2

Strengthening the Demand-Responsive Approach: Learning from Program Experience in Niassa Province, Mozambique

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Introduction

In recent years, the demand-responsive approach (DRA) has become the keystone of government and donor water supply policies throughout the world. Funding proposals, country action plans, and implementation manuals are full of references to the DRA, and it is difficult to find international NGOs or funding agencies that do not claim to be implementing projects based on this approach.

This shift from supply-driven water supply interventions to programs focused on demand is easily understood. In general, supply-driven interventions have not succeeded in providing poor communities with sustainable water supplies. Communities that simply "receive" a water point, playing only a minor or symbolic role in project implementation, tend to lack a sense of ownership. The result is that millions of dollars have been wasted, because communities are not committed to maintaining their water supplies.

In response to these problems, the international water sector is increasingly trying to implement programs based on a different approach. Instead of villagers waking one morning to find drilling rigs in their community, the DRA expects them to take the lead in water supply initiatives. Communities have to demand improved services, choose what type of facilities they want, and work out how they will manage them. In addition, they are required to make meaningful contributions to their project in the form of cash, labor, or materials. In the long term, the community must take responsibility for sustaining the new water supply systems.

This paper explores whether a DRA-inspired water supply policy necessarily creates conditions for more sustainable water supply interventions than traditional supply-driven models. It is based on WaterAid's experience in Niassa Province, northern Mozambique, since 1996. In Niassa, WaterAid has been working with

[1] The key water sector documents in Mozambique are *Política Nacional de Águas* (Direcção Nacional de Águas, República de Mozambique, Maputo, 1995); *Plano de Transição de Água Rural: Estratégias de*

a range of government, private sector, and nongovernment organizations, supporting their efforts to implement the Government of Mozambique's (the Government) National Water Policy and Implementation Manual, which are both based on the DRA.[1] These partnerships have given WaterAid unique insights into the experiences of a range of different water sector actors during the transition from one model to another.

This is valuable experience, because in the process of moving from supply-driven to demand-driven processes, critical tensions are emerging.

Niassa Province is located in the northwest corner of Mozambique and is the most sparsely populated province in the country.[2] It is characterized by poor

Box 1. WaterAid Partners in Niassa

Government
- The Provincial Department of Water and Sanitation (DAS-Niassa) has responsibility for water supply and sanitation development in the province. DAS-Niassa is located within the Provincial Directorate of Public Works and Housing (DPOPH-Niassa).
- The district directorate of public works and housing in Maúa and Nipepe (DDOPH–Maúa and Nipepe) are responsible for water supply and sanitation at the district level.

NGOs
- ESTAMOS implements water supply and sanitation projects in the districts of Lichinga and Mandimba.
- *Ulongo* is the dance, theatre, and cultural association.

Private Sector
- The private sector supports 10 construction companies for water related work.

CBOs
- Local community education program teams in Maúa and Nipepe, made up of activists from the districts, are financed directly by WaterAid.

infrastructure, a weak agricultural economy, and political as well as social isolation. Niassa has some of the worst poverty and social deprivation rates in the country, and a high proportion of the population lacks access to potable water, even compared with other parts of this low-income country.[3]

The paper focuses on three areas. First, it provides a brief overview of the DRA, followed by a short account of Mozambique's switch from supply-driven interventions to DRA-inspired policies. Second, the paper examines partner experiences of applying the new policy in five districts in Niassa over the past 3 years.[4] Which elements of the DRA seem to enhance sustainability prospects

Implementação da Política Nacional de Águas (Ministério das Obras Públicas e Habitação, Direcção Nacional de Águas, Maputo, November 1997); Draft "Manual de Implementação de Projectos de Abastecimento de Água Rural," Departamento de Água Rural, Direcção Nacional de Águas, 1999 and 2000; and Final "Manual de Implementação de Projectos de Abastecimento de Água Rural," Departamento de Água Rural, Direcção Nacional de Águas, December 2001.

[2] The population stood at about 809,800 people in 1997.

[3] República de Mozambique. 2001. *Action Plan for the Reduction of Absolute Poverty 2001-2005 (PARPA)*, April.

