F I E L D   R E P O R T

LESSONS LEARNED FROM THE WATER AND SANITATION SECTOR PROJECT IN SRI LANKA

WATER AND SANITATION for HEALTH PROJECT

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LESSONS LEARNED FROM THE WATER AND SANITATION SECTOR PROJECT IN SRI LANKA

by

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RELATED WASH REPORTS

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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. 151. 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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ACRONYMS

ADB	Asian Development Bank
A.I.D.	U.S. Agency for International Development (Washington, D.C.)
ESA	external support agencies
GSL	Government of Sri Lanka
NWSDB	National Water Supply and Drainage Board
OD	organizational development
O&M	operations and maintenance
RSC	Regional Service Center (five offices set up to supervise regional operations)
USAID	U.S. Agency for International Development (overseas missions)
WASH	Water and Sanitation for Health Project
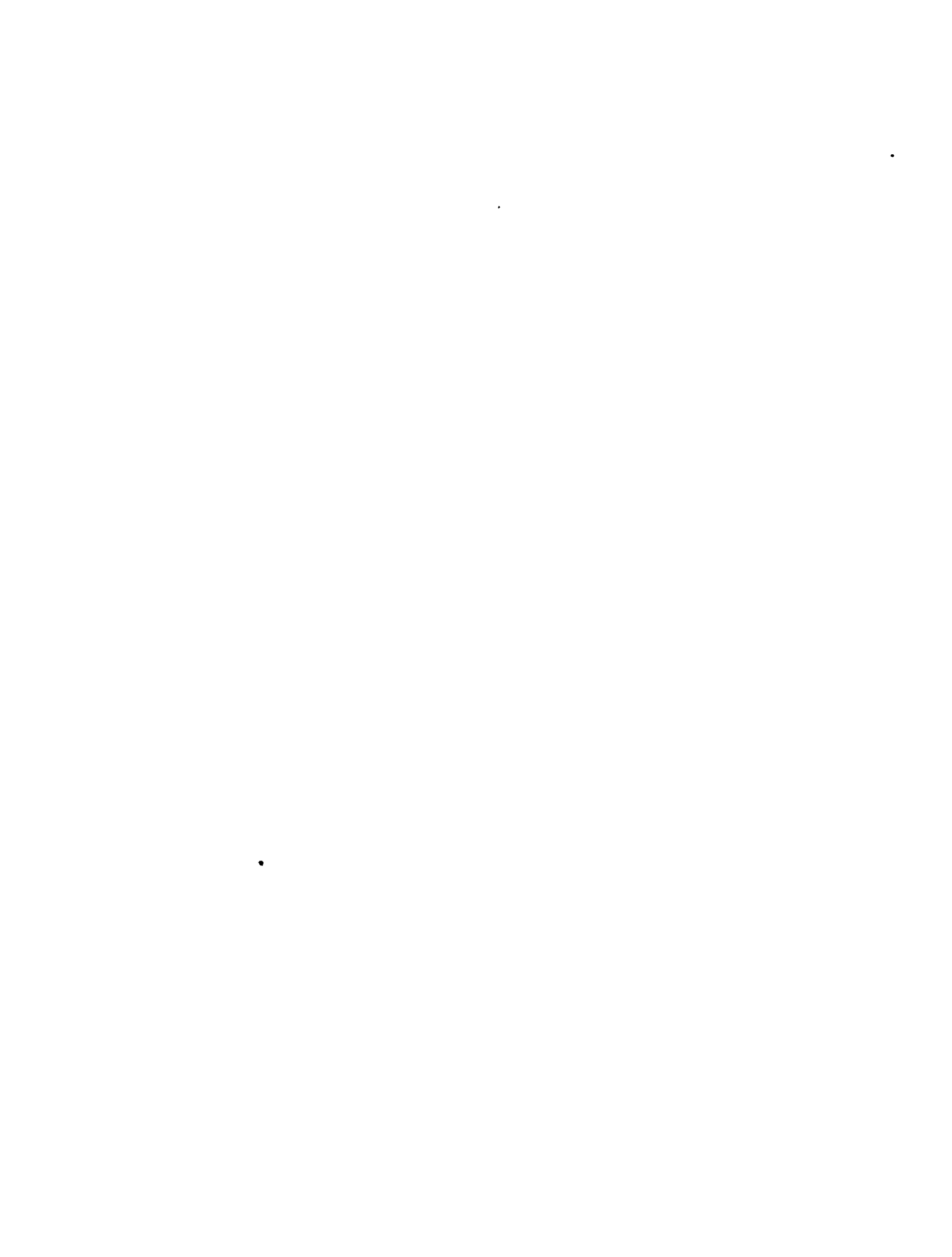
EXECUTIVE SUMMARY

The WASH Project has been closely involved with the highly successful USAID-funded Water and Sanitation Sector Project in Sri Lanka for the past ten years. This involvement has provided WASH the unique opportunity to follow the project over time and derive lessons in developing and implementing institutional development projects over the long term.

The overall purpose of the project was to strengthen the National Water Supply and Drainage Board (NWSDB), the national water authority in Sri Lanka. The primary project activities included an organization-wide restructuring program, development of commercial and financial systems, and increased attention to operations and maintenance.

WASH involvement began with the design of the project in 1984. WASH conducted the project start-up workshop in 1985 as well as six subsequent annual project monitoring and evaluation exercises. WASH also conducted a five-phase management development program for the 30 top managers and designed a three-phase management development program for plant superintendents. From time to time, WASH also provided targeted technical assistance to supplement the institutional contractor's team. The most recent activity was a final impact evaluation to determine if the gains made had been sustained in the two years (1991-93) following the end of the project.

The report presents nine lessons, which are summarized below.

1. The establishment and evolution of a clear vision of what the NWSDB needed to become was essential to project success.

2. The management development program served to build a shared understanding of the responsibility for the future of NWSDB and created a senior leadership team.

3. The project developed over a ten-year period, a reasonable length of time for the organization to absorb or assimilate new ways of operating.

4. The primary engine of change within the NWSDB was a core group of 20 senior managers. Their influence on others paved the way for organizational change.

5. Continuity in the short-term and long-term technical assistance teams resulted in relationships of trust and allowed the counterparts to develop the necessary skills.

6. The ultimate success of the project is evident in the NWSDB's ability to discover and correct problems without resorting to outside consultants.

7. The changes made during the project period would not have been possible without an evolving level of political support.

8. The close cooperation of the external support agencies (USAID, the World Bank, and the Asian Development Bank) was key to moving the institutional agenda along.

9. When the reward structures and the incentives changed within NWSDB, it was clear that the innovation would be sustained.

The lessons learned are directly applicable to institutional development projects for water utilities. They will also be directly applicable to other commercially-oriented organizations such as electricity and telephone companies. They will be relevant to other institution-building projects provided there is strong government commitment to change and a project design which addresses the entire institution and not just a part.

Chapter 1

INTRODUCTION

1.1 Why a Lessons Learned Paper?

The development of institutions has historically been one of A.I.D.'s major development goals. A.I.D. project officers and consultants focus on institution building in all sectors because of the importance of leaving structures, programs, and people in place to continue to solve problems long after project assistance has ended. Among multilateral and bi-lateral external support agencies, A.I.D. has created a niche in institutional development. As one example, USAID/Sri Lanka has been involved in a 10-year institutional development effort with the National Water Supply and Drainage Board (NWSDB). At various stages over the course of the last 10 years, WASH has provided technical assistance, drawing heavily on the services of one key consultant. WASH believes that many of the lessons learned from the project are transferable to other water and sanitation projects as well as to projects in other sectors.

In summarizing the experience, this paper serves a number of purposes. It provides a useful occasion to reflect and draw lessons learned from the whole series of activities which WASH has carried out. Continuity of consultants on a project permits a perspective informed by experience and time. Not often is it possible to observe the unfolding of the change process year after year based on intended, and sometimes unintended, interventions made early in a process. The lessons from the NWSDB project have also been culled by reviewing the project strategy as it evolved and developed over time. A body of skills and knowledge was developed in NWSDB staff through a series of management training sessions conducted by two WASH consultants (who made repeat visits); long-term resident consultants reinforced and followed up on the training programs. The cumulative effect (on the organization and individuals) of these activities provides opportunities for reflection and summarizing lessons learned.

1.2 The Water and Sanitation Sector Project in Sri Lanka

1.2.1 The NWSDB Situation Prior to Project Design

At the time of project initiation (1984), the NWSDB was a highly centralized national water utility that had been formed in 1971 as a state corporation. The core managerial and technical staff were taken from the engineering section of the public works ministry, where they had responsibility for the design and construction of municipal and village water schemes throughout Sri Lanka. The newly formed organization inherited responsibility for operating and maintaining about 90 percent of the municipal and peri-urban water supply systems in the country as well. The large central zone of the capital city (Colombo) remained the

responsibility of the municipality to operate and maintain, but the water was treated, pumped, and supplied by NWSDB. All suburban areas and city expansion were given to NWSDB.

The newly formed NWSDB inherited about 7,400 employees including drivers, laborers, watchmen, secretaries, and office clerks from the municipalities and the parent ministry. Employment in municipal and large village water plants had been traditionally handled through political patronage.

Government policy, following the socialist political viewpoint at the time, was to provide water at minimal or no charge to the population. The decision about who received water and what systems should be constructed was totally a political matter settled by politicians. Engineers were to follow orders from the ministry and to pass the costs on to the national treasury for payment. NWSDB did not maintain a viable commercial accounting function during the first 10 years of its existence. There were no meters for measuring and charging for water consumption; such meters were just beginning to be installed at the time of project design, 1983-84. The World Bank had made its first loan contingent upon the development of a commercial function and a system to introduce tariffs.

The water treatment operations staff of NWSDB were stationed at or near the plant sites or pumping stations where they were given free housing. The managerial staff were all located at the NWSDB headquarters office in a suburb of Colombo at Ratmalana. A few engineers had been assigned to oversee operations. The island had been divided into sectors, called ranges, which were supervisory units. Field staff seldom saw their range managers (perhaps once or twice a year).

A World Bank loan had required that NWSDB set up a special internal organization to take charge of a large construction project to renew and expand the urban system of Colombo. This organization was allowed to pay higher salaries and provide a number of perks (vehicles, drivers, overtime pay) and extra pay for the engineers. The most prestigious positions in NWSDB were within this section, and its head was given the title of Additional General Manager, a title normally given to the second most powerful job in NWSDB.

1.2.2   The Project Design

The USAID Water and Sanitation Sector Project (USAID Project No. 383-0088) was a seven-year effort (1984-91) to strengthen NWSDB in a series of areas leading to improved institutional performance. The initial objectives of this project were described in the final project report (Bradley and Tomasides 1991) as follows:

- 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 activities in the rest of Sri Lanka.

- Decentralize by deconcentrating staff and forming five regional service center operations (RSCs).

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- Change the overall mission, organizational structure, priorities, and actions to strengthen the operation and maintenance (O&M) activities of the NWSDB.

During the first three years, the following additional objectives were developed to expand the institutional development concept:

- Involve a wider policy environment (Government of Sri Lanka) in supporting the modernization of NWSDB.

- Provide formal coordination within the external support agencies (ESAs) in the sector and involve them in supporting institutional development activities.

- Develop a greater awareness of financial, commercial, and budget matters within the organization and emphasize these areas for new systems development.

- Establish an in-house policy development capability through a new senior decision-making group (called the management cell) and a corporate planning division.

- Establish task performance indicators, monitoring systems, and employee performance evaluation procedures.

- Expand the project to include Greater Colombo in the decentralization process.

Primary project activities included an organization-wide restructuring program and a series of technical assistance inputs in each of the organizational, managerial, and technical sub-systems. Commodities were also provided in selected areas to support training activities and for demonstration purposes. The major program activity areas for assistance included the following steps:

- Decentralize by setting up three regional service centers (RSCs) and reclassifying and reorganizing staff positions and transferring staff.

- Develop administrative systems, standard operating procedures, and computer-supported management information systems in O&M, personnel, laboratory, planning and design, procurement, billing and collections, stores and supplies, and financial management.

- Form a commercial department and computerize the billing and collection process.

- Develop and implement an annual financial planning process; upgrade accounting systems and prepare a fixed assets inventory.

- Improve and expand the training department; develop training systems and curriculum; train staff based upon needs.

- Revise personnel policies and procedures.

- Improve maintenance management through attention to process control, water quality monitoring, and provision of equipment.

- Establish an annual strategic planning process and a sound policy implementation mechanism.

- Create a public relations unit, a legal unit, and a section for community promotion of water schemes.

- Develop and conduct a senior management training program; revise and clarify management roles and responsibilities.

The official project start date was in August 1984. The time required for procurement of the technical assistance contractor was eight months. By April 1985, the contractor team (Engineering Science Inc.) was in place and a project start-up workshop had been completed. The technical assistance strategy (explained in more detail below in 2.5) included a long-term resident staff of overseas (non-Sri Lankan) and local consultants supported by intermittent short-term consultation provided by the centrally-funded WASH Project. The project officially closed in August 1991, but related activity continued through August 1993. Under World Bank financing, one long-term advisor from the USAID project consulting team has continued to work to assist the development of the Greater Colombo metropolitan RSC. Assistance to that region had not originally been included in the USAID project design, and additional work was required to complete the development agenda.

At the end of the project, USAID/Colombo transferred funds into the WASH Project to continue short-term technical assistance for the NWSDB for a two-year period, 1991-93. This technical assistance consisted of continued monitoring and evaluation, management training for senior staff and officers in charge of treatment plants, and a final impact evaluation (see Edwards and Salt 1993).

1.3   Activities of the WASH Project in Support of Institution Building

The WASH Project has been involved in a series of activities to develop and support this effort over an unusually long period of time (1983 through 1993). The first WASH activity occurred prior to project development. A WASH team promoted the project concept and demonstrated how to use problem solving and a facilitated workshop approach by applying these techniques to problems in operations and maintenance of water systems in 1983 (see Edwards 1983). Several WASH-assisted activities followed.

WASH has provided the same consultant (author of this report) for project design, project start-up activities, annual project monitoring events, senior management training, and the final impact evaluation. When the management development program began in the third project year, another WASH consultant began activities and teamed with the first on all management training and several monitoring activities.

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Project Pre-design

A four-person WASH team conducted an in-depth management analysis of the NWSDB in 1984 to provide data and recommendations for a project identification document (PID). The analysis investigated the management and structural situation, the financial status and systems, the operations and maintenance systems, and the training and human resources development needs of the organization. This study led to a project design that stressed activities to assist broad-based institutional, technical, and administrative systems development. Importantly, the project design included development of new commercial/financial systems, an operations and maintenance focus, and a reorganization/decentralization program.

Project Start-up Workshop

The project design and project approval were accomplished in less than a year. By April 1985, WASH pioneered a new concept for project initiation in which all the major actors involved in a project were brought together to get the project started (see Edwards and Austin 1985). This approach was subsequently published in a generic form for other A.I.D. projects, "Facilitator's Guide for Conducting a Project Start-up Workshop" (Edwards and Pettit 1988). The start-up workshop provided exercises to orient both the institutional contractor and the staff of NWSDB and to discuss project management and technical implementation issues. An important outcome was forming a project team by clarifying expectations and reaching agreements about working together.

