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**Study of the Institutional
Arrangements for the Provision of
Rural Water Supply and Sanitation
Services in Mozambique**

FINAL REPORT

Submitted to:

**National Directorate of Water
Ministry of Public Works and Housing
Republic of Mozambique**

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Prepared by:

Cowater International Inc.



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Acknowledgement

Mozambique, after 20 years of turmoil, is now immersed in a process of profound and rapid development. Productive activities, infrastructure installation, as well as new governance systems, administrative arrangements, and private initiatives are concurrently underway. The rural water supply and sanitation sector is also challenged to respond to the changing context of Mozambican reality.

The present "Study of the Institutional Arrangements for the Provision of Rural Water Supply and Sanitation Services in Mozambique", seeks to respond to the National Water Policy's quest for increased coverage in sustainable water and sanitary services.

The results of this study follow a six-month long consultative process, from October 1996 to March 1997. During this time, two national workshops and four one-day workgroups, along with more than 60 individual interviews with representatives of over 20 organisations, provided the discussion and analysis necessary to push the National Water Policy from generalities to specificity for the rural water sector.

Inasmuch as this document represents the combined thinking of the nation's water sector professionals, COWATER is proud to have played a facilitative role in the development of this study. By way of recognition, it is right to mention the institutions and professionals whose vision and determination brought this document to fruition. INDER, as an multidisciplinary catalytic agent in the rural areas of Mozambique, funded and supported the work of this study. The Ministry of Public Works and Housing, through its executive National Directorate of Water, provided the conceptual framework for this mission. The National Programme for Rural Water (PRONAR), provided the energy and ideas of its staff in fleshing out the conceptual framework of the National Water Policy. COWATER extends its deepest thanks to the staff and senior management of INDER, DNA, and PRONAR for their selfless collaboration and open dialogue during this process. Also, we are indebted to the staff and provincial directors of, Cabo Delgado, Gaza, Manica, Maputo, Sofala, and Zambezia, for their warm reception and support during our field visits there.

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Finally, we would like to express our admiration for the people of the rural areas of Mozambique, whose daily sacrifices and struggle to improve their quality of life, give urgency and seriousness to the government's efforts to effectively and efficiently meet their demand for safe and abundant water.

Acronyms and Abbreviations

ARA	Administração Regional de Águas <i>Regional Water Administration</i>
AT	Assistência Técnica <i>Technical Assistance</i>
BM	Banco Mundial <i>World Bank</i>
CBO	Organização Baseada na Comunidade <i>Community Based Organisation</i>
CCBU	Unidade de Comunicação e Capacitação <i>Communication and Capacity Building Unit</i>
CDPTAR	Comissão Directivo do Plano de Transição de Água Rural <i>Rural Water Transition Plan Task Force</i>
CFPAS	Centro de Formação Profissional de Água e Saneamento <i>Professional Training Centre for Water and Sanitation</i>
COSUDE	Agência Cooperação Suíça para o Desenvolvimento <i>Swiss Agency for Development Cooperation</i>
DA	Departamento de Águas <i>Water Department</i>
DAS	Departamento de Água e Saneamento <i>Water and Sanitation Department</i>
DNA	Direcção Nacional de Águas <i>National Directorate of Water</i>
DPOPH	Direcção Provincial de Obras Públicas e Habitação <i>Provincial Directorate of Public Works and Housing</i>
EAR	Estaleiro de Água Rural <i>Rural Water Workshop</i>
EPAR	Estaleiro Provincial de Água Rural <i>Provincial Rural Water Workshop</i>
ESA	Agência Externa de Apoio <i>External Support Agency</i>
FDF	Formação de Formadores <i>Training of Trainers</i>
GOM	Governo de Moçambique <i>Government of Mozambique</i>
HRD	Desenvolvimento de Recursos Humanos <i>Human Resources Development</i>
IAS	Estudo de Disposições Institucionais <i>Institutional Arrangement Study</i>
IIM	Instituto Industrial de Maputo <i>Maputo Industrial Institute</i>
INDER	Instituto de Desenvolvimento Rural <i>Rural Development Institute</i>
ISP	Plano de Fortalecimento Institucional <i>Institutional Strengthening Plan</i>
LINK	Unidade de Coordenação de ONGs <i>NGO Coordination Unit</i>

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MAE	Ministério da Administração Estatal <i>Ministry of Government Administration</i>
MINSA	Ministério de Saúde <i>Ministry of Health</i>
MIS	Sistema de Informação para Gestão <i>Management Information System</i>
MOPH	Ministério de Obras Públicas e Habitação <i>Ministry of Public Works and Housing</i>
NGO	Organização Não Governamental <i>Non-Governmental Organisation</i>
NWP	Política Nacional de Águas <i>National Water Policy</i>
O&M	Operação e Manutenção <i>Operation and Maintenance</i>
O, M & G	Operação, Manutenção e Gestão <i>Operation, Maintenance and Management</i>
O, M, G & U	Operação, Manutenção, Gestão & Utilização Apropriada <i>Operation, Maintenance, Management and Appropriate Use</i>
OBC	Organização Baseada na Comunidade <i>Community Based Organisation</i>
OGE	Orçamento Geral do Estado <i>National Budget</i>
ONG	Organização Não Governamental <i>Non Government Organisation</i>
PDP	Projecto de Demonstração Provincial <i>Provincial Demonstration Project</i>
PEC	Participação e Educação Comunitária <i>Community Participation and Education</i>
PIMU	Unidade de Planificação e Gestão de Informação <i>Planning and Information Management Unit</i>
PNA	Política Nacional de Águas <i>National Water Policy</i>
PNSBC	Programa Nacional de Saneamento a Baixo Custo <i>National Low Cost Sanitation Programme</i>
PNUD	Programa das Nações Unidas para o Desenvolvimento <i>United Nations Development Programme</i>
PRONAR	Programa Nacional de Água Rural <i>National Rural Water Programme</i>
PRR	Projecto de Reabilitação Rural <i>Rural Rehabilitation Project</i>
PSAA	Pequeno Sistema de Abastecimento de Água <i>Small Piped Water System</i>
PTAR	Plano de Transição de Água Rural <i>Rural Water Transition Plan</i>
RRP	Projecto de Reabilitação Rural <i>Rural Rehabilitation Project</i>
RWS	Abastecimento de Água Rural <i>Rural Water Supply</i>

RWSS	Abastecimento de Água e Saneamento Rural <i>Rural Water Supply and Sanitation</i>
RWTP	Plano de Transição de Água Rural <i>Rural Water Transition Plan</i>
RWTPTF	Comissão Directivo ao Plano de Transição de Água Rural <i>Rural Water Transition Plan Task Force</i>
SDC	Agência de Cooperação Suíça para o Desenvolvimento <i>Swiss Agency for Development Cooperation</i>
SIG	Sistema de Informação para Gestão <i>Management Information System</i>
SMT	Colectivo de Direcção <i>Senior Management Team</i>
TA	Assistência Técnica <i>Technical Assistance</i>
TM	Monitor Técnico <i>Technical Monitor</i>
TOT	Formação de Formadores <i>Training of Trainers</i>
TSU	Unidade de Apoio Técnico <i>Technical Support Unit</i>
UAT	Unidade de Apoio Técnico <i>Technical Support Unit</i>
UCC	Unidade de Comunicação e Capacitação <i>Communication and Capacity Building Unit</i>
UNDP	Programa das Nações Unidas para o Desenvolvimento <i>United Nations Development Programme</i>
UNICEF	Fundo das Nações Unidas para a Infância <i>United Nations Children's Fund</i>
UPGI	Unidade de Planificação e Gestão de Informação <i>Planning and Information Management Unit</i>
US\$ / USD	Dolar dos Estados Unidos da America <i>Dollar of the United States of America</i>
VLOM	Operação e Manutenção ao Nível da Aldea <i>Village Level Operation and Maintenance</i>
WATCO	Recursos Hidricos - Preprograma de Coordenação Sectorial <i>Water Resources - Sectorial Co-ordination Preprogramme</i>
WB	Banco Mundial <i>World Bank</i>

Executive Summary

In 1996 the Government of Mozambique (GOM) commissioned a "Study of the Institutional Arrangements for the Provision of Rural Water Supply and Sanitation Services in Mozambique". The general objective of this study is to propose an enhanced framework that will improve rural water and sanitation service delivery in the country.

In 1995 the GOM approved its National Water Policy (NWP). The NWP embodies a new approach to water resources and water supply/sanitation issues. This Study aims to identify and elaborate upon the implications that the NWP has upon the Rural Water Supply and Sanitation sector in Mozambique.

The two major objectives of the NWP for rural water supply and sanitation (RWSS) are:

- increased coverage levels, and;
- achieving service sustainability.

These two objectives are not always compatible in that achieving sustainable services requires more time and resources than achieving mere numerical increases in coverage.

The Study examines the key concepts of the NWP as applicable to RWSS in Mozambique. These concepts are:

- demand-based programming;
- decentralisation;
- expansion of sector capacity;
- withdrawal of the government from direct project implementation,
- greater participation of the private sector.

It is clear that the context for RWSS programs in Mozambique has been dramatically altered in the past 5 years. The ceasing of the civil conflict, the end of emergency drought conditions, the strengthening of democratic principles, the liberalising of the economy and the productive return of displaced families to their homes, have contributed to a new and dynamic framework for the development of rural infrastructure projects. This new national context demands new GOM responses.

The Study team performed a series of analysis utilising the following tools:

- a SWOT (strengths, weaknesses, opportunities and threats) analysis,
- the project cycle (policy and practice review);
- relative strengths (rural compared to urban water).

The SWOT analysis revealed positive developments over the past five years, including: the strengthening of community participation aspects (PEC); the development of the NWP; the active role of the training centres; the ability to attract sector funding, the

expansion of the role of the private sector, and, the first steps toward decentralisation (deconcentration), among others

Specific weaknesses were also identified, including, direct implementation being managed from the national level, a lack of clear lines of supervision and control between the EPARs, DPOPHs, PRONAR, and the DAs, unclear EPAR legal status, lack of support to PEC field activities; unstructured monitoring and evaluation; planning based upon weak management information systems, and minimal community decision making

The Project Cycle served as a framework for analysing current practices in the following phases:

- Programming;
- Pre-investment;
- Design and Construction;
- Operation, Maintenance, Management, and Use;
- Follow-up.

It was found that the two project phases with the least current emphasis are those that have been shown world-wide to have the greatest cumulative impact on sustainability - Pre-investment and Follow-up. It was also found that additional strategies, policies, standards, and mechanisms are needed to support sustainability at various steps throughout the project cycle. Some of these include:

- criteria for setting priorities;
- information management system development;
- standardisation for technical and social assessments;
- support for the demand-driven approach to RWSS;
- development of legalised management systems for water supply;
- up-dated design and construction standards;
- standardisation of tender processes and contract management;
- guidelines for technical inspection;
- appropriate use of technologies;
- cost-effective design and construction;
- phasing-out of government construction capacity,
- phasing-in of private sector capacity;
- delineation of the strengthened role of PEC;
- structured follow-up programme;
- full O&M cost recovery;
- regulatory guidelines.

Finally, the review of the relative strengths of the rural and urban sectors, shows that rural areas, with three times the population of urban areas, receives from two to three times fewer financial and human resources than is available to urban water.

The proposed set of recommendations for fully implementing the NWP can be divided into four general areas:

- Policy, strategies, and mechanisms,
- Human resource development;
- Alternative structures and responsibilities,
- Roles of other sector actors

Policy, Strategies, and Mechanisms

Within this general area, five specific points are highlighted:

- the concept of "client" versus "beneficiary";
- deconcentration,
- government withdrawal from direct implementation;
- the expansion of overall sector capacity;
- communications.

A "beneficiary" is a passive element that receives something. A "client" is an active element that decides about the services they are able to afford. The demand-based approach is contingent upon and responsive to the client. It implies a new understanding of how RWSS programmes are planned, implemented, and managed, an understanding that will have to be cultivated before a transition can take hold.

Similarly, the motive for deconcentrating to the provinces is a natural consequence of demand-based programming. Only local structures and actors can best respond to a client's desires and future needs.

Government withdrawal from direct execution will free the national level to concentrate on its planning, regulatory, and research functions.

Overall sector capacity expansion will be approached on several fronts including human resources development both within the governmental services and in the private sector, the development and application of appropriate standards and policies, and the implementation of more efficient structures and mechanisms for sector activity.

A communication strategy to stimulate and support the demand-based process, will also help assure long-term information flow between clients and planners.

Human Resource Development

Current staff will be strengthened through the application of a participatory needs assessment, followed by the development and implementation of targeted training plans. Full understanding of the implications of the NWP is crucial to the transition process, and becomes a priority action in the training plan. Similarly, the need for specific technical skills will grow alongside the changing role of PRONAR.

Specific training instruments such as study tours, universities, the use of appropriate technical assistance, on-the-job training, the development of a local training-of-trainers team, and short courses form part of the HRD strategy

Alternative Structures and Responsibilities

Within this area, the following points can be highlighted:

- new departmental sections,
- functional grouping of staff,
- new provincial and national level roles

The newly named DNA Department of Rural Water (DAR-PRONAR) has three sections; the Planning and Information Unit (PIMU), the Communication and Capacity Building Unit (CCBU), and the Technical Support Unit (TSU). At the provincial level, a single Water Department is maintained within the DPOPH, with the same three areas as at the national level. While the structures are similar, the tasks and responsibilities vary widely, with the national level providing the regulatory and planning role, and the provincial level performing a management and technical assistance role for province-wide water initiatives.

Staff are grouped into technical and social areas. At the national level, specialists are needed in civil and mechanical engineering, hydro-geology, and economics (TSU), as well as community liaison and support, communication and gender, and monitoring, evaluation, and training (CCBU). At the provincial level, individual staff members are expected to have a range of appropriate skills.

The provinces will now be free to manage their own resources and the national level will now be free to dedicate itself to its role as the authority for RWSS in Mozambique

Role of Other Sector Actors

Other significant sector actors include; donors, the for-profit private sector, the not-for profit private sector (e.g. NGOs), ministries with related goals (e.g. Ministries of Health and Education), local governing bodies, and community social structures.

The local government's role is greatly expanded to form part of the necessary apparatus for channelling and prioritising client demand. Related ministries are part of the team needed to provide long-term training in adequate use of sanitary infrastructure. The private sector is counted upon to provide cost-effective consulting and construction services, when provided with adequate incentives such as technical training, access to specialised equipment, and information about sector planning. It is envisioned that the EPARs will be phased-out and their staff integrated into the new DA and existing private companies, or motivated to form private sector consulting or construction firms.

Donors and NGOs will be asked to support the transition process through the provision of funding. This new modality of planning for donor assistance will allow for the accommodation of greater amounts of funding and an expanded range of donor partners.

The Transition Process

Along with transition comes confusion. New roles must be learned by institutions and individuals, while old roles are still being performed as part of a phase-out process. Employee productivity and production targets may initially decline, until the demand-based approach gathers momentum.

In order to minimise negative sector impacts, two principle strategies are to be employed. The first is the implementation of a proposed Priority Action Plan, and the second is the implementation of Provincial Demonstration Projects (PDPs).

Action Plan

The action plan is comprised of a series of 13 activities or action areas that are critical elements of the Rural Water Transition Plan. These activities take place primarily at the national level and include PRONAR restructuring, the identification of technical assistance, institutional strengthening activities and the formulation of policies, standards, and alternative systems for the implementation at the local level of sustainable water supply.

Key to the Action Plan is the naming of an interim Task Force that will support the DAR-PRONAR director and leadership group in the Transition Process and in the programming of the PDPs. The Planning and Information Management Unit (PIMU) chief will be central to moving the Transition Process forward via the PDPs, while the DAR-PRONAR director will concentrate on non-demonstration province activity. The Task Force, to which the DAR-PRONAR director belongs, will assure that individual roles are clearly defined.

A Technical Monitor will also be contracted to provide part-time independent support for monitoring progress, providing feedback, and providing specialised technical assistance as required by the Transition Process.

A series of national and international consultants may be brought in as required to assist in specific tasks that have to be completed in the initial year of the Transition Process (for example, the preparation of a Decentralisation Transition Plan, the development of alternative management regimes especially for piped systems, the preparation of updated technical standards, and help with setting up the MIS system).

Provincial Demonstration Projects

The PDPs would implement the strategies and policies of the National Water Policy as developed by DAR/PRONAR over the coming months. It is critical for demonstration

projects to be done on a provincial level so that the complete range of technical and social aspects of sustainable RWSS projects can be implemented in an integrated fashion. Replication can take place as the evaluation process and future funding permit. Less detail is provided on the course of the PDPs in deference to the fact that all provinces are uniquely structured and staffed, and that the Transition Process should take into account local inputs as often as possible.

An illustrative budget for the initial three years of the Transition Process, excluding training, suggests that USD 3.5 million will be required. Budgets for Provincial Demonstration Projects will vary from province to province and from donor to donor, but it is felt that five year periods should be considered for all funding cycles at the provincial level.

1. Introduction

1.1 Background

With the advent of peace, Mozambique is establishing multi-party democracy and a program of governmental decentralisation to improve accountability and the provision of services to the population. A safe, adequate water supply, and the elimination of human wastes are fundamental building blocks of individual and collective well-being, and therefore figure prominently as components in this process.

Approximately 75% of the nation's population resides in rural areas. With the return of millions of displaced people and refugees to their lands of origin, attempts to improve rural sanitary infrastructure assume additional significance.

Presently, rural water supply coverage stands at approximately 34%, while adequate sanitation facilities are available to approximately 11% of the rural population. The declared goal of the Mozambican government, as expressed in the National Water Policy, is to increase rural water supply coverage to 40% by the year 2000, and to achieve total coverage by the year 2017. The least served areas are to be prioritised.

Current sector roles and activities reflect wartime realities, post-war and post-drought emergency efforts, and the fiscal, social, and organisational philosophies formerly adopted by the government. The emerging realities of the past three to four years demand a renovation of sectoral structures and objectives.

The new National Water Policy, formally approved in 1995, enunciates the water supply and sanitation sector's general principles, specific policies, and proposed targets, while stipulating the initial key steps toward achieving these objectives. The development of new sectoral frameworks and structures is pivotal to the implementation of the ideas embodied in the National Water Policy.

With this end in mind, the Government of Mozambique has commissioned a "Study of the Institutional Arrangements for the Provision of Rural Water Supply and Sanitation Services in Mozambique."

1.2 Purpose of the Study

The general objective of the study is to examine the existing structure of the institutional arrangements in Mozambique for the provision of rural water supply and sanitary services, and to propose an enhanced framework, together with an associated policy, and management and implementation arrangements, that will improve rural water supply and sanitation service delivery in the country.

Specific objectives include the following:

- Undertake a detailed analysis of the existing institutional structure in the rural water supply and sanitation sector, including service delivery,
- Develop proposals for an improved institutional framework and associated policy, expanding upon the concepts expressed in the National Water Policy;
- Formulate a human resources strategy that will permit the government to put the agreed upon institutional structure and policies into practice;
- Formulate an action plan, addressing the current constraints of the sector, that will allow the transformation of the existing structure into the approved model;
- Ensure the active participation of all sector players;
- Analyse, within the context of the above mentioned specific objectives, issues such as: community participation; cost recovery; willingness to pay; service delivery to the disenfranchised; technical standards; private sector participation; NGO and donor roles; sustainable operation, maintenance, and management, clear definition of small, piped systems; and methods for determining the necessity of incorporating sanitation and hygiene education within water supply projects.
- Make recommendations as to how different players can adjust to become consistent with, and support the transition to the new sector model;
- Make recommendations as to how the work of financiers and implementers can best be co-ordinated and supervised within the framework of the national water policy,
- Make recommendations as to how donors and lending organisations, generally, and the World Bank, specifically, can most effectively implement sector projects in agreement with and support of the recommended model. Such recommendations will be within the context of the Bank's proposed National Water Resources Management and Development Project, and as a stand-alone project.

1.3 Context of the Final Report

This Final Report is the result of a process that included an initial six week mission to review the rural water sector, both from a current and historical perspective. A draft preliminary report was prepared for use as a discussion paper during a two-day workshop held November 14th and 15th outside of Maputo. More than 50 sector professionals, representing MOPH, DNA, PRONAR, DPOPH, the DAs, EPAR, INDER, MINSA, PNSBC, MAE, UNICEF, UNDP, bi-lateral donors, NGOs and private enterprise, all contributed to the discussions of issues raised in the draft report (see

Annex 1 for Workshop Participant List) Many of the ideas generated during the group and plenary sessions of the workshop were incorporated into a Preliminary Report

The Preliminary Report was turned over to DNA for distribution to interested parties for further study and to obtain comments before the initiation of the second six-week mission

At the beginning of the second six week mission, the Study Steering Committee met with the consultants to review the comments and give a more precise definition of the study requirements

The conclusions and direction of the Steering Committee were:

- that the water sector in Mozambique does not require, at this time, the development of a long-term institutional model, considering the current dynamism of the structural environment and the recent promulgation of the National Water Policy.
- that of greater importance is the development of alternative ways to operationalise the newly stated policies, and initiate a process through which these alternatives can be implemented and monitored.
- that a human resource strategy to accompany a long-term model is not currently called for. However, guidelines for long-term human resource development and specific HR short-term goals and activities should be identified

Thus, the following modifications were proposed to the Terms of Reference for use in the Final Report:

1. The Final Report should suggest a long-term institutional model, towards which priority actions will be addressed. Based upon the results obtained for the sector in the coming two to three year period, the long-term model may be modified.
2. The Final Report should more specifically address the implications of the National Water Policy and suggest institutional mechanisms for implementing the established policies
3. The Final Report should contain recommendations for a series of demonstration projects whose goal is to implement the proposed institutional mechanisms and analyse their appropriateness for replication throughout Mozambique.
4. The Final Report should contain a Human Resource Strategy for the short-term institutional development of the sector, and the associated demonstration projects.

The consultants organised four day-long Working Group sessions with sector specialists to address the major issues identified by the Steering Committee. The results of the Working Group Sessions were incorporated into a Draft Final Report that was used as a working document in a Workshop held on 24-25 March 1997 at the *Centro Regional de*

Desenvolvimento Sanitário in Maputo More than 50 sector professionals (see Participant List in Annex 1), representing MOPH, DNA, PRONAR, DPOPH, the DAs, EPAR, INDER, MINSA, PNSBC, WB, UNICEF, UNDP, bi-lateral donors, NGOs and private enterprise, all contributed to the discussions of issues raised in the Draft Final Report

The basic concepts of the Draft Final Report were accepted by the participants However, many of the refinements to the concepts generated during the group and plenary sessions of the workshop have been incorporated into the Final Report

2. Sector Objectives and Policies

2.1 Sector Objectives

As enunciated in the National Water Policy, the prime goal for the rural water sector is to increase the level of coverage to 40% of the rural population by the year 2000, at a service level where a shallow well or borehole equipped with an operational handpump will serve 500 people in a radius of not more than 500 m. In addition, up to 200 small water systems will be rehabilitated. These targets imply the construction of around 6,000 new water sources to serve an additional three million people.

In rural sanitation, provincial sanitation teams will be established in all Provinces by the year 2000. Their function will be to carry out public education, extension work, research and monitoring.

2.2 Sector Policies

The National Water Policy enumerates nine principal policies meant to guarantee the attainment of sustainable water supply and sanitation to the entire population:

1. The satisfaction of basic needs in water supply and sanitation is a high national priority, particularly for rural, low-income groups;
2. The full participation of beneficiaries in the planning, implementation, and management of water supply and sanitation programmes is meant to improve sustainability; the objective is to provide services in accordance with the desires and economic capacity of the users (demand driven);
3. Water has both an economic and a social value;
4. Water resource management will be decentralised to autonomous catchment authorities. The provision of water supply and sanitation should be decentralised to the local level, and be financially self-sufficient;
5. The government should eventually withdraw from direct implementation of services, and provide sector direction, stimulation, and regulation;
6. Bulk raw-water will be allocated using integrated river basin management, in order to optimise benefits to both present and future users;
7. The investment policy should balance economic development with poverty alleviation and public health improvements;
8. Sector capacity will be expanded by human resource development, the definition and implementation of new institutional arrangements, the active involvement of beneficiaries, and new roles for governmental, non-governmental, and private organisations;

- 9 The dynamism of the private sector may be utilised to accelerate the rate of provision of services, improve levels and quality of services, and eventually assist in the supply of managerial and financial capacity

For rural water supply, the principal objective of the Water Policy is the provision of basic water supply needs, prioritising those provinces with the lowest coverage rates. Special attention is placed upon the rehabilitation of small water supply systems, especially those with opportunities for economic development or the capacity to guarantee service sustainability. Community participation and training (PEC) activities need strengthening to ensure effective maintenance.

The Government's future role should be in the provision of an adequate political and legal environment, and to facilitate the provision of services by the allocation of suitably supervised investment funds, which will eventually be channelled through the end users. Private sector participation will be encouraged, however, some governmental capacity for implementation should be retained where private participation is shown to be non-viable.

Regarding rural sanitation, the role of the state should be one of policy making and promotion of local initiatives, including the mobilisation of resources, the provision of technical assistance, and ensuring an adequate supply of tools and materials.

2.3 Analysis of Sector Objectives and Policy

Four key elements of the NWP can be highlighted as they concern the Rural Water Sector. These are the demand-driven approach, decentralisation, government withdrawal from direct implementation, and sustainability. These elements are analysed below.

2.3.1 Demand-Driven Approach

The approach being adopted by the NWP is that the prime guarantor of project sustainability is the user. As such, the NWP proposes the involvement of the user communities at all stages of the RWS decision-making process from choice of system, planning, financial contributions, labour contributions, implementation, operation and maintenance, etc. The process must be essentially **demand-driven** by the users, or clients. They must have a clear idea of what choices are available and of what the "consequences" are of choosing a particular option, including an explicit understanding of the costs for keeping the system functioning (O&M costs). *A critical element that must be understood by all sector actors is that the user communities will be responsible for all O&M expenses.*

This demand-driven or client-driven approach means that, not only must new methodologies of communication between all participants be developed, but that construction productivity targets can no longer be the primary objectives of RWS.

2.3.2 Decentralisation

Within the NWP, it is clearly stated that water and sanitation services should be decentralised to the local level. This is also a logical consequence of adopting a demand-driven approach. An important factor of this decentralisation, is that a significant effort has to be undertaken to assure that all authorities, not just those linked to the water sector, are aware of and support the demand-driven approach. This will be particularly critical with the creation of elected Municipal Councils in the Districts.

Decentralisation will also mean that clear definition of responsibilities at all levels must be elaborated and capacity at each level must be developed so that these responsibilities can be accepted and carried out. Particular attention needs to be paid to channels and methods of communication between these levels as well as between sectors, such as education, agriculture, government administration, etc.

2.3.3 Government withdrawal from direct implementation

One of the objectives clearly stated in the NWP is the withdrawal of the government from direct implementation of services in the future. This is particularly significant in a demand-driven system. At present, a full time government implementation agency, EPAR, funds for itself through payment for the completion of physical construction activities. There is little self-interest in having communities involved in the process, as the communities and the activities linked to them are seen as delaying construction activities as well as being difficult to invoice and control.

A demand-driven system requires that the communities or "clients" take priority in programming construction activities. Thus, taking the implementation agencies out of the government permits the government to take a more objective programming and support role.

The demand-driven approach implies that, for implementation activities to be carried out by the private sector in an economic manner, a "critical mass" of construction activities needs to be identified in a particular zone (i.e. one borehole in a district becomes prohibitively expensive). Thus, communication and co-ordination of the various levels of the decentralised system becomes essential for proper programming.

2.3.4 Sustainability

The two principal objectives contained in the National Water Policy (NWP) are.

- 1 Improved coverage levels;
- 2 Sustainability.

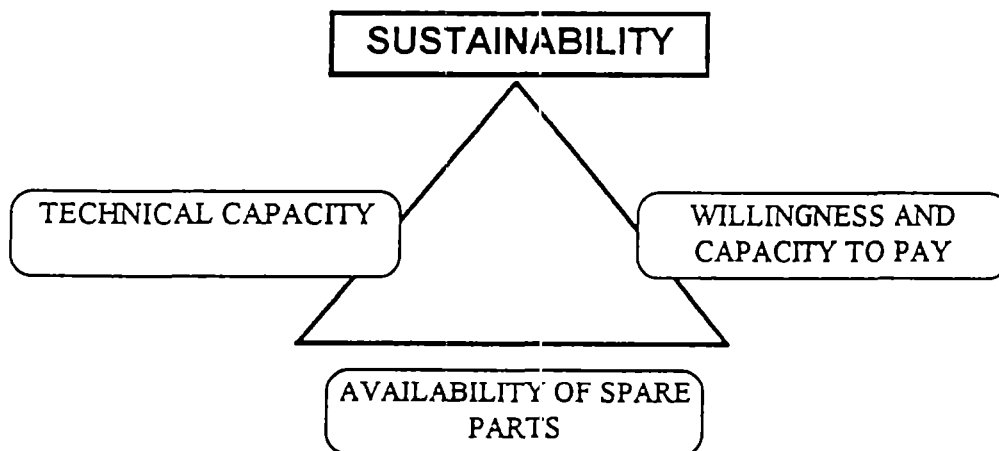
These explicitly stated objectives are not always compatible. Coverage is oftentimes increased by instituting programs that either overwhelm the existing operative capacity of the sector, or fail to address the sustainability issue altogether in order to boost production to the required levels.

Despite the possible incompatibility of objectives, the NWP highlights certain approaches and strategies aimed at improving sustainable programming in water supply and sanitation

Full community participation is a new basic tenet. This suggests that a demand-driven approach be consistently applied for service delivery. Community choice and decision making should, therefore, take place during all project phases, including, pre-investment, design, construction, operation, maintenance, management, and follow-up. New structures, forums, and attitudes must be developed in order to fully implement a demand-based approach.

Water is treated as an economic good, as well as a social good, in the NWP. This suggests that water supply and sanitation recurrent costs, and eventually capital costs, should be completely assumed by the users. If recurrent costs cannot be met, service levels may eventually decline to the point where water quality, quantity, and continuity are threatened. If capital costs cannot be recovered or raised, long-term replacement of services cannot be guaranteed.

There are, however, other components critical to sustainability that are not directly addressed in the NWP. These can be represented in the Sustainability Triangle



If any of the three “legs” of the triangle is lacking, sustainability is unlikely.

Not only do the user communities need to have the **financial capacity** to pay for the O&M costs to keep the system running, but there must be a management system that the users trust to provide the service for which they are paying. **Willingness** to pay also depends on the users placing an economic value on the service they are receiving. Clearly, an important factor is easy access to water.

“Trustworthy” or accountable management is important for any RWSS, but may be a critical issue regarding PSAAs, as users clearly will not be willing to pay a monthly water fee, if the PSAA management cannot guarantee the regular provision of water. The creation of various options for accountable management systems, assisting the

communities in choosing the appropriate system and providing training to selected management teams is a capacity that has to be developed

The **technical capacity** must exist to carry out all O&M tasks. In the case of VLOM handpumps, this capacity can be provided to the user community through the training of community members. For more complex systems, operator and mechanics/repairmen (women) must be trained to carry out the more complex tasks. The work of these operators and mechanics must be financially remunerated by the user communities, including any transportation costs, if they are not based in the communities. These costs must be reflected in the water rates.

The availability and easy access to **spare parts** for carrying out O&M tasks is essential. This important aspect needs to be addressed simultaneously with the other two “legs” of the triangle. Too many cases exist where communities have large Maintenance Funds, and trained mechanics are available, but no appropriate spare parts are available in the province or even in the country.

Another factor in longer-term sustainability is user understanding of water potability and its importance for their well-being. In this regard, **participatory health and hygiene education** should be accorded a high priority. Sanitary education should not only be given during the construction phase, but also during the rest of the project cycle, while simultaneously being linked to other agencies with contacts to the community, such as health centres, primary schools, religious organisations, other community based organisations (CBO), radio, newspapers, etc. as well as closely co-ordinated with the Rural Sanitation Promotion Programme. The demand for sanitary infrastructure, and its appropriate use, can be greatly increased by effective educational programmes. It is only through the adequate use of water and sanitation infrastructure that improvements can be made in health, productivity, and, thereby provide a higher standard of living to the rural population.

2.4 Issues Not Addressed by the National Water Policy

While the NWP provides a generally solid foundation for water sector policy formulation, some critical issues remain to be addressed

First, a policy of conscientiously applying appropriate technologies to both urban and rural water supply and sanitation should be enunciated, so as to better guarantee service viability. Any technology that requires spare parts, materials, or technical assistance unavailable at least at the provincial level, is likely to be unsustainable.

Second, a policy to apply the principles of cost-effective design and construction, which implies: full use of local knowledge, materials, and human resources; and a concerted programme of cost reduction, including, for example, research projects in conjunction with local universities, or the creation of design competitions (with appropriate incentives) for developing cost-reducing strategies and technologies. Cost efficient programmes attain greater coverage levels per unit cost, and invite increasing levels of

sector investment from both within and outside the government, as well as from the private sector

Third, a programme which addresses the issue of technical assistance and follow-up to small piped systems and point sources in rural areas should be elaborated. All the major models of sustainability include long-term follow-up as one of the primary prerequisites for project permanence.

3. Sector Analysis

3.1 Description of Current Sector Framework

The lead agency in the rural water sector is PRONAR (National Rural Water Programme). It is considered institutionally as a Department of the DNA (National Directorate of Water) within the MOPH (Ministry of Public Works and Housing). PRONAR co-ordinates, plans, and supervises rural water supply work nation-wide. Liaison with local authorities for data collection and planning activities are through the DAs (Water Departments) within the DPOPHs (Provincial Directorates of Public Works and Housing). Implementation is by the private sector and the EPARs (Provincial Rural Water Workshops), under contracts with PRONAR and DPOPHs or directly with other financing agencies. The EPARs are nominally independent bodies under the tutelage of DPOPH with PRONAR technical support, although they possess no clear legal definition. Supervision of the EPAR's work is carried out in turn by the Provincial Director of the DPOPH. All payments are carried out by PRONAR, after approval by the DPOPH, with support by the DA.

At the national level, PRONAR is composed of five sections: PEC (Participation and Community Education), PSAA (Small Piped Water Systems), Wells and Boreholes, Finance and Administration, and Logistics. A regional PRONAR office in Beira provides logistical support and technical assistance to the Provinces of Zambezia, Tete, Manica, and Sofala.

At the provincial level, PRONAR co-ordinates project activities through the DPOPHs. Both PRONAR and the DPOPH have supervisory responsibilities over the EPARs, which are composed of five sections: PEC, Works, Finance and Administration, Supply, and, in some districts, EARs (Rural Water Workshops).

A government organisational chart for the current structures of the rural water supply sector can be found in Fig. 1.

In addition to national and local government institutions, various international and bilateral agencies, as well as international NGOs are active in the water sector. Their interventions can be through the government institutions, co-ordinated with government institutions or totally independent.