[4] The districts are Lichinga, Mandimba, Maúa, Nipepe, and Sanga.

in Niassa, and which need to be modified to enhance them? This section of the paper also explores difficulties encountered during the transition, examining aspects of policies and practices that could undermine sustainability. The third and last section offers some conclusions on how the DRA could be better supported in the future, based on lessons from Niassa Province.

Sustainability is the touchstone by which the DRA must be judged. WaterAid's experience in Niassa suggests that the DRA does indeed offer advantages compared with supply-driven approaches, but that it also has weaknesses in this regard. These insights are relevant wherever water supply actors are attempting to enhance sustainability through the DRA.

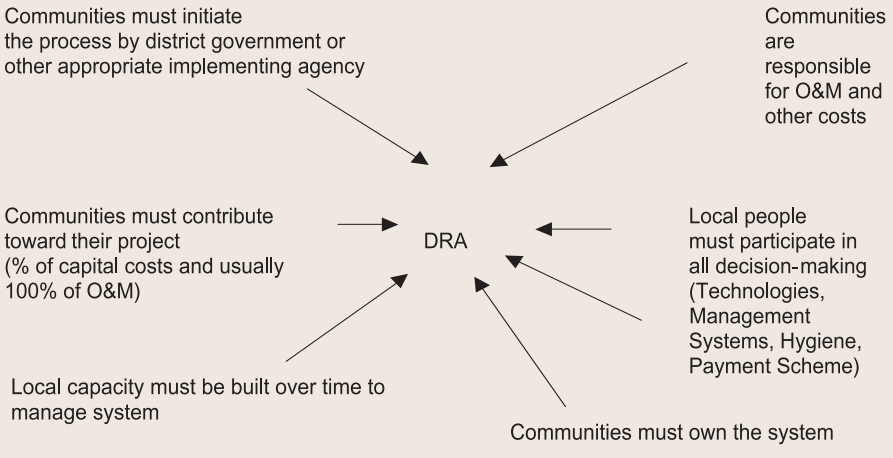
DRA in Mozambique

Both the Mozambican National Water Policy and Implementation Manual are premised on the DRA. The basic principles are that

- water is an economic and social good and needs to be managed as such;
- management should focus on users at the lowest appropriate level, i.e., community level or even at the level of individual water points;
- women are critical players. According to the DRA, they tend to respond more quickly than men do to technical problems at water points, and they have greater capacity in relation to improved water supply than is generally acknowledged within the sector. The DRA sets out to acknowledge and integrate this capacity into water supply services; and
- water resources should be managed in a holistic manner.

Box 2 sets out the defining characteristics of the DRA, all of which are designed to enhance the sustainability of water supply systems. This emphasis on sustainability has proved attractive to funding agencies, many of whom are now pursuing the DRA.

Box 2. Characteristics of the Demand-Responsive Approach



Box 3. The Case of Chimbonila

Chimbonila, the district capital of Lichinga, lies within 25 km of the provincial capital of Lichinga, and is serviced by a tar road. It is, in many respects, unusual for Niassa as population densities are high, families have better access to both resources and income than others living in more isolated parts of the Province.

In 1998, WaterAid financed eight water points with Afridev hand pumps. In 2000, four of these water points were rehabilitated. In February 2002, the Projecto de Desenvolvimento Agrário de Niassa installed an additional Afridev on a borehole near the administrative center of the town.

At the time of writing, only the new borehole and one other water point were operational. The others failed because the operation and maintenance teams were unable to secure enough funds to repair the water points. Some water points were vandalized and one was stolen. Most members of the community had given up on the project.

The main reasons for project failure are

- users of the water points could not collect sufficient funds for spare parts; and
- most community members did not consider the project "theirs" as the water points were imposed on the community.

The Failure of the Supply-Driven Model

Prior to the development of the National Water Policy and the subsequent Implementation Manual, Mozambique's water supply approach was supply-driven. The approach did not succeed in delivering sustainable water supply services, for the following reasons

- The Government and development partners tended to identify project sites without consulting the communities concerned.
- The sole technology on offer was "Afridev" hand pumps. A target community's capacity—whether financial, technical, organizational, or social—to maintain this type of pump was not considered.
- Decision making on issues such as siting was usually confined to a few local leaders, rather than to users in general, so water point locations tended to depend on local politics. Families who lived far from water points continued collecting water from closer, unprotected sources.
- The model of community management was inappropriate, and in practice, did not work. Communities were simply told to form a committee with two men and two women, who would manage the water supply scheme. Alternative management models were not considered.

Few committees could respond to technical problems, or had the power or influence to secure community contributions for spares. The upshot was that, according to government estimates, over 35% of water points in the province are broken. Some districts have much higher failure rates, such as Macula, where 90% of the pumps have broken down.[5] WaterAid found that more than 80% of communities had never repaired their hand pumps.[6] Many water points were only functioning because the Government or funding agencies had rehabilitated them.

[5] DAS–Niassa "Banco de Dados," 2002.
[6] Data collected as part of WaterAid's support program, April 2001.

Changing Direction: From Supply to Demand

The publication of the Government's National Water Policy in 1995 demonstrated its recognition of the problems associated with the supply-driven model. The new policy represented a dramatic rethink, arising from project failures, a lack of sector capacity, and a need to transfer more responsibility to communities.

The new policy and the official manual argue that communities are more likely to sustain water systems if they do the following.

- Initiate the project themselves. This shows that the community is interested in addressing its water problems.
- Make decisions on technologies, management systems, and hygiene programs.
- Contribute cash up-front: communities must contribute 2–10% of the total cost of the water service, to demonstrate their commitment and to highlight their financial and organizational capacity to sustain the project over time.
- Manage systems themselves: communities must accept full responsibility for their water service, by deciding on a tariff structure and paying all operation and maintenance (O&M), as well as repair, costs.

The manual calls for the decentralization of government responsibilities, from national to provincial and district levels, in keeping with DRA principles. The thinking is that people close to the project have a better sense of what is feasible than decision makers and funding agencies further removed from the field.

Lessons from Niassa Province

The challenge facing the Mozambican water sector is to transform the way programs are implemented, based on the new Policy and Implementation Manual. To support this process, WaterAid and its partners (Box 1) have been testing the Implementation Manual in five districts in Niassa since 2000. Most of WaterAid's work in Niassa has been based on two early drafts of the manual, issued in 1999 and 2000, which were replaced by the current manual in 2001. This is significant because the new version of the manual has removed Niassa's most popular and sustainable technology option from consideration, a point that will be elaborated on later in this paper.

This section highlights some key issues that have arisen. It offers our insights into whether or not the DRA, as applied in Mozambique, is leading to more sustainable water services for poor communities.

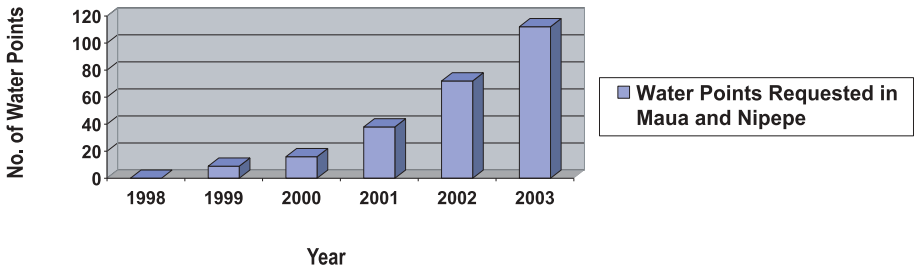
Generating Demand: The Roles of Trust and Guaranteed Finance

Some senior Mozambican government officials fear that the shift in approaches from supply-driven to demand-responsive may lead to a decline in the number of communities serviced per year. A common argument is that communities need a long lead-in time to understand the policy and express demand. Coverage

rates are only 36.6% in Mozambique, and a program that undermines delivery in such a context would be politically and morally misguided.[7]

This is a legitimate worry, but it is not borne out by our work in Niassa. The district-based programs had grown considerably since 2000, when WaterAid partners first introduced the policy. Demand for improved water sources had increased dramatically at district level, as the graph on Maúa and Nipepe suggests (Fig. 1). The demand has in fact outstripped previous targets set by provincial government for these districts. This suggests that, when communities initiate projects by expressing demand, the percentage of people unserved by improved services is likely to be reduced more quickly than by the supply-driven approach.

