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INTERNATIONAL DEVELOPMENT

AND

NATIONAL WATER SUPPLY AND
DRAINAGE BOARD, SRI LANKA

WATER SUPPLY AND
SANITATION SECTOR PROJECT
USAID PROJECT NO. 383-0088

FINAL REPORT ON INSTITUTIONAL DEVELOPMENT OF THE NWSDB

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ENGINEERING - SCIENCE. INC
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IN COLLABORATION WITH

RESOURCES DEVELOPMENT CONSULTANTS, LTD
SRI LANKA

ERNST & YOUNG
CHARTERED ACCOUNTANTS, SRI LANKA.

This report represents the combined experience of the ID consulting team responsible for implementing the project over its 77 months life. The report was compiled by Dr. Robert M. Bradley, Senior Associate of Engineering-Science Inc, and Project Manager from January 1986 through June 1991. The compiler has drawn heavily on the personal observations of both the team members and their counterparts but has attempted to maintain anonymity throughout. The material is presented in an attempt to place the project in the correct perspective - the project was, after all, concerned with changing the way people behave, and human behaviour in any culture is rich in anecdotal material. It is hoped that any person - consultant or counterpart - who identifies himself with a particular example in this report will not take offense, but will rather take it as a compliment to have been involved in an innovative and highly successful ID intervention.

Key long-term consulting team members associated with the project included the following:

Mr. C.H. Tomasides	Financial Planning/ Organization Development
Mr. G.A. Bridger	Engineering
Mr. S. de Saram	Operations & Maintenance
Dr. J. von Dornum	Human Resources Development
Mr. R.J. Peterson	Computerization
Mr. J.P. Requa	Organization Development
Dr. H.I. Karunadasa	Community Participation/ Health Education
Mr. A.D.B. Talwatte	Accounting Systems
Mr. M.P.D. Cooray	Management Accounting

PREFACE

The purpose of this report is, firstly, to satisfy the USAID contractural requirements for a formal documentation of project activities and, secondly, to present to a wider audience the more significant elements of what is perhaps the most comprehensive and innovative institutional development project carried out to date for a public sector water supply agency in a less developed country.

Because of the increasingly widespread appreciation of the advantages of institutional development as a key factor in supporting both the sectoral and national development plans of external support agencies, and in helping to achieve specific project sustainability, it is believed that interest in this report will not be restricted only to those who have been actively involved in the project. In particular, other external support agencies, other public sector authorities both in Sri Lanka and elsewhere, USAID missions in various countries, and specialists in the field of institutional development should find in the report something of relevance to their own particular interests. The implementation timeframe of this institutional development effort was almost six and a half years of continuing consultant input. Many lessons were learned in this period and many of these lessons are highly relevant, not just to the specific case of the National Water Supply and Drainage Board, but also to institutional development of utility agencies elsewhere.

The report concentrates on the institutional development elements of the Water Supply and Sanitation Sector Project, other project activities which were not directly related to institutional upgrading are dealt with in separate reports, notably the Greater Colombo Water Supply System Master Plan Update Report and the Pre-School Latrine Health Impact Assessment Report.

Anyone interested in the more prosaic details of project records such as names of trainees, training location and course duration; lists of commodities and equipment procured; expenditures and financial information; standard operating procedures and manuals; and similar outputs will not find them in this report. A project of this nature and duration inevitably generates a voluminous data base. Such information as listed above is available in the project files.

The report is organised to reflect the replicative nature of the institutional development initiatives tested on this project. Part One provides the overall setting for the project activities. The project objectives are defined in Section 1 in the context of the growing international awareness of the benefits of institutional development. In Section 2 the institution under study is put in perspective with a description of its operational performance at the project inception stage and a summary of its perceived deficiencies. Section 3 explores in some detail the cultural framework of the project in the context of the national, Governmental and institutional cultural characteristics. The terms of reference for the project, technical assistance input and key project resources are summarised in Section 4.

Part Two deals with the basic project concept and strategy. The formal and informal reporting linkages and liaison mechanisms are discussed in Section 5. In Section 6 the basic institutional development approaches are defined, then Section 7 shows how various strategies were adopted to put into practice the basic approaches.

In Part Three the focus moves to the specific project activities. A comprehensive range of case studies is examined in Section 8 and the successes and failures of the various approaches are highlighted. Section 9 describes in more detail a series of innovative institutional development strategies which proved to be the keys to the overall project success. The important issue of monitoring and evaluation is covered in Section 10, and the proposition is introduced that an institutional development project can only be evaluated on the basis of institutional performance. Section 11 pulls together the various conclusions and observations of the earlier sections and identifies the key lessons learned throughout the project implementation period.

It is hoped that this report will assist in some way to stimulate the growing interest among donors, practitioners, and utility agencies in the important field of institutional development. It must be stated at the outset that although problem areas and impediments to institutional development are discussed, no criticism is intended of any individual, group or organization. Rather it is believed that a frank but objective review of what really happened will be of benefit to all concerned parties and to external observers. Resistance to change is a characteristic of any organization and must not be seen to be something peculiar to either the National Water Supply and Drainage Board in particular or Sri Lanka in general.

It is not easy, in a project spanning more than six years, to acknowledge personally the large number of individuals who assisted in so many ways in making this project a success. It goes almost without saying that the counterpart staff of the National Water Supply and Drainage Board were particularly instrumental, at all levels, in helping the consultants to help the National Water Supply and Drainage Board. Particular mention must be made of Mr. T.B. Madugalle and Mr. A.P. Chandraratne, respectively the longest-serving Chairman and General Manager during the project implementation phase, who were both willing to try out new operational approaches and to smooth the waters when on occasions differences of opinion threatened to divert the attention from the job at hand!

The two Additional General Managers, Mr. S. Nagaratnam (Operations) and Mr. M. Wickremage (Corporate Planning) were strong supporters of the project goals, particularly Mr. Wickremage, who served for two long periods as chief counterpart and National Water Supply and Drainage Board Project Manager. Mr. P. Pathiraja (Deputy General Manager/Planning and Design) and Mr. W.A. Karunaratne (Deputy General Manager/Construction) also provided continual assistance and support during their direct association with the project in their roles of chief counterpart (Project Manager) and Deputy Project Manager respectively.

The assistance of senior officials of the Ministry of Housing and Construction (formerly Ministry of Local Government, Housing and Construction) is also gratefully acknowledged. In particular, the earlier Secretary, Mr. R. Paskaralingam, the current Secretary, Mr. W.D. Ailapperuma and State Secretary (Housing), Mr. C.H. Tissera, all demonstrated a keen interest in project activities and willingly participated in project-related workshops and policy committees. The advice of Mr. R. Paskaralingam during the early phases of the project, to continually take into account the evolving Government policy framework was well taken.

A number of external support agencies active in the Sri Lankan water supply and sanitation sector gave considerable moral support to the project, through regular liaison meetings, collaborating in strategy evaluation and harmonising development goals. Special thanks are due to Mr. G. Plant, Mr. P. McCarthy and Mr. C. Godavitarne of the World Bank, Mr. T. Hall of the United Nations Development Programme/World Bank and Mr. A. C. McIntosh of the Asian Development Bank, for taking the time throughout the project implementation to keep abreast of project activities and to offer helpful advice.

Regular necessary and invaluable assessments of overall project direction, with suggestions for modifications to the project approach, were given by Mr. D.E. Edwards of the WASH Project. This input indubitably helped the consultants to separate the wood from the trees and to counter any tendency to become "institutionalized" themselves.

The continued support of USAID/Colombo was crucial to the success of the project. Four Mission Directors, namely Messrs. F.D. Correl, R.C. Chase, P.J. Bloom and R.A. Brown were involved with the project during its implementation phase, and all gave strong backing to the regular requests for contract modifications which arose as a result of the changing circumstances which were inevitable on a project of this nature. The day-to-day liaison involvement of the following USAID officers is gratefully acknowledged: Mr. L. Purifoy, Mr. J.J. Pinney, Mr. E.R. Loken, Mr. D. Jenkins, Dr. J.C. Thanarajah and Mr. M. Siribaddana. The support of Mr. Loken needs to be highlighted. This project was his "baby" right from the preparation stage through the first two years of implementation. The wish that he made on almost his last day with the project, that by the end of the project the National Water Supply and Drainage Board would be playing host to water supply agencies from other developing countries, did eventually come to fruition, thereby amply justifying his vision of what institutional development could achieve.

Finally, the dedicated contribution from numerous individuals, both in the National Water Supply and Drainage Board and other Sri Lankan public sector authorities, who were associated at one time or another with the project is gratefully acknowledged.

ADB	Asian Development Bank
Addl. GM	Additional General Manager
AGM	Assistant General Manager
BP	British Petroleum PLC
CCD	Contract completion date
CEB	Ceylon Electricity Board
CPD	Corporate Planning Division
CPU	Community Participation Unit
CSSS	Community Support and Sanitation Unit
cu m	cubic meter
DANIDA	Danish International Development Agency
DGM	Deputy General Manager
ES	Engineering-Science, Inc.
ESA	External support agency
FINNIDA	Finnish International Development Agency
GDP	Gross domestic product
GM	General Manager
GNP	Gross national product
GTZ	German Technical Cooperation Agency
HRD	Human Resources Development
ID	Institutional Development
IDA	International Development Agency
IDWSSD	International Drinking Water Supply and Sanitation Decade
IMF	International Monetary Fund
JVP	Jathika Vimukthi Peramuna
lakh	100,000
LDC	Less developed country
M	million
m^3	cubic meter
MHC	Ministry of Housing and Construction (formerly MLGHC)
MIS	Management information system
MLGHC	Ministry of Local Government, Housing and Construction
MOH	Ministry of Health
MP	Member of Parliament
NGO	Non-governmental organization
NWSDB	National Water Supply and Drainage Board
OD	Organization development
OIC	Officer-in-Charge
OJT	On-the-job training
O&M	Operations and maintenance
PACD	Project activity completion date
PMU	Project Management Unit
PRU	Public Relations Unit

RFP	Request for proposals
Rs	Sri Lankan Rupee (Rs.27.02 = US$1.0 in 1985; Rs.40.40 = US$1.0 in 1991)
RSC	Regional Support Centre
SANEPAR	Companhia de Saneamento do Parana
TA	Technical assistance
TCDC	Technical cooperation among developing countries
TOT	Training-of-trainers
UK	United Kingdom of Great Britain and Northern Ireland
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development
WASH	Water and Sanitation for Health Project
WHO	World Health Organization
WSSSP	Water Supply and Sanitation Sector Project
y	year

DEDICATION

This report is dedicated to all the employees of the National Water Supply and Drainage Board of Sri Lanka, from the Chairman and executive management to the unskilled grades. Over the life of the project these employees experienced a major change in the way the institution went about its business. The impact of the institutional development consultants, variously described as catalysts, change agents, process consultants, or other euphemisms for foreign intruders, would have been zero without the employees' commitment and willingness to try out new operating strategies. The consultants undoubtedly helped, but the credit for the successful institutional development achieved through this project most certainly belongs to those whose livelihood depends on the institution, namely the employees.

PART ONE

I N T R O D U C T I O N

Objectives, Institutional Setting, Cultural Framework and Resource Inputs.

SECTION 1

PROJECT OBJECTIVES

Institutional development (ID) is a broad term and a project which has ID as its principal goal inevitably has a broad set of objectives. This project was no exception. In this section the original objectives are presented in a condensed form and are followed by a summary of additional objectives which became evident as being highly relevant to overall project goal accomplishment soon after project inception. The section starts with a review of the increasing international awareness of the importance of ID, in an attempt to place the specific project objectives in the right framework.

INCREASING INTERNATIONAL AWARENESS OF THE BENEFITS OF ID

The international donor community has long recognised the advantages to be gained from strengthening participating-country institutions in order to maximise the benefits of their development initiatives. In a forty-year history of funding a vast range of development programmes, the United Nations Development Programme (UNDP) has increasingly focussed attention on ID (see Box 1).

In the water supply and sanitation sector the eighties marked the United Nations' International Drinking Water Supply and Sanitation Decade (IDWSSD). Assistance during the early years of the programme concentrated

Box 1. Extracts from the Report of the Administrator (UNDP, 1989 a)

The Fifties- "A critical weakness of the early development co-operation efforts was a failure to recognise that capital assistance and the creation of physical infrastructure were not enough for self-sustaining development. Investments in people and institutions had to follow, or development efforts would collapse."

The Seventies- " .... the cycle of reliance on outside experts and imported equipment would give way to building local skills and technology."

The Eighties- " .... donors were quicker to acknowledge that when it comes to development work, developing countries must be in charge, must articulate their own goals and must develop and implement their own programmes."

The Nineties- "National self reliance, the ultimate objective of all technical co-operation, calls for accelerating education and training, increasing investment in human and institutional development ..... Equitable and sustainable development .....encompasses the need ..... to set up viable institutions in developing countries, ..."

almost exclusively on hardware. For example, during 1981-1982, despite statements by almost all involved funding agencies that institutional deficiencies had to be addressed, only 20% of the 20 bilateral agencies, development banks, funds and UN organizations active in the sector had committed funds to specific ID components (WHO, 1983). The situation improved somewhat as the IDWSSD progressed, with projects including at least one of seven "socially-oriented" components (defined as human resources development, management improvement, community participation, involvement of women, health education, public information and institution building) increasing from 24% of total commitments in 1981-1982 to 34% in 1985-1987 (UNDP, 1989 b).

Various IDWSSD progress review documents have demonstrated how a greater emphasis on ID would have secured more substantive results. Half-way through the decade a review by WHO (1985) highlighted the weakness of sector institutions as the main problem area. A UN study to address the legal and institutional factors affecting progress in Asia, Africa, Latin America and the Caribbean clearly showed the detrimental effect of an over-emphasis on engineering, with scant attention paid to developing management skills, cost recovery and translating policy priorities into plans and assignments that could be carried out by the implementing agencies (United Nations, 1989). At the end of the decade a review of sector achievements in South and East Asia concluded that " ... serious weaknesses in the ability of sector institutions to manage, operate and maintain water and sanitation systems were serious constraints ...." (UNDP, 1990). Institutional structure, human resources, financial resources and management, relations between implementing institutions and service users, and national policies were identified by McCullough and Wyatt (1990) as the five most critical issues affecting institutional performance and long-term sustainability.

Despite the apparent support by the donor community to the need to pursue ID in order to ensure more effective allocation of development funds and to achieve long-term capacity - building in implementing institutions, an extensive review reported as recently as 1988 suggested that donor rhetoric was louder than action (see Box 2). In fact it is probably fair to say that if the amount of energy allocated to implementing ID had equalled that expended by external support agencies on ID verbiage, then this report would no longer have any novelty value since the type of project it describes would be common place.

Early in the IDWSSD the USAID administrator identified as one of four key development pillars " .. fostering institution building to enhance countries' abilities to marshall human and financial resources to ensure that development will continue long after assistance ends." The initiative taken by USAID to support a major ID project at a time when many other external support agencies were still only paying lip-service to the ID need was far sighted. The decision has been more than vindicated by the experience gained during the decade.

PROJECT OBJECTIVES

The basic rationale for the project as stated in the Project Paper (USAID, 1984), was that since safe, convenient water supplies and adequate sanitation are essential to improved health, an improved health

Box 2. Negative Factors Influencing Efforts to Include ID in Assistance Programmes

- project officer workloads
- government budgetary procedures
- need to appease constitutents with short-term tangible results
- organization culture characterised by bureaucratic procedures
- competition among donors
- high turnover of project officers and experts
- lack of incentives to adopt longer-term strategies (both in donor agencies and programme recipients)
- lack of sufficient ID know-how within donor agencies
- bias of Western experts to their host cultures
- ID is a threatening subject since it is contrary to the more conventional expedient short-term projects

Adapted from Van Reenen and Waisfisz (1988)

status would ultimately lead to increased economic productivity and human well-being. The project had two elements, a comprehensive institutional building component for the National Water Supply and Drainage Board (NWSDB) and a programme to improve health education and rural sanitation services through the integration of NWSDB activities with the Ministry of Health (MOH).

Three basic objectives of the institutional - building element were defined as follows:

- consolidating 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
- decentralizing to the regions
- changing the overall organization structure, attitudes and actions to make the operation and maintenance (O&M) activities of the NWSDB the most important mission

The principal objective of the health education, sanitation and community participation element was to ensure, through a process of formal coordination among the NWSDB, MOH, participating non-government

organizations (NGOs) and beneficiary communities, that health education and sanitation services would be delivered to the communities simultaneously with the provision of new or upgraded water supply facilities.

The Project Paper further detailed the expected project activities and anticipated outputs, these are combined and summarised in Table 1.

REVIEW OF PROJECT OBJECTIVES

As comprehensive as the original project objectives were, it became apparent as the project progressed that there existed some serious imbalances between the degree of detail contained in the Project Paper and the somewhat cursory attention paid to the institutional development process per se. It is, of course, easy to make this observation with the hindsight of more than six years' experience of project implementation, but it is necessary to address the issue because of the possible ramifications on future ID projects.

Firstly the ID objectives were enshrouded in the all-embracing goal of improving the health and well-being of the people of Sri Lanka, measured by the increase in the number of people served with adequate water supply and sanitation facilities and by a reduced incidence of water-related diseases. This emphasis on "hardware" in what was essentially a "software" project did tend to divert more consultant resources than were probably justified to the public health and engineering inputs, at the expense of the more critical organizational development inputs. A more realistic balance was eventually reached about eighteen months into the project.

Secondly, some of the project outputs were described in so much detail that they were almost prescriptive in nature, the least desirable approach for an ID project. Typical examples included the scope and size of the expanded NWSDB Training Department and a list of conditions precedent to disbursement which included such key ID components as the basic NWSDB reorganization structure; identification of members of a Strategic Planning Committee and a Personnel Management Task Force; details of the RSU structure and staffing; and details of the previously mentioned training upgrading. According to the Project Paper these conditions precedent were to be met prior to the selection of the technical assistance consultants, although the consultants were actually appointed prior to the precedents being met and were able to become involved, albeit to a preliminary degree, in the deliberations on these absolutely fundamental ID issues.

There were, of course, reasons for this overly prescriptive approach. It was basically believed at the time that in order to secure government commitment to a project of this nature that pressure had to be applied through the use of disbursement approval leverage. Also, considerable resources had been expended on project design, including visits of specialist teams, and it was believed by USAID that the recommendations of the specialists on basic issues such as training needs and scope of decentralization were readily applicable and hence could be woven into the Project Paper as mandatory upgrading requirements. The reason for emphasising the public health linkage so much, almost to the extent that it over-shadowed the underlying ID component, was perhaps understandable

Table 1. Condensed Project Activities and Outputs

Institutional Development Component
Reorganization - Consolidation of two separate organizations, decentralization to three Regional Support Centres (RSC) and strengthening of five Regional Offices with provision of physical facilities.
Strategic Planning - Establish annual strategic planning process.
Policy - Establish sound policy implementation mechanism.
Public Relations - Establish Public Relations Unit (PRU).
Management Information System (MIS) - Design and implement computerized MIS.
Commercial - Set up a Commercial Department and implement computerized billing and collection.
Financial - Implement annual financial planning process, upgrade accounting systems, prepare fixed assets inventory.
Supplies, Stores, Contracting- Upgrade procedures, provision of stores facilities.
Human Resources Development - Expansion of Training Department, enhancement of skill training coverage, provision of facilities.
Personnel Management - Revise policies and procedures, introduce incentive package for regional staff.
Capital Facilities Planning - Prepare planning and design manuals, construct/rehabilitate six water supply sub-projects.
Operations and Maintenance - Improvements in process control, maintenance management, water quality monitoring, provision of equipment.
Research - Strengthening of research group, undertake five research studies.
Legal - Establish Legal Unit.
Information Management - Set up data management system with uniform computerized facilities.
Health Education Component
Sanitation - Create Rural Sanitation Unit (RSU) to be responsible for social and public health inputs into NWSDB planning.
Health Education - Design health education programme, implement in six sub-project areas.
Latrines - Construct latrines in the sub-project areas.
Adapted from USAID (1984)

since project funding was being channelled from the USAID health budget. The effects of this approach to project design on the ID momentum are discussed in more detail in Section 7.

Additional Objectives

Additional key objectives soon became apparent following project commencement. Most of these objectives were essentially linked to the question of "how to" undertake ID in the context of the NWSDB, and also how to ensure sustainability. These objectives were concerned with process rather than output and perhaps to be fair to the project designers, would not have been clearly defined at the project design phase for two reasons. Firstly, the processes to be adopted in any ID project

are to a great extent institution-dependent and cannot be defined without a deep understanding of the inner-workings of the institution. Secondly, in the early eighties when the project was designed ID was still very much a new area. Although in the USA and other developed western-oriented countries, ID concepts were starting to be applied in primarily private sector establishments, they were often "piggy-backed" on to more traditional organization development (OD) studies. In the public sector in less developed countries, ID was very much in its infancy.

The more relevant additional objectives can be summarised as follows:

- Involvement of wider policy environment (Government of Sri Lanka)
- Formal coordination 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.
- Include Greater Colombo in the decentralization process.

In this section the status of the NWSDB at the start of the project is described, following a brief review of the institution's history and purpose. The deficiencies in operational performance which prompted the ID initiative are also addressed.

FORMATION OF THE NWSDB

The NWSDB was formed out of the Department of Water Supply and Drainage in January 1975 as an autonomous body under the then Ministry of Local Government, Housing and Construction (MLGHC). As stated in its enabling Act, the NWSDB was charged primarily with developing, providing, operating and controlling efficient water supply facilities, to distribute water for public, domestic or industrial purposes and to charge for same. Other duties of the NWSDB included such functions as the provision of piped sewerage facilities, research and training. At its inception the NWSDB had a staff of about 1600 and was responsible for operating 96 schemes.

The NWSDB soon became the lead agency in the water supply sector in Sri Lanka, taking on the responsibility for planning, design and construction of virtually all urban water supply schemes and most of the piped supply schemes in rural areas. In addition, the NWSDB took on an increasing burden of facility operation and management as a large number of poorly-managed and generally run down local authority schemes were handed over to the NWSDB.

At the time of the project preparation in late 1983/early 1984 the NWSDB was responsible for the management of 161 piped-supply schemes and its staff had increased to almost 6000, about half of whom were casual employees.

PERFORMANCE STATUS

In 1983 it was not an easy matter to quantify performance. The NWSDB was functioning without any formal operational targets or performance indicators, other than those related to the disbursement of its capital budget on new schemes. If viewed solely in terms of scheme construction, the NWSDB was performing remarkably well, its annual capital expenditure allocation having increased almost three-fold since 1980, from Rs.482 million to Rs.1380 million.

However, in terms of overall financial viability and optimization of staff the performance was less than satisfactory (see Box 3).

Box 3. NWSDB Performance Status 1983	
• Capital expenditure allocation	: Rs.1380 million
• Proportion of national sector total allocation	: 97%
• Actual capital expenditure	: 70% budget
• Total water production	: 149 million m^3y
• Total staff	: 5848
• Billed connections	: 49000
• Consumer/staff ratio	: 8.4
• Billings	: Rs.78 million
• O&M Cost	: Rs.163 million
• Total collections	: Rs.19 million
• O&M cost recovery	: 12%
• Total O&M plus debt service cost	: Rs.194 million
• Total cost recovery (excluding depreciation)	: 10%

PERCEIVED DEFICIENCIES

The basic problem with the NWSDB at the time of project design was that it had not been able to come to grips with the very significant role shift occasioned by its change from a Government Department to a public corporation.

The new role demanded that its focus of attention be changed from capital projects to O&M and consumer billing. This change in focus represented a radical redirection of emphasis, one that the NWSDB was not easily in a position to absorb. The NWSDB management in 1984 was almost entirely comprised of the pre-1975 cadre, the organizational culture and operating procedures of the old department had been carried over to the corporation with no substantive change.

The new emphasis on O&M and billing also introduced the previously untried, or at best low priority operational areas of public relations, financial management and policy development (corporate planning). The demands of the IDWSSD also placed new exigencies on the NWSDB, namely to offer specific services in the areas of groundwater development, community participation and training (Figure 1).

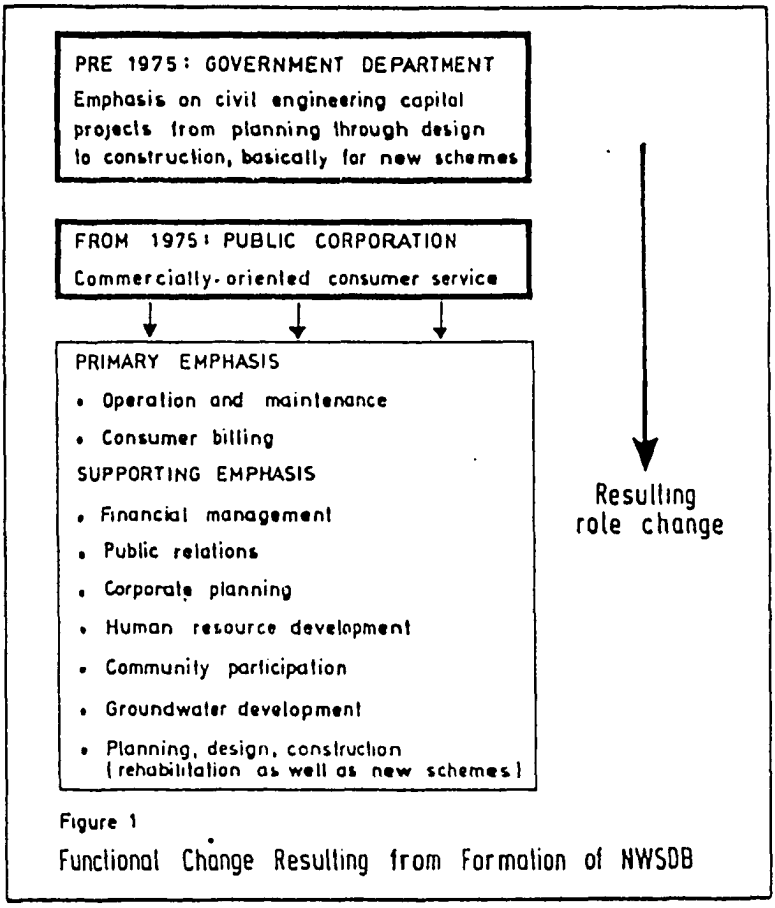

Figure 1

Functional Change Resulting from Formation of NWSDB

The NWSDB organization structure at the pre-project stage reflected the emphasis on capital projects (Figure 2). The NWSDB was effectively divided into two organizations, with a separate management structure responsible for a major World Bank-funded project in the southwest, centered on the capital city Colombo. Although small regional offices did exist, they tended to be headed by relatively junior engineers and any substantive decision-making was made at Head Office level. Because of the attractiveness to essentially design and construct oriented civil engineers of a major foreign-funded project, with associated rupee allowances, located in the major metropolitan area with all its attendant services, it was understandable that the Southwest Coast Project tended to be staffed by the more experienced officers, to the detriment of the operations in the rest of the island.

There was no doubt that the project management concept adopted for this major project was necessary. It represented the highest contract value yet undertaken by the NWSDB and was very much a test case from the point of view of external support agencies assessing the NWSDB's ability to manage major infrastructure projects. The project was managed successfully, as testified to by the continuing confidence shown by the donor community in funding a succession of major capital projects in later years.

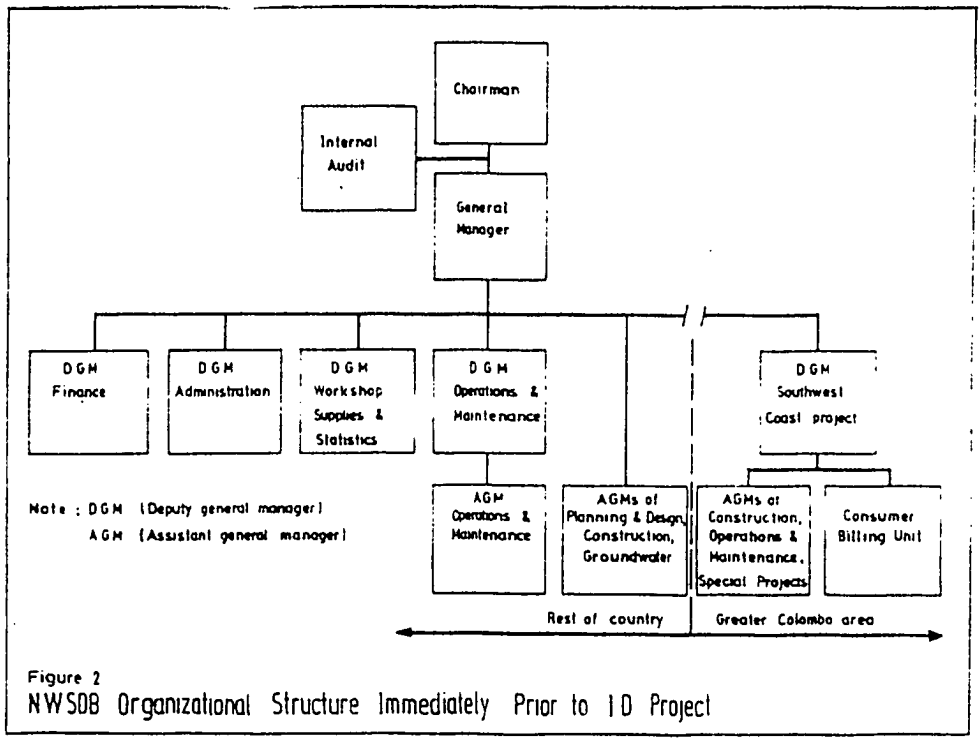

Figure 2
NWSDB Organizational Structure Immediately Prior to ID Project

By comparison, the supposed new focus of the NWSDB was not living up to its expectations. The rapid growth in physical facilities was not paralleled by an improvement in O&M capabilities or essential support services. The vast majority of water supply schemes evidenced broken motors, pumps and gauges, with chemical feed and filtration equipment defective and only marginally operational. Water quality monitoring was almost non-existent. Preventive maintenance was negligible and essential corrective maintenance was severely hampered by totally inadequate and non-responsive stores, spares and workshop facilities.

Billing and collection activities had only commenced in 1981 (for the non-domestic sector) hence experience in this area was naturally limited. However, financial awareness as a whole was seriously inadequate with scant attention to budgeting (other than for capital projects), less than acceptable accountability and confusing accounting systems which made it very difficult to differentiate expenditures on the revenue side from those associated with capital items.

Although performance on the major Southwest Coast Project was good, performance on other schemes left much to be desired. The emphasis was directed to the provision of new facilities, rather than to rehabilitation, and project planning was totally divorced from community considerations, either in terms of appropriate technology, user-facility location or ability and willingness to pay. Linkages with sanitation aspects and community health status were not considered. An evaluation of the design capability of the NWSDB reported by Hirano (1982) graphically illustrated the inadequacies, with designs being done by junior engineers who inevitably referred to previously completed designs. Often, such designs were copied without first evaluating their applicability and any errors originally introduced tended to be repeated subsequently.

It is fair to say that almost all these deficiencies were attributable to two basic problems. Firstly, up until the early eighties, NWSDB management had generally not been aware of the need for change, and secondly, even if it had been, it was not in a position to implement by itself the major attitudinal shifts and to develop the new procedures necessary to support the required change. This need to change the way in which the institution was being run was the key to successful ID, all the previously mentioned deficiencies were basically the symptoms of this underlying cause.

To summarise, the operational deficiencies resulted from the major shift in emphasis caused by the formation of the corporation in 1975 (see Box 4).

Box 4. NWSDB Deficiencies - the Cause Defined

The change from a Government Department to a public corporation produced a major change in emphasis from a capital projects to a financially viable O&M/commercial organization. But without a change in basic NWSDB staff attitude, supported by new operational skills and procedures, the following deficiencies persisted:

- Negligible emphasis on O&M
- Minimal commitment to financial viability
- Neglible accounting/budget discipline
- No corporate planning
- Little attention to community/user considerations
- Reliant on Government subsidies
- Totally reactive to directions from MLGHC, local authorities and Members of Parliament

NWSDB DEFICIENCIES IN THE NATIONAL CONTEXT

In order to keep things in perspective it is important to appreciate that the status of the NWSDB in the early eighties was no different from most of the other public sector agencies * in Sri Lanka at that time.

As in many other countries, the public sector was akin to a highly resistent "iron rice bowl" system of guaranteed employment. The training and basic philosophy of many of the government officials tasked with managing the state sector agencies was often totally at variance with the attributes required of a commercially-oriented business manager. Recruitment, promotions, transfers, etc. were dependent on matters

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* Public, government and state sector are used synonomously to describe a government agency (authority, organization, board, corporation), as opposed to an NGO or wholly private sector enterprise.

unconnected with competence in a business environment. Financial regulations, personnel procedures, salary levels, etc. were almost in every case based on rigid interpretations of government regulations which were not designed for performance-based achievement.

During the three-year period 1984 to 1986 government expenditure on corporations exceeded contributions from corporations (by way of taxes, dividends, repayment of loans and Treasury advances) by a factor of 6.2 (Wijesekera 1988):

	1984	1985	1986	Total
Contributions to government (Rs.billion)	1010	1205	1499	3714
Government expenditure (Rs.billion)	6654	5936	10486	23076

Comparison with Private Sector

Total remuneration packages in public sector agencies were well below the private sector during this period. A revealing survey reported by Jayasinghe and others (1985) showed a marked differential between the public and private sectors as follows:

Management level	Total remuneration package differential (private/public)
Senior	1.9
Middle	1.6
Junior	1.2

The survey also showed that whereas 88% of private sector senior and middle level managers believed that their salary would be impacted by their performance, only 63% of public sector managers held similar views. Perhaps one of the most disturbing results of the analysis was that 38% of public sector managers admitted to being bored in their work for a period ranging from one hour to 25% of their working day.

Working Hours

Examples abound of the adverse effect of such national state sector organizational conditions on the NWSDB. Take the case of effective hours worked per employee. The following computation is for a male staff member and assumes that all leave entitlement is taken:

Days per year		365
Saturdays, Sundays		104
Public holidays falling on working days (typical)		18
Sick leave		21
Annual leave		14
Casual leave		7
Short leave (3 hours/month)		5
	Sum	169
Effective working days		196

In terms of effective annual working hours the NWSDB can be compared with selected other countries as follows (Economist, 1990 a):

Location	Hours worked per year per person
NWSDB	1372
United Kingdom	1750
USA	1800
Japan	2100

The difference is actually greater than indicated because the NWSDB computation is based on a full-time employee, whereas the national totals for the United Kingdom, USA and Japan include part-time workers (chiefly women with young children) which has the effect of pulling down the average number of hours worked.

Of course, the number of public holidays in Sri Lanka does not help to increase productivity. The comparison with other countries is quite illuminating:

- Sri Lanka 26
- Japan, Philippines 12
- Singapore, Malaysia, Indonesia 11
- Pakistan, UK, West Germany, Italy 10
- India, USA 9
- China 6

Personnel Procedures

There are numerous examples of rigid personnel procedures drawn from centralized norms and practices which impacted the effectiveness of the NWSDB in the early eighties. Two typical examples are those relating to training policies and recruitment practices.

In the case of training, overseas courses were traditionally offered to candidates strictly in accordance with seniority taking into consideration the number of overseas courses they had previously been on. Final approval for a public sector training candidate going overseas for training rests with the office of the Prime Minister. Unfortunately, this rigid procedure often works against the manpower development interests of the NWSDB (see Box 5).

Recruitment practices are a sensitive issue in many organizations. Since the NWSDB was dominated by civil engineers right from its inception, having evolved from an engineering line-department of the MLGHC, recruitment practices for non-engineers tended to reflect the system for engineers. A good example is afforded by the inability of the NWSDB to recruit competent non-engineering staff to Assistant General Manager (AGM) level, in this particular example Senior Accountants. The internal scheme of recruitment stipulated 10 years post-qualification experience for such a position, regardless of profession. Although this condition was fine for engineers, of which there was a surplus in Sri Lanka, it was not so

Box 5. Restrictive Overseas Training Policy Works Against the Interests of the Institution

Background- Donor funding available for a one-week workshop in Geneva on preparation of guidelines on cost recovery in community water supply and sanitation projects. Excellent opportunity to develop NWSDB skills in this new area.

Candidate - Officer who was responsible for coordination of foreign-funded projects selected. However, the officer turned down the opportunity because it would jeopardize his chances for a one month course in the UK on construction management during the following year.

Outcome - New, unique field is ignored. NWSDB already has an adequate number of engineers trained in construction management but there is no officer with training in cost recovery at the community level.

Comment - Needs of NWSDB made subservient to system which selects training candidates on basis of frequency and duration of training events, irrespective of course content.

for accountants since the supply was deliberately restricted by their professional association to be below demand, in order to enhance their status and remuneration. As a result an accountant with 10 years post-qualification experience could earn three times as much in the private sector as in the NWSDB.

The net result was that the only individuals the NWSDB could attract tended to be those who had been passed over by the private sector, who were marking time pending another job opportunity (usually overseas), or who were studying for exams. The turnover of qualified accountants was high, and the effectiveness of the Finance Department suffered as a result.

A proposal put forward during the course of the ID project to lower the post-qualification experience for accountants, seemingly justifiable because of the unique supply/demand situation, was rejected by the Ministry of Housing and Construction (MHC), the parent Ministry of the NWSDB, on the grounds that it was not in accordance with the practice in other MHC line corporations, and also because it might open the door for other "special exemptions," even for engineers.

It is, of course, difficult to define whether or not these examples are wholly linked to the centralized controls of parent Ministries, or whether they are facets of the institution's culture. This aspect is explored in more detail in Section 3.

Successful ID demands an understanding of the culture of the institution. Since institutions do not function in isolation, the impact of external cultural forces must also be appreciated. This section discusses in some detail the cultural framework of the ID project, covering not only the culture of the NWSDB but also cultural aspects of the government sector and of Sri Lanka as a whole.

CULTURE - A PERSPECTIVE

Culture often means different things to different people. All too often the term is used to describe outward demonstrations or actions which are different from those which the observer is accustomed to in his* own environment. Typical examples are "cultural" dances or a "culturally" based preponderancy to talk loudly. The footnote at the bottom of this page might also be construed as representing American "culture" since no self-respecting writer in Asia would see the ironic in such a statement!

In the context of ID, culture needs to be defined more rigidly. Perhaps one of the most explicit definitions of organizational, or institutional culture, is that given by Schein (1987) - "a pattern of basic assumptions - invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems." In other words, organizational culture is the set of values and norms which inform and guide everyday actions. However, it should not be construed that behaviour always reflects the culture, instead it may be a reaction to a stimulus from the operational environment. One of the essentials for effective ID intervention is to differentiate between the two.

The tendency to blame the culture of the organization as the reason for lack of success must be resisted. Rather, ID must take place <u>within</u> the constraints of the culture, whilst recognising that the culture is not necessarily static, and that it can change, given the right incentive.

THE SRI LANKAN CULTURE

Before launching into a discussion on Sri Lankan culture, it is as well to state that it is extremely difficult for a foreigner to fully understand the culture of another country since it is so easy to become diverted by behaviour patterns which may not be culturally-based. The observations herein, therefore, are put forward as a tentative basis for the purposes of providing a cultural background for the more detailed

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* <u>his</u> and <u>he</u> are used for reasons of convenience, no superiority of the masculine pronoun is intended.

assessment of the NWSDB. The observations are based not only on the compiler's six years continual residence in the country, but have also been culled from a wide range of material produced by persons far more qualified than the writer to proffer a discourse on the subject.

Regional Context

Asian culture in general is often characterized by an emphasis on the group rather than the individual. The extended family lends itself to group orientation, and can be contrasted with the nuclear family concept in many western societies which is predisposed to an individualistic orientation. A strong extended family orientation may tend to prevent the development of an individual decision-making capacity because the family elders pronounce on key matters. The young Asian is, therefore, shielded from having to strategise and decide since family support is ever-present. In the work situation the support is removed and it is difficult to reach a quick decision. A cultural trait may develop of "no decision equals no action equals no trouble," which is really a way of avoiding having to stand up and be counted. Although the young Asian manager may be physically independent he is not necessarily psychologically independent. The tendency is to form a committee so that the decision then belongs to everyone.

The importance of family and community is regularly espoused in official pronouncements in Asia, in fact the then Prime Minister of Singapore, Mr. Lee Kuan Yew, defined Asian values as "putting community above self, upholding the family, settling things by consensus rather than confrontation." (Economist, 1989a).

Sri Lankan Context

Statements such as that quoted from the Singapore Prime Minister are also heard from Sri Lankan statesmen, often linked to religious values. However, care must be taken when basing cultural traits on religion. It is all too easy for someone brought up under the so-called "protestant work ethic" to dismiss some of the Asian religions as encouraging laziness. It is perhaps a truism that most eastern religions are based on a withdrawal from reality with a search for a higher plane, and the dominant Buddhist philosophy in Sri Lanka is no exception. However, the philosophy has to be kept in perspective, the following quotation for example, (Premadasa, 1990), is not an exortation to sit back and do nothing, it is fundamentally sound advice on how to approach a problem:

"When ordinary human beings look at the world they see things differently. Each one has a different view. The result is conflict. However, when we see things as they really are, without attachment, conflict ceases. So the way to end conflict is to attain that state of mind which will give us a sense of detachment. The root of the problem is attachment. Where there is attachment, there is conflict, pain, suffering and unhappiness. When attachment ceases there is true happiness."

Similar generalisations should be avoided when considering characteristics of urban and rural societies. Sri Lanka is predominantly a rural society with more than 75% of the population living in small villages and scattered settlements. Farmers and fishermen tend to be stoical types, regardless of nationality. They know that they cannot control the seasons or nature's catastrophes, but they also know that

eventually the rain will fall or the sun will shine. This stoicism should not be construed as meaning that rural societies sit back and wait for things to happen. This criticism is not levelled against the large rural societies of Europe, why should it be levelled at Sri Lanka?

A review of a country's history can illuminate some of the cultural traits. For over two thousand years there existed in Sri Lanka a strong spirit of communality with the population having a strong sense of duty to family, community and king. The evidence of impressive community-based irrigation schemes bears testament to this communality. During colonial times the state became all-powerful and the concept of communal or public property somehow changed to government property, "theirs" rather than "ours." Following independence a period of heavy socialism tended to reinforce the attitude of reliance on the state and currently Sri Lanka is trying to get out of this mould and move towards a greater reliance on individual efforts. These shifts in policy touch the very roots of traditional beliefs and must have an impact on the national culture.

Sri Lankan society is not based on a sense of equality. The sense of communality existed within a caste system which went back to Indian origins. The reincarnation doctrine of birth and re-birth is linked to the caste system in the sense that a superior-inferior status is predestined, being based on a past life cycle. The old Sri Lankan kings did not rule on the basis of social equality, but the system was accepted. Colonialism introduced the concept of equality, at least in theory if not in practice. As Lord Macaulay stated in 1854, in his Report on the Indian Civil Service - "we must at present do our best to form a class who may be interpreters between us and the millions whom we govern; Indian (Ceylonese) in blood and colour, but English in taste and opinion, in morals and in intellect," (quoted in Fernando, 1984). National education and health systems based on western models and a tendency for the political elite, at least until very recently, to be the product of English-language western oriented private schools all placed strong pressures on the centuries old traditions. The civil disturbances of the Tamil-Sinhala ethnic problem and the Janatha Vimukthi Peramuna (JVP) insurrection are all symptoms of a society undergoing tremendous stress, out of which a cultural change is probably inevitable.

Specific Features

Having discussed at some length the overall cultural content it is pertinent to highlight some specific Sri Lankan cultural features. The cultural characteristics in Table 2 were prepared by Sri Lankan and American graduate students as best reflecting their host culture, Lundquist (1990). The characteristics offered by the Sri Lankan managers are supported by recent statements in the national press (see Box 6).

One legacy of the colonial period is the popularity of writing petitions, although in modern Sri Lanka such petitions are more often than not anonymous poison pen letters. This trait is a characteristic mode of communication in post-colonial Asia. In Sri Lanka the "petition syndrome" is common even in parliament, where dispersions are cast without naming names. An example taken at random from a parliamentary debate on 5 September 1990 included the following statements from the floor ..." There was a certain key Buddhist priest who was very close to the government behind the whole operation ..." "There was a prominent person in Sri Lanka who was openly introducing kassippu into liquor ..."

Table 2 Views of Management Graduate Students of their own Cultural/Management Characteristics

Sri Lankan	American
Hospitable	Industrious
Caring	Goal oriented
Soft mannered	Competitive
Class/caste conscious	Individualistic
Influenced by family	Mobile
Respect for elders	Pragmatic
Reluctant to change	Time-conscious
Lethargic	Hypercritical
Conservative	Materialistic
Conventional	Mechanistic
Not punctual	Inquisitive
Inflexible	Confident
Adverse to pressure	Egalitarian
Submissive	Hedonistic
Easy-going	Violent
Care for spiritual values	Youth-oriented
Proud of heritage	Wasteful
Trustworthy	Win-oriented

Box 6. Views on Sri Lankan Professionals

- "Sri Lankan managers are moved by such feminine factors as interpersonal relationships, modesty, caring for the weak, etc. rather than by masculine factors like task achievement, assertiveness, and the love for hard work."

  Dr. G. Nanayakkara, Director, Post Graduate Institute of Management, University of Sri Jayawardenapura, (Leonard, 1990).

- "Researchers of Sri Lanka's economy and policy have data and the ability to criticise constructively but they refrain from doing so because they risk losing their jobs .... all who dared to point out shortcomings or discrepancies in public policy were branded 'anti government' and therefore, bold, constructive criticism did not exist in our economy, or nation."

  Dr. W. Wickremasinghe, State Minister for Policy Planning and Implementation (Vanderpoorten, 1990).

The importance attached to petitions can go to unusual lengths. In 1989 the appointment of 25000 teachers was indefinitely postponed to afford an opportunity for those who were not selected to submit petitions (Wijetunge, 1989). Not all petitions are anonymous, a local member of the ID project team whose contract was terminated when his particular

task was over, petitioned the prime minister, leader of the opposition and various other politicians on the grounds that he had in fact been performing the duties of one of the expatriate specialists whom he claimed was incompetent. Perhaps some internal ID among the project team would have helped in this instance!

The publicity handout reproduced in Figure 3 suggests that fiddling expense claims is something to be condoned, although whether or not this represents the culture of the Sri Lankans patronising this particular bar or that of the British owners of the international hotel chain is not clear.

It does appear that in Sri Lanka there is a tendency for procedure to camouflage the issue at hand. The examples in Box 7 clearly show how the wrong problem is being addressed, the fact that dead bodies are found in canals and rivers does not seem to be the issue.

Box 7. A Confusion of Issues

- "A number of corpses floating in the Colombo-Puttalam Canal are not claimed by relatives and post mortems are not held and the bodies are floating the waters for days. According to the tide in the canal the bodies float in one direction into one police area and when the tide turns, these bodies are found floating into the other police area thus both police stations find it difficult to decide in whose area the corpse is"

  Daily News (1987).

- "Dead bodies could be seen floating in the Mahaweli River everyday. It is not necessary to state that several lakhs of people use the waters for drinking purposes. If this river is used continuously for dumping dead bodies, that becomes a terrible health hazard."

  Wijayasiri (1989).

There is one redeeming characteristic of Sri Lankans which places them apart from other Asians, and that is the ability to laugh at themselves. The following popular story quoted by Vittachi (1987) is a good example:

"There was this conducted tour of hell. The tour group came to a place where the grounds led into a well and the people inside were screaming in agitation. The guide explained that these were the Germans. Even when they were sent to hell they had to be put into a deep well to hold them in because they were constantly trying to break out, and guards had to be alert to shoot them down. They came to a second well where the same thing was happening. The guide explained that these were the irrepressible Japanese. They came to a third well which had no guards; but there were loud noises and scuffles inside the well. 'These are the Sri Lankans,'

explained the guide. 'When they come here we put them inside a well because they want to get out. But we don't need guards to put them down. When one of them tries to escape, the others pull him down."

Another example from the NWSDB emerged when one of the managers complained bitterly about being "rotated" from a position with a high public visibility to a more back-seat management position. His supervisor told him, in a meeting of his peers, to take the astrologer's advice as given in the following fable - "a 40-year old Sri Lankan manager, feeling depressed, visits his astrologer. His horoscope is studied and the astrologer confirms that the manager is going through a difficult time but tells him not to worry because by the time he reaches 50 things will change. The manager gets excited and asks the astrologer if he means that he will experience a good phase of life, maybe even win the national lottery, 'No, no' responds the astrologer, 'by that time you will be used to it.'" One cannot imagine Japanese or Chinese poking fun at themselves, hence care must be exercised in putting the all-embracing Asian culture label on Sri Lanka.

Figure 3
An Invitation to Cheat on Expenses?

To conclude, it is dangerous to generalize. Glib statements such as "the only time Sri Lankans are punctual is for auspicious times," or that the lethargy and inefficiency prevalent in many Sri Lankan institutions is a result of the poor diet (lack of protein and vitamins do not help the brain)(Peiris, 1989), should be treated with caution, if not disdain. Whatever the predominent national cultural characteristics, it is a fact that Sri Lanka exhibits high literacy and life expectancy rates and a steadily decreasing infant mortality rate. The Physical Quality of Life Index (Morris, 1979) for Sri Lanka is significantly higher than many other Asian countries and also exceeds those of many of the oil-rich Middle Eastern nations. The numbers of Sri Lankans in positions of responsibility in the professions and overseas organizations and companies bears testamony to their latent ability to learn quickly and to excell, particularly when placed in an environment where individualism is encouraged.

The foreign ID specialist may never completely understand the national culture, the key is not to be judgemental, but to observe, to respect and to develop change strategies which are acceptable within the national culture.

PUBLIC SECTOR CULTURE

Within the overall national culture the Sri Lankan government or public sector has its own particular traits. Two of the most recognisable characteristics are political interference in public sector organizations and a rigid adherence to regulations.

The former characteristic is not, of course, restricted solely to Sri Lanka, or even to Asia. Many governments traditionally use state organizations as sources of political patronage (Edwards and others, 1991). In Sri Lanka there has been a growing tendency for such political interference to increase since independence, with politicians making decisions that should be made by management.

According to Senanayake (1990), Members of Parliament (MP) have arrogated to themselves executive power in their constituencies without any legal or official sanctions. A typical example quoted by Jayaweera (1989) refers to a certain state sector corporation where in order to obtain a job, the patronage of local MPs or a membership card of the governing party is a prerequisite. However, he does point out that this practice had been the case with every party in government during the last 20 to 25 years.

It is impossible for management to run an efficient organization when they have no control over the number of people within their own organization. The new government elected in 1989 has, to its credit, been trying to reverse this trend and to insist on appointments and promotions based on merit. The politician's chit may have disappeared but there remains a certain amount of national scepticism as to just how successful will be this campaign to remove a procedure which has been in operation for almost a quarter of a century (see Figure 4).

Figure 4

The Pervasive Influence of Big Brother
(From The Island, 21 March 1990)

The custom of anonymous petitions was alluded to in the preceding section. Because these are accepted by politicians and often acted on, fear is instilled into public sector employees and as a result regulations and procedures are followed to the letter to guard against any accusation of non-compliance. An officer is really risking his status if he "breaks" a procedure slightly, even in the interests of getting a job done more efficiently, because that will be used by some individual oozing "malevolence coated with cowardice" (to quote Vittachi, 1987) to discredit the officer or to favour his own cause. Depositing such anonymous petitions into the waste paper basket would take away a major irritant to efficient operations in the public sector.

The old colonial administrative and financial regulations which were ideal in an epoch when a foreign power was managing Sri Lanka with the aim of eliminating any siphoning-off of money destined for its Treasury overseas, are not necessarily the most relevant for a public sector corporation in the present day. The grid of regulations is far too rigid to encourage discretion or initiative, let alone flexibility and change.

During the course of the ID project, the cultural norms of the government sector as described in this section have been subjected to an unprecedented scrutiny by the government itself and by external support agencies, notably the International Monetary Fund (IMF). A programme has been introduced, based on restructuring the economy so as to eliminate loss-making state enterprises and to encourage the private sector which, if successful, will have an almost revolutionary impact on the status quo, and on the basic cultural attitudes of the Sri Lankan public sector as a whole.

NWSDB CULTURE

The discussion of NWSDB culture in this section is intended to provide a basis for understanding why some of the ID implementation problems arose, and why the more successful ID strategies were selected. It must be appreciated that much of what is presented herein represents the culmination of more than six years' continuous involvement by the ID project team in the NWSDB. At the start of the project the understanding of the NWSDB culture was sparse to say the least and many of the early ID initiatives, as well as the degree of emphasis placed on specific objectives at the project preparation stage, reflected a lack of appreciation of the forces and norms at work within the institution. Differentiating between what people "say" and what people actually "do" is not an ability which can be learned from a few quick visits and formal discussion sessions. The only way to understand a culture is to live in it, for a considerable length of time, and not just as an outside observer, but as a participator.

Engineers' Culture

One of the fundamental facets of the NWSDB culture is that it is an engineering-dominated organization. The ID project introduced a different emphasis, on O&M and commercial awareness for example, functions that were alien to traditional civil engineers and were seen as a threat to their power base.

The cohesiveness of the engineers manifested itself at the very formation of the NWSDB, particularly in the period between the NWSDB Act being passed in September 1974 and its coming into effect in January 1975. During this period there was a concerted campaign by the employees, not to change or lose the benefits they had enjoyed when working for the Government Department. This campaign was based on general non- cooperation with "go slows," "work to rule" and a one-day token strike by everyone, including the professional engineers.

The NWSDB Engineers' Association is the official "voice" of the engineers within the NWSDB, not on professional matters as such but on matters of remuneration, scheme of promotion and similar personnel issues. Basically the Association exists to protect the status of engineers within the institution, and of course to protect its members. It works on typical trade union principles, and is in fact one of 13 such unions within the NWSDB where total membership (about 5500 in April 1991) represents more than 80% of the total NWSDB staff. Virtually all the professional engineers are members of the Association, right up to the level below General Manager, hence the dilemma exists where senior management involved in sensitive policy deliberations on issues such as retrenchment and privatization, are also members of a body incorporated to protect the rights of its members against the adverse effects of the very policy issues under review!

It should be pointed out that the concept of professional engineers belonging to a trade union is not something peculiar to the NWSDB. Similar bodies exist in other state-sector organizations and these bodies also occasionally flex their muscles (see Box 8). There are, of course, positive and negative aspects of strong unions, even for those representing key management. An example of a positive aspect was a request which was fully endorsed, from the Engineers' Association to its membership not to attend a cocktail party hosted by a foreign plant supplier because of the uncooperative and unruly attitude of its Project Manager. As stated in the News Letter (Engineers' Association, 1986) "... Let this be an indication to others that, we the engineers, cannot be bought over a cocktail, a mixed grill and a jaggery souffle."

Box 8. Engineers Close Ranks

- The Irrigation Department Engineers' Union is summoning a special meeting of its membership to discuss the recent appointment of a 'non-irrigation' man to head the department's Irrigation Management Division .... there was no valid reason for the change and the union would discuss what action it should take ..."

  Daily News, 28 May 1986

Unfortunately there are also instances where entrenched views militate against developing a corporate as opposed to an engineers' culture, and hence slow down the development of the institution into a more mature, cost effective, performance-oriented organization. Examples include a

tendency to counter disciplinary action against individual member employees with the argument that lapses and problems (of a technical nature) are not the responsibility of the individual, but are the collective responsibility of the whole NWSDB. This argument runs counter to the maxim of staff accountability and illustrates a wider cultural trait based on group rather than individual performance.

A more insidious example is the common opinion, particularly among the younger and less mature engineers, that only professionally qualified engineers, that is those holding a recognised degree and charter, should be permitted to manage the NWSDB (see Box 9). A similar attitude often prevails against non-engineers, such as professional accountants, being promoted to senior management levels and all kinds of excuses and strategies will be used to prevent such promotions to such an extent that eventually directives have to be issued from the parent Ministry.

Conflict Avoidance

The basic feeling of insecurity on the part of the engineers is inextricably linked with the extended family/group culture. The ranks become closed and the group acts to protect the individual member. Problems with peers must not arise and personal problems must be avoided at all costs. The culture is essentially one of "conflict avoidance," it is preferable to keep quiet and act as a group rather than speak out and be noticed as an individual. This refusal to identify the person

Box 9. Engineers as Kings

- Comment overheard at Middle Management Training Course when a chemist has difficulty understanding a particular concept. An engineer speaks out - "You don't need to bother about these things, you are just a chemist."

- Objections by engineer-manager to management training being conducted by NWSDB Training Section (training officers skilled in delivery were technical officers and a non-professionally qualified engineer):

  "Even though training officers are experienced, they should not be training engineers. The course should not include a mix of engineers and accountants, only 'true' managers (read 'engineers') should participate."

- Engineers' Association refuses to accept a non-chartered engineer being promoted to AGM level since that would put him on the path to GM. This view was defended to the parent Ministry who investigated the case with the classic comment, accepted by the Ministry, that "You may have an excellent Montessori teacher, but would you promote him to be school principal?"

responsible for a particular error goes to extreme lengths (by western standards, that is), for example even when confronted by a Minister a group would refuse to say who was responsible for a delay (particularly if the person was from the same work section as the group) they would literally say nothing.

The propensity to avoid open communication was illustrated by a questionnaire survey among NWSDB managers, the questions being designed to probe attitudes to decision-making involving such issues as loyalty to friends, professional standards, and concerns for ethical principles. The format was based on a case study reported by Peterson (1989). The results clearly showed that NWSDB managers were far less likely to indulge in open communications than their western counterparts (drawn from the ID team), by a ratio of about two to one (Table 3).

Peer Sensitivity

Numerous examples of this conflict avoidance and peer sensitivity tendency surfaced during the course of the ID project. In one instance the senior manager of a progressive RSC had introduced participative planning sessions in his region by involving his Officers-in-Charge (OICs) in weekend goal-setting workshops. Problems of resource inadequates were addressed and all agreed to perform as well as they could within the constraints. When asked to explain his participatory management style at a meeting of his peers in Head Office, the RSC senior manager talked only of his "OICs demanding solutions to their problems," thereby totally ignoring the excellent team work which was actually taking place in his region. Basically he felt more comfortable showing his peers that he was under pressure from his subordinates, thereby gaining sympathy and putting himself on the same level as his less mature fellow managers.

Table 3 Attitudes to Open Communication

Topic	NWSDB		ID Team	
	For (%)	Against (%)	For (%)	Against (%)
Implementation of too sophisticated, costly infrastructure system	70	30	100	0
Colleague to be retrenched	40	60	100	0
Accepting poor quality work under political pressure	40	60	33	67
Take account of environmental protection measures	33	67	67	33

Note: For/against signifies attitude for/against open communication on the topic being addressed.

In another instance a maintenance engineer who spoke openly, at a workshop dealing with O&M problems, about the lack of preventive maintenance in his region (because of lack of resources), was criticised by his Regional Manager for having raised the issue in an open forum. This objection was totally unfounded since the purpose of the forum was to address such issues and to find constructive measures to overcome the problems, yet it was seen as wrong to publicly highlight a shortcoming in this manner.

Conflict avoidance reaches to the highest levels of the institution. An unfortunate incident occurred on one occasion when a casual labourer attacked his supervisor with an iron rod, with intent to kill. An alert driver intervened and the labourer was arrested then released on bail. The supervisor suffered severe concussion. No disciplinary action was taken, each manager in turn recommended to his superior officer that the labourer be interdicted but by the time the recommendations reached the higher echelons of management, it was almost time for the labourer's casual-service contract to expire. This example of issue-avoidance was inspite of procedures existing which enabled the immediate supervisor to terminate the contract of the offender. The effect of this incident on the institution was traumatic since it was apparent that management did not support the staff. By way of a postscript, this unfortunate incident did take place at a time of high tension in the midst of the JVP insurrection when the NWSDB was being terrorised with work stoppages and other intimidating measures. In such an atmosphere it was impossible to know who was a JVP-sympathiser and who might eliminate you if you did something to one of the movement's supporters.

Before the beginning of acceptance of the employee performance evaluation system, personnel changes were only made in strict accordance with the procedures enshrined in government codes. When it became apparent that certain individuals in key management positions were not performing, excuses had to be found to remove them. In the NWSDB recourse was made to exposing the individuals to the parent Ministry, or to even higher levels of authority, so that an order would come "down" which could not be ignored. Wholesale staff reshuffles were implemented in this way just to remove one incumbent, whilst at the same time not upsetting groups of individuals who were at the same "seniority level" (length of service). On one occasion a report prepared at the behest of the parent Ministry by a retired judge on the reasons for the failure of a particular water supply intake was used as the reason to demote a senior engineer manager in order to create a vacancy to enable someone else to be promoted. The report, incidentally, found no evidence of sabotage or gross incompetence, just the usual poor coordination between agencies and among sections within the NWSDB, and some minor procedural irregularities.

The oft-repeated justification for adhering to government procedures in matters related to personnel issues that this counters the risk of political interference rings rather hollow in instances like the one described.

This reluctance to discuss problems, particularly those of a management or personnel nature, outside the immediate area of responsibility of those involved, presented a major stumbling block to ID in the early stages of the project. It was eventually overcome by introducing a networking concept on a somewhat restricted case-by-case basis using individual "solution feeders" rather than open-forum lessons-learned sessions (Figure 5). The inability to use open communication and logical

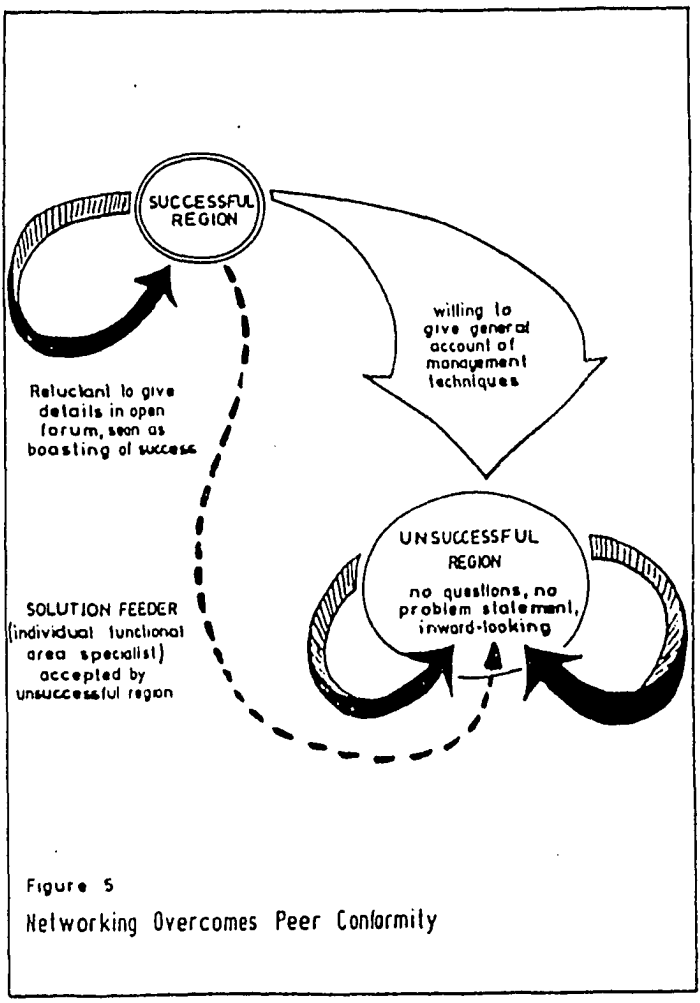


Figure 5

Networking Overcomes Peer Conformity

procedures to solve problems is supported by other cultural traits such as a tendency to view things in a negative way. A strong reluctance to accept innovative ideas that are different from the group-accepted norms brings forth such seemingly never ending comments as ..."the problem is" (rather than the solution is), "that will never work" (rather than let's try it) and the frequent "let's form a committee" (rather than why don't you take the responsibility for solving this problem).

Fear of exposure to one's peers can also lead to jealousy of individual success. In one case during the civil unrest in 1988/89 there was a very real risk of water treatment plants being without chlorine because of a port strike and a boycott of Indian goods (the main supplier). A senior manager sensibly arranged with the army to unload the cylinders, as a contingency measure to ensure water quality standards were maintained. The more junior manager whose real responsibility this was, but who had failed to act, tried to create a conflict by notifying the parent Ministry of the risk of poor-quality water, should the army fail to deliver. No reprimand was given since that would have been against the culture.

Status

Petitions are common in the NWSDB just as they are in the national context generally. On average there are about five anonymous petitions every month against NWSDB employees, but usually no more than one is worth following up by the audit section. Most are examples of petty jealousy or accusations of discrimination (racial, regional, professional, or individual). Discrimination does sometimes exist, as is the case in most societies, but in Asia it often takes on more subtle tones. The caste system is not openly strong in Sri Lanka, compared to say India, but there are certain nuances which indicate that it is operating. An individual steeped in the caste culture will find it almost impossible to become "involved" with his staff, to sit down and explain, to coach and assist them, since his cultural preference is to dictate an order. The trust bridge between manager and staff cannot be formed in such cases unless the staff are equally caste conscious and accept their position. Although this problem is not widespread in Sri Lanka, and is fortunately quite rare in the NWSDB, it does have a parallel in that some managers wish to maintain status by not mixing with the lower ranks. Engineers encased in air conditioned glass-walled cubicles whilst draftsmen and the "lower ranks" sweat outside is one example, as is a common comment on the lines of ..." but how could I eat with my driver?" Caste-based prejudices such as these are not at all dissimilar from class prejudices found in certain western European societies, in fact it is sometimes difficult to differentiate between the two root causes in Sri Lanka.

Hierarchical management styles tend to prevail in most government sector institutions in Sri Lanka and the NWSDB is no exception, particularly at the upper levels. The formal seating arrangement in the NWSDB Chairman's office speaks for itself (see Figure 6). Fortunately, by the end of the ID project the wooden signboards had been relegated to the cupboard and managers were happy to sit anywhere, except at the Chairman's table.

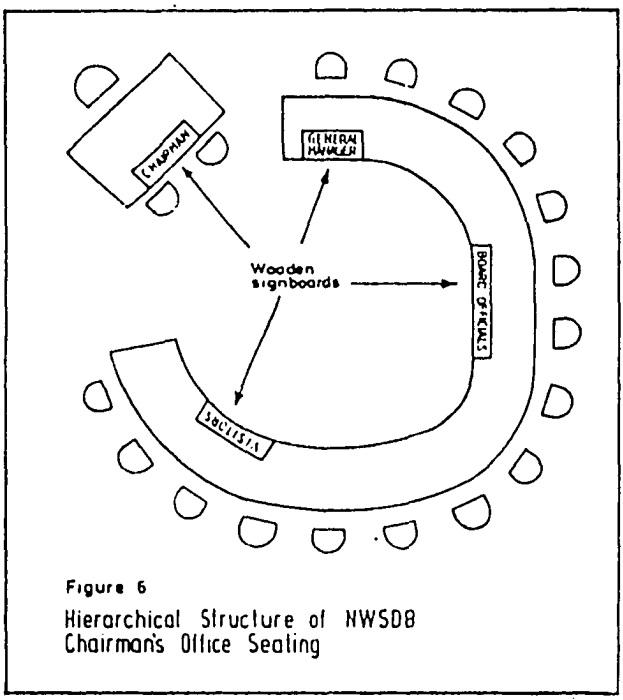


Figure 6

Hierarchical Structure of NWSDB Chairman's Office Seating

Conclusions

The culture of the NWSDB at the start of the ID intervention, could, therefore, be summarised as exhibiting the following features:

- o conflict avoidance
- o sub-group cohesiveness (engineer-dominated)
- o peer sensitivity and a high level of protectiveness
- o burying individual accountability in collective responsibility
- o personnel/group agenda rather than corporate agenda
- o avoidance of open communication
- o reliance on written procedures (no flexibility or innovative approaches to problem solving)
- o hierarchical management style
- o status conscious (professional engineers)
- o negative outlook towards problem resolution
- o committees solve everything
- o avoidance of performance measurement
- o jealousy of individual success (contra to group collectivity and sameness)

The interwoven cultural similarities among the national, public sector and institutional cultures are shown in Figure 7.

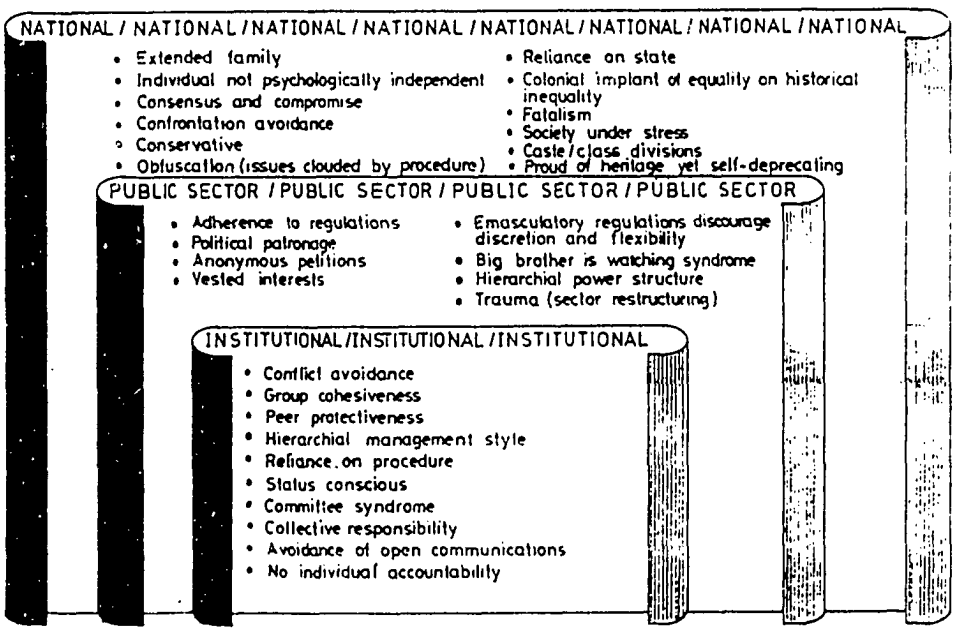


Figure 7

Linkages Between National, Public Sector and Institutional Cultures

The ways in which these various cultural attitudes were taken into consideration, and to some extent changed, as the ID project progressed, are discussed in Sections 8 and 9.

CULTURAL SENSITIVITY AND CHANGE

An ID consultant must be sensitive to the culture of the organization in which he is working. This may not be easy if the consultant is from a western society and the institution is located in Asia (see Boxes 10 and 11).

Box 10. Cultural Differences

- You are crossing a large river on a boat with your wife, son and mother. The boat sinks, you are the only swimmer and you can only save one person, whom would you choose?

  Of a group of men from the USA, 60% would save the son, 40% the wife and none would save the mother. By comparison, 100% of Asians would save the mother. Why, you can always remarry and have more children but you cannot have another mother.

  Adapted from Loh (1990).

- Would you lie on behalf of a friend who had been involved in a traffic accident?
  66% of Venezuelans would compared to only 2% of Americans.
  Moral - Americans cannot trust Venezuelans because they never tell the truth and Venezuelans cannot trust Americans because they will not even protect their friends.

  Adapted from Turner (1990).

The differences between the USA and Asia are wide. In Asia subordination of the individual to the group is considered of high value, whereas in the USA individualism and pragmatism are given greater emphasis. The concept of self-actualization is generally not recognised as a meritorious trait in Asia. In comparing American and Japanese corporate cultures, for example, the fable of the tortoise and the hare is quite apt, the Japanese organization moving slowly over a long time period having first established a corporate consensus on the direction in which to move, whereas the American organization will rush into a new field and worry about the integration with the rest of the system later.

Box 11. Reported in The Island
12 April 1991

Woman tourist bathes in nude at airport pond

Piyanimal Nissanka

A middle aged Austrian woman tourist who arrived at Katunayake international airport from Madras on Wednesday jumped nude into the ornamental pond in front of the VIP lounge of the terminal building, and started bathing.

She had inquired from the surprised onlookers, "Why are you staring at me? We can bathe in the nude anywhere we like in our country. Is it not the practice here?"

Airport women security officers induced the woman to come out of the pond and don her clothes. Later she was sent to a tourist hotel close to the airport.

The tourist was scheduled to leave for Japan on the same night.

Sri Lanka cannot be compared with Japan in terms of level of socio-economic development but there are many underlying common traits. The governing United National Party's preoccupation with "consultation, consensus and compromise" speaks volumes in terms of the nation's cultural foundation.

Cultural Sensitivity Examples

The ID project had many instances of these cultural divergencies. For example, the American members of the consulting team found it really difficult to appreciate that their use of the word "aggressive" (in the positive sense of go-getting), has a negative impact on many other cultures, Sri Lankan and British included, where an aggressive approach signifies an approach which is offensively over-ambitious. Continuous use of culturally incompatible words can result in a negative attitude being built-up towards the consultant.

Western data processing specialists tend to be very precise and output-oriented individuals, often intolerant of indecisiveness and antagonistic towards anything that smacks of bureaucracy. Explosive clashes can occur when such an individual finds himself obstructed by a Sri Lankan general management type who appears to be more concerned with making sure that quotation procedures for the purchase of micro-computers are strictly adhered to rather than building up a data processing capability in the institution. Long lasting adverse affects of such conflicts can be avoided if the specialist can humble himself after his outburst to seek an apology, and if the manager is magnanimous enough to accept. This project lived through a cycle of such altercations to the benefit of both parties!

Other western hard-nosed cultural features are not so easily diffused. At an open forum to review personnel procedures, the not unreasonable suggestion was made by the NWSDB that trade unions be involved in the process. The audible comment of one particular specialist that "unions should be the last people to get involved" was undoubtedly a factor in his eventual downfall and early termination of input.

Sensitivity issues can also surface in every-day life, as the example in Box 12 shows. In this case the lesson was well learned and similar reactions did not take place on the project.

Box 12. An Exchange of Views

The Scene Consultant rents a house nextdoor to a Sri Lankan who is carrying out extensive internal renovations. Troubled by the noise and dust the consultant asks his neighbour when the work will be finished. The reply, repeated over a few weeks, is always 3 to 4 days. Finally, the consultant's wife returns from a long home leave and the consultant in desperation enters his neighbour's house.

Conversation goes something like this

Consultant: "Hey, how long is this going to continue? You told me 3 or 4 days but it's still continuing. With all this dust and noise it's getting to the point where I shall have to consider moving."

Neighbour : "Don't worry, just another 3 or 4 days.

Consultant: "Now I don't know if I can believe you. You have been saying that for weeks."

Neighbour : "Who are you to question me in my house, I don't need it from a foreigner" (angry, grabs hold of consultant and pushes him into the street).

Analysis Consultant had accused his neighbour of lying but his neighbour did not consider that he was lying, just that his concept of time was quite different from that of the consultant. The neighbour was angry because he expected the consultant to understand the local culture and not to implant USA norms on Sri Lanka.

Change Processes

Culture is dynamic, people from one culture can adjust to another culture and a host culture can also change. If this premise were not so, then advances and ideas developed in one country would never be absorbed by another. The culture of an organization may be changed by shock treatment, (say by making an abrupt change in organization structure, bringing in new managers from the outside) or it may be changed by a more gradual consensual process among the organization's members by seeking prior agreement on the direction in which they should be moving.

Examples of the shock technique are common in western countries (British Steel and BP Exploration are good examples). The more eamotic, consensual approach is perhaps more typical of Asians (Japanese car manufacturers moving into the USA and Europe, for example, Economist, 1990 b).

Change inevitably produces stress and resistance to change is a basic human instinct regardless of the host culture. The typical stages of adaptation to a new culture are shown in Figure 8, the ID process should focus on strategies to achieve full participation.

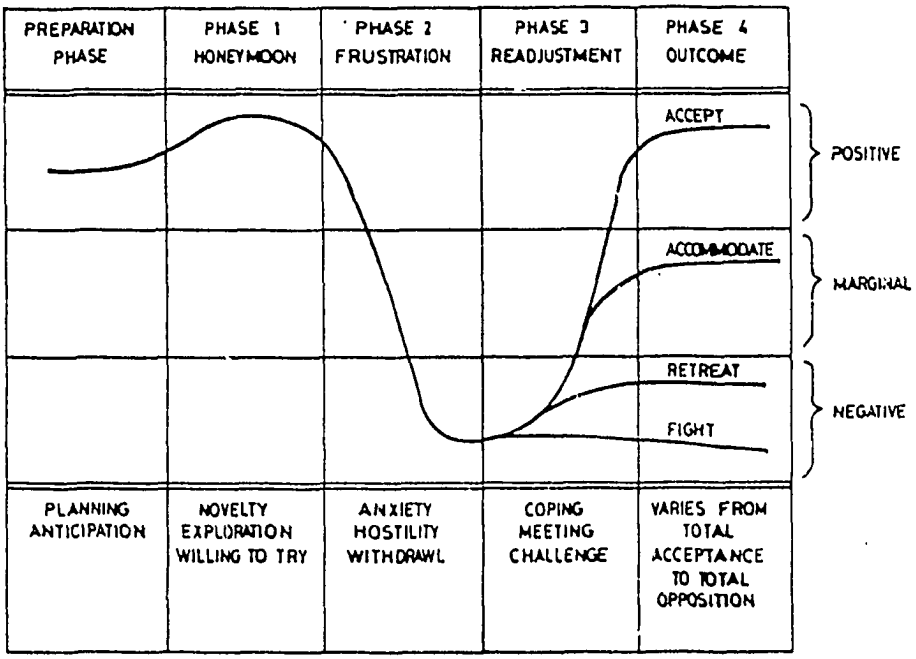


Figure 8

Stages in Cultural Adaptation (Adapted from Ruken, 1984)

Examples of change which prove the dynamism of culture are to be found in Sri Lanka. At the national level, a major cultural change is in the making with the move towards privatization of state sector enterprises. The following excerpt from the 1989 Budget Speech to the Sri Lankan Parliament (Daily News, 1989) goes counter to a whole series of previously sacrosanct norms regarding government participation in commercial concerns ..." The Cabinet has also approved the restructuring of public enterprises and their commercialisation by selling shares of these enterprises to the employees and the public, thereby broad-basing the ownership of these enterprises..... The Government has also decided to close down public enterprises which are performing inefficiently.... The efficiency of these enterprises will also be improved by the appointment of staff solely on merit."

Another example of the new cultural approach is the introduction of management competitions and quality circles in Sri Lankan district administration. According to the Secretary of the Ministry of Home Affairs more than 200 quality circles had been established in various offices of the district observation by 1988 (Gamage, 1989).

Examples of cultural change in the NWSDB are given later in this report (see Section 8). One example which is similar to that previously described for district administration officers is the first Regional Offices competition held in 1989. The offices were judged on their attitudes to overall housekeeping, consumer facilities, staff deportment and record keeping. The winning three offices were presented with certificates by the General Manager at a meeting attended by managers from all offices. This open appreciation of superior performance, given at a peer-group meeting, would have been unthinkable in 1985 when the ID project commenced.

The project Terms of Reference and the resources mobilized to achieve their implementation are summarised in this section.

TERMS OF REFERENCE

The project objectives are presented and reviewed in Section 1. The Terms of Reference included a comprehensive scope of work directed at satisfying the four primary objectives (reorganization/decentralization; upgraded policies/procedures; O&M emphasis; health education/sanitation/community participation). The principal items to be addressed under the ID component consisted of provision of technical assistance (TA), training, commodity procurement, facilities construction and rehabilitation, and research activities. Six major categories to be covered were as follows:

Human Resources Development

- Training systems development
- TOT development
- Skill training
- Personnel management
- Manpower development planning
- Employee performance evaluation

Management

- Organizational development
- Regional decentralization
- Authority delegation
- Strategic planning
- Policy development
- Public relations
- Management information systems
- Performance monitoring

Financial/Commercial

- Financial planning
- Accounting
- Budgeting
- Billing and collection
- Supplies, stores, procurements, tenders and contracts
- Fixed asset inventory

Capital Facilities Management

- Project prioritization and feasibility study
- Design
- Construction and rehabilitation
- Commissioning

Operations and Maintenance

- Process Control
- Maintenance management
- Water quality monitoring
- Optimization of staff deployment

Special Services

- Administration
- Information management (computerization)
- Legal
- Internal Audit
- Research

The health education component concentrated on improved coordination of NWSDB water supply activities with MOH health education and rural sanitation programmes, improved effectiveness of health education training to beneficiary communities, and an increased emphasis on conjunctive implementation of water supply and excreta disposal facility improvements together with health education. Training was a key factor in this project element together with the institutionalization of the RSU within the NWSDB to be responsible for overseeing and implementing social, environmental and public health inputs into all NWSDB processes. Six demonstration sub-projects were to be implemented where appropriate strategies for involving the community in the upgrading of water supply facilities were to be developed, together with the provision of latrines (target 15000). Four of the sub-projects were to involve rehabilitation of existing water supply facilities and two sub-projects were to be construction of new water supply schemes.

The scope of work emphasized the need to formalize the institutional and public health reforms through the production of a series of manuals and standard operating procedures. The technical reports and documents to be produced during the project included the following:

Manuals

- Policy
- Organizational structure and function
- Supplies and stores management
- Tendering and contracting procedures
- Training of trainers
- Training of trainees and associated course curricula
- Personnel policy and management
- Water supply and sanitation construction/rehabilitation projects pre-feasibility, feasibility, design, construction supervision, commissioning
- Operations and process control
- Maintenance management
- Water quality monitoring, analysis and laboratory procedures
- General administration

Standard Operating Procedures

- Strategic planning
- Management Information
- Budgeting
- Accounting
- Financial planning
- Metering and meter reading
- Billing and collection
- Public relations (including consumer complaints)
- Fixed asset inventory
- Training needs assessment
- Training information, planning and evaluation
- Internal audit
- Legal
- Information management

In addition, the scope of work envisaged the production of special reports on a case-by-case basis. These were anticipated to cover such items as research studies, guidelines on monitoring and evaluation procedures, community participation procedures, groundwater management, plumbing standards, etc.

The Terms of Reference specified the provision of approximately 290 work-months of long-term specialists plus approximately 150 work- months of short-term consulting services, with a contract duration of 40 months. Specified long-term specialist team members were:

- Management/commercial
- HRD/training
- Supplies and stores
- Environmental/sanitary engineer
- Water supply O&M
- Water quality monitoring/process control
- Public health
- Health education
- Social Scientist

AUTHORIZATION

Following a competitive request for proposals (RFP) procedure, the prime contract was signed between Engineering-Science Inc. (ES) and USAID in February 1985 with an effective start date of 1 April 1985. During the implementation of the project a number of consulting companies and specialist service companies were sub-contracted to ES, primarily to provide local professional expertise. The main subcontractors were as follows:

- Ernst & Whinney, Sri Lanka (later changed to Ernst & Young, Sri Lanka).
- Resources Development Consultants, Ltd., Sri Lanka
- Ceywater Consultants, Sri Lanka (Colombo Water Supply Master Plan component only)
- Connell Bros. Company, Ltd. USA (procurement service agency).

The prime contract was amended on a number of occasions throughout the duration of the project, the more significant amendments being:

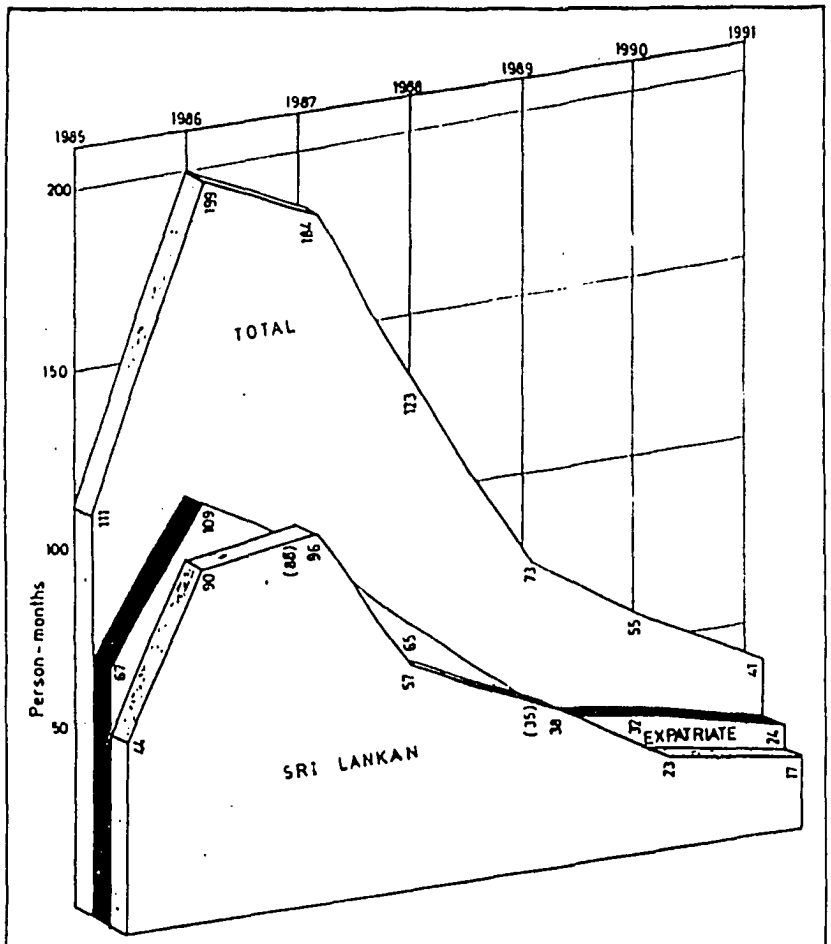
Amendment No.	Date	Purpose
2	March 1986	Increase professional input from 440 to 500 person-months
3	December 1986	Increase professional input to 576 person-months
4	May 1987	Increase professional input to 588 person-months
5	July 1988	Increase professional input to 608 person-months and extend CCD by one month to 30 September 1988
6	October 1988	Add to the contract work covered under a new competitive RFP to continue TA for 24 months with provision of 118 professional person-months
9	June 1990	Extend the period of contract to new CCD of 31 August 1991 and increase professional input to 238 person-months.

These contract amendments effectively increased the original project duration by 93% from 40 to 77 months, and expanded the on-site professional input (expatriate and Sri Lankan) from 440 to 828 person-months. Of the revised total, about 42 person-months were allocated to the Greater Colombo Water Supply Master Plan component which was included in the overall project framework in 1990/91. Since this component was not strictly speaking ID, the increase in the professional input for the primary ID project purpose was 79%, from 440 to 786 person-months.

TA RESOURCE MOBILIZATION

The annual professional staff input (excluding home office support) from April 1985 to August 1991 is indicated in Figure 9 for the two main project components, that is ID and health education. The staff inputs can be broken down as follows:

	Person-months
Expatriate:	
Long-term	388
Short-term	32
Sum	420
Sri Lankan	366
Total	786



Totals are rounded to nearest month and exclude input on Greater Colombo Water Supply Master Plan, and Home Office support.

Figure 9

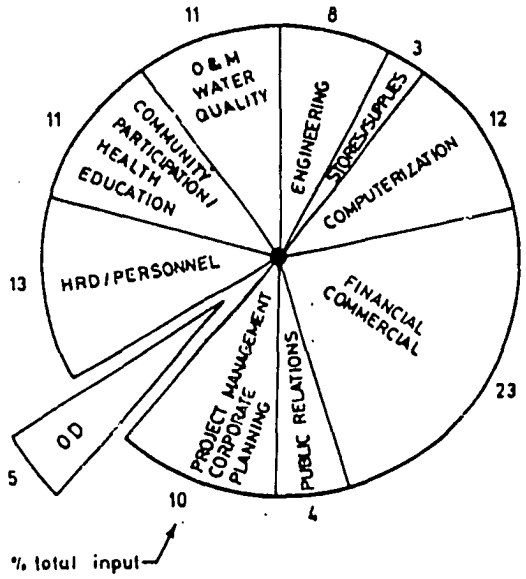
Annual Professional Person-Months

The input in terms of specialist functional area is shown in Figure 10. This can be compared in Table 4 with the planned staff input at project inception for the initial implementation period of 40 months. What is perhaps striking in Figure 10 is the very low proportion of total consultant effort allocated to specialist OD input. The manner in which initiatives in other functional areas were channelled to bring about effective OE/ID is discussed in Section 9, but nevertheless a minimum input of OD expertise was considered mandatory.

Table 4. Professional Staff Input

Functional Area	Input - % total person-months: Planned at project inception	Actual
Project management/corporate planning	10	10
HRD/personnel	15	13
Community participation/health	22	11
O&M/water quality	17	11
Engineering	10	8
Stores/supplies	7	3
Computerization	4	12
Financial/commercial	14	23
Public relations	1	4
Organizational development	0	5
	100	100

Total input at project inception = 440 person-months
Final input (excluding Greater Colombo Water Supply Master Plan component and Home Office support) = 786 person-months



Includes expatriate and Sri Lankan professional input but excludes input on Greater Colombo Water Supply Master Plan

Figure 10
Distribution of Specialist Input by Functional Area

The change of emphasis in areas of attention as the project progressed is evident from Table 4. Major increases in emphasis were made in the areas of financial/commercial activities, computerization, public relations and, as mentioned earlier, OD. This increase in emphasis was at the expense of community participation/health, stores/supplies, O&M/water quality and to some extent training and engineering. As discussed in Section 1, additional objectives became apparent as the project progressed and the change in input priority reflected these additional, and generally more important, objectives. It is unfortunate that a more realistic prioritization of project objectives was not set out in the Project Paper or realised at the project inception stage. However, since ID was a relatively new field at that time, particularly in developing country public sector agencies, this less than adequate perception of the real project needs on the part of those preparing the project and those submitting proposals is understandable.

The annual costs of the TA inputs are shown in Figure 11, excluding the input for the Greater Colombo Water Supply Master Plan component. The staff costs in Figure 11 relate basically to payroll costs and exclude travel, housing and similar expenditures. It is interesting to note that although the input of Sri Lankan professional staff represented 47% of the total professional staff input, in terms of cost the Sri Lankan input represented only 16% of the expatriate staff cost ($0.76 million compared to $4.74 million). The total TA cost was of the order of $6.29 million, and since payroll costs represented a large proportion of the total cost, the need for correctly defining priority areas of concerns, distributing the person-months accordingly, and selecting the right people to carry out the work is all too apparent.

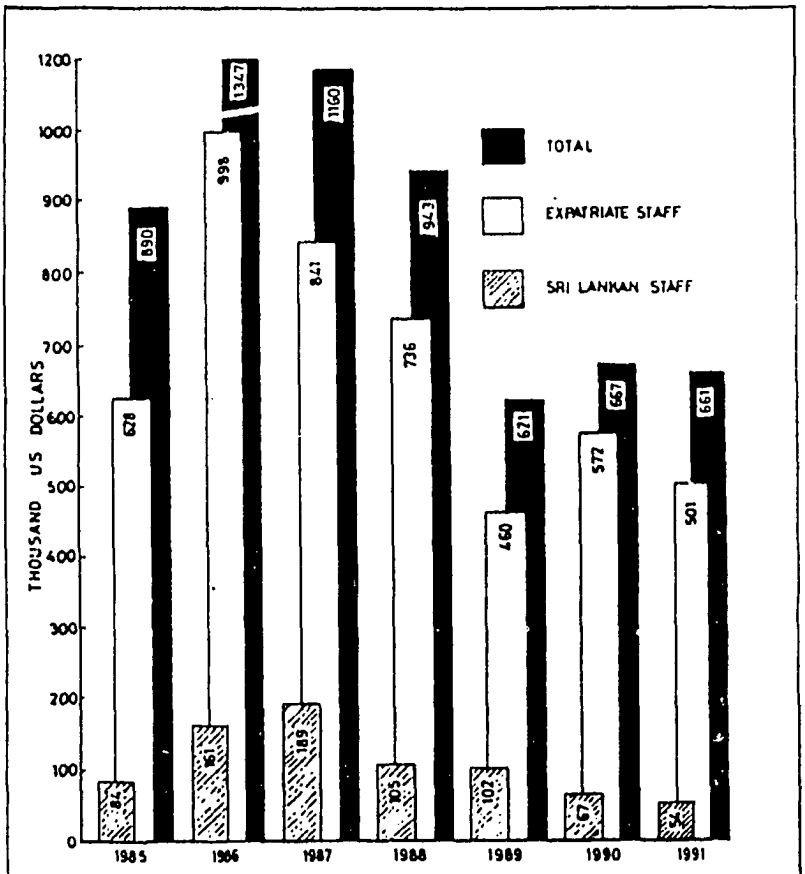
The TA cost can be put in perspective quite clearly by expressing the annual cost as a proportion of the NWSDB operating expenditure:

Year	Average exchange rate (Rs to $1.0)	TA cost (% O&M cost)
1985 (9 months)	27.2	13
1986	27.9	17
1987	29.4	12
1988	31.6	8
1989	36.4	6
1990	40.0	6
1991 (8 months)	40.4	6 *

* % O&M budget

OTHER RESOURCE MOBILIZATION

The Terms of Reference also included a substantial catalogue of resources in addition to the provision of TA. These resources included the following:



Staff costs include salary, overhead, allowances, fee, but not local housing or travel

Total costs include staff costs and other resource costs

Sri Lankan staff includes professional and non-professional support staff

Costs exclude training and input on Greater Colombo Water Supply Master Plan

Figure 11

Annual Project Technical Assistance Costs

- **Training** - 2 long-term Masters degrees; 43 person-months short-term overseas study; participation in a minimum of 25 in-country workshops, etc; health educational support.

- **Commodities** - equipment for workshops, laboratories, training facilities and regional facilities (total cost $2.9 million)

- **Facilities** - construction and renovation of 3 - RSCs (Kandy, Anuradhapura, Matara); 5 - ROs (Jaffna, Ampara, Ratnapura, Kurunegala, Bandarawela) (total cost $ 2.4 million)

- Water Supply Sub-Projects - 2 new schemes and 4 rehabilitation schemes (total cost $ 2.6 million)
- Latrine Construction - 15000 latrines (total cost $ 695000)
- Research - 8 research studies (total cost $ 55000)
- NWSDB Recurrent Costs - project-related salaries, vehicles, office maintenance (Total cost $920000).

The total estimated project cost at the time of project inception, excluding contingencies and inflation allowances, was $13.85 million, of which TA costs relating to the ID and health components were estimated to account for 25%, at $ 3.52 million. Total USAID funds, of which 42% were grant funds, represented about 68% of the total estimated project costs. The inclusion of contingencies and inflation increased the total estimated cost to US$ 19.6 million. In terms of NWSDB capital and operating budgets the Sri Lankan Government contributions to the project cost were not expected to represent more than about 3% and 5.4% respectively.

These data are presented to illustrate that although ID (and also health education) are essentially "software" projects, associated "hardware" (non-TA) costs represented no less than three quarters of the total project costs. The necessities of providing such hardware to support ID initiatives are reviewed in Section 7.

PART TWO

THE PROJECT CONCEPT AND STRATEGY

Project Organization, Implementation Strategy and Implementation Overview.

The project organization and reporting relationships are described in this section. These include both formal, contractural lines of communication and more informal liaison and consultation linkages.

FORMAL ORGANIZATION STRUCTURE

The prime contract for the ID project was between USAID and the technical assistance contractor (ES). The NWSDB was not a party to this contract, although the concurrence of NWSDB was rightly sought for all significant contract inputs and modifications, such as mobilization of key specialists, changes in staff, reprioritization of areas of attention and contract extensions.

The formal organizational linkages are illustrated in Figure 12 which shows how the functional area ID specialists focussed on the NWSDB staff, who constituted the "core" of the structure, assisted when necessary by human resources development and organization development specialists. Two formal committees were set up to monitor and advise on project activities.

The Project Management Committee comprised the USAID Project Officer, the ES Project Manager, his deputy, and the NWSDB Project Manager (the senior project counterpart staff member). The frequency of committee meetings ranged from weekly to monthly depending on the project phase and typical agenda items included task input planning, progress monitoring, staff issues, invoicing and administrative matters, and interpretation of USAID procedures in such areas as commodity procurement and training.

The Project Steering Committee was established as a high-level group to monitor ID progress, to review and agree on priority areas and to iron out any major implementation issues. The committee met monthly and the membership comprised the USAID Project Officer, the Project Manger and his deputy, NWSDB senior management (Chairman down to AGM level), and representatives from the MHC, MOH and NGO Decade Service. The Steering Committee served as a valuable mechanism to discuss a range of ID matters before a wide cross-section of NWSDB staff and other interested parties.

For about the first three years of the project the committee continued to serve its purpose but gradually as the NWSDB managers began to accept and assert their increased delegated authority, the meetings came to be used as a forum to present to executive management demands for resources and similar assistance. The presence of non-NWSDB members, particularly the parent Ministry, was an embarrassment in such instances since it tended to dramatise the operational problems of the institution out of all proportion. This issue of improving senior management coordination and communication was addressed at a Steering Committee meeting towards the end of 1988, when it was decided to hold bi-weekly staff meetings between the GM and senior managers at which operational issues would be addressed. Thereafter the agenda of the Steering Committee was

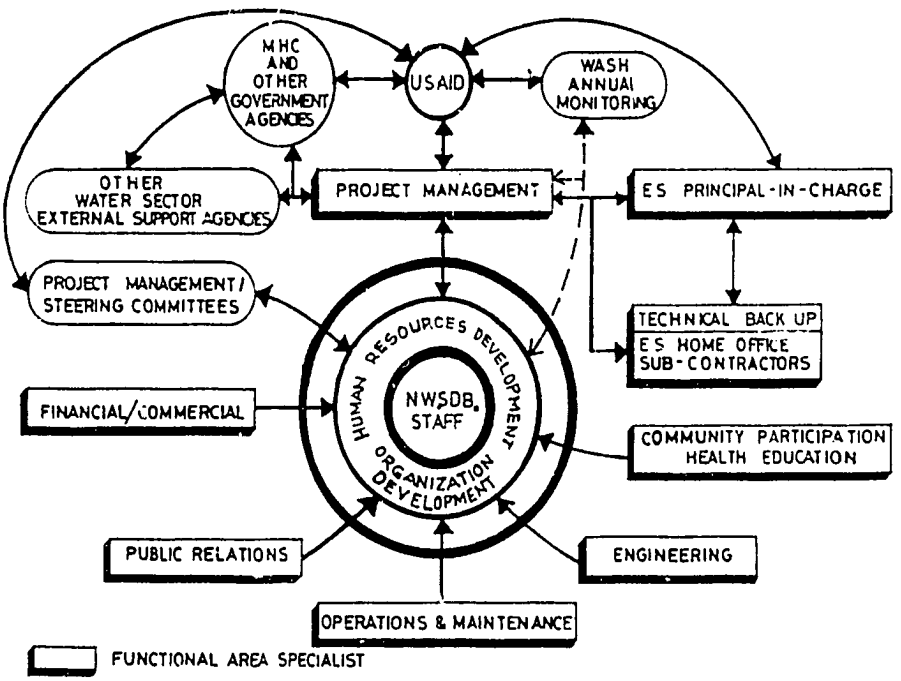


Figure 12
Formal Project Organization

restricted strictly to key ID issues and during 1989 these included personnel procedures, public relations, MIS, O&M performance upgrading and corporate planning. From 1990 the committee was disbanded since by that time the ID momentum was well established and in-house strategy development and progress monitoring forums had become institutionalized (notably the Management Cell, policy task forces, regional coordination meetings, etc.)

INFORMAL ORGANIZATION LINKAGES

It soon became apparent that in order to engender support for the more sensitive aspects of the ID process that linkages had to be established with the wider operational environment. These linkages served two principal purposes, firstly, to widen the consultation process and secondly, to explore the possibilities of leverage being applied to accelerate the change momentum. These informal liaison linkages are shown in Figure 13 and were essentially managed by the ID Project Manager. The frequency of the ad-hoc meetings varied, those involving USAID, MHC and the ESAs, were typically on a quarterly basis. On occasions NWSDB executive management were involved in the USAID and MHC sessions. The importance of this informal organization structure is discussed more fully in Section 9.

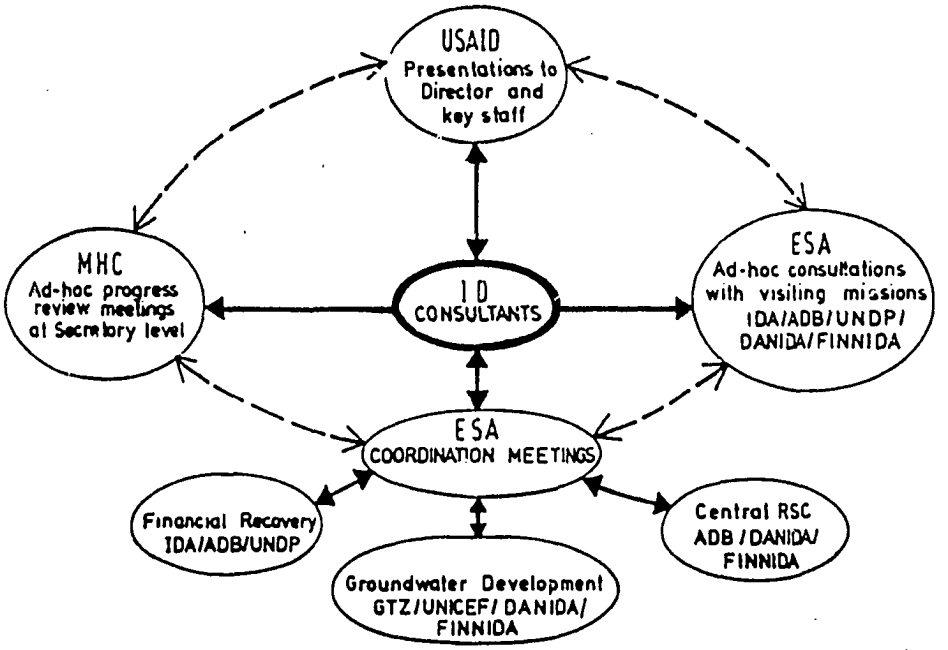


Figure 13

Informal Organization Linkages

SECTION 6

PROJECT IMPLEMENTATION STRATEGY

The essential nature of ID is defined in this section and various alternative approaches of implementing ID are presented. Particular attention is paid to the role of the ID consultant and to the need to involve the external environment and its principal actors.

ID - A DEFINITION

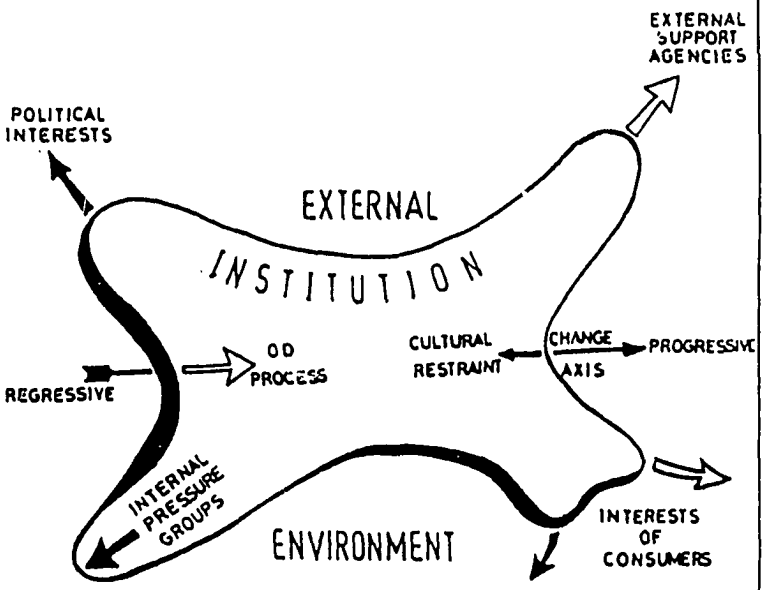
This project was implemented on the basic premise that ID is internal organization development combined with harnessing the opportunities and countering the threats which exist in the external environment impacting the institution (Figure 14). Whereas OD is the development of an institution's effectiveness within the confines of the institution's stated mission and culture, ID seeks in addition to take account of the wider institutional ramifications, such as linkages with other authorities, sectoral goals and policies and possible modifications of the role of the institution within the external environment.

In the case of the NWSDB, a strictly OD approach would concentrate on improvements in internal organization procedures, technical task-specific target development, upgrading management effectiveness, operational planning and performance monitoring. By comparison, ID would add on an analysis of national sector policies and goals, corporate planning in the context of sector needs, external stakeholder priorities and an analysis of liaison mechanisms and degrees of influence relating to key agencies operating in the external environment, particularly government Ministries and external support agencies.

INVOLVING THE EXTERNAL ENVIRONMENT

The importance of involving the key actors in the external environment was alluded to in Section 5 in the discussion on the project's informal organization structure. Such involvement is not restricted to Sri Lanka, one of the primary lessons learned over ten years' experience with the WASH Project was that " .... Institutional performance is always greatly impacted by the political environment... The government should be supportive of the kinds of changes needed to strengthen a water supply and sanitation institution.... successful ID projects strive for comprehensiveness and wide participation ...." (WASH 1990).

In the case of the NWSDB, a definite strategy was used to involve the external stakeholders and thereby support the ID initiatives (see Box 12). The results of this involvement were essentially cyclical with the visibility of institutional improvement reflecting the sporadic influence of external stakeholders as well as the continuous impact of internal OD processes (see Figure 15).



I D = O D + EXTERNAL ENVIRONMENT (HARNESSING OPPORTUNITIES AND COUNTERING THREATS)

Figure 14

Institutional Development Defined

APPROACHES TO ID

There are two somewhat contradictory espoused theories of how best to approach ID in the water supply and sanitation sector in LDCs. One approach generally favoured by academia and specialist practitioners is that since special skills are needed to evaluate organizational deficiencies, to develop improvement strategies and to then assist in the implementation of such strategies, so ID is best carried out by consultants who specialise in this area.

Box 12. Strategy to Involve Stakeholders

- o Establish long-term performance improvement programme (done participatively with counterpart staff)
- o Continually seek support of MHC/ESA for general concepts of performance improvement programme
- o Link goals of performance improvement programme to those of ESA stakeholders (eg. cost recovery, tariff reform)
- o Identify short-term achievable improvements that will please political stakeholders (eg. reduce consumer complaints, improve water quality)
- o Sustain cycle by constantly reviewing the improvement programme and modifying as necessary to reflect changing priorities (eg. new emphasis on decentralization)

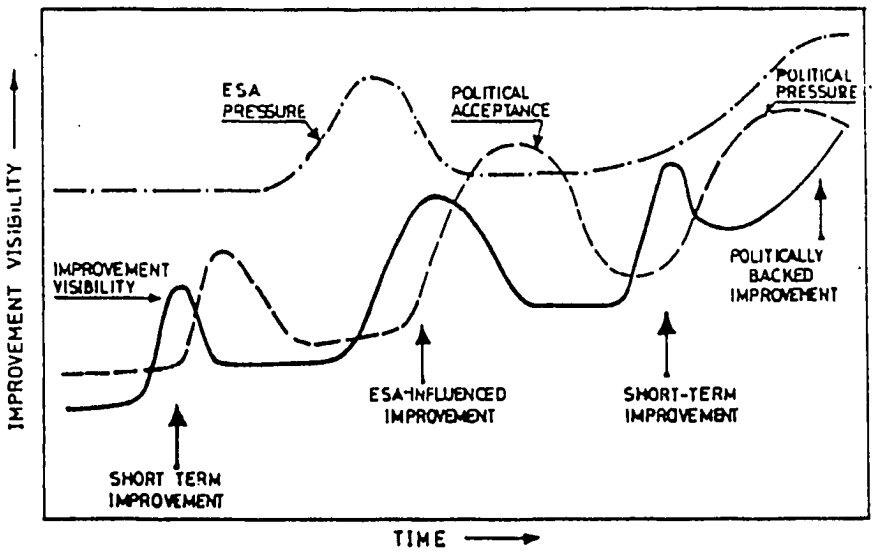


Figure 15

Influence of Stakeholder Pressure on Institutional Improvement Visibility

The alternative approach, which appears to be becoming increasingly popular with those foreign donors who are now moving into the field, is to establish a "twinning" arrangement between the institution in the LDC and one in a more developed country, the idea being that the "better" performance of the latter will be absorbed by the former through such measures as inter-agency staff transfer and skill training programmes. The second approach looks more attractive at first sight because it is easy for project planners in ESAs, who are often under pressure to achieve disbursement targets, to visualise technology transfer by some kind of osmotic process.

A look at the essential ingredients necessary for ID will help put the two theories in perspective. Basically the institution must be in a condition to:

a) recognise the need for change
b) admit its weaknesses
c) agree collaboratively with the intervention team on how to bring about change
d) change existing procedures to assist in improving performance effectiveness

Specialists from a water supply agency in a more developed country are not necessarily trained for (a), (b) or (c) and may not be very good at (d) because the procedural changes are often prompted by inadequacies in institutional reporting patterns, levels of responsibility, delegation of authority, etc., rather than by technical issues. Even though some of the effective procedures used in the "twinned" authority may appear to be appropriate for an LDC, they may not be sustained unless they are culturally acceptable and the institution genuinely wants to adopt them.

Although there are many examples of successful ID interventions carried out by specialist consultants in the more developed countries, principally the USA, more often than not they tend to be limited to private sector institutions. In a developing country public-sector institution the resistance to change may be far more formidable than that experienced in the American private sector , and this resistance, when compounded by cultural differences, may result in the ID specialist not being so spectacularly successful. Care must be taken in selecting an ID consultant with a proven track record of offering successful solutions, rather than just advice. Despite the rhetoric of many management consultants (who often purport to be equally capable of turning round institutions), many of them do not know how to implement their ideas, Economist (1991).

Recommended Approach

Experience on the WSSSP suggests that the optimum approach is a mix of the two. Although ID specialists are necessary to help develop the intervention strategies, technical specialists are also required to help develop new technical procedures, to provide skill training, etc. It was also apparent that in the case of the NWSDB a consultant with prior experience in the water supply sector tended to be more readily acceptable, particularly if he was an engineer with a good track record of work in the Asian region. These consultants tended to speak the same

"professional language" as the engineer-managers in the NWSDB. The key is to harmonise the technical input with the OD/ID techniques so that successful institutional upgrading is achieved.

A note of caution is warranted when making the assertion that technical experts with prior water supply experience are an essential component of the ID project team. Not all technical specialists make the successful transition from being expert teachers in their host culture to being culturally-sensitive change agents in an LDC. Experience on many international projects has shown that engineering experts, whether they be individual advisors or members of a consulting company, often tend to adopt a technocratic approach with a reluctance to interact with other disciplines. A detailed analysis of the impact of donor-supported projects in the rural water supply and sanitation sector reported by Boydell (1990), showed that although consultants are supposedly the servant of both the donor and the government (or institution), their dominant interest is often to satisfy the donor (in order to secure more work), with a secondary interest to maintain their own involvement and profitability.

This criticism could not justifiably be levelled at the WSSSP for a number of reasons. The donor (USAID) had drawn up an unusually detailed scope of work which identified a wide range of key ID outputs and thereafter maintained close supervision of project activities; the annual project monitoring exercise carried out by WASH ensured that project objectives were constantly kept in view; the day-to-day involvement of the NWSDB in the ID process made sure that any weaknesses on the part of the TA team were soon recognised; and the key members of the TA team were committed to implementing what was at the time a major, innovative project in a totally new field of endeavour.

As a result any ineffectual members of the TA team, and there were a few, were soon identified and eased out. There was no place on this project for a "super-image consultant" the type of individual ably described by Udwadia (1989) who gives the impression of possessing a high level of job-related competence but in reality whose only ability is to project an image of being so eminent in his field that he must deal exclusively with those global issues that do not involve day-to-day detail (ie. getting the job done).

There were, unfortunately, some visiting advisors (not provided through the prime contract between USAID and ES) from water supply agencies in developed, western countries who turned out to be much less effective than originally hoped.

These individuals tended to adopt a "this is the way to do it" approach and were almost totally insensitive to the real live situation in the NWSDB. On the other hand, advisors from water supply agencies in what may be termed "newly developed" or "more developed" countries, were highly successful. Advisors from Brazil and Malaysia were accepted by NWSDB staff from day one, there was none of the "holier than thou" mannerism and both advisors and NWSDB staff could relate to common problems and share similar experiences. This concept of Technical Co-operation Among Developing Countries (TCDC) is now gaining recognition as a highly beneficial technology transfer process, and is being actively supported by ESAs (McIntosh, 1990).

Throughout the WSSSP, a continuing programme of overseas study tours for senior managers was funded as part of the training resource input, the managers visiting the Penang Water Authority in Malaysia and the Sanitation Company of the Sate of Parana (SANEPAR) in Brazil. Both these agencies are examples of highly efficient water supply authorities which have undergone some degree of ID and have experienced many of the operational problems and environmental constraints affecting the NWSDB. In addition, regular visits by middle managers and technical officers were made to Penang to observe specific operational practices such as metering, billing and collection and preventive maintenance. This concept of sharing experiences among effective and not-so effective institutions in LDCs is far more preferable to the more common practice of sending trainees to visit highly sophisticated systems in the USA or Europe. The technology gap is usually far too wide in such instances and the trainees soon become disillusioned on return to their host institution.

Conditioning the TA Team

Early in the project a technology transfer training workshop was organised for the TA team, conducted by training specialists from Training Resources Group (under the WASH Project). This event was most necessary, for the reasons stated earlier, because virtually none of the TA team had specific prior experience in an ID situation in an LDC. A clear distinction was drawn at this workshop between the traditional "doctor-patient" role and that of a "process consultant" required for the ID project. In this context process consultation as defined by Schein (1988) is relevant " .... a set of activities on the part of the consultant that help the client to perceive, understand, and act upon the process events that occur in the client's environment in order to improve the situation as defined by the client."

A useful feature of the technology transfer workshop was an open forum session at which each member of the team was asked to list on posters those professional attributes of their colleagues which should be strengthened, those which should be changed, and those which should stay the same. This process was most cathartic, it enabled strengths and weaknesses to be admitted and discussed and considerably helped the Project Manager to recognise which members of his team were best suited for particular roles. Two members of the TA team refused to take part in this exercise. Their impact on the project turned out to be only marginal, in fact one expert resigned before completing his contract. This was a useful lesson learned, the Project Manager of an ID intervention needs to know more about his team members than their individual bio-data would suggest. In this case an ability to operate in potentially sensitive group situations can only be assessed from observation.

Use of External Stakeholders

In accordance with the philosophy of serving as process consultants, change agents or catalysts, the TA team basically operated in a pivotal role, facilitating and monitoring the ID process (Figure 16). Of course, there were occasions when it was necessary to secure the support of external stakeholders in order to sustain ID momentum. This process has

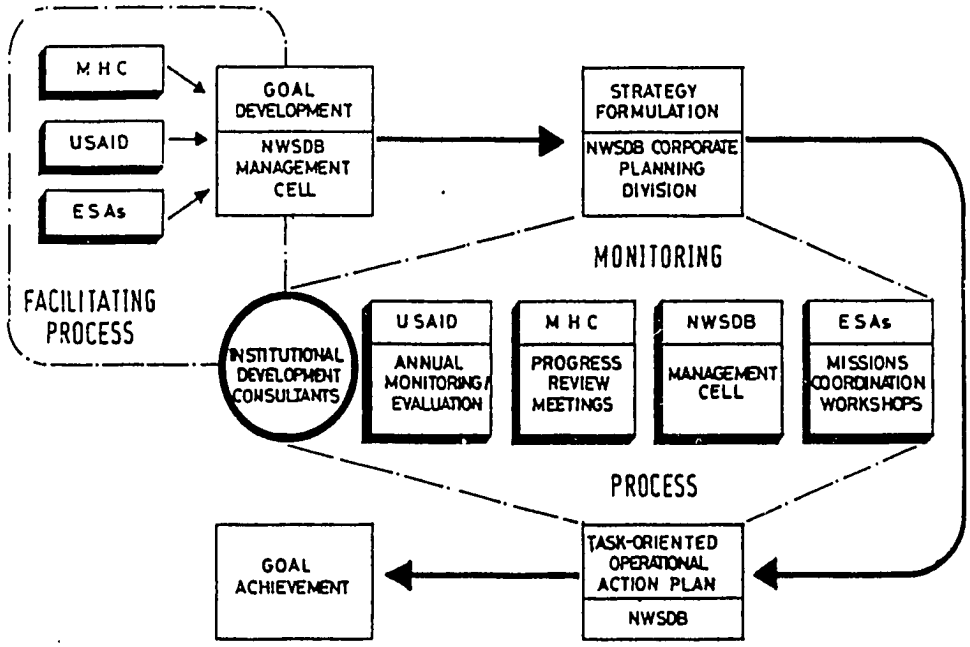


Figure 16

Pivotal Role of Consultants in the Institutional Development Process

been described earlier in this section. Hence although ideally the TA team tried to maintain their pivotal role of process consultants, there were occasions when a prescriptive mode was adopted informally, using the opportunities available in the external environment. This dual approach demanded a very delicate balance between coaching and helping the institution to solve its own problems, and applying pressure to overcome those blockages that appeared to be particularly intransigent to the process consultation method.

The decision to move into the prescriptive mode was taken by the TA Project Manager, in almost every case in strict confidence so that even the TA team members were not aware of the forces at work. The decision was not taken lightly, it was discussed in detail with the external actor concerned and great care was taken to ensure that the pressure was in accordance with the stated ID goals, supported by the wider sectoral goals of government. Typical examples of problems which were overcome by this method included some senior staff changes, delegation of authority to RSCs, staff retrenchment, and tariff reform. Of course, the end results of such pressure were not always as anticipated. The effect was to unleash a force which impacted the institution in such a way that the reaction could be in various dimensions. A move to transfer an

individual manager who was recognised by all parties, including the NWSDB, to be either obstructive to reform or perhaps not competent for the post he was holding, could result in a major, unwarranted staff rotation as the institution struggled to justify the change within accepted procedures and cultural norms (face-saving and eliminating peer differences).

As a result of the unknown, wider outcome of such pressures, the prescriptive mode was only resorted to on rare occasions. Although it became a recognised and indeed an essential element of the ID process, it was politically dangerous, both because of the unseen spin-off results and the risk of exposure which could totally negate the confidence built up between the TA team and the institution. Of course, the use of the external environment in this way did become more widely known, but it was never openly discussed, probably because it was seen by all parties that its net effect on institutional change was generally positive.

ID Bubbles

A trend which the ID consultant must continually guard against is that of the institution becoming dependent on the consultant. This trend is more prevalent with long-term team members who often unwittingly take on more and more implementation responsibility so that when they eventually leave the reforms fail because there has been no effort to achieve sustainability. The net effect is akin to an "ID bubble," which is blown up by the outside experts and which bursts when the support is withdrawn at the end of the project. This tendency has been documented by Andersson (1990) who observed that in Africa in times of economic crisis some donors withdrew to certain regions or projects where they were able to develop perfect solutions in isolation. The Southwest Coast Project described earlier in this report was an example of such a donor-supported "bubble" in the NWSDB. There have been others since but the NWSDB has begun to learn that true institution-wide technology transfer is not achieved from separate Project Management Units (PMU). The integrated project management model adopted for the Greater Colombo Water Supply Master Plan component is to be preferred (see Section 8.1).

The consultant-dependency syndrome points to a dichotomy between the advantages and disadvantages of long versus short-term input. On an ID project in particular, a short-term consultant is only beneficial if he is advising on a highly specific element, generally of a technical nature, since to achieve true ID requires an appreciation of the institution's culture, a time-demanding acclimatization process. On this project, short-term team members accounted for less than 8% of the total expatriate professional input (in accordance with USAID procedures, a short-term specialist is an input of less than 12 person-months).

The only way to guard against consultant-dependency is to continually monitor the individual team member's input, and to insist an occasional pulling back so as to permit the client to take on the ownership of a new procedure. Regular staff meetings, one-on-one discussions with team members, and probing interviews with counterpart staff are essential tools for the Project Manager to use in this area.

The other adverse effect associated with long-term inputs is project fatigue. This effect is observable, typical manifestations of such a state are listed in Box 13. There was one example of project fatigue on

Box 13. Manifestations of Staying Too Long

- o Absorption of less attractive aspects of host culture (late, absent, missing deadlines)
- o Talk about non-essentials (institutional gossip)
- o Loss of sense of direction (loses ability to organise work, prefers to wait for instructions)
- o More and more out of touch with project reality
- o Relegated to role of "in-house foreign advisor" wheeled-in to meet visitors who are not considered important enough to be entertained by institution's executive management.

the WSSSP, characterised by what initially seemed relatively harmless traits of the expatriate concerned such as reading the newspaper in the office; insisting on doing basic administrative duties himself (posting letters, paying utility bills); avoiding meetings where performance-related issues were discussed; concentrating on irrelevancies (systems rather than technology transfer); and a tendency to put the blame for delays on local Sri Lankan team members. A review of progress in this particular expert's functional area, carried out by a short-term consultant, soon showed these traits to be what they were and the input of the individual was curtailed as a result, his input then being taken over most successfully by a Sri Lankan specialist.

SENSITIVE ISSUES AND THE TRUST-BRIDGE

A further concern which needs to be addressed is how to deal with sensitive issues, and how the way of dealing with them reflects on the trust-bridge developed between the consultant and the institution.

Sensitivity Examples

Many of the sensitive issues which surfaced in the ID project were institution-culture related. The adverse effects on the institution's effectiveness of the behavioural characteristics exhibited by certain managers, for example, long periods of absence or habitual late arrival in the mornings, were accepted by their peers. This attitude reflected the NWSDB cultural manifestation of closing ranks and protecting one's peers. Such moves are alien to those brought up in an environment where openess and frank, objective discussions are rated as worthy goals to aim for. As a result, consultants who fail to recognise the value of such cultural mores can easily alienate themselves from their counterparts. Two examples of such alienation which occurred early on in this project will illustrate the point.

In the first case the consultant submitted a field trip report which in addition to describing his task-related findings and recommendations from visiting a NWSDB regional office, also mentioned that the state of the NWSDB office was an offense to the public. The consultant highlighted the overgrown garden, the broken furniture, the dirt on the floor and the all-pervading smell of neglect and pointed out that such poor housekeeping would give a very poor impression to the general public. The consultant also noted that the nearby regional office of another state sector institution was in far superior condition. In accordance with normal procedure the field trip report was submitted not only to the Project Manager but also to NWSDB counterpart staff and to USAID.

It soon became apparent that this particular consultant had broken two cardinal cultural norms. First, he had identified an area of less than acceptable standard in writing, and secondly, had exposed this condition to the regional staff's peers and superiors, and to an outside agency, USAID. In addition, the standard of the NWSDB had been compared unfavourably with another institution. The immediate result was a "closing of the ranks," an increase in pressures to cancel "this unwanted project" and finally the Project Manager was called before a committee of the Engineers' Association, at which the GM presided.

The committee lambasted the consultant for straying outside his terms of reference and emphasised that the poor housekeeping was a result of inadequate resources and it was ludicrous to expect to find a situation in the rural areas of Sri Lanka similar to that in the USA. This statement was not entirely true because the real cause of the problem was lack of commitment by management to good housekeeping. Resource needs to improve the situation were basically a brush, mop and pail of water. However, this could not be pointed out since at this early stage in the project the managers still believed that they had almost nothing to learn, especially from foreign consultants. The Project Manager eventually convinced the committee that the consultant had only the best interests of the NWSDB at heart and that his motive was to suggest areas where improvements might be made. He apologised on behalf of the consultant, explained that the consultant was not yet totally au fait with the NWSDB cultural norms, and suggested that in future such observations would not be made in field trip reports but would be discussed with the relevant managers to see what the real problems were.

The second case involved the same issue, that of identifying officers who were not performing adequately. In this example, a member of the consultant's team gave a very forthright exposition at a residential workshop involving all the NWSDB senior managers pointing out why it had taken such a long time for a relatively straightforward in-country commodity to be purchased. He pointed out that because of the very generous personnel policies regarding leave, the purchase had been delayed by four months. A purchasing clerk had taken maternity leave, an accounts clerk had gone on two weeks casual leave without prior notice, the messenger responsible for delivering the purchase order had fallen sick, the section head had been unable to deal with the purchase personally because his driver had not reported to work for a week and the Transport Section was unable to provide a relief driver, basically because short city trips were not popular. Finally the whole Supplies Section staff took three days leave to attend the funeral of one of their

colleague's relatives at a remote location in the south of the country. This exposition was well received and caused much amusement among the managers, it also earned a most uncommon accolade with one of the more anti-project senior managers expressing the view that "this particular consultant is the only one who really understands the problems in the NWSDB."

Up to this point the consultant had not named names. However, during the discussion group sessions following the presentation the question was raised of how to deal with the problem. It now became necessary to be more direct and the consultant identified, to the whole group, the individual who was really causing the problem by not adequately managing his staff. The consultant pointed out that it was no good blaming the procedures since procedures by themselves did nothing. The net result was a refusal to discuss the issue further and a second statement from the anti-project senior manager to the effect that "what we want are these consultants to give us new procedures which will not give rise to these problems."

In these examples, both of which occurred relatively early on in the project, the consultants lost their process consultation role and reverted to the "doctor-patient" role, also forgetting that the patient had not yet recognised that he was in fact ill!

Consequences of the Trust-Bridge

The degree of trust which had been built up to that time was immediately lost, not only for the two individual consultants concerned but also for the whole consultant team. This reaction was understandable, when the institution closed ranks because one of its members was under attack, the attacking force was seen as the foreign consulting team, not an individual member of the team.

As the project progressed, such mishaps became fewer and trust relationships were established. The consultants became more sensitive to cultural differences, those consultants who were unable to adjust were replaced, and the counterparts gradually came to recognise that the institution did indeed have a problem and that perhaps the consultants could help. On retrospect, this feeling of mutual trust took about 12 to 18 months to establish. This period might seem surprisingly long but for the first nine months of the project life the situation was quite unstable with strong project resistance.

As the degree of trust developed, the consultants became party to information which was highly confidential and often overtly personal, including instances of incorrect practices. Stories surfaced of individuals who bent the rules to suit their personal interests. The examples were more often than not minor infringements of procedure which are common in many organizations in most countries. Occasionally a more serious malpractice did occur. The question arises as to just what does a consultant do when faced with information that someone in the institution, whose development he is trying to assist, is in fact involved in malpractice?

There is only one answer to this question. The consultant has been told such information in trust, to destroy that trust would be to destroy the consultant/counterpart relationship. The consultant cannot, therefore, "blow the whistle." Perhaps it is worthwhile reflecting on why such sensitive information was imparted in the first place. Maybe the incident was completely unfounded, perhaps the counterpart was trying to downgrade a peer in the eyes of the consultant. Perhaps it was just camouflage, maybe the counterpart was covering up his own misdeeds and pointing a finger at someone else - "forget the fact that my cousin was awarded the vehicle hire contract (unsaid) but just look at the way that he (a highly competent manager and potential competitor) used an official vehicle to transport some timber to build his house!" Or perhaps the information was given completely altruistically, in order to widen the consultant's appreciation of the internal environment which he was trying to develop.

Of course, the consultant may never know if the information is genuine or not. He may cross check it by oblique references to other counterparts, but the fact that such practices may exist should alert the consultant to a hidden dimension which he should recognise in his ID interventions, but which he should not meet head on. In the absence of sound proof, how can he? The approach should be to listen to the information, state categorically that consultants do not get involved in personal issues, and point out that such practices, if true, are to be abhorred and are totally detrimental to the health of the institution. A positive step that perhaps can be taken is to see if policies and procedures can be designed to close certain loopholes. A more fundamental and long-term step is to upgrade management's professionalism so that all are working to a common corporate goal, the achievement of which will reflect on their status. By this means the "ranks can be closed" around a corporate consensus to achieve a more effective operational state, which will have little toleration for self-serving individualism at the expense of corporate goal achievement.

In this section the evolutionary nature of the ID process is described. Starting with an overview of the national environment that existed during project implementation, the pulls and pushes impacting institutional strengthening are presented, the distinct project phases are defined and examples are given of key implementation approaches such as prioritization of areas of concentration and the use of demonstration projects.

NATIONAL ENVIRONMENT

The WSSSP was implemented during a period of national upheaval, in terms of both economic stability and social upheaval. From 1983 the ethnic conflict in the Northern and later the Eastern Province resulted in serious damage and dislocation to the production capacity of the area. Development virtually ceased, communities were dispersed and the local economy functioned well below the normal levels. It is estimated that the number of refugees after July 1983 reached a staggering one million, out of a total Sri Lankan population of just over 16 million (Gunaratna, 1990). The second major problem was the period of civil disturbance connected with the JVP (Janatha Vimukthi Peramuna)* which, after smouldering during 1987, rapidly escalated in the Southern Province in 1988 and threatened to engulf almost the entire country in 1989. It is estimated that during the period of this insurrection, from middle 1987 to end 1989, at least 40000 people lost their lives (Chandraprema, 1990). The number of violent deaths resulting from the ethnic conflict and the subversive insurrection during the second half of 1989 was equivalent to an annual rate of about 165/100000 population. This rate was considerably in excess of those existing in the more widely publicised problem areas of Beirut, Northern Ireland and Punjab, in fact the next highest international rate was reached in Washington DC, USA (70/100000 population) as a result of drug-related crime (Economist, 1989b).

As a result of the civil strife defense expenditures took an increasing share of government budget, rising from 1.4% of gross domestic product (GDP) in 1984 to an estimated 6.0% GDP in 1990. In 1988 and 1989 the budget deficit was of the order of 15% of GDP. As shown in Table 5, GDP growth rate declined during the period, as did per capita GNP from 1988, and inflation increased dramatically, the cost of living rising by about 186% over the 1984 to 1990 period. The economic nadir occurred in August 1989 when the Treasury had only 50 lakhs of rupees at its disposal (about US$125 000) (Premadasa, 1990).

Work stoppages, disruptions to transport, communications, banking and financial services all had a serious negative impact on the economy. Investor confidence waned, tourist arrivals fell dramatically and unemployment climbed with the result that by the end of the project there were around 1.2 million people unemployed, 800,000 of whom were youths (see Box 14).

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* A subversive movement which almost brought the nation to a standstill during 1988/89. Its acts of terror, carried out by its military wing (the DJV-Deshapremi Janatha Viyaparaya) have been likened to those of the better known Peruvian Shining Path and the Cambodian Pol Pot movements.

Table 4. Selected Economic Indicators 1984-1990

Indicator	1984	1985	1986	1987	1988	1989	1990
GNP (current million US$)	5201	5289	5607	5641	6004	5563	6249
GNP/capita (US$)	333	334	348	345	374	367	355
GDP growth rate (%)	5.2	5.0	4.3	1.5	2.7	2.0	3.0
Current account deficit (% GDP)	4.2	9.9	9.5	7.9	9.1	10.3	9.4
Colombo consumer's price index (1952 = 100)	553.1	561.2	606.0	652.8	744.1	830.2	1026.5

Data Sources: Department of National Planning (1989); Central Bank (1990); External Resources Department (1991).

Box 14. 87000 Apply for 150 Vacancies

A total of 87000 applications have been received for 150 labour grade vacancies in the Health Services, official sources said. Among the applications are several GCE 'O' and 'A' level qualified persons.

The Island, 7 May 1990

With the holding of national general and presidential elections in December 1988 and February 1989 respectively, and the suppression of the JVP insurrection by the end of 1989, the overall situation began to improve. The new government began to implement a structural adjustment programme aimed at reducing wastage and inefficiencies in the government sector and encouraging private sector investment and expansion. Two other key policies now being implemented are a new industrial strategy designed to diversify the economy and ensure a more equitable distribution of income and wealth and a poverty allieviation programme founded on helping the poor build up their asset bases through productive employment.

Impact on NWSDB

The effect of this national upheaval on the operations of the NWSDB was significant, although not as catastrophic as might be imagined. Apart from the fear phychosis which affected almost everybody in Sri Lanka, day-to-day operations were frequently interrupted by JVP-inspired curfews, campaigns to refuse paying water bills and even intimidation of NWSDB officers who were involved in revenue-related activities such as meter reading, disconnections and payment collections. NWSDB property was damaged and on one occasion the staff of a Regional Office were physically attacked.

One of the most visible impacts of the national situation was on collections. Data from the Southern RSC over the period 1987 to 1990 clearly show the impact of the national general and presidential elections and civil unrest (Figure 17). On average, the period of insurrection reduced total national collections by about 30%. The adverse effect of the external political environment on the NWSDB financial status was particularly marked in 1988 when electioneering gambits such as a government-mandated salary rise of about 45% and the conversion of almost 2500 casual employees to permanent status increased operating costs by about 12%.

It is perhaps surprising that despite the adverse operational environment existing for most of the project implementation period, the NWSDB continued to provide an essential service to its consumers, to rehabilitate and build new schemes and, most importantly, to develop as an institution. This progress speaks well of the calibre of management in the institution.

Although reliable data are not available for the specific project preparation and commencement years of 1984 and 1985, a review of the gross water supply coverage situation in 1990 compared to 1981 indicates substantial progress (Table 6). The NWSDB was responsible for most of the urban systems and for a significant proportion of the handpump facilities in the rural sector. This increase in facilities was probably one factor which contributed to the reduction in infant mortality, from a national average of 29.5/1000 live births in 1981 to 19.4/1000 live births in 1988. Of course, the national improvement in infant mortality undoubtedly masks large regional variations, particularly in those areas most affected by civil strife.

Table 6. Gross Water Supply Coverage 1981-1990

Year		Urban Sector	Rural Sector	Total
1981				
Population	(thousand)	3007	11622	14630
Coverage	(%)	50	56	54
1990				
Population	(thousand)	3663	13954	17617
Coverage		76	64	66
1981-1990				
New coverage	(thousand)	1279	2374	3653

Data from NWSDB Corporate Plan (1989, 1991)

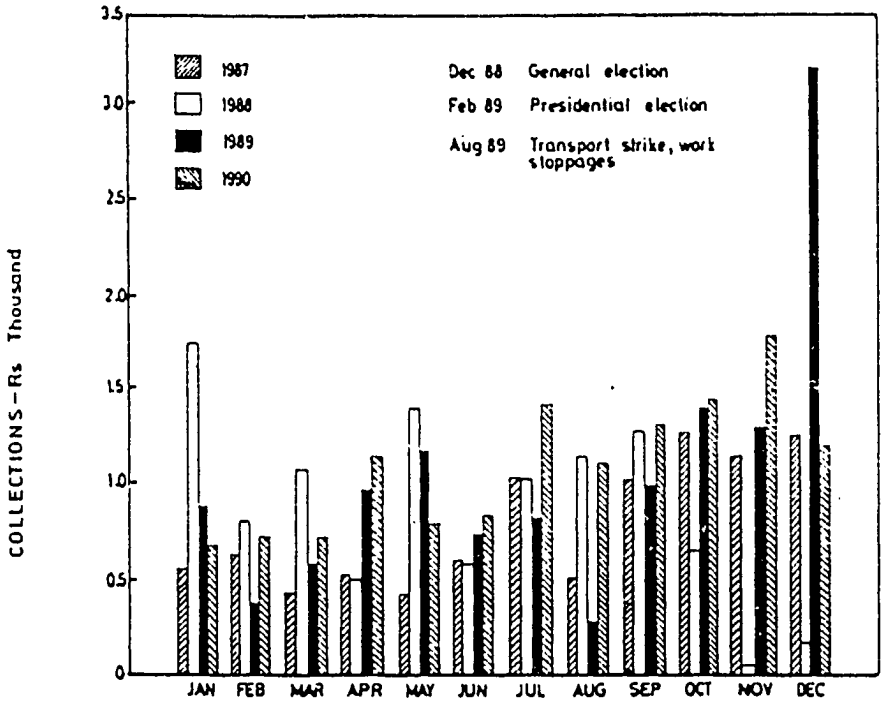

Figure 17

Impact of National Environment on Collections in Southern RSC

ID AS AN EVOLUTIONARY PROCESS

The process of ID is dynamic, cyclical and subject to all the positive and negative forces at work both within the institution and in the external environment. The process is shown diagrammatically in Figure 18 as an ascending spiral, with a range of positive forces being brought into play to counter and overcome the pressures acting against change. The need for "hardware" inputs such as equipment, facilities and overseas training tours is recognised, not just to upgrade the asset base of the institution but also to provide incentives to accept changes. Further examples of actual threats, opportunities, strengths and weaknesses which were experienced during project implementation, together with the coping strategies adopted, are shown in Figure 19.

The net effect of the four main forces at work (internal culture; OD; political environment; ESA) is to produce a series of overlapping, or inter-twined ID sub-cycles. Specific examples are shown in Figure 20. Constant attention must be paid to the relative strengths of these forces, the objective being to continually manage the ID interventions in such a way that the combined effect of all the forces remains positive (above the horizontal axis in Figure 20).

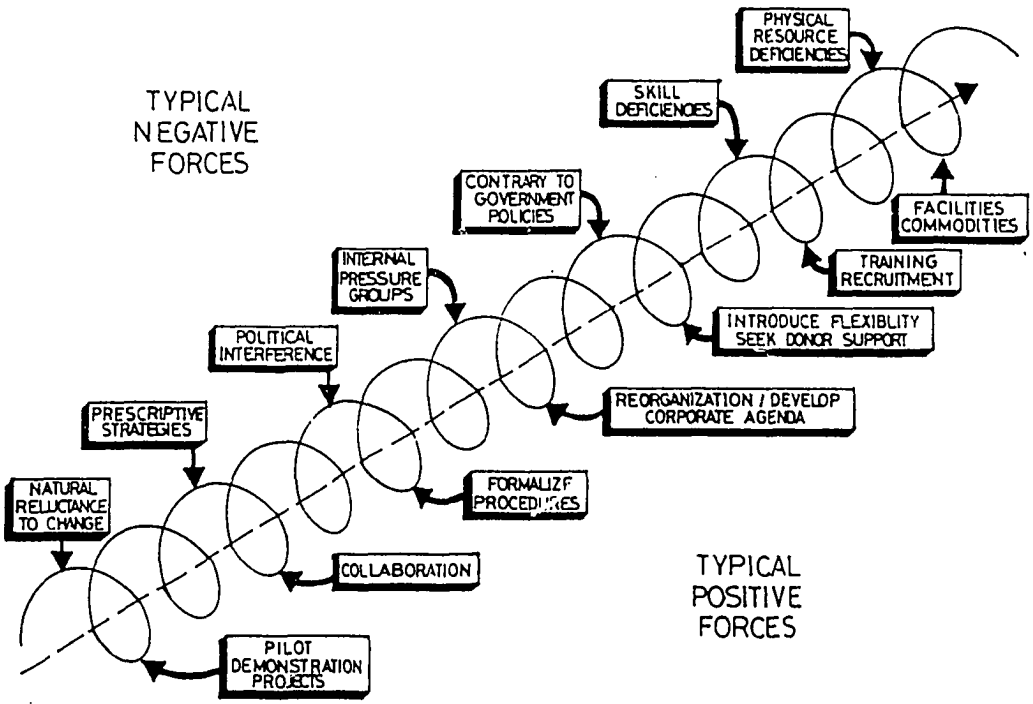

Figure 18

Ascending Spiral of Institutional Development

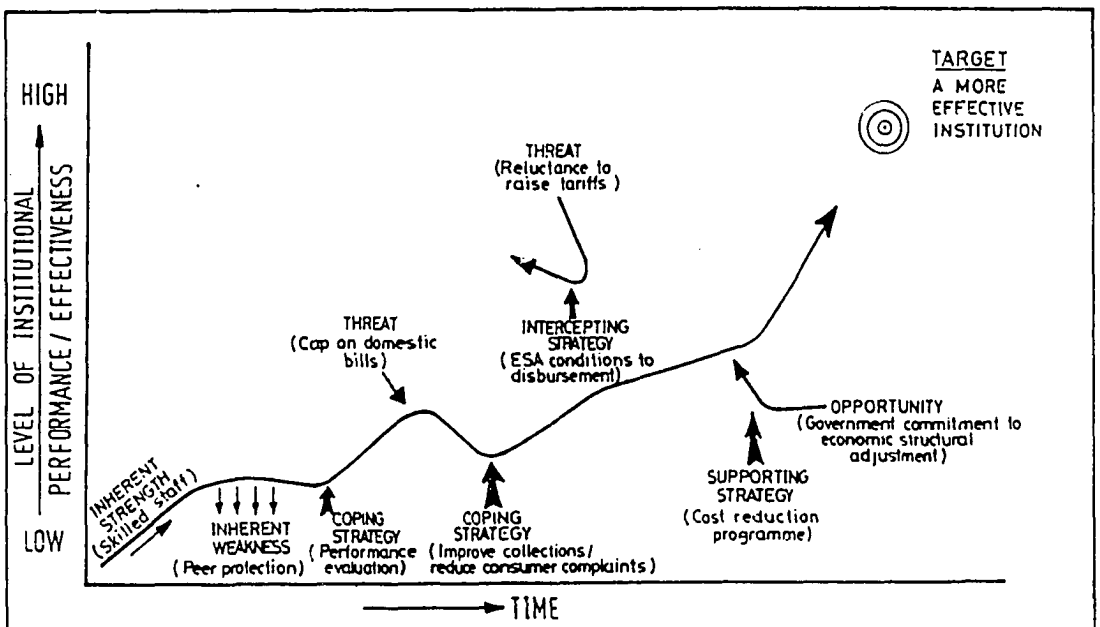

Figure 19

Forces Influencing Performance Improvement

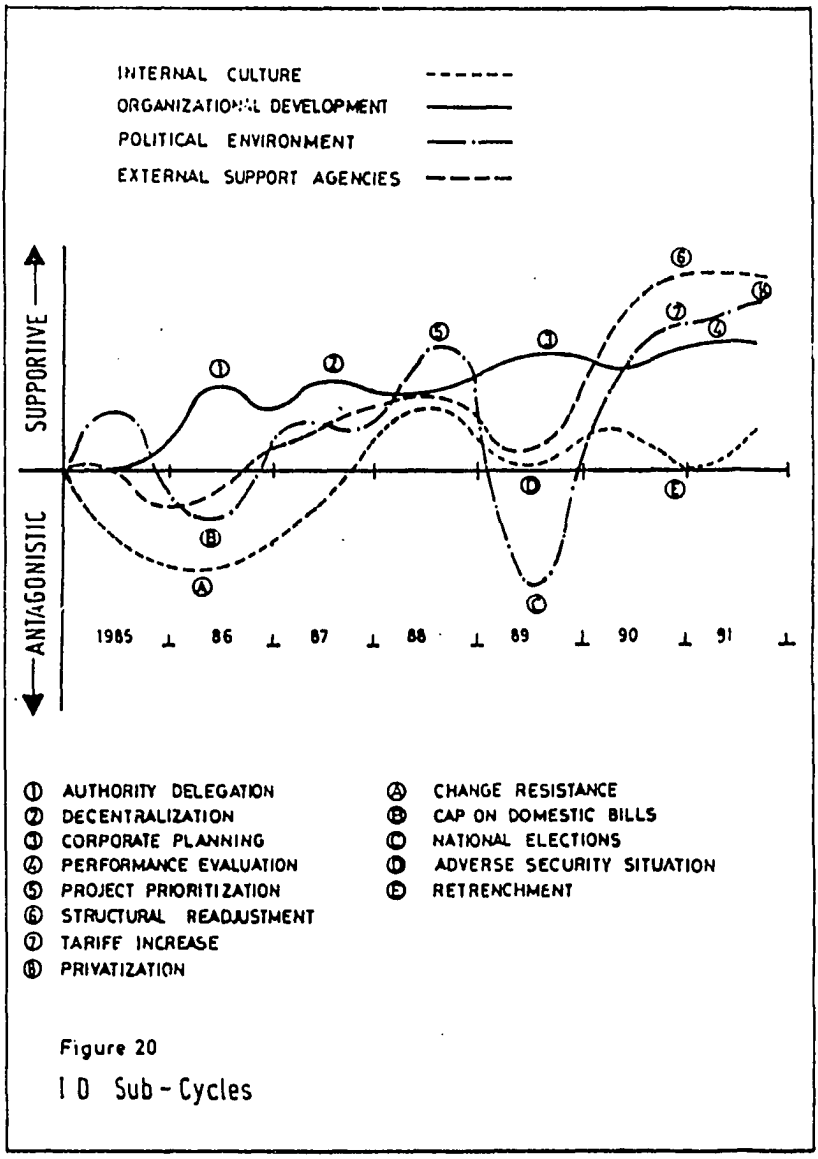

Figure 20

I D Sub - Cycles

If constant vigilence is not maintained the whole ID momentum can be knocked out of kilter, as it very nearly was in 1989 during the civil insurrection and national election period.

PROJECT PHASES

In retrospect, the project exhibited a progression of distinct phases as the initial resistance faded and support for institutional strengthening increased. Modifications to the project scope also signalled changes in emphasis with corresponding phase shifts. In a simplified form, the more easily definable project phases are identified in Figure 21.

1984	PROJECT DESIGN	DONOR DRIVEN
1985	LEARNING/ADJUSTING • NWSDB REORGANIZATION • RