water department headed by the DWE

is administratively under the DED. The water department at district level communicates with the RWE on technical matters only. The main difference between region and district is that staff at the region are employees of the Ministry of Water, while water department staff at district level are employees of the district councils.

The administrative organisation of the regional water department is divided into sections, namely water resources, design and construction, Town Water Engineer, operation and maintenance, workshop, and administration and training. A Planning, Monitoring, Evaluation and Coordination (PMEC) unit has recently been established to coordinate the activities of the various sections. Each section has its own section head. Due to manpower shortages, many section heads are in an acting capacity only. The water department has presently two advisers, one assistant to RWE (until July 1991) and one adviser for the two sections, construction and O&M.

The DWE's administration is theoretically a copy of the regional setup except, for the training and water resources sections, and PMEC unit. Design section at district level normally concentrates on survey and minor design jobs. The manpower situation at district level is even more critical than in the region. The most serious problem is a severe shortage of qualified personnel as DWEs and section heads. With the responsibilities given to the districts in pursuing sustainable O&M and management of developed water supply schemes, Maji's administration has to be considerably strengthened. The DWEs therefore strongly oppose the decisions made at regional level to replace assistant DWEs with technical advisers to the DEDs.

While the office of the RWE is a regional branch of Maji, the DWE is an employee of the District Council under its administrative head, the DED. The line of command between districts and region does not consequently subordinate the one to the other. However, the RWE has a professional, advisory and supportive role in relation to the DWE. Although RWE has no administrative command over DWE, a very close professional relationship exists between the two administrations.

Since NORAD only communicates primarily through the region, the districts often seem to be uninformed about decisions taken on their behalf at regional level. One example is that although the assistant DWEs are under the command of the DED, and not the RDD, communication concerning recruitment, contracts and job descriptions has been between NORAD and the region. This causes unnecessary delays, misunderstandings and irritation at district level.

Another problem not solved is that although RWE's staff only perform construction of water schemes on request from the districts, there is in the districts a tendency to give

less attention to schemes constructed by RWE. The impression is also that RWE staff do not always fully cooperate with the district in matters related to implementation.

4.1.2 Funds and expenditures

The inputs needed to reach the ultimate goal in the water sector were quantified at the LFA workshop to about 1,39 billion Tshs. or approximately NOK 400 million. The amount indicates what may be required to reach the ultimate programme target, safe and reliable water supply to a majority of Rukwa's population. Annual allocations from NORAD for development of the water sector are currently estimated at NOK 4 million (Tshs. 12,5 million), excluding expatriate costs. It should therefore be appreciated that severe prioritizing and maximized benefit of funds to the users has to be seen as the guideline in development.

The lines of command and procedures for reporting and disbursement of funds within the governmental system seem to function. The general problem, however, is that only very limited amounts are allocated to support the water sector.

Almost all development funds are provided by NORAD through RUDEP. The situation of funds coming through different channels, with uncoordinated routines regarding budgeting, reporting and disbursement of funds add administrative workload on an understaffed administration in the region and the districts. In the LFA workshop's evaluation of the programme, the shortage of qualified staff, together with complicated reporting procedures and absence of coordination of funds at both regional and district level, were seen as obstacles in the development process.

The governmental budgeting routines do not allow for long term planning of development and revenues. However, since governmental funds for development are very limited, allocation of these funds can normally be fitted into the development programme.

The four year commitment of donor funds (agreement period) and the funds secured for the region in the programming period allow for long term planning. As the donor funds are used mainly for development, there is a strong need for establishing routines for long term planning, for acceptance of procurement orders almost a year before construction starts, and for development according to local capacity. Long term planning is also necessary to secure coordination of plans and activities. RUDEP should therefore be given firm planning figures for next financial year within the first quarter of the present financial year. Experiences of the kind the region had at the Annual Meeting in 1991 should not occur again as this is contrary

to NORAD's development policy, firm planning, and the aim of the annual meetings.

According to information given to the review team, the region is kept uninformed of the corresponding NOK value of the budget in Tshs. With the decline in Tshs. value and the internal inflation rate the region should regularly be kept informed of present Tsh. value compared to existing exchange rate of NOK.

The Maji programme currently accounts for just under 30% of the total RUDEP budget. For the time being, the review team suggest that this share should not be significantly reduced. Maji's relative strength should be exploited as a means of strengthening the programme as a whole. Their share of the budget should eventually be challenged by other sectors on the basis of their own strength, rather than a lessening of budgetary allocations being seen as a way of lending strength to others.

4.1.3 Integration of Maji and RUDEP

The integration of the Maji rural water and sanitation project and RUDEP was recommended in the joint review of these two programmes in 1987, and brought into effect at the beginning of the 1988-89 financial year. Although formal integration has taken place, a large number of problems remain before it can be said that the two are fully integrated.

Part of the rationale behind the move towards integration was that the longer history and greater strength of the Maji programme would help to strengthen RUDEP as a whole. From the Maji point of view, however, it seems evident that integration is seen as a handicap rather than a benefit, and as a decision which was imposed from above rather than one which was desired or sought.

In the past, water and sanitation project funds were directly controlled by Maji. Under the integrated approach, all funds (including those allocated to Maji) are now channelled through the RUDEP. According to staff in the Maji project, this has led to delays in financial administration which slow-down implementation and cause frustration among Maji staff. This has also led to longer delays than before in the procurement of materials and equipment, and a general growth in paperwork and bureaucracy. RUDEP seems to be viewed by the Maji project as a controlling institution rather than a coordinating one, and the review team sensed a feeling among Maji personnel of a loss of autonomy and control over a project which they consider to be their exclusive responsibility.

In part, these problems can be linked to shortcomings in the organisational and administrative structure of RUDEP

itself, many of which were addressed in the 1990 review of the integrated programme.

In the case of RUDEP as a whole, there is evidence that the current structure is in need of review and revision to ensure smoother coordination, more speedy and efficient administration, and greater cooperation between the various units. The presence of the RUDEP programme, despite its many benefits, also causes a number of problems to the regional administration (due to a number of differences between RUDEP and government procedures) and these need to be addressed.

4.1.4 Operational integration and coordination

Generally weak coordination of the different units (including Maji) which make up the RUDEP programme may suggest that many of the feelings evident in Maji may well be shared by other collaborating units. In general terms this seems to have led to an inadequate level of operational coordination, despite institutional and administrative integration. Maji staff, for example, complain of clashes at field level due to the simultaneous implementation of different elements of the RUDEP programme in the same communities. This obviously compromises the effectiveness of all, since conflicting demands are made on community time and attention. In such circumstances, RUDEP components appear to see each other as competitors for the attention of communities, rather than partners in an overall development process. While each unit is building up its own coordinating bodies, the overall coordination of RUDEP activities, particularly at field level, appears to be virtually non-existent.

A possible contribution to solving this problem may be the general reorientation of the relationships between the RUDEP units and the staff of Community Development. The review has already indicated that it may be appropriate to return the implementation responsibility for community participation elements in the water and sanitation project directly to Community Development, and this logic can be extended to all RUDEP activities.

Rather than seconding Community Development staff to the various units, it may be more appropriate for all of the units to commission the services of Community Development, allowing Community Development staff to remain in the same department, in close enough day-to-day touch with one another to enable an effective coordination of field activities to be achieved. Community Development would then in effect fulfil the function of an operational coordination unit for field activities, as a complement to the administrative coordination function performed by the office of the RDD. At the same time, the capacity of Community Development should be strengthened and its

effectiveness improved. In the case of Maji, those officers who are currently "doubling up" as technical staff and community participation workers would have the latter pressure eased, but could remain with a responsibility for liaison and coordination between Community Development and Maji's field operations, ensuring that the correct sequence of activity in the field can continue to be carried out.

In addition to minimizing the competition between the various units, and encouraging a more inter-sectoral development philosophy in all units, this approach may also assist in more effectively strengthening community capacity to manage and sustain development activity in a more systematic way. Hopefully, this would also make it easier for community members themselves to see the inter-relationships between the various RUDEP-supported activities in the general process of development. The adoption of this approach would imply that separate budgets for community participation activities in RUDEP as a whole would have to be made, with allocations for all CP activities being directly assigned to Community Development at both Regional and District levels.

As a further step in strengthening community elements in RUDEP programmes, a move towards maximum decentralisation of CP activities to district level would be desirable. The district is the most appropriate level at which field operations may be effectively coordinated, and would bring the planning and coordination process closer to the rural community. In principle, this would allow the RUDEP programme as a whole to be more capable of responding directly to community needs.

A precondition for the adoption of these proposals is that the Department of Community Development should be in a position to take on these enhanced roles. According to the department, the current staff establishment in the region as a whole is 89. Of these, 32 staff members are based in the community, at ward level, and all but 12 are assigned to districts. Although by no means fully staffed, the department should be in a position to take up a more central role in RUDEP coordination and operations than at present, if given the proper support.

A further step which could be taken to strengthen planning and coordination at district and field level would be through the secondment of a number of planning officers from the regional office to the districts. These could support the DEDs in programme coordination, and provide additional back-up to the Department of Community Development in ensuring that its role is properly recognised. The current complement of nine planning officers in the region is soon to be supplemented by two more and the region could probably easily afford to second a planning officer to each district from this number.

4.2 The role of communities

4.2.1 Community management and sustainability

Community participation (CP) is a crucial element in the RUDEP water programme, and is the principle means by which sustainability - as defined in the Terms of Reference of the review mission - is to be achieved. Its importance, therefore, is hard to underestimate and a significant amount of emphasis was accordingly given to this element of programme activities during the review.

In general terms, there is evidence of significant progress. Since 1986, a total of 55 water schemes have been "handed over" to communities and Village Water Committees have been established in all 206 villages nominally served with improved water supplies in the region. A campaign is now underway to establish Village Water Funds in all served communities, with a view to creating maximum self-sufficiency in the operation and maintenance of schemes. So far, funds have been established at 26 villages, and 10 more were in the process of being established at the time of the review.

In the long-term, it is envisaged that communities will be in a position to undertake all but the most major of repairs to their water schemes, and will be able to generate sufficient funds from their own resources to meet virtually all spare parts requirements and maintenance costs. A degree of support from Maji, at both Regional and District levels, is always likely to be required, but (according to the model) this should be restricted to major technical works beyond the capacity of community scheme attendants, the replacement of major, high-cost scheme components which community funding can not support, and assistance with the procurement of spare parts. In all other respects, the sustaining of the water scheme will be managed and supported by communities themselves.

The aims of the CP element of the water programme are very ambitious, and place the Rukwa project at the forefront of the development of approaches to sustainability through community management which have been identified at a global level in the sector as a key strategy for the 1990s and beyond. Given that this is so, it would be surprising if a flawless approach had already been developed. In reviewing this element of programme activities, therefore, the review mission has been very conscious of the difficulty of the task confronting team members responsible for the implementation of CP activities.

A large number of the problems noted in this report are well-known to the project team itself, and many were noted during the evaluation exercise carried out as part of the LFA workshop. In documenting them the review mission hopes that suitable steps can be taken to further strengthen CP

work.

4.2.2 The 15 step approach

A Community Participation Unit was established in Maji in 1987, with support from an expatriate adviser. The adviser's contract has now expired. This team consists of three members, based in the Regional Water Engineer's office at Sumbawanga. At District level, CP activities are the responsibility of Maji technical staff (two in each district) who have been designated as CP coordinators in addition to their normal duties.

The CP methodology used in the programme is a so-called "15-step approach". The 15 steps are divided into three groups of five, the first for planning, the second for construction, and the third for operation and maintenance. Although intended to enhance the participation of communities in the water programme, the 15 steps appear to be very "top-down" when actually put into operation, and very bureaucratic, being linked to the signing by communities of a long series of forms and agreements. The approach offers very little in the way of real choice to communities, and at best can be described as a model for community mobilization rather than participation in a full sense, and at worst a model for community compliance with Maji's demands.

The approach is at present very biased towards the process of implementation, with 10 out of the 15 steps being concerned with the planning and implementation of schemes. The last five are concerned with O&M, but the process appears to come to an end with the handing over of the scheme.

In relation to sustainability, there is a need for a more continuous process of support to be offered, which will provide a more effective "after sales service" to communities, and give them access to long-term support and advice in developing and strengthening local management capacity. More is said about this issue below.

Although the CP unit members have their own doubts about the 15-step approach, they currently feel at a loss as to how improvements can be made.

The 15-step approach very much represents a model, and on a number of occasions it was suggested to the review team that actual implementation was often far from ideal, even within the limits of the model itself. In some cases, inadequate time was allowed for the process to be completely developed because of the haste to implement new schemes, or a lack of commitment by team members. In such cases, the attention given to the role of women is likely to be a major victim. Women are accorded a low status in

the local community in rural Rukwa and explicit and energetic steps are required to ensure that they are fully involved in project development. If short-cuts are taken it is unlikely that their views will be heard. Since one of the stated objectives of the water project is to lessen the burden of women in fetching water, this may be a serious shortcoming.

4.2.3 Village Water Committees and Village Water Funds

The community management of water schemes is intended to be implemented through the establishment of Village Water Committees (VWCs), with financing being provided through Village Water Funds (VWFs). The CP programme includes a training element, to help prepare VWCs for their management role.

Given the scope of responsibilities to be passed to VWCs, a more developed training programme will be required, with emphasis being placed on the development of problem solving skills, as well as on practical organizational and financial management skills. The programme may wish to consider adopting some of the "participatory" methods of skills development currently being promoted within the water sector, which lay emphasis on problem-solving processes rather than instructional methods.

Expertise in these methods is being developed within Tanzania, and a short-term input from a local consultant may be of value. Consultancy support of this kind could also be of value in helping to modify the 15-step approach, to make it more flexible and responsive to community needs, and to bring it more into line with a partnership approach to the relationship between Maji and the communities.

The management of VWFs is of particular importance, if community contributions are to be sustained. At present very limited guidance is given to VWCs in relation to this issue. The main financial control mechanism so far introduced is that Maji should be a co-signatory of each VWF account (in addition to the VWC members given this responsibility). This is meant to ensure that money in the VWF is only used for expenses related to the water scheme, and thus to instill confidence in the community that their contributions are being used for the intended purpose. Other than this, no systematic approach has yet been established, and no clear picture has yet emerged, as to how VWFs will be managed and sustained, and what further financial control procedures can be instituted.

Communities have been left to work out their own systems, which may or may not be desirable. The likely outcome is that some communities (particularly those with leaderships with high levels of integrity) are likely to develop very good systems, while others may develop very bad ones.

Leaving communities to entirely make their own arrangements may not, for example, lead to equity and fairness and may thus undermine sustainability. The project should consider playing a more active role in assisting communities, on a partnership basis, to develop effective community-based financial management systems - making maximum use of the systems developed by communities themselves, but offering help and guidance to those which are experiencing difficulties, and mediating in cases of dispute or inequity. On the basis of early evidence, there seems to be a reasonable degree of willingness among communities to make financial contributions to system maintenance, but this will only be sustained if effective financial management systems can be introduced to ensure that all community members feel that they are getting value for money.