Annual Project Monitoring

The technical assistance component of the project called for WASH to conduct an annual project monitoring exercise. This consisted of interviews with major project actors and joint review with project staff of work plans and performance indicators. This "internal review with outside assistance" was designed to identify obstacles to achieving project goals and to bring together the consultants and NWSDB senior staff to work out ways to solve implementation problems and plan for the next year of activities. On this basis, the project strategy was changed as needed to meet overall objectives.

During the monitoring exercise, WASH provided specific consulting advice in technical areas considered important and/or where there was difficulty in implementation (e.g. utility financial systems, corporate planning, management, decentralization). The two-person WASH team that conducted each monitoring workshop consisted of a management consultant and a technical specialist. The same management consultant participated in all monitoring workshops over the life of the project. The technical specialist varied from year to year—representing different areas of expertise (engineering, finance, etc.). WASH conducted six annual monitoring exercises in addition to the project start-up workshop.

Management Development Program

In the third year of the project, a management development program was designed specifically for NWSDB based in part upon the model that Training Resources Group (TRG), a WASH sub-contractor, had developed for senior and mid-level staff of A.I.D. (Edwards and Salt 1988). This program was given in five workshop installments for the top 30 managers over a three-year period. The content and skills were designed to complement and assist project activities. For example, the management development program introduced basic concepts and skills in communication, meeting effectiveness, use of performance indicators, teamwork, accountability, and motivation. After the workshop, follow-up on-the-job assignments were to be applied during a six-month time period. The long-term consultants who worked daily with NWSDB counterparts provided assistance, monitoring, and coaching in accomplishing the assigned tasks.

Following development of a program for senior staff, the NWSDB training department developed a parallel program for mid-level managers. At the end of the project, WASH developed a management training program model with NWSDB for plant superintendents

Technical Assistance

WASH provided periodic technical assistance to supplement the permanent institutional contractor's consultant team. The subject areas were corporate planning, operations and maintenance, management development for water plant managers, and personnel management of administrative, clerical, and staff assistants.

Impact Evaluation

Two years after the formal end-of-project date, WASH provided an impact evaluation to determine and document which areas of project achievement had been sustained and improved upon and the reasons for sustainability (see Edwards and Salt 1993).

The impact evaluation documented a number of successes. Importantly, most gains made during the project period had been sustained, and NWSDB continued to improve in specific areas of project focus. This was particularly true in the financial and commercial sectors: NWSDB demonstrated capacity for cost recovery sufficient to meet operational costs and debt service requirements, while increasing staff salaries and benefits.

1.4   Intended Use and Audience for this Paper

This report is written for A.I.D. project officers and consultants working for A.I.D. who wish to design institutional improvement projects. The lessons provided may also be useful for development planners and consultant-practitioners working with multi- and bilateral external support agencies. While the most directly applicable lessons at the technical level may be in the water and sanitation sector, there is a great deal of transferability to other institutional development projects at the process level. Various possibilities for transferability are discussed in Chapter 3.

Chapter 2

LESSONS LEARNED

This chapter is framed by the question, "What occurred in the project that was essential to success?" The positive lessons are the focus. To be sure, there have been many instances of "what not to do" as well, but those lessons are common knowledge in the development community (e.g., selecting the "wrong" staff, trying to work on too many problems at a time, expecting no resistance to change, etc.). A companion WASH paper presents many of the do's and don'ts in designing, staffing, and managing institutional development projects (Edwards 1988). Many of the points in that paper were derived from the early years of the Sri Lanka experience.

The perspective presented here attempts to focus attention on the following questions:

- What actually happened that had important effects?

- Why did things come together as successfully as they did?

- What would others want to know that could save them from committing a serious error in a similar project?

- What were the building blocks of success?

2.1 Developing a Vision of the Possible

Developing a clear idea of what NWSDB needed to become was essential to project success. It provided a target to aim for and continually reminded staff of why the present situation had to change. As the principle of developing, refining, and maintaining a vision became a normal part of managerial life within NWSDB, mechanisms were established to define and resolve strategic issues.

Early in the project, it became clear that most senior officers within the NWSDB were new to the public water utility business. Previously, most staff experience and the organizational emphasis focused on engineering and construction of new systems. The mandate given to the newly formed NWSDB by the government was to operate a national water utility as a commercial enterprise. The prior government policy, providing free or highly subsidized water, was to be phased out, and NWSDB was told to become financially viable as soon as possible. The USAID project, with support from the World Bank, was to be the mechanism for achieving that transformation. Therefore, one of the first major challenges was to develop a change process to transform the vision of the staff from engineering to utility management. A number of specific activities contributed to that transformation.

The Shock Treatment

The first intervention, which occurred during the project start-up workshop, was later termed "the shock treatment" by senior staff. After repeated long speeches by staff protesting the perceived imposition of changes, the then-chairman of the board of directors of NWSDB (the de facto chief executive officer) said, in effect, "You will decentralize; you will set up a commercial operation, whether you like it or not." While considered a very challenging and potentially destructive statement at the time, in retrospect it served to alert staff that business as usual would no longer work, and that perhaps there was something wrong with the way NWSDB operated. The seeds of uncertainty had been planted.