As shown below, in Figure 2, the major sector players assume a mix of functional responsibilities. The functions are listed according to the phases of the project cycle detailed and commented in Chapter 4. The actual situation displays a tendency towards decentralisation, with PRONAR currently possessing a very limited design and construction role, and the increased outsourcing of works to the private sector. Also, the commercial network for spare parts is being strengthened. Some EPARs and

Fig.1

ORGANIGRAMA DAS INSTITUIÇÕES DO GOVERNO - AGUA RURAL (Actual)

Março 1997

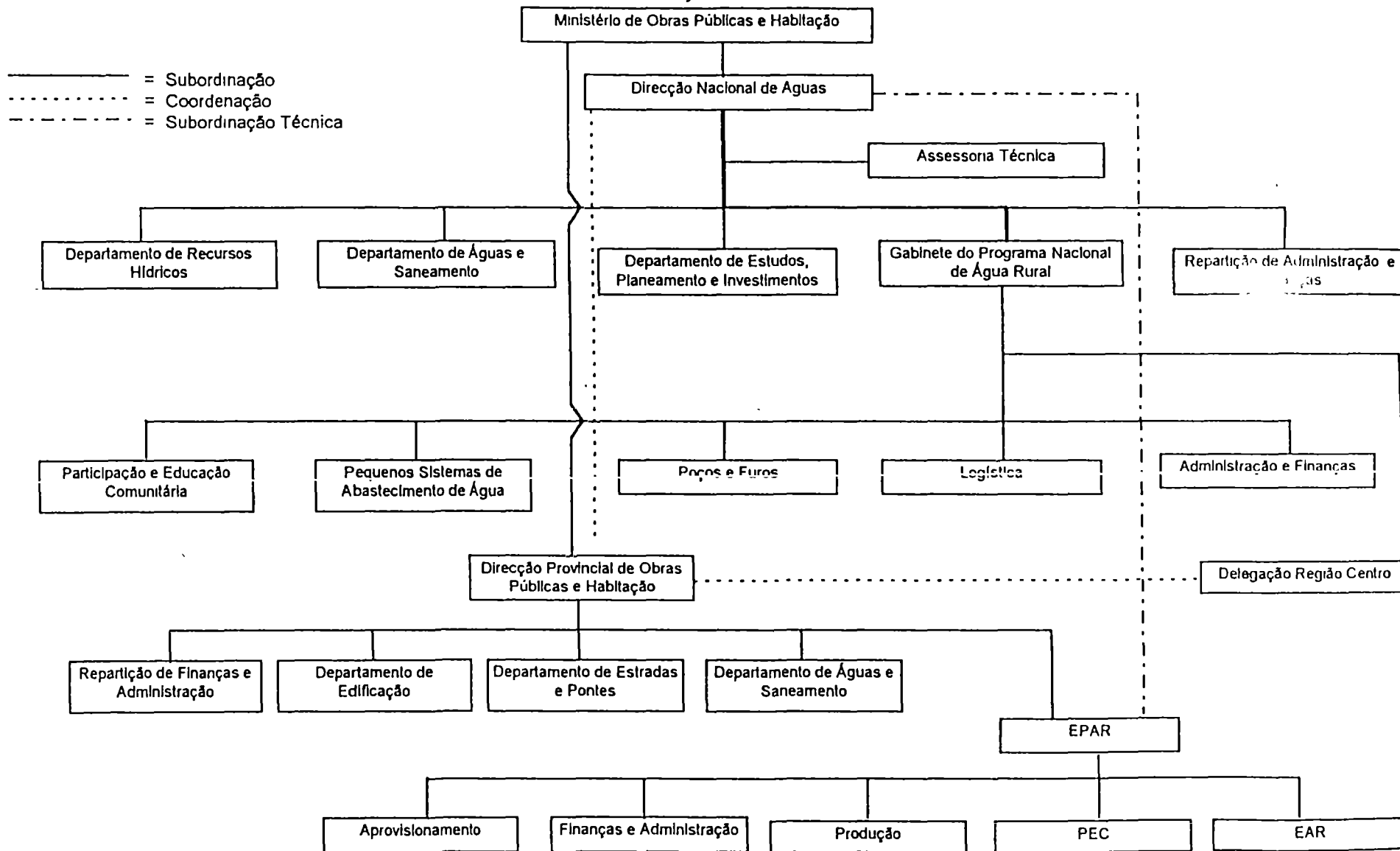


Figure 2 Key Functional Responsibilities for Selected Actors in Rural Water (Actual)

	DNA - PRONAR	DPOPH	EPAR	Private Sector/ NGOs	Administration	Community
1 Programming Phase						
1.1 Establishing objectives	X					
1.2 Development and Promotion of Strategies, Policies and Regulation	X					
1.3 Programme proposals and Funding	X			X		
2 Pre-investment Phase						
2.1 Secure resources	X		X	X		X
2.2 Project Promotion and site identification			X	X	X	X
2.3. Technical and social assessments			X	X		
2.4. Communication		X	X	X	X	X
2.5. Legal acquisition of water and property rights						
2.6 System Management Definition					X	X
2.7. Agreement defining responsibilities between participants			X	X		X
3 Design and Construction Phase						
3.1. Organisation of participant contributions			X	X		X
3.2. Preparation of designs and budgets	X		X	X		
3.3. Acquisition of services and materials	X		X	X		
3.4. Construction and supervision		X	X	X		
3.5. Training in operation, maintenance, management and use	X		X	X		
3.6. Test, approval and system turnover			X	X		
4 Operation, Maintenance, Management and Use Phase						
4.1. Implementation of regulations				X	X	X
4.2. Promotion of appropriate use of services, protection of sources and works						
4.3. O, M & M training activities						
5 Follow up Phase						
5.1. Regulation, monitoring and evaluation of quality of services						
5.2 Technical Assistance			X			
5.3. Auditing						

DPOPHs, however, are still performing O&M tasks for small systems and handpumps, as the idea of user ownership is slow to take hold

Many of the tasks, such as regulation, technical and social assessments, training, construction supervision, monitoring and evaluation, and information management, are only nominally performed within the sector by the actors profiled and often sporadically. For example, currently, no short-term or long-term strategic plans are drawn up for rural water supply or human resource development, design standards are either archaic or non-existent, and no national level MIS is in place. The current structure was built around, and has concentrated on, emergency relief projects over most of the past 10 years. A return, then, to internal stability is key to sectoral development

Currently, four identifiable implementation modes are being used for rural water supply projects in Mozambique. These are

1. Central government funding to the GOM at the national level;
2. Central government funding to the GOM at the provincial level;
3. International donations/loans disbursed to the GOM at the national level,
4. International donor funds disbursed locally through non-GOM structures.

Physical implementation takes place at the local level using a number of mechanisms, including: the contracting of a GOM unit (EPARs), private sector contracts (for well drilling or construction), the use of NGO-salaried construction teams, or the use of paid and unpaid community labour.

A closer look at each of the funding models is provided below.

1 Central Government Funding to the GOM at the National Level

Part of the OGE includes funds for civil works to be disbursed directly through DNA/PRONAR, both for boreholes/wells and small water supply systems. The total amounts available are relatively small, at around US\$ 1 million budgeted for calendar year 1996

2. Central Government Funding to the GOM at the Provincial Level

The OGE also contemplates funding rural water supply directly at the DPOPH level. These funds are made available for hand-dug or hand-augured wells, as well as some O&M, and are channelled through the EPARs or the private sector. The yearly budget for infrastructure is generally small

3 International Donations/Loans Disbursed to the GOM at the National Level

For instance, UNICEF maintains a multi-province rural water supply and sanitation programme, funded centrally through PRONAR and PNSBC. Some funding for school wells and latrines is being channelled directly through DPOPH - Zambezia using local contractors. Materials and equipment are procured in Maputo and also off-shore, but not in the past year. Spending levels have been on the order of US\$ 3.5 million per year.

4 International Donor Funds Disbursed Locally Through NGOs

A multitude of district-level and province-level programmes, funded entirely by international NGOs, can be found throughout the country. Information on the projects is generally exchanged between the DPOPH, the NGO, and the district administrator. Occasionally, NGOs perform work without the knowledge of any local government structure, but that tendency has decreased since the end of emergency conditions. Information, however, on investment levels and services provided are not always supplied by the NGOs to the DPOPH. Project execution can be done by private contractors, EPARs, and in-house NGO construction teams.

3.2 Strengths and Weaknesses of the Current Structure

The following sets of strengths and weaknesses of the existing structures can be highlighted based on the analysis evolved with the Work Groups:

Strengths:

- Centralised implementation has permitted a certain transparency of donor funding at the national level;
- Centralised implementation has been appropriate for emergency programming;
- The PRONAR organisational structure highlighted PEC as a strategic component;
- The incorporation of training institutes (CFPAS, IIM) within the water sector has permitted development of appropriate training;
- With the changing economic situation some decentralisation is being implemented;
- Sizeable international funding has been attracted to the sector through this centralised approach;
- With the changing economic situation, the role of the private sector has expanded for engineering services, civil works and spare parts distribution;
- The existing structure permitted the development of the NWP.

Weaknesses:

- Centralised implementation functions interfere with policy and planning functions at the national level;
- PRONAR's "programme" designation, weakens rural water's status within DNA structure;
- There is a lack of clear lines of command between the EPARs, DPOPHs, PRONAR, and the DAs;

- The legal status of the EPARs is unclear,
- PRONAR involvement in provincial logistics is not only burdensome, but has not stimulated Provincial-level initiative,
- Rural sanitation issues are only being addressed through various pilot projects, managed by the PNSBC and some NGOs;
- Responsibility for co-ordination with NGOs is unspecified and NGOs often do not accept PRONAR's regulatory and programming role,
- Construction management and PEC co-ordination is ill-defined within the EPARs diminishing the involvement of the communities;
- Subsidised EPAR existence can limit private sector willingness to participate in construction activities,
- The unclear legal status for community management groups and district administration of services, as well as the lack of appropriate management models makes PSAA sustainability difficult,
- EPARs often must prioritise GOM work at the expense of other donors contracting their services, limiting the EPARs' ability to attract funds to pay for themselves;
- There is a strong verticality between management levels with little delegation of powers often retarding the decision-making process;
- There exists little capacity for programming with no criteria for establishment of priorities,
- There is a lack of participation of the community in most RWS activities;
- RWS technologies are often imposed by donors, with little consideration given to the availability of spare parts or the appropriateness of the technology;
- Though the NWP exists, there are no procedures or methodologies developed to put it into place nor assess its appropriateness;
- There is a lack of structured monitoring and evaluation activities to permit assessment of the success and failures of policies;
- There are no standardised approaches to assessing the demands, needs and capacities of the communities;
- The apparent participation of communities is brought on by the requirements of the service supplier, not necessarily due to willingness of the community;
- The PEC approach is not standardised, nor is it very much accepted by most players.

3.3 Implications of Strengths and Weaknesses of the Current Structure on Achieving Sector Objectives

An analysis of the current model, vis-à-vis the sector objectives, suggests a series of critical reforms

1. The maximisation of implementation productivity for the achievement of higher coverage levels, requires that lines of command be streamlined and clarified.
2. The legal status of the EPAR must be resolved. It is likely that the implementation elements will be privatised, whilst other elements could be integrated into the DAs

3. PRONAR must eventually withdraw from direct implementation and logistical activities, while assuring that coherent financial and administrative systems are in place at the provincial level, and providing TA as needed
4. Small systems management models must be designed and tested, with attention to the respective legislative reform packages required for adequate implementation
5. Clear, complete, and up-dated standards, technical specifications, and standard tender documentation and procedures should be developed for the full range of service and civil works to be outsourced in the rural water supply and sanitation sector. Special effort should be made to publicise the full implications of these standards and procedures to the private sector.
6. A fully demand-driven approach should be instituted for rural water supply and sanitation.
7. Full recurrent cost recovery should be an integral part of all designs and studies, and provide the basis for user promotion and information.
8. Technological sustainability must be incorporated as a critical design parameter.
9. The Regional PRONAR office in Beira should eventually turn over its responsibilities to the provinces at an accelerated level as compared to the national level, so as to serve as a pilot activity
10. Water source and water point protection programmes should be initiated
11. Support and co-ordination of PEC must be guaranteed.

3.4 Priority of the Rural Water Sector

The stated policy in the NWP is to give priority to satisfying basic needs in water particularly to the rural areas. Table 1 below gives an indication of the relative concentration of effort between the urban and rural water sectors. It can be noted that the urban areas are being given a significantly higher priority.

**Table 1 - Approximate Values Indicating the Relative Concentration of Effort
Between the Urban and Rural Water Sectors**

	% Population (World Bank 1995)	Approximate Budget in US\$ Millions (extracted from the 1996 MOPH Investment Budget)	Water Sector Personnel Involved (from the 1995 Gaspar report on Human Resources in the Water Sector)	Personnel with University Degrees (1994-95)
Urban Water	25%	US\$ 13.5 M	1600	18
Rural Water	75%	US\$ 6.8 M	865	5

4. The Project Cycle

4.1 Overview

The project cycle described below will be used as a frame of reference for analysing how approaches for sustainable development of the rural water sector can be incorporated into all programme/project phases. Best practices will be described for the general case of rural water supply and sanitation, and comparisons made to the actual Mozambican case, within the local and regional context. The proposed institutional structure and transition process developed later in the document, will describe how the Mozambican scenario can be improved using appropriate strategies developed throughout the world.

A five-stage project cycle has been adapted for use in this document. Other project cycle arrangements are possible. The five stages used here are: Programming; Pre-Investment, Design and Construction; Operation, Maintenance, Management, and Use; and Follow-up. Within each phase a number of operative areas are further explored. The areas within each phase are illustrative, and not intended to reflect the entire range of possibilities for any given programme. They do, however, provide ample room for analysis of the major factors of sustainable RWSS programmes.

4.2 Programming

RWSS programming involves the development of overall sector objectives and policies, including the elaboration of long and short-term plans with estimated funding requirements. The ability for programming to respond to ever-changing political, institutional, socio-economic, and technological environments, is critical to its success.

Programming for the RWSS sector in Mozambique has been affected during the last two decades by an unstable environment which included civil strife, changes in political and economic systems, and drought emergency activities. Multi-annual planning, master planning, and long-term strategic planning have not historically been performed. The recent appearance of a coherent National Water Policy (1995) underlies the programming void of the past.

4.2.1 Establishing Objectives

The NWP states the general objective for rural areas as that of providing basic water supply to low income groups. Numerical targets established in the NWP for rural areas address water supply coverage increases at specified levels of service. By the year 2000, 40% of the rural population will be served with water from shallow wells or boreholes equipped with a handpump serving 500 people in a radius of not more than 500 m. Additionally up to 200 small water systems will be rehabilitated. These targets imply the construction of around 6000 new water sources to serve an additional three million people.

At the current rate of implementation *the short-term targets are unattainable*. The NWP further states that the RWS sector requires an additional 11 million US dollars per year

to achieve these goals. This level of financing is not foreseen, but more importantly and as will be suggested, *the institutional preconditions do not currently exist to implement sustainable rural water supply projects in Mozambique.*

It is therefore believed that *the NWP numerical objectives should be replaced by other, more institutionally-related objectives whose aims are to fortify the sector's capacity to reach sustainable coverage goals in the medium-term*

4.2.2 Development and Promotion of Strategies, Policies, and Regulations

As described in section 2.2, the NWP proposes a series of well-crafted policies for the sector. These policies form the backbone of this study. The task of operationalising these policies has slowly begun, as demonstrated by the de-concentration of many logistical responsibilities to the provincial level, the growing participation of the private sector, the strengthening of the national training institute (CFPAS), and the privatisation of Hidromoc and Geomoc. These activities do not respond to a formal plan, therefore, a more concerted and programmed approach is needed.

Answers must be provided to key questions such as how to fully implement a demand-based approach, how to phase out the government's implementation role, how to establish an information management system, how to set up transparent project site selection criteria, and how to raise the productivity of both the private and public sector actors. The proposed action plan developed in this document aims, in part, to fill this programming gap.

4.2.3 Programme Proposals and Funding

The development of programme proposals for rural water has generally proceeded in an ad hoc fashion, initiated more often by international donors than by the GOM, influenced by the difficult period that Mozambique has been forced to experience. The guidance of sector investment has, therefore, been haphazard.

Currently no criteria for establishing priorities can be implemented, due in large part to the absence of information systems containing critical data at the national and provincial levels on user demand, service coverages, unit design and construction costs per service level, O&M costs per service level, the incidence of water-related disease, estimations of the capacity for the GOM, NGOs and the private sector to implement water supply projects, etc. The dearth of basic information along these lines makes the rational use of scarce resources practically impossible.

4.3 Pre-investment

Pre-investment refers to the phase following the commitment of funds to a programme or project, when field assessments and intensive periods of information exchange between project partners take place. *The pre-investment phase is the period during which sustainability can best be assured.*

4.3.1 Securing Resources

Both material and human resources are secured, including the establishment of specific project guidelines and policies. Mechanisms must be instituted to assure that the general principles expressed in the NWP are operationalised in all sector programmes and projects, as highlighted in section 4.2.2. Currently in Mozambique, the task of delineating the implications and applications of the NWP has been addressed in a piecemeal fashion.

4.3.2 Project Promotion and Site Identification

One of the main challenges of project implementation is the identification of specific project sites. Using the policies established at the national level, locally-based structures and institutions must be used to promote water and sanitation programmes both generally and specifically, and identify potential project sites. Some built-in degree of flexibility will ensure that local contexts are respected, but the basic tenets of the NWP must be respected.

The past decades in Mozambique have witnessed a growing passivity among “beneficiary” groups, which must now assume a more protagonistic role as “users” or “clients”. The burden of project identification will shift towards the community as an agent of dialogue initiation. The “ability to choose” implicit to a demand-based approach, will allow a greater range of options, and more time for discussion and the exchange of information. Such an approach requires higher project start-up costs, but will produce dividends of long-term project viability.

Potential economic return (benefit/cost), and per person costs, have been identified by the NWP as project selection criteria. How project sites can eventually be chosen from a likely homogeneous pool of candidates may lead to the application of market forces or, the application of political pressure, for making final determinations. *The development of a transparent process for final project site selection is critical to the sector's long-term effectiveness.*

4.3.3 Technical and Social Assessments

As an important part of the dialogue between project partners, assessing the appropriateness and viability of a water supply system in both its technical and social aspects is vital. Customarily, in Mozambique, a technical assessment is performed, analysing potential water sources, gathering preliminary population figures, observing the general lay of the land and distribution of housing, and generating a preliminary budget. At present, the community may or may not participate in this assessment.

Social assessments are not currently performed in a systematic way. Such an appraisal identifies community interest, organisational capacity, leadership structures, historical perspective, general socio-economic levels, sanitary conditions, local resources (transport, materials, tools, equipment, skilled workers, support groups, etc.) and other more specialised information such as ability to pay, or sanitary knowledge and practices.

Either assessment performed in isolation from the other gives an incomplete portrait of local conditions, making it difficult to assist in the design of an adequate approach to project implementation, or identify the potential for long-term sustainability of the completed infrastructure. Care must be taken in the design of assessments to insure that the required information is gathered, processed, and evaluated in a participatory fashion. Above all, the specific objectives of the assessments must be as clear as possible to avoid compiling useless information that retards the analytic process. *Standardised models and analytical tools for both technical and social assessments should be developed*

Participatory assessments and the application of knowledge, practice and coverage surveys are methods for determining the necessity of incorporating sanitation and hygiene education within water supply projects. Current evidence suggests that demand is currently very weak for sanitation and hygiene education in rural areas and that social marketing will be needed to spur greater demand.

4.3.4 Communications

Communications refers to the identification of, and information exchange between, project stakeholders. Currently, little real co-ordination occurs between local authorities (including community representatives), executive and supervisory agencies, and donor groups. Planning should be a shared experience, with regular planning meetings being held. Transparent agreements should be developed and signed between all active project participants. Designs and budgets should be tied to local level of service needs and ability to pay, and must be approved by all participants. *This requires a major change of philosophy, and must be accompanied by a serious commitment to participatory development (demand-driven approach) which includes a program of awareness-raising among sector actors of emerging policy implications of the NWP.*

4.3.5 Legal Acquisition of Water and Property Rights

Part of the pre-investment analysis demands that water sources can be legally utilised in a water supply scheme, and that the probable sites for works are legally obtained. This is more a factor in small piped systems. In Mozambique, the state is the legal owner of water resources and may extend exploitation rights through the ARAs or DNA. The situation surrounding property ownership has not been a factor to date, but should be monitored as property rights are more fully developed in the coming years, especially in conjunction with the future role of municipalities in zoning and taxation.

