

prepared for the
PROJECT STEERING COMMITTEE
and
WORLD CONSERVATION UNION - SOUTHERN AFRICA

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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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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

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 four

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

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

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.

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.

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:

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

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.

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.

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

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 proj

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

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

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-1.15 Td/

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

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

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.

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.tmentah

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 be 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.

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.

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 aiiew mater i003 Tc0.9rawnmnQ.4801

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, cTerst wvce of stuieds icl

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).

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 flex

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

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.

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 sture review.of the pontepte.¶J/TT4 1 Tf0 Tc 0 Tw 1

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

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.

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.

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.

Analytical Papers are discussion documents to inform the question of whether

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).

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 guideline, but also to guide (and not to

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

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.

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.

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.

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 in 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.

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.

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.

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.

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.

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

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

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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 level of the individual consumer,

consumption of water in the study areas is not surprising. It would be expected that the population in the study areas would be small and that the population would be largely rural.

7.1

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 enthusia

be more different from Phase II than Phase II was different from Phase I. Phase II was

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 workability of those concepts with stakeholders, including SADC officials.

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.

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.

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.

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

Rathgeber, Eva, Women, Men, and Water-resource Management in Africa, in Eglal

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