Introducing Vision Development Through Management Training

One of the four cornerstones of the management development program was the development of a management vision. In the first workshop, the idea of what vision is and how it is developed was presented. Subsequently, a profile of excellence in water utility management was presented using studies WASH had conducted (Cullivan et al. 1988). These studies were based upon models of existing water utilities in Brazil (SANEPAR) and Malaysia (Penang) which were considered leading examples of excellence in the developing world.

Workshop participants then compared NWSDB with those utilities and developed a profile of organizational deficiencies and a profile of what they wanted NWSDB to become. This started the senior staff thinking about what was possible. New terms and ideas became fashionable: commercially oriented, attention to consumers, cost effectiveness, managerial excellence, attention to staff development. These are now commonplace concepts at NWSDB.

The Study Tours to Brazil and Malaysia

Over a three-year period, 16 senior staff made field visits to SANEPAR and Penang. These visits proved to be extremely valuable. Staff were able to observe first-hand how excellent water authorities operated. Later, when the consultants discussed issues such as customer service, NWSDB staff remembered seeing a 24-hour hotline staffed with phone operators who used a computer to relay work orders to emergency crews, or they recalled observing the utility director of the city of Curitiba in Brazil conducting a quality circle discussion with plant operators. The study tours provided a deeper message than the on-site training course. The message that emerged was this: "It is not only possible; if they can do it, we can do it too."

Establishing a Corporate Planning Function

By the fourth year of the project, it became increasingly clear to the staff of NWSDB that the long-term project consultants would be leaving soon. Many problems had been solved, but then more complex problems often emerged. For example, positive financial indicators were a result of a long struggle to convince the government to raise tariffs. The problem (financial viability) seemed to have been solved. However, if one looked at the compromise made with the politicians to achieve an increase in the tariff structure, it was clear that the new tariff was

fragile and was perhaps only a temporary solution. The tariff was structured so that the commercial and industrial sectors paid inordinately large tariffs and subsidized domestic consumption. The net result was that it would be more cost effective for the commercial sectors to dig their own wells and pump their own water.

If a clear vision of the future were to be established and maintained, NWSDB needed permanent mechanisms for defining and resolving such strategic issues. There was a need to look further ahead as problems were solved. A corporate planning division was set up and the second highest ranking position in NWSDB (one rank below the general manager position) was assigned to the division. This served to institutionalize a mechanism for developing and sustaining a long-range vision.

2.2   The Importance of the Management Development Program

The senior management training program was the primary vehicle for introducing new ideas and building a shared understanding of management's responsibility for the future of NWSDB. The program brought staff together and built a senior team that coalesced into the new group of managers who would be the leaders for the future.

In addition to introducing the concept of change and "vision" to senior staff, the management development program altered the way managers viewed themselves and the role of management. The transformation of staff from technical contributors (engineers) to leaders and orchestrators of results through others was accomplished over several years of specifically targeted management development. All of the change themes discussed in this chapter were presented and worked on in these management training workshops. The senior staff examined the following concepts, developed practical tools, and applied them most successfully:

- how to communicate as a manager

- how to conduct meetings and how to use meetings as a vehicle for setting and monitoring priorities

- what performance management and performance indicators are and how to use them

- how to make, follow up, monitor, and provide feedback on performance agreements with staff

- how to work together as a team

- how to get the most out of staff

·2.3 Time as an Element of Success

It was very important to have patience and allow adequate time for change to be absorbed at a pace acceptable to the client. The design for a complex system of change was based on the premise that learning must be absorbed and found useful before introducing the next building block. The project period of six years was required to transform NWSDB into a modern, decentralized national water utility. In addition, two years were spent promoting and developing the project up front, and there were two years of follow-up after project completion to consolidate the gains made. Thus ten years of effort have been invested.

The length of time allowed for the project was essential to the project's success. Institution building requires that people change behavior. This takes patience and time. Had the project not been extended and re-extended after the initial four years, the investment would probably have been lost and change would not have been sustained. There is also a cumulative effect when many small pieces of learning and experience coalesce.

A good bit of time was required to introduce the concept of performance management and to explain and demonstrate what a performance indicator was. It took several months for managers to experiment with the idea and to draft performance indicators for their work units. Several more months were required to explain the drafts and to convince subordinates of their usefulness. At a management training workshop several months later, each work unit presented draft performance indicators. These were commented upon and modified by other work units. Subsequently, a performance management unit was formed and began to incorporate certain performance measures into a management information system.

In addition, the senior staff had to set up mechanisms for performance indicator review. Ultimately, the art of reading, understanding, and interpreting performance information and then using the information to improve performance took time. In all, about five years were required to put performance management into place. This is but one example of many changes that required time.

2.4 The Development of a Core Group for Change

A core group of some 20 senior managers became the primary engine of change within NWSDB. Without their cooperation and influence on other staff, the project would not have succeeded.

The core group within NWSDB emerged out of the process of working with the organization. Some of the individuals were very senior staff, but not all. The long-term consultants who worked with the project on a daily basis found that some staff were more receptive to new ideas than others; some were more willing to take risks and apply new concepts and skills. The WASH consultants also found some people more interested and excited about becoming better managers than others. Many of the exercises conducted at project monitoring events were team building in nature. A team identity emerged over time within this group.