4.3.6 System Management Definition

One of the principal means of guaranteeing sustainable water supply is through the adequate definition and support of local management systems. *Currently, in Mozambique, no legally defined management systems exist, at any level.* Government ownership is often clearly established. Unfortunately, ownership does not imply or demand appropriate management. This management vacuum represents, arguably, the greatest current challenge in the sector.

Concurrently planned demonstration projects in Mozambique seek to address this weakness. Unfortunately, these are not being linked programmatically or adjoined to

legislative efforts that the GOM must undertake for legally permitting alternatives for water supply, including community management, private ownership/management, and alternative means of public ownership/management. *Delimiting and regulatory legislation must be developed, especially with regards to small piped systems* All activities must be cognisant of, and concordant with, emerging municipal law and support structures. *Until adequate system management definition and design and construction standards are developed, it is recommended that no new design and construction activity be undertaken for PSAAs.*

The problem of water tariff calculation and application in rural areas is only recently being addressed by the GOM, (Draft Water Tariff Policy, 1997) principally for small systems. *This initiative must be accelerated, while expanding its treatment of point sources.*

Small Piped Systems

Small piped systems (PSAAs) require special consideration when system size, complexity and customer classification are issues. In some cases, project approval and inspection of piped systems may require more technical and management capacity than the Provincial DA can be expected to provide. DAs should always have the option of consulting DNA on piped systems. However, DAs should be required to consult with DNA when projects meet certain criteria, such as:

1. A large percentage of water production is supplied to commercial and/or industrial users;
2. Projects involve inter-provincial, inter-municipal or inter-watershed transmission of water;
3. Projects require highly complex water production or treatment regimes (e.g. need for establishing pressure zones, multiple pumping station configurations, water requiring treatment beyond roughing or slow sand filtration, etc.).

If DNA is satisfied the DA can provide the required technical and managerial capacity, then the DA can assume full responsibility. If not, DNA, in co-ordination with the DA, must assure that adequate capacity is provided.

In all cases, the DA should be the initial contact for piped systems projects. However, systems meeting specific complexity criteria must be reviewed by DNA for design approval, the preparation of design and construction tenders, and inspection of works. This effectively leads to the term "piped systems" instead of "small piped systems"

4.3.7 Agreements

As briefly mentioned in section 4.3.4, formal agreements should clearly spell out the roles and responsibilities of all participating actors. Special issues to be addressed in these agreements include payment schedules (if applicable), water fees; training; project planning; monitoring; policies on the handling and storage of materials, especially of excess materials, terms for project reception, and a clear description of the final

management system. In many rural areas of Mozambique, however, little meaning is attached to written agreements. More participatory, and culturally acceptable, approaches to define mutual roles and responsibilities need to be developed.

4.4 Design and Construction Phase

The design and construction phase has historically received the greatest amount of attention in Mozambique. Here as well, great opportunities are presented for “building in” project sustainability. One of the shortcomings, however, of the NWP is its failure to address the issues of demand-driven, functional, and cost-effective design (including updating standards for design and construction), and the appropriate use of technology.

4.4.1 Organisation of Participant Contributions

As is common with construction projects, more time is often spent in the planning phase than on the construction of the works themselves. In the case of community-based projects, extra effort must be expended in assuring that all actors are adequately organised for making their contributions in an effective manner. This implies the establishment of special systems for the provision, training, and monitoring of skilled and un-skilled labour; the establishment of site-specific rules for community member participation; and overall project monitoring and evaluation.

4.4.2 Preparation of Designs and Budgets

A demand-based design process for rural water supply presents great opportunities for fortifying the sustainability potential of water systems. The “ability to choose” - on issues ranging from level of service including supplementary works such as clothes washing areas, showers stalls, etc., to location and number of public taps or hand-dug wells - not only brings the issue of community decision making to the fore, but also improves the service itself by giving the users what they truly want and are willing to pay for. Choice also provides a unique venue for the participation of women in the decision-making process, to assure the provision of services they value and demand.

The Mozambican experience to date has not been participatory in the design area. Private contractors, including the EPARs, have concentrated on satisfying their needs to complete construction and receive payment, rather than satisfying the needs of the end user. When the user group has the power to approve or reject technical studies and completed works, the appropriateness of those studies and works will increase dramatically. The thought of consumers approving engineering work is not acceptable to most technicians, therefore, *an intensive programme must be embarked upon to sensitise technicians to the demand-driven approach.* Information concerning the commitment to community approval of studies and works must be disseminated to all project participants, including local government and contractors.

4.4.3 Acquisition of Services and Materials

The approval of designs paves the way for the acquisition of services and materials for construction. World-wide, an ever-growing percentage of this work is being performed by the private sector, whether represented by for-profit or by not-for-profit corporations.

The NWP enunciates the GOM's desire to eliminate direct government implementation (This is interpreted as meaning direct construction)

Presently, in Mozambique, an estimated one half of civil works is implemented by the Provincial EPARs. However, an increasing amount of work is being let to private sector entrepreneurs and companies. Private sector capacity, though, varies widely from province to province. Quality of work is generally regarded as substandard to acceptable.

If the GOM is to phase out its own construction capacity, care must be taken to insure that what replaces it can provide quality workmanship in a competitive environment. The GOM must also assure that the human resource potential currently located in the EPARs is not lost to the sector. *Province-specific strategies to deal with the phase out of the EPARs must be carefully prepared and implemented in as participatory a fashion as is possible.*

Similarly, the private sector will require a "phasing-in", to assure compliance with the principles of the NWP. A pro-active policy needs to be developed and implemented for assisting contractors and NGOs in making the intellectual transition from "construction-driven" to "consumer-driven" projects.

4.4.4 Construction and Supervision

As the government phases itself out of direct construction management, it begins to fulfil the role of contract manager and inspector. In a demand-driven approach, the role of "PEC" becomes crucial to the timing of inputs at all stages of the project. *In light of the new "PEC" leadership position throughout the life of project, the role of "PEC" needs to be carefully defined.*

Current practice in Mozambique puts the technician in the leadership role. This arrangement has tended to isolate the community from the construction process, reinforcing their role as a "recipient", instead of their role as "client".

4.4.5 Training in Operation, Maintenance, Management, and Use (OMMU)

The management model selected in the pre-investment phase (see section 4.3.6) defines the training regimen needed in OMMU. Adequate selection and training of operators and/or managers can thus be pre-designed to suit any type of service level chosen.

The community-at-large must also participate in appropriate training, both on how to use the system "hardware", and how to use that "hardware" as a tool for improving the quality of life.

Presently, the Mozambican experience ranges from intense training in OMMU to total neglect of the training issue, the latter case found most often where the local administration or an NGO plays the role of system owner/operator. Community-wide "hardware" training in the proper use of handpumps is normally provided by animators

4.4.6 Testing, Approval, and System Turn-Over

Within a demand-based approach to RWSS, the customer must express satisfaction with the final product. This is partially secured by the community having had the ability to choose among both technological and management options. Once construction is completed, the works are tested for functionality, and either accepted or rejected by the users. A system that supplies good quality water can still be rejected if it does not meet the customer's requirements. Until a system is approved by the users, it cannot be turned over to the management group.

In Mozambique, while system testing is normally performed, little regard has been given to user approval. System turn-over to an appropriate management structure has not been the norm. As mentioned in section 4.3.6, the lack of legally-defined management systems makes a successful turn-over difficult to achieve.

4.5 Operation, Maintenance, Management, and Use Phase

Once the infrastructure has been handed-over to the appropriate management structure, the day-to-day tasks of OMMU take place. The conceptual framework employed in getting to this point, now depends upon the training that was provided during the pre-implementation and construction phases, in order to produce sustainable benefits.

Every major study on rural water supply and sanitation has concluded that the process of long term follow-up is a necessary part of the enabling environment for fomenting sustainability. Especially for community managed works, the technical and social back-stopping that an outside agent can provide, is greatly welcomed by local managers. Advice on keeping ledgers and records, ideas on improving system operation, recommendations as to replacement part and equipment availability and their costs, and sometimes just a sympathetic ear, serves to assist operators and managers, not only in their job performance, but also in their job satisfaction.

The government, the private sector (for profit), and non-profit sector (community associations) can all assume this role. In view of the weakness of the private and non-profit sectors in this area, and also the need for the GOM to provide such a service as an entryway for MIS data collection, it is recommended, at this time, that the GOM take on this role within the DAs.

4.5.1 Implementation of Regulations

How do new families acquire rights to use the water service and at what cost? How is system abuse dealt with? How are user fees reviewed, and as needed, updated? What are the customer's rights and responsibilities? The establishment and even-handed application of system internal regulations must answer these and related questions in an unambiguous fashion. If not, customer confidence will be undermined, and with that, eventually, the desire to pay. *The definition of general regulations (especially for small systems) must form part of the development of the system management options mentioned in section 4.3.6.*

4.5.2 Promotion of Appropriate Use of Services/Protection of Sources and Works

“Appropriate use” is not routinely mentioned as forming part of the project cycle. It is highlighted here in two aspects: 1) how users physically operate and care for the service, and 2) how users maximise benefits through the use of their sanitary infrastructure. Water and sanitation services are tools that can be used either to improve or worsen the quality of life. Water points can be transformed into an appropriate habitat for mosquitoes. Latrines can easily be transformed into primary foci of disease transmission. The educational process, however, is a long and continuous one, that must be approached on various fronts.

Management systems should, therefore, at a minimum provide on-going “operational” information to the users, and optimally co-ordinate with the Ministries of Health, Education, Agriculture, Environment, and the Municipalities, to participate in hygiene education and environmental protection campaigns.

At the present time, women’s groups are given training in correct handpump use, and some basic hygiene messages are also delivered, such as the benefits of clean water and proper water storage techniques. These efforts are undertaken during the brief construction period needed for wells and boreholes, normally less than two months. Co-ordination with other ministries is not sought. Currently, no activities in environmental protection or environmental education are being implemented in the country in co-ordination with RWS programmes.

4.5.3 OM&M Continuing Training Activities

Operators leave town. System managers step down or are moved out. Maintenance techniques are improved, available materials and equipment change, management skills need sharpening. How water supply caretakers and administrators acquire, maintain and upgrade their capacities over time is not always clear. Strategies for assuring that trained personnel are always available to rural water supply services, vary from country to country. The two most exercised options are: regularly-scheduled, government-sponsored national or provincial-level training courses; or private sector technicians (circuit riders), partially subsidised by the government, who provide follow-up and training within a specified geographical area.

Currently in Mozambique, no clearly-defined strategy for training replacement OM&M personnel or upgrading OM&M personnel skills is in place. The draft final report for the Training and Capacity Development Study for the water sector neglects training and continuing training needs in community-managed water supply, both for small systems and point sources.

If sustainable water supply coverage remains a primary objective of the NWP, *a serious effort must be made to address post-construction issues*, such as OM&M training, and the follow-up activities mentioned below in section 4.6.

4.5.4 Availability of Spare Parts

While much can be done at the design stage to assure that appropriate, cost-effective technological options are proposed to the user groups, there will always exist the need for some tools, equipment, services and spare parts in order to keep the water system operative

Much has been done to date by PRONAR in limiting the variety of handpumps. Though this has excluded the use of some VLOM alternatives (especially for direct-action suction pumps), this policy has helped avoid a more serious spare parts availability problem than currently exists.

Despite these efforts, there remains much work to be done in addressing spare parts distribution. Local distributors can be encouraged to stock spare parts by providing a one-time credit for the purchase of the first set of spare parts. Distributors must know that users will be informed that spare parts are available in their shops, and that this implies secondary benefits when people purchase items other than parts from their stores.

Local social marketing professionals should be employed to formulate strategies for stimulating distributor interest in the sale of spare parts in rural areas. Potential marketers must also be provided with data on numbers and locations of pumps as well as future handpumps installation plans. The distributors could also participate in O&M training courses so they could understand how pumps function and how spare parts wear, so they could provide a better service to customers and properly stock their stores.

4.5.5 Water Fees

Water supply systems generally have tariff structures which reflect both capital and recurrent costs. For point sources and piped systems in rural areas, alternative arrangements for payment range from monthly cash fees to agriculture products. *The NWP requires all water infrastructures to be locally maintained, such that all O&M costs are paid by the users.* When credit becomes available for rural infrastructure, capital cost recovery should also be considered.

4.6 Follow-up

In order to complete the project cycle, information from the users must make its way back to the planners. A focused monitoring and evaluation programme serves to identify successes and failures, and ultimately to effect policy change.

It has also been shown that one of the principle factors of sustainable water supply is the provision of follow-up support to community OM&M structures. How this support system is defined and interacts with the community management structure is a critical question

4.6.1 Regulation, Monitoring and Evaluation of Quality of Services

In a demand-based approach, the consumer requires a basic level of service for which payment will be made. When the quality, quantity, and continuity of the service is no

longer seen as acceptable, payment for the service is likely to stop. The consumer has broad powers to demand good service. Customer satisfaction, then, is the best measure of service sustainability. The quantification of customer satisfaction (length of queuing times, water taste and chemical characteristics, pump down time, water rationing, etc.) should be researched, so that this information can be fed back to project designers and builders in order to improve future interventions.

At the present time in Mozambique, no quantification of customer satisfaction is systematically performed.

From the regulatory point of view, what support must be provided in the case of physical, chemical, or sanitary threats to rural water supply sources? What can guarantee that only adequately trained individuals fill positions as system operators? Under what circumstances and in what ways can local management systems be held accountable for failures to follow national standards when expanding a water system or directing the construction of sanitary works? *These responsibilities will soon be passed down fully to the provincial level which will require guidelines for performing its regulatory functions.*

4.6.2 Technical Assistance

Rural water supply organisations may require expert advice on a wide range of issues: everything from system expansion to clogged wellscreens, to appropriate ways to invest growing O&M accounts or how to get recalcitrant customers to pay their water fees. A more subtle issue involves the moral support desperately needed by those who voluntarily manage community infrastructure. Both government and the private sector can supply these long-term technical assistance needs, as mentioned in section 4.5.3.

Currently, technical assistance for rural water supply is delivered on an emergency basis by the DPOPHs and the EPARs, often at the behest of the administrators or governors. There exists little capacity in the private sector or local government to deal with TA in rural settings. A structured follow-up programme suggested by PRONAR for the EPARs has not been implemented. *As a prime factor in the sustainability of RWSS projects, this TA function must be aggressively planned and performed within the provincial water departments (DAs).*

4.6.3 Auditing

A specialised aspect of technical assistance, especially applicable to small systems, is the external auditing of system finances. Consumers are especially sensitive to financial management, and systems for external review must be foreseen in order for trust to be maintained between system managers and users. A transparent auditing process will bolster user confidence, and reduce the risks of non-payment due to mistrust or suspicion.

The developing municipalities of Mozambique have been assigned this task, within their jurisdictions. The auditing of municipal services is to be performed by the Inspector General of Finances and the Administrative Tribunal.

5. Proposed Institutional Framework

5.1 General Observations and Assumptions

5.1.1 Observations

As a background to the proposed alternative institutional model, it is useful to provide some general observations regarding the present situation in Mozambique

- Mozambique is a very large country, with a dispersed rural population,
- There is a generalised process of evolution from a system created during a time of war, drought, centralised economy with free provision of services towards a more peacetime, economically liberalised, democratic, “fee” paying system still under final definition,
- Insufficient basic infrastructure (roads, electricity, communications, buildings, rural access roads, etc.) makes development activities difficult;
- The management, technical and educational levels of the human resources need strengthening at all levels of society (public sector, private sector, communities);
- Water and sanitation systems have been implemented, not necessarily at the request of the users/beneficiaries;
- There is a general acceptance for some form of decentralisation,
- The concept of payment of all the costs of O&M of the Rural Water Systems is generally accepted;
- The commercial network is gradually re-establishing itself throughout the country;
- The spare parts distribution network for RWS is beginning to expand;
- Studies suggest that users have the capacity and willingness to pay for water,
- There is no credit system for any level of water supply or sanitation construction activities,
- For rural users, accessible water is more important than potable water;
- Sanitation is not a high priority for rural communities.

5.1.2 Assumptions

To develop the model, certain general assumptions had to be made:

- The new institutional structure must conform to the tenets of the National Water Policy (NWP);
- The rural water and sanitation sector will remain within DNA and MOPH;
- Significant external support for rural water and sanitation will continue, not only for implementation but also for institutional strengthening;
- The Government is willing to decentralise,
- The Government will gradually withdraw from direct project implementation;
- Implementers will accept the Government’s role in setting priorities and regulation;
- Implementers will provide services according to the desires and capacities of the users.

5.2 Proposed Alternative Model - Provincial Level Deconcentration

The ideas embodied by the NWP require fundamental changes in existing structures. At the same time, change can only occur within an enabling environment: responsibilities cannot be deconcentrated to weak provincial levels, an inexperienced private sector will not provide work of adequate quality; experienced professionals will not be interested in relocation without acceptable incentives. This enabling environment can and must be constructed over time. It must, therefore, be kept in mind that a period of years will be required before the final model can be fully implemented.

The Organisational Structure is represented in Figures 3.

5.2.1 Description of the Alternative Model Institutional Structure and Functions

Model Institutional Roles

The National Rural Water Programme (PRONAR) is to be recognised as the Rural Water Department (DAR), within the MOPH. DAR will retain some of the legislated PRONAR functions. However, changes will have to be made in the internal regulations to accommodate DAR's evolving responsibilities, which will include developing standards, regulation, providing sector direction and guidance.

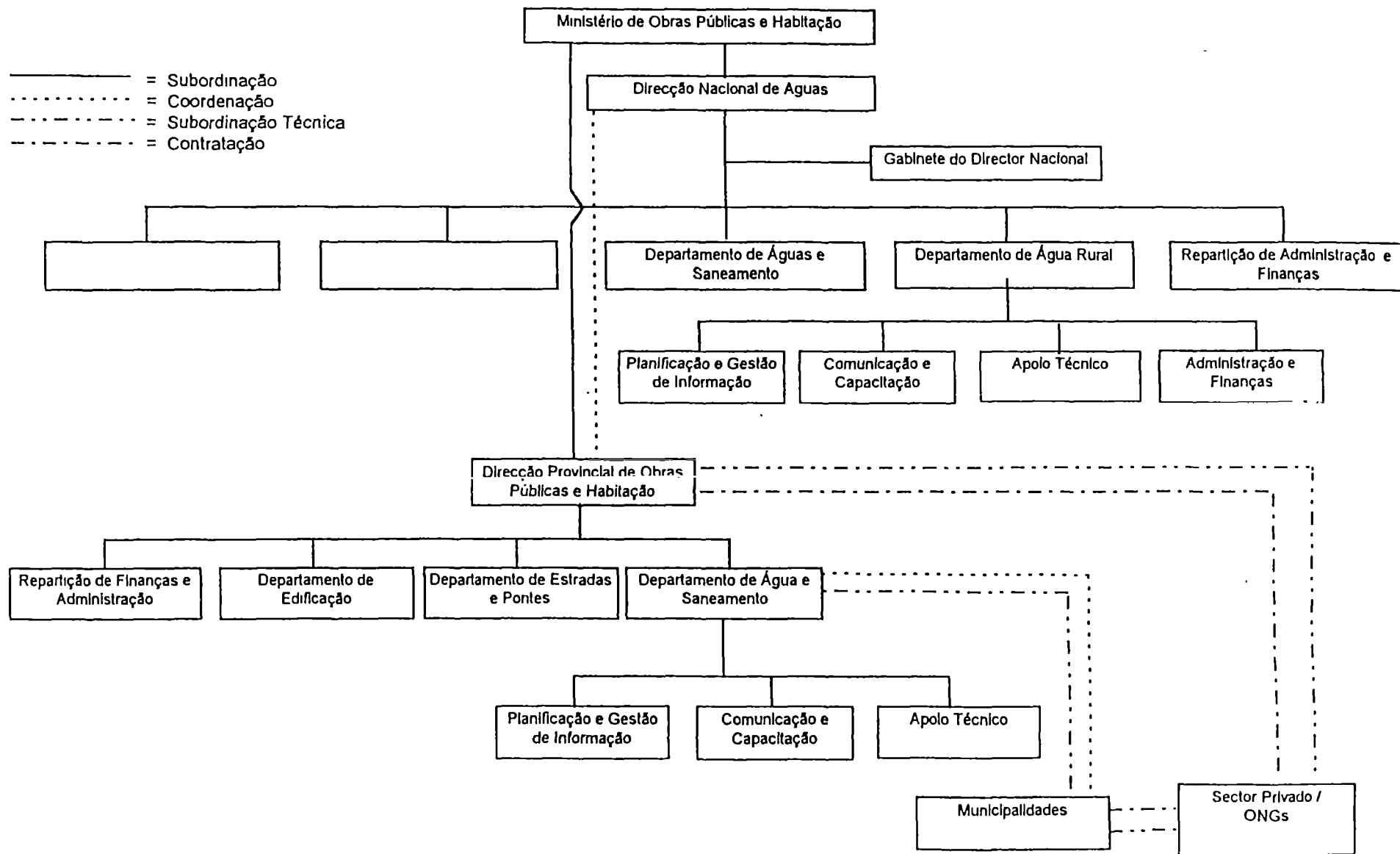
Strengthened DAs, within the DPOPH, assume responsibility for contract management and sector-wide co-ordination at the provincial level. As municipalities form and begin to exert their autonomous functions, the DA (along with the DAR, DNA, CFPAS, IIM, MAE, and others) will play a strong part in preparing them for long-term technical and administrative roles in water supply and sanitation activities at the municipal level.

Project execution is performed through several channels, including NGOs, the private sector, and the EPARs. The EPAR is to be phased out of the government, with some technical sections joining the DAs and assistance given to Production Units to become private sector actors.

Communities and municipalities will develop the capacity to own and operate their water supply services. Enabling legislation is clearly critical to this process. Municipalities will develop the capacity to provide monitoring and evaluation, as well as information management, with regards to water supply and sanitation coverage, O&M, needs assessments, etc.

Project Management Units may appear, as donors seek ways to channel project funds. These will be regulated at both the national and provincial levels, by DAR and the DAs, respectively.

Fig. 3 ORGANIGRAMA DAS INSTITUIÇÕES DO GOVERNO - AGUA RURAL Alternativa



Internal Structures and Lines of Co-ordination

DAR will be composed of four Units, namely Planning and Information Management Unit (PIMU), Communication and Capacity Building Unit (CCBU), Technical Support Unit (TSU) and Administrative and Finance Unit. A possible organisational structure can be seen in Fig 4

Co-ordination between the national and the provincial levels is between DAR and the DAs. The DAs will be structured identically, except that the Administration and Finance functions will be carried out by the existing DPOPH structure. Section 5.3.2 suggests some possible roles and responsibilities at the national and provincial levels.

The provision of adequate technical and organisational assistance from the CCB Unit is critical to sustainability. The CCB role, in the short to medium term, belongs within the DPOPH/DA, for pre-project and post project interventions since no single, viable alternative currently exists. It is envisioned that the CCB role will eventually be devolved to the municipal level. CCB activities during construction would be the responsibility of the implementing agencies (NGO, private sector, etc.). It should also be kept in mind that water supply and sanitation service levels will evolve as communities achieve a higher standard of living. This suggests a continuing role for qualified personnel at the local level, who can be trained at the provincial level.

Figure 5 describes the key functional responsibilities for selected actors in the proposed rural water model.

5.2.2 Proposed Model Implementation Regimes

The Proposed Model uses the same implementation regimes as the current Model except that for water supply, no funding is made available for direct implementation at the national level.

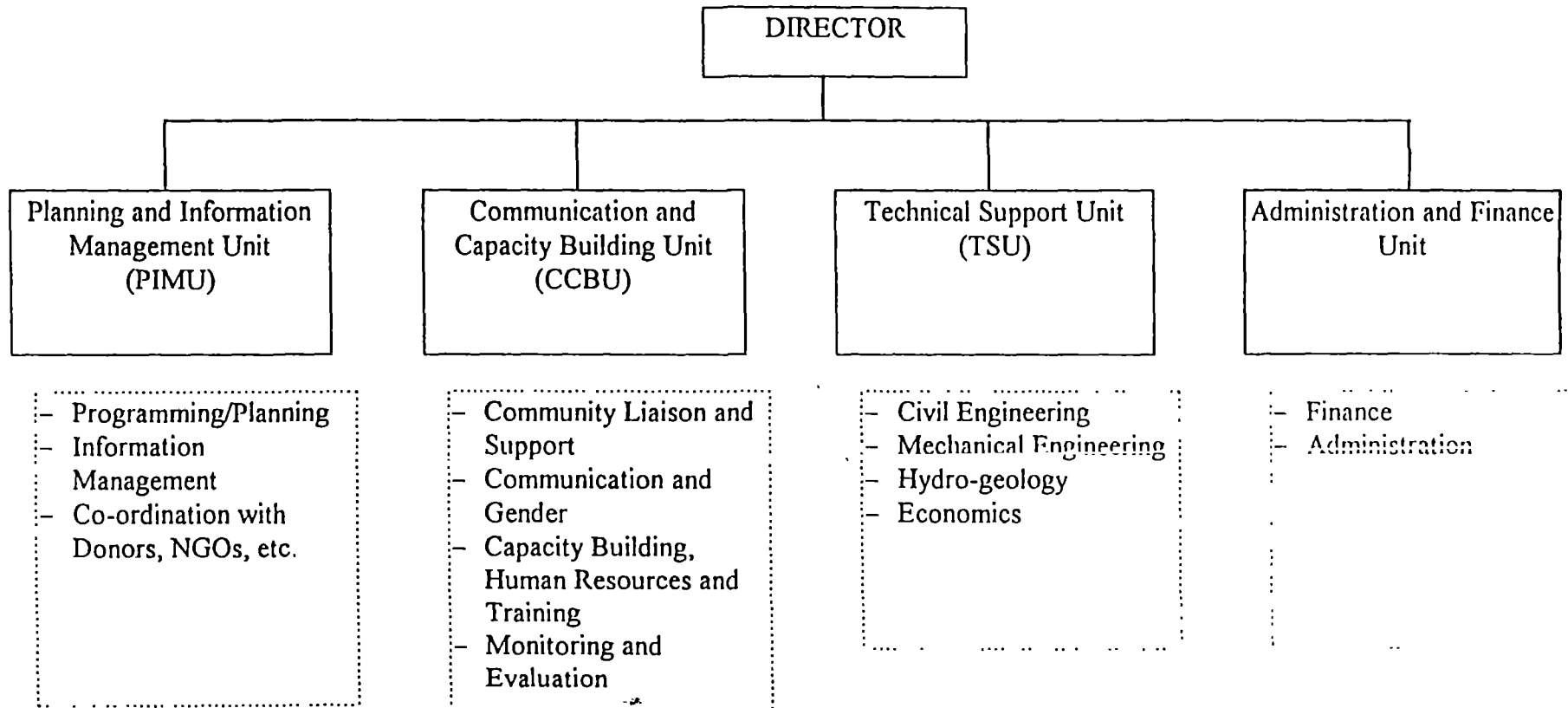
5.2.3 Strengths and Weaknesses of the Proposed Model

The possible strengths and weaknesses of the Proposed Model are shown below.

Strengths

1. Provincial responsibility and initiative stimulated.
2. DAR able to concentrate on key sectoral tasks.
3. Municipal participation is anticipated and planned for.
4. The private sector obtains unbiased treatment in tenders
5. Clear lines of command and co-ordination
6. Forces clarification of the legal status for community and municipal management.
7. Facilitates NGO participation at the provincial levels.
8. Training begins to be decentralised to the provinces and municipalities
9. Rural water supply and sanitation can be more closely co-ordinated.

Fig. 4 - Proposed Organisational Structure for DAR-PRONAR



Weaknesses

1. The DA must create the capacity to absorb several functions previously provided at the central level
2. The deconcentration process will probably not be accompanied by the posting of experienced central level staff to the provinces
3. Donors previously working through the central government may have little confidence in provincial management structures and reduce investment levels.
4. Reform is required within DNA statutes and regulations, as well as at the municipal and community levels.
5. Loss of understanding at central level of common problems faced at implementation levels.
6. Initial slower increases in service coverage levels.

Figure 5 Key Functional Responsibilities for Selected Actors in Rural Water Alternative Model

	DNA - DAR	POPH / DA	Private Sector/ NGOs	Administration	Community
1 Programming Phase					
1.1 Establishing objectives	X	X			
1.2. Development and Promotion of Strategies, Policies and Regulation	X	X			
1.3. Programme proposals and Funding	X	X	X		
2. Pre-investment Phase					
2.1. Secure resources		X	X		X
2.2. Project Promotion and site identification		X	X	X	X
2.3. Technical and social assessments		X	X		X
2.4 Communication		X	X	X	X
2.5. Legal acquisition of water and property rights					
2.6 System Management Definition		X		X	X
2.7. Agreement defining responsibilities between participants		X	X	X	X
3 Design and Construction Phase					
3.1. Organisation of participant contributions		X	X	X	X
3.2. Preparation of designs and budgets			X		X
3.3. Acquisition of services and materials		X	X		X
3.4. Construction and supervision		X	X		X
3.5. Training in operation, maintenance, management and use		X	X		X
3.6 Test, approval and system turn-over		X	X	X	X
4 Operation, Maintenance, Management and Use Phase					
4.1. Implementation of regulations			X	X	X
4.2. Promotion of appropriate use of services, protection of sources and works		X			
4.3. O, M & M training activities		X	X		X
5 Follow up Phase					
5.1. Regulation, monitoring and evaluation of quality of services		X			X
5.2 Technical Assistance		X	X		
5.3. Auditing		X	X	X	

5.3 Human Resources in the Proposed Model

5.3.1 Introduction

An analysis of the NWP and its implications can provide a guide to human resource requirements for the proposed model

It is useful to note that while the NWP does not suggest completely new approaches to the sector nor impose totally new structures to implement the ideas, it does present the requirement of a critical change in attitude for all players in two major areas: demand-based programming and decentralisation with government acting as facilitator.

It has been shown that the concept of demand-based programming is key to policy implementation. This requires an attitude on the part of all players that:

- user groups are capable of taking on civic responsibilities;
- user groups are able and willing to pay for some aspect of their services;
- this payment is a community investment;
- government's role is to facilitate this process through subsidy where needed;
- government is accountable to the community it serves.

In order to arrive at the demand-based approach, the NWP states that the sector capacity will be expanded by human resource development, the definition and implementation of new institutional arrangements, the active involvement of beneficiaries (users) and new roles for governmental, non-governmental and private organisations.

Further it states that water and sanitation services should be decentralised to the local level and that government will withdraw from direct implementation. This means that capacity must be built up at the local level so that these responsibilities can be accepted and carried out. The basic attitudes needed for this include:

- user communities can be assisted to have decision-making and enough technical abilities to both finance and manage a system;
- government must act as facilitator of a process that requires "listening" to community views;
- the private sector and NGOs can be trained to carry out tasks earlier performed by government.

5.3.2 The NWP Impact on Roles and Responsibilities in the Sector

The roles and responsibilities (functions) for the sector will be divided into:

- Government Agencies: national and provincial
- NGOs and Private Sector
- User groups or communities
- Civil Administration

5.3.2.1 Government Agencies

a) National Level

DNA

While the lead agency in the rural water sector is PRONAR, it is institutionally a department of the DNA within the MOPH. This leaves DNA with an overall sector responsibility for setting sector policy; sector promotion and resource mobilisation, and sector co-ordination and staffing.

Capacity required: understanding of demand-based programming, decentralisation needs and purpose of provincial demonstration projects

DAR/PRONAR

The most important issue for PRONAR at the present time is to develop strategies for changing focus from its current role as the major project executing agency to one consistent with the general view of government as facilitator rather than service provider. This emphasis on project execution distracts PRONAR from its important functions in planning, policy formulation, regulation, training, research and monitoring.

General Functions:

Program Co-ordination and Planning

This includes long and short-term planning, budgeting and co-ordination of activities in the rural water sector, including the preparation of the annual workplans and budgets. Equally important is external liaison and co-ordination of rural water investments supported by other government agencies, NGOs and ESAs

capacity required: strong conceptual understanding of Water Policy and its implications; experience in management; experience in policy development; long term strategic planning, budget preparation; communication and media skills.

Regulation and Communication

PRONAR will be called upon to interpret the NWP by setting guidelines, norms and regulations.

capacity required : ability to interpret NWP at both social and technical level. Knowledge of communication.

Program Capacity Building

PRONAR will be required to interpret capacity needs for the NWP, co-ordinate a training program for government personnel and monitor the capacity building effort for

NGOs and the private sector; monitor training materials and manuals, promote the use of participatory techniques in all aspects of activities, co-ordinate hygiene education campaigns with other agencies, promote gender strategies; community participation strategies, and socio-economic studies

capacity required : At a broad programme level be able to oversee training needs for technical and social programme. Knowledge of adult education techniques, participatory processes and curriculum development

Technical Support

Research and promotion of various technological choices, appropriate use of technology; spare part distribution; advise on water tariff policy; supervise contract management procedures including the development of standardised contract documents; monitor application of technical norms and standards.

capacity required: understanding of technical needs for low-cost rural water and sanitation; experience in administering small contracts.

Monitoring and Evaluation

This includes the continuous monitoring and evaluation of the program and management of the MIS. Supervision and control of the collection, transmission and quality of data required for MIS,

Capacity required: data processing and management skills, knowledge of computer systems and computer software suitable for large MIS.

Research and Development

Research into community management arrangements, water source management issues; communication; participatory techniques; appropriate use of technology.

Capacity required: strong knowledge of needs of rural water and sanitation sector;

Organisational Structure

The present PRONAR organisational structure is more suited to PRONAR's former role as implementing agency and should be changed to reflect the tasks and functions outlined above.

A suggested organisational format could include groupings of functions with unit heads consisting of: Planning and Information Management Unit (PIMU), Communication and Capacity Building Unit (CCBU); Technical Support Unit (TSU) and Finance and Administration Unit. The long term goal would be to have each person heading a Unit

hold a University degree relevant to the disciplinary needs of the Unit. This requirement could be phased in over a period of time.

An Organisational Chart for the new DAR-PRONAR is presented in Figure 4.

Suggestions for job descriptions for key posts in DAR-PRONAR are in Annex 2. These job descriptions are not intended to be definitive. Their purpose is to illustrate the type of roles and responsibilities expected for each position.

b) Provincial Level Government Staff

With decentralisation, responsibility for the facilitation of implementation moves to the provincial level.

The key players for facilitating provincial and district level implementation will be newly strengthened Departments of Water (DAs) who will report to DPOPH. During project implementation, DAs will be responsible for contracting out to the private sector for field staff on both the social and technical side. Some of these field staff may become available through the phase-out of the present government supported EPARs. It is visualised that increased strength in social and technical water and sanitation support work will be developed in the private sector over time.

The local civil administration will have a key partnership role to play in rural water and sanitation implementation. Local civil administration will be the body responsible for creating the link between user communities demand process and government's role in facilitating implementation through the private sector.

Provincial Directorate of Public Works and Housing (DPOPH)

A proposed organisational chart is presented in Figure 3. As in the national level, the body responsible for facilitating rural water at the provincial level is housed in the Department of Public Works and Housing (DPOPH). The DPOPH is therefore the body responsible for creating and maintaining the link between the DAs and the civil administration through its direct link to the provincial Governor and local Administrators. DPOPH is also the reporting link between DAs and DNA (DAR/PRONAR).

capacity required: a thorough understanding of the implications of demand-based programming for the rural sector and a knowledge of the roles and responsibilities for the DAs.

The Department of Water (DA)

The Department of Water (DA) will be strengthened to become the key government facilitating unit playing a pivotal role linking the communities, private sector and civil administration. The new DA structure will consist of a small multi-disciplinary team.

made up of specialists in social (communication and capacity building) and technical areas trained in rural water supply and sanitation technologies, as well as contract management and administration. This twin multi-disciplinary group will be led by a manager who could be from either the technical or social side in training. His/her chief qualifications would be grounded in his/her ability to manage. A Provincial Planning and Information Management Unit (PPIMU) will be situated under the manager of the DA.

The DA team is a permanent government team. During project implementation the DA team will be responsible for identifying, contracting and supervising the training of a local team of technical and social animators from the private sector. They will also be responsible for follow-up supervision of field work. Further, they will carry the responsibility for managing contracts with the private sector for design, construction and maintenance.

General Functions:

General Management

- Ensure compliance to the NWP on part of all involved in the sector
- Planning and programme design at provincial level
- Inter-agency co-ordination
- Liaison with local administration
- Financial control including contract payment

Communication and capacity building

- Supervision of training of contracted extension workers (both social and technical).
- Supervision of training of artisans and mechanics in the private sector
- Co-ordinate hygiene education campaigns
- Supervision of extension workers during project implementation (quality control)
- Co-ordination with Civil Administration (municipalities, administrators) on demand-driven policy

Technical support

- Assure that designs for small systems, boreholes and wells are done according to norms and regulations
- Inspection of PSAA, borehole and well construction
- Assure local availability of spare parts, material and equipment
- Technical assistance on the setting of water rates, water source protection and treatment
- Preparation of bidding documents and contracts for design and regulation of norms and standards for construction
- Inspection of newly constructed works

Monitoring, Supervision and Data Collection

- Monitoring and evaluation of handpump functioning (data collection)
- Collect data for MIS
- PSAA monitoring and evaluation

During project implementation (for example, during the Provincial Demonstration Projects proposed in Chapter 6), the DA team will be responsible for identifying and contracting local animators from the private sector. People with some experience and training may be found from the newly phased-out EPARs. Others could have experience through working with NGOs or other government departments. Capacity building of these private sector animators will be the task of the DA team (with possible assistance from the DNA Training Centre's TOT team proposed in Chapter 6).

In order to properly define the jobs needed and the number of people to be hired, DAR-PRONAR will have to organise a participatory HRD needs assessment for each province.

Suggested job descriptions are presented in Annex 2 as a way of illustration. The final job descriptions and basic qualifications for the DA Communication and Capacity building and Technical team members should be drawn up by DAR-PRONAR in consultation with DPOPH.

5.3.2.2 Private Sector and NGOs

The NWP clearly indicates that the government should not directly implement projects. It is further recommended in this study that not even a small capacity for construction be retained, since this would lead to inconsistencies with the approved approach to private sector initiatives.

The private sector, however much it is touted as a solution for project implementation, requires a careful approach lest water sector activities be unnecessarily slowed. A province-by-province assessment of private sector capacities must be performed in both the service (PEC, engineering, drilling, etc.) and the construction areas (civil and mechanical works). This activity must be programmed within the formulation of the Provincial Decentralisation Transition Plan.

EPAR phase out provides an opportunity to strengthen the private sector with experienced staff in both the technical and social areas. A placement programme should be developed for each province so that EPAR staff can be marketed to existing private sector companies. Those with an entrepreneurial bent should be encouraged to establish private consulting and/or construction firms through Small and Medium Enterprise (SME) training activities. Lease-purchase agreements could be arranged to support this process. Alternatively, tools and equipment could be sold to private firms for lease/rental by contractors, permitting in this way equitable access to these capital goods. All these concepts must be examined on a province-by-province basis in light of possible donor-

specific constraints, the existing capability of the private sector, the magnitude of the EPARs, etc

Other possibilities for private sector strengthening at the Provincial level include the provision of specialised TA in marketing, construction management techniques, and financial management. All private sector actors should be obligated to be trained in the NWP and its implications as a pre-requisite for receiving contract advances. Information should be routinely circulated to private sector entrepreneurs and companies as to the staging of relevant training events. Participation in such events would award competitive edges in the tendering process.

The new DA team would have input in designing the roles and responsibilities for contracted extension workers from the private sector. It is hoped that during the Transition Period proposed in Chapter 6, staff from the newly phased-out EPARs may take on these positions. Over time the field staff may form private sector consultancies or NGOs to fulfil this function. Private contracting companies will be hired to handle construction.

Potential tasks of these extension workers are listed below.

Animators

- participatory needs assessments
- assistance in technology choice
- community capacity building
- hygiene, health and sanitation education
- establishment and training of committee
- organisation for community fund
- assisting communities in data collection

Technical Team

- provide information to communities on technology choice and design
- co-ordinate training and activities of contractors
- data collection and planning
- design of water supply systems with communities
- supervision of construction
- training of caretakers and maintenance groups

5.3.2.3 User Groups and Communities

In a demand-based system, user groups or communities take on new roles and responsibilities. The change from "beneficiary" to "client" implies a major role for the community in the development process - they make the decision to develop a new water supply, choose the type of facilities, and take an active role in planning and building them. Since water is women's business, women must play a key role in making decisions.

on the facility and how it is to be financed and managed. At completion, the community will be responsible for the new facilities - they will manage and maintain them. If they break down, the community will repair them and pay for parts and repairs.

Capacity building for communities to help them handle the required task will be a major focus for the field teams.

5.3.2.4 Civil Administration

In the NWP, the Civil Administration will play a key role in facilitating the demand process. The provincial DA will work with the staff of the Civil Administration to work out the modalities of the communication process to stimulate demand. The Civil Administration office will be the centre point for receiving and processing community demand. How this is done may vary from province to province and even district to district. The Provincial Demonstration Projects proposed in Chapter 6 will be the vehicle to work out the details for specific locations.

5.4 Communication Strategy

5.4.1 Introduction

One of the most important and fundamental changes required to improve the sustainability of investments in water supply and sanitation is the introduction of a mechanism for incorporating community demand into the process of planning and project selection. This is an area where the lowest level (most accessible) local authority has a clear role to play both in informing communities through the public media about the water programme and in receiving and processing community requests according to project criteria previously set by PRONAR, DPOPH with input from the local civic administration. In this case, it would be the Administrator/municipality.

While it is true that aspects of this concept of "demand-based" programming in rural water is not entirely new to Mozambique (requests for water facility improvement already come to local administrators), two small but critical points change the perspective. First, what is important is that potential users must voluntarily come forward to make requests to "buy in" to the programme based on widely disseminated information on its rules and criteria. This concept of "buy in" generates the second important point which calls upon a change of attitude for the whole programme turning user groups from "beneficiaries" to "clients." The implications of this are profound for it means a change in roles, responsibilities and attitudes for all stakeholders in the sector. Communities (user groups) must take on their civic responsibility for managing their own services rather than expect handouts. Government must learn to see communities as responsible partners and clients rather than recipients and play the role of facilitator of community knowledge and decision-making rather than implement projects on the community behalf.

In order for this change in strategy to succeed, several actions must be taken.

First, guidelines must be clearly laid out and promulgated by DAR-PRONAR backed by norms, regulations and a system of supervision and monitoring at both the national and provincial level

Second, the roles and responsibilities emerging from the new strategy must be clearly defined for each actor (DAR-PRONAR, DPOPH, DAs, NGOs, private sector and communities) with a widespread training programme which addresses both the common need to understand the implications of the new policy, and individual training packages for the separate training needs of particular actors

Finally, there is the important but mostly overlooked need to establish an overarching strategy that addresses the different communication needs of the programme and provides the link between government, private sector and communities.

5.4.2 The Need for a Communication Strategy

One area, often overlooked in planning a water and sanitation programme, is the need for a clearly articulated and systematic communication strategy. The inclusion of a planned communication strategy not only recognises the necessity of communicating with people (at the heart of a water supply project), it articulates the needs of each stakeholder and helps find a way to bridge the gap between planners, government agencies, private sector and communities. Communication can also both compliment and, in some cases, substitute for the regulatory framework. It can compliment because the design and successful implementation of a rural water policy requires a level of dialogue between those who design or implement the policy and those who are addressed by it. It substitutes for other instruments when it motivates people to change their behaviour voluntarily. In fact, the opening of a two-way dialogue between policy makers and stakeholders may be the only way to cope with issues related to change of behaviour around health and hygiene, for example, where regulatory instruments do not always apply.

In order to be effective, a communication strategy must be deliberately and systematically planned. While most programme planners assume (correctly) that some level of communication will take place, whenever it does, it does so on an ad-hoc basis without necessarily reflecting the communication needs of differing groups of people nor does it facilitate a two - way dialogue between planners and people.

In Mozambique, DAR-PRONAR will have to communicate the needs and norms of the sector to other government agencies, donors and executing agencies. It will also have to develop feedback mechanisms to help oversee that these norms are being followed. Methodologies will have to be found to channel information from the field systematically back to the central planning agency for continuous monitoring and fine tuning of the norms and regulations for the sector.

At the community level, people will be expected to manage their new water and sanitation systems. To help bring this about in a sustainable fashion, communities will be involved in project selection and planning, implementation, appropriate use of sanitation

facilities, hygiene education and on - going infrastructure upkeep and maintenance. Government officials, consultants and other intermediaries will be expected to facilitate this process through strategies that bring people into the planning process and provide feedback channels from the community back to the central government planners.

Communication inputs for these critical areas in a rural water strategy cannot be left to chance but must be integrated into the strategy development process as a whole. None of this is difficult. The challenge lies in recognising its importance and providing space within programmes and budgets to allow it to happen. In the final analysis, no amount of investment or provision of technology and inputs will bring any lasting improvements in the living standards of people unless they, themselves change their attitudes and behavioural patterns. Communication planning is pivotal because it recognises and caters to these human dimensions.

5.4.3 Communication Needs

To illustrate this, we can look at the NWP communication needs in key areas:

- a) Interpret and promote the New Water Policy (NWP)
- b) Broaden water sector relationships
- c) Facilitate demand and request process
- d) Stimulate demand
- e) Assist in participation approach
- f) Monitoring and feedback

5.4.3.1 Promotion of NWP

The uniformity of the application of the NWP is crucial to its success. New actors (donors, NGOs, other government departments) entering into the sector must be thoroughly briefed on all aspects of the strategy. There is also a need to promote the strategy to other government departments (health and agriculture, for example). Project implementation will require full consultation on the NWP to government officials (governor, administrators etc.) at the provincial and district level.

To do this, PRONAR personnel will have to first become conversant themselves with the implications of the NWP. Next they will have to be trained in media relations and presentation skills to assist them develop the dialogue with donors and other government people. It would be useful to have the NWP publicised in simple language through popular media such as pamphlets, radio scripts and handouts.

Communication possibilities: prepare simple, printed pamphlets and leaflets on the NWP; disseminate information through media (print, radio and television); hold public consultations at the District level.

5.4.3.2 Broaden water sector relationships

At present, the rural water sector in Mozambique operates in a hierarchical fashion without much co-ordination with other government departments, NGOs and private

5.4.3.5 Assist in the participatory process

Participation is a key word for the NWP. This means that methods must be found to facilitate user group participation in all phases of a water project beginning with request, through to identification, project planning, design, construction and follow up. The intermediaries chosen to assist in this process can benefit from interpersonal communication skill training to help them facilitate the community (and others) in the participatory process.

Training for facilitators in interpersonal communication skills, participatory training methodologies and participatory needs assessment.

5.4.3.6 Monitoring and feedback

A new style of participatory monitoring and evaluation will be needed in order to be consistent with, and provide support for, meaningful user participation. This approach puts emphasis on community involvement in data collection for monitoring their own systems. This type of evaluation becomes an essential tool for management of change, and the data collection-learning-evaluation process becomes an integral part of overall implementation. It calls for a partnership approach between project staff (executing agencies) and community people. It also presupposes the need for a feedback mechanism to channel information and lessons learned from communities to executing agencies and from executing agencies to decision makers at DPOPH and DA and from there on to policy makers in DAR-PRONAR. Communication planning is essential here to provide: a) a structured communication system to ensure that feedback flows from communities to decision makers, and b) an occasional and more direct route of information flow between communities and decision makers.

DAR-PRONAR staff will have to have explicit responsibilities to travel and make periodic site visits. Communication methodologies such as community radio or interactive video can be used on a selective basis to feed information from the community back to DAR-PRONAR planners.

5.4.4 Communication Requirements and the Project Cycle

PROJECT CYCLE	COMMUNICATION NEED	PRINCIPAL ACTORS
PROGRAMME	prepare workshops, consultations, roundtables and media coverage on NWP	DNA and DAR-PRONAR
PRE-INVESTMENT	media campaigns to promote water project feedback on request to communities prepare awareness raising campaigns to stimulate demand participatory needs assessment with user groups demonstrate technology choice	DPOPH, DAs, Animators and communities
CONSTRUCTION	supervision skills	DAs, Animators and communities
OPERATION, MAINTENANCE, MANAGEMENT AND USE	Participatory management	Communities
FOLLOW UP	monitoring and feedback mechanism	DAs, Animators and communities

5.4.5 Communication Planning

While it is anticipated that TA will be needed to provide DAR-PRONAR and DPOPH/DA staff (and other partners) in communication training, this work can be coordinated with the Centre for Social Communication and can draw on experience from UNICEF, FAO and others.

Basic principles to guide the communication planning process:

1. Communication is not the same as "telling." The words "to communicate" imply a two-way process. A communication strategy must include the opportunity for feedback from the audience to the sender and back again. This feedback is critical. When people are allowed to participate in the process of defining and implementing the rules for their own water strategy, the potential for sustainability is accelerated.
2. A corollary to this is the need "to listen." Communication requires "listening." If the messages coming back across the feedback loop are not listened to (and acted upon where appropriate), communication is not taking place.
3. A communication plan requires a comprehensive fact-finding phase. Those preparing the strategy cannot make assumptions as to what others need to know or hear without first finding out what they (the target audience) already know and what they may want to hear.
4. Channels for communication must be chosen for individual target audiences and with the participation of the target audience. If, for example, there is a need to promote the Rural Water Strategy with executing agencies, find out from those executing agencies how they would like to see the strategy promoted.

A Communication Planning Sequence

- identify and articulate key issues to be communicated
- identify individual target audiences (all stakeholders)
- research each target groups **current** knowledge, attitude and practice around the required **future** change in behaviour
- develop messages based on current behaviour and needs for future action
- pre-test messages
- identify appropriate communication channels
- prepare communication materials
- pre-test materials
- train communicators
- develop indicators to assess impact
- implement communication programme
- assess impact based on indicators and providing a feedback loop to adjust programme design.

6. The transition process

6.1 Guiding principles

Change can assume either positive or negative implications, depending on the way in which it is managed. The transition process must be directly addressed in as participatory a way as possible. It must clearly be stated and often repeated that 'things will be done differently'. And actions must bring the meaning behind the words to life. Establishing a set of guiding principles under which the transition process will operate assists in setting the tone for new ways of doing business.

From the brief analysis in chapter three it is clear that rural water has not received its fair share of attention. This should concern not only rural water sector professionals, but indeed, the national government as well. The new DAR/PRONAR must assume an increasingly proactive role in defending and expanding its role and programs. To be effective at doing so, DAR/PRONAR must devise and implement a promotional strategy, aimed at influencing the decision-making process of the GOM, DNA, donors, NGOs, associated ministries, and municipalities, to more fully assist communities in their struggle to improve their quality of life.

To be truly effective, the DAR/PRONAR must drive the transition process from within, not be changed from without by multi-national institutions, donor governments, or NGOs. This does not imply an introspective or self-righteous approach to the sector, on the contrary, it implies reaching out in a structured and efficient way to those who want to assist the Mozambican rural population live healthier, more productive lives.

One of the implications of these guiding principles is the need for a greater professionalisation of DAR/PRONAR. Rural water must receive its due share of the nation's most senior and experienced professionals, and with them, appropriate resources to program, plan, research, design, and grow. Without a substantial increase of resources flowing into the rural water sector, and the nurturing provided by the nation's most capable professional assets, the recommendations generated by this study may never reach their full potential.

6.1.1 Definition of approach

As decided by the study Steering Committee at the start of the second consulting mission, the approach to be taken in drafting the final report was less concerned with organisational structures, and more concerned with testing a new approach to assuring sustainable water supply programmes in Mozambique.

In spite of the likelihood of increased funding to the water sector, it is not realistic to envision the undertaking of a major overhaul of the entire sector, simultaneously in all provinces. Current levels of personnel, both by number and by profession, does not allow for rapid and controlled growth.

The proposed solution to attaining an improved institutional framework for sustainable rural water supply follows a two-pronged approach. First, appropriate policies and systems will be developed and implemented for putting the sector in a position of strength. Second, a representative number of demonstration provinces will be identified for the wholesale implementation of the newly developed systems and policies.

It has become clear that PRONAR needs to liberate itself from implementation functions that interfere with its ability to plan and regulate. The implications of the National Water Policy have to be profoundly analysed and on the basis of this analysis, a coherent set of objectives, principles, policies, and actions for the rural water sector can be produced.

Initial proposals to identify independent demonstration projects (such as small piped systems, handpumps, or communication strategies), fail to consider the constraints under which these components would have to operate within a provincial structure that at best remained indifferent to them or at worst directly contradicted their operational philosophy and initiative. *For this reason, it is being strongly proposed that the demonstration projects be undertaken in provinces as a complete package, including restructuring the Departments of Water to adequately deal with the complete range of technical and social aspects of rural water supply and sanitation. In this way, the sector can experiment with approaches in an integrated fashion, for eventual replication in the remaining provinces.*

While it is beyond the scope of work of this study to propose the demonstration provinces, it is felt that three provinces (one in the north, one in the south, and one in the central provinces) should be targeted for this initiative in order to reach a maximum return on the required investment. Donors or groups of donors could be asked to sponsor provinces as part of a national programme for decentralising and professionalising the rural water sector. The GOM could offer to sponsor a province itself to demonstrate its commitment to the transition process.

6.2 Management

Transition periods bring confusion. New roles must be learned while old ones are still being performed as part of a phase-out process. Individuals as well as institutions must cope with new arrangements. Employee productivity may initially dip. Production targets may not be met. Time is required for discussion, clarification, and training. All these concerns must be expected as a logical part of the transition process, and plans put in place to deal with the anticipated problems

One major concern is the simultaneous support of provincial activities in both demonstration and non-demonstration provinces. The sense that some provinces receive preferential treatment, or that other provinces are not receiving a fair share of support from the central level, will exist and must be proactively dealt with. The following strategies can be employed to head off such difficulties:

- 1 Training needs assessments and plans should be developed in all provinces,
2. The results of all special studies and reports performed in connection with the transition plan must be made available to all provincial directors and water departments, and the recommendations and results of these studies should be applied, where feasible, in all provinces. For example, the new design standards and management systems for piped systems will be made available to all provinces for immediate review and testing
3. Training opportunities such as scholarships and study tours should be open to staff from both demonstration and non-demonstration provinces.
- 4 A three-part support structure is proposed in Section 6.3 (Task Force, DAR-Director, PIMU) for dealing with the intricacies of supporting from the national level the demonstration and non-demonstration provinces (see Section 6.3, Priority Actions). It is critical that this support structure exist in order to provide a smooth transition. Should more funding become available for demonstration provinces, this support structure may need to be evaluated for further strengthening.

While productivity may drop initially for most major aspects of the rural water and sanitation sector due to this transition process, long-term productivity should eventually increase as measured by an accelerated pace for sanitary work construction and improved sustainability at the user level. *Increased funding due to renewed donor interest should be a positive by-product of the transition period.*

A critical area of the transition process will be the co-ordination of the activities and management of the information generated during the process. New communication approaches required under a demand-driven strategy will be tested, new regulations will be drafted, norms and standards will be prepared, programming will be directed by demand. Activities will be occurring at the national, provincial, district and community level and it is critical that all the information and lessons learned are well co-ordinated.

