WATER DEMAND MANAGEMENT PROJECT FOR SOUTHERN AFRICA

MID-TERM REVIEW

prepared for the

PROJECT STEERING COMMITTEE
and
WORLD CONSERVATION UNION - SOUTHERN AFRICA

by
DAVID B. BROOKS
Ottawa, Canada

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Universal access and demand management are considered to be the most important issues in the transition to sustainable fresh water management.

GlobeScan Survey of Sustainability Experts (2002-1)

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LIST OF ACRONYMS

DfID	Department for International Development (United Kingdom)
GoZ	Government of Zambia
GSA	Government of South Africa
IDRC	International Development Research Centre (Canada)
IUCD	World Conservation Union
IUCD-ROSA	World Conservation Union - Regional Office for Southern Africa (Harare)
MENA	Middle East and North Africa
MIS	Management Information Systems
NGO	Non-governmental Organization
PA	Project Assistant
PM	Project Manager
PMT	Project Management Team
PSC	Project Steering Committee
SADC	Southern African Development Community[1]
Sida	Swedish International Development Agency Corporation
TCG	Technical Core Group
TNA	Training Needs Assessment
UNZA	University of Zambia
WDM	Water Demand Management
WARFSA	Water Research Fund for Southern Africa
WSCU	Water Sector Coordinating Unit (of SADC)

[1] SADC consists of the following 14 nations: Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, and Zambia, and Zimbabwe.

EXECUTIVE SUMMARY

This document is the Mid-Term Review of Phase II of the Water Demand Management Project for Southern Africa, which is funded by Sida and IDRC and implemented by IUCN's Regional Office for Southern Africa. Half way through its planned life, the project is reasonably on course and proceeding well toward achievement of its general objective of making water demand management (WDM) a significant part of each SADC nation's water policy. Progress was somewhat slow in the first six months, but has picked up significantly and attained more direction in the most recent full year of operations. Lack of definition and loose objectives in the original proposal were largely corrected in the Inception Report.

The project contains four specific objectives (tasks). Not all are being achieved equally well, nor is progress uniform across the region. Briefly stated, the four tasks are to: 1) increase awareness of WDM; 2) collect and disseminate information on WDM; 3) improve capacity to promote and implement WDM measures: and 4) application and testing of the use of guidelines for WDM. Progress has been strong on Task 2; moderate on Tasks 1 and 3; but negligible on Task 4. In part, mixed results are not surprising, as there is a logical sequence from the first objective to the fourth. In part, however, they also reflect the design of the project, which, in retrospect, seems to have been over-programmed. Too much was expected from water demand management in a region for which it was desperately needed yet little understood or accepted. Despite such problems, the project has already had an important impact in about half the SADC nations, with a couple of others showing initial interest; only a few countries, mainly those in immediate post-conflict situations, have stayed apart from the project.

Following in the footsteps of the first phase, Phase II, the project has already completed five country studies (adding four countries to the list of those reviewed; one country study was repeated), and it has added several research studies. These outputs are the heart of Task 2, and they add substantially to the regional information base on WDM.

Task 1 is progressing more slowly. Despite the key conclusion from Phase I that the greatest barrier to water demand management in the region is lack of awareness, the proposal for Phase II allocated only a small amount of money to this task. Even so, some steps have been taken including a draft communications plan and links to the Water Sector Coordinating Unit in SADC. Project staff are aware of the need to pursue Task 1 more vigorously, and, together with the Project Steering Committee, will give greater emphasis to increasing awareness over the remaining life of the project.

Task 3 on capacity building is and is not progressing. It is progressing in the sense that every component of the project has had a significant if implicit carry over to capacity building among, but not limited to, participants. It is not progressing in the sense that none of the originally planned explicit capacity building programs have yet been put in

place (though some are planned). Gains are significant, but in rather different forms from those originally envisaged.

Task 4 on application and testing is not progressing well. This step would logically be the last, but even the analytical studies of the potential use of guidelines to promote WDM across the range of conditions found in SADC countries have not been successful. The studies, though useful in themselves, did not serve the end of informing the project about whether or how to proceed with guidelines. Moreover, it seems unlikely that other tasks will progress far enough to permit significant application and testing of guidelines (outside South Africa, which is following this path anyway).

The single greatest achievement to now is that the project, as a result of the scope of activities and its insistence on wide stakeholder participation, has ensured that its key product is *process*. Many people have become engaged in one way or another across the region, and more government officials (particularly where country studies were carried out) are "buying into" the concept. This focus on process is itself critical to building greater awareness about WDM.

Nearly 40 recommendations are made to guide the management or implementation of the project over its remaining life. Some relate to linkages with the Project Steering Committee and to work with the advisory group (Technical Core Group). Others focus on the designing of research studies and on the already significant efforts made to coordinate work with the numerous other water-related projects and programs in southern Africa. However, the most important recommendations focus on possible adjustments in the project itself. Among these are suggestions to change the emphasis among the four tasks, to increase funding and staffing for work on increasing awareness, for greater focus in future work on training and capacity building, and on the need to increase the role of social science analysis in all aspects of the project activities. As well, issues of equity in water use need to be noted more clearly in outputs, and water quality needs more attention than it has received from most components. Finally, the project must make every effort to ensure that WDM is not seen simply as a collection of techniques to save water, but rather a critical form of governance that affects almost all aspects of human behaviour, on the one hand, and of government and commercial operations, on the other.

The final 15 months of the project will be very busy if all tasks, even if somewhat scaled down, are to be achieved. Despite considerable progress, it would be naive to expect WDM to be established policy in more than a few SADC countries by the end of Phase II. Therefore, it is not too soon to begin thinking about a third phase of the project. The final recommendations urge attention to the future, but suggest that a bridging period be designed so that lessons from the first two phases can be thoroughly absorbed and a strong proposal focussing more on advocacy and implementation than on research and information be designed for Phase III.

WATER DEMAND MANAGEMENT PROJECT FOR SOUTHERN AFRICA
MID-TERM REVIEW

David B. Brooks
30 June 2002

1 INTRODUCTION

The Water Demand Management (WDM) Project for Southern Africa aims to promote the adoption of water demand management tools and policies as essential components in the search for sustainable water management in the countries and institutions, and for the people, of the SADC region. Phase I of the WDM project extended from 1997 to 1999 and consisted primarily of a set of five country studies. The project was funded by Sida and IDRC with IUCN-ROSA (based in Harare) serving as executing agency. The most accessible of the outputs to emerge from the project is a book summarizing research results (Goldblatt *et al*, 2000).

Phase I of the project built basic understanding of the nature and extent of WDM in southern Africa. Building on this base, Phase II was able to adopt a more fundamental approach to WDM in the region. More country studies were done, but, in addition, research studies were funded to address the now-broader range of project objectives, and analytical papers were commissioned to explore the extent to which guidelines for WDM might be used in the region. As well, a much wider stakeholder involvement process was initiated. Phase II was again funded by Sida and IDRC, and again managed by IUCN-ROSA. After some adjustment to allow for an early lag in staffing, the project will extend from mid-2000 to early 2004.

The WDM Phase II project reports every six months to a Project Steering Committee (PSC), which includes the two donor agencies. Beyond this internal monitoring, the project includes provision for two external reviews, one after about a year of project operation and the other toward the end of the project. The actual start date of WDM Phase II was February 2001, and it is therefore appropriate that the Mid-Term Review be undertaken shortly after the March 2002 Progress Report in order to assess project implementation to that point, and, more important, guide project components that will be implemented over the remaining 1-1/2 years of the project. *This report is that Mid-Term Review.*

The organization of this Mid-Term Review continues with two preliminary sections, one on purpose and nature, and another on approach. Section 4 covers Project Organization and Management – in effect, the process followed – and is followed

Section 5 on project tasks – in effect, the product.[2] These two sections are the core of the review. Section 6 describes several neglected areas in the design and implementation of the WDM project. And the Mid-Term Review concludes in Section 7 with thoughts on a possible Phase III for the project.

Unless they are relevant to specific decisions, detailed budget and management choices are de-emphasized in favour of a focus on general directions. Recommendations are set out in italics, and are keyed by number to the section where they are found in the report. There are three annexes: Section 8.1 lists key people from whom I received comments; 8.2 lists literature reviewed other than project documents; and 8.3 provides the Terms of Reference for the Mid-Term Review. A draft set of Terms of Reference for the end-of-project evaluation appears as Annex 2 to the March 2002 Progress Report of the project.

[2] These two sections are reversed from the order suggested in the Terms of Reference. To me, it makes more sense to discuss broader issues before more specific ones. As well, this is the order in which the topics are presented in the project's progress reports.

2 PURPOSE AND NATURE OF THE REVIEW

2.1 Formal Purpose

The formal purpose of the Mid-Term Review is "to review WDM Phase II in line with the project plan, goals and objectives." The project plan is described in the Proposal and modified in the Inception Report. As stated in the latter (p. 3), "The overall aim of Phase II is to consolidate the knowledge base and inform the respective national policies an southern African regional policy on WDM."

The primary audiences for the Mid-Term Review are the Project Steering Committee, which includes the two donor agencies, and IUCN-ROSA, which is the implementing agency. The Project Manager (who sits on the PSC) is directly responsible for supervising the Review and for reviewing intermediate drafts. She works from the premises of the IUCN country office in Pretoria, South Africa. Secondary audiences include project staff and the Technical Core Group, which was created as an advisory body early in Phase II.

2.2 Informal Purpose

Stated less formally, the primary purpose of the Mid-Term Review is to provide the Project Steering Committee, IUCN-ROSA, and the Project Management Team (PMT) with suggestions about program adjustment or correction for the remaining 18 or so months of project life: what is being done well; what is being done less well; and what is not being done at all. Such a review does not imply that current directions are wrong, or that project management is lacking. It only means that, as in any large project, an external perspective can suggest shifts in emphasis or sequencing that may be harder for people immersed in the project to identify.

Three further characteristics of this review must be noted. First, though the project nominally started in August 2000, a Project Manager (PM) did not come on staff until February 2001.[3] As detailed in Section 4, important steps were taken in the early months to establish a base for project operations. However, those efforts were necessarily constrained by the absence of direction that could only come from a PM. Therefore, for most purposes, this review covers a period of 15 months – from February 2001 through April 2002. In the same way, the Inception Report as developed by the PM, replaces the original Funding Proposal as the basic project document.

Second, as a mid-term review aimed at the general rather than the specific, many aspects of the project must be treated more lightly than others because they are proceeding well. Indeed, the very attempt to look at every process and product tree

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[3] Effective commencement of the project was delayed by prolonged negotiations with an individual to whom the post of PM had been originally offered but who eventually declined. During the interim, the project was managed by the Director of the South Africa office of IUCN.

would risk obscuring the project forest. For example, the use of work plans is a strength of project management. The brochure is attractive and useful. Progress reports are frank and clearly written. The efforts of the PMT to pursue active collaboration with IUCN's regional office in Harare, and with country offices elsewhere in the region, are commendable. In short, absence of comment should be taken as implicit approval, not as neglect.

Finally, if the Mid-Term Review is to have much impact, it is needed sooner rather than later.

2.3 Nature of the Review

The Mid-Term Review will complement issues arising from the Project Steering Committee meeting on 15 April and the Regional Workshop on 16 - 17 April, and from internal review of country reports, research reports and analytical papers. Together these inputs will guide Phase II for the remainder of its life.

The nature of the Mid-Term Review is informed by another consideration as well, this one external to the project. On World Water Day this past March, the United Nations issued a report stating that, by 2025, two-thirds of the world's population will face water shortages, with half of that number living under conditions of "severe" water scarcity. The report went on to state that the areas most at risk are the semi-arid regions of sub-Saharan Africa and Asia. The SADC region will move from conditions of periodic water crises to one of chronic water shortages. Obviously, such a situation makes the WDM Project for Southern Africa (and other work on water in the region) that much more important. Ironically, this does not imply the need for haste. To the contrary, it implies the need for proceeding with caution. If the shift to WDM must be so profound as many of us believe necessary, and, if the combination of lack of awareness of and resistance to WDM is as strong as evidence from Phase I and Phase II indicates, course correction needs to aim at longer rather than shorter term measures, and at longer lasting rather than emergency approaches.

3 REVIEW PROCESS

As indicated above, without neglecting specific points that may arise, emphasis in this Mid-Term Review will be on the broad picture and on substantive issues -- where the project is going, where it is not going, and where it could go.

The process was as follows:

② In a very real sense, work that contributed to the Mid-Term Review began well in the past. While still an IDRC officer, I was active on the team that reviewed and revised the original proposals leading to Phase II of the Project. Subsequently, in May 2001, just four months after the arrival of the Project Manager, I visited the project office in Pretoria and wrote a report on the project for IDRC. This project report was highly complimentary. At the same time, based on my general experience with WDM, and on my specific experience with the IDRC-funded WDM Network in the Middle East and North Africa (MENA), I was able to offer some suggestions, many of which have been incorporated into the work plan. Perhaps the most important single statement from my report is as follows:

> What is clear is that Wardie Leppan and Simon Forster were certainly correct when they insisted, at the time of the second Pan-African Workshop on Water, that Southern Africa was just as ready for a project on water demand management as was MENA. None of this means that policy makers are ready to act on demand management, only that they are ready to listen. The traditional supply orientation remains alive and well.

② Prior to arriving in South Africa, I reviewed key project management documents from the initial proposal to the most recent Progress Report. In particular, I studied the specific objectives for the project and the plans for implementation of the project, as adjusted in the Inception Report, together with expected outputs.

② For reasons of time and cost, field work was limited to one country (Zambia), with emphasis on Lusaka and its peri-urban areas. However, the report is informed by work over the past decade (including field visits) on projects in about half the countries of SADC.[4]

② During this visit, I attended the meeting of the Project Steering Committee and participated in the Regional Workshop in several capacities, including serving as a Panel Member in the session on options for pursuing demand management.

② This visit also gave me an opportunity to meet many members of the various study teams. I met with the principal investigators for most of the research studies and

[4] Angola, Botswana, Malawi, Mozambique, South Africa, Zambia, Zimbabwe.

analytical papers, and the team leaders for all of the country studies. Discussion was not directed to the reports *per se*, which I could read, but to their experiences in undertaking the work. For example, I asked what the teams might have done differently if they were doing the study again, and what they would have done had they had more time and money. No formal interview protocol was followed, nor were detailed (*eg*, taped) records of the meetings kept.

② I also reviewed each of the country reports, research reports and analytical studies that have been prepared to this point in the study. This review ranged in depth from scanning to complete reading depending on my perception of the document's relevance to the assignment.

The process contained of course a significant writing phase. Work on the Mid-Term Review commenced in the second week of April, and, after one exchange of drafts with the Project Manager, a draft report was submitted to the PSC in mid-May. After three weeks for review, the final draft was submitted at the end of June. The whole process was therefore completed within about 2-1/2 months, which conforms with the view that the review is needed sooner rather than later.

4 PROJECT ORGANIZATION AND MANAGEMENT

To start with the conclusion of this Mid-Term Review, despite problems getting started, the organization and management of the WDM Project for Southern Africa is proceeding well. Indeed, much was accomplished in the first six months when the project operated without a designated manager (the Country Program Coordinator took on the additional task of Acting Project Manger). The design and production of a brochure was commissioned; a consultant was engaged to develop terms of reference for the research themes; those terms of reference were subsequently revised and sent out as a call for proposals; web site training was undertaken; and the first meeting of the Project Steering Committee held.

All this early activity, important though each task might have been, was rather willy nilly. It was only after February 2001 when the Project Manager arrived that greater sense of direction could be provided to the project. Recognition of the importance of this step change is implicit in the request made (and accepted) to extend project life to allow for time prior to the arrival of the Project Manager. (It is both ironic and indicative that the newly engaged Project Manager had to produce a progress report one month after her arrival on the job.) The shift is most clearly seen in the Inception Report, which is much more detailed than the original proposal. Inception reports are common with operational projects, but not with research projects. (They are rare with IDRC-funded projects, which generally expects that a detailed work plan keyed to each specific objective will accompany the final proposal.) The WDM-SA project lies between an operational and a research project, which is one reason why its management is so complex. In the Inception Report, sub-objectives were made more specific and tasks tailored more carefully to the time and budget available. (See further in Section 5.1.)

In retrospect, Phase II of the WDM project was less under-budgeted than over-programmed. The original proposal was logical in concept but designed as if the path from idea to implementation were short and smooth. It never is, and it is even longer and rougher when the task involves something so dispersed as water demand management. It would, ironically, be far simpler to reform the water supply sector, which has many fewer stakeholders and much more concentrated management.

To summarize the rest of the findings on project organization and management, I find few things to criticize. The following points are more in the nature of “what might have been” rather than “what should be.”

4.1 The Project as Process: Stakeholder Participation and Ownership

One of the main products, perhaps the main product, of the project will be process. I know of no other regional WDM program in which the process has been so extensive and, so far as I can observe, so effective. By that I do not mean only that a lot of people have been engaged, nor only that people from most sectors and SADC nations participated in one way or another, but that the project has created a level of

enthusiasm among participants that is remarkable. Most of the studies were themselves a kind of process, notably in the stakeholder workshops that accompanied each of the country reports. The Regional Workshop in April 2002 was also part of the process, and, despite a densely packed agenda, almost all of the 60 or so participants stayed to the very end. During the course of the workshop, several people came to me on their own to ensure that I understood how valuable the project (by which they meant the process) had been. Others indicated that they were able to learn, for the first time, the extent to which water problems were shared among the countries of the region.

To some degree, the participatory approach adopted for the WDM Project for Southern Africa reflects a strong tendency in the region toward participatory exercises and bottom-up processes. More than in any other part of the world, equity plays a strong role in people's views about how processes should develop as well as how products should be distributed. (This is not to imply that equity is always achieved.) As stated in an overview prepared for the Steering Committee, what the project is seeking is "Governance based on maximum participation, responsibility and accountability." I will return to this goal in a moment, but the important point is that IUCN and project staff deserve credit for seeing the importance of participation. The very nature of WDM, which affects every person, farm, factory etc., makes a participatory approach more important (and more difficult) than in the case of water supply management.

There is one qualification to the foregoing perspective. As indicated by the people who came to the Regional Workshop, by comments from participants in the Technical Core Group, and by the disinterest of some government officials, WDM is still seen more as technique than as governance. The statement quoted above, which came from project management, is one of the few in which explicit reference to WDM as governance is made. Perhaps participants sense that both process and product are elements of governance, but most of the effort remains focussed on finding techniques to overcome supply constraints – *eg,* lining irrigation canals or improving irrigation methods rather than strengthening of local water user associations or support for rain-fed crops at the Ministry of Agriculture.

Recommendation 4.1a: It is essential to the future of the process, and all the more so as WDM moves from a good principle to practical governance, to maintain the high level of stakeholder participation.

Recommendation 4.1b: The PMT should continue its networking upward to water sector officials in SADC and in national governments, and, equally, continue its networking downward through insisting that project components include multi-stakeholder workshops and reports back to their own constituencies.

Recommendation 4.1c: In all documents, both those for internal and those for external use, WDM as governance must be given explicit emphasis. WDM cannot be something that stands apart but rather must be part of planning for agriculture, urban design, watershed management etc.

The enthusiasm from a wide range of stakeholders, interests, nationalities and disciplines mobilized around WDM by means of this project bodes well for the future of WDM in SADC. This process will serve to bring WDM more forcefully to the attention of national policy makers and could also bring it to the attention of regional policy makers at SADC.

4.2 Project Steering Committee

The original design of the Project Steering Committee (PSC) was a mish-mash of direction and advice. As a committee that consists principally of representatives of the donors and the implementing agency, it should have been the former. The very name "Steering Committee" implies that it sets strategic direction, yet a sentence from the Terms of Reference reads, "The Steering Committee are to act as an advisory committee . . . ". Whether others, such as government representatives and "experts," should also serve is problematic. Members of a steering committee need to have some level of comfort with the tasks being undertaken; they do not need to be specialists in the subject matter. They are there to guide the project, not to manage it. The Progress Report for the period ending March 2002 identifies the lack of interaction between the project and the PSC as a problem. With creation of the Technical Core Group, the PSC should now settle into its appropriate role of strategic direction. For this role, size and representation are less critical, and the present complement of the PSC seems about right. Interaction should be easier from now on, and the current members can decide among them if wider representation is necessary.

Recommendation 4.2a: I concur with the recommendation in the most recent Progress Report to revisit the Terms of Reference for the PSC.[5]

Recommendation 4.2b: *From some perspectives, I can also concur with the proposal not to replace the two (possibly three) departing PSC members who were originally brought in for their expertise rather than for their position. However, I believe that this decision should be left to the PSC itself, as the members of that body are best placed to determine what additional representation or knowledge is need to complement what they already bring to that body.*

4.3 Technical Core Group

It is surprising that, given the complex nature of the project, no suggestion was made in the proposal for an ongoing advisory group to work with project management. (The original proposal did include an advisory committee but only for the country studies.) If the appropriate role for the PSC had been recognized earlier, the need for an advisory group might also have been recognized earlier. I applaud the fact that the Technical

[5] I am aware that during its meeting of 15 April, the PSC chose not to re-open the Terms of Reference, and it left open the possibility to add one WDM "expert" to the PSC. My recommendations remain as stated.

Core Group (TCG) was created, and that it seems to include many of the people who can assist with each of the four specific objectives. Its membership will be critical for reviewing documents and for "spreading the word" (both professionally and politically). However, the role of the individual members will inherently be limited by the absence of any budget for out-of-pocket costs. Their expressed frustration at the lack of an official mandate and at the absence of a budget are reasonable and should, if possible, be accommodated. This will be especially important for activities related to raising awareness about WDM and to advocacy on behalf of WDM as such activities are less easily "buried" inside regular university or corporate accounts.

Recommendation 4.3: The PM consult with the PSC about ways to reallocate the existing budget or to seek additional funding such that around $25,000 become available for out-of-pocket expenses incurred by members of the TCG in project-related activities. It is not recommended that honoraria be paid because of the difficulty in determining who should receive how much and for what tasks.

Useful though they will be, members of the TCG must never come under the impression that they are guiding the project. For this reason, I would favour a plan in which the TCG is given a mandate by the PSC but made responsible to the PM rather than to the PSC. As individuals, members of the TCG are of course free to approach members of the PSC with ideas, proposals, concerns or whatever. However, as an advisory group on technical issues, they should, in my view, work through the PM.

Recommendation 4.3: The TCG seek a formal mandate from the PSC, which mandate should direct the group to work through the Project Manager.[6]

4.4 Project Staffing

The Phase II project is significantly under-staffed, something that will be evident to anyone who spends time with the project. Given the size and diverse nature of the project, the proposal was quite correct in identifying the need for a Project Manager. However, it probably should have added at least one additional person-year of time to the staff, with the tasks divided between Director of Research and Director of Communications. (Without re-writing the proposal, it is not possible to say whether both tasks could inhere in one position, or whether there should have been two half-time positions.) The project would have been significantly impaired had not IUCN-ROSA provided staff assistance for drafting the Final Monitoring and Evaluation Plan and for outlining the Communications Strategy and Plan. However, further work will be hampered with the current staff complement. For example, the current work plan suggests that a newsletter will be started, along with the web site. Neither will be

[6] I am aware of the recent decision to make the TCG a subcommittee of the PSC (meeting 15 April 2002). My recommendation remains as stated.

possible with the current complement of staff unless significant cutbacks are made in expectations for other outputs (see further in Section 5.1). It is easy enough to put out the first issue of a newsletter or to establish a web site; the hard part is continuing the effort so that they remain vital and useful. The following recommendation is intended to resolve that problem, and is based on the assumption that the bulk of research activities have already been commissioned.

Recommendation 4.4: At least one half-time person be added to project staff to focus on communications and awareness. The same person would also be responsible for final versions of all project outputs. Such staff could be seconded from IUCN, but only if it is a formal assignment with explicitly dedicated time, not just an additional task on top of existing tasks.

In passing, I also want to mention one possible source of support of additional research assistance: graduate students at regional universities. With only a small amount of promotional work by project staff, some professors could likely be induced to have their students write term papers or dissertations on topics of interest to the WDM project. Even if the project had to pay direct expenses, total costs would be low, and the work would be monitored carefully and at no cost.[7]

4.5 Role of IUCN-ROSA

IUCN-ROSA began establishing a niche for itself in the water field in southern Africa from the early 1990s onward. Its initial book (Chenje and Johnson 1996) is a primer on water resources for a general audience, and its more recent work on WDM is commendable. IUCN-ROSA has now received approval from its membership to create a water program for southern Africa that will include, in addition to WDM, attention to wetlands, legal framework, and catchment approaches. To the best of my knowledge, no other non-governmental organization has so long and extensive a record in fresh water management for Africa, nor has any regularly operated at both stakeholder and government levels. Moreover, with its regional structure and its diversified resources, IUCN is organizationally as well as professionally well placed to promote the politics of water – to make it a governance issue. Clearly, a strong non-governmental presence is needed for water in general and for WDM in particular, and IUCN not only has been, but seems likely to remain, well placed to fulfill this role. (See further in 4.6.3.)

Having recognized its virtues, IUCN-ROSA did not always live up to its high standards in the development of the current project. In particular, the proposal for Phase II does not seem to have received either the intellectual attention or staff time that it needed. Among other things, the proposal did not take full advantage of the important

[7] In a comment on the draft Review, the PM noted that some efforts to engage students are taking place, especially in Malawi and Mauritius. Such efforts are welcome, and more should be encouraged. Inasmuch as my comment is just a suggestion based on experience that has worked with other projects, no formal recommendation is made.

information and insights gathered in Phase I. The specific objectives are not very specific (something that may cause some problems for the final evaluation). As a result, the proposal submitted to donors was not so good as it should have been. My own experience while at IDRC indicates (and information from a Sida representative confirms) that all of us charged with reviewing drafts of the project proposal were regularly disappointed. Though IDRC (and I presume Sida) had no doubt that IUCN was the appropriate organization to undertake the project, and though we were pleased to participate in its development, we did spend more time revising the proposal itself than we felt appropriate when dealing with an organization so sophisticated as IUCN-ROSA. The Inception Report corrected many of those problems, but at a significant cost in time and momentum.

4.6 Other Issues of Process and Management

4.6.1 ***Reporting:*** The project suffers from excessive requirements for technical progress reports. The PMT is over-burdened, and, given results to date, future reports on a semi-annual basis should not be necessary. At most, a pair of tables comparable to those in past progress reports showing a) a task list and accomplishments (or lack thereof), and b) the work plan for the next period, should suffice. This conclusion does not apply to financial reporting about which no comment is made.

Recommendation 4.6.1: The PSC should urge the donors to relax the reporting schedule so that it is less of a burden on project staff. Further, Sida and IDRC should be urged to move to identical reporting schedules.

4.6.2 ***Final Monitoring & Evaluation Plan:*** Annex 2 to the March 2002 Progress Report contains a draft Monitoring and Evaluation Plan for Phase II. As with the Communications Plan, this Plan was developed thanks to the support of IUCN-ROSA. The draft plan is extensive. As stated in the March 2002 Progress Report (p. 3), it "goes beyond project-based activity monitoring." Other than the almost trite comment that work on implementing the plan has to start sooner rather than later, my only concern is that the draft plan may be a bit of over-kill. That is, it may be more of an ideal concept than a practical plan for this specific project. However, in the absence of sound knowledge of the method, I demur on any recommendation.

4.6.3 ***Partnerships and Collaboration:*** Work with IUCN to one side, partnerships with other agencies and organizations working on water issues in SADC are critical to full development of the WDM project. In particular, plans for joint work on regional water policies and on awareness and communications been worked out with the SADC Water Sector Coordinating Unit (WSCU). Both teams deserve credit for persevering to the point where now they appear to be working in a collaborative mode. Joint activities currently focus around two areas of work: one on regional water policies (few of which currently refer to WDM) and

the other on increasing awareness of WDM. In addition, SADC's Water Resources Technical Committee was helpful in the initial stages of establishing a base for the Country Studies (see Section 5.3).

The Project Management Team has already taken steps to build continuing collaborative relationships with other organizations and projects.[8] Country study teams also linked with water projects in their respective regions. Such efforts must continue. They are important as much to "show the WDM flag" as to improve outputs. (Both will likely emerge.) Efforts should also be encouraged to find ways to devolve project activities to other organizations. According to the PMT, preliminary steps have also been taken to work with WaterNet, a program for training in the region, in delivering parts of the training module for tertiary institutions (see Section 5.6). As well, the Global Water Partnership - Southern Africa has indicated its readiness to collaborate in dissemination.

My experience suggests that "like-minded" groups are most likely to be found with NGOs and universities, and with a few innovative national and regional institutions. Quite a number of such groups are already working in southern Africa, including a Habitat project on cities in southern Africa, a World Bank study of nine towns, and the Water Research Fund for Southern Africa (WARFSA). There is plenty of work to be done, but the number of activities means that overlap is possible, and inefficient use of information and personnel is likely. Networking among project leaders will be essential, and collaborative work desirable. However, interaction and collaboration are time consuming, and joint implementation (however like-minded the groups may be) is seldom free of aggravation. Therefore, the following two recommendations are made with mixed feelings because of sensitivity to time obligations they imply for project staff.

Recommendation 4.6.3a: Project staff should urge the leader of IUCN-ROSA's new program on water in southern Africa, as one of her early tasks, to create a "map" of who is doing what in the region, with emphasis on those activities that fall broadly within the framework of WDM. Once such a map is available, efforts should be made to create a network of team leaders in order to make best use of resources. (Emphasis in this recommendation is on management, not program.

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[8] In its response to the draft Mid-Term Evaluation, the PMT stresses its efforts to establish contacts and coordinate activities with other organizations and projects, and indicates a sense of frustration with the general lack of response. For the most part, they claim that their efforts have not, in most cases, been reciprocated (except in the case of the WSCU). Though I have no way to confirm these allegations, there is no reason to doubt them. Most likely they originate from the fact that NGOs and project staff everywhere are over-burdened with day-to-day activities rather than from any lack of desire to work with the WDM project.

That is, the goal is to avoid duplication and increase efficiency, not necessarily to create joint programs.)[9]

Recommendation 4.6.3b: Even before a map is available, project staff should look for additional opportunities to increase the range of collaborative work with other groups working on water issues in SADC. The approach should be opportunistic. In the words of the PSC, they should seek opportunities to add value to ongoing work of the project. Wherever possible, other groups should be sought that can, in effect, manage parts of the work or that have facilities for, say, dissemination or training that current project staff do not.

[9] In her review of the draft Mid-Term Review, Ms. T. Matiza Chiuta, Executive Secretary for the Global Water Partnership for Southern Africa, states that such a management map already exists (see her point 14). Not having seen this map, I will let my recommendation stand, but it can easily be put to one side once the map is in use.

5 ASSESSMENT OF PROGRESS IN ACHIEVING KEY COMPONENTS

In many ways, this is the key section of the Mid-Term Review as it reviews the products and outputs expected to result from the funding. Granted that *process*, as described primarily in Section 4, is also important, the material reviewed here is that part of the project that will be seen by those who lack direct contact with it. Section 5 is divided into six main sub-sections: 5.1 reviews specific objectives and adjustment of tasks to now; and the next sections review the key tasks related to those objectives:

- 5.2 increasing awareness;
- 5.3 country studies, 5.4 research studies, 5.5 analytical papers (these three sections jointly cover the task of collecting and disseminating information); and
- 5.6 training and capacity building.

5.1 Changes in Objectives Since Proposal[10]

The full form of the specific objectives of the Phase II project, as stated in the proposal, appear in Box 1. Work to now has focussed on the first two objectives, and this will continue but with lesser emphasis. Of course, there have been gaps in the planned goals of even the first two objectives. However, these gaps in the first two objectives are exceptions. If anything, the incorporation of analytical studies along side research, and the emphasis on varied dissemination techniques goes beyond what was originally proposed.

Box 1: Specific Objectives of Phase II

Task 1: to increase awareness of WDM by politicians, professionals and role players in the water supply chain.

Task 2: to collect and disseminate sound information on WDM and assess the benefits accruing.

Task 3: to improve the capacity of technical, educational and policy professionals to promote and implement WDM.

Task 4: to document the application and testing of WDM measures in pilot case study areas and supporting the implementation of guidelines in different sectors in selected countries of the region.

The situation is quite different for the latter two objectives. Indeed, even in the period between the Proposal for Phase II and the Inception Report, the planned scope of activities related to capacity building and training was reduced and those related to application and testing were narrowed to focus mainly on guidelines, and on the use of case studies for training. If I can read between the lines, these changes stemmed from a more careful assessment of what was possible with limited staff and

[10] This section of the draft Mid-Term Review elicited more response than any other. The recommendations have been significantly revised in light of that response, and I acknowledge the helpful suggestions provided by all reviewers.

budget. However, they were a logical adjustment. For one thing, capacity building and training could not precede the knowledge that was being developed and the awareness that was being built through pursuit of the first two objectives. More important, much of what we are learning about WDM suggests that, beyond technology itself, implementation will be specific to sectors, countries and institutions – indeed to specific institutions serving specific sectors in specific countries. Capacity will have to be built and training provided in a context where it is meaningful, and this suggests something other than a region-wide project.

In summary, the changes made to now represent needed corrections to the original project design. If anything, I wonder if they have gone far enough. Even constrained to focus on guidelines, application and testing may well go beyond the capacity of the project to deliver. Moreover, the entire project can be seen as a capacity building effort. Each component has built, and continues to build, capacity among everyone from project staff to researchers to participants in meetings. (Apropos, references in the recommendations to capacity building refer to components explicitly directed to this goal, not to the capacity building that arises implicitly from of other project activities.)

Recommendation 5.1a: The PSC should hold a discussion at its forthcoming meeting to consider the third and fourth specific objectives that have, to now, received less emphasis than the first two. This discussion should determine the appropriate emphasis that the PM should give to the four specific objectives in order to come closest to achieving the general objective, and, to the extent possible, give more definition to them.

Of course, any tightening of definition for individual objectives or change in emphasis among objectives that the PSC chooses to accept would have to be communicated to and receive formal acceptance from the two donor agencies.

Recommendation 5.1b. Based on my observations and experience to now, my contribution to this discussion would be along the following lines. (Please note that suggestions made at this point anticipate analysis that appears later in the Review.)
i) I would suggest that the PSC de-emphasize the third objective on explicit capacity building and training efforts to the end that only a limited number of target-specific components be undertaken (see further in Section 5.6).
ii) I would also suggest that the PSC either delete the fourth objective on application and testing of WDM implementation measures and guidelines, or revise it to focus on development of a method for application and testing rather than implementation of any significant number of WDM measures (see further in Section 5.5).
iii) Finally, I would suggest that the PSC state that, for the remainder of the project's life, increased emphasis will be given to increasing awareness and information dissemination (see further in 5.2). As part of this effort, I would urge the PSC to direct the PMT to look for and take advantage of selected strategic opportunities where project staff, members of the PSC, or members of the TCG can use project results to advocate in favour of WDM.

Recommendation 5.1c: If, as a result of the PSC discussion, any objective is de-emphasized in Phase II, that objective should receive renewed attention in a possible Phase III (see Section 7.2).

One final point: in discussion at the PSC meeting, it was stated that, though tasks have been revised, specific objectives remain the same. I admit to being confused by this perspective. In my approach to programming, tasks are what one does in order to accomplish a specific objective. The extent to which specific objectives are achieved is the primary indicator of success. They are not long-term goals, nor are they simply hoped-for outcomes.

5.2 Increasing Awareness

One of the key findings from Phase I, perhaps *the key* finding, was that awareness of WDM was lacking at all levels. This point was reinforced by the PM in a note contained in a review of an earlier draft of this review:

> For many of the participants at the "start-up workshops" (in all five countries), the half-day PM's presentation on WDM . . . was their first exposure to WDM.

The task of increasing awareness of WDM is enormous – and by no means unique to southern Africa. I have no doubt that lack of awareness will remain as a key problem at the end of Phase II. The difference should be that, by the end of this phase, the project will have identified most of the information barriers and be able to offer a plan for overcoming them.

Progress on increasing awareness and disseminating information has been slower in Phase II than had been hoped. However, the March 2002 Progress Report indicates that the PMT is aware of this problem and intends to rectify it over the coming six months. To this end, they will pursue opportunities to ensure wide dissemination of information from project outputs (which are only now becoming available) as well as more general information on WDM. Collaboration with staff from IUCN-ROSA work did result in the development of a draft communications plan, but this activity has logically been put on hold pending future work at the SADC level (see Section 4.6.3 above). As well, the participatory approach adopted for the five country studies should itself be seen as part of the effort to increase awareness.

Further support to the critical task of increasing awareness will come from a parallel effort. DfID is well along toward producing a handbook on WDM measures and techniques. Not only will the expected publication of this handbook in the fall of 2002 give a boost to WDM, but more significantly it will relieve the IUCN project of any need to deal heavily with technical aspects of WDM. This means that the project can, as proposed elsewhere in this review, focus on the governance aspects, including of course increasing awareness.

Given the other tasks facing project staff in its first year, the delay in work related to increasing awareness is understandable. The current plan to devote more resources to communications and awareness over the coming six months, is sensible. Links with SADC-WSCU program should be particularly useful in ensuring that WDM is high on the list of regional and national water priorities. Certainly, the positive reaction of print and electronic media to the stakeholder workshops in several countries suggests that there is an audience for the information. Many other stakeholders appear to be ready to learn about WDM. A wide array of ways to increase awareness have been identified in the draft plan. What is lacking at this point is an integrated and phased program developing awareness at all levels – government and corporate officials, small business and farmers, media of all types, students at all levels, and of course householders; in each case, with attention to class and gender differences and to eco-regional variations. *(Nb: This statement should be read as an assessment of where the project stands. It is not to meant as a criticism of project activities to now.)* The ultimate test of that program should be measurable in terms of quantitative indicators of awareness, in the rate and extent of implementation of WDM measures, and ultimately in the extent to which WDM programs are sustained by national and local governments, and by regional institutions.

If the initial delay in preparing a communications plan is understandable, the lack of funds for the work is not. Despite the key conclusion from Phase I, the proposal for Phase II provided only a minimal budget for tasks related to increasing awareness and none at all for information dissemination. Funds were provided for a couple specific tasks, such as information sheets, but nothing more (March 2002 Progress Report, page 3.) The Progress Report also notes that IDRC has given an initially favourable response to the suggestion that additional funds be provided to accomplish the task (a "supplement" to the project in IDRC jargon).[11] This avenue should be pursued.

Given uncertainties about the available budget and staffing (see Section 4.4), I will not make any recommendations about specific ways of increasing awareness and disseminating information. My recommendations focus entirely on the need to elevate this area of work to the highest prominence in the project. And to do so quickly. The importance of this task cannot be over-emphasized.

Recommendation 5.2a: Because of the importance of increasing awareness (along with greater information dissemination), a detailed work plan extending over the remaining life of the project should be created for this objective alone. The work plan should show not only those sub-tasks that will definitely be done but also those that are options or alternatives. The work plan should be expansive rather than restrictive, which is to say that it should aim high, not low. Among other things, it should allow for strategic efforts to engage in or promote advocacy in favour of greater attention to demand

[11] Though I was an officer at IDRC until recently, I have no recollection of any written request, nor could I find anything pertaining to it in project files. Presumably it was an informal request and received an oral response.

management. Deliverables should be clearly defined, and any sub-tasks that have significant time or budgetary implications should be accompanied by preliminary time and dollar budgets.

Recommendation 5.2b: As soon as the special work plan has been developed, it should packaged as a proposal and presented to PSC for further consideration. PSC will then have the options of reallocating within the existing budget or taking the proposal to donors for supplementary funding.

Recommendation 5.2c: Even before additional funds are secured, the search should begin for someone who can serve as Information and Communications Officer for the project. (As indicated in Section 4.4, this recommendation does not preclude the secondment of staff from IUCN.) If a small bit of salary money can be found, this individual should be invited to assist with development of the work plan and with proposal preparation.

Recommendation 5.2d: As the work plan on increasing awareness is developed, project management should provide, or ask members of TCG to provide, a set of indicators of success. These indicators should be associated with each component, not for the overall project, which should more appropriately be covered in the final evaluation.

5.3 Country Studies

In Phase II, four countries were added to the list of country reports, and the study for Mozambique was repeated. The five new reports were significantly better than those in Phase I. Mainly, they went beyond reporting on the state of water resources in the nation to analyzing the institutional base for water management and, in some cases, for the failure of WDM to play a greater role. In addition, as noted above, the studies greatly expanded their connections to stakeholders outside the professional community.

There are interesting variations among the five studies, and, based on my reading and meetings, I suggest that those variations stem primarily from variations in the characters of the study teams. For example, the Mozambican team was led by a management specialist, and this study emphasizes (as, in my view, all of the studies should have) the institutions governing water use and conservation, along with the barriers and the opportunities from that particular institutional structure. The Malawi Country Team was the only one with a predominance of social scientists, and this team put a lot of emphasis on the relationships within the community and from the community to the government. The other three country studies (Mauritius, Swaziland, Zambia) were certainly helpful, but they tended to be more descriptive of the physical geography and water use patterns, and of existing institutions, rather than analytical about the social, economic and political potential for WDM and about institutional design that might be more supportive of WDM.

In many ways, the Country Studies are the most successful part of the WDM project to now. They developed from a clear and well-defined strategy that was based in part on

experience from Phase I, but that was elaborated by current project management. The success of this part of the project reflects the effort put into developing a general strategy for undertaking country studies, then particularizing the terms of reference to make them specific to each country, and finally insisting on wide stakeholder participation as part of the process.

All of this was possible because of a prior effort to identify stakeholders. A sizable network had been established during Phase I of the project. Then, as related by the PM in a note to me, "a deliberate attempt was made at the beginning of Phase II to cast the net wide in the region to identify resource people that the project could 'work in partnership' with." One early indicator of success in process can be found in the fact that no less than two proposals were received from every country; four proposals were received from two countries. As a way to involve government, appropriate water sector officials were asked to comment on the proposals and later to participate in the workshop. Again quoting the PM, "Government was encouraged to be the other 'client' in a sense." Even then, of course, the nature and extent of official "buy-in" to the process varied. In my view, there are lessons to be learned here, and I think the range of results from the Country Studies is worth further exploration. Just as much as failure, success deserves to be explored for lessons learned.

Recommendation 5.3a: I suggest that a small contract be let to someone familiar with SADC countries and their formal water sector institutions for a desk study of the five Country Studies in order to suggest why impacts were in some cases greater and in other cases less than expected. The proposed method may be ex post*, but the purpose is* ex ante*. The purpose is* not *an evaluation of what worked and what did not in the five studies, but to identify conclusions that can inform future efforts to involve governments in WDM activities. The immediate audience for this study would be the project team (including PSC and TCG), but more broadly it would be directed to all of IUCN's water projects and to other organizations engaged in advocacy on behalf of WDM in southern Africa.*

With nine studies in hand, five countries remain in the SADC region for which WDM studies have not been undertaken.[12] From an analytical point of view, there seems little reason to undertake these five studies. Regional conditions are well illustrated by the available reports, and, even though specific details would certainly be added, one can doubt whether anything new would emerge that would change conclusions for the region as a whole.