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The consultants began to rely increasingly on this leadership group to get things done. For example, when it became important to tackle the problem of setting up a performance review program, a cost reduction program, a tariff increase study, or a personnel manual revision, ideas were first discussed with individuals and small groups selected from this core group. Members of this group would discuss the proposed innovation and provide feedback to the consultants on the realities of implementation and the difficulties that an implementation strategy would face. Subsequently, when a task force was formed to work through the design and implementation of the innovation, members of the core group would chair the task force and serve as the prime movers for getting the job done.

2.5   The Technical Assistance Role

The technical assistance design provided a unique combination of skills and the best advice available to NWSDB. The continuity of several years of the same technical assistance teams had the advantage of building a long-term trust relationship while allowing the consultants to build concepts and skills and grow along with their counterparts in NWSDB. The short- and long-term consultants worked as a team. The consultants knew when to back off and let the counterparts take over. The project success would not have been possible without all of these elements of technical assistance.

Technical Assistance Structure

Technical assistance was provided by two primary sources of consultants. A long-term contractor maintained a resident team of international and local consultants. Over the course of the project, this group was given short-term, intermittent, technical assistance backstopping from the WASH consultants on project strategy and in selected technical areas such as management and finance.

The contractor's team began the project with a full complement of technical experts in subject matter areas that corresponded to major project components or activity areas. These consisted of operations and maintenance, financial and commercial matters, computerization/stores and supplies, design/construction engineering, personnel, and training systems. Each technical expert worked in a counterpart relationship with the head of a department. The initial consultant team had seven full-time consultants, two of whom were Sri Lankan. The consultants' job was to ensure that a written product (i.e., a standard operating procedure or a manual), as well as the skills required, were transferred to NWSDB counterparts. Over the years, as major technical systems were developed and made operational, the consultant team diminished. During the last two years of the project extension period, a team of three consultants was in residence. They focused attention on decentralization, management, and personnel. They also worked with senior leadership in developing the strategic planning function.

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The chief of party for the contractor's team managed the team and the project strategy overall. Although trained as an engineer, the team leader's role in the project primarily called on his organizational development skills (OD). His interest in continually learning and applying OD principles was very significant in guiding the project and in collaborating with the WASH consultants. The team leader worked in a counterpart relationship with the NWSDB project manager and the senior executive staff (the chairman of the board and the general manager).

The WASH staff initially consisted of one intermittent consultant who provided a variety of project inputs: project strategy advice, management training, and annual project monitoring and evaluation. By the third year of the project, he was joined by a management training and OD consultant to assist in the annual monitoring exercises and the management skills courses. WASH consultant visits occurred two to three times a year, most visits taking three weeks. These two consultants were augmented periodically by experts in areas where the project needed extra assistance (e.g. finance, strategic planning, and training).

How the Long-term Consultants Worked to Transfer Skills Effectively

The resident consultants were most effective when they acted as advisors and coaches to their project counterparts. This was particularly effective when managers tried to apply new skills or undertake innovative programs (such as cost-effectiveness studies or staff reduction studies). The most effective consultants would assist their counterparts in getting started and then leave them alone to do the work, advising only when needed or asked. Occasionally, if a problem was especially difficult, the consultant would work alongside the counterpart for a period of time. As trust developed, the consultants were able to give corrective and reinforcing feedback more openly. This served as a model so that counterparts could learn how to provide feedback to their subordinates and peers. The consultants on the project who were least effective (some of whom were also terminated) attempted to dominate, force solutions, and do the work for their counterparts in frustration rather than patiently work with them to arrive at a product together.

The consultants played an important "third party" role, and they were consciously and openly used as such. For example, when a senior NWSDB official wanted to send a strong message to the World Bank, or a high ministry official but did not want to risk a confrontation, the consultants would be asked to prepare a briefing paper on the subject and present it. When one management unit was blocked by the board of directors or another higher level manager, the consultants would often help find out what the problem was and seek to get the parties together.

How the Intermittent Consultants Worked to Support Project Consultants

Because the WASH consultants were a part of the project design process and conceptualized the institutional development component, they acted as strategy advisors to the contractor's team leader. Because they worked intermittently, the WASH consultants were able to maintain a more detached perspective and advise the long-term consultants on ways to stay focused on the longer-term strategy and the larger picture. Both sets of consultants developed mutual

trust through working together. The WASH consultants could act as a sounding board and as a release valve for the frustrations that tend to accumulate in daily development work. Occasionally, the WASH consultants would provide a one-day session on consulting skills or project strategy.

The WASH team also established trust with the senior staff of NWSDB. Because the third party is important to the culture, the WASH team provided feedback to the long-term consultants and to senior staff when difficult situations arose. Occasionally, WASH consultants would be asked to speak to the chairman of the board on behalf of managers to find out how they were perceived, or to talk with the permanent secretary of the ministry about policy initiatives or with a World Bank official to pass on a particular message that might prove threatening if passed through formal channels.

The Process of Transfer of Skills and Responsibility for Change from the Consultants to the Core Group

The challenge in technical assistance is finding a way to leave the organization with the skills to be internally self-correcting and the ability to use teamwork and internal leadership to solve problems. Transferring the external consultant's role to a core group of internal consultants in the organization is a desirable outcome and was accomplished to some extent in this project.

