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IMPACT EVALUATION OF THE WATER AND SANITATION SECTOR PROJECT

USAID/NWSDB INSTITUTIONAL DEVELOPMENT 1985-1991

WASH Field Report No. 431
November 1993

[redacted]

WATER AND SANITATION for HEALTH PROJECT

Sponsored by the U.S. Agency for International Development
Operated by CDM and Associates

[redacted]

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USAID/NWSDB INSTITUTIONAL DEVELOPMENT 1985-1991

Prepared for the USAID Mission to Sri Lanka
and the National Water Supply and Drainage Board of Sri Lanka
under WASH Task No. 475

by

Daniel B. Edwards
and
Edward Salt

November 1993

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RELATED WASH REPORTS

Management Development Program for the Officers in Charge of Water Supply Schemes in Sri Lanka. WASH Field Report No. 426. October 1993. Prepared by Jane Trent Surles and Abhaya Goonawardhana.

The Management Development Program for the National Water Supply and Drainage Board of Sri Lanka. WASH Field Report No. 230. February 1988. Prepared by Daniel B. Edwards and Edward Salt.

Pre-Implementation Workshop on the Water Supply and Sanitation Sector Project, National Water Supply and Drainage Board of Sri Lanka. 26-29 April 1985. WASH Field Report No. 251. August 1985. Prepared by Daniel B. Edwards and John H. Austin.

A Workshop for the National Water Supply and Drainage Board of Sri Lanka, June 6-10, 1983. WASH Field Report No. 94. August 1983. Prepared by Daniel B. Edwards.

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ABOUT THE AUTHORS

Daniel B. Edwards has been a vice president with Training Resources Group since 1981. He has over 25 years of experience as a training and organizational development consultant in Latin America, Asia, and the Middle East. He has worked on numerous WASH assignments over the past nine years, primarily in the area of training and institutional development. He has been involved in projects in Sri Lanka, Ecuador, Thailand, Egypt, and Eastern Europe. He speaks fluent Spanish and has lived in the Dominican Republic and Panama.

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ACKNOWLEDGMENTS

The WASH impact evaluation team had the opportunity to interact with many officers of the National Water Supply and Drainage Board (NWSDB) of Sri Lanka. These officers expressed justifiable pride both in NWSDB's accomplishments achieved during the seven-year USAID project and, of enormous interest to the impact evaluators, in the gains made in the last two years since the close of the project. Information was openly and generously shared. Staff had ready access to accurate information about organizational performance from wall charts and routinely-prepared management information reports—information that would not have existed three to four years ago. While the team received full cooperation from all NWSDB staff, special thanks should be given to Mr. T. B. Madugalle, the Chairman of NWSDB, and Mr. M. Wickramage, Additional General Manager (Corporate Planning) for their consistent support of and genuine interest in the impact evaluation.

A final note is in order about attributing causation to any one input or set of activities supported by the project. It would be impossible to isolate and measure the variables that caused a particular change. The causes of the changes within the NWSDB are multiple. In the last two years, NWSDB staff have continued the inputs begun during the USAID project, with the support of the Government of Sri Lanka and multiple donors, including the Asian Development Bank, the World Bank, Finida, Danida, and WHO, inter alia.

One could also say that the structure of the change was set in motion by the USAID project during the project design phase (1983-1984) and that substantial inputs were made. The end-of-project report documents the changes made over time, and this impact evaluation will update their status. Results achieved during the project have proven to be a foundation for continuing improvement in the operations of the board and the credit for bringing about these changes belongs to NWSDB staff.

ACRONYMS

AGM	Assistant General Manager
CP	Corporate Planning
CP Division	Corporate Planning Division
DGM-C	Deputy General Manager (Commercial)
DGM-F	Deputy General Manager (Finance)
ES	Engineering Science, Inc.
ESA	external support agencies
GC	Greater Colombo
GM	General Manager
HRD	human resources development
MD&T	manpower development and training
MHC	Ministry of Housing and Construction
MIS	Management Information System
NWSDB	National Water Supply and Drainage Board
O&M	operations and maintenance
OIC	Officer in Charge
OJT	on-the-job training
RM	Regional Manager
Rs.	Sri Lanka Rupees (US$1 = Rs.46)
RSC	Regional Service Center
TOT	training of trainers
USAID	U.S. Agency for International Development (overseas missions)
WASH	Water and Sanitation for Health Project

EXECUTIVE SUMMARY

The Impact Evaluation of the USAID-sponsored Water and Sanitation Sector Project, implemented with the National Water Supply and Drainage Board (NWSDB), was conducted by a two-member WASH evaluation team during July and August 1993, approximately two years after the completion of the project, which was implemented between 1985-1991. The evaluation team assessed which elements of the USAID-sponsored project have been sustained by the NWSDB and provided an analysis of why these practices, organizational structures, systems and procedures have been sustained, i.e., continue and/or are being built on.

Eight areas that received technical assistance from the USAID-sponsored project were studied in the impact evaluation:

- Financial viability and commercial performance;
- Budgeting;
- Capacity for corporate planning, strategic problem-solving, and policy development;
- Decentralization;
- Application of modern management techniques;
- Relations with external entities, stakeholders, and consumers;
- Emphasis on operations and maintenance and service delivery; and
- Use of training and human resources development as a tool to support organizational objectives.

In each of the above areas, end-of-project performance (1991) was compared to performance in 1993, and an analysis was made to determine "what had caused results in this area to be sustained or not sustained," including factors that had supported continued improvement in each area and, in some cases, those factors that had caused gains to be minimal. The analysis also suggested those issues that needed attention if gains were to be continued.

The general conclusion of this impact evaluation is that the major gains in institutional strengthening made over the life of the USAID project had been maintained over the two years following completion of the project. Performance improvement was most striking in the area of financial viability and commercial performance. Since the end of the project, billings had increased by 98 percent, and collections had increased by 125 percent. In 1992, the board met its corporate goal of covering operations and maintenance costs and two-thirds of debt service, and generated a surplus of 189 million rupees (Rs.). Its goal in 1993 was to cover all its operational costs and the full cost of debt service.

Comparing verifiable end-of-project data to current performance in 1993 revealed that, in addition to financial viability and commercial improvement, performance had significantly improved in a number of other areas, including:

- Relations with external entities;
- Use of modern management tools of analysis; and
- Implementation of preventive maintenance of facilities.

Performance had improved to some extent in these areas:

- Budgeting;
- Decentralization and Regional Service Centers' (RSC) capacity to perform independently; and
- Use of training and human resources development.

In the following areas, performance in 1993 was much the same as at the end-of-project—it had neither significantly gone down nor had it significantly improved:

- Capacity for strategic problem-solving and forward-planning;
- Capacity for operating and maintaining systems, and producing a high quality product;
- Consumer relations and responsiveness to consumers; and
- Delegation of authority to the RSCs and to lower levels within the RSCs.

The impact evaluation also determined that in many areas the NWSDB had demonstrated a capacity to replicate and build on end-of-project accomplishments. Cutting across the eight areas were a number of patterns of organizational behavior and managerial action which seemed to have supported improvement in institutional effectiveness. In a general way, four patterns of behavior were seen that seemed to promote sustainability, and two patterns were seen that inhibited sustainability as defined above.

Patterns of behavior which supported sustainability included:

- Setting targets collaboratively, monitoring performance against those targets, involving people in developing strategies and plans to deal with problems identified in the monitoring process, implementing those plans using a variety of approaches and then continuing to monitor progress;
- Staff at working levels taking the initiative when a problem existed and not waiting for directions from the top;
- Providing continued training, coaching, and consultation in support of clear programmatic objectives; and
- Creating an organizational environment where "it's not okay not to care."

Patterns of behavior that inhibited sustained institutional improvement included:

- Paying attention to short-term operational issues at the expense of long-term planning and policy development; and

- Micro-managing at all levels from the Management Cell on down.

To maintain and build on the positive gains from the project in the future, the NWSDB needs to continue to reinforce those management behaviors which have supported sustainability. In addition, the WASH team made three final recommendations.

The NWSDB needs to:

1. Review and agree on mechanisms for how long-range issues will be addressed;
2. Review and modify how key meetings are structured; and
3. Provide continued senior management training and team building.

Chapter 1

INTRODUCTION

1.1 Background

The USAID Water and Sanitation Sector Project (USAID Project No. 383-0088) in Sri Lanka was a six-year effort (1985-1991) to strengthen the institutional performance of the National Water Supply and Drainage Board (NWSDB).

The NWSDB is the lead agency in the water supply and sewerage sector in Sri Lanka. It is responsible for the planning, design, and construction of virtually all urban water supply schemes and most of the piped schemes in rural areas. The NWSDB has also taken on increased responsibility for facility operation and management.

The objectives of the institution-building element of the USAID project as described in the 1991 Final Project Report[1] were:

- Consolidate the NWSDB organization responsible for a major World Bank-funded infrastructure project in the southwestern portion of the country with the separate NWSDB organization responsible for similar activities in the rest of Sri Lanka;
- Decentralize to the regions; and
- Change the overall organization and structure, attitudes, and actions to make the operations and maintenance (O&M) activities of the NWSDB its most important mission.

As the project was implemented, additional objectives were added, including:

- Involve wider policy environment (Government of Sri Lanka);
- Coordinate formally with sector-external support agencies;
- Develop a financial consciousness;
- Develop an in-house policy development capability;
- Establish task performance indicators, monitoring systems, and employee performance evaluation procedures; and
- Include Greater Colombo in the decentralization process.

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[1] R M Bradley and C. Tomasides, *Final Report on Institutional Development of the NWSDB.* (USAID, August 1991).

Primary project activities included an organization-wide restructuring program and the provision of technical assistance in each of the organizational, managerial, and technical sub-systems, as well as commodity inputs in selected areas to support training activities and for demonstration purposes. Major program activity areas for assistance included:

- Implementation of a decentralization program to establish three Regional Services Centers (RSCs);
- Development of administrative systems, standard operating procedures, and computer-supported management information systems for:
  - operations and maintenance,
  - personnel,
  - laboratory,
  - planning and designs,
  - procurement,
  - billing and collections,
  - stores and supplies,
  - financial management
- Formation of a commercial department and implementation of computerized billing and collections;
- Development and implementation of an annual financial planning process and upgraded accounting systems;
- Expansion of training department and development of training systems and curriculum;
- Revision of personnel policies and procedures;
- Improvement of maintenance management, including improvements in process control and water quality monitoring, and provision of equipment;
- Establishment of an annual strategic planning process and a sound policy implementation mechanism;
- Creation of a public relations unit, a legal unit, and a section for community promotion of water schemes; and
- Implementation of a management development program for senior managers and development of revised and clarified roles and responsibilities for management.

The USAID project began in April 1985 and was completed in August 1991. Under World Bank financing, one long-term advisor from the USAID project continued to assist the

development of the Greater Colombo metropolitan RSC. Assistance to this unit, while not included in the USAID project design, continued the momentum in this area. Additionally, at the end of the project, USAID/Colombo transferred remaining project funds into the WASH project to continue project monitoring and evaluation, management development, and training for the Officers in Charge (OIC) of water treatment plants. This level of staff had not been reached by the larger project.

In July 1992 during a project monitoring activity, NWSDB staff was trained in procedures for conducting an internal management assessment. The last technical assistance activity provided under the original USAID project was an impact evaluation, the subject of this report.

1.2 Terms of Reference

The purpose of the impact evaluation was to determine the level of institutional development and the degree of sustainability that had been achieved in the two years since major full-time project inputs had ceased. The task was to compare NWSDB institutional performance in 1993 with performance at the end of the project (1991), and to determine the extent to which the NWSDB has demonstrated the capacity to replicate and build on its performance at end-of-project. In addition, the evaluation was expected to identify areas that need attention, especially those related to NWSDB's capabilities to deal with issues they face in the larger environment. The WASH team was specifically requested to review the status of:

- Relations of the NWSDB with its Board of Directors, Ministry of Housing and Construction (MHC), and its consumers;
- Decentralization of management authority and responsibility;
- Financial, commercial, and budget activities contributing to the financial viability of NWSDB; and
- NWSDB's capacity for strategic planning.

The team was asked to review key documents and interview government officials, members of the Board of Directors, the supervising ministry (MHC), and NWSDB staff in the head office and the RSCs. Following analysis of the data, the team was to provide verbal feedback to NWSDB senior staff, its Board of Directors, and USAID on the results, and produce a final report.

1.3 Definition of Sustainability

The WASH team used two measures of "sustainability" to evaluate NWSDB's institutional performance:

- The extent to which the results gained in the project had lasted; and

- The extent to which the capacity for continuing to develop beyond end-of project accomplishments was demonstrated.

During the debriefing after the impact evaluation was completed, NWSDB senior staff displayed their keen awareness of the importance of "sustainability." We asked, "What does it mean when a project is sustainable?" The group responded:

- "When outside assistance is no longer needed for the activity."
- "When we continue to use it."
- "When we believe in it."
- "When we continue to improve upon it."

With these measures in mind, the impact evaluation team focused on two broad questions:

1. Have positive end-of-project gains been maintained?
2. If so, to what extent has the NWSDB expanded on and/or replicated these gains?

As a result, the WASH team was less concerned with existing organizational or operational problems, and more focused on identifying patterns of managerial behavior seen in the NWSDB that helped or hindered sustainable institutional effectiveness.

1.4 Methodology

With this basic concept of sustainability as a starting point, the WASH team held initial meetings with NWSDB senior staff and USAID/Colombo staff. They also reviewed WASH annual project monitoring reports and the very useful 1991 Final Project Report, written by Engineering Science, Inc. (ES), the prime contractor for the project. These activities led to the selection of eight primary areas for review:

- Financial viability and commercial performance;
- Budgeting;
- Capacity for corporate planning, strategic problem-solving, and policy development;
- Decentralization;
- Application of modern management techniques;
- Relations with external entities, stakeholders, and consumers;
- Emphasis on operations and maintenance and service delivery ;
- Use of training and human resources development as a tool to support organizational objectives.

These categories were selected because each area had received considerable technical assistance during the project, and institutional performance had been measured through data collected during the project. End-of-project status was described in the final project report. These primary areas also corresponded largely to the institutional analysis framework used by WASH over the years. (See WASH Technical Report #37, "Guidelines for Institutional Assessment: Water and Sanitation Institutions.")

The team used the final project report to establish an end-of-project baseline in each of the eight areas. NWSDB was then asked to use its management information system to provide current information in each area. With this information and other written materials, including the draft of the 1992 NWSDB Annual Report (see "Key Documents Reviewed" in Appendix), the team made an initial assessment of how the 1993 status in each of the eight areas compared to performance at the end of the project.

With this framework, the team set up a plan of inquiry to interview selected NWSDB staff and other officials from July 18-29, 1993. Questions focused on verifying the written information, determining why progress had been made, and examining what has happened in each area that has prevented change. NWSDB staff was interviewed at the head office in Colombo and at the Greater Colombo, Western, Southern, and Central RSCs. Twenty-eight NWSDB officers at all levels, NWSDB members of the Board of Directors, representatives of other donors, and MHC officials were interviewed.

In Chapter 2, titled "Findings," the major findings are detailed. The findings are presented on each primary area studied in three sections: End-of-Project, Status in 1993, and Analysis.

End-of-Project Status

First the status at the end of the project in 1991 for each primary area studied is presented. The data and indicators presented in the 1991 Final Project Report were summarized. (Other data was added from annual monitoring reports from the WASH consultants.)

Status in 1993

The second subsection reports on the status of the primary area two years after the project ended (1993). These findings were based on the WASH team's review of data summaries compiled by NWSDB staff and from interviews and analysis made during the 1993 review period.

Analysis

In the third subsection, status in 1993 is compared with end-of-project status and the question "what has caused results in this area to be sustained or not sustained?" is addressed. Factors that have supported continued improvement in the primary area and in some cases those factors that have caused gains to be minimal are identified. In some of the eight areas, this analysis involved reviewing NWSDB's stated goals and strategy, including agreements made

during the internal management review conducted in July 1992 (see "Conducting the Management Assessment for the Internal Consultant Team," report for WASH Task No. 384) and the 1991 NWSDB Corporate Plan, and comparing these intentions with actual performance. In several areas, this analysis also pointed out issues needing attention if the overall process of institutional strengthening is to continue.

In Chapter 3, "Conclusions and Recommendations," some broader generalizations about factors that have significantly contributed to sustainability are discussed.

Chapter 2

FINDINGS

2.1 Financial Viability and Commercial Performance

End-of-Project Status

The 1991 Final Project Report noted that the "key project objective—to turn the NWSDB into a financially viable organization—was approached through a combination of the following institutional development initiatives:

- Improving billing and collection;
- Developing financial consciousness through budgeting performance;
- Improving management through adoption of performance-based operations;
- Strengthening corporate planning (raising visibility of financial viability goal through interaction with external environment);
- Upgrading financial systems;
- Providing timely financial information through the installation of Management Information Systems (MISs);
- Adopting cost containment measures; and
- Instituting tariff reform.

"The basic strategy was to awaken an interest among NWSDB management (at all levels) for financial discipline and improvement, to develop the mechanisms to enable financial information to be made widely available in a timely fashion, and to develop collaboratively financial targets supported as necessary by key actors in the external environment (notably external support agencies, the MHC, and the Ministry of Finance)."

The project supported the creation of a separate commercial department and the post of Deputy General Manager-Commercial (DGM-C), as well as the introduction of an efficient billing and collection system decentralized in area offices in Colombo and in the RSCs. The project caused substantial growth in corporate commercial awareness. The development of an inhouse micro-computer-based billing system that generated detailed information on billings, collections, and consumer complaints made possible the involvement of regional managers in monitoring billings and collections by reviewing performance data, resolving problems, and jointly evaluating strategies to improve performance.

Key end-of-project accomplishments noted in the 1991 Final Project Report included the following:

- "The billing lag time (the time between meter reading and receipt of the bill by consumer), which had averaged 6 months when billing was being carried out by a private bureau, was reduced to 30 days."
- "...consumer billing complaints fell dramatically, from over 10 percent of billed connections to below 2 percent by 1989, although there was an increasing trend from 1990 onwards, up to about 3 percent in 1991, as a result of tariff increases..."
- Current collection ratios improved, for example "in the latter half of 1991, Colombo collections within 2 and 6 months of bill posting averaged about 60 percent and 74 percent respectively, compared to about 15 percent and 50 percent in 1986 when inhouse billing and collection commenced."
- Billings and collections substantially improved over the project life, with the monthly average national billings increasing from Rs.17.4 million in 1986 to Rs.70.9 million in 1991. Average monthly collections in 1986 were Rs.13.6 million; in 1991, an average of Rs.45.8 million were being collected.
- "During 1989, it became evident that despite all the efforts to contain cost, the tariff which had been in existence since 1984 was not adequate to enable O&M costs to be recovered from collections, even if substantial improvements could be made in collection efficiency." As O&M costs increased from Rs.224 million a year in 1984 to 391 million in 1989, the percentage of O&M costs covered by billings dropped from 125 percent to 72 percent.

Following work by a project-supported NWSDB task force, the NWSDB 1989 Corporate Plan proposed a tariff increase for 1990 that was linked by the World Bank and Asian Development Banks to their loan disbursement programs. Another increase for 1991 was adopted in order to meet "corporate objectives (and the loan disbursement covenants of the World Bank) of covering all O&M costs, the 1990 current operating deficit resulting from the delayed implementation of the 1990 tariff increase, and one third of debt service from current collections by the end of 1991."

Status in 1993

A comparison of key financial indicators in 1984, toward at the beginning of the project in 1985, the end of the project in 1990, and at the end of 1992, shown in Figure 1, highlights the impact of NWSDB's focused attention on financial viability.

Since the end of the project, billings have increased by 98 percent and collections have increased by 125 percent. During the same period, operational costs increased by 58 percent overall; O&M costs per connection increased by 27 percent.

	Before Project (1984)	*End of Project (1990)*	*1992*
Billings (Rs. million)	224	503	1,000
Billings (% of O&M cost)	125	118	149
Billings (Rs./connection)	2,835	2,719	4,347
Collections (Rs. million)	56	422	953
Collections (% billing)	25	84	95
Collections (% of O&M cost)	31	99	141
Collections (Rs./connection)	709	2,281	4,143
Arrears (Rs. million)	149	380	562
O&M Cost (Rs. million)	179	425	671
O&M Cost (Rs./connection)	2,226	2,297	2,920
O&M Cost (Rs./cu. meter produced)	1.15	1.94	2.63
Debt Service (Rs. million)	33	123	156
Total Cost (O&M + Debt Service Rs. million)	212	548	828.2
Billings (% Total cost)	106	92	119
Collections (% Total cost)	26	77	114

Figure 1

Comparison of Key Indicators

Of course, much of the increase in billings over the two years was due to higher tariffs, but the data also provide evidence of systematic attention to collections. Monthly average billings and collections data for the regions and for Greater Colombo updated through 1992 are shown in Figure 2.

Area	1989	1990	1991	1992
Greater Colombo				
Billings	16.8	32.0	52.5	57.3
Collection	13.9	26.9	34.7	55.6
Regions				
Billing	6.7	12.1	18.4	24.9
Collections	4.5	8.3	11.1	23.2

Figure 2

Monthly Average—Billings and Collections (in Rs.Million)

Both Greater Colombo and the other RSCs substantially improved collection performance in 1992 over 1991. In 1991, collections in Greater Colombo were 66 percent of billings; in 1992, they were 97 percent. In the regions, collections were 60 percent of billings in 1991; in 1992, they were 93 percent.

Commercial staff continues to develop approaches to reduce billing lag time, which in 1993 can still be up to three weeks. The procedure, which is based on "batching" bills, is being modified so that two "batches" go out each month instead of one, which reduces lag time by at least a week. Meter readers are given a Rs.3 "incentive" to deliver bills by hand because of difficulties with mail service.

In 1992, NWSDB met its corporate goal of covering O&M costs and two-thirds of debt service, and generated a surplus of Rs. 189 million (US$ 4.1 million). Its goal in 1993 is to cover all its operational costs and the full cost of debt service.