Another constraint is the lack of adequate data on the actual levels of expenditure which communities may face in taking over responsibility for schemes. At present, the project lacks a sufficiently developed monitoring system to predict with any degree of accuracy the likely cost implications in the long term. This is partly due to the relatively short time in which most new water supplies have been in operation, but it is nevertheless necessary that a more effective system of monitoring and information management is developed so that this service to the community can be steadily improved. Maintenance costs are likely to rise as schemes age, and levels of community financing obtained in the early stages may not be sufficient to meet later costs. Communities should be made aware of such factors before being asked to commit themselves. The evident reluctance on the part of some communities to establish funds may be due in part to uncertainties as to how much will really be required. This lack of information also means that they are not in a strong enough position to make an informed choice as to the wisdom of accepting a new scheme.

Although a limited number of VWFs have been established, community financing of operation and maintenance has not yet effectively begun. It is still too early, therefore, to predict what problems are likely to arise. Because of this, a continuing relationship with communities is extremely important, both to provide assistance and back-up when required, and to enable the programme to monitor progress with community management as a means of further developing the CP approach.

4.2.4 Community Participation and Community Development

Many community management problems are likely to arise as schemes age, and a continuous and consistent programme of support will be required to help communities confront these. Ready access to community development workers within

the local area would assist this process greatly. The prospects of developing such an approach are currently hampered, however, by the inadequate involvement of resident Community Development Assistants (CDAs) in the planning and implementation process. Although CDAs, and other extension workers, are invited to the community meetings held by the water programme, there is no evidence that they are actively involved in the development of the approach, or play a central role in the CP process as far as water supply activities are concerned. These cadres need to be involved from the very beginning, and fully included in the CP team, to ensure that they are sufficiently familiar with water and sanitation (and community management) issues to offer effective long-term support.

This observation raises a fundamental issue in relation to the future development and sustainability of the CP element of the water programme, and the long-term sustainability of the community management approach. At present, CP activities are carried out within Maji itself, with little real involvement of the Department of Community Development. In the opinion of the review team, this situation gives rise to shortcomings within Maji's own CP programme, and also has an impact on community participation activities within RUDEP as a whole.

According to current government policy, the Department of Community Development should play a leading role in development coordination at community level. By establishing CP units of its own, Maji is effectively bypassing this policy and, furthermore, is limiting the extent to which CP activities related to the water sector are integrated and coordinated with the general process of community participation in the development process.

The existence of separate CP units within Maji should be seen as a short-term measure, aimed at developing an effective CP package for the water programme which can subsequently be taken up and implemented by the Department of Community Development. For this to be successful, the department should already be involved in the process. The review team feels strongly that the Department of Community Development should be brought more centrally into the Maji programme with a view to passing this responsibility fully to their own workers within one to two years. This issue has already been discussed in some detail in the section relating to the integration of Maji's programme with RUDEP as a whole.

Even after responsibility is passed to the Department of Community Development, there would continue to be a need for some degree of CP support within Maji itself. The review team suggests that this could be achieved by modifying the terms of reference of the regional CP coordinator to relieve this person of field implementation responsibilities and allow her to focus on the further

development and strengthening of the CP strategy, and to provide monitoring and back-stopping services to district-based community development workers in relation to the water programme. The CP coordinator would then have more time available to develop activities such as the mini community survey conducted immediately prior to the review mission, which suggested that a great deal of valuable information is awaiting collection in communities which could make a significant contribution to programme development. She would also have more time to devote to the general raising of awareness within Maji of the importance of the community role in the water sector, and the particular role which can be played by women.

The present situation, whereby the regional CP unit directly implements the CP programme in communities served by the RWE, is far from satisfactory as there is no possibility of consistent follow-up in the long term. The 15 steps are divided between three staff members in the regional unit (each taking 5 steps apiece), which means that a single community will not even encounter the same individual in all stages of project development, let alone meet them again after the scheme has been handed over. Once a scheme has been handed over, the regional CP unit is far too busy moving on to new schemes to have the time to provide further support to the old ones.

Maji officers at district level who have been given CP responsibilities would have less responsibility for the actual implementation of CP activities, but would act instead as liaison officers in scheduling field operations in collaboration with DCDOs and ward-based CDAs. The present approach places an unfair burden on Maji technical officers to undertake community development activities for which they have not been trained, and which they would not be required to do in the normal course of their duties.

4.2.5 Maji and the community

In spite of conducting field operations in communities on a fairly large scale for a long period of time, there appear to be limits in knowledge among Maji staff of community views and feelings. The modest survey exercise carried out by the CP team prior to the review mission yielded some "surprising" results for Maji staff, indicating a need for a more thorough and regular means of soliciting community views. A more equal exchange of views would be of benefit to both Maji and the communities, enabling both sides to obtain a clearer understanding of each others problems. Linked to this, is an evident "culture of expertise" in Maji which gives little credit to community skills and knowledge, and appears to feel threatened by the idea that community members should be more involved in the decision-making process. This must of course affect the attitude displayed by Maji staff in their

dealings with the community, and must limit the amount of choice they are prepared to offer to community members.

During the LFA workshop, a number of interesting discussions developed in relation to these issues, and there was clearly a good deal of scepticism about the extent to which communities (and women in particular) are really able to make a significant contribution, either at the planning, design, and construction level, or in the longer term process of operation and maintenance. Although the true limits of community capacity are not yet known, a raising of consciousness among Maji staff as a whole, perhaps through a workshop activity and the introduction of more participatory community participation techniques, may help to close the gap between the agency and the community and stimulate the development of a more partnership based approach. At present, "participation" by communities appears to be viewed by many Maji staff as largely a question of compliance - participation being viewed as successful in direct proportion to the degree to which community members do what they are asked.

Another factor of importance is the quality of service offered by Maji to the community, particularly as the policy of "free water" is being altered in favour of a more self-sufficient approach. While communities are being asked to sustain water supply schemes with their own resources, they are given very little choice as consumers, and appear to have little recourse in the event that schemes are not well installed by Maji (beyond the six to 12 months "guarantee" period). Poor workmanship or inappropriate design by Maji may lead to additional financial burdens on communities.

A clear implication of this is that a move towards transferring responsibility to communities must be accompanied by an improvement in the technical standard of services provided by Maji, and greater confidence among beneficiaries that schemes will be installed to an acceptable standard. These comments are not intended to suggest that there is anything sub-standard about Maji's current quality of work, but only to underline that a community-based approach to sustainability implies that all schemes must be built to the highest possible standards if community confidence is to be won. In view of the constant breakdown of older schemes (for whatever reason), it would be surprising if there were not some scepticism within communities about the reliability of new schemes, particularly those involving more sophisticated technologies. A combination of more genuine technology and service level choices, and improved construction standards are needed to address this problem area.

4.2.6 Approach to community participation

In general terms, the review mission supports the definition of community participation put forward in the RUDEP "Policy Document on People's Participation", tabled at the 1991 Annual Meeting. In this document, "authentic community participation" is viewed as a process, based on a partnership, involving:-

- * "a mutual understanding and respect of each other's culture, knowledge, skills, and abilities";
- * "opportunities and encouragement for the community to play an active role in decision making at all stages of the process and in the various organs of programme and project administration";
- * "a strong commitment and willingness to carry through this process, especially on the part of government officials and project staff";
- * "ensuring that CP forms the basis of all development projects and that it gives equal opportunity for the weaker sections of the community to fully participate";
- * "the empowering of communities and the sharing of benefits derived from the changes which occur".

The wholehearted adoption of the philosophy embodied in this view by all those involved in the water sector programme (as well as the rest of RUDEP) would in itself greatly enhance the prospects for success of the CP component and the sustainability of the programme as a whole.

4.3 Gender issues

The issue of the role of women has been referred to a number of times in this report, and requires special underlining. The review team is far from convinced that enough serious attention is being given to this issue. Experience from many other projects suggests that women can play a substantial role in contributing to the appropriateness and sustainability of water supply programmes. An explicit aim of the Rukwa project is to reduce the burden on women caused by poor access to water supplies, and this goal can only be achieved by ensuring that they are fully involved in developing the programme.

The role of women was reviewed at the LFA workshop, and a number of objectives and activities were identified to help strengthen their position in the programme. The review team

fully endorses these proposals and urges the project team to ensure that they are fully implemented.

4.4 Technology choice

According to information in the region, a total of about 200 villages have so far been supported with water supply of different kinds. Since 1980, approximately 174 schemes have been constructed, of which a majority have been funded by NORAD. The distribution of these schemes is:

- 50 villages with gravity schemes
- 17 with diesel pump schemes
- 77 with boreholes with hand pumps
- 30 with wells and protected springs.

The introduction of wells and protected springs is fairly new and has been adopted as the main water supply option only during the last year.

An inventory carried out in the districts prior to the arrival of the review team revealed a disappointingly high failure rate in rural water supply schemes. The conclusion of the inventory, which did not include the UN supported Mishamo and Katumba refugee areas, is that perhaps as few as 25 % of the schemes provide full reliable service throughout the year.

Motorised water schemes, in particular, provide very poor service due to fuel and spare part shortages, mismanagement, and frequent breakdowns. In addition, a majority of the gravity water supply schemes using open streams as sources provide water of poor quality and do not therefore participate in the provision of safe and clean water to the consumers.

The recently adopted programme policy of focusing on a more low cost technology, using groundwater wherever possible, has a better chance of being sustained and providing an adequate service than previous approaches. The new technology choice has, however, advantages and disadvantages. On the positive side, protected springs and shallow wells normally provide unpolluted water, and the skills needed to construct and maintain these types of water supply are easily learned. Another advantage of these types is that, together with boreholes, the implementation period is fairly short and can therefore be more easily fitted in between other demands for village labour. The disadvantage of using springs in particular, and to a lesser degree wells, as main sources, is that the location of water points may often be less convenient for the consumers. By using springs and wells in the outskirts of the village as the major source a compromise between a technically appropriate water supply and longer walking distances has to be made. The potential disadvantages of

boreholes are the higher construction cost and comparatively higher maintenance costs.

Sustainability of technical installations is to a large degree dependent of the complexity of technical installations, affordability of spares, and proximity of service. An example is that even though the Rukwa people for generations have used ploughs for tilling, they have continued to use sledges rather than ox carts for transport. Up until recently, ox carts would have to be imported from outside the region, and were therefore beyond the economic capacity of the rural population. Even if the water sector programme has managed to introduce more affordable technologies, the cost of some components, like pump cylinders, are, according to the programme staff, beyond the present economic capacity of the villagers. To alleviate this problem local production of spares could be possible, or even local production of pump cylinders could be tried.

The search for new and improved technologies should continue to be a part of the Rukwa programme, and the RWE's office should play a particular role in this work. Further alternatives, for example solar pumping, should be explored and field tested.

4.5 Staffing and human resources development

4.5.1 Staffing situation

A key element of sustainability in the long term is that the water programme should achieve self-sufficiency in staffing, with dependence on expatriate technical assistance being progressively reduced. At present, prospects for achieving this are somewhat limited, with the staffing position often being close to crisis level, particularly at management level.

The Maji regional office is currently suffering fairly serious management staffing problems. The Regional Water Engineer (RWE) was suspended in 1990, and the acting RWE was at the time of the mission on study leave. The Town Water Engineer (TWE) was consequently taking responsibility for both the Sumbawanga Urban area, and the region as a whole. The head of design and construction died during 1990, and the head of the workshop was suspended and subsequently transferred. These officers have only just been replaced and the new officers will obviously need some time to settle into their posts. Although the situation should improve with the return of the acting RWE later in the year, discontinuities in staffing of this kind can be expected to be a regular feature in Rukwa. This is in part due to the remoteness as a region, and its unpopularity as a duty station among government staff

Similar problems are evident in the districts, with Nkansi being particularly badly affected. The District Water Engineer (DWE) has for the past year and a half been acting District Executive Director (DED). This has significantly affected output in this district, particularly after the departure of the expatriate assistant DWE.

It is to be hoped that government staff turnovers can be kept to a minimum to ensure continuity. At the same time, NORAD should give careful consideration to the effects of turnovers in expatriate staff. Where possible, and appropriate, arrangements should be made for adequate handover periods. Where expatriate positions are being phased out, the possibility and need for short-term return visits by outgoing expatriates should be explored. The proposal for the outgoing assistant RWE to make a number of return visits to the region during the next year or so is supported by the review team, and should contribute well to ensuring a smooth handover to the new RWE.

At lower levels, the problem is reversed, with overstaffing of technical staff in some areas, and a high degree of dependence on RUDEP contract staff.

There are currently four expatriate advisers working directly in the water programme - an assistant RWE, a regional O&M adviser, and assistant DWES at Sumbawanga and Mpande. The assistant DWE at Nkansi has finished his contract, but is expected to be replaced soon.

The assistant RWE will be leaving in July. It is not intended to fully replace this post, but plans are being made to retain the services of the current adviser for a series of short-term visits to the region to assist with planning, budgeting and monitoring, and general advisory support to management. The review team is supportive of this approach and sees it as a useful means of progressively handing over full management responsibility while at the same time avoiding a sudden withdrawing of support.

4.5.2 Training and skills development

Training was identified in the LFA workshop as an area of weakness in the current programme, and the review mission endorses this view. The training section in the RWE's office appears to be very weak, and routine in-service training activities are not well-executed. At the community level, there also appears to be a lot of scope for the further strengthening of training activities, both in relation to developing the skills of scheme attendants and in building community management capacity. Monitoring and follow-up of training activities at all levels also appears to be weak. Strengthening of training for Village Water Committees was identified as an important output during the

planning workshop and this should be actively pursued.

At present no systematic plan seems to be in operation, though an annual training plan is prepared at the region. A 1987 manpower development plan is said to be outdated, and is clearly no longer in use.

At this point a need for further external support to training is not indicated, but more effort clearly needs to be put into training activities. The review mission suggests that the PMEC unit in the RWE's office gives close attention to the training issue at all levels during the coming financial year. The need for external support should be reviewed again at the next annual meeting.

4.5.3 Staff incentive schemes

The national economic situation in Tanzania has created serious hardships for government employees throughout the country, and salary levels are far from adequate to secure a basic standard of living. This of course has significant effects on staff motivation and performance, and compels government workers to seek supplementary sources of income. Many of the problems faced by the programme related to control and security of resources can be attributed to this situation.

The introduction of staff incentives has been seen as a partial solution to this problem, and a number of schemes have been introduced. A demand for greater incentives was evident at the workshop.

The introduction of an incentive scheme for the borehole drilling crew in Rukwa has evidently paid dividends, and the review mission supports modest reward systems of this kind, particularly when they produce tangible results. The mission is also sympathetic to the predicament faced by Tanzanian staff. It is important, however, that incentives are kept within reasonable bounds to ensure that they do not have a detrimental effect on long-term sustainability.

There is a danger that incentive schemes linked to output are most likely to favour implementation activities, perhaps to the detriment of the equally important areas of work in O&M and community-based management. These areas of work are far harder to assess in quantitative terms but are of crucial importance to the sustainability of the programme. Any incentive schemes which are introduced must therefore be properly balanced to ensure that staff are not drawn away from the more process-oriented aspects of project work. A delicate balance needs to be developed between creating an incentive environment which is conducive to good productivity and taking a long term view towards the sustainability of the programme. There is a danger with incentive schemes that they become so deeply

relied upon that staff are unable to function when this kind of support is withdrawn.