Within the concept that the capacity of the sector needs to be developed, the creation of Planning and Information Management Units (PIMU) at the National (DAR-PRONAR) and Provincial (DPOPH) levels is proposed

Particularly during the transition process, the PIMU should have a certain decision-making autonomy to allow for a swift and flexible response to the needs of this process. Amongst other specific responsibilities and functions, the PIMU should have the capacity to

- co-ordinate and programme with all levels of actors in the water sector (ministers, governors, administrators, donors, NGOs, the private sector, end users, etc.),

- assist the directors of the respective services (DAR-PRONAR, DPOPH) in defining the internal structural modifications necessary to allow the services to perform the functions and responsibilities required by the NWP;
- propose and detail concepts to be tested,
- define, perform and co-ordinate monitoring and evaluation activities,
- manage (collect, analyse, disseminate) information including technical, social and financial aspects,
- direct and co-ordinate research and development on appropriate and sustainable technologies;
- manage tenders for specific studies/activities identified as necessary to reinforce the transition process;
- define appropriate computer hard and soft-ware for direct use by DAR-PRONAR, DA

6.3 Priority Actions - Rural Water Transition Plan

This section deals with the actions that need to be taken immediately, as part of the Rural Water Transition Plan (RWTP) to reinforce the rural water sector. Scheduling of these actions takes place as shown in Figure 6. The schedules are composed of activity descriptions, with proposed durations, followed by the assigning of responsibilities for execution and supervision.

The level of detail in the action plans is of necessity sparse, however, every effort was made to identify all critical tasks. Approval of the present study is given as the nominative start to the Action Plan. *It will be noted that the scheduling of the Provincial Demonstration Projects (PDP) themselves are not detailed, and will proceed in accordance with their individual designs.* The EPAR phase-out process, the setting up of the links needed for the demand-based system of community identification, the human resources needs assessments and subsequent training and staffing plans, all depend heavily upon local conditions for subsequent scheduling.

The priority actions were selected based upon the need to have them underway before other activities, especially the PDP, can fully proceed. There are 13 priority actions/action areas to be addressed for implementing the RWTP. These are the following

1. Approval of the Institutional Arrangements Study
2. Appointment of the Rural Water Transition Plan Task Force
3. Identification of PIMU manager
4. Identification of CCBU and TSU managers
5. Selection of medium-term Technical Assistance for the RWTP
6. Identification of the Provinces and potential donors for the PDPs
7. Formulation of policies and strategies for fully implementing the NWP in both the social and technical areas
8. Formulation and Implementation of the DAR/PRONAR Institutional Strengthening Plan
9. Formulation of a Decentralisation Transition Plan

10. Development of alternative management systems for PSAAs
11. Development and implementation of workshops on the full implications of the NWP
12. Elaboration and dissemination of norms and standards in the technical and social areas
13. Standardisation of definitions and formats for basic information collection

More complete descriptions of the priority actions are given below.

1. Approval of the Institutional Arrangements Study

DNA is responsible for the final approval of this Institutional Arrangements Study (IAS). Once this approval is given, the action plan goes forward.

2. Appointment of the Rural Water Transition Plan Task Force

The Rural Water Transition Team Task Force is envisioned to consist of two high level DNA staff and the director of DAR-PRONAR. The Task Force will be commissioned by the DNA Director as approved by the Minister of MOPH. Their primary function will be to supervise the RWTP process in as flexible manner as possible, able to adapt the process according to the changing circumstances, support DAR-PRONAR to allow its long-term capacity building by relieving it of some of the RWTP tasks. Their responsibilities should include at least the following:

- a. Supervise the RWTP process (3 years);
- b. Define the responsibilities of the DAR/PRONAR director and the PIMU manager;
- c. Advise and support the DAR/PRONAR management team throughout the RWTP process;
- d. Mediate areas of conflict within the management team of DAR/PRONAR;
- e. Identification of the PIMU manager;
- f. Identification of the CCBU and TSU managers, in conjunction with the PIMU manager,
- g. Assist in the selection of a medium-term RWTP Technical Monitor.

3. Identification of PIMU Manager

The PIMU manager will be largely responsible for RWTP management. The DAR/PRONAR director will continue to manage the DAR/PRONAR as per the division of responsibilities made between the PIMU manager and the director. The PIMU manager will perform planning and monitoring for the RWTP, as well as drive the programming of the PDPs

Fig. 6 RURAL WATER TRANSITION PLAN - SCHEDULE OF ACTIONS

Task Name	Responsibility	Year 1										Year 2														
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25
1 Approval of the Institutional Arrangement Study	Minister MOPH, Steering Committee	■																								
2 Appointment of Rural Water Transition Plan Task Force (RWTPTF)	DNA Director, Minister MOPH	■																								
3 Identification of Planning and Information Management Unit manager	RWTPTF	■																								
4 Identification of Communication and Capacity Building Unit and Technical Support Unit managers	RWTPTF and PIMU	■																								
5 Selection of medium-term TA for RWTP	RWTPTF, DAR (Director + Senior Management Team(SMT))	■																								
6 Identification of Provincial Demonstration Project Provinces and potential donors	RWTPTF	■																								
7a Formulation of policies and strategies for NWP Implementation in social and technical areas	CCBU, TSU	■																								
7b Provincial Consultation of policies and strategies for NWP Implementation	CCBU, TSU	■																								
8a Formulation of DAR-PRONAR Institutional Strengthening Plan	DAR (Director + SMT)	■																								
8b Implementation of DAR-PRONAR ISP	DAR (Director + SMT)	■																								
9 Formulation of a Decentralisation Transition Plan	DAR (Director + SMT), TA	■																								
10a Development of alternative management systems for PSAAs	DAR (SMT), TA	■																								

4. Identification of CCBU and TSU Managers

The Communications and Capacity Building Unit and the Technical Support Unit will be headed by professionals with the qualifications suggested in section 6.5

They will form, along with the PIMU manager and the DAR/PRONAR director, the DAR Senior Management Team (SMT).

5. Selection of Medium-Term Technical Assistance for the RWTP

In medium to long-term institutional strengthening plans, it is especially helpful for the SMT to have available to them part-time independent support for monitoring progress, providing feedback, and providing specific technical assistance on topics such as gender issues, appropriate water treatment, or participatory rapid appraisal. This Technical Monitor (TM) role can be useful in eliciting critical thinking about where the project has been and where and how it needs to go, thus keeping a flexible approach to the Transition Process.

6. Identification of the Provinces and Potential Donors for the PDPs

The provinces for the Provincial Demonstration Projects should be identified with enough lead time for donor interest to be cultivated and solicited.

7. Formulation of Policies and Strategies for Full Implementation of the NWP in both the Social and Technical Areas

a) Although the NWP has been studied and debated, relatively little work has been done on developing the corresponding policies and strategies needed for its implementation in rural areas.

On the social side, the role of community liaison and support (formerly PEC), must be redefined for a demand-driven approach and non-implementation bent. New strategies and methodologies for discovering and responding to consumer demand for services must be devised and tested in a participatory fashion, under expert supervision.

For technicians, the idea of providing the wide range of service options intrinsic to the demand-based system, must be cultivated. Similarly, technicians must re-educate themselves in the areas of appropriate use of technology and cost-effective design so that their standards, designs, and works are not only used, but permanently maintained.

The role of the CCBU and its relationship to the engineering staff, local administrators/municipalities, and community leaders, need clarification in light of the implications of the NWP. It is essential that promotional staff, in close

consultation with community leaders, lead the project process, not follow the lead of the construction crews. In order to do so, CCBU staff must have their professional qualifications raised and receive continuous training in both on-the-job and formal settings.

b) It is very important that the Provinces be consulted on the implications of the policies and strategies for NWP implementation, so that when the actual communication strategy is developed (with various workshops, Point 11), there is already a clear perception of all the implications.

8. Formulation and Implementation of the DAR/PRONAR Institutional Strengthening Plan

One of the strategic initiatives of the RWTP is the proposed Institutional Strengthening Plan (ISP), through which, DAR/PRONAR will accomplish the following:

- consolidate its standing as a strong service within the MOPH/DNA structure;
- inform the MOPH/DNA hierarchy, other relevant ministries, the donor community, and the public about the status of the RWTP and its successes; and,
- attract additional human and material resources for fortifying the institutional capacity of the DAR/PRONAR, and eventually the rural water sector as a whole.

The DAR Senior Management Team will be largely responsible for this task through a) formulating a viable ISP for accomplishing the above-stated purposes based on the implications of the policies and strategies developed in Point 7, and b) executing the ISP.

9. Formulation of a Decentralisation Transition Plan (DTP)

In order for decentralisation (deconcentration) to occur in an orderly and expeditious fashion, a number of prerequisites must be put in place. If project funds are to be spent at the provincial level, financial planning and control systems should be developed, along with standard tender procedures and documentation, and rules for contract management and inspection/receipt of work. Training will also be required in these aspects.

A staffing and staff training needs analysis, based upon province-specific attributes such as physical extension, rural population size, current water and sanitation coverage levels, common level of service found (PSAAs, boreholes, wide-diameter wells, cisterns, etc), number and qualifications of present staff, must also be prepared.

Strategies for phasing-out the EPARs must also be developed in close consultation with EPAR staff. It must be made clear from the outset that the EPARs have lent a valuable service to the people of Mozambique, and that effort will be expended in seeing to it that as many of their trained staff as possible remain in the water sector. Provisions must be made for either re-location, transfer to the DAs, or arrangements for the gradual privatisation of the EPAR role, including the initial facilitation of contract work and equipment lease/purchase. Section 5.3 2.2 provides a more complete review of potential options.

10. Development of Alternative Management Systems for PSAAs

As mentioned in previous chapters, no legally-recognised management systems currently exist for rural piped water supply. Proposals for such management systems must be prepared, including specifying the legal framework for each management system; developing general regulations (including water fee calculation and collection, consumer rights and responsibilities, procedures for service installation, penalties and sanctions, etc.), and identifying the regulatory process for external auditing, service quality standards, certification of operators and private sector specialists, etc. Until this legal-regulatory framework can be defined, no construction activity in small piped systems should be initiated. It is envisioned that specialised TA will be needed to assist in developing the full range of management options. The process Technical Monitor should assist in this activity.

The various management systems that could be researched, "legalised" and tested in the PDPs would include, amongst others:

- Direct Municipal Management
- Autonomous Service Management
- Private Management
- Community Management

11. Development and Implementation of Seminars on the Full Implications of the NWP

In order to achieve full support for the new directions dictated by the NWP, a series of seminars directed at the ministerial, senior management DNA, provincial government, and district government levels must be prepared and implemented, initially targeting the provinces identified for the PDPs. The full implications of demand-driven programmes, the new DAR/PRONAR roles, the functioning of the decentralisation process and strengthening of the DAs, the initiatives for management systems for PSAAs, must all be detailed and explained to the sector actors.

Opportunities for commentary and decisive input should precede and accompany the seminars, so that a consultative atmosphere can be established for long-term good working relations

12. The Elaboration and Dissemination of Norms and Standards in the Technical and Social Areas

a) As referred to in earlier chapters, the design and construction standards for water supply and sanitation in Mozambique are outdated, and for rural areas, non-existent. Until appropriate standards are developed and tested, it is impossible to regulate sector activities, establish systems for design and construction approval, analyse unit costs for different service levels, and rationalise the use of scant water and financial resources.

Similarly, in the social area, the standardisation of approaches to demand-driven programming, adult education, participatory assessment and evaluation, gender and project design, etc. would be critical for a full implementation of the NWP.

As with management systems for PSAAs, it is suggested that specialised TA assist in the exhaustive process of preparing up-dated norms and standards and initiating the consultative process for the application of these new standards.

b) A communication strategy must be developed to assure that all norms and standards are disseminated to all those directly involved in implementation

13. Standardisation of the Definitions and Formats for Basic Information Collection

One of the primary responsibilities of the DAR/PRONAR is information management for planning and decision-making. The MIS "tree" reaches down into the communities via the DA. With the emphasis on demand-driven programmes, finding a way to exchange information between users and planners becomes a crucial task.

Also, the current paucity of hard data on coverage levels, handpump functioning, spare parts availability, unit costs of construction, etc. makes programming and budgeting practically impossible.

The elaboration of standardised definitions and formats for the use in basic information collection must be accomplished at this stage. As previously mentioned, it is vital to avoid over-designing data collection systems. TA can be effective assisting in the design of data instruments and standard definitions

6.4 RWTP Estimated Budget

Table 2 below gives an estimated budget to carry out the RWTP over a three year period. It does not include a budget for the PDPs, which will have to be developed by the Task Force, DAR, DPOPH and the donors.

Table 2 Estimated Budget for the RWTP

Item	USD Year 1	USD Year 2	USD Year 3	USD TOTAL
Task Force	168.100	94.500	98.500	361.100
PIMU	138.400	73.500	76.500	288.400
CCBU/TSU	450.600	251.000	252.000	953.600
Technical Monitor	263.600	274.000	283.000	820.600
Technical Assistance	500.000	250.000	275.000	1.025.000
Totals	1.520.700	943.000	985.000	3.448.700

6.5 Provincial Demonstration Projects

Section 6.3 examines the priority actions that must be either completed or underway before start-up of the Provincial Demonstration Projects (PDPs). The PDPs could start-up on completion of the Decentralisation Transition Plan (Point 9). As mentioned earlier, a possible scenario contemplates three PDPs in different regions of Mozambique.

The PDPs would put into practice the policies and strategies devised in order to implement the NWP. In that sense, they are a unique open-air laboratory to see if the application of a decentralised, demand-driven system, will result in the delivery of sustainable rural water supply services. It is not expected that this experiment will be a rigorous, scientific one, due to the need for extensive baseline and control data collection and analysis that accompanies such studies. Some basic project objectives with appropriate indicators will, however, be proposed and monitored by the DAR and DA, with the support of the Technical Monitor.

As previously mentioned, it is not possible to prepare a detailed schedule of activities for the PDPs due to the specificities involved for each province. However, it is worthwhile highlighting the three major areas to be developed during the initial phases of the Demonstration Projects

1 HRD Issues

The greatest challenge to the historically weak DAs is to expand and strengthen its human resource capacity within a relatively short time. This implies that HRD issues will come to the forefront of PDP implementation. It is important that the MOPH HRD Unit (or the new unit proposed for DNA) support the DPOPH/DA at this juncture in the search for appropriate candidates (internal as well as external) for the key DA posts. Ideally, mid-level professionals in DNA can be attracted to accept upper-level PDP postings. Training activities at the provincial level are addressed in section 5.3.2.1 b). The special case of the EPARs is addressed in section 6.3, n°9.

2. Liaison

As DAR/PRONAR is called upon to promote the NWP and the PDPs at the national and provincial levels, so too the DA will be called upon from the outset to aggressively promote the same policies at the provincial, district, and community levels. The range of actors at the provincial and local levels can be dauntingly ample: Civil Administration at Provincial and District levels, national and international NGOs, religious organisations, politicians, private sector entrepreneurs and companies, and the communities themselves. How they all fit into the communications strategy is a critical issue to be dealt with, and has been detailed in Chapter 5.

3. Management Information System

Apart from the issues raised in Section 6.3, number 13 regarding MIS, it is critical that a strategy for information sharing be developed, so that lessons learned in the PDPs can spread to non-demonstration Provinces as soon as possible.

As can be noted from the Priority Actions of the RWTP, the results of a certain number of actions can be disseminated to all Provinces. These include the strategies for NWP implementation in social and technical areas, the gradual implementation of the DTP in non-demonstration Provinces, alternative management systems for PSAAs, technical and social standards and norms, and standard formats for basic information collection, as well as receiving newly developed and tested training approaches

The factors that will initially differentiate PDP provinces from the others will be, amongst others

- Province-wide demand-driven approach, including close co-ordination with Civil Authorities, NGOs, other government agencies, etc.
- Rapid staffing of DA, according to the DTP, with possible initial (2 year) salary, housing and logistical donor support for staff;
- Phase-out of EPARs under a personnel assignment plans,
- Funds channelled directly through Provincial mechanisms,
- Developing and testing appropriate training approaches with DAR-PRONAR support;
- Contract management for the various phases of the project cycle,
- Testing of management systems and appropriate use of technology (slow sand filters, roughing filters, etc.) in PSAAs;
- Implementation of all the aspects of the NWP

For implementation of the PDPs, an awareness must be instilled of the phases of the project cycle, and the importance particularly of the Pre-investment and Follow-up Phases to assist in assuring the sustainability of the RWS systems. A non-exhaustive example of the sequence of activities linked to each phase for the PDPs is indicated in Annex 3.

6.6 Flow of Funds

For deconcentration to the provinces to be truly effective, responsibilities and resources must be directly transferred to the DPOPHs. Mechanisms currently exist at the Ministry of Finance and Planning for direct transfer of funds to the provincial level. Donor funding could also be directly transferred to DPOPHs per contract agreement with the GOM. Fiscal control and auditing will be performed as per GOM standards. Budgets should be prepared at the provincial level.

Part of the transition process specifically addresses the need for DAR/PRONAR to develop and transfer to the provinces all the necessary systems for contract management, including standard tender documentation and procedures, inspection criteria, qualifications for contracted animators, etc.

6.7 Sector Training Needs and Capacity Building

Capacity building is undoubtedly the critical requirement (after funding) for successful implementation of the NWP.

The 1994/95 report on government human resources in the water sector, listed 18 university graduates in urban water and only 5 graduates in rural water (Gaspar, 1995)

While it is true that some international NGOs in the water sector provide skilled resources (and training for new staff) the majority of remaining government staff employed in rural water either have middle - level (técnico médio) training which gives them an equivalent of a high school education received through the Centro de Formação Profissional de Agua e Saneamento (CFPAS) or the Industrial Institute in Maputo. The rest have basic level training (grade 6 education). The basic level technicians usually

received their training at the Industrial Institute in Maputo which has a capacity to graduate about 20 - 30 water technicians per year (Hugman, 1997 draft)

It is clear, however, that implementation of the NWP calls for a strengthening of the cadre of personnel and a type of capacity building that goes beyond the technical training presently offered by either the Industrial Institute or CFPAS

- a) The policy to move central government completely out of implementation and to focus instead on establishing priorities, preparing norms and regulations, orientation and acquisition of information, calls upon a different set of skills and capacities. While technical knowledge will still be important, the ability to plan and conceptualise, manage and supervise the sector will require at least a top level cadre of university graduates to **manage** the various DAR/PRONAR units.
- b) The demand-based approach to rural water management underlines the need for methodologies to help empower communities and equip them to take actions for themselves. This means that changes are necessary in the attitude and behaviour of the people who work in the sector and of the people in the communities. To do this, the sector must create a type of communication culture, where dialogue and participation at all levels amongst different partners become second nature to sector work.