Analysis

The NWSDB's success in meeting its financial goals resulted from several factors that clearly proved its enduring "commercial orientation" and highlight the impact of project activities that focused on financial viability.

First, NWSDB has demonstrated that it has the continued capability to convince senior ministry officials, politicians, and consumers that tariffs should be adjusted based on inflation and the costs of producing water. Tariffs were increased for the third successive year in 1993.

Second, the NWSDB systematically managed the billings and collections process. As one manager put it, "Our managers were determined in this area. They knew we had no future without financial success." Managers attribute their success to a variety of actions:

- **Timely posting of bills and the use of established procedures to send "red" (late) notices and to follow up by disconnecting services.** Strategies for prioritizing disconnections are shared between regions and planning for disconnections is routinely done based on analysis of trends and other data.

- **Establishment of collection targets for each RSC and region and incentives for achieving targets, e.g., for the best performing region.** Because total collections exceeded operations costs in 1991, NWSDB staff were given 14 percent of their salary as an incentive to continue this performance (funds for this incentive, which has continued in 1993, are from interest on surplus funds collected). Other incentives are given for construction gangs completing a certain number of disconnections in a day and for meter readers who detect illegal connections. Many of those interviewed commented that there is now "competition" among the RSCs on billings and collections.

- **Monthly monitoring meetings held to review progress reports on billings and collections and develop strategies to solve collection problems.** These meetings are held at the RSC level, at the head office level involving RSC and head office staff, and in many cases at regional and district levels. Each level has available up-to-date (usually for the previous month) management information reports on billings and collections, which are developed at RSC and regional levels using standardized formats.

  The agenda of the July 20, 1993 meeting in the RSC in Colombo attended by 25-30 staff members, including all managers, is typical of these monthly meetings:

  1. Discussion of steps to take to deal with delays in the post office delivering bills;
  2. Report on progress of disconnection program;
  3. Billings and collection performance report from each area engineer;
  4. Discussion of "charge for loss of revenue" (non-revenue water) program;
  5. Submission of management information reports;
  6. Analysis of trends in consumer complaints using complaint data base.

- A decentralized commercial function "vigorously" supported by the DGM-C. The RSCs are able to receive assistance in such areas as setting up new procedures, orienting staff in schemes that have been taken over, and intervening in tough collection situations such as with government organizations and the armed forces.

While 1992 billings and collections performance was quite positive, several critical problems raised the question of how NWSDB senior management would continue to develop its capacity to use monitoring systems to identify operational problems, to develop strategies, and to hold itself accountable, thereby sustaining a high level of financial performance. Some examples of these kinds of problems include:

- Billing and collection performance for the first quarter of 1993 as compared to the same period in 1992 illustrates that although billings have increased by 11 percent (primarily due to the 1993 tariff increase), collections are down by 3 percent overall from the first quarter of 1992. Several explanations are offered for this situation, including the fact that collection targets were not set until the beginning of the second quarter, but as yet there has been little attention to managing a systematic, data-based process at the board level that would identify causes of the problem, develop strategies for recovering from the slow start, and adjust targets as necessary.

- The monthly billings and collections monitoring meeting held at the head office is seen by many as not providing effective RSC monitoring. Further, the meeting does not provide a forum in which to identify and solve problems. One manager characterized the meeting as "not really monitoring. Problems are not raised in an orderly manner. There are too many participants, sometimes as many as forty. We can't have a close discussion around the table to present a case and fix a problem. It's difficult to map out strategies. It's conducted like a classroom with a teacher."

- An example of a complex problem that has to be dealt with if financial viability is to be maintained is billing and collections in Greater Colombo. Traditionally, over 70 percent of collections have come from Greater Colombo. Billings and collections data (1993) for Colombo are as follows:

	1st Quarter 1992	1st Quarter 1993	Increase (Decrease)
Billing	180	191	6.1%
Collections	160	147	(8.1%)
Arrears	393	387	(1.5%)

Figure 3

Collections from Colombo

None of the monthly collections through May were as large as the monthly average in 1992.

Meeting collection targets in Greater Colombo is complicated by substantial arrears and the associated problem of meter rectification (repair of faulty meters). Although arrears in Greater Colombo decreased for time in 1992, they increased from Rs. 368 million in December 1992 to Rs. 387 million in March 1993. Over 12 percent of the RSC's 130,000 meters are in need of rectification in 1993; these consumers represent many of the complaints being dealt with by this RSC. Senior management needs to devote continuing attention and resources to the collection of arrears, and the associated problem of meter rectification if the RSC is to sustain its financial performance.

- A third example of a critical financial management problem that requires attention is the monitoring of operational expenditures. As noted above, operational costs rose 18 percent in 1992. While significant attention has been given to the area of billings and collection, monitoring of O&M costs is not done systematically. The lack of timely data on expenditures at the scheme level makes it difficult for RSCs to focus on cutting operational expenses, and encourages an atmosphere in which the importance of controlling long- and short-term costs are under-appreciated by staff. O&M costs will be difficult to control because much of the expense is related to personnel and benefits. Some RSCs are developing their own approaches to collecting timely income/expenditure data, but the organization as a whole needs to place greater emphasis on monitoring operational expenses against budgetary targets.

In summary, NWSDB has demonstrated its ability to use a data-based monitoring system to manage its billing and collections process. Setting targets collaboratively, monitoring performance against those targets, involving people in developing strategies and plans to deal with problems identified in the monitoring process, and continuing to monitor progress are the core elements of the management process which has brought about success in the billings and collections area. This process needs to be extended to other issue areas, such as the ones identified above, in order to deal with the full range of financial and operational problems that the board faces. If this is done, stakeholders will be more likely to support periodic adjustments in tariffs and the financial viability of the NWSDB will be sustained.

2.2 Budgeting

End-of-Project Status

At the end of the project, a performance budgeting system had been put into place to monitor the operational budget. This process required staff to review accomplishments and expenditures from the past year and propose the next year's budget based on performance expectations. "Budget-request forms, together with detailed compilation instructions, were developed by the institutional development project team and reviewed and tested . . . .Budgets were prepared for a total of 328 cost centers" by office and scheme (1991 Final Project Report). A budget development process from the bottom up, based on the zero-based concept of justification for each line item, had been installed. The budget review process included staff origination, review, and amalgamation by the immediate supervisory office head

or RSC regional, AGM and DGM levels, and final review by the head office. Review factors included cost comparisons, staffing levels, operational costs by category, non-revenue water, and projections for increasing revenue and reducing costs.

Budget monitoring procedures had been established by levels and cost coding had been established and staff trained. Overall, expenditures in 1989 were less than 3 percent above budget. Understanding of the basic principles of cost management and acceptance of the need for financial management had been established but facility and ease of budget management had not yet been established.

Status in 1993

The bottom-up budget development process has been maintained. A memo from the General Manager (GM) to all budgetholders (released on June 7, 1993) provided a detailed description of the steps each budget holder needed to take during the coming months to develop the 1994 budget. The process has been refined over the past two years, and strong support to budget holders was provided by the Finance Department. All budget holders interviewed were able to describe the overall budget development process. The OIC, as the first budget holder, is involved in operational budget generation.

At the same time, budget monitoring is being carried out with varying degrees of success. In 1990, expenditures on operations exceeded the budget by Rs. 12 million or 2.9 percent. In 1992, the O&M budget was exceeded by 60 million or 11 percent. Budget exceptions are sometimes granted by the GM without consultation with the Deputy General Manager-Finance (DGM-F) and some items—the cost of some salary incentives for staff and funds for rehabilitation taken from surplus—are not included in the budget or the budgeting process.

The importance of cost containment and cost management is generally accepted within NWSDB, particularly at the higher management levels. However, in 1993, procedures have not been fully in place to systematically contain costs. Some RSCs held meetings with regional managers and the AGM level to review expenditures. The Chief Accountant of the Colombo RSC has developed a detailed budget monitoring system through the creation and installation of a database system that records and summarizes expenditures by all performance areas of the operation. Rather than wait for the head office reconciliation report, the RSC records the expenditures as they are incurred, and a financial report is provided by the 20th of each month. The Southern RSC is making an effort to adopt this approach.

Analysis

Continued training and attention given by the office of the DGM-F to all offices have supported performance in this area. Workshops have been conducted at each RSC by accountants from the head office to further train staff in the use of budget development and monitoring instruments.

The installation of an improved, modern accounting and budget management system was a major project accomplishment and is critical for the success of a number of other NWSDB

performance objectives. In order to further institutionalize budget development and control and to improve budget management, several elements need attention:

- Need to include OIC in budget control process. The first need is for the budget holder at the OIC level to receive regular expenditure reports and to be included in the process of budget control. The accounting system at the head office level amalgamated expenditures, and a scheme by scheme report is not produced at this level. The RSC level has the data but in the past has not reported them to the OIC.

The OIC has not been considered part of management. While asked to generate a budget, staff at this level is not provided with the information needed to monitor expenditures against a budget. Yet most of the recurring operational expenditures (electricity, chemicals, staff, operations and maintenance) are made at this level.

At the beginning of 1993, a pilot program for OIC upgrading, and training was underway at the Southern RSC. It was proposed that this program would bring about OIC involvement in expenditure control.

- Need to increase timeliness and decentralization. In the two years since the completion of the USAID project, dependence on head office central accounting reports on expenditures has made it difficult for managers to monitor expenditures. Reports are received about two months after the data are sent in. The program that the Colombo RSC has developed to maintain a current expenditure accounting program at the RSC level is a good example of internal initiative to build on the gains of the project. This program should be installed for all RSCs.

- Need for continued training in how to present, understand, and interpret budget and expenditure data. Those participating in the budget process need to understand the principles of accrual accounting. For example, current budgets are arrayed in simple 12-month straight-line configurations, and budget holders are often deceived that they are doing fine on holding costs down, not anticipating peak expenditure periods that may fall in certain months. Bulk procurement of recurring supplies may be incurred in early months and appear as large deficits. The budget presentation and monitoring require flexibility. Mandated expenditures on benefits for staff often change the budget picture, but arguably should not necessarily be seen as a budget deficit. Overconfidence due to exceeding revenue targets often causes budget holders to request exceptional expenditures before all costs have been accounted for.

2.3 Capacity for Corporate Planning, Strategic Problem Solving, and Policy Development

End-of-Project Status

At the end of the project, the informal "corporate planning group" started during the project had been formally transformed into the Corporate Planning Division (CP Division) headed by an Additional General Manager. The CP Division had not been staffed fully to perform the duties expected, but had absorbed the Performance Management Accounting Unit, which compiled the management information used in overall performance and budget monitoring. One secretary and one planner (engineer) were assigned as well. Some of the supervisory functions previously exercised by the Additional General Manager for Services (personnel, administration, and training) were assigned to this division.

Additionally, a permanent internal advisory-management group had also been set up called the "Management Cell." This group consisted of the most senior (DGM and above) staff (on a rotating basis). Their function was to monitor accomplishment of the corporate plan and to continually monitor the internal and external environment for problems that might affect the well being or future of NWSDB. The Management Cell would pass on concerns, needs and problem interventions to appropriate levels and to the CP Division.

By the first quarter of 1991, the first written corporate plan was produced with the assistance of the project consultants. The corporate planning process had included a wide range of NWSDB managers in preparing background papers to project service needs (population, hours of service, quantity of water), qualitative needs (water quality) and cost savings and recovery needs for a five-year period. A workshop involved senior staff in review and presentation of these planning elements. This planning and projection served as a data base to evaluate the desired level of service and to set corporate targets for coverage, financial targets (cost recovery, tariffs, and expenditures), operations and maintenance (reduction in non-revenue water, water quality, and preventive maintenance) and management improvement (staffing, employee performance evaluation, and control of excessive staffing and overtime costs). The presentation of this first corporate plan was well received by major external support agencies and the Government of Sri Lanka.

Perhaps equally important as the production of the first corporate plan was the attitude of staff that it is possible to shape the sectoral environment through clear intention and vision coupled with a systematic plan to achieve it. Including many of the senior and mid-level staff in the corporate planning exercise provided training in planning. The 1991 Final Project Report states, "This event marked a significant turning point in the development of the NWSDB. The evolution of the corporate planning process . . . resulted in NWSDB changing from being totally reactive to parent ministry dictates on matters of policy, to not only reaching out to reshape and guide the national sectoral environment, but also to demonstrate the confidence to present its ideas in an open forum before foreign donors and the Sri Lankan political lobby."

Status in 1993

The corporate planning section within the CP Division has increased its level of staffing by two persons since the project ended. The CP Division is a permanent feature and is considered an integral part of NWSDB. The Performance Management Accounting Unit continues to collect and report on a range of performance indicators and publishes a monthly management information bulletin, which all AGM and above-level staff receive. THE WASH team was referred to data in this management information bulletin repeatedly by those interviewed.

The CP Division continues to develop its own capacity for monitoring corporate achievements. In addition to the management information function, the most visible role of the CP Division is the management of the annual budget exercise. The CP Division and the Performance Management Accounting Unit coordinate closely with the finance and accounting division and all offices and RSCs to develop and manage the budget.

An attempt to replicate the workshop approach to involvement of staff in development of a corporate plan took place in January 1993. This effort was guided by the Additional General Manager (CP) and staff and initiated the revisions and updating procedure for the original corporate plan developed in 1991. The revised corporate plan was under development and was expected to be completed in 1993.

Each RSC also reported that initiation of operational problem-solving was done locally without assistance from the head office. This was done through regular meetings and special training programs initiated at the local level. The CP Division saw itself as a "facilitator" of problem-solving and planning and often drew on the work done in the RSCs. Following recommendations made in the July 1992 organizational assessment, the CP Division developed organization-wide procedures for house connections, which were based on the work done in the Central RSC. The CP Division also assisted in the design and facilitation of a workshop to expand to all RSCs the gains made in preventive maintenance for electrical and mechanical devices by the RSC Southern.

In the area of overall capability for developing and maintaining a corporate vision and monitoring the corporate plan, the Management Cell continues to meet. Meetings were held five times in the seven-month period from January through July 1993. It met infrequently in 1992. The range and type of agenda items presented in order of the number of items on the agenda over the two-year period were as follows:

Monitoring cost effectiveness goals:

- NWSDB paper on detection of illegal connections and security deposits by non-domestic consumers
- Review of overall NWSDB performance indicators for 1992
- Report on privatization study (possible areas for contracting out)
- Pilot project contracting for meter readers

- Dues from irrigation department in Anuradhapura
- Funding for future rural water supply projects and cost recovery policy
- Control of personnel costs proposal
- Replacement of old galvanized iron service connections
- Collection of arrears from armed forces
- Review of NWSDB paper to appoint special collection agents
- Propcsal for incentives for billing and collection staff in Greater Colombo (GC).

Agenda items addressed to monitor the decentralization goals:

- Evaluation of amalgamation of O&M and commercial functions of RSC-GC (1992)
- Reorganization and decentralization of investigation functions (1992)
- Report on rationalization of regional boundaries (1991)
- Work program of institutional development consultant (1993)

Operational Matters:

- Decision for disciplinary action against meter readers to be handled directly by the DGM-C and reported to the DGM-GC.
- Control of expenditures on overtime
- Facilities for workshops and training courses
- Proposal to improve meter reading performance
- Proposed impact evaluation by USAID (1992-93)

Agenda items to further marketing and coverage expansion targets:

- Water service connections to private property developers
- Present status of taking over schemes in Badulla, Kurunegala, Chilaw and Puttalam

Human Resources Development (HRD):

- Report on employee motivation consultation by WASH and selection of two recommendations for implementation
- Training Plan

Policy and Procedure:

- Approval and purchase of capital items
- Adoption of price escalation policy for construction

Agenda items to further the public image of NWSDB:

- Action program to publicize new NWSDB act (1992)

The 1991-1992 Corporate Plan contained 24 specific Operational Service Targets (e.g. "train and equip in-house leak detection and repair teams in all regions by June 1992;" "reduce operational staff/1000 billed connections ratio from around 40 to around 25 by December 1992," 5 Financial Targets (e.g., "initiate a Rs.51 million operating cost reduction programme from July 1991 that will be in full effect in 1992 and thereafter"); "assess realistic collections levels for arrears and plan collection programs accordingly by April 1991," and 2 Institutional Strengthening Targets (e.g., "fully staff decentralized Community Participation Units in five RSCs by December 1991"). In discussions with the CP Division and other staff, it was apparent that while most of these targets had been achieved during the past two years, the targets and the overall corporate plan itself had not been systematically reviewed. NWSDB organizational resources had clearly been devoted to many of the key operational, financial, and institutional objectives included in the plan, but it did not seem that the corporate plan was being used by senior NWSDB staff as a tool to allocate resources, develop strategic or operational plans, or systematically monitor progress toward objectives.

Analysis

Those interviewed gave the CP Division high marks for management of the budget process and the information system. These gains were sustained because a well-conceived and documented system of procedures had been established. The demand for these services was key to overall functioning of the NWSDB. The staff performed well in these areas and personnel were assigned to give them attention. The CP Division received relatively low marks on timeliness (the time required to receive feedback on management indicators and budgets for monitoring and the pace of actions on corporate initiatives and planning), initiative development, and operational problem-solving.

One of the reasons for this mixed assessment was insufficient staff resources. Comparable corporate planning departments in other authorities would have a financial analyst, several social scientists/organizational developers, and researchers in areas of technical innovation. It has been difficult to recruit staff for the few positions that were open. In addition, management responsibility for most of the administrative, personnel, and training functions of the NWSDB also has been assigned to the Additional General Manager (CP), which burdened the chief corporate planner with administrative management, leaving little time for corporate planning. In other words, a full-time corporate planner with an operational CP Division has not been established to complete the institutionalization of this function.

Another issue related to the viability of this function is that there continue to be differences in perception about what the CP Division should be doing. Many of those interviewed expected the CP Division to inherit the role of the USAID consultants and act as an in-house consultation arm, operational problem-solver, and "monitor" of action items related to institutional development agreed to by various parts of the NWSDB. Others raised larger

questions of NWSDB policy, e.g., coverage versus financial viability, which they expected the CP Division to address in the context of a visionary plan for the future. Most did not believe that the CP Division has adequate staff or management capacity to accomplish this. Many were unsure what the CP Division was doing and seemed to lack information. Another group of those interviewed (particularly at the higher management levels) were well informed of the activities of the CP Division and believed that it need not initiate problem-solving and provide future vision, but rather should provide a monitoring/analysis function on overall corporate progress. In other words, the CP Division should be research-oriented and respond to requests for study from top management and from different sections (a type of "think tank" and not an action group).

The CP Division itself believes that it is utilizing the existing staff within all NWSDB departments to deal with operational problem-solving by acting as a facilitator and catalyst when good ideas are put forth (for example, assisting with planning and facilitating the pilot program for OIC development or sponsoring a workshop in preventive maintenance). The CP Division believes it is appropriate to continue its monitoring role on management information and budget development. In other words, the CP Division sees itself functioning as a broker between pressures to change or improve and top decision-making. It also assists the change management process with the training department with special programs. According to this view, the CP Division is a force to balance overall long-range corporate objectives with continued institutional change.

When questions related to sustaining NWSDB institutional performance were raised in the interviews, most of the NWSDB senior managers as well as many of those interviewed outside the NWSDB pointed to "larger" issues, which they felt needed to be addressed if NWSDB operational and financial performance are to be sustained. Some of the larger issues were represented by these questions:

- Does the NWSDB approach to tariff increases unfairly subsidize domestic consumption and inhibit industrial development? Will the current tariff policy be sustainable over time? This policy requires 8 percent of the consumers to pay more than the actual cost of producing water, thereby subsidizing the other 92 percent, who pay less than the actual cost.
- How can the NWSDB better manage the market for water?
- What next steps should be taken to further decentralize and structure the water sector for the next 10 years?
- What will it take to achieve 100 percent coverage?
- When we begin to cover 100 percent of our debt service, where should the board be putting its "profits?"

Most of those interviewed agreed that insufficient attention is being given to issues of the NWSDB's long range direction. Many view the Management Cell as the primary force required to act as the vehicle for identifying, assigning and initiating problem-solving activity, and

developing future vision. Many believe it should spend less time on operational issues and more on the larger policy issues that affect NWSDB's future.

Given the diversity of viewpoints about the role that the CP Division should play, and the critical importance of some of the larger questions that relate to the NWSDB's future directions, attention needs to be given to the continued development of NWSDB's capacity for corporate planning. The function needs to be appropriately staffed and a consensus developed on the respective roles of the CP Division and the Management Cell in the areas of corporate planning, strategic problem-solving, and policy development.

2.4 Decentralization

End-of-Project Status

One of the important accomplishments of the USAID project was the establishment of a structure for decentralization. The concept of the RSC was that the delivery of services to consumers and the management of that service needed to be close to the consuming public and responsive to their needs. By setting up the RSC structure, a series of decisions, functions, staff positions, and resources was deconcentrated from the head office at Ratamalana to create five geographic regions.

Years of effort were expended by many NWSDB staff and the consultant team in defining every step and position in that decentralization effort. The management training program, the financial delegation program, and the capital investment program to construct and equip new offices were all directed to the decentralization. Within this process, increased decision-making and agility of response to local needs were taken on increasingly by the RSCs. By the end of the project, the role of the head office had shifted in many instances from operational management of RSC and outstation affairs to consultant, policy development, normative oversight, and progress monitor of workplans and budgets previously agreed on and originating from the RSCs. This was particularly true in the commercial and financial areas. At the end of the project, the NWSDB was less decentralized in construction, groundwater, planning and design, and technical planning areas.

Figure 4 shows the division of responsibilities between the head office and the RSCs as described in the 1991 Final Project Report.

Other key end-of-project accomplishments noted in the 1991 Final Project Report include the following:

- "...a high degree of decentralization had been achieved in two RSCs (Southern and Central), a somewhat lower level in Greater Colombo and Western RSC and, with the exception of Ampara region which came under the temporary purview of Central RSC, no progress at all in North-Eastern RSC because of the continuing adverse security situation."

- "The level of financial authority enjoyed by the RSC senior managers at the end of the project was 20 times greater (Rs.500,000 compared to Rs.25,000) than that enjoyed by the engineer managers responsible for regional operation at project inception."
- "The RSC senior manager had been elevated to the rank of Deputy General Manager (DGM), and managers were provided to cover financial accounting, planning and coordination, construction, O&M, and support services functions. New or rehabilitated office, laboratory, and workshop facilities had been provided in some locations . . . billing and collection procedures had been established, and with the introduction of region-wide collection targets, financial performance had improved dramatically."
- "A major impact of decentralization was improved liaison with decentralized government agencies and communities and a much improved NWSDB."

Head Office	Regional Service Centers
■ water sector master plans	■ groundwater development
■ planning/design/construction supervision (extensions, minor new and rehabilitation projects)	■ planning/design/construction supervision (major new and rehabilitation projects)
■ corporate planning	■ operations and maintenance
■ policy preparation	■ water quality monitoring
■ development of new management systems	■ community support/sanitation
■ financial reporting	■ billing/collection
■ personnel functions	■ financial management/budget control
■ audits/quality assurance	■ local purchases
■ bulk purchases/imports	■ local and on-the-job training
■ training (overseas, interagency coordination)	■ performance evaluation
■ performance evaluation	■ MIS
■ national data bank	■ MIS coordination
	■ liaison with decentralized government agencies
	■ regional data bank

Figure 4

Division of Responsibilities between the Head Office and RSCs

Status in 1993

The level of decentralization at the end of the project has been maintained, and in a number of ways, has continued to evolve. In the two years since completion, RSCs have taken on additional personnel functions, more training is coordinated and carried out by RSC staff, the construction supervision of increasingly larger projects is handled by RSCs, and greater emphasis is given to developing and monitoring budgets. All RSCs have an Assistant General Manager (AGM), and fully staffed decentralized commercial functions. Discussions have begun on extending financial authority beyond Rs.500,000. Groundwater has not been decentralized to all RSCs.

RSCs are seen as increasingly willing to take the initiative for solving key operational and strategic issues. For example, RSCs are setting up committees to examine the advantages of clustering schemes, developing procedures so that applications for connections can be taken at the OIC level, and developing regional management information systems. Several managers indicated that their income/expenditure data are more timely and detailed than that provided by DGM-F. Overall, DGMs and senior RSC staff are perceived to be more self-motivated, self-confident, and willing to take risks than they were two years ago. An oft-repeated refrain during interviews at the RSC was "I'm not waiting for the head office to do that." Or, "We can do it ourselves."

DGMs are routinely dealing with local government counterparts and politicians and are seen as "having a better understanding of politicians, having more experience and a better system to deal with politicians." In the Southern RSC, consumer societies have been formed in concert with local district councils and district secretaries as a structure for billing and collecting payments for standpost water. There is strong coordination with local government structures.

Within the RSC structure, efforts to further involve staff and delegate to Regional Managers (RMs) and OIC levels continue. Regional meetings are held regularly without the participation or control of the DGM or AGM levels. An effort is underway in the Southern RSC to set up an OIC classification program and to train and upgrade OIC positions.

The continuing evolution of decentralized operations is taking place at the same time as the individuals carrying out the DGM role are changing. Three of the DGMs managing RSCs were not performing in those jobs in 1991. Managing an RSC has become an established and valued role in the NWSDB.

Analysis

The positive gains reached at the end of the project have been consolidated and a decentralized approach to management continues to play a vital part in sustaining NWSDB's performance. Decentralized management of billings and collections is a prime example of how delegating authority to field offices has supported performance. There are many other examples throughout this report.

Several issues need to be addressed to support the continued evolution of decentralization and to develop the board's ability to function in a decentralized manner:

- **Need to provide institutional development assistance to RSC/Colombo.** Many NWSDB officers have realized that RSC/Colombo needs to be looked at as a "water authority" in itself and examined to determine what kind of "institutional development" and decentralization program needs to be carried out. The intensive institutional development process enjoyed by the Southern and Central RSCs under the USAID project came to the Colombo RSC very late in the project and with fewer resources because it had not been a part of the original project scope nor the terms of reference of the contractor.

- **Need to increase RSC autonomy.** As was pointed out in one interview, all RSCs need to continue to "pull, because the people in head office are not going to be pushing." With the growth of the population served, the trend toward taking over schemes formerly operated by municipal councils, and the need for better coordination with those involved with rural water, RSCs are going to need to continue to develop their capacities to function autonomously in areas such as corporate and operational planning.

- **Need for continued institutional development at RSC level.** A primary issue is the kind of "institutional development" that needs to take place within each RSC and in its lower management levels. The Chairman has stated that "as a matter of principle, the OIC must be treated as a manager." Following recommendations made in an organizational assessment adopted in July 1992, Southern RSC is carrying out a pilot management development program for OICs in collaboration with the CP Division. Carrying out this program involves grading schemes, establishing job duties and designations for each position according to the type and complexity of each scheme, and assigning staff to these schemes according to the abilities and disciplines of the employees. Ongoing support needs to be provided to this effort, including the creation of promotional ladders and a significant training effort.

  Decentralization to the RSC level has resulted in significant, measurable improvements in performance. Further decentralization to the OIC level offers the promise of further improvement. In many ways, carrying out this further decentralization provides challenges that are similar to the initial USAID project. The need to change the "organizational culture," to build management skills, and to develop reliable systems and procedures will test the NWSDB's ability to implement institutional strengthening beyond the results gained in the USAID project.

- **Need to develop the consultative role of the head office.** The shift in role of the head office from direct management to consultation and support needs to continue. The very successful model of technical assistance and training provided by the finance and commercial areas from the head office to the RSC is a good example of what will be needed to sustain decentralization. As the RSCs become more like regional water authorities, this shift in role needs to continue. The CP Division could

play an important role in that effort by assisting the RSC in problem-solving and facilitating technology exchanges from one region to another.

2.5 Application of Modern Management Techniques

End-of-Project Status

At end-of-project, a series of management tools and skills were operational:

- A revised management structure had been put into place through the formation of the RSCs that allowed for increased delegation of authority and delineation of functions to emphasize the need to provide service to customers (commercial and operations and maintenance) and to pursue financial goals (increased attention to billing, collection, and accounting).
- A performance management system had been put into place using a series of performance monitoring devices: target setting, definition of duties, management information system using the "Key Management Information Report," and computerization. The staff had been introduced to the use of data for management purposes, and they had the tools and equipment to do so.
- A personnel policies and procedures manual for the top eight grades of staff had been designed, approved, and adopted by the NWSDB.
- A performance evaluation system had been established, with a series of steps required and learned by managers. Managers were able to observe employee performance based on performance requirements and agreements, to compare behavior with standards, and document performance and conduct annual performance reviews. A system was established to provide incentive pay for those achieving more than 80 percent in the evaluation scoring system. Those scoring below 30 percent were not given annual increases.
- Senior management had participated in a series of management training seminar-workshops and had developed a base of management skills for achieving better results with staff and for developing a staff team. The skills for defining mission and purpose, for communicating with staff, for representing NWSDB to the public and to colleagues, for conducting meetings, and providing feedback to monitor staff had been demonstrated with varying degrees of success. The senior staff of NWSDB operated as an effective team. Mid-level staff had begun to receive a parallel management training program.

In addition to the achievements related to project deliverables, a great deal of effort had been put into individual advice and coaching assistance for managers to assist them in becoming better managers. As a result, management atmosphere that increased possibilities for risk-taking and taking individual responsibility for new initiatives had been established.

In the area of role clarification for management, a great deal of effort had been expended to carefully separate the roles of management so that policy matters were approved by the NWSDB based on staff work and recommendations from management. Day-to-day management was separated from actions by members of the Board of Directors. The Management Cell was set up to strengthen senior management's executive role, working with the GM (the chief executive officer), and any participation by the Chairman of the Board was for advice, as opposed to direct control or management. Efforts were made to push the level of decision-making on a number of routine matters as low as possible. The signing of routine personnel actions, overtime, and leave allowances and approvals was pushed off the GM's desk and assigned down to appropriate levels to allow the GM to operate as the chief executive and have time to consider future direction, outside relations, and facilitation of staff efforts.

Status in 1993

The management structure developed under the project continues to be refined based on needs and emerging realities. For example, the RSCs continued to refine duties and to develop and move positions around to meet coverage and service targets. In the Southern RSC, a position was created to provide coverage for the Hambantota regional. This proposal was accepted without question. In the Colombo RSC, positions were developed to provide additional attention to the operations and maintenance function by creating an AGM post for production and for distribution networks. Delegation of financial authority continues apace with inflation and is now at a ceiling of Rs.500,000 and likely to be raised. Sustaining these structural elements comes from overall acceptance and the general functionality of the structure. There is currently a pilot program underway to further define and upgrade the role of the OIC so that the delegation would continue to lower levels.

The staff have increased their abilities to use and rely on data and management information as a management tool within the performance management system. During interviews, managers frequently referred to data. The need for and use of data tends to vary according to the management job. Those working in operational, commercial, and RSC management positions rely heavily on data. They continue to improve and refine the use of data-based tools. The pilot project to upgrade and improve the OIC position at water treatment plants will be based on the definition of specific duties and performance measures for which the OIC has to qualify and subsequently achieve, according to the DGM heading this effort. The tool of performance management has been increasingly institutionalized.

Performance review as a management tool continues to improve from the relatively infirm position it was in two years ago. In some cases, it has produced outstanding results. For example, approximately 50 non-performing staff have been released and have not been reinstated based on labor tribunal reviews. These non-performers were treated systematically using performance review procedures and within the full application of documentation procedures for termination. Most of these have been due to excess absenteeism. The provision for special incentives for those achieving more than 80 percent ratings in performance review has been suspended, and an across the board 12-percent incentive bonus has been provided

for all employees as long as NWSDB continues to generate revenues in excess of its operational costs and exceeds overall collection targets.

The personnel policies and procedures manual developed under the project for the top grades has been adopted to varying degrees and is policy. Many of the benefit provisions regarding hardship assignments, provision of low cost loans for housing, and transfers are regularly implemented. In many instances, however, staff report that lower level staff have not been afforded these same benefits and that these benefit policies need to be extended to their levels. At lower levels, particularly at the operational level, housing is supposed to be provided and rented to staff. This has been done neither uniformly nor sufficiently.

The exercise of new management skills related to supervision, teamwork, meetings, and modern management has enjoyed varying success during these two years. For example, almost all of those interviewed regularly hold unit staff meetings and regularly discuss work assignments with staff. In another example, it was encouraging to hear a mid-level employee state that he was designing a workshop with his boss and with the assistance of the CP Division for OIC-level staff to share lessons learned on monitoring performance. The approach expressed was to "let them discuss and recommend which forms would be most useful; I have decided to say little and get them to feel the ideas are their own."

While this encouraging attitude of delegation and motivation was present in many instances, sometimes the meeting structure of the head office had fallen back into the pattern of large meetings with poor results during the monthly operational and billing and collections meetings. This could be evidence that the "meeting routine" is no longer required.

Analysis

NWSDB staff continues to place a great deal of attention on improving management practices. Effective administration systems have been established, and they have made the management task easier for staff. A new management culture has been created, and this momentum is self-sustaining in many areas. The tools are in place for modern management, and staff have the skills to use them.

There are some cautions in order, however. One issue raised by many of those interviewed was that the overall spirit of teamwork that existed two years ago has waned. Reasons for this include the infusion into senior management ranks of new staff who had not participated in the overall institutional development process, had not served on task forces and in problem-solving groups, and had not attended annual project monitoring and team building events. Additionally, many of these new managers were not trained in the management seminars provided during the project.

Another issue is that the respective roles of NWSDB senior leadership are becoming confused. During the project, a great deal of attention was given to creating clear and distinct definitions of the roles of senior board staff. For example, a "Management Cell" was set up as a structure intended to allow the senior management (at the DGM level and above) to work with the GM, acting as the chief executive of NWSDB, to identify critical management needs and move on

them quickly. Efforts were made to reinforce board senior staff responsibility for daily NWSDB management and to involve only the full-time working members of the Board of Directors in policy and advisory duties. This clear definition of roles and responsibilities which existed at the end of the project has eroded within the two years following the end of the project.

The Permanent Secretary of the MHC stated in the interview that "internal management is for NWSDB, we are only here to review larger policy matters and ensure that international loan projects are attended to." Yet, at the Board of Directors level, two full-time members of the Board of Directors (the Chairman and Vice Chairman) are heavily involved in daily operational decisions and routine management of the NWSDB.

It was questionable whether Board of Directors members should act as full-time staff. (In the great majority of corporations in the world, the members of the Board of Directors play a different role. It is their job to develop policy and review outcomes, and leave the "how" to the organization's management.) The danger is that when a Board of Directors member, because of his inordinate power, tries to manage directly, his word will not be questioned by managers, even when it should be. This "dipping down" into daily management issues confuses the chain of command. Staff reports that this is happening, for example, at the level of the Management Cell, which has become a management meeting that members of the Board of Directors ran. As one person interviewed said, "almost 100 percent of the discussion time is taken up by the Vice Chairman and the Chairman. The senior staff remain mostly silent."

Using the time of the Management Cell to deal with operational problems means that other issues do not get dealt with. As can be seen by the analysis of the Management Cell's agenda for the past two years shown above, about 80 percent of the items are focused on board revenue, costs, and Greater Colombo operational problems. The Management Cell has a potentially critical role to play in identifying, assigning and initiating problem-solving activity, and developing strategies for the future. This leadership role cannot be carried out if members of the Board of Directors use their time to micro-manage internal matters.

2.6 Relations with External Entities, Stakeholders, and Consumers

End-of-Project Status

By the end of the project, NWSDB had established an improved relationship with its parent ministry. During many years of the project, the then Ministry of Local Government, Housing, and Construction (later changed to the MHC) conducted weekly meetings with all of the AGM, DGM, and senior staff to discuss operational matters. These meetings later became monthly, and by the end of the project, sufficient confidence had been established so that only formal, official liaison was maintained, with the GM and the Chairman attending normal reporting meeting on matters of policy and externally-funded projects.

In the area of local government and local political structures, NWSDB had set up working relationships with provincial councils and municipal government, and the corresponding DGM

or AGM regularly met with these structures to conduct business. In many instances, however, these relationships were complicated by the commercial relationship involved. NWSDB sold water in bulk to a number of municipalities, and often many of these were in arrears by the end of the project. In some instances, the MHC was required to intervene to force payments, and this mechanism was used when required by the end of the project.

Relationships with foreign donors were considered very good in 1991. A number of projects were in force, including an Asian Development Bank-funded rehabilitation project, and activities under World Bank Loan III for rehabilitation and construction in Colombo. The staff of NWSDB had become effective in working with the international donor community to further the interests of NWSDB.

Relations with consumers had improved marginally over the years of the project. Consumer complaints had been reduced. However, NWSDB did not have a strong record on speedy, courteous response to consumer requests. Nor did it have consumer-oriented mechanisms such as easy-to-pay outlets, telephone lines dedicated for consumers, and a system to meet consumer service requests or serve complaints in specified time periods.

Status in 1993

At the level of ministry relations, the gains have continued. During the interview with the Permanent Secretary, a memorable quote was, "In this ministry, one of the most effective institutions we supervise is the Water Board. They are more efficient than the other public corporations. That is difficult given its social responsibility."

In relations with politicians and local government, there have been continuing improvements. In general, staff have better understanding of politicians: "... we have more experience and a better system to deal with politicians. Particularly at the RSC level, staff have been able to anticipate needs before problems arise with local politicians. Confidence in dealing with these pressures has improved. The pressures and requests from politicians have not changed over the years, but we have better tools for dealing with them now."

The capacity to work with donors has continued to be effective. Progress on loan projects has generally been on target, and the NWSDB has been able to use the external support agency (ESA) loan processes to leverage important policy issues. This has been true of tariffs. At times, the ESA also might demand actions that create stress and great amounts of attention of senior staff, who often spend more time pleasing the ESA and providing data and analyses than on managing the NWSDB. Work is being completed on World Bank Loan III and expectations are that Loan IV will be negotiated satisfactorily. This, however, may require the NWSDB to take on a larger role in the sewerage operations of Colombo.

Some work has been done in the area of consumer relations and service, but NWSDB staff report that "only lip service is paid to the consumer side." In terms of positive achievements, a manual on how to deal with household connections was produced and used in the provincial RSCs, thanks to the initiative of staff in the RSC Central and with the support of the CP Division. More locations have been established for the public to make payments on bills (e.g.,

at storefronts and public offices). In 1992, the NWSDB internal management assessment identified consumer relations and attention to consumers as two of the most important needs for problem solving. Resolutions were made at a workshop to work on a few simple items, such as arranging places for customers to sit while waiting for attention at offices, putting in special lines so that customers can contact the NWSDB by phone; but "other priorities" intervened, and these items were not acted on.

Analysis

The few gains made in the consumer relations area have been made because of the initiative of a few individuals. This area has not received major attention from management. The relationship with consumers has great variability within the different locations and regions of NWSDB. For example, in the Central and Southern RSC offices, there are fewer customer complaints. This may be because it is more difficult to complain, given telephones and the distances customers would have to travel to arrive at offices. It is also possible that these management units are smaller, and more attention is paid to consumer needs.

In Colombo, however, there are a number of factors that contribute to a higher volume of consumer complaints and a poorer public image: the larger population is more difficult to serve, and access to politicians, telephones, and personal connections with authorities creates a situation where consumer complaints are heard much more. One spot survey of complaints on bills for a month indicated that most of them were from highly literate civil servants who had connections. There is a constant scramble for people with connections to intervene with NWSDB staff to "fix problems." These often fall into the categories of errors in billing or metering, and occasionally are requests for service requiring that pipe be extended above current service levels or in new areas. The result is that top managers, from the Chairman on down, are bombarded steadily with complaints or requests for favors. No one is really sure what the dimensions of the problem are for improved customer relations and dealing with customer complaints. Many of those interviewed doubt the accuracy of data around customer complaints.

At the attitudinal level, many NWSDB staff are complacent about this issue: "the politicians and the public are really convinced they have to pay. On January 1, there was an increase, but no complaints. Compared to other things, water is very cheap. Maybe in 3-4 years we may face complaints about quality and level of service." Staff often pay more attention when a consumer issue is raised to the level of embarrassment. A more effective system is needed than people with connections complaining to top officials and politicians.

NWSDB has been very successful in managing a number of issue areas in which it had set up a good data management system, developed a strategy, set priorities and stuck to them, and monitored at all levels. NWSDB faces a challenge in using this approach in the area of consumer relations and marketing their services. The "public image" issue is important to the long-term sustainability of NWSDB.

2.7 Emphasis on Operations and Maintenance and Service Delivery

End-of-Project Status

By the end of the project, the shift in emphasis to delivery of water to consumers, and the operations and maintenance of the system to support this delivery had been accomplished. The structure of NWSDB had been arranged for attention to operating and maintaining systems and service delivery through the regionalization concept and by creating upgraded positions throughout the O&M side of the operation. Management priorities had shifted to commercial concerns.

The tasks required (standard operating procedures) and the recording systems for preventive maintenance had been introduced in several water treatment plants, and written manuals had been produced. However, by the end of the project, though there no strong preventive maintenance program operational in any area, a start had been made. The management information system had been designed to record and review operational indicators. (See Figure 5.) For example, piped water produced, unaccounted-for-water, billed connections, ratios of employees to connections, water produced by employees, water quality, and the costs of each element of water production were all built into the management information system. The overall needs for system rehabilitation throughout the country had been identified and documented, and a rehabilitation loan and program was in progress. Most systems operated by NWSDB were in need of rehabilitation.

	Before Project	End of Project	End of 1992
Piped water produced (million m^3/year)	155	219	255
Unaccounted-for-water (%)	40–50	37	54[1]
Billed connections (000s)	79	185	230
Employees[2] (total)	6,100	7,128	6,607
Ratio of connections to employees	13	26	35
Ratio of water produced to employees (million m^3/year)	25	31	38.5

[1] Figures on "non-revenue" water are admittedly unreliable, especially in Greater Colombo. Most staff would agree that this figure is, at best, a guess.

[2] Including permanent, casual, and contract employees.

Figure 5

Comparison of Key Operational Indicators

Status in 1993

NWSDB is currently producing 16 percent more water than they were at the end of the project and has 45,000 more billed connections, an increase of 24 percent.

This level of production was carried out with fewer staff, but overall, operations and maintenance is costing more per unit of water produced. O&M costs per cubic meter produced have risen 35 percent between the end of project and 1992.

A Rs.672 million 1992 operating cost (including overhead costs) represents an increase of 18 percent over 1991 and a 58 percent increase since the end of the project. From 1991 to 1992, O&M employment (labor) costs increased from Rs.195.7 to 257.17 (33 percent) even while the number of employees directly involved in operations and maintenance of water and sewerage schemes was reduced by 176 from 4081 to 3905.

The amount of unaccounted-for-water is very high and appears to have increased. Most unaccounted-for-water is in the Colombo RSC. The ability to measure this, however, continues to be very limited. These figures are estimated based on pumping capacity and compared to meter readings. One of the highest priorities given in the current year is the development of a crash program for non-revenue water. To this end, an AGM position has been created, and a special project with foreign donor assistance is underway. The MHC believes that one of the major areas of challenge for NWSDB is to bring down the non-revenue water figures. This becomes more critical as the new production facility in Colombo comes on line, and more water is available.

The preventive maintenance program for electrical and mechanical machinery introduced by 1992 has been fully accepted and is operational island-wide. The draft 1992 Annual Report pointed out that a 3.5 percent reduction in repair and maintenance costs was "due to continued preventive maintenance programs carried out in almost all pump installations and treatment plants." The program was first intensively installed by NWSDB staff in the Southern RSC. A program to extend this to all regions was developed. A workshop was held to transfer concepts, forms and skills, and preventive maintenance is now a common practice.

The RM for O&M for the Southern RSC has begun a comparative cost analysis process on savings due to preventive maintenance. Routines for preventive maintenance for distribution networks, and other areas of plant operations are now being worked on. This picture is also repeated, in large measure, in the Colombo RSC, but because of the relative size and the complexity of the system, progress has not been as dramatic. During interviews, senior staff at all levels were aware of the benefits of preventive maintenance.

Analysis

Some of the intangible gains made related to changing the institutional culture towards an operations and maintenance organization have been maintained, yet overall attention to O&M matters has declined, and much still needs to be done. There is a danger that momentum will

continue to stall in this area even if the new efforts on non-revenue water succeed in reducing operating costs.

There continues to be a reluctance to use those tools that have proven successful in improving performance in billing and collections in the O&M area. These include incentive structures and firm performance targets linked to incentives. Proposals have been made and ideas surfaced on setting up incentives for water quality, reduced breakdown time, reducing lag time between consumer requests and actions etc. These proposals invariably fall into the morass of "one cannot reward one set of employees without a corresponding program for all employees, so we won't reward any, or we'll reward all." This type of attitude ties the hands of management to set priorities and improve performance in priority areas.

Many of those interviewed indicated their appreciation for the need to pay attention to the commercial aspects of the board's work, but feel there needs to be more "balanced" attention to operations and maintenance. When work in the O&M area is believed to be more important, more prestigious, and better compensated, then an O&M culture will have been sustained. Another example is that plant operators are all graded at the same level, notwithstanding the size or complexity of the water treatment plant. Because of this, there is no incentive for an operator to progress up the ladder to increased responsibility and pay. Work in a small plant in a rural area that requires relatively little attention is compensated equally with work at a modern production facility for which operators have to be certified. A career path for O&M needs to be designed that accounts for complexity of tasks and allows O&M staff to move into the managerial ranks. A certification program for levels of skill, coupled with an educational and training program, would ensure that gains in O&M are sustained and extended.

2.8 Use of Training and Human Resources Development to Achieve Organizational Objectives

End-of-Project Status

By the end of the project, an improved training capability for NWSDB included a restructured training department with a career progression ladder, increased positions and staff, increased training skills using participative training methodologies, and addition and expansion of training curriculum (including management training for mid-level staff). A beginning regional training coordination capacity had been formed. The training curriculum included new training designs in groundwater pump maintenance, management, meter reader, clerks, operations and maintenance of water treatment plants—to list a few. The 1991 Final Project Report provided statistics related to training, to which were added status in 1993 data (see Figure 6).

	Beginning of Project (1985)	*End of Project (1990)*	*Current Status (1993)*
Training section staff	26	30	35
Functional areas provided with training	70	125	135
Conducted by NWSDB			
■ trainees	438	830	978
■ person days	2,673	4,148	6,078
Liaison with other institutions			
■ trainees	0	152	155
■ person days	0	2,603	3,154
Overseas			
■ trainees	20	19	43
■ person days	1,075	293	1,521
Total Training			
■ trainees	458	991	1,176
■ person days	3,748	7,044	10,753

Figure 6

Comparison of Key Training and HRD Indicators

Other end-of-project accomplishments described in the 1991 Final Project Report included:

- "The adoption of a strategy based on training of trainers (TOT) and on-the-job training (OJT) and the extensive use of other training resources available in Sri Lanka resulted in accelerated progress from the middle of 1986 onwards."
- "...The significant and deliberate change in emphasis from formal classroom training to OJT using NWSDB officers in a training mode . . . was particularly successful in the O&M, financial, and commercial areas with substantial skill upgrading taking place in the regions."
- "In addition to the OJT program, a significant amount of skill training was given by the ES Training Specialists [consultant staff] and Training Section staff. Some of the most impressive skill training was in upgrading basic management skills for middle managers and supervisors . . . carried out throughout the regions on a rotational basis."
- On the negative side, ". . . the [training] cadre was never fully staffed; technical training staff devoted 30 percent of their time to mounting exhibitions rather than supporting training, and overseas training trips still tended to be awarded in

accordance with seniority rather than being in accordance with the real manpower development needs of the NWSDB."

- "A satisfactory replication process" for the upgrading of O&M management capabilities "was not developed" largely because while "the program received strong support from senior O&M management, the support from middle O&M management and plant supervisory staff was less than satisfactory."

In the area of human resources development and manpower planning, repeated efforts during the life of the project to set up a defined and limited job allocation and staffing cadre were never successful. An extensive effort by a personnel task force had succeeded in developing and approving a personnel policies manual complete with position descriptions, regulations for staff procedures, transfers, benefits, and performance evaluation. This effort was limited to the top eight grades. Grades 9 through 15 did not have the position descriptions, but most of the regulation provisions also applied to those staffing grades.

Status in 1993

As noted in the 1992 draft "Annual Report," NWSDB was continuing to "expand the activities of the Manpower Development and Training Section (MD&T)." Actions taken during 1992-1993 included:

- A "comprehensive survey of training needs" is being carried out, and a "first-ever training plan was prepared and presented to several leading donors, seeking their financial support for implementation."

  Efforts are being made to involve supervisors in examining needs to be met in this three-year plan for external and internal training.

- With four new senior training officers (two senior training officer positions remain unfilled), the Training Section is providing increased person days of skill training, as can be seen from the chart above. Increasingly, these courses utilize "faculty" drawn from technical staff in O&M, commercial, and finance sections. More courses are being conducted in the RSCs.

- Attention continues to be focused on TOT supported by courses given in the regions. Some RSCs have full-time training coordinators who follow up core courses provided by the Training Section with support and on-the-job training, especially with clerical staff and meter readers. Increasingly, RSC staff are conducting structured training programs and workshops.

- In addition to core courses in specified function areas, training and workshops are being carried out in support of specific organizational and corporate objectives. Examples include training for meter readers in Greater Colombo that incorporates problem-solving discussions with section heads, management training in support of the Southern RSC OIC pilot program, and a March 1992 workshop held in Greater

Colombo to improve coordination within the various sections and improve employee motivation.

The established training curriculum continues to be maintained, although important courses are not always delivered because trainers are not available (management training is an example of this). The use of supervisory and technical staff throughout NWSDB to assist in course delivery has become common.

The management of the training function has been given to staff who are professionally specialized and experienced in all facets of training design, delivery, and management for the first time in NWSDB history.

In the area of human resources development, NWSDB has conducted a comprehensive, office by office, desk/job study to determine position needs and has fixed the NWSDB cadre at 6,800 positions for the first time in NWSDB history. A manpower task force has been set up. Fixing the cadre was the first step in an overall manpower planning effort. Subsequent steps include planning for and filling needed vacant positions (about 150) in highly skilled areas.

During early 1993, a consultant study was provided by WASH to define HRD needs for the lowest level positions. The recommendations were reviewed, and the Management Cell decided to begin implementation by beginning training for two positions in 1993. The job title of the lowest office grade has been changed from "peon" to office laborer.

The performance evaluation system continues to be used, and the skill gaps identified in this process have served to improve the training curriculum for clerical staff, accountant clerks, meter readers, office laborers, and new staff orientation training.

The staff benefits have increased over the past two years. Staff may receive low-interest loans for housing, and an across-the-board performance raise has been given because NWSDB has been able to cover its operational costs, meet debt service, and generate a surplus.

Analysis

NWSDB has, without question, developed an effective and sustainable approach to training. Managers believe that training can provide skills and knowledge that can help them get better results. The demand for training far exceeds the capacity to deliver training. In order to meet this demand, the management of training and the provision of more frequent courses coupled with effective on-the-job follow-up would be required. The OIC training program is a good example of the increased demand. After the OIC pilot training program was completed in August 1993, the training center inherited a program with a number of OICs trained as trainers, and the AGM (Training) prepared to deliver and manage this course. In order to implement it in all RSCs, several hundred OICs will need to be trained in regional settings. This program will require a good deal of coordination, planning, and management, and it is not clear how this program can be carried out at the same time that other training activities are maintained.

Another example of demand overwhelming capacity is in the area of management training. The number of mid-level managers who require yearly and periodic management refresher courses and skill upgrading is higher than can be handled at present.

At the senior level, many of those interviewed believe that if they are to sustain a core group of senior managers working together and continuing to learn about management, that regular refresher training is required. Many are also concerned that new managers coming up through the ranks will not receive the same training they did nor have the same level of skill, and some have said "you can tell the difference when managers have received the management training we did and those who have not. Given this concern it was important for this training to continue and for senior managers to receive new skill and refresher training at least once a year. It is probably not appropriate for senior management training to be conducted "in-house." (In most organizations senior-level management training is conducted by outside consultants.) Currently, there are no plans underway to meet this need.

As RSCs develop their own capabilities to conduct formal training programs, the role of MD&T needs to be more clearly defined. Some RSCs have trained trainers and are receiving external donor assistance in manual development and training design. Training is, in fact, in the process of being decentralized. A planned approach to this process is needed, including the development of descriptions of RSC and head office roles regarding training.

Sustaining the human resources will require continual training, but also will include a clearer picture of the needs and demands for staff. A clear manpower plan has been requested by external donors being asked to assist with funds for training. This request will be oft repeated by lending institutions. A comprehensive plan will include succession planning, career ladders within all ranks, an estimate of the internal staffing needs (demand) by technical and task area, and an estimate of supply from the educational and labor market and from within NWSDB.

Chapter 3

CONCLUSIONS AND RECOMMENDATIONS

3.1 General Conclusion

In Chapter 1, the concept of sustainability was proposed as a lens for viewing progress over the two years since the project ended. Sustainability was defined as:

- the extent to which the results gained in the project have lasted; and
- the extent to which the capacity for continuing to develop beyond end-of-project accomplishments was demonstrated.

It is the general conclusion of this impact evaluation that the major gains in institutional strengthening made over the life of the project have been maintained over the two years following its completion. Comparing verifiable end-of-project data to performance in 1993 reveals that performance has significantly improved in a number of areas including:

- Financial viability and commercial performance;
- Relations with external entities;
- Use of modern management tools of analysis; and
- Preventive maintenance.

Performance has improved to some extent in these areas:

- Budgeting;
- Decentralization and RSC capacity to perform independently; and
- Use of training and human resources development.

In the following areas, performance in 1993 is much the same as at the end-of-project—it has neither significantly gone down nor has it significantly improved:

- Capacity for strategic problem-solving and forward-planning;
- Capacity for operating and maintaining systems and producing a high quality product;
- Consumer relations and responsiveness to consumers; and
- Delegation of authority to the RSC and to lower levels within the RSC.

3.2 Factors that Have Significantly Contributed to Sustainability

The impact evaluation also determined that in many areas the NWSDB has demonstrated a capacity to replicate and build on end-of-project accomplishments. A central question arising from this study and a point of interest for institutional development designers is "why has the NWSDB been able to achieve this level of sustainability?"

One way to address this question is to look across the eight areas that were examined and to identify those patterns of organizational behavior and managerial action which seem to have helped and those which hindered continued improvement in institutional effectiveness. In a general way, four patterns were seen that seem to promote sustainability, and two patterns were seen that inhibit sustainability.

Patterns of behavior that support sustainability include:

- **Setting targets collaboratively, monitoring performance against those targets, involving employees in developing strategies and plans to deal with problems identified in the monitoring process, and implementing those plans using a variety of approaches and then continuing to monitor progress.**

  These core elements of effective management were most apparent when reviewing success in the billings and collections area:

  - ☐ A data-based problem-solving process was used, and all levels of NWSDB were involved.
  - ☐ The highest priority and commitment were given to financial viability;
  - ☐ A clear monitoring and accountability system was set up, and actions were taken to set targets, conduct monitoring meetings at all levels, and develop strategies to solve problems. Incentives were provided for good performance.
  - ☐ Dedication to the issue was relentless.

  The lesson learned was that when there is high motivation, a clear vision (a variety of targets were set by specific area, scheme, person, and level), and commitment, continued institutional improvement is assured. The impact assessment highlighted areas where this has not happened and where institutional performance has not been strong.

- **Staff at working levels taking the initiative when a problem existed and not waiting for directions from the top.**

  This has been particularly true in levels where decentralization permitted innovation at the RSC level. Over time, the staff of the RSC have gained confidence in managing their own operations. This confidence has been gained because the staff at local levels have taken the initiative on a number of fronts and succeeded. For example, a group of local staff became involved in an initiative to develop a standard procedure for all

aspects of making household connections. There was a strong need because household connections were a point of struggle for NWSDB staff for years; there were no standard procedures; and household connections provided sources of conflict, corruption, consumer complaints, and endless hassles for staff. The group that took the initiative was able to produce a manual. Procedures island-wide were established.

Repeated occurrences of taking initiative spontaneously where problems exist and acting on them without waiting for approval from the top were discovered during this evaluation. Examples are:

- ☐ Setting up a RSC budget monitoring program at Colombo RSC;
- ☐ Developing a pilot program to employ contract staff as meter readers;
- ☐ Setting up consumer societies as structures for collecting standpost water bills; and
- ☐ Setting up procedures that give OICs greater responsibilities for making house connections.

When lower level managers and staff have not taken the initiative and have waited for higher levels to initiate programs or problem solving—for example, failing to involve OIC in monitoring expenditures—institutional performance has not been strengthened.

- **Providing continued training, coaching, and consultation in support of clear programmatic objectives.**

Some of the most positive continuing gains, for example in budget development and in the commercial areas, have come when management staff have played a supportive, consulting role instead of a supervisory, monitoring role. The strongest model for this is the DGM-C, who is widely known for his willingness and skill in assisting commercial staff at all levels with training, coaching, and "dealing with the tough issues on my behalf." This same kind of role is played by others in the head office, such as DGM-F and the Additional General Manager (CP). All three of these senior managers are likely to describe their roles in terms like "facilitator" or "consultant." This kind of managerial behavior is seen increasingly at lower levels, with DGMs leading training sessions and facilitating small group problem-solving, and financial staff from one RSC providing training for staff in another RSC at their own initiative.

- **Creating an organizational environment where "it's not okay not to care."**

The study provided numerous examples of situations when the organization was able to build a sense of joint responsibility—"We're all in this together"—which contributed to its capacity to grow and change. The fear that the water board would be privatized or radically changed in other ways if it could not be made financially viable drove many managers to pay attention to the importance of the commercial side of the business. In a number of areas, managers took particular actions to reinforce an organizational culture that supported change by creating formal and informal

competition among RSCs and among regions in RSCs, by setting up mechanisms where feedback and peer review could happen, and talking seriously about what was important in their organizations—"My Regional Managers' performance is being looked at. They know it's not okay not to care. What's valued around here has changed, and it's no longer just engineering."

Patterns of behavior that inhibit sustained institutional improvement included:

- **Paying attention to the short term at the expense of the long term.**

  The NWSDB has benefited because it has built a strong "commercial orientation" which is valued and acted on. At the same time this "vision" or sense of strategic direction has, for many, lost its power as a motivating force even as the NWSDB has demonstrated its success in this area. Many staff complain about the "lack of balance" in the NWSDB's direction, and believe more attention should be paid to operations and maintenance or to consumer issues. Others have expressed concerns about a loss of "team spirit."

  The evaluation noted the tendency of higher level management groups to focus primarily on short-term operational issues and to not place consistent, systematic attention on updating and utilizing the corporate plan. This tendency to use high-level resources to focus on the short term at the expense of the long term could threaten the sustainability of the positive gains described in this evaluation. In particular, the capacity and mechanisms for identifying, planning, and dealing with broader, long-range issues need attention. Paying insufficient attention to issues like the following made the NWSDB vulnerable to losing gains achieved during the project:

  - ☐ Moving strongly into the arena of improved consumer relations;
  - ☐ Bringing about a more balanced tariff structure so that commercial and industrial customers do not inordinately subsidize domestic consumption;
  - ☐ Supporting the institutional development of the Colombo RSC;
  - ☐ Marketing water services to larger segments of the population and meeting consumer demand;
  - ☐ Planning for the use of excess revenue as financial targets are met; and
  - ☐ Planning for the continuing restructuring of the water sector, e.g., moving decentralization down within the RSC to lower levels, and developing a picture of how NWSDB should be organized in 10 years (utilizing regional water authorities or increased privatization).

- **Micro-managing at all levels from the Management Cell and below.**

  The evaluation noted a tendency to micro-manage at all levels from the Management Cell and below. Most large organizations, particularly those whose management is made up of those with a high level of technical skill, need to periodically examine

whether staff at each level are dealing at the appropriate level of detail. When NWSDB board members concern themselves with daily operational details, when DGMs in RSCs worry about "how" lower level staff solve a problem, and when large meetings of senior staff focus too much on specifying how a particular manager should do his job, it is time to review whether other more important issues are being ignored and whether managerial time could be used more effectively somewhere else.

During the debriefing session with NWSDB, the question, "What ways of managing have helped sustainability, and what ways of managing have hindered it?" The following list of factors was provided by those staff:

Helped:

- "In situations where we have been able to sustain a culture that encourages innovation and try new things because of dissatisfaction with the way things are."
- "When managers have been left alone to manage."
- "When we have paid attention to issues relating to the needs of staff as people and human resources development."
- "When we have maintained teamwork and team spirit."

Hindered:

- "When we have become unbalanced and focused only on one area and forget we are here to serve the consumers."
- "When we have not looked ahead to research and solve problems."
- "When we have allowed outside micro-management and interference."
- "When the team has moved apart, and individuals have begun to think 'my section is most important.' "
- "When we have neglected the needs of individuals."

3.3 Recommendations

The staff of NWSDB have demonstrated that they did not have the capability to move beyond the point reached at the end of the USAID institutional development project. The issues that need attention, which were discussed in Chapter 2, have been reviewed with NWSDB staff at the DGM level and above during the final debriefing with the WASH team. These areas were also reviewed in a debriefing session with the NWSDB Chairman, the Vice Chairman, and the GM.

During these debriefings, the discussion highlighted the importance of NWSDB continuing to reinforce those management behaviors that have supported sustainability in order to maintain and build on the positive gains from the project in the future. In addition, the WASH

consultants made three recommendations which would particularly help NWSDB in continuing "sustainability" and strengthening the NWSDB as an institution. Acting on these recommendations would have a potentially high impact and payoff over the long term. They focus on those areas that, if ignored, would have the greatest negative impact on the future of the NWSDB:

1. *Review and agree on mechanisms for how long-range issues will be addressed.*

In the section on capacity for future strategic planning, a number of options were raised for how the CP Division could operate. The need for improved performance by the management cell also was discussed. These options should be studied and acted upon.

2. *Review how key meetings are structured.*

Many NWSDB staff interviewed believed that many of the current meeting review mechanisms had fallen out of date with reality and current need. An example is the large operations and the large billing and collections meetings each held once a month. These meetings appear to be ineffective for the purposes of monitoring and problem-solving. The meeting structure should match the level of decision-making. Meetings of this nature may solve information dissemination needs but rarely have proven useful for trouble-shooting. Much of that need can be met by individual conversations and lower level meetings at the RSC.

Another example of meeting ineffectiveness is the Management Cell meeting. How is the agenda decided? Who should attend? What gets the attention of the Management Cell and why? How much operational management is attended to there that should be delegated? All of these various meetings should be reviewed for purpose, attendance, agenda, and effectiveness. It would be helpful to appoint a "meeting observer" whose job it is to observe the process and give periodic feedback on meeting performance. This could assist in the conduct of meetings, once the structure has been reviewed.

3. *Provide continued senior management training and team building.*

The leading edge for institutional change has been the senior staff of NWSDB. They have led the way to sustainability, and most have participated in the countless task forces, problem-solving sessions, and management training programs provided during the USAID project. After two years without senior management training, many are beginning to feel that the senior team is not as together as it was two years ago. Additionally, most of those interviewed felt that if they do not continue to learn new skills and have opportunity to review and solidify their learning, there is a danger that the momentum developed for the senior team and for each individual may begin to wane.

Given the pace of the work and the number of challenges faced, it is important for the senior team to periodically sit back, gain perspective, build bridges among the senior staff, and learn new skills. It is in the enlightened self-interest of NWSDB to continue to invest in its senior human resources. (Most forward-looking institutions and enterprises have sustained attention to staff development.) Sustainability will be greatly enhanced if senior staff continue on the path established during the project for self-improvement and senior team development.

Appendix

KEY DOCUMENTS REVIEWED

Annual Report 1992 (Draft), National Water Supply and Drainage Board, Corporate Planning Section.

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THE WASH PROJECT

With the launching of the United Nations International Drinking Water Supply and Sanitation Decade in 1979, the United States Agency for International Development (A.I.D.) decided to augment and streamline its technical assistance capability in water and sanitation and, in 1980, funded the Water and Sanitation for Health Project (WASH). The funding mechanism was a multi-year, multi-million dollar contract, secured through competitive bidding. The first WASH contract was awarded to a consortium of organizations headed by Camp Dresser & McKee International Inc. (CDM), an international consulting firm specializing in environmental engineering services. Through two other bid proceedings since then, CDM has continued as the prime contractor.

Working under the close direction of A.I.D.'s Bureau for Science and Technology, Office of Health, the WASH Project provides technical assistance to A.I.D. missions or bureaus, other U.S. agencies (such as the Peace Corps), host governments, and non-governmental organizations to provide a wide range of technical assistance that includes the design, implementation, and evaluation of water and sanitation projects, to troubleshoot on-going projects, and to assist in disaster relief operations. WASH technical assistance is multi-disciplinary, drawing on experts in public health, training, financing, epidemiology, anthropology, management, engineering, community organization, environmental protection, and other subspecialties.

The WASH Information Center serves as a clearinghouse in water and sanitation, providing networking on guinea worm disease, rainwater harvesting, and peri-urban issues as well as technical information backstopping for most WASH assignments.

The WASH Project issues about thirty or forty reports a year. WASH *Field Reports* relate to specific assignments in specific countries; they articulate the findings of the consultancy. The more widely applicable *Technical Reports* consist of guidelines or "how-to" manuals on topics such as pump selection, detailed training workshop designs, and state-of-the-art information on finance, community organization, and many other topics of vital interest to the water and sanitation sector. In addition, WASH occasionally publishes special reports to synthesize the lessons it has learned from its wide field experience.

For more information about the WASH Project or to request a WASH report, contact the WASH Operations Center at the above address.