4.6 Logistics and procurement

4.6.1 Logistics

The findings of the team and the programme evaluation in the workshop clearly document that operation of the programme is complicated. The region covers a vast area. Long distances and poor road conditions, difficult communications and a general remoteness from supply facilities adds up to a difficult logistical situation. Minor weaknesses in the planning and timing process can therefore cause considerable delays in implementation and operations. This problem was discussed several times during the workshop and the need for the creation of buffer stores for materials and spare parts was repeatedly mentioned. The aim is to have a reasonable amount of construction material and spares stored in the region to alleviate the problems created by long procurement periods.

Compared with other projects, RUDEP and the water sector are extremely well equipped with transport facilities, particularly at regional level. The number of vehicles at district level seems, however, reasonable. The vehicle fleet causes several problems. For one it necessitates a complicated and skilled management system to coordinate transport activities in the programme. Second, the possibilities of misuse is a constant threat to keeping the cost of the development programme within budgeted figures and planned progress. Third, the self contained transport situation within RUDEP hardly contributes to establishing a sustainable transport position in the region. Although this was not regarded as a problem in the LFA workshop, the review mission was not fully convinced of the need for such a large transport fleet.

4.6.2 Procurement

The programme has two different types of procurement procedure. Materials obtained in the region (C-funds) are to a large extent procured on ad hoc basis when materials are needed. The system allows for annual contracts with local suppliers. Such contracts have, however, to be based on tenders approved by the regional tender board. This type of local procurement has hardly been used within the water sector programme.

Procurement of material from outside the region (D-funds) is handled by a procurement agent (Norconsult) in Dar es Salaam. The procurement agent handles external as well as domestic procurement based on orders and specifications from RWE. RWE coordinates the external procurement with the

districts.

The procurement handling has recently been out for tender. According to information in the region, NORAD has made an in-house evaluation of the tenderers without liaising with the regional authorities. With the experiences they have with the present company, and the time it has taken to streamline the procurement procedures with the handling agent, the fear in the region is that these hard learned lessons will be lost if a new agent takes over. The review team has not made any analysis of the tenderers, but will as a matter of policy recommend that the evaluation of the tenderers should be done in Rukwa and Kigoma respectively. This procedure will contribute to a policy of recipient oriented and sustainable development. However, the team appreciates that the two regions will benefit by using the same handling agent.

Procurement procedures, long deliveries, uncompleted deliveries, particularly from domestic suppliers, and incomplete specifications in orders from the region, are the main obstacles hampering the procurement process. Locally, seen from the Maji point of view, cumbersome procedures and slow processing of payments hamper operations. Seen from the RUDEP point of view, "last minute" ad hoc procurement complicate control and increase the risks of mismanagement of funds. This problem was not solved in the workshop, but there should be several alternatives for improvement of the procedures for local procurement.

4.7 Urban Water Supplies

There are three designated urban centres in Rukwa region. Sumbawanga is the only "real" town in the region, while Nyamanyere and Mpanda are district centres in Nkansi and Mpanda districts respectively. However, for the purposes of the water programme, all three centres have been characterised as urban and have therefore received relatively less support than the rural villages.

Sumbawanga Urban Area with a population of 68.000 (1988), comprises the central town and 28 "villages" of which 21 have some sort of water supply schemes. The central part of Sumbawanga is served from a gravity system, with three different water sources. The water sources are some streams in the rainforest area on top of the escarpment. The gravity water supply system is not able to serve more than the central part of the town and even there water supply is not available during the night. To enable a reasonable service during daytime, the communal storage tanks have to be filled during the night. The present output from the water supply system is approximately 3500 m³/day. With a consumption figure of approximately 150 l/capita per day the water supply system should be able to serve around

23000 people. Loss of water in the system is substantial due to leakages and extensive use of water in gardens and shambas. Estimates made by the O&M section at RWE indicate that as much as 2000 m³/day are "lost" in the distribution system.

Better control of the consumption pattern, use of a differentiated water levy system, and monitoring of water use should contribute to reducing the need for increased production of water. One problem is that due to a high content of silt and sand in the untreated water, installation of water meters is not regarded as feasible. The present revenue collection system, where all revenues are brought into treasury and recurrent funds transferred back to the towns, does not encourage the town council to recover maximum revenues.

Ironically, Sumbawanga is located on top of a substantial groundwater source, but the energy requirement for pumping the required amount of water from this source has made the exploitation of it currently unfeasible.

Nyamanyere consists of two villages - Nyamanyere A and B. Nyamanyere is partly served by a diesel supply scheme and partly from boreholes and wells with handpumps. Only a few buildings in Nyamanyere have house connections. The diesel scheme is running from 4 to 6 hours per day and does not give sufficient service to the consumers.

Being the former centre of a mining industry, and the end station of a branch of the central railway line, Mpanda appears more like a town than Nyamanyere. The water supply system in Mpanda is very complex. The "town" is partly served from a gravity scheme, partly from a diesel pump scheme, and partly from springs, wells and boreholes. The central part of the town has about 1000 house connections. Estimated annual revenue is about Tshs 240.000, while recurrent expenditures are in the tune of Tshs.1 million. The situation has until this year been even more difficult as the council only has been able to recover approximately Tshs.160.000 from consumers. The district accountant has now appointed a person with specific responsibility for water revenue collection.

Two conclusions emerged from the workshop. First that, except for the central parts of Sumbawanga and Mpanda, the regional and district centres of Sumbawanga, Nyamanyere, and Mpanda, are essentially villages and should therefore not be regarded as urban areas. Second, that as hardly any governmental funds are available for development of water supplies in the urban centres, they should be included in the programme. The problem is the financial implications this will have for the water sector development programme and the present dependence on central government funds for the recurrent budget. The team supports the idea of improved water supply to the urban villages, and that some

basic investments in the centres could be included in the programme. The policy of establishing sustainable water supply should be paramount also for the town centres. This implies that, particularly in the centres, recurrent expenditures should mainly be covered by revenue income.

4.8 Operation & maintenance

The policy adopted under the Rukwa water programme is that responsibility for operation and maintenance should be handed over to communities. The ultimate aim is full self-sufficiency, with communities being able to undertake all repairs, with all costs covered from Village Water Funds. Complete self-sufficiency is unlikely to be achieved, and some degree of back-up support from government will always be required for major repair and rehabilitation work. A process has begun, however, which should lead to a very high degree of community responsibility.

The basic model for implementation and handover is that of a demand-driven approach, with implementation being undertaken on the basis of requests from village governments. Once a community has been identified for a water scheme, a process of community participation begins, and a technical survey is undertaken to identify technical requirements and to locate water points. The community is required to form a Village Water Committee, and this is given training. Implementation is undertaken by Maji (at either Regional or District level), with communities contributing unskilled labour and local materials (stones, sand, etc.). Four scheme attendants are selected from the community for each scheme. These are given one week on-site training by O&M staff, and issued with a basic tool kit. Payment of scheme attendants is the responsibility of the village government, on the basis of a contract drawn up between them. On handover of the scheme, a stock of standard spares is given to the VWC to cover needs for the first year or so. A very rough estimate is given to the VWC of likely maintenance requirements and costs.

This model is very much an ideal one, and is far from being perfected. In reality, priorities are set by a combination of attending to requests and using the old Master Plan priority lists, and the need to keep the whole construction staff fully utilized. There is no evidence that requests are dealt with on a "first come, first served" basis, which means that a request from a community may have very little bearing upon when implementation is likely to begin.

The bulk of maintenance work is at present done by Maji staff, and the real capacity in the region for village level maintenance is not yet known. This will probably not be fully discovered until community financing of schemes is properly instituted.

In the meantime, the quality of information available to communities on likely O&M implications is very poor, and does not provide them with a full and clear picture of what they are committing themselves to. To date, 55 schemes have been handed over, and Village Water Funds established in 26 villages (10 more are in the process of setting them up). There are at present quite serious shortcomings in the management of village funds - most of those in existence were set up through one-off "impulse" collections at public events such as Maji Day. There is also some suggestion that the CP steps are not always adhered to, and many procedures may be by-passed in the haste to install new schemes.

Information management for O&M is generally weak. A complete inventory of water schemes and points is not yet available, though work is ongoing in trying to put one together. Records of breakdown rates, costs, etc., do not exist in an operational form and real costs and labour implications can only be very roughly estimated. Overlapping of O&M responsibilities between the region and districts also makes management difficult. Breakdown rates are known to be high, though precise figures are lacking, and real service levels are thought to be much lower than official figures might suggest. As many as half of the schemes completed over the past ten years or so may currently be out of commission.

Problems include corrosion of borehole well casings, virtual inoperability of motorised schemes because of lack of financing, and the drying up of wells and boreholes. In addition, many gravity schemes are fed from unprotected and untreated surface water sources, with water quality consequently being low.

The first scheme was handed over in 1986. To date, it cannot be said that village level operation and maintenance is working well. Part of the problem is the procurement and supply of spare parts. The project wishes to establish buffer stores of spares, but has not yet obtained the necessary funds. Handing over schemes before VWFs are established and spares are available is clearly a problem. High drop-out rates of scheme attendants have been experienced in some areas, and village level operation and maintenance varies considerably in quality and effectiveness from district to district (Sumbawanga is said to be quite good, while Nkansi and Mpanda are not so good).

According to the regional O&M team, monitoring must be considerably improved, and strengthening of district capacity is required. General conditions in the region are very difficult, with access to communities, transport and communications all being serious problems, and these factors all contribute to making the challenge of developing an effective O&M system even more difficult.

The Sumbawanga urban water supply is in a bad state of

repair, with very poor water quality. RUDEP has been providing support to the scheme, and has been installing point-source supplies to improve drinking water quality and provide back-up supplies to cover breakdowns of the piped supply. The town supply needs complete rehabilitation at an estimated cost of Tsh.6 millions. These funds are not currently available. Much the same can be said for the supplies at Nyamanyera and Mpande.

Financing of urban schemes is a major problem, with revenues being far short of what is required to keep them in good working order. Basic tariffs are themselves very inadequate, and are based on directives from central government which appear to take no account of actual costs. The incentive to collect revenues is very low, both because even full recovery of tariff charges will not provide anything like enough to run the schemes, and the amount collected appears to have no bearing on the actual allocation received from central funds. Revenue is currently only collected from clients with metered or yard tap connections, with no contributions being required from users of public standposts or point source supplies in the designated urban areas. It is an anomaly of urban provision at present that, while rural populations are all to be asked to contribute funds for the maintenance of basic water supplies, no such policy has yet been developed for urban dwellers.

The evaluation exercise at the LFA workshop identified the following key problem areas in O&M:-

- District revolving spares stores not established
- Lack of estimated average costs for O&M
- Poor information flow about new water policy
- Hand over not done in many villages
- Diesel schemes have high construction and O&M costs and low service reliability
- Maintenance costs for borehole wells may be high
- Dependence on imported handpump technologies

To these, it might be added that security of materials and equipment is not yet completely satisfactory, and a significant level of loss from government stores is experienced. This situation, if it continues, may have a seriously detrimental effect on the effectiveness of community maintenance if (as is likely to be the case) the cost of such losses is ultimately borne by communities. Inflation will also have an impact on maintenance costs, and communities may find that prices begin to run ahead of the levels of funding they are able to achieve. One method

for slightly offsetting the effects of inflation, and improving the security of spares stores, would be to encourage communities to purchase standard spares inventories on an annual basis, for storage in the community itself.

Village stocks could be established each year, immediately after replenishment of community funds (perhaps soon after harvest). This would help to reassure community members that their funds are indeed being used for the water supply scheme (since they would be able to see the spares stock as soon as it is brought to the village); would help to defend community funds against inflation by purchasing spares in advance, rather than waiting until they are actually required (by which time the price will probably have risen); and will relieve the burden on Maji at regional and district levels of constantly worrying about the security of their own stores.

4.9 Monitoring and information management

4.9.1 Monitoring, information, and programme management

Sound monitoring, and a good information management system to assist in operationalizing monitoring data, are prerequisites for an effective development programme of any kind, and are of particular importance given the strategy adopted in the Rukwa water programme, and RUDEP as a whole.

At present, a great deal of information is being generated in the water programme, but this has yet to be systematically organised, and management of the programme is compromised in its effectiveness as a result. In the period immediately prior to the review mission, a lot of effort was made by the project team to gather background information for the review team. Much of this was extremely useful, but the fact that special efforts had to be made to compile it is in itself evidence of shortcomings in the present approach.

Information needs have been highlighted in a number of sections of this report, and needs for the strengthening of this general area of management are evident.

4.9.2 Information needs

A broad range of information, generated on a regular and systematic basis, and compiled in appropriate formats for ease of use and utility as management tools, should serve to strengthen the general coordination and management of the water programme. Information of both a quantitative and qualitative kind is required, serving all levels from the community to the region and beyond. The following list gives an indication of the types of information required:-

- inventories of water schemes by type, location, population served, date of installation and handover, etc.;
- records of development costs and time and manpower inputs for scheme installation;
- regular scheme status reports, indicating breakdown rates, down times, maintenance costs, water quality, etc.;
- scheme rehabilitation and replacement records, including cost data;
- vehicle fleet management data, including mileages, running and maintenance costs, breakdown rates, etc.;
- records of training and human resource development activities in Maji and in communities, including costs;
- stores inventories;
- general financial control data and cost analyses;
- quantitative and qualitative data on village management of water schemes, based on the development of both community-based monitoring systems, and data collection and monitoring by Maji staff.

This list is by no means exhaustive, but gives some indication of the extent of information needs. Much of the data required to develop these systems is available, but work needs to be done to improve data management, presentation, and accessibility.

4.9.3 Information management

The establishment of the Planning, Monitoring, Evaluation and Coordination (PMEC) Unit in the RWE's office is a positive development, and provides a good institutional forum for the analysis and operationalisation of monitoring data. This unit should play the coordinating role in identifying information needs and ensuring the development of information management systems in support of its role. Through this unit, support could be given to districts and to communities in the development of effective systems.

In the course of time, it is to be hoped that reliance on the region for direct implementation work will progressively reduce, as district and community capacities are strengthened, and the regional team will be able to devote an increasing amount of its time to programme

coordination activities. Continuing improvements to information management systems will support this role.

4.9.4 Information and programme coordination

Good information management will not only assist the water programme, but may also assist in the strengthening of RUDEP as a whole and contribute to greater operational and strategic integration between the different programme components. Sharing of information between the various RUDEP coordination units may form the basis for much sounder and genuine coordination in the programme as a whole. At present overall coordination appears to be very weak, and this may in part be a function of the problems encountered by each part of the programme in achieving internal coordination, let alone actively pursuing closer integration with others.

The review team believes that serious efforts in developing this vital area of programme management will pay long-term dividends, and will justify staff time inputs, even if this leads to some decline in tangible project outputs in the short term.