Figure 1. Water Points Requested in Two Communities



A number of critical factors explain this trend.

- Funds for the work supported by WaterAid were guaranteed to the districts over relatively long periods. This raised the confidence of district government, and as a result, local officials were proactively helping to create demand.
- Community confidence in the process grew. More communities were approaching the government, because they saw that officials were responding to their demands.
- Multiple communication channels for demand creation, and the expression of community demand, were employed, and the following were found to be valuable.
  - Radio: simple messages were used to explain how to apply, coupled with stories told by local people on their project experience.
  - Drama: a drama was developed that explained the DRA principles in a simple yet compelling way. The drama looked at issues relating to applications, community contributions, choices, as well as roles and responsibilities.
  - Workshops: these were organized with traditional leaders, who were influential and had proven themselves invaluable allies for the program.
  - Exchange visits: communities interested in participating in the program were brought to villages that had already taken part, to facilitate information sharing.

[7] Rural coverage data are cited in the Draft Review Report of the Mozambique Water and Sanitation Sector for the African Development Bank by SEED LDA (22/12/01). The report adds that "the review team has serious reservations about the veracity of [these] figures" (SEED: ii).

This combination of proactively generating demand, enhancing community trust through effective responses, and guaranteeing financial support over time seems to lead to increased demand and coverage rates. Several factors threaten this.

- The DRA will not succeed without a strong state that can respond to community demands and manage the process at district level. However, many funding agencies are implementing policies that strip the state, including local government, of its responsibilities, instead of helping build capacity.
- Government and funding agencies still tend to control the program selection process. But WaterAid's experience is that, when communities have actively sought out a project, this creates a greater sense of "buy-in" commitment and energy than when villages are selected by government officials or funding agency staff.
- There is a pressing need to coordinate funding, linked to strategic water supply planning. Provincial and district government are still deterred to some extent from implementing the DRA, because they lack confidence that funding will be available once demand is unleashed. Although they are right to be wary, in WaterAid's view, what lies at the heart of the financing problem is a lack of sector coordination, rather than any shortage of funds. In fact, Niassa is scheduled to receive considerable funding for water supply in 2003, much of it guaranteed for 3–5 years.[8] However, this will come from disparate sources, and is allocated according to the old supply-driven model, whereby district administrations simply choose communities for support. No attempt has been made to develop a strategic, DRA-based, water supply plan that different funding agencies can then finance together. If this were done, the available funding would encourage demand generation, in keeping with government policy.
- In WaterAid's view, government and international funding agencies are using an inflated estimate of the cost of constructing a water point. For instance, hand pumps are generally financed at $4,000, whereas WaterAid and its partners have calculated the true cost at less that $2,000. The result is that the number of communities being provided with an improved water supply is only about half of what it could be.[9]

Strong government leadership is needed to resolve these problems and clear the way for better coverage rates in Niassa.

Community Choice of Technology: A Crucial Factor for Success

Technology choice is a key component of the DRA. This was recognized in the draft implementation manuals issued in 1999 and 2000. Both drafts offered

[8] In 2003, Niassa was scheduled to receive about $100,255 from the Government for improved water supplies. In addition, WaterAid and Ireland Aid are allocating a combined $1,225,000, and other funding agencies (Oxfam Belgium and Foundation for Development Cooperation) are likely to provide smaller amounts.

[9] In 2002, WaterAid and the Provincial Government organized a meeting with utility and private sector representatives to discuss costings for different types of systems. Even when additional costs such as contingencies, transport, administration, and staff overheads were included, the maximum costs for a water point were estimated at $1,167 for a protected well and $1, 923 for an Afridev hand pump. Private contractors bid at these rates. They were able to make respectable profits and invest in new equipment.