On the other hand, experience in Phases I and II indicates that one of the great virtues of country studies is the in-country involvement they require and the awareness they stimulate. A good case could be made for undertaking country studies in the five

[12] The countries without reports are Angola, Democratic Republic of Congo, Lesotho, Seychelles, and Tanzania.

remaining SADC countries for these reasons alone, which is to say process will likely prove more important than product. Moreover, if any of these countries wants to mount a WDM program, it would certainly need to start with a country study. Some of the five countries would pose special difficulties for research, but there is now considerable experience with research in post-conflict situations.

Recommendation 5.3b: Given the budget limitations and the range of things that remain to be done in Phase II, I recommend against funding any further Country Studies at this time. In order to protect the project against possible criticism from regional authorities or from countries that have not yet received studies, PSC should confirm this decision.

Recommendation 5.3c: Country studies for Angola, Democratic Republic of Congo, Lesotho, Seychelles, and Tanzania should be re-considered during initial discussions about Phase III.

The country studies vary widely in detail and character. This is not a criticism, but it does require some attention to the communications strategy. The book produced in Phase I is an excellent example of how technical material can be made interesting and accessible to a wide audience. One possibility for producing a similar report is to adapt an approach from an IDRC project on local water supply and conservation in India and Nepal (Moench *et al* 2000). This project had four study teams, each working in a different area, and, at several points over the course of project life, senior members of the teams were brought together with an experienced editor for a "writing workshop." (Further details on this approach can be made available if desired.) Diversity in the tasks probably precludes a similar approach for either research studies or analytical papers.

Recommendation 5.3d: Writing workshops be considered as an approach to preparing non-technical versions of the country reports, along with an overview chapter that will draw out those lessons that are common to all countries and those lessons that explain why there are differences. The texts should be objective about WDM conditions and options, but should also emphasize the importance of advocacy in favour of WDM.

5.4 Research Studies

Research forms a critical part of this project. In contrast to the great effort and broad knowledge about the sources of water, far too little is known about how and where water is used. Quantity and quality relationships are vague at best; vast amounts are withdrawn and consumed in ways that are either informal or illegal; gender and class relationships are more surmised than understood. Apart from obvious measures to improve technical efficiency, major gains in water demand management depend upon greater knowledge.

5.4.1 ***Design of Objective 2:*** Having placed research as one of four main objectives (see Box 1), it is surprising in retrospect that so little attention was paid to the scope and nature of specific research topics. Or to the absence of primary data

for most if not all of the topics. Though the main themes for research were identified in the final workshop of Phase I, the PM and PA were left more or less on their own to develop specific terms of reference for the research projects, to select research teams, and to monitor research progress and results. This despite the fact that neither was an experienced research manager. (*Let me be clear that this statement is not meant as criticism of project staff; it is criticism of project design. See Section 4.4 above.)* As a result, it took too long to reach common understanding of what was meant by words in the terms of reference, to agree on the purpose of each study, and to allow for the absence of data. For example, the first wave of studies includes research on the benefits and costs of WDM; the second wave will include one on the savings from WDM. The latter should have been part of the former as it is the real purpose of the exercise.

More generally, objectives for the research were not clearly enough stated, with the result that the studies tend to stop with description and fail to pick up on analytically more interesting conclusions. For example, the objectives for the research study on rural water use did not direct the researchers toward relationships that would tell us something about the demand for water (as opposed to consumption; see Section 6.3.2) or about balancing depth vs. breadth in the search for information. Still another questionable approach came from the process of selecting researchers, which was treated more in a consulting mode (as with the use of Requests for Proposals) than a search for people with the time, knowledge, and enthusiasm to undertake the research in a flexible way. Finally, there is a tendency to load the terms of reference for the studies with too many questions. Even if relevant, the number of questions tends to blur focus and may have allowed researchers to go on tangents not central to desired results. Some of these problems began to be resolved as the PMT gained experience with research, and as members of the TCG (and in one instance the PSC) provided technical reviews of the research reports. Those contributions were helpful but they came late in the process.

Two further criticisms of research design: 1) It should have been clear from the outset (particularly to IDRC) that $10,000 (later $15,000) per study was minimal for research in any field, much less one that is so new to the region. In contrast to leaders of the country teams, who tended to feel that $25,000 was adequate (if barely so) for a country study, all of the research team leaders indicated that they were pressed to stay within budget. 2) Phase I had already indicated that awareness of and planning for WDM were minimal in the region. Despite this, no specific measures were taken to establish a bridge from individual research studies to the audience that needed to read them. As stated in the March 2002 Progress Report, “The key lesson has been to not overlook the importance of Communication when drafting proposals.” As this issue has been treated in Section 5.2, no more needs be said here.

Happily, despite bumps and false starts along the way, the research component of the project can be considered successful. The projects add to the knowledge base, and experience in research management has increased.

Recommendation 5.4.1a: I concur with project management that the highest priority for further research should lie with a study of the scope and scale of savings from WDM. Direct savings are far from the only rationale for WDM, but they are the best way to attract the attention of decision makers. Therefore, terms of reference for this study should indicate that the goal of the study is to provide practical results, which implies the need for case studies (though not necessarily new studies) with results as quantitative as possible. However, the study should go on to identify and suggest the size of less easily quantified savings (for example, avoided health costs and environmental productivity).

Recommendation 5.4.1b: Prior to funding further research, project management should make a quick survey of other policy-oriented water research under way in southern Africa. The wide range of efforts supported by various governments, international agencies, and donor agencies ensures that at least some will be relevant to WDM. Current and future research should be informed by linkages to other groups (especially to WARFSA). However, this survey is only an interim measure for a limited number of studies. If further waves of research are considered, as in Phase III, a more concerted effort would be required (see Recommendation 5.4.6).

5.4.2 ***Study of Barriers to WDM:*** One of the research studies that was undertaken focuses on the barriers to WDM. Had this project been brought to me prior to funding, I would have expressed reservations. Barriers to WDM are so many and so varied that I would have argued that it is inappropriate to try to cover them in one study. Lack of technical knowledge is one type of barrier and it requires a range of responses; the supply-side orientation of typical water agencies is another type of barrier that requires a different range of responses; and so on. Even identifying and classifying the major barriers is a formidable task. Fortunately, in this case the team leader was very flexible in the way he put a team together and in the approach of selecting just a few key barriers to investigate.

The fact that, despite dim prospects, a good study has emerged offers some lessons. Above all, it is good evidence for the contention that the process in support of WDM is beginning to take hold. Consultants and academics are willing to take risks and to work in the near-absence of remuneration to be a part of the process. However, it also carries another lesson: Just as with the original design for the whole WDM project, the tendency to treat barriers as technical and subject to fairly simple correction must be resisted. This team was one of the few that included physical and social scientists, and it was therefore one of few that

incorporated socio-economic and cultural aspects. I will return to this point in Section 6.

5.4.3 ***Other Research Studies Already Funded:*** The other three studies funded in the first wave of research projects yielded less exciting results. (The three include a theoretical design for measuring costs and benefits of WDM; water use and WDM in rural areas; and technical, economic and social aspects of WDM measures.) None are bad; all met objectives; but in the end they told us little that could not have been learned from a good literature review. I have already expressed myself on the excessively theoretical nature of the benefit-cost study. The review of WDM measures may not have been needed at all. Only the study of rural water use patterns seems in retrospect clearly needed, and it suffered badly from lack of funds to do much field work. On the other hand, it is not entirely inappropriate that some things be re-learned in a different locale and a different context. All three studies will prove useful in selecting among options for WDM in the future. See further in Section 5.4.6.

5.4.4 ***Ecological Demand for Water****:* One of the planned research studies in the next portion of the project involves the ecological demand for water: *ie*, the amount of water that needs to be left *in situ* to provide a variety of services, some tangible and many intangible. During my earlier monitoring visit to the project office, I suggested such a study. In retrospect, my suggestion was ill-advised. A search of data bases indicates that there are no accepted methods for estimating ecological demands for water, and this WDM project is not the place to break new analytical ground. Two alternatives are to wait for the forthcoming DfID handbook, which is supposed to have a chapter on ecological demand, or to ask TCG members based at a university to identify a graduate student who would, as part of a course, undertake a literature review of the concept.

Recommendation 5.4.4: The plan to undertake a research study of the ecological demand for water should be dropped. If some work on this subject is needed, a literature review could be requested from a graduate student in ecology or environmental economics.

5.4.5 ***Gender and WDM:*** The originally proposed study of gender effects of WDM was never funded because not a single proposal was received. I accept that researchers with knowledge of both water and gender are in high demand, and that the project can not offer them enough money to draw them away from other work. Nor, judging from the materials delivered to now, is it a high priority even for those working on WDM in this project. The Malawi report is the only country study that delves more deeply into gender. Most studies barely mention the subject, and, with the partial exception of a couple of research studies, none treats gender analytically.

Despite past problems, the attempt to fund research on water and gender should be renewed for at least two reasons: first, if water supply is gendered, it is highly likely that water demand, and particularly changes in water demand, will also be gendered; second, previous IDRC research has shown that one of the best ways to increase awareness of water issues is through programs directed at women and girls (Brooks 2002). Previous IDRC studies have developed a good base of studies, including some that focus on WDM in Africa and others that include a research agenda (Rathgeber 1996; Manundu 1997; Rathgeber 1997).

Recommendation 5.4.5: Renewed efforts be made to find a researcher to study the gender implications of greater emphasis on water demand management in policy and in practice.

5.4.6 ***Other Possible Research Studies:*** At least two additional research studies may be funded, and, given the flexibility of the WDM project, it is possible that more money will become available for research. This section presents a number of areas of research that might be covered in the remaining life of the project or in Phase III, or that might be supported by collaborating institutions. They are listed in no priority order, and are based mainly on my general knowledge of the region and its needs.

② Several country teams had problems gathering information on the industrial demand for water. For example, brewers and bottlers are secretive. (Many have their own, private sources of water, commonly a bore hole.) In this situation, it is futile to expect good results from country studies. Instead, a regional desk research study could be funded because specific use of water by industry (*ie*, litres per unit of output) for consumptive uses probably varies less from place to place than that of any other sector. The person commissioned to undertake this study must have basic knowledge of industrial operations if he or she is to be able to evaluate information in the literature. (Alternatively, this may be an area that will be adequately covered by the forthcoming DfID handbook.)

② Over and over again during my field visit to Zambia and during the workshop, the problem of the water service sector arose. Typically poorly managed and working with crumbling infrastructure, the sector now faces two additional problems: First, because water supply is unreliable in time and in quality, people do not pay their bills. Second, as WDM measures are instituted, consumption drops. In either case, the water service sector incurs revenue losses, which sets up a vicious circle where the sector has no money to invest, and service deteriorates still further. (This situation must be contrasted with evidence that people are ready to pay for water, but only when the water supply is reliable and clean, and when measurements of use are accurate.) This sort of problem has been faced in the past by electrical utilities, and desk research studies should be able to suggest options to overcome what should be a temporary problem. Though not a true WDM study, I became convinced of the

need for some attention to this problem when a participant in the regional workshop stated that WDM must be conceptualized within the planning framework of the utility. It is for that reason that I list it here.

② In all of the countries, urban areas are growing rapidly and generally without controls. In a study comparable to that done on rural areas, a study could be undertaken to get a better indication of water use patterns in peri-urban areas (and in informal developments within urban areas), as well as appropriate options to both improve supply and make it more efficient and equitable. Greater emphasis on locally managed water should receive attention (Brooks 2002), as should water demand in terms of what influences people to pay for more water.

② As emphasized by project management, WDM should not be seen as an emergency response measure, nor an unpleasant pill to be taken for want of anything better. However, there are important lessons that can be drawn from observing local reactions to flood or drought conditions. A research study including field work might be capable of inferring which policies and programs are appropriate in the sense of making sense for the longer term as well as the short. The focus of the proposed research is not drought *per se*, but clues to WDM from observing how farmers (and others) react to drought. For example, adjustments in farming practices or crop selection in dry years might have much to recommend them if they can be identified and the rationale for their selection determined.

Recommendation 5.4.6: Prior to funding the any future wave of research studies (most likely early in Phase III), the PM should ask two to three people with research management experience (presumably from the TCG) to form a research management team. The team would identify the most needed research topics and the audiences for that research, and share its conclusions with selected other research-oriented groups, such as WARFSA. Once a short list has been created for the WDM project, the team should suggest specific objectives and appropriate investigators. The short list may be greater than the number of projects that can be funded, but, given that the need for research is great, this approach will let potential researchers select those topics to which they can make the best contribution. The research management team will then work with potential researchers to define terms of reference (an approach which should eliminate the need for inception reports), and it will later review (or identity reviewers for) draft reports.

5.5 Analytical Papers

Analytical Papers are discussion documents to inform the question of whether guidelines are appropriate for WDM in the region, and, if so, what process should be used to develop priorities, design guidelines, and monitor implementation.

In a sentence, this part of the project has failed in its basic objective. (This should not be read as saying that analytical papers themselves are not useful.) It is the only part of the project for which this must be said. The problem may well lie in the original conception of an analytical paper. For one thing, the difference from a research study is not entirely clear. Words such as "discussion document" and "presentation for discussion" are used, but they are inadequate to define a clear difference. As well, the exact link to the concept of guidelines for WDM is not clear. According to the Terms of Reference, the focus could be on guidelines themselves, or the conditions that will promote use of guidelines, or even the need for guidelines in the context of southern Africa. Neither of two analytical papers that were received is particularly focussed on guidelines, and, somewhat ironically, they are at opposite ends of a spectrum. Tony Turton's paper on social adaptive capacity is entirely conceptual (it would have made an excellent "keynote paper" for the workshop), whereas Bekithemba Gumbo's paper on information systems for the water services sector is entirely operational.[13] Finally, the criticism made with reference to research studies – trying to load too much onto one study – applies to analytical papers as well.

There are innumerable approaches to stimulating greater attention to WDM on the ground. The approach can be predominantly top down, or predominantly bottom up, or (most commonly) something between. The question is less which approach can work – in the right circumstances, any of them can work – than which approach is most appropriate given the state of governance, the resources available, and the culture of the region. From this perspective, the original idea to adopt a guidelines approach was probably appropriate for South Africa, as indicated by the fact that they are currently under active development for most sectors. Whether they are equally well suited to the rest of southern Africa is an open question that deserves more thought. (An analytical paper to this end was commissioned but the research process was not successful; it is this study to which reference is made in footnote 13.) Participants at the Regional Workshop in April 2002 confirmed their belief in the viability of guidelines, and useful ideas emerged from the three break-out sessions. However I doubt that everyone understood the sophistication of the process being undertaken in South Africa nor the necessity for a strong data base and regular monitoring of results. (Guidelines are often touted as, but seldom turn out to be, self-enforcing.) Note the problem identified in many of the country studies about getting access even to such data as were available, and the difficulty that the South Africans are experiencing with some sectors (*eg*, forestry).

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[13] A third paper was funded, but, despite strenuous efforts by the PM, it has not come together, and the contracts for the work are now being terminated. Inasmuch as the PM has given full particulars of this unfortunate situation to the PSC, and given further that I believe the risks she took in trying to create one joint analysis from two original proposals were reasonable, nothing further needs be said.

What is needed now, I believe, is to re-think the strategy of reliance on guidelines and certainly guidelines of the type being developed in South Africa. Given the acceptance that the idea of guidelines seems to have for many stakeholders, one probably wants to retain the terminology, but to interpret it more broadly. The WDM Project for Southern Africa needs to identify the scope and nature of guidelines appropriate for *moderating* (not *managing*, which is a bigger issue) water demand in countries that are characterized by limited data availability, limited monitoring capacity, and next to no enforcement ability. This can best be done by starting with a focus on the modern sectors of the economy: industry, commercial buildings and hotels, mining, forestry, and perhaps commercial agriculture and a few others. These sectors will have the sophistication not merely to work with the concept of guidelines but also the capacity to participate in the time-consuming process of creating guidelines. As well, guidelines for these sectors should not differ greatly from one SADC country to the next – though this assertion is a hypothesis that needs to be tested.

Recommendation 5.5: Either another analytical paper be commissioned or (preferably in my view) a small team of TCG members be convened with the objective of identifying the most appropriate form of WDM guidelines for countries that are short of almost everything needed to develop, monitor and enforce guidelines. Once a draft document has been developed, it should be widely circulated for comment, and then the original author or team should produce a final document for distribution and use.

In effect, I am proposing a new start on the issue of guidelines for water-using sectors of the economy. The DfID document under development should will be very helpful in pursuing these questions. Note that my emphasis on the need for a new approach to guidelines does not apply to awareness and dissemination, which has already been discussed in Section 5.2, nor to capacity building, which will be discussed below in 5.6.

5.6 Training and Capacity Building

WDM as a major component of integrated water resources management is still at a preliminary stage of development. What is clear is that, whatever the path of development, training and capacity building will be essential. What is not clear is the level and type of training and capacity building that this project should include, particularly given the possibility for adjustment among tasks, as suggested elsewhere. For example, prior to decisions about how to approach guidelines (see Section 5.5), it is premature to suggest appropriate training. Decisions are still further complicated by the fact that, as emphasized above, considerable capacity is being built through the project itself. Analysts are beginning to see WDM as a promising field for research; officials are recognizing the need to introduce WDM into programming; and new tools and techniques are being introduced and tried.

Still another problem in making choices lies in the fact that differences between training and capacity building are not clear in the proposal. In my use of the terms, capacity is built to serve a panoply of activities that will occur over the longer term; training is arranged for a specific task that needs to be accomplished in the near term. Whatever

the distinction intended by the proposal, current definitions should be made explicit and then confirmed with the PSC.
Recommendation 5.6a: The PMT propose to PSC a working definition of each training and capacity building that will serve the needs of the project, and beyond.

Under these circumstances, it is difficult to make very specific recommendations about training and capacity building. The only area where the project seems to have a clear direction is with proposed work in tertiary institutions, something that is not surprising given that many participants in project activities are based at regional universities. (Indeed, one of the elements of capacity building through the project involves students who are using work related to the project as the basis for theses in their pursuit of advanced degrees.) There seems no reason not to move forward with support of what is probably better called capacity building than training at tertiary institutions. Given that neither of the members of the PMT works from a university, and the all-but-universal desire of universities to retain their independence from government, it might be appropriate to enlist several members of the TCG to guide this part of the work. One of the first tasks would be to survey people at tertiary institutions to determine what is needed, and when. It would not be difficult to establish an electronic link for WDM analysts to dissemination information on new reports and publications. (For example, the April 2002 issue of *World Development* contains an article on water in African cities.) Such a service could also identify data sets, such as Aquastat (FAO). On the other hand, perhaps the real need is for bourses to assist students. The important thing is to ensure that support for capacity building on WDM at tertiary institutions cuts across disciplines in ways that include both physical and social sciences.

Recommendation 5.6b: For the next six months to one year, work on the task related to training and capacity building should focus largely on tertiary institutions. This work should be multi-disciplinary, and it should probably be led by academics based in the region, and begin with a survey of what is needed (in priority order). To the extent possible, this area of work should, as already planned by the PMT, be delivered through other organizations, such as WaterNet.

The Inception Report and the recent Progress Report both note the intention to produce a Training Needs Assessment (TNA). This is an appropriate goal for the project, but it is still premature. Further work on the TNA could be deferred for six to nine months. (I am aware that what I am suggesting involves a second deferral, and this may require discussion at the next PSC meeting.) Even then, description of the TNA should probably be modified to suggest that the output from Phase II will be preliminary rather than conclusive. Finally, I suggest that the TNA must take one of two directions: either it must lean toward a generic TNA independent of sector or nation, or toward needs in specific regions and sectors. If the latter, it will likely become less an assessment *per se* than a process for undertaking a TNA in any region or sector.

Recommendation 5.6c: The PM should propose to PSC that work on the TNA be deferred until directions for work on guidelines are clarified. In the interim, the nature of the TNA should be better defined, and a draft table of contents and outline be prepared.

6 GAPS, NON-GAPS AND CONTROVERSIAL ASPECTS OF THE PROJECT

Given the broad scope of the WDM project, and the fact that, apart from South Africa, and to a lesser extent Botswana and Namibia, institutionalization of WDM is new to the SADC region, it would be surprising if some gaps did not emerge in the implementation of the project. The first section below presents several areas of work that, in my opinion, need strengthening. The following section presents several other areas that also need strengthening but that do not seem appropriate for attention by this project. The final section presents one broad issue that is troubling but cannot be easily contained.

6.1 Neglected Areas of Work that Need Attention

6.1.1 ***Socio-Economic Aspects of WDM:*** The most important gap in the current analysis of WDM in southern Africa is the near-total domination of the field by engineers and geologists/hydrologists with a scattering of systems analysts and IT specialists. Social scientists stand out because they are so rare. (Only 10 or so of the 60 people at the Regional Workshop were social scientists. Only one of the people whom I met on my field trip to Zambia was a social scientist. As indicated above, the Malawian country team was unique in being mainly made up of social scientists.) This absence of social scientists in the research teams, and of social science approaches in the analyses, means that important aspects of existing water use patterns, and even more of issues related to adjusting those patterns, are missing. (A specific example of this sort or problem is presented in Section 6.3.2.) As well, it tends to limit economic analysis to cost effectiveness, and cedes the policy field to those who believe pricing and WDM policy are synonymous. Socio-economic analysis must also look at social benefits and costs, and then ask what are the incentives for individuals, groups and societies to adopt those measures (and what are the incentives working against adoption). What looks good to one level of society may look less good to another. And there not only can be but likely will be differences in perspective depending upon class, gender and ethnic group. Important lessons can be learned from observing what techniques are neglected as well as those that are adopted, which is exactly the kind of analysis that experienced social scientists can bring to bear on WDM opportunities.

A range of social science disciplines is needed for WDM, and no doubt among the list of participants all of the key disciplines can be found. However, for the most part those social scientists are either too junior to influence project direction, or too senior to get directly involved in field work. (Happily, this distinction is less evident with the physical scientists.) What is needed are some senior people with practical skills in field work, benefit-cost analysis, motivation theory and the like.

Recommendation 6.1.1: The PMT should try to increase the role of social sciences in the remaining life of the project. Perhaps the major opportunity will arise from further work with the TCG. Emphasis should be placed on finding economists, anthropologists, sociologists and political scientists with practical skills in analyzing policy and program options and in testing institutional options against a variety of criteria.

6.1.2 ***Increasing Emphasis on Equity:*** From my review of project documents, I am comfortable in saying that equity is *not* being neglected in the WDM project. However, judging from comments made at the Regional Workshop, issues of equity are not always evident to participants, which means that they will certainly be missed by others as well. Therefore, as the WDM project shifts to put more emphasis on communications and awareness, project staff must ensure that equity of access to fresh water is explicitly presented.

Emphasis on equity should complement other project components inasmuch as low-income people and those living in water-scarce areas have always adopted WDM practices as a matter of survival. This does not mean that they are always using water as efficiently as they could, nor that they have exploited the resource in a sustainable manner, but it does mean that it will be worth studying their water use patterns to understand the underlying rationale (Brooks 2002). That rationale may offer clues to the best approaches for optimizing water use, and it may even have potential application elsewhere. (A possible research study related to reactions of farmers to drought has been noted in 5.4.6.)

Recommendation 6.1.2: All communications and all materials distributed by the WDM Project for Southern Africa, whether for specialized or general audiences, should include reference to the need to ensure equity in access to water of appropriate quality.

One aspect of equity deserves particular attention. Along with the growing emphasis on water as an economic good is the parallel emphasis on water as a basic right (Gleick 2001). The appropriate quantity of this right is debatable, but most figures centre around 50 to 100 litres per person-day, about half of which should be potable. This is a small quantity of water, and it is therefore nearly irrelevant whether it is or is not subject to pricing. Pricing is critical to WDM, but the relatively small quantities involved in providing for basic needs, and the evident tendency of people with limited supply to use water frugally, mean that the option of a lifeline tariff or of non-pricing can be accepted without seriously compromising other elements of a WDM strategy.

6.1.3 ***Quality Constraint:*** Water quality is not receiving strong enough emphasis in the project. For example, only Mauritius emphasizes water quality issues in its country report. Other reports refer to inadequately treated sewage or other

specific problems but do not go further with the issue. In no case does water quality receive the systematic attention given to water quantity.

The relative lack of attention to water quality is unfortunate for at least two reasons: First, the quantity of water available can be constrained by quality considerations, and can even decline if appropriate disposal measures are not part of the program. All too commonly, industrial effluents or agricultural and runoff turns otherwise good water into a waste product. Second, it is a fundamental conservation principle to provide water of appropriate quality for the end-use. It does not make sense (however common it may be) to use potable water for flushing toilets or even for washing clothes. Water for irrigation and for livestock can be of lower quality than that for human use. Cascading water from end-uses that require higher to those that require lower quality water is one of the most powerful instruments in the tool kit for WDM. Indeed, it is one of the most common practices for people living sin water-scarce areas.

Recommendation 6.1.3: As new outputs start to emerge from Phase II, researchers and authors should be urged to give more attention to quality dimensions of WDM. In particular, they should be urged to identify opportunities to conserve higher quality water that is needed for direct human consumption.

6.1.4 ***WDM as Governance:*** As discussed in 4.1 and especially Recommendation 4.1c, more emphasis needs to be placed on WDM as a part of governance – and not only in the water service sector but in all sectors and policies. Inasmuch as the issue has been discussed above, no more needs be said here.

6.2 Neglected Areas of Work Best Left to Others

There are obviously many other areas of work that might be undertaken by a project focussing on WDM. My comments here are restricted to those areas that arose in meetings or discussions, or that were suggested as appropriate during the Regional Workshop.

6.2.1 ***Better Information on Water Consumption and Conservation:*** Without exception, every sectoral and country study was hindered by lack of good information on the use of water. Most data is not measured directly but inferred from supply systems. There is no consistency in water use data from country to country, or even within some countries. WDM will never advance very far in the absence of regularly collected data on water use (by quantity and quality) together with an accepted framework for handling the data and an accessible data base for storing and distributing it. This does not imply the need for a highly sophisticated system. The adage that it is better to be approximately right than precisely wrong makes great sense with water consumption information.

Important though it is, data collection and management are not tasks that the WDM Project for Southern Africa should take on. For one thing, selection of

an appropriate framework for the data will itself be a challenge, and then will come the task of convincing all countries in the region to accept that framework. Once acceptance of the framework is gained, a data gathering, storing, and verifying system must be established, and many steps in that system will have to be mandatory. Clearly, this is not a task for an NGO, but rather for government, and more specifically in this case for SADC. The question of an appropriate framework can be resolved fairly quickly and cheaply, as proven models exist. Actually collecting and storing the data in a way that allows it to be retrieved and manipulated easily will be neither quick nor cheap. Support from major bilateral or multilateral donors will likely be required, and it will take time to experiment with possible data management models in order to find the one that is appropriate for SADC nations.

Recommendation 6.2.1a: Either the PM for this project or the newly appointed director of IUCN-ROSA's water program should approach SADC - WSCU to determine its plans for taking on the task of developing a water use data management system. To the greatest extent possible, the WDM project should organize any water consumption data that it gathers in ways that are consistent with those plans.[14]

Recommendation 6.2.1b: In the interim, the PMT should seek (or ask one of the TCG members to seek) information on working toward policy in environments in which data sets are highly limited. Some appropriate methodologies exist, and the project should make them available to people working on WDM.

6.2.2 ***Management Information Systems (MIS) for Water:*** Though MIS systems will be critical initially to assist water supply systems to adapt to limited WDM measures, and later to assist broader WDM campaigns, their development cannot be undertaken by the WDM Project for Southern Africa. There are just too many other and more proximate priorities. Moreover, this is one area where we can expect development to proceed on its own.

6.2.3 ***Water Harvesting and Related Techniques:*** Water harvesting is a term applied to a range of ways to improve water regimes in water-scarce areas (or in areas with distinct wet and dry seasons).[15] The same is true for supplemental

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[14] In her review of the draft Mid-Term Review, Ms. T. Matiza Chiuta, Executive Secretary for the Global Water Partnership for Southern Africa, states that it has already been agreed that the WSCU will collect regional water data. However, inasmuch as water consumption data pose particular problems, I will let this recommendation stand. In any event, the PMT must become familiar with whatever data management system that the WSCU plans to adopt.

[15] These techniques are more broadly described as traditional water management, and, because they are so close to the end-user, they are typically treated as demand rather than supply management.

irrigation, which can greatly increase the security and productivity of rain-fed agriculture.[16] Unfortunately, both water harvesting and supplemental irrigation are less widely used in southern Africa than in many other parts of the world. A research study could gather information on the nature and extent of water harvesting in the region, and go on to suggest what sorts of water harvesting offer greatest promise for the region. However, exploration of such techniques would take the WDM Project for Southern Africa far off course. This is, rather, exactly the kind of thing that would be appropriate for some of IUCN's partners.

6.2.4 ***Ecological Sector and its Demand for Water:*** Mentioned here only for completeness. For discussion see Section 5.4.4.

6.2.5 ***Trans-boundary Issues*****:** Trans-boundary issues are sometimes mentioned in connection with WDM. Though relevant to shared management of trans-boundary water, and in some cases critical to resolution of conflicts, the analysis of WDM and trans-boundary water is not essential for the current project. For one thing, decision-makers are not generally aware of the potential for demand management to play a substantive role in trans-boundary water management. Moreover, analysis of that potential tends to be very location-specific, and identification of options for incorporation of WDM as a mediating force requires knowledge of international water law, on the one hand, and economics and political science, on the other. Diversion of research attention to trans-boundary issues would compromise the principal tasks that remain to be accomplished in Phase II. Happily, the general effort to raise awareness about WDM is relevant to trans-boundary issues, and to this extent the project can make a contribution.

6.3 Overall Focus of the Project: WDM or Supply Modification?

There was an underlying debate during the Regional Workshop that occasionally broke through to the surface. Are the activities being undertaken in this project, some participants asked, truly WDM? Or are they just modifications of more or less conventional supply approaches, what might be called Demand-Side Management (Stiles 1996)? This is not a trivial question, nor does it impugn the intentions of those who posed the question (even less those, perhaps the majority, who did not understand the issue). All participants shared the goals of more efficient, more equitable and more sustainable water management for the SADC region, and that is critical as the starting point.

6.3.1 ***Water Demand Management vs. Water Conservation: More Than Semantics:*** South Africa has conflated the concepts of WDM and Water

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However, in the context of the current study, "traditional" is ambiguous and more often refers to the supply-side orientation of government agencies and water providers.

[16] Supplemental irrigation is a modern approach in which crops are supplied with some additional water – perhaps only 20% as much as suggested as optimal in text books – but that water is supplied at critical times in the plant's life cycle.

Conservation in its efforts to develop guidelines, but they are not the same thing. This is not the place for an extensive discussion, but the general differences can be illustrated by thinking of water demand management as a potential that exists at the present time with given technologies, attitudes, habits and practices. The focus of work is on efficiency gains in the delivery and use of water without any fundamental change in how or why things are done. Water conservation is a broader concept that allows for changes in just those parameters held constant for WDM. One might say that WDM is a potential that exists at a point in time, whereas conservation expands that potential over time. In a technical sense, the potential to save water can be represented by a curve showing water saved at various costs; WDM involves movements along the curve; water conservation involves shifts of the curve.

6.3.2 ***The Current Project:***: The WDM Project for Southern Africa is much closer to WDM than to water conservation. This is neither surprising nor inappropriate. Given the state of knowledge about WDM opportunities in the region, and the lack of data on water use, the more restricted approach is quite reasonable. It reflects the position where governments, NGOs and communities are at the present time.

Two issues follow from the definitional point in 6.3.1 and the statement just made about WDM in this project. First, the debate that I discussed above does not, by and large, involve the distinction between WDM and water conservation (though these terms were used, if incorrectly). Rather, the important challenge is whether the project is focussing on WDM or on Water Demand-Side Management, which to quote Stiles (1996, p. 22) "is a term used to describe a somewhat narrower set of activities and principles that are typically initiated by the resource provider (utility) itself as a part of its corporate-planning and capital-investment process." In my view, the charge that this project has focussed on demand-side management is inaccurate. True, many elements of demand-side management are included (the analytical paper by Gumbo is an example), but the options discussed in almost every country and research study go well over into the range of activities that can be legitimately be called WDM. On the other hand, the project must take account of the fact that knowledgeable people at the Regional Workshop had the impression that the focus was demand-side management. If this impression gains ground, it could compromise much of what the project is trying to achieve over the longer term!

Recommendation 6.3.2a: At every opportunity and in all its outputs project staff must emphasize the true nature and scope of WDM. Among other things, it must be made clear why it incorporates so much attention to raising awareness, to advocacy, and to governance. None of this should be presented in such a way as to deny the importance of intermediate steps in demand-side measures, but emphasis should be placed on broader and longer term changes.

Second, and equally important, the project has not to now really investigated the demand for water. Partly because of the relatively few economists participating in the research studies, the project has focussed on the consumption of water. Demand is a relationship that depends upon the nature of the use, on price, on income and, most importantly, on the potential for substitution or for alternative uses. (The only paper to suggest these kinds of relationships was the research study by Daan Louw.) The absence of information on water demand, particularly at the household or farm level, means that it is very difficult to design WDM programs. One is guessing at, rather than analyzing, what will influence, say, farmers to adjust their consumption patterns. Though demand studies are not simple, it would be appropriate to take some steps in their direction. For example, a modest amount of money added to Jonathan Kampata's study might provide some data on water use a few communities in Zambia, and also explore the independent variables that influence that use. If the suggested study of water use in peri-urban areas is funded, it should certainly emphasize demand as opposed to consumption. Perhaps the DfID study will indicate something about the demand for industrial water.

Recommendation 6.3.2: In the remaining life of the project, money should be set aside to investigate, probably as part of other studies, the demand for water as economists understand that term, with initial emphasis on demands in households and small farms. A large literature already exists on water demand, but we have little idea of the extent to which these generalities are appropriate in the key water-using sectors of southern African societies. It is further recommended that this work be guided (or led) by an economist on the TCG.

7 PRELIMINARY RECOMMENDATIONS FOR A POSSIBLE PHASE III

7.1 Phase II in Relationship to Phase III

It is by no means too early to begin thinking about a possible third phase of this project. The project is nearing the mid-point of its life, and it has generated an enormous amount of interest in about half the countries of SADC, and at least passing interest in most of the rest. Thanks to the broader concept for Phase II, considerably more is known about the nature of WDM and of its current and potential role in the region than after Phase I. Both of the two current donors, Sida and IDRC, have indicated that a third phase is thinkable though by no means assured. The purpose of this section is not to propose a design for a possible Phase III but suggest how to go about producing such a design.

Let me start with two preliminary assertions, both phrased as recommendations, and both directed to the PSC and to project staff:

Recommendation 7.1a: Operate Phase II as if Phase III is assured.

Recommendation 7.1b: Plan Phase III as if it will be the final phase.

Recommendation 7.1a is put forward partly because so much remains to be done, and because almost everyone connected with the project expects some sub-tasks to remain un-done at the end of the project. Part of the problem with the original proposal for Phase II was its implicit suggestion that by the end of the project WDM would be well established in the region. The changes instituted by the Inception Report made it clear that any such suggestion was naive. In keeping with that position, Phase II must be seen as an intermediate phase in the project.

Recommendation 7.1b is put forward on different grounds, some practical and some political. The most practical reason is that donors, and particularly research donors such as IDRC, are sceptical of projects that go from phase to phase, something that is more appropriate for conventional aid delivery than innovative research programs. The most political reason is that, at some point, governments must take ownership of WDM, and, if after three phases this has not begun to happen, it suggests that the previous program has not been so successful as hoped. (*Nb:* Use of the plural “governments” in the previous sentence is meant to extend horizontally to include the 14 nations of SADC and also to extend vertically from SADC regional institutions through national governments to local authorities.) Of course, no one would expect all governments at all levels to be equally involved in or enthusiastic about WDM. However, by the end of Phase III, there should be discernable movement in that direction.

7.2 Tentative Design for Phase III

Let me now go way out and make one final assertion, but in this case I will not go so far as to put it in the form of a recommendation: Phase III should probably be designed to

be more different from Phase II than Phase II was different from Phase I. Phase II was much broader than Phase I, but it represented the same sort of approach. It was exploring the realm of WDM to see what was and what was not going on, and then asking what would be needed to give the demand side a greater role in water management in the SADC region. Phase III will have to shift the emphasis from analysis to implementation, from information to advocacy. (Indeed, this is implicit in my suggestions in Recommendations 5.1b and 5.1c to the effect that objectives for training and capacity building, and for testing and implementation de-emphasized in Phase II and given renewed emphasis in Phase III.) The process will still be research in a broad sense, but it will be a much more practically oriented project. Most of the research will be about how to define appropriate measures for specific circumstances, about how to promote acceptance of those measures by authorities, and about how to measure success once the measures have been implemented.

By the end of Phase II, the first two questions about what is and what is not in place will be largely answered. So too will many questions about what might be done, and about cost effectiveness. As indicated in Section 5.3, the fact that the project lacks five country reports is not a serious deficiency. Moreover, though innumerable research questions will remain, enough will be known to permit implementation to begin at all levels. Because several countries in the region are already leading and indeed forcing issues of WDM (extending in a few cases to water conservation), the knowledge base will be that much greater. And it will be complemented by a push from growing populations and economies on the one hand, and very possibly by deteriorating climatic conditions on the other.

Given a focus for Phase III on implementation, the question immediately arises: Implementation of what? There are many possible answers, but from what we have learned in Phases I and II, the following seem likely to be included:

- Continuing focus on barriers and constraints.
- Continuing focus on disseminating information and increasing awareness.
- Partially new focus on training related to implementation and testing of WDM.
- New focus on developing appropriate processes for implementation and for testing “success” (see p. 28 in the March 2002 Progress Report).
- New focus on selected experiments that will “push the envelope” of WDM, especially for water-intensive activities (for example, supplementary rather than full irrigation).

One more task could also be considered, but it would thrust the project directly into the middle of national and regional politics. It is clear from the studies already undertaken in Phase II that WDM does not appear explicitly in many of the institutions of

governance in southern Africa. At best it appears as a secondary area of activity or one that is applicable in an emergency or during a drought. Making WDM a central part of fresh water governance at all levels is an important task for the medium term. Whether it is appropriate for Phase III of this project, I am not at this time prepared to say.

It will be no trivial matter to prepare the proposal for Phase III, particularly given the need for support from government agencies and for collaboration in experiments with stakeholders in a range of sectors and countries. Many programs to support the water sector, and even water demand management, already exist in southern Africa, and any Phase III would have to take those efforts into account. As a result, I doubt that current project staff will be able to bring Phase II to a successful conclusion, including all of the dissemination that the project deserves, and also prepare a proposal for Phase III. Hence, this final recommendation:

Recommendation 7.2: Consider the possibility of asking for bridging funds – Phase II-1/2 – to allow, say, six months to assess the results of the end-of-project monitoring and evaluation study, to draft workable concepts for Phase III, and to "test" the workablility of those concepts with stakeholders, including SADC officials.

7.3 At the End of Phase III

Given my contention that Phase III will be the final phase of the project, at least of a project in the current mode, the question arises as to what will be left behind. Obviously, there will be the project outputs, which by that time will amount to a sizable literature in print and other media, and an even larger grey literature. And across the region there will be many more people from many disciplines and in many positions who are not merely much more aware of the nature and potential of WDM, but who are in a position to do something about it.

The question in this section, and the question on which I wish to conclude this Mid-Term Review, is not about project outputs on WDM but about the governance of WDM. I have indicated above that, with some exceptions, governance is not a strong element in the analysis or the outputs of Phase II. This cannot be the case at the end of Phase III. Once implementation starts, even on an experimental basis, institutions are required. To make the question more explicit: What sort of institution (or what sorts of institutions) should be left behind at the end of Phase III? It is hard to avoid the conclusion that WDM is so pervasive that it has to be dispersed throughout governments horizontally and vertically and cannot be concentrated in any one agency. However, such a conclusion does not preclude special agencies devoted to research or monitoring, among other things. And those agencies could be located at the SADC level, or at the national level. Alternatively, given that WDM so quickly affects national and sectoral interests, it might be better to keep those functions outside government and to make them the mandate of a dedicated institution or of an international non-governmental organization. Perhaps they are the sort of thing that could be taken under

the wing of the regional office of the International Water Management Institute. This sort of approach is not common in Africa, but it might be appropriate in this case.

7.4 A Note on Timing

This project on WDM for Southern Africa is extraordinarily timely. For a variety of reasons, the world is coming to recognize the importance of fresh water, and options for improving water balances and water quality are at last getting the attention they deserve. Moreover, the nature of the attention to water is shifting, as discussed most explicitly by Tony Turton in his analytical paper. Without pretending that the shift is complete or even widely recognized, for the first time what Turton calls Second Order scarcity is getting attention. Part of this shift lies with the broad consensus that a greater share of natural resource governance must be based at local rather than at central levels. Far less of a consensus can be found around the related shift from supply to demand as a way of reducing water scarcity and improving water quality. Still far short of a paradigm shift, WDM is nevertheless now given a greater role to play than it has ever had before.

In conclusion, it is premature to suggest what should happen in Phase III. It is not premature to begin thinking of the need to make such suggestions.

8 ANNEXES

8.1 List of Persons With Whom I Met

Nb-1: This list does not include the many people connected with the WDM Project whom I met as part of other activities. For example, I met the full complement of the Zambian Country Study team during my field visit to that country. It also excludes a number of people whom I met during various office visits or at the time of my two lectures. An asterisk in the list below means that the name listed is that of the team leader.

Nb-2: As explained in the text, these meetings should not be construed as interviews in any formal sense. They were shorter or longer but always unstructured discussions about the nature and progress of the work.

Beukman, Ruth: Manager, Water Demand Management Project for Southern Africa
Fakir, Saliem: Director, South African Country Office, IUCN
Hazelton, Derek: Consultant, Team Leader, Research on Constraints*
Kampata, Jonathan: Dept. of Water Affairs, Lusaka, Zambia;
Co-Project Leader for Research on Rural Water study*
Katerere, Yemi: Executive Director, IUCN-ROSA
Mulwafu, Dr. W: Professor, U of Malawi; Team Leader, Malawi country study*
Musonda, William: Zambia Inst. of Advanced Legal Education;
Economist on study of local water use on Zambia country report
Mwasambili,Rees: Technical Inspector, National Water Supply & Sanitation Council, Lusaka; Member, Namibia Country Study team
Mwendera, Emmanuel J: Prof, Faculty of Agriculture, U of Swaziland;
Team Leader, Swaziland country study*
N'goma, Margaret: Ministry of Housing & Local Govt, GoZ;
Tainer in study of local water use on Zambia country report
Nkhuwa, Dr Daniel C. W: Head, Geology Dept., UZAM;
Co-leader: Research Study on overcoming constraints to implementation of WDM
Nyambe, Imasiku A: Senior Lecturer, Geology Dept., UZAM, and Coordinator of Zambia Water Partnership; Leader, Zambia Country Team*
Ramos, Carmen: Team Leader - Mozambique Country Study
Katarina Perrolf: 2nd Secretary - Development Cooperation, Embassy of Sweden, Harare; former officer at Sida responsible for the WDM project.
Singh, Michael: Director, Water Conservation, Dept of Water Affairs & Forestry, SA
Turton, Anthony: Head, African Water Issues Research Unit, Univ. of Pretoria;
Leader, Analytical Study on Social Adaptive Capacity

8.2 Documents Reviewed or Cited (Other than Project Outputs)

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8.3 Terms of Reference for Mid-term Review

Attached as a separate document because my Word Perfect document did not cohabit happily with IUCN's Word document.