4.10 The sanitation programme

The sanitation component of the Rukwa programme has struggled throughout its life and has yet to achieve significant success. The initial choice of technology (the ventilated improved pit latrine) failed to be taken up by communities, in part because of its relatively high cost and the consequent need for high levels of subsidy. Progress was so poor that sanitation activities were suspended during the 1989-90 financial year.

The sanitation component is coordinated by the CP unit in Maji, and was reactivated during 1990-91 following a study tour to Malawi in May/June 1990. After this visit it was decided to adopt the sanitation platform ("Sanplat") as the main technical option. This is a simple, low-cost reinforced concrete squat plate which can be installed in existing traditional latrines, or used as a basis for the construction of new improved latrines.

A pilot project to test this technology has begun in Matai, Sumbawanga District, and initial results have been very encouraging. A "Sanitation Centre" has been built, with large elements of community self-help, and a number of demonstration units constructed.

Between November 1990 and May 1991 approximately 275 sanplat units have been installed - a rate of implementation which is already far outstripping the old programme. Sanplats are sold to community members at a cost

of Tsh.175 each, a rate which covers about half the materials cost. At present, no management system has been developed to handle these funds and the money is currently kept in an envelope in the CP coordinator's office. Given the low cost of Sanplats, and the good initial response from the pilot community, the project should consider selling them at full cost.

The sanitation pilot project is being implemented in collaboration with MOH extension workers. This is a positive situation and the relationship between Maji and Afya should be further strengthened. The sanitation project should provide a good vehicle for this. At present, health education activities in the programme as a whole are very weak, and the sanitation project provides a good opportunity to develop a more structured approach which could eventually be extended to the water programme as a whole. Ideally, the sanitation project should, in the long term, be completely taken over by Afya, with promotional support being given by Maji and the Department of Community Development. This would relieve the CP unit in Maji of the burden of managing this project component and leave them free to focus exclusively on the all-important community management aspects of the water programme.

Given the evident success of the new approach, the sanitation programme should be vigorously supported in the coming period. The inclusion of a strong sanitation element, in combination with a well-developed health education programme, is likely to be of decisive importance in the long-term in securing the health benefits which the programme hopes to achieve. During the workshop held as part of the review mission, plans were made to extend sanitation activities to all three districts in the region.

As noted in the discussion of potential private sector involvement in the Rukwa programme, the sanitation component provides an opportunity for income generation in the rural areas, through slab production and latrine construction, and this potential should be fully explored.

4.11 Involvement of the private sector

An approach recently introduced in the water programme is the use of private sector contractors. At present this is confined to the hiring of local artisans to construct water point headworks. Depending on the success of this experiment, more contracting out of work may be considered. The immediate effect of this approach has been that Maji has been able to reduce the number of technical staff employed on RUDEP contract.

The review mission supports this development, and hopes that greater use can be made of the private sector in future. In addition to construction work, the project may

also consider using the private sector for the delivery of materials and equipment and, in the longer term, for general procurement services. The project is also pursuing the possibility of obtaining handpumps from Tanzanian manufacturers. At present, SWN and Nira pumps can be obtained locally from suppliers in Morogoro and Dar es Salaam, and it is to be hoped that the capacity of the private sector to produce simple water supply technologies can be further stimulated, though there are clearly limitations to the influence the Rukwa project can have on this. Where locally manufactured equipment is available, however, this should always be preferred to imported goods.

The possibility of encouraging the production of spare parts within the region does not yet seem to have been fully explored, and there may be some potential within Sumbawanga town for the manufacture of simple spares (even if this were confined to the production of leather cups, rubber washers, etc.). Closer cooperation with other units in RUDEP may help to identify possibilities.

In view of the stress on community participation in RUDEP as a whole, and the aim of the programme to stimulate general economic and social development in the region, with particular emphasis on the rural areas, the project should give priority to the rural population in distributing private contracts. The move towards simpler technologies (spring protections, kanats, and shallow wells) has created a situation where much greater potential exists for sub-contracting implementation work to private individuals or small groups and, at the same time, increasing the level of skilled input from communities. The resurrection of the sanitation programme with a simpler level of technology also creates an opportunity in rural areas for local artisans to obtain modest earnings from latrine construction and the casting of sanitation platforms (sanplats).

The review team recommends that implementation of the simpler water supply and sanitation technologies should include an explicit training element, aimed at identifying individuals within rural communities with an aptitude to construct facilities to the desired standard. Priority should then be given to people trained in this way in the awarding of Maji contracts. Consultation with communities, through Village Water Committees and the village government structure, should play a part in this process, both to help in identifying suitable candidates for training and in screening contractors for local acceptability.

If this approach is developed in a thorough way, it should be possible to adopt a policy of awarding almost all private contracts within the local area. This should enable Maji to further reduce its dependence on RUDEP contracted labour, and create opportunities for income generation among the beneficiaries themselves. An added advantage of

this approach is that skills for the rehabilitation and repair of simple water points will be immediately available within the local community (since the builders will be drawn from the local population), and the capacity for community maintenance will thus be enhanced.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General conclusions

In general terms, the review team found much to commend in the Rukwa water programme, and was impressed with the way in which a series of major adjustments to strategy and approach have been handled by those involved. The programme is now moving in promising and innovative directions, with a more simplified technological approach, a gradual movement towards integration with RUDEP, and a growing emphasis on involvement of communities in water scheme implementation and management. If these trends continue, and can be further strengthened, the prospects for sustainability in the long term should greatly improve.

The reorientation of the programme towards the principle goal of sustainability must continue, however, and must become a dominant priority for the sector team, and indeed for RUDEP as a whole. At present the programme is still heavily oriented towards implementation and the construction of new schemes. Though this is very important, with improved coverage continuing as a major goal, at least as much energy and time needs to be devoted to more process oriented activities, with a view to generally strengthening programme performance and efficiency and, in particular, giving maximum support to the development of capacity within communities to manage and sustain water supply schemes. The long spiral of the continual collapse of schemes after implementation must be broken, and an approach developed that will secure long-term benefits for the rural population through improved water supply.

In summarizing its principle recommendations, the review team wishes to generally endorse and support the conclusions and recommendations of the LFA workshop. Where there are clear conflicts between the team's recommendations and those developed at the workshop, these should be the subject of further discussion by the project team and, where necessary, with NORAD.

5.2 General recommendations

The review team makes the following general recommendations:-

- i) The principle focus in future programme development should be on the long-term sustainability of improved

water supplies in the Rukwa region through support to, and development of, maximum community self-sufficiency in operation and maintenance, and the development of an enhanced capacity for community problem-solving and management of the development process in general. Community financing and management should be key elements in this process. The role of women should be more explicitly acknowledged and strenuous efforts made to ensure that the voice of women is heard in future programme development.

- ii) Major efforts should be made to improve coordination and operational efficiency at all levels. Within Maji, coordination and communication between the region and districts must be strengthened and improved, and the division of responsibility between the two levels further clarified. In general terms, field operations should be decentralised as far as possible to the district level, with the region concentrating on providing support services such as monitoring and information management, planning and management support, research and development, and other related back-stopping activities.
- iii) General improvements need to be sought in management and administrative procedures both within Maji and in RUDEP as a whole. Every effort should be made to streamline procedures, and bring them closely into line with standard government practices. The goal of the programme as a whole should be maximum efficiency, and the devotion of maximum benefit from programme activities to rural communities.
- iv) A significant strengthening of the coordination of field activities both within the water sector, and of all RUDEP activities, is of vital importance. A more central role for the Department of Community Development is required to reach this goal, with operational coordination being decentralised to district level to bring programme activities as closely as possible into line with the felt needs and aspirations of the rural population.
- v) The general principle of retaining maximum economic benefits from the programme within the region must be vigorously pursued and given high priority in all activities. The greatest possible use should be made of the local economy, and the rural areas in particular, in procurement and the awarding of contracts to the private sector.
- vi) The LFA approach should be adopted as the programme's standard and routine methodology for evaluation and planning, with a follow-up workshop being organised in October or November of this year. If possible use should be made of the same team of facilitators.

Future reviews should seek, as far as possible, to adopt an approach similar to the one used in the current review.

5.3 Specific recommendations

The specific recommendations of the review team are summarised below, and are presented under the section headings in which supporting arguments can be found. In the view of the review team, many of the recommendations entail changes in emphasis and attitude, rather than fundamental adjustments to the basic programme framework. It is not anticipated, therefore, that their adoption will necessitate significant increases in the level of resources devoted to the programme. Many of the recommendations support the further strengthening of areas of activity which already form an integral part of the programme. Efforts have been made to keep recommendations for new areas of activity to a minimum.

Organisation, finances and planning

1. The lack of a direct authority relationship between the regional and district levels makes the need for good communication and coordination of great importance. Efforts should be made to keep lines of communication and cooperation open. A general spirit of cooperation and common commitment to programme goals should be developed to assist in overcoming protocol problems which seem at present to be a barrier to effective coordination.
2. Districts should be kept fully informed of all policy developments and decisions which affect them. NORAD should ensure that its communications reach beyond the region and include districts in all important decisions.
3. RUDEP should make active efforts to strengthen and streamline its financial, planning, and coordination procedures, bringing them as closely as possible to standard government procedures.
4. The region and districts should take maximum advantage of the four year donor commitment period to develop an effective forward planning capacity. In support of this, NORAD should make every effort to adhere to its commitments over each four year period, and not make sudden or unexpected changes in levels of funding. Any changes which need to be made should be fully discussed with the region and districts and full scope for negotiation and compromise allowed.

5. The current share of total RUDEP funds currently allocated to the water programme should not be further reduced in the immediate term. Consideration should only be given to further reductions when other units within RUDEP have developed a proven capacity and are in a position to compete for funds with Maji. The relative strength of Maji should be seen as an asset to RUDEP and not as a drain on the potential resources for other sectors.
6. Linked to the recommendation above, Maji should demonstrate a greater commitment to the general aims and objectives of RUDEP, and should be seen to be taking active steps to integrate its activities with those of other sectors. Reciprocally, RUDEP should take steps to ease the process of integration, and generally facilitate closer coordination between all involved sectors.
7. The Department of Community Development should be given a stronger and acknowledged role in the operational coordination of the water programme, and RUDEP activities in general. A handover process of community participation activities to the department should be initiated as soon as possible, with a view to fully handing over these responsibilities within the next two years. The legitimate role of the Department of Community Development in operational coordination of development activities is supported by government policy, and should be fully acknowledged within the whole RUDEP programme.
8. To support the decentralization process, and provide further support to effective coordination, the region should consider seconding Planning Officers to the districts to assist the DEDs and the Department of Community Development in operational planning and coordination.
9. All field activities in the community participation component of the water programme should be decentralised to the district level. The terms of reference of the community participation unit in the RWE's office should be modified to adjust its role to that of a supporting agency, responsible for developing CP approaches and providing general support to district teams.

The role of communities

10. The 15-step approach used in the CP programme should be reviewed and revised to make it more flexible, less bureaucratic, and more responsive to community needs. The revised approach must be fully supported by all Maji staff, and efforts made to ensure that the CP

elements are fully implemented in all involved communities

11. Support to communities should be extended to ensure long-term back-up support is available after water schemes are handed over. The full involvement of Community Development Assistants in the development of CP activities are a prerequisite for this.
12. Serious consideration should be given to introducing "participatory" methods into the CP programme. If necessary, a short-term local consultant with skills in this area should be engaged to support the development of this kind of approach. The consultant could also assist the CP unit in the general revision of CP procedures, in conformity with the recommendations above.
13. Greater support should be given to communities in the development of financial management skills, and in offering advisory support to strengthen the management and sustainability of Village Water Funds. The approach should not involve the development of inflexible, "blueprint" models, but should be developed as a consultative and supportive process, allowing maximum opportunities for the development of community initiatives.
14. Maji should provide communities with more detailed and accurate estimates of the likely cost implications, in both the short and long term, of taking over responsibility for water schemes. Such information should be given at the very beginning of the consultation process to allow communities to make clear decisions about the type of scheme (if any) they are prepared to take on.

15. In support of the above recommendations, there is a need for a general reorientation of attitude among Maji staff and the creation of a positive and supportive attitude towards communities. Communities capacities should be fully recognised. If necessary, a staff seminar should be held in which the potential role of communities, and women in particular, is reviewed and acknowledged.
16. In order to sustain community confidence in the water programme, Maji should ensure the highest possible standards of construction in the implementation of water schemes. The rights of communities as consumers should be recognised, and every effort made to ensure that they are not saddled with an unreasonable financial burden because of poor construction standards.
17. The principles and philosophy expressed in the RUDEP "Policy Document on People's Participation" should be actively taken up, and support given to further developing this into concrete strategies.

Gender issues

18. More explicit steps should be taken to ensure the maximum participation of women in the water programme. Current shortcuts apparently being taken in the CP programme appear to be most detrimental to the process of women's involvement. The recommendations of the LFA workshop on enhancing the role of women should be fully implemented.

Technology choice

19. The current focus on simpler and lower cost technologies should continue, with first preference being given to shallow wells and spring protection wherever feasible. The RWE should also seek to investigate other technologies, such as solar pumping systems. The RWE's office should play a general role in technical research and development in support of district programmes.

Staffing and human resources development

20. Government should seek to minimize the turnover of staff at region and district level who are actively involved in the programme. At the same time, NORAD should play close attention to ensuring that proper handovers are assured when expatriate staff change. When expatriate positions are phased out, short return visits by key personnel to assist in the transition to full local takeover of responsibilities should be

encouraged where necessary.

21. The P MEC unit should actively review the Maji training programme during the coming year, in consultation with the training section and district staff. The manpower development plan should be reviewed and, if possible, revived. The issue of training should be considered at the next Annual Meeting and the need for external support reviewed.
22. Further staff incentive schemes should be kept within reasonable and modest bounds, and should not unduly favour implementation activities at the expense of more process-oriented work. Considerations of long-term sustainability should be paramount in considering incentive schemes.

Logistics and procurement

23. Long-term procurement planning procedures should be strengthened, and efforts made to secure the timely delivery of supplies. The establishment of modest buffer stores should be supported, provided that steps are taken to ensure the security of stocks. The size of the stores should be kept at modest level, both to protect against excessive losses, and to avoid the locking up of too much funds in stock.
24. There should be no further increase in the Maji vehicle fleet, beyond necessary replacement. The transport situation should be reviewed by the P MEC unit with a view to making savings and, if possible, reducing the size of the fleet.
25. Tenders for procurement services should be made available to the region and districts for evaluation, and not be exclusively controlled from the NORAD office.

Urban water supplies

26. For the purposes of the water programme, Nyamanyere and Mpanda should be considered to be rural areas, and allocations should be made for the provision of point-source water supplies in all "urban" areas, including Sumbawanga. Major rehabilitation of the Sumbawanga urban supply should not be supported at this point, but the provision of point-source supplies should be continued to improve access to safe drinking water in the town.