The process has begun. PRONAR already recognises the importance of community participation in its work, although some of the staff who work with the communities lack experience and training. The training through CFPAS does include social issues and PRONAR itself provides re-training courses for animators in the provinces but on an ad hoc basis

There is now a need to go beyond any piecemeal approach and develop an overarching strategy for training and capacity building that will address the twin needs of the sector over a long-term timeframe.

Several major areas need to be addressed simultaneously. First, there is the need to build capacity of existing staff and to give opportunities for both on the job in-country training and in-country university education, and second, to develop a methodology to build capacity on sector priorities of communication, participation and institutional change. This range of activities would be required training, at different intensities, for everyone in the programme. Finally, there is the need to attract university level graduates to new positions to within DAR-PRONAR and DA and to facilitate university entrance for those (*técnico medio*) who are in a position to take up scholarships on a full time basis

6.7.1 Capacity Building for Existing DAR-PRONAR Staff

DAR-PRONAR staff has a wealth of experience developed over its ten years of operation. It is important that this existing capacity is not lost during this period of re-organisation

In order to retain this experience and build capacity the short term, training opportunities must be identified for DAR-PRONAR staff who are not in a position to take up scholarships either for personal or work-related reasons. To address this need the SDC, through the Institutional Support Programme, MOZ 37, has funds available both for in-country scholarships for staff to attend Universities in Mozambique and for short term training courses.

6.7.2 Capacity Building for Communication and Participation

Experience has shown the importance of ensuring that all staff in rural water, from the Directors to the field technicians, have a grounding in the communication and participation approach of the sector. This is to ensure commitment to the more qualitative side of the programme on the part of engineers and technical people who are used to quantitative measures of activity.

All people in the sector must understand that the demand-based approach calls for a programme that provides capacity to meet community demand rather than water and sanitation facilities themselves.

There are various ways to approach this:

- Develop a short training course that will introduce all staff to the communication/participatory process. This type of course has already been used by the former PROWWESS team within the UNDP/World Bank Water and Sanitation Program and could be adapted to Mozambique needs. It should be mandatory for all personnel.
- Study tours for senior staff to countries in the region already implementing demand-based approaches in water and sanitation. Suggested countries could be Ghana, Guinea Bissau and Uganda.
- Identify champions of the communication/participatory approach already in the sector. Request them to appear on panel discussions on television, discuss over radio and present the NWP to the media. Wide dissemination of the NWP strategy and its implications for rural water assists in implementation.
- On-going seminars and workshops for personnel to take advantage of the presence of particular trainers in the country for specialised training courses
- Develop a core Training of Trainer (TOT) team that could be contracted through the CFPAS. This TOT team would be a centre of excellence for communication and participation training. It could assist the Demonstration Provinces get started in their training needs and be responsible for on-going refresher courses for DAR/PRONAR and DA staff.

6.7.3 University graduate staff

This study indicates that there will be a need for some 15 to 25 university graduates to adequately staff the new institutional model. The plan calls for at least 5 at DAR/PRONAR headquarters in Maputo and 10 - 20 to sit at the DA level in the provinces.

The need is to both recruit new staff to the sector and to offer university training to people with field experience within DAR/PRONAR.

A recent report entitled Training and Capacity Development for the Water Sector in Mozambique (Hugman, 1997 draft) suggests that the universities now in Mozambique have adequate capacity to educate sufficient numbers of new graduates for the sector though this would require an active recruitment policy to attract them. The report further offers ideas as to how to make the sector more attractive. It proposes that any university education offered to DNA employees be taken in Mozambique at least for the undergraduate level. One suggestion is to consider courses offered in Distance Education to allow senior managers to stay in the job while pursuing a degree.

These are sound ideas. The particular needs of the rural water sector, however, require that future management level candidates take undergraduate degrees in countries that specialise in the social as well as the technical aspects of the sector. This will also give them a broader vision of all the various approaches being attempted in other countries other than staying in the country. The Dutch and British universities such as The International Institute of Social Studies (ISS) in The Hague or in England at the WEDC in Loughborough exemplify the type of training centre that could provide this kind of education.

The SDC MOZ 37 Project has identified funds to support this need.

6.7.4 Training and Capacity Building Needs for DAR/PRONAR.

DAR/PRONAR has the lead role. Its task as a facilitating agency is to guide the policy of the sector and assist provincial bodies manage the implementation process. To do this, PRONAR capacity will have to be strengthened in three broad areas: management; communication and the participatory approach and technical support.

A participatory training needs assessment with DAR/PRONAR staff has already been initiated. However, the NWP call for a changed institutional model and move from operation to facilitation necessitates a new participatory assessment. This should be done as soon as the changes for DAR/PRONAR are agreed.

Technical Assistance will be needed to assist DAR/PRONAR through its training needs assessment. TA can further assist both DAR/PRONAR and the CFPAS develop curriculum based on the training needs identified through the participatory assessment exercise. This curriculum would be used for an in-depth and intense Training of Trainers (TOT) course.

The International Water and Sanitation Centre (IRC) at The Hague, the Netherlands has recently developed a two week TOT course which was used to train a team of trainers in Guinea Bissau. This could be adapted for use in Mozambique.

Below is a chart to indicate broad areas for capacity building needs for the new DAR/PRONAR. These fall out of the HRD strategy proposed in chapter five.

FUNCTION	CAPACITY REQUIRED
Programme Planning and Co-ordination	strong conceptual understanding of NWP, management, policy; strategic planning; budget preparation; communications
Regulation and Communication	ability to interpret NWP at both social and technical level
Program Capacity Building	knowledge of NWP at social and technical level, training needs skill; adult education; communication; participatory techniques; curriculum development
Technical Support	knowledge of technical needs of low cost water and sanitation; contracting; appropriate use of technologies
Monitoring and Evaluation	data processing and management skills, knowledge of computer systems and computer software
Research and Development	knowledge of rural water and sanitation sector

The TOT training package should cover the three broad areas of: Management, Communication/ Capacity Building and Technical Support. The training team must be grounded in all three categories. DAR/PRONAR staff would participate in designing the TOT course. Use would be made of existing training material already in use at the CFPAS

The following is a sample of the type of training issues to be included in the TOT course:

Management

- Basic management
- Participatory management skills
- Financial Management and budgets
- Planning and work programming
- Management information systems and data collection
- Supervision, monitoring and evaluation
- Contracting and contract management
- Legal framework, norms and regulations

Communication and Capacity Building

- Communication planning and strategy building
- Adult education and training skills
- Participatory techniques
- Participatory needs assessment (KAP) studies
- Planning for hygiene education
- Community organisation
- Data collection/data analysis
- Action Research

Technical Support

- Technology choice and cost implications
- Operation and maintenance issues
- Small piped systems design
- Appropriate use of technology including water treatment
- Hydro-geology
- Water source protection
- Water tariff calculation

6.7.5 Training and Capacity Building at the Provincial Level

The TOT team, once in place, would be responsible for assisting in the training at the provincial (and demonstration) level. This provincial level training would be dependent on the progress of the demonstration projects since it would be funded directly through them and would be strengthened by on-the-job training experience.

Training at the provincial level mirrors the training needs at the national level.

1. Awareness raising on the NWP and demand-based programming must be developed for a wide range of people from the Governor (civil administration), DPOPH, DA, the private sector and communities.
2. The TOT CFPAS training team would assist provincial DAs implement a training programme based on the training package outlined above.
3. The TOT team and the newly trained DA staff would in turn prepare training for the contract animation staff. The TOT team would advise on the first training programmes.
4. A feedback mechanism will be developed so that new experience coming from on-the-ground implementation can be fed back up to the TOT for inclusion in the training curriculum. Thus a cycle of information collection, feedback and training can be established to inform the TOT on the training programme. Refresher training, workshops and information exchange will be used to keep the process moving in a circular fashion

6.7.6 Capacity Building Action Plan

An Action Plan for only the first year is presented here. Thereafter the Action Plan for the following years will be the responsibility of the PIMU and the TOT team. Action Plans would be formulated on a participatory needs basis - one of the first skills to be learned in the first year training programme.

1. University graduate staff

The Director, Planning and Information Management Unit (PIMU) manager and the Rural Water Transition Process Task Force (RWTPTF) will be responsible for the identification of the managers for the Communication and Capacity Building Unit (CCBU) and the Technical Support Unit (TSU). Once all the managers are in place, they would be responsible for preparing transparent guidelines for university candidates from amongst present DAR/PRONAR staff and Provincial Staff. They would also develop a short list of potential candidates for university training. A transparent process would be set up for finalising the list of university candidates (approximately 5 or 6 the first year depending on the calibre of candidates). This would be done under the direction of the DNA Scholarship Committee

Time Frame: Total process from initial guidelines to student placement, 6 months.

If initially it is not possible to identify a suitably qualified graduate for either of these positions, the position could be filled by a person with third level qualifications. As soon as this position can be filled by a suitable graduate, the incumbent would become a candidate for university training. If full-time university training is not possible, other forms of on-the-job training and night courses should be made available.

2 Awareness Raising on Demand-Based Approach

Study Tours to countries in the region with experience in executing the "demand-based" approach would be arranged for senior staff of DAR/PRONAR and DNA. Suggested countries could include Ghana, Guinea Bissau and Uganda.

Time Frame. First 6 months

3 Training of Trainers (TOT)

Technical Assistance would be needed to set up an intensive TOT course at the CFPAS. CFPAS and the CCBU manager would be responsible for managing this process. The TOT training participants could include DAR/PRONAR CCBU staff and contracted participants from the private sector. This way the permanent CCBU staff would be involved in the training process. This would assist them in supervising and managing the TOT team in the future. The TOT team would be made up of contracted employees from the private sector. Initial training would take place over a 2 week period with follow up training after 6 months. Initial training would include: strategic communication planning;

adult education skills, participatory needs assessment and other participatory techniques etc. The follow up training would be focused on developing training skills and a training curriculum for TOT future work at the provincial level

Time Frame. one year (2 weeks intensive training followed by a second 2 week course 6 months later)

4. Communication Training

The CCBU team and the TOT team will prepare an Awareness Raising Programme on Demand-Based Approaches in the 6 month period between training sessions. This programme will be field tested during the second 2 week training period This will allow for TA assistance and feedback.

Time Frame: 6 months

5. Participatory Training Needs Assessment

The CCBU team and the TOT team will assist DAR-PRONAR staff on their new Participatory Training Needs Assessment. This work will also take place during the 6 months between training sessions and would result in a multi-year Training Plan.

Time Frame: 2 months

6. Training Plan Development

The DAR/PRONAR management team will develop a multi-year training plan for DAR/PRONAR. The Training Plan will address DAR/PRONAR training needs in management and technical support as well as communication and capacity building Technical Assistance will be used to assist in the process

Time Frame: 2 months

6.8 Monitoring and Evaluation of the Transition Process

The implementation of the Transition Plan cannot be left to chance. Multiple steps are suggested to assure the timely start-up and progress of the Transition Plan.

First, the start date is clearly defined as the date the Institutional Arrangements Study is accepted by the Government of Mozambique, through the Study Steering Committee and the Minister of Public Works and Housing

Second, the Task Force appointed by the DNA Director and approved by the Minister of Public Works and Housing, has a clear set of tasks and responsibilities for moving this process forward.

Third, the PIMU Manager, and chiefs of the Technical Support Unit and Communications and Capacity Building Unit will be appointed almost immediately, forming, with the DAR/PRONAR Director, the Senior Management Team

Fourth, a Technical Monitor will be selected by the Task Force and Senior Management Team, to provide periodic supervision and technical assistance throughout the transition process.

The principal tasks of this Transition Team, composed of the Task Force, Senior Management Team, and Technical Monitor, are the following:

1. Maintain a forward momentum to the transition process;
2. Modify transition plans as needed to assure that the final objectives are reached,
3. Maintain close communications with major sector actors, including donor organisations, national and local GOM agencies, and international NGOs, about the progress of the Transition Plan;
4. Direct the development of the Provincial Demonstration Projects and assure that lessons learned are fed back into DAR/PRONAR for application in the remaining provinces.

In order to maintain an active dialogue within the water sector concerning the progress of the Transition Plan, three-day workshops should be held once every six months on the national level to highlight the lessons learned from the transition process to date, and also to provide expert training in select themes, such as financial management, human resource development, management team building, project design and management, technical themes, etc. Roundtable discussions on issues of overriding importance identified during the preceding six months, should be held during these workshops. The preparation of position papers by DAR/PRONAR and DNA should fuel the roundtable debates. The Technical Monitor should assist DAR/PRONAR in the design of the workshops. Province-wide workshops of a similar nature could be held once the PDPs are initiated.

The transition process should utilise some external technical assistance for discreet tasks which DAR/PRONAR does not have the manpower to perform, but the Task Force members and the Senior Management Team should be composed entirely of Mozambicans. In this way, the nation will retain a greater percentage of both the theoretical and the practical knowledge gained during this transition period.

ANNEX 1

Workshop Participants

14-15 November 1996

and

24-25 March 1997

WORKSHOP PARTICIPANTS

14-15 November 1996

Roberto Colin Costley-White	Minister, MOPH
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WORKSHOP PARTICIPANTS

24-25 March 1997

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ANNEX 2

Suggestions for job descriptions
for key posts in
DAR-PRONAR and DPOPH-DA

SUGGESTIONS FOR JOB DESCRIPTIONS FOR KEY POSTS IN DAR-PRONAR

Planning and Information Management Unit (PIMU)

Unit Manager

The Unit Manager for the PIMU reports to the Director, DAR-PRONAR.

Responsibilities are.

- Overall management and co-ordination of the Rural Water Transition Plan (RWTP).
- Co-ordination and formulation of policy options and approaches to implementation including formulation of norms, regulations and guidelines
- Mobilisation of financial resources.
- Liaison with government agencies, NGOs and donors.
- Media relations over rural water policy.

Background and qualifications:

- University degree in civil engineering or in development planning and administration
- Proven managerial and administrative skills
- Knowledge of sector

Information Manager

The Information Manager will report to the Unit Manager, PIMU.

Responsibilities are:

- Supervision of Management Information System (MIS) and tracking of the sector investment plans and coverage.
- Preparation of annual budgets and workplans.
- Assist Unit Manager in formulation of policy options.
- Responsible for development of Monitoring and Evaluation system and feedback mechanism.
- Liaises with Finance and Administration regarding the mobilisation of funds (resources) for sector investment.

Background and qualifications

- University degree in Management Information Systems or related disciplines.
- Experience in planning.
- Ability to produce clearly written material.
- Computer literacy with knowledge of software applications

Communication and Capacity Building Unit (CCBU)

Communication and Capacity Building Manager

The Communication and Capacity Building Manager will report directly to the Director, DAR-PRONAR

Responsibilities

- Directing the communication approach for the programme including formulation of guidelines.
- Co-ordination of training programme for rural water sector personnel and the capacity building efforts for NGOs and the private sector. This includes supervision of contract procedures for training provided through institutions.
- Monitoring and evaluation of the effectiveness of training materials and methods.
- Promoting the participatory approach through all levels of the program.
- Monitoring and evaluation of participatory approach including directing research on new methodologies.
- Supervision of staff in the unit.
- Participation with other senior staff in overall management activities for PRONAR.

Background and qualifications:

- University degree in sociology/anthropology, rural extension, adult education or related disciplines.
- Experience in adult education/training and a strong commitment to, and experience of, participatory techniques.
- Experience of training programs for rural people.
- Excellent communication skills and ability to write clear reports.

Technical Support Unit (TSU)

Technical Support Unit Manager

The Technical Support Unit manager will report directly to the Director, DAR-PRONAR.

Responsibilities:

- Formulation of guidelines, standards and regulations for design and implementation of works.
- Preparing and updating designs and specifications for all standard technologies, including sample bidding documents and model contracts

SUGGESTIONS FOR JOB DESCRIPTIONS FOR KEY POSTS IN DPOPH - DA

Department of Water, Manager

The Department of Water, Manager reports directly to the Director, DPOPH.

Responsibilities:

- Overall co-ordination and supervision of the rural water and sanitation programme at the provincial level.
- Management of the PPIMU and its activities including monitoring and supervision.
- Co-ordination of the sector with other government agencies, NGOs and the private sector.
- Co-ordination of the sector with the civil administration.
- Promotion and dissemination of information about the programme amongst decision makers at regional and district level.
- Preparation of workplans and budgets and management of overall programme funds.
- Formal approval of all training, project preparation and construction contracts.

Background and qualifications

- University degree.
- Proven management experience.
- Good communication skills.

DA Communication and Capacity Building Team

The DA CCB team members will report to the DA manager.

Responsibilities:

- Promotion of communication component of project implementation.
- Promotion of participatory techniques.
- Management of contracting local social extension workers during project implementation.
- Management of training and capacity-building elements of program relating to social-communication needs.
- Inclusion in training sessions and contribution to methodology development.
- Co-ordination with other agencies, NGOs particularly over hygiene education campaigns and water source management.
- Supervision and monitoring and evaluation of social components of project.

Background and Qualifications.

- University degree supplemented by others with mid-level training in social/community development
- Experience in rural water and sanitation, NGO or other government ministries involved in rural support programmes.

DA Technical Support Team

The DA Technical Support team members will report to the DA Manager.

Responsibilities

- Supervision, monitoring and evaluation of technical matters relating to water supply.
- Supervision of technical field staff.
- Assistance to communities (through technical field staff) in technology choice.
- Management of capacity building - training sessions for technical field staff.
- Inclusion in training sessions and contribution to methodology.
- Management of borehole and piped systems contracts.
- Promotion and establishment of private sector capacity for water supply, maintenance and repair
- Assuring availability of spare parts.
- Participation in technology development

Background and qualifications

- University degree in Civil Engineering supplemented by mid-level technical staff
- Experience in rural water, NGO or other sector work in rural areas

ANNEX 3

Provincial Demonstration Project,
based on the project cycle

PROJECCÃO E CONSTRUÇÃO

- Projecção (Técnico com a comunidade)
- Identificação de construtores
- Organização dos contribuições dos intervenientes
- Construção a través do sector privado
- Fiscalização e supervisão da construção
- Fiscalização trabalho animadores
- Formação em O&M
- Ensaio, aprovação e entrega do sistema

OPERACÃO, MANUTENÇÃO E GESTÃO

- Execução correcto de O, M & G
- Reciclagem do pessoal responsáveis O, M & G
- Reparações
- Fiscalização trabalho animadores

ACOMPANHAMENTO

- Auditoria
- Regulamentação, Monitoriamento e Avaliação da qualidade de serviços
- Assistência técnica para reparações maiores, expansão do sistema, etc.
- Circulação da informação - níveis nacional, provincial, distrital, comunitária
- Modificação das políticas
- Modificação do plano de execução