One example of how skills were transferred occurred during the post-project period, 1991-93. Six members of the core group were selected by the WASH consultants (with senior-level concurrence) to learn how to conduct an internal management assessment exercise. The group learned how to become consultants. They designed information-gathering objectives, conducted interviews, organized information, and conducted a three-day workshop for their colleagues (the senior staff) with the assistance of the WASH team. This process was conducted with and through the newly emerging corporate planning division and served to strengthen its role as the division to inherit the project responsibilities within the organization.

The Role of the USAID Project Officer

During the first two years of the project, the A.I.D. project officer was almost a member of the technical assistance team. He attended the weekly project steering committee meetings. He knew all of the project staff on a first name basis. He worked with the consultants to ease their entry into the organization. He conducted high-level discussions with ministry officials to ensure that government policy would support project changes. And, most importantly, he saved the project from almost certain failure by insisting that several members of the initial consulting team (including the team leader) be replaced with more appropriate individuals during the first year of the project. His high level of attention to ensuring that the project got off to the right start and the amount of behind-the-scenes work he did were critical to project success. Institutional development projects require attention from the donor agency. This advocacy role is important to project success. When the project requires that governmental policies be changed, it is especially critical that a representative of the donor organization provide such support.

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2.6   The Ability to be Self-correcting

The ultimate measure of the success of the project is this: the staff of the NWSDB were able to discover and correct problems (without resorting to outside consultants) because they had in place and used data-based management tools. This allowed them to identify and correct problems as they emerged. They also learned that a problem could be solved when it was given the highest priority by all senior staff and was attacked with persistence.

The impact evaluation of the project, conducted in July 1993, focused on sustainability issues. A major finding identified in that study was that financial performance had not only been sustained but had actually improved in the two years after the project ended. The staff had understood and used management tools. Additionally, financial indicators were improved because the entire organization, particularly the leadership, had made use of the performance indicators with attention to billing, collections, and cost savings—the highest priority of the organization.

Preventive maintenance is another area where initiative has been taken to detect and resolve problems using performance management. A system was set up to provide preventive maintenance and track expenditures for electrical and mechanical equipment. The outcome has been greatly reduced costs in equipment downtime and equipment replacement.

2.7   Managing the External Environment

The changes made during the project period would not have been possible without an evolving level of political support. Political support for NWSDB, almost non-existent when the project began, improved as performance of the organization improved. NWSDB learned that the way to minimize political interference and to maximize support for change was to communicate with and determine the needs of the external stakeholder.

During the period of project development, the then-permanent secretary of the Ministry of Local Government, Housing, and Construction appealed to the donor community to assist him in transforming NWSDB. At that time, there were frequent newspaper articles critical of the services of NWSDB, politicians were constantly attacking it or calling for favors, and the amount of national treasury subsidy was very high. The president was putting pressure on the ministry to do something about the situation. Many felt that NWSDB was a national embarrassment.

At the time of the impact evaluation (ten years later), the permanent secretary said candidly in an interview, "The NWSDB is the best-managed state corporation we have in Sri Lanka." When asked why, he said that the professional staff anticipated needs through planning and had ways of meeting performance expectations. He was also pleased that all operational costs and payment of the debt service on national loans were fully met by NWSDB. It was financially self-sustaining. The pressure was off because performance was strong.

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For this institutional development project it was important to allow time for performance to make a difference. Political support was earned over time; it was not necessarily there at the start.

In order to better manage the external environment, NWSDB managers had to change their attitudes and improve management skills. In the early days, staff were almost totally reactive to demands from politicians and from external support agencies. An important change in attitude was a growing belief that it was possible to find out what stakeholders needed by communicating with them. Systems that followed technical and financial feasibility guidelines were set up to screen requests for new services, and support was enlisted and received from government officials for adherence to those guidelines. NWSDB board and staff made extensive efforts to educate, inform, and enlist the active participation of local politicians in setting up community users' associations to help collect bills where water was provided to poor people by public standposts.

2.8   The Role of External Support Agencies

> *The fact that the World Bank and the Asian Development Bank (ADB) cooperated closely with the USAID project was key to moving the institutional agenda along. The best solutions to institutional reform often meet the needs of ESAs while protecting the needs of the organization.*

While USAID addressed the institutional development agenda, the World Bank and the ADB provided loans for infrastructure. Many of the loan contingencies and conditions provided opportunities to address key institutional issues such as tariffs, staffing, and commercial affairs. All of these issues were discussed in advance with the NWSDB core group members and the consultant team. The combination of donor forces working together with the best-motivated elements for change within NWSDB proved to be unstoppable.

Over time, NWSDB leadership became skilled and wise in the ways that ESAs operate. They learned to anticipate the endless requests for data by setting up data systems. They also learned to enlist support of ESAs in important change projects, such as raising the tariff. New loans became contingent on a tariff increase, but the study identifying what was needed was made by NWSDB and communicated to the donor community. (NWSDB initiated rather than reacted to donor conditions.)

2.9   Sustainable Change Required a Different Reward Structure

> *When the reward structures and the incentives within the organization changed, it was clear that the innovation would be sustained.*

One is never totally sure in these situations if cause or effect is at play. However, it was observed that at the beginning of the project, the most prestigious jobs were in engineering; by the end of the project, they were in the service delivery side of the organization. A number

of factors contributed to this. The reorganization and decentralization program created a number of very high-ranking posts for the heads of the RSCs. This also created a chain of command for a number of managerial posts that did not exist in operations and maintenance.

Most of the incentive programs for performance were structured for staff who served customers directly (although this created a great deal of grumbling from the staff in construction). Ultimately, the visibility of staff in operations and maintenance was much higher than the design and construction staff. They were talked to by politicians, invited to ministry-level meetings, and inherited the policy and management direction of the NWSDB.

The end result is that the formal reward structure recognizes high performance, and the informal social structure of the organization encourages advancement through the ranks of the operations and maintenance side of the organization, and not through the ranks of engineering design. The chairman of the board of directors is now requiring that all staff at the higher levels rotate into O&M posts in order to be trained in utility operations.

Chapter 3

THE APPLICATION OF LESSONS LEARNED TO OTHER PROJECTS

3.1 Three Desirable Elements for Replication in Other Projects

When one considers the lessons learned from a project like the Sri Lanka example, the first question is, can those lessons be applied to other institutional development projects? Or, was there something special in that experience? Three elements, in particular, stand out as essential in any institutional development project.

Mandate for the Project

A clear mandate was given by the government of Sri Lanka to A.I.D. to design and conduct a project that would modernize the national water supply system and make it financially viable. The government's perception of the problem and support for the changes required to solve it were important. A.I.D. was able to say to the government, in effect, "If you want the problem solved, you must be willing to change policies and the way things are done. Staff may need to be transferred, and salaries eventually raised. The public will have to pay for water, and rational and technical criteria (as distinct from strictly political considerations) will need to be established and adhered to."

Need for the Project

The NWSDB needed decentralization and reorganization. This need brought with it a ready reason in the project design and the institution building agendas to put in place new staff, new procedures, and new equipment. It is often easier to build new systems than to try to revise old ones, to which people often feel strong attachment. Many other entities needing improvement may not have the need or the possibility of large-scale reorganization leading to decentralization.

The Project Design

The project was conceptualized to work with *all* of the organizational and institutional systems in an orchestrated attempt to deal with the whole problem, not merely one aspect of it. The whole systems approach allowed for change strategies to be structured and staged to address administrative, technical, financial, human resource, and policy aspects in a systematic fashion. All aspects of the NWSDB received attention.

The project design was sufficiently flexible to allow correction and shift of priorities as needed. The annual project monitoring events provided a source of feedback and adjustment to project strategy. For example, the technical assistance team learned that a good way to work within the NWSDB culture was to pilot test innovation in one geographic region. This tended to "showcase" staff in the selected region. They felt important. Quickly thereafter, other regional

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service centers wanted to achieve the same status. The project strategy was thus adjusted to work in an integrated way from regional to national scale.

3.2 Limits of Transferability

The lessons learned presented in this document are applicable to other institution-building projects for water utilities. They are also applicable to other utilities or institutions such as power or telephone companies that can operate on a commercial basis. The limits of transferability potentially lie in two areas: the commercial nature of the institution and its autonomy.

Performance management techniques provided a great many management tools (management information systems, staff performance review, strategic programs) that helped NWSDB become successful. While utilities produce a commodity that lends itself to a commercial orientation, this should not necessarily be a limiting factor for other institutions that are not product-oriented. One could argue that institutions that offer services (i.e., information or regulatory activity) could also use performance management techniques to improve efficiency. However, as a practical matter, many service organizations find it difficult to adopt this approach.

The other limiting factor in applying these lessons is the degree of autonomy of the organization. One of the institution-building objectives of the project was to create as much self-sufficiency and autonomy for NWSDB as the political system would allow. Water utilities can also be set up as state or state-delegated enterprises. Thus, it is possible to view them along a continuum of autonomy. Some public utilities are very autonomous; others are directly administered by government. Regulatory and educational organizations, for example, would probably not lend themselves to the same degree of autonomy as water utilities.

3.3 Summary of Lessons

While many institutional development projects may not have goals related to decentralization, autonomy, or performance management, institution building and the process requirements could be similar to those experienced in the project discussed in this report. The lessons derived from examining the processes used to achieve change in the NWSDB are applicable to any institutional development project if appropriately adapted to the needs of the particular situation. Following is a summary of these lessons.

- The change strategy in Sri Lanka required that those involved develop a vision of what they wanted to become.

- In this case of organizational change, the managers and people that made decisions needed to change first, and they needed to learn how to manage people. This allowed the project to achieve a multiplier effect for changes down the line.

- Time was allowed for lessons to be absorbed and for learning to build upon itself.

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■ Acceptance of change meant that ultimately a core group within the organization, rather than consultants, become the primary instruments for change.

■ The technical assistance design provided a high degree of continuity in both the long- and short-term consultants, resulting in the development of trust with the NWSDB counterparts. The technical assistance design also focused on skill transfer and on not doing the work for the counterparts.

■ Mechanisms for self-correction needed to be built into the project. Data-based tools and performance indicators were very important to that process.

■ Institutional change required strong support in the policy area and in the external environment.

■ The reward structures and incentive systems within the organization supported the institutional change, making the changes sustainable.

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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.