Operation and maintenance

27. Monitoring of technical and financial aspects of operation and maintenance should be considerably strengthened, both to improve programme management and in support of community financing. Encouragement should also be given to the development of community monitoring systems.
28. Systematic follow-up activities should be introduced to provide long-term support to village scheme attendants and identify needs, where necessary, for refresher courses and the training of new attendants to replace drop-outs.
29. Simple and clear maintenance manuals should be developed and field tested by the regional O&M section for use by scheme attendants.
30. Efforts should be continued to ensure tight security and good inventory control at Maji stores to minimise stock losses.
31. Consideration should be given to the establishment of a revenue collection system for urban public standpost and point-source water supplies, to eliminate potential inequities caused by community financing of rural schemes being unmatched in urban areas.
32. A system should be developed to permit communities to rapidly convert Village Water Funds into stocks of spare parts whenever funds are replenished.

Monitoring and information management

33. General steps should be taken to strengthen monitoring and information management within the programme. The PMEC unit should play a leading role in this process, and should use the guidance given in this report as a starting point. Developments in this area of work should be communicated to other RUDEP units to assist in the general strengthening of this area of management in the integrated programme as a whole.

The sanitation programme

34. The current approach to sanitation improvement is strongly supported and should be continued. The programme should be swiftly expanded to all districts.
35. Particular attention should be paid in the development of the sanitation programme to the creation of income-earning opportunities for rural artisans in latrine

construction and slab production.

36. Given the relatively low cost of sanplats, consideration should be given to distributing these on a full-cost basis.
37. The sanitation programme should be seen as a vehicle for strengthening the field activities of health extension workers, and as a means of developing the health education component of the water and sanitation programme in general. In the long term, the aim should be to completely hand over the sanitation programme to Afya.

Involvement of the private sector

38. Further involvement of the private sector should be actively pursued, with top priority being given to local suppliers and contractors, particularly in the rural areas.
39. The construction by Maji of the simpler water supply technologies should include an explicit training element to allow a transfer of skills to the rural community, and to create an environment in which individuals can be identified within rural communities with sufficient aptitude to be employed as private contractors.

ANNEX 1

REPORT OF THE LFA WORKSHOP

UNITED REPUBLIC OF TANZANIA

ROYAL KINGDOM OF NORWAY

NORWEGIAN AGENCY FOR INTERNATIONAL DEVELOPMENT COOPERATION

NORAD

**LFA - WORKSHOP ON THE WATER SUPPLY PROGRAMME
IN RUKWA REGION**

**HELD BETWEEN 28.05. - 01.06.91 IN THE REGIONAL
HEADQUARTER'S BLOCK, SUMBAWANGA, TANZANIA**

Report by

Dr. L. Lwambuka

M/s E. Ngido

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**1. OPENING SPEECH BY THE ACTING RDD AND REGIONAL PLANNING OFFICER
FOR RUKWA, MR. F. R. MWAISAKA**

Honorable Facilitators of this workshop,

Esteemed Guests,

Ladies and Gentlemen.

On behalf of the Regional Administration, I would like to welcome you in Sumbawanga in general and to the Goal Oriented Project Planning workshop in particular.

It is a normal routine for NORAD to conduct reviews of RUDEP every year. But since RUDEP involves many sectors it has been very difficult to make reviews to cover all the sectors within one particular period.

Because of this limitation, the reviews which are being conducted normally involve one sector at a time. In 1989 we had a review of the Road Sector while in 1990 we had the Health Sector Review. This year we have the Water Sector Review.

I am sure the members of the Review Team have visited all the three districts. I hope they have collected enough data which they will use during this workshop.

For over ten years, NORAD has been donating funds for the supply of water to the rural community. This was done by first conducting surveys which ended up by producing a Water Master Plan which was and is still the basis for implementing water projects in the region.

Prior to integrating the Water Sector into RUDEP, the implementation of projects within the Water Sector was being done by NORCONSULT and later by the NORAD Finance Unit. Of course there were advantages and disadvantages of this procedure. The main disadvantage is that in the case of NORAD's withdrawal, there would be no smooth continuity of the programme by the Government. It was because of ensuring sustainability that NORAD decided to integrate the Water Sector into RUDEP.

When the Water Programme was incorporated into RUDEP as part of the Integrated Development Project, the operational procedures of the water component had also to change in order to fall in line with Tanzania Government implementation procedures.

As you might have noted during your field visits, there have been quite remarkable achievements in the Water Sector under the NORAD funded Rukwa Rural Water Supply Programme. For example, out of 332 registered villages, 208 villages have been supplied with clean water within an average walking distance of 400 meters from respective households. It is estimated that about 66% of the total population of Rukwa has access to clean water.

Despite these achievements, however, problems have been noted here and there. For example it has been noted that some schemes have been rendered in operational due to lack of, or inadequate maintenance. A number of motorized schemes have suffered mostly under this category.

It has also been noted that some villages don't have the capacity to generate requisite resources to pay the pump attendants once the schemes have been handed over, thus leading to improper care of the water schemes in those respective villages.

It is to the region's hope and expectations that this weeklong workshop which starts today will address these problems [among the others] in detail and come up with recommendations on how to address them and chart out a programme plan which is manageable and operational within the context of Tanzania and Rukwa region in particular.

Ladies and Gentlemen, I wish once again to welcome you to this important workshop and I hope that you will make your contributions without fear so that the expected goals of our workshop are realized which in turn would help to improve the planning and implementation of the water projects.

Thank you very much.

2. LIST OF ABBREVIATIONS

AFYA	: Ministry of Health
Ag.	: Acting
AMREF	: African Medical Research Foundation
BH	: Deep Boreholes
CD	: Community Development
CDA	: Community Development Assistant
CP	: Community Participation
DP	: Domestic Water Points
DS	: Diesel Schemes
DSM	: Dar es Salaam
DWE	: District Water Engineer
Govt.	: Government
GoT	: Government of Tanzania
Gs	: Gravity schemes
HV	: Hired vehicle
IG	: Infiltration Gallery
ILO	: International Labour Organization
KILIMO	: Ministry of Agriculture
LFA	: Logical Framework Approach
MAENDELEO	: Ministry of Community Development
MAJI	: Ministry of Water
NGO	: Non-Governmental Organization
NOK	: Norwegian Kroner
NORAD	: Norwegian Agency for International Development
O&M	: Operation and Maintenance
PMEC	: Planning Monitoring Evaluation & Co-ordination Unit
P.P. & P.	: Project Planning and Preparations
RCDO	: Regional Community Development Officer
RDD	: Regional Development Director
RPLO	: Regional Planning Officer
RR	: Rukwa Region
RUC	: RUDEP Coordinator
RUDEP	: Rukwa Development Programme (Rukwa Integrated Development Programme)
RUSA	: RUDEP Senior Accountant
RWE	: Regional Water Engineer
SA	: Scheme Attendant
SANPLAT	: Sanitation Platform
SSF	: Slow Sand Filter
SW	: Shallow Well
SWN	: (Morogoro Pump)
TAS	: Tanzanian Shilling
VWC	: Village Water Committee
VWF	: Village Water Fund
WS	: Water Supply
W/S	: Water Scheme

3. WORKSHOP PROGRAMME

Tuesday

- 28.05.1991
- Welcoming Address
 - Introduction of participants
 - Expectations of the participants
 - Introductory remark on objectives of the workshop
 - Highlights on the terms of reference of the evaluation mission.
 - Introduction to the LFA Method
 - Evaluation of the present project strategies.

Wednesday

- 20.05.1991
- Discussion on evaluation of the present project strategies continued
 - Introduction to problems analysis
 - Identification of the "Focus Problem"
 - Discussion on immediate causes to the Focus-Problem
 - Discussion on the Problem Tree.

Thursday

- 30.05.1991
- Introduction to objectives analysis
 - Discussion on the Objectives Tree
 - Introduction to alternative analysis
 - Discussions on possible strategies
 - Introduction to PPM
 - Discussion on the first column of the PPM
 - Identification of the purpose and outputs

Friday

- 31.05.1991
- Discussion on the first column of the PPM continued
 - Discussion on activities leading to outputs
 - Presentation of activities and discussions
 - Introduction to Assumptions
 - Identification of Important Assumptions and discussions

Saturday

- 01.06.1991
- Introduction to Objectively Verifiable Indicators
 - Discussion on Objectively Verifiable Indicators in groups
 - Presentation of Objectively Verifiable Indicators and discussions
 - Discussion on the Means of Verification
 - Closing of the Workshop

Saturday afternoon + Sunday 02.06.1991

- Quantification of Inputs in a small group

DAILY PROGRAMME SCHEDULE

08.30 - 10.30 - 1st Session
10.30 - 11.00 - Tea/Coffee break
11.00 - 12.30 - 2nd Session
12.30 - 14.00 - Lunch
14.00 - 15.15 - 3rd Session
15.15 - 15.30 - Coffee break
15.30 - 17.00 - 4th Session

4. LIST OF PARTICIPANTS LFA WORKSHOP SUMBAWANGA 28.5 - 1.6.1991

NAME	OCCUPATION	CONTACT ADDRESS
1. Mr. G.E.A Iddo	Ag. RWE	Box 192, Sumbawanga
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9. Mr. Bjorn Bue	Asst. to DWE, Mpanda	Box 67, Mpanda
10. Mr. F. Kabuka	DWE, Nkansi (Senior Technician)	Box 106, Namanyere
11. Mr. Ayub Myaule	Construction Supervisor (Tech.III)	Box 106, Namanyere
12. Mr. W. Kitashu	DWE, Sumbawanga	Box 192, Sumbawanga
13. Mr. S.Y. Sakalla	P.P. & P. Section	Box 192, Sumbawanga
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15. Mr. F.R. Mwaisaka	RPLO and Ag. RDD	Box 128, Sumbawanga
16. Mr. E.J. Ntemi	Ag.RUC	Box 128, Sumbawanga
17. Mr. J.E. Muhembano	Ag. RCDO	Box 128, Sumbawanga
18. Mr. I.A. Khaliki	RUSA	Box 128, Sumbawanga
19. Mr. S.C.B. Mayeye	Planning and Control Officer	Box 128, Sumbawanga

- | | | |
|------------------------|---------------------------------|----------------------------------------------------------------|
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- | | | |
|--------------------|---------------------------------------------|---------------------------------|
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5. Introductory Remarks

The assistance of NORAD to development of the Water Supply Sector in Rukwa Region dates back in 1979. It started with a Master Plan from which the Water Supply and Sanitation Programme was designed.

A review mission of 1987 recommended the integration of the Water Supply and Sanitation programme into RUDEP and this was effected in 1988. A review of the integration was undertaken by the joint Tanzanian - Norwegian review mission and are contained in a report of December 1990. The report included a brief assessment of the Water Supply Programme and some proposals on key issues which needed thorough examination during the review of the Water Sector in 1991. NORAD recommended that LFA-Workshop form an integral part of the review.

This report is based on the outcome of deliberations during the LFA-Workshop on evaluation of the existing Water Programme and a replanning of the project for future programme strategies beginning in July 1991.

6. Objectives of the Programme/LFA- Planning Workshop

The Water Sector Programme in Rukwa has three main objectives:

- i) Sustainable water supply schemes; on
 - needs assessment by the user
 - village planning
 - choice of technology
 - affordability
 - organizational approach
 - skills, transfer of-, utilization of-
- ii) Reduced workload of women; by
 - proximity of water
 - availability of water
 - additional features
- iii) Improved health; with regard to
 - health education
 - improved facilities (sanitation)
 - coordination with other donors

The main objectives of the LFA - Planning Workshop are contained in the terms of reference of the review team. It was mainly to evaluate the current and plan the future implementation of the Water Supply Programme in Rukwa.

The first two days consisted of the evaluation of the existing water supply programme; the last three days were used to discuss

and agree upon the future programme strategies.
The detailed objectives were to:

- analyse the existing water programme approach
- evaluate the current programme in terms of merits and demerits
- recommend on future programme approach
- re-examine the current problems faced by the programme (Problems Tree)
- define the objectives which are to be achieved on solving the current problems (Objectives Tree)
- discuss and agree on the suitable project purpose for the new phase.
- define project outputs (results) which must be attained in order to realize the project purpose.
- analyse the activities which are necessary to achieve the project outputs
- discuss and agree on the required inputs into the project.

The named workshop objectives are the official ones. Initially, the participants usually have different expectations from the workshop in particular if they are participating in LFA for the first time. Expectations of participants usually form the first exercise of the workshop and has the only intention to stimulate and acquaint the participants with the workshop atmosphere:

7. PARTICIPANTS EXPECTATIONS

MANAGEMENT PROBLEMS

A better understanding of what is really happening within the Water Department.

Solve problems between Maji/NORAD regarding Water sector in Rukwa

IMPROVED MANAGEMENT PROCEDURES

Know the trend of RUDEP Support in Water Sector

CLARIFY THE ROLE BETWEEN REGION AND DISTRICT

To come up with a feasible framework for inter departmental endeavour for success of the programme

Achieve sustainability of management/routines and water schemes.

Utilization of Resources Securing Donor funds

Be able to achieve maximum utilization of resources

AWARENESS ON WATER SUPPLY PROGRAMME

I shall be aware about the programme

Better knowledge of the sustainability of water supplies

More knowledge of the Water Sector

My big expectation is to gain and learn concerning this programme

I will learn more about this programme

Problems facing our water projects

To hear more about the water project

I will be able to know schemes to be implemented

More funds from Donors after knowing felt need of the people

PROBLEMS IDENTIFICATION/ SOLUTIONS

Clarification of problems and possibilities

Solve practical problems

Problem identification and solving

Knowing about LFA

To learn how LFA is used to solve some operational problems.

To gain Evaluation

LFA approach in planning & coordination of development activities

Miscellaneous

At this point I don't have any expectation

To have fun with colleagues

8. Evaluation on the Existing Design of the Water Programme

The main objectives of the existing Water Programme are contained in the review mission report of 1987. These were also reaffirmed by the workshop participants and categorized in six programme strategies as follows:

1. Strengthening community participation in water programme activities
2. Adopting the appropriate technology
3. Strengthening of management capacity
4. Financial contributions to water sector
5. Ontegrating MAJI into RUDEP
6. Improved health of Rukwa Population.

The Logical Framework Approach was applied in the workshop to identify the merits and demerits of the above named objectives in the existing programme. Recommendations based on experiences gained were made for future implementation of the project.

Following is a summary of the evaluation for the ongoing project.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future strategy</u>
1. Strengthening Community Participation in Water Programme Activities	<ul style="list-style-type: none"> -Villagers + CD workers. -NORAD/GOT Regional and District authorities. -Policy maker -Maji/ Community Dev. Office. 	<ul style="list-style-type: none"> -CDA's in each ward. -About 40% of maintenance and repair activities are done by local "fundis" e.g. in Nkansi District. -Schemes Implemented and handed over to villagers. -Each activity has funds for CP-work 	<ul style="list-style-type: none"> -CP work not given high enough priority. -Lack of transport facilities (bicycles) for the ward CDAs. -Awareness of clean and safe water. -Lack of skills upgrading of CD-workers. -Lack of clear definition of responsibilities. -Some schemes are not properly run by villagers. -Statistics of working or not working schemes are not good enough. -Poor information flow from Region/Districts to villages. -CDA's not appropriately involved 	<ul style="list-style-type: none"> -Involving politicians particularly MP's in mobilizing villagers. -Strengthening CD at all level. -Cooperation (close) of Sector involved. -Priority to felt need of target group. -Utilise the Region's/ RUDEP's Newsletter. -Clear definition of responsibilities.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for futureStrategy</u>
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1.1 Improved Villages Participation in needs Assessment & Planning	-CP MAJI & CD workers. -Village Leaders. -Village Social Committee.	-Village Participation is increasing. -Villages Water funds established in 26 villages and accounts opened. (10 villages in the process) -Number of villages requesting water schemes increased -206 Village Water Committees established	-Top bottom approach is still followed in the identification and planning Water Sector Projects/Activities. -Poor information flow from Rukwa/Districts to Villages. - Health Education not sufficient.	-CD team increases villages awareness & ability to identify their felt-needs. -Improve CDAs capability to create needs assessments. -Increase awareness through seminars. -Region's Newsletter to be used for information only. -Give villages ability to decide on alternatives within available resources.
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Objectives/Strategies Responsibility Achievements Problems/Shortcomings Suggestions for future Strategy.

1.2 Reduced workload for women and children	<ul style="list-style-type: none"> -Village govt. -Council -GOT -NORAD -Regional Authority -CCM 	<ul style="list-style-type: none"> -Approx. 300,000 villagers have been given water within 400m. -Clean water provided -Less disease -Reduced workload 	<ul style="list-style-type: none"> -Sometimes available simple technologies do not reduce walking distances. -Few women in village Leadership. -Tradition and Taboos. - "Women liberation" used a "Catchwork" to attract Donors interest. 	<ul style="list-style-type: none"> -Better cooperation MAJI/other departments/team work -The application/consideration approach as a condition of starting up new project should be stopped. -DP be constructed near to the homesteads and more water supplies. -Washing slabs should be constructed (close to DP's/Point sources) -Change of Traditions.
1.3 Villagers contribution to O&M costs	<ul style="list-style-type: none"> -Village Govt. -District/Region O&M team 	<ul style="list-style-type: none"> -26 Village Water Funds established. -Some handed over Schemes have VWF for O&M. -All 55 handed 	<ul style="list-style-type: none"> -District Revolving Store not established. -Lack of estimated average costs for O&M. -Poor information flow about new 	<ul style="list-style-type: none"> -To make villagers aware that they have to make O&M for the water schemes. -Improve information to villagers. (Newsletter etc.) -Introduce village

over schemes
have trained
attendants.

water policy.
-Handing over not
done in many
villages

competitions and
award incentives
for winners.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
		- Handed over some water schemes to beneficiaries.		-Assist villagers on income raising activities. -Allow village Govt. to contract well diggers and masons to construct water supplies. -Train village "fundis" on how to construct wells and spring protections
1.4 Identifying and supporting private entrepreneurs to participate in: a) construction b) maintenance/repair c) manufacture & supply of spare parts		-So far only construction. -HV used where possible		

<u>Objective/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcoming</u>	<u>Suggestions for future strategy</u>
2. Adopting the appropriate technology 2.1 Construction/ Installation: IG Springs Shallow wells/ Deep Boreholes Gravity schemes Diesel schemes.	Maji & Beneficiaries	<ul style="list-style-type: none"> -Low construction cost for springs, IG, SW. -Participation is good for springs, IG, SW. -Good water quality for springs, IG, SW, BH. -Short walking distance for GS. -Improved output and efficiency for BH. -Faster output (short constr. time) for BH. -300 deep borehole constructed. -80 shallow wells constructed. -Each district can construct 15-30 shallow wells/ springs per year. 	<ul style="list-style-type: none"> -Procurement delays for materials. -Lack of buffer store for construction materials. -General output too low for springs, IG, SW. -Locations fixed for springs, IG, SW. -Sometimes long walking distance for springs, IG. -Sources for springs, IG, SW are not always available. -Springs, IG needs normally an alternative technology. -SW sometimes run dry Taste sometimes not easily accepted for BH. -BH have double costs compared to SW. -Slow output (longer construction time) for GS. -Often poor water quality for GS, DS. 	<ul style="list-style-type: none"> -Establish buffer store for construction material -Cost and quality evaluated for all alternatives. -Check solar system possibilities. -SW should be 1st choice where available -Phase out diesel schemes, where available.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
			<ul style="list-style-type: none"> -DS are not affordable. -DS are often expensive (as cost per head). 	
<p>2.2 Maintenance/ Repair:</p> <ul style="list-style-type: none"> -India Mark II -Nira pumps -Springs -Shallow wells -Deep Boreholes -Gravity schemes -Diesel schemes 		<ul style="list-style-type: none"> -Low O&M cost for springs, IG, SW -In most cases village "fundis" can do repair for BH. -For well constructed gravity schemes O&M needs/ costs are low. -GS have high service degree. 	<ul style="list-style-type: none"> -DS have high construction and O&M cost. -DS have low service degree. -Possible high O&M cost for BH -Dependence on imported technologies for SW BH, DS. -Possibilities of use of new tech. of non-woven synthetic fabric layers on conventional existing SSFs. 	<ul style="list-style-type: none"> -Seek cost savings for all schemes. -Not enough experience with BH, check O&M cost in other Countries. -Encourage more local production of pumps and spares. -DS only in very special cases.

<u>Objectives/Strategies</u>	<u>Responsi- bility</u>	<u>Achievements</u>	<u>Problems/Shortmings</u>	<u>Suggestions for future Strategy</u>
2.3 Develop cheaper alternatives	Maji			As for 2.1 - 2.2
2.4 Improvement of existing water supply facilities (Rural + Urban)		<ul style="list-style-type: none"> -More than 30 Deep Wells drilled in Town centres; also shallow wells. -Improvement in Urban (Sumbawanga) compared to 1981. -Pump replacement made to Mpanda & Namanyere. -Schemes have been reha-bilitated. -Some Rural schemes have been rehabilitated. 	<ul style="list-style-type: none"> -Urban:Lack of funds for construction -Urban supplies largely overlooked in project. -Inadequate revenues for maintenance of urban supplies. -Urban W/S services degree low (50%). -Namanyere has been completely omitted -Rural W/S rehabi- litation of gravity takes too long time. -Water charges in Urban areas too low. -No community Contribution for DPs in Urban areas. -Urban W/S high rehabilitation and extension costs. -Inaccessibility to remote villages. -Water policy does not allow water rates according to costs. 	<ul style="list-style-type: none"> -The system of colle- cting Revenue and sending it to Treasury where in turn the Treasury sends some amount should be improved.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
2.4			-Water revenues to Central Govt. does not enhance water funds collection	
3. Strengthening of Management Capacity	-RUDEP -RWE -DWE's -Local Govt -GOT -NORAD	-Local personnel and expatriates recruited. - Regular Planning progress meetings established. -Good workplan and budget procedures. -Accounting and procurement procedures established. -Improved plans (14 days) for use of vehicles.	-Qualified personnel not adequate -Some workers don't want to come/stay in Rukwa. -Report forms are <u>much</u> too complicated. -Too many employees (lower Cadre). -Poor coordination of work and transport. -Inadequate management and skills within senior staff. -Lack of funds. -Low salaries	-Training of local personnel as well diggers and in spring protection should be instituted. -Govt. to respond to Region's manpower requests. -Workplans should be delivered in March (after annual meeting) instead of in June. -Simplify financial and progress report forms. -Strengthen training section at Region level. -Improve payment systems.

<u>Objectives/ Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
3.1 Infrastruc- ture Development at Regional & District levels.		<ul style="list-style-type: none"> -Transport and other facilities provided. -Monitoring and evaluation unit established. -Physical infra-structures, offices, stores & workshops constructed. - Planning manual prepared. - Some training activities of personnel has been carried out. 	<ul style="list-style-type: none"> -Training needs assessment not carried out. -No training programme prepared. -Training section is not functioning well (MAJI Region) -Procurement of goods takes too long. -Goods(construction materials)are not available, remoteness. 	<ul style="list-style-type: none"> -Procurement agent (in DSM) should not be changed. -Re-Introduce meal allowance which existed during Norconsult which was abolished. -Sponsorship of specialist training in Infiltration Galleries/Khanats. -Incentives introduced depriving remotenes problem. -Establish Revolving store for pipes, fittings etc.

<u>Objectives/ Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
4. Financial contribution of Water Sector.	-NORAD	-NORAD 90/91:235 mill.TAS 91/92:190 mill. "	-Reduction in Donor contribution.	-Region/District should coordinate all funds to water sector.
	-District Council	- N.A	-Councils inadequately funded by Govt.	
	-Villages	-Some village funds established.	-Village financial system not fully established.	-Community financial management systems to be improved..
	-Central Govt.	No financial Contribution		
	-ILO	-About 30,000 people provided with water supply from ILO		
	-NGO's	-Some contribution for W/S exist from Missionaries.		
5. Integration of Maji to RUDEP.	-Donor -Govt.	-Institutional Integration 100%	- Operational Integration; some problems -Delays of payments - A lot of paper work (reports to NORAD and Govt. are different)	Simplify existing routines with same control. -RUDEP Planning handbook to be revised.

<u>Objectives/Strategies</u>	<u>Responsibility</u>	<u>Achievements</u>	<u>Problems/Shortcomings</u>	<u>Suggestions for future Strategy</u>
5.1 improved organizational approach		-organizational structure well designed	-Coordination of activities not good enough. -No coordination among activities in the same village; (RUDEP projects) -RUDEP doing MAJI job of water project monitoring. -No clear responsibility boundary.	-Planners within RUDEP should come up with coordinated plans
6. Provide clean and safe water supply to population		-300,000 Consumers served (Total pop. 724,000) -A number of villages supplied with clean water within walkable distance.		-Rehabilitation and implementation of new schemes hand in hand. -Strengthen O&M.

Objectives/Strategies Resopnsibility Achievements Problems/Shortcomings Suggestions for future Strategy

6.

-206 out of 376
villages with
W/S

-Some of
these 206 W/S
do not function
well.

7. Improved
Health

* Difficult to
measure health
improvement.

9. REPLANNING FOR FUTURE PROJECT STRATEGIES

The participants discussed on problems for the Water Sector in Rukwa Region and the Focus Problem, which form the central point of the overall problematic conditions, was easily identified as:
The majority of Rukwa population have not safe water.

A consensus was also attained through further discussions on the immediate and direct causes of the Focus Problem. Three direct causes were identified:

- some water schemes in Rukwa are unsustainable
- many existing water schemes do not function well
- water supply coverage in Rukwa is inadequate

The hierarchy of problems was then developed into a Problem Tree based on the cause-effect analysis.

Applying the means-end relationships the problems were re-stated into objectives which are realistically achievable to form an Objectives Tree. The ultimate objectives were identified to be:

- reduced workload of women
- reduced death rate in the region

The Objectives Tree was further examined to identify areas which fall within the scope of the project (alternatives analysis). The identified objectives form new possible project strategies.

The participants discussed and agreed on a project purpose which describes the intended impacts or the anticipated benefits of the project. This was identified to be:
Supply safe water to Rukwa population on sustainable basis.

Following are the six outputs which were identified as necessary objectives to achieve the project purpose:

- i) strengthening the Maji Management capacity
- ii) Establishment of an effective O & M system
- iii) Increasing the safe water supply coverage
- iv) Establishment of management of water schemes by communities
- v) Reducing the women workload for water collection
- vi) Improving the environmental health conditions.

The participants analysed the necessary activities required for successful implementation of the above named outputs. Earlier recommendations which were proposed upon evaluation of the existing Water Programme were also incorporated as activities.

The project purpose together with the outputs and activities form a Narrative Summary of the project design.

Important assumptions, which are necessary conditions that must exist for successful implementation of the project, but falling outside the direct control of the project, are listed to indicate the chances of the project success.

Also included in the project design are Indicators which define the contents of the objectives. They provide information on the desired quantities, and quality of the objectives for a given time period.

The source of data required to assess the degree, to which extent the project objectives have been achieved, are contained in the project design as Means of Verification.

The Narrative Summary, Important Assumptions, Objectively Verifiable Indicators as well as the Means of Verification are presented as a Project Planning Matrix (PPM).

Due to time constraints, the participants did not manage to come out with Indicators and Means of Verification at the purpose level.

The workshop was then desolved into a small group to analyse the inputs required for implementation of the new Water Programme Strategies covering a 4 year period. The inputs were based on the outlined activities for each of the 6 project outputs. The new phase is estimated to cost a total of TAS 1,380,900,000/=.

9.3 PROJECT PLANNING MATRIX

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>GOAL Improved health and well being of the people of Rukwa Region</p>			
<p>PURPOSE Supply safe water to Rukwa population on sustainable basis</p>			<p>-General economic and social development in the country</p>
<p>OUTPUTS 1. MAJI Management and implementation capacity strengthened</p>	<p>-75% of MAJI Technical staff in Rukwa Region have passed basic training courses by 1995 -85% of planned W/S completed as scheduled at required standards by 1995 in Rukwa -All vacant positions in MAJI Department are filled in by qualified personnel within 6 months as from July 1991 (Region & Districts) -At most 2 Consultants recruited annually as need arise</p>	<p>-Training section Quarterly reports -PMEC Unit quarterly & annual reports -MAJI Administration Department monthly & annual reports</p>	<p>-No harmful interference from other Authorities</p>

	-Not more Expatriates; one in each District and 2 in the Region recruited	"
2. Effective O&M system established	-Less than 10% unattended breakdowns at any time by July 1995	-O&M quarterly reports
3. Safe water supply coverage increased	-70% of villages provided with adequate clean & safe water at 75% degree of service by the year 1995 -Urban centres served with 75% of demand supplies by 1995	-O&M quarterly & annual reports "
3.1 Old schemes rehabilitated/ replaced/ augmented	-20 schemes replaced/ rehabilitated to full operational standard between July 1991- July 1995 (of these 50% of existing schemes have been replaced) in Rukwa -Rehabilitation of Sumbawanga & Mpanda urban and construction of Namanyere to operate at demand capacity by July 1995	"
3.2 New W/S constructed	-200 BH and 320 SW constructed and opera-	-Water resources quarterly &

	ting at full operational standard by July 1995 in Rukwa -All ongoing GS constructions completed by July 1995	annual reports	
4. Management of Water Schemes by communities	-After Jan 1993 80% of all DP's for handed over schemes in function -Trained SA in 90% of all handed over schemes at any time as from June 1991 -All handed over have adequate VWF from Jan 1993 -80% of funds for spares covered by VWF by Jan 1995	-PMEC Unit quarterly reports -Training section annual reports -CP Unit/PMEC half-year and annual reports	-Villagers willing to participate in water schemes
5. Women workload for water collection reduced	-Every W/S constructed after July 1991 has at least one washing slab before handed over -80% of schemes provide WS within 400m from home when handed over	-CP, O&M quarterly & annual reports -PMEC Unit reports	
6. Environmental health condi-	-90% of all constructed DPs have functioning	-O&M quarterly reports	

tions improved

drain trenches by 1993
-By July 1992 each
District has started
sanitation programme
-Improved latrines in
at least 2000 new
households per year
from July 1992

-MAJI Administration
half-year & annual
reports
-CP/Construction
section in MAJI
reports

1. MAJI MANAGEMENT AND IMPLEMENTATION CAPACITY STRENGTHENED

<u>Activities to</u>	<u>Assumptions</u>
1.1	HUMAN RESOURCES DEVELOPMENT
1.1.1	Training Section to be strengthened
1.1.2	Training needs assessment carried out
1.1.3	Training Programme instituted
1.1.4	Implement Training Programme
1.1.5	Incentive packages introduced
	- Transport to and from work
	- Housing
	- Meal allowances/overtime/tea
1.1.6	Provide working facilities
1.2	PROCEDURES
1.2.1	Financing Procedures
1.2.1.1	Prepare budget, workplans and Action plan/Implementation schedules
1.2.1.2	Revise disbursement of funds and payments
1.2.1.3	Propose simplified financial and progress forms
	Proposal is accepted by NORAD and GOT
1.2.1.4	Propose unified reporting procedures to NORAD & got
1.2.2	Procurement procedure
1.2.2.1	Prepare Tender documents and present Tenders for local supplies to Regional Tender Board.
	Govt. accept system

- | | | |
|---------|-----------------------------------------------------------------------|--------------------------------|
| 1.2.2.2 | Establish Buffer store in the Region | Special funds as requested |
| 1.2.2.3 | Propose Revenue collection system which can ensure maximum returns. | |
| 1.3 | IMPROVED COMMUNICATION | |
| 1.3.1 | Install new Radio system in the Region | |
| 1.4 | INFORMATION SYSTEM | |
| 1.4.1 | Make more use of RUDEP Newsletter | Newsletter continues to exist. |
| 1.4.2 | Establish Data-Bank-Hydrology, Water Quality Laboratory, Hydrogeology | |
| 1.4.3 | Establish two way communication MAJI/RUDEP/Villages and other Sectors | |
| 1.4.4 | Update scheme inventory every three months. | |
| 1.4.5 | Suggest multi-sectoral meetings/forum | |
| 1.4.6 | Establish visual aids to villagers regarding Maji Activities | |
| 1.5 | POLICY ISSUES | |
| 1.5.1 | Improve routines for issues of driving permit. | |
| 1.5.2 | Pay attention to communities preferences when planning W/S. | |

2. **EFFECTIVE O&M SYSTEM ESTABLISHED**

Activities to

Assumptions

- | | | |
|-----|-----------------------------------------|--|
| 2.1 | Introduce cost saving procedures in O&M | |
| 2.2 | Improve existing schemes by | |

- introducing new low cost techniques.
- 2.3 Adherence to preventive maintenance routines
 - 2.4 Introduce procedures for monitoring O&M expenses for different types of schemes.
 - 2.5 Establish Operation and maintenance manuals for various types of schemes
 - 2.6 Provide villagers with necessary tools.
 - 2.7 Assist villages to appoint scheme operators.
 - 2.8 Modify criterias for selection of scheme attendants
 - 2.9 Establish contracts with local manufactures spareparts

Local manufacturing capacity exists
 - 2.10 Introduce control systems for use of spareparts.
 - 2.11 Institute regular & surprise stock taking for spare stores.
 - 2.12 Standardise materials and pumps

Pumps continues to be available
 - 2.13 Establish competitions among villages on good village based O&M performance.
 - 2.14 Train more women as W/S attendants

Women willing to work as Attendants
 - 2.15 Encourage and assist villagers in income generating activities.

Income generating opportunities exist.
 - 2.16 Update price lists

2.17 Establish District Revolving Stores.

3. WATER SUPPLY COVERAGE INCREASED

<u>Activities to</u>	<u>Assumptions</u>
3.1 Provide water treatment facilities where required	
3.2 Propose to RUDEP on procurement of Boats in lake areas.	
3.3 Increase use of private contractors (Some limitations)	
3.4 Train village "fundis" in spring protection/shallow well	
3.5 Maintain inventory of water schemes	
3.6 Design priority list for construction of W/S based on requests	
3.7 Give producing incentive for Maji Staff	Incentive lead to better Management
3.1 <u>Old Schemes rehabilitated or replaced</u>	
3.1.1 Conduct surveys to identify possible areas.	
3.1.2 Prepare village maps on identified villages (Survey & Design)	
3.1.3 Conduct ground water survey - springs, wells etc.	
3.1.4 Appropriate technologies to be discussed with villagers when old schemes will be rehabilitated/augmented.	
3.1.5 Alternative W/S constructed (e.g. replace existing diesel schemes)	
3.1.6 Minor improvements/upgrading of Sumbawanga town W/S including maintenance and running.	

3.2 New Water Schemes constructed

- 3.2.1 Improve construction management
 - 3.2.2 Minimize time between request and construction
 - 3.2.3 Ensure timely supply of materials & equipments
 - 3.2.4 Delegate more activity to the Districts
 - 3.2.5 Carry out survey & Examine choice of technology
 - 3.2.6 Discuss with villagers on technical aspects & choice of techn. and time schedule (sign agreement)
 - 3.2.7 Improve construction standards (Supervision/monitoring)
 - 3.2.8 Maintain and replace vehicle fleet
 - 3.2.9 Maximize drilling rig-output/new construction
 - 3.2.10 Complete on going construction
 - 3.2.11 Improve cost effectiveness of scheme designs
 - 3.2.12 Monitor water table in dry season
 - 3.2.13 Construct new water schemes for Sumbawanga, Mpanda and Namanyere towns.
 - 3.2.14 Monitor the performance existing Water Supply.
 - 3.2.15 Make as build drawings
- Reliable enough watersources available.

4. MANAGEMENT OF WATER SCHEMES BY COMMUNITIES ESTABLISHED

<u>Activities to</u>	<u>Assumptions</u>
4.1 Explain policy of community management to communities	
4.2 Agree on selection criteria for VWC/SA	
4.3 Assist villagers to form VWC and in selecting scheme attendant	
4.4 Provide information to communities on likely O&M costs/VWF	
4.5 Establish Village Water Fund	
4.6 Provide management training	
4.6.1 Provide training to VWCs in Financial management Basic Book keeping	
4.6.2 Training of scheme Attendants.	
4.7 Training on village level monitoring	
4.8 Establish the monitoring/reporting system	
4.9 Handover water schemes to community	Community willing to accept
4.10 Provide technical and management back-up support to VWCs through CDSs/CP/MAJI.	
4.11 Conduct CDA seminars regarding MAJI activities in villages.	
4.12 Train villagers (especially women) on proper use of hand pumps.	
4.13 Advise villagers to establish stores for spare parts.	

5. WOMEN'S WORK LOAD FOR WATER COLLECTION REDUCED

- 5.1 Create awareness amongst MAJI staff on women's needs.
- 5.2 Consult women on choice of technology
 - 5.2.1 Discuss with women different available technologies and alternatives
 - 5.2.2 Inform about consequences with regard to choice of water sources
- 5.3 Consult women on location of water points
- 5.4 Consult women on design of DPs
 - 5.4.1 Design and construct labour saving DP according to women's expressed needs.
- 5.5 Introduce washing slabs to draw-off points
- 5.6 Investigate labour-saving technologies for water carrying.
- 5.7 Propose to RUDEP-CD Department to introduce feasible labour saving technologies (pilot projects)

6. ENVIRONMENTAL HEALTH CONDITIONS IMPROVED

- 6.1 Introduce Health Education related to village habits on water handling
 - 6.2 Improve drainage of water points
 - 6.3 Improve other relevant sectors on health improvement
 - 6.4 Establish solid waste disposal system in villages.
 - 6.5 Assist villagers to improve bath shelters
 - 6.6 Build demonstration latrines
 - 6.7 Train Community membes in improved latrine construction
 - 6.8 Establish sanplat production Centres
 - 6.9 Project surface water sources.
- Communities open to new ideas

9.4 INPUTS REQUIREMENT

OUTPUT/ACTIVITIES	EXPLANATIONS	FUNDS (TAS '000,000)
MAJI MANAGEMENT CAPACITY STRENGTHENED		
1.1.1	Training Officer	-
:		
:		
1.1.4	Training of Maji Staff from different section at Regional & District level.	20
:		
1.1.6	Copying machine & computer inputs replacement	2
1.2.1.1	Stationaries	0.2
1.2.2.2	Purchase spareparts fittings pipes & other materials	100
1.3.3	Replace Radio system in 3 districts i.e. Mpanda and Namanyere and one in the Region.	5.5
1.4.2	Collection of data/inform. - Laboratory-water quality - Hydrology-surface water - Hydrology-ground water - (Activities like - 3.1,3.2 3.2.5, 3.5; 3.2.9; 3.2.13; to be covered)	32
	TOTAL	159.7

EXPECTIVE O&M SYSTEM ESTABLISHED	On job training to strengthen O & M section (activities 2.1 - 2.4)	
2.1		
2.2		1
:		
2.5	stationaries + drawing + printing services	0.2
2.6	90 handed over schemes - Scheme attendants to be provided with tools + fittings at apprx: 200,000 TAS each	18
;		
:		
:		
2.11	5 personnel/40 mandays	0.8
:		
2.13	Remarks in terms of spareparts & fittings	0.6
2.14	About 10 women to be trained in villages, training 3 months (each year) Probation-Supervision 9 months, qualify after 1 year. Allowance for trainees: In village training 90 days in each village x 3 villages -Close supervision 270 mandays i.e for probation period. 10 supervisors involved.	4
2.17	District revolving store. There are 4 districts. To maintain the supply of spare fittings to villagers.	3
	SUB-TOTAL	27.6

WATER SUPPLY COVERAGE INCREASED		
3.1	Sumbawanga Treatment Plant (31/rs construction)	30
:		
3.4	Existing 320 W/S, each 1 scheme attendants	4
3.7*	Section heads 6,000/= p.m. Supervisors 5,000/= p.m. Foreman 4,000/= p.m. 4 bonus for driller and shallow well team (3.0mill. in 4 years)	7
3.1.1	2 surveyors/28 mandays	1.1
3.1.3	2 personel/14 mandays	0.5
3.1.5	100 Pumps + wells each 0.6mill.TAS	60
3.1.6	"Normal" Urban W/S replacement/rehabilitation	40
:		
:		
3.2.5	6 surveyors, 50 villages/year, 3 design Engineers, 3,000 mandays	25
:		
:		
3.2.8	Replacement of vehicles 3 light vehicles/year, 2 new lorries/year	80
3.2.9	Drilling 80 B/H /year) new construction 50 SW/Year) each estimated at 350,000/= TAS	450
3.2.10	6 GS each 3 mill.(ongoing)	18
3.2.11	Water supply facilities in urban centres.	400
SUB TOTAL		1,115.6

MANAGEMENT OF WATER SCHEMES BY COMMUNI- TIES ESTABLISHED	8 CP-MAJI staff involved Activities 4.1 - 4.5 under CP activity) Seminars;village visits to cover all these activities in 160 villages	8
:	Invillage training for village water committee members + scheme Attendants in about 160 villages (New schemes) (Details for training see activity 2.4) Activities 46 - 4.6.2 and 4.10 included)	12
:	1 Seminar/year by CP (CDA's at ward level)	1
4.6	included in other activities	21
4.11	SUB-TOTAL	21
:		
4.13		
:		

WOMEN'S WORKLOAD FOR WATER COLLECTION REDUCED		
5.2	Activities 5.2 - 5.4 included in activity B.7;3.2.7, and 4.2	
5.5	25 washing slabs/year 4x50,000/= (Communities expected to contribute e.g. labour)	5
	SUB-TOTAL	5
6.1	Sanitation activities 3mill. for each district - 4 districts x 4 years (These activities include also 6.2 - 6.8)	50
:		
:		
6.9	Fencing water sources and Health Education to communities	2
	SUB-TOTAL	52
	GRAND-TOTAL	1,380.9

10. CRITICAL ISSUES RAISED IN THE WORKSHOP

10.1 Coordination of Activities

- Inadequate coordination among RUDEP activities was recognized to be a major problem affecting the active participation on individual programmes, e.g. a village simultaneously being mobilized for AFYA, MAJI, MISITU, etc. A similar conflict was observed between RUDEP and other external programmes, e.g. AMREF, AIDS, etc.
- Lack of consistent approach amongst Donors. While NORAD CP-funded activities are on self-help basis, the ILO and missionaries insist on labour intensive approach.

10.2 Community Participation

- The participants also observed that the CP was well organized in the early 60's. This was again suppressed under the previous implementation praxis "everything for free" which was introduced in the late 60's. There is still much effort required to change this attitude.
- It was further observed that no CP response is accorded with regard to gravity schemes due to long construction period. However, considerable achievements on CP activities can be observed on schemes with simpler and affordable technology: springs, Shallow Wells, Infiltration Gallery and Deep Bore Holes.
- A strong recommendation was made to avoid mobilization of villagers during rainy season. Cultivation has generally a higher priority among villagers than CP on RUDEP programmes.

10.3. Water Supply Coverage

- The current attitude in the programme to omit urban areas and in particular Namanyere (District Headquarters for Nkasi) from the Programme was criticized. Namanyere for example has not even attained the urban status.

10.4. Integration of Maji into RUDEP

- The participants observed that the institutional integration of MAJI into RUDEP has been completed, but operationally not. Increased bureaucracy within RUDEP hinders smooth implementation of the water supply programme.

10.5. LFA-Workshop Participation

- The list of participants as included herein confirms good representation on project management and implementation. However, the target group i.e. the villagers and village communities were not represented in the workshop. This was seen as a serious shortcoming which must be taken care of in future planning exercises.

THE CLOSING SPEECH GIVEN AT THE END OF AN LFA WORKSHOP BY MR. E.J.K. NTEMI

- ACTING RUDEP COORDINATOR

Dear Mr. Chairman, the Acting RDD, Members of the Review Team and my Rukwa Colleagues, May I take this opportunity to congratulate all of you for the great work you have done throughout this week.

Although we were very busy in the brain storming exercise, the workshop has been quite educative, interesting, full of fun and was conducted in a healthy and warm social environment. This could not have occurred had it not been due to our two facilitators. May I therefore take this opportunity on behalf of workshop participants, to congratulate the facilitators for all the trouble they took in the preparation of the workshop material and "reading the route map while we were doing the driving". I hope we have managed to reach Mpanda - albeit different expectations.

May I also give special thanks for the evaluation team for bearing with us and for their lively and constructive contributions. They have lived with us here for nearly two weeks now and they have tested the perceived remoteness of Rukwa. I hope they will make a very strong recommendation to NORAD so that it increases its annual budgetary allocation.

I should also thank my colleagues who participated in this workshop. The attendance and the active participation was of its kind. It was not possible to bring all our staff to this workshop and so this is why you were selected to be their representatives. I hope you are going back with this new resource and will use method in planning (at your sectoral level) so as to improve your planning capabilities.

Mr. Chairman, LFA approach is a new technique to this region and for this reason, let me remind NORAD (both Oslo and Dsm) through the review team and the facilitators, the promise they had given that they would arrange for an LFA course for some people from this region. We request that this promise be fulfilled.

Turning to this year's review, I think it is a unique one. It is unique in the sense that we implementers have been given an opportunity to critically assess ourselves as a team. The report which will come will be more objective than the previous reports had been and so there will be few areas of disagreement between the reviewers and we the implementers and so enable us to improve our performance for the attainment of the objective of RUDEP.

Mr Chairman, since this was a workshop of and for the technicians, I feel I should not proceed on this issue but assure the review team and NORAD at large that RUDEP is going to look into the possibility of using the LFA technique in future in the planning, monitoring and evaluation.

ANNEX 2

TERMS OF REFERENCE

TERMS OF REFERENCE

REVIEW

TAN 060 WATER SUPPLY PROGRAMME

1. Background

NORAD has provided support to the water supply sector in Rukwa since 1979, starting with the Water Master Plan and continuing in 1983 with implementation of the Water Supply and Sanitation Programme. In 1988 the water programme was incorporated into RUDEP as part of the Rukwa Rural Development Project.

The joint RUDEP review carried out in November 1990 included a brief assessment of the Water Programme, and recommended, inter alia: the development of cheaper alternatives for the provision of water; strengthening of village level operation and maintenance; and development of local supply of spare-parts. It also recommended that a review of the water programme be carried out.

2. Objectives

The general objectives of the water supply programme are improved health, increased social welfare and reduced workload for women. The water programme has been implemented with community participation as its stated means and goal. Institution building and strengthening local capacity for operation and maintenance are seen as important activities in fulfilling the objectives.

It is important that the water supply is sustainable. This may be defined to mean that a water supply service continues on an appropriate level for an extended period of time after major financial, managerial and technical assistance from an external donor is terminated.

The review will consist of two stages.

Phase I: Gathering of information by the Review Team.

Phase II: A LFA workshop where the findings from phase I are the subject of further discussion and elaboration. The conclusions and recommendations from the workshop will serve as a basis for the final write up of the review report

The objectives of this review are therefore:

- to assess the present organisation within the water sector at different levels from village to region with emphasis on securing sustainable water supply and sanitation in the villages.
- to assess, in the light of prevailing economic constraints, the level of development expenditure in the water sector compared to level of service, local priorities and extent of needs as judged by the team.
- to assess the level of technology adopted in the water sector compared to the general technological level and economic capacity in the region.
- to recommend changes to be made in the water sector programme to ensure sustainable and, if possible, replicable water supply and sanitation for the people in Rukwa region.

2. Scope of work

The review should focus on, but not necessarily be limited to the following issues:

- level of assistance to the sector (including contribution from the Government of Tanzania) compared to the level of development assistance to the region through RUDEP.

- the organisational, technical and managerial capacity of the governmental structures and local organisations, particularly at village, ward and district level.
- relationship between recurrent costs and revenues, taking into account how installations are managed and maintained.
- the planning and implementation process with emphasis on the actual role and influence of the beneficiaries on technology choice, economic consequences and priorities.
- gender aspects, including the responsiveness of the programme to women's needs, the relationship between men and women in decision-making, sharing of responsibilities and in work-load, the share of women in training and in provision of paid positions within the programme.
- types of water sources and alternative methods for provision of potable water with emphasis on affordability.
- constraints and potential for involvement of the private sector e.g. in construction, maintenance, supply of spare parts.

Although the primary focus in the past has been on rural water supplies, it has been agreed in principle that urban water supplies may also be included in the programme. The team shall therefore assess the relative priority which should be attached to this component, and make recommendations (regarding choice of technology, design standards, operation and maintenance etc) to ensure the sustainability of such supplies.

In view of the importance attached to training and institution-building, the team shall specifically address the question of human resource development, and make recommendations as to how this component of the programme may be strengthened, if this is deemed necessary.

4. Form of Work

As far as possible, the Team should place emphasis on process rather than product. In other words, the primary aim should be to engage in an informed dialogue with those in the Region, assisting them to identify and resolve problems and to arrive at a suitable future strategy. This approach will require active participation by those in the Region, and a clear understanding of the intended methodology by all concerned. LFA (logical framework analysis) will be an important tool to ensure that this approach is effective. An LFA workshop involving water department staff and other regional personnel will therefore be included as an integral part of the review. Two facilitators will be engaged for this purpose, who will also prepare a report from the workshop to be included as an Annex to the Team's report. The workshop should take place during the latter part of the review period. This will ensure that the team have time to collect enough data to be well informed about the programme - by various means including on-site inspection, interviews, and questionnaires, as appropriate. It will also allow time for supplementary data collection, if necessary, and preliminary writing up before the Team leaves Rukwa.

The Team will be required to produce a written report for submission to NORAD and the Government of Tanzania, which may be the subject of discussion at the next Annual Meeting.

5. Implementation

The Team will be composed as follows:

NORAD: Mr. Aage Kruger, Teamleader
Dr. Phil Evans, Consultant

Tanzania:

Ms. Hilda Gondwe, MAJI
Mr. Charles Igogo, Min. of Regional Administration
Mr. M.E. Mushi, and Local Government.

The LFA workshop facilitators will be:

Dr. Lwambuka, Dar es Salaam
Ms. Ngido, Tanga

The Team (excluding the facilitators) shall mobilize in Dar es Salaam on or about 20th May. The facilitators shall arrive one week later. The team shall finalise their report by end-June 1991.

Date:..... Kjell Storløyken
Director
Regional Department Africa

TAN 060 - WATER AND SANITATION PROGRAMME, RUKWA

REVIEW, MAY/JUNE 1991

COMMUNITY QUESTIONNAIRE

It has been agreed that information should be obtained from a sample of communities so as to provide additional information to the Review Team when they visit Rukwa on about 20 May. Answers to the following questions should be provided. Some communities which have not received a new supply under the Programme should be visited, as well as some that have. The questions for each will differ.

I. QUESTIONS IN VILLAGES WITHOUT NEW WATER SUPPLY SCHEME:

1. Will an improved water supply be among your highest priorities regarding development in this village?
2. How much would you be willing to contribute towards a new water supply?
 - A. Days of work on implementation (construction)
 - B. Funds for a Water Fund
 - C. Annual payment

II. QUESTIONS TO BE ASKED IN VILLAGES WITH A WATER SUPPLY SCHEME:

1. When the water supply scheme was planned/constructed, were you given any alternatives to the scheme constructed?
2. Do you feel that your workload in fetching water has been substantially reduced? (This question should normally be addressed to women)
3. Do you feel that the village itself can
 - A. Run the water supply scheme?
 - B. Do all the repair work on the scheme?
 - C. Provide funds for most spare parts?

ANNEX 3

SUMMARY OF COMMUNITY SURVEY RESULTS

COMMUNITY SURVEY RESULTS

Shortly before the arrival of the review mission, a mini-survey of communities in the Rukwa Region was conducted by the Community Participation Unit, using a brief questionnaire based on draft set of questions forwarded to the team by NORAD. Two forms were developed, one for communities with improved water supplies, and the other for those without. The questionnaires were administered in nine villages with improved water supplies, and seven without.

Although a survey on this scale can not claim any statistical validity, the results obtained were of interest to the review team and provided a number of useful insights into community attitudes and highlighted a number of important problems and issues.

In all but two villages, interviews were held with village leaders. In the other two, the leaders could not be found and the interviews were held with ordinary community members. Summary charts of the results of the survey are attached, as well as the questions asked.

Of the nine villages visited with improved water schemes, one was in Sumbawanga Urban area, four in Sumbawanga Rural, three in Nkansi, and one in Mpanda. Five had gravity schemes, two had motorised schemes, one was served by shallow wells, and one with a combination of shallow wells and protected springs. Of the unserved villages, five were in Sumbawanga and two in Nkansi. These were served by traditional wells, or a combination of wells and streams.

All of the villages surveyed without an improved water supply reported that the quality of water was bad and that health conditions in the village were poor. Four said their water sources were nearby, while the other three said they were far away. Water, as might be expected, was unanimously stated as a high development priority. Willingness to participate in the construction and maintenance of improved water supplies was expressed in all the unserved villages. All said they were willing to contribute labour, and contributions in kind for construction. Only one expressed a willingness to contribute cash for construction. All, however, said they could contribute to a village maintenance fund. The amount they said they were willing to pay for maintenance varied between Tsh.200 and Tsh.1000 per family (per year), with most suggesting Tsh.2-300 per family.

There was evidence in the forms of some frustration among unserved villages in relation to the water supply issue. Three villages reported that surveys had previously been carried out by Maji, but no action taken. At least two years had passed since the most recent survey, and they wondered whether they

would ever be served. One village reported that two letters had been written requesting assistance with water supply, but no replies had been received. Another reported that they were not aware that they could request help.

Although the survey can not be taken to be representative of the region as a whole, there is at least some indication of willingness on the part of communities to play an active part in water supply provision and maintenance, and a fairly strongly felt need for improved supplies. A drawback for Maji is the evidence of frustration and disillusionment expressed by some villagers, indicating a need for good communication and mobilization in communities to overcome any cynicism which might be evident.

The responses from villages with improved water supplies provided illustrations of a number of key problems identified during the review mission, and give quite useful pointers to areas in which the project could seek improvements. One note of caution is that both motorised schemes surveyed were in running order, which does not seem to be the case in general.

Two of the schemes had improved supplies in theory, but not in practice. In the case of one, four out of the five shallow wells provided had run dry, while in the other a gravity scheme had broken down and was no longer in use. In the other schemes, all but one village reported good water quality. One village with a gravity scheme reported poor water quality. Six of the nine villages reported that the new water supply had improved health conditions, though the survey does not provide any means of verifying this. Water supplies in all cases were reported to be close by.

Three villages responded positively when asked whether they had been given any choice when the new scheme was installed, with one saying the involvement had been very good. Six said they had not been consulted, but three of these said they had been subsequently consulted during the rehabilitation phase. These responses give some indication that community consultation has improved, if it is correctly assumed that those reporting good consultation are the more newly served ones. All villages reported that the new schemes had led to a decrease in the workload of women, except for the one where the gravity scheme had broken down. Again there was no means to verify this, and it is not clear from the forms whether interviews were conducted with men or women.

All villages with improved supplies expressed willingness to play a part in running, repairing, and contributing funds for the sustaining of the water supplies. In two cases, this was qualified by saying that the scheme would need to be rehabilitated first, while in two others respondents said that they would need preparation and training first. Two villages reported that they had started village water funds, and one was already paying a scheme attendant. Another village said problems had been experienced in starting a water fund

(although they also reported that the village was prepared to make a financial contribution.

Because of the limited scope of the survey, major conclusions can not be drawn, but the results are certainly interesting enough to merit consideration, and discussion within the project.

In view of the interesting results obtained, the project may wish to consider doing a more detailed study to gather more in-depth data to assist the community participation programme, and also to provide information to the construction and operation and maintenance units on problems being encountered by communities. One member of the Maji team admitted to being pleasantly surprised by how interesting the results were, suggesting that feedback from communities so far has been limited and that many project staff members would benefit from being made more aware of community views.

SUMMARY OF SURVEY QUESTIONS:

Villages with improved schemes	Villages without improved schemes
1. What kind of water source has been developed ?	What kind of water source is used ?
2. How does the water quality compare with old sources ?	How is the water quality ?
3. Has there been an improvement in health ?	Is water quality affecting health ?
4. How far is the new source compared with the old one ?	How far is the source ?
5. Was the community given any choice of type of scheme ?	What is the village's highest development priority ?
6. Has women's workload been reduced ?	Is an improved water supply among your highest priorities ?
7. Can the village:- a. run the scheme ? b. do all repair work ? c. provide funds for spare parts ?	Is the village prepared to contribute to: a. implementation in work ? b. implementation in cash ? c. village water fund ?

COMMUNITY SURVEY, SUMMARY OF RESULTS, VILLAGES WITH IMPROVED WATER SUPPLY

VILLAGE	DISTRICT	TYPE OF SOURCE	WATER QUALITY	HEALTH CONDITIONS	DISTANCE TO SOURCE	CHOICE OF TECHNOLOGY ?	WOMEN'S WORK-LOAD REDUCED	COMMUNITY WILLING TO OPERATE & MAINTAIN	COMMENTS
Kasense	Sumbawanga Urban	5 Shallow wells	Good, but 4 wells dry	Poor - use trad. sources	Not far	Yes	Yes	Yes	Is anything planned to fix dry wells ?
Matai	Sumbawanga	Gravity - but broken down	Poor, scheme broken down	Bad	Close - but not in use	No	No, scheme not working	Yes - if rehabilitated	Very poor traditional water quality
Sandulula	Sumbawanga	Shallow wells & prot.springs	Good	Improving	Not far	Yes, good involvement	Yes	Yes	Village positive. Willing to start fund
Mavazusi	Sumbawanga	Gravity	Good (treated)	Improving	Near	Yes	Yes	Yes	Positive attitude
Npui	Sumbawanga	Gravity	Poor	No change	Not far	No	Yes	Yes	Water fund started
Milundikwa	Nkansi	Motorised	Good	Improving	Not far	No, but yes during rehab.	Yes	Yes	Problems with starting fund
Mkundi	Nkansi	Gravity	Good	Improving	Not far	No	Yes	Yes	Extension of system required. Some people still use old sources
Chala "B"	Nkansi	Gravity	Good	Improving	Not far	No, but yes during rehab.	Yes	Yes	Some taps leaking
Sitalike	Npanda	Motorised	Good	Improving	Close by	No, but yes during rehab.	Yes	Yes	Fund started. Pay attendant. System needs extension

COMMUNITY SURVEY, SUMMARY OF RESULTS, VILLAGES WITHOUT IMPROVED WATER SUPPLY

VILLAGE	DISTRICT	TYPE OF SOURCE	WATER QUALITY	HEALTH CONDITIONS	DISTANCE TO SOURCE	DEVELOPMENT PRIORITIES	WILLING TO CONTRIBUTE ?	HOW MUCH ? (FAMILY/YEAR)	COMMENTS
Chipu	Sumbawanga	Traditional wells	Bad	Poor	Far	Water	Yes	Tsh.100	Repeated surveys, but no action
Nambogo	Sumbawanga	Streams & wells	Poor	Bad	Near	Water Dispensary	Yes	Tsh.100	Unable to expand settlement due to water scarcity
Jangwani	Sumbawanga	Traditional wells	Poor	Bad	Near	Water	Yes	Tsh.1000	Survey in 1988, but no action. Willing to participate
Mkisa	Sumbawanga	River, streams, & wells	Bad	Bad	Far	Water	Yes	Tsh.200	Not aware that help can be requested
Malolwa	Sumbawanga	Traditional wells	Poor	Bad	Near	Water	Yes	Tsh.500	Surveys in 1975 and 1986. Why so long ?
Kantawa	Nkansi	Streams & wells	Good from streams, poor in wells	Bad	Near	Water Dispensary	Yes	Tsh.200	Two request letters written.
Londokazi	Nkansi	Streams & wells	Good from streams, poor in wells	Bad	Far	Water	Yes	Tsh.100	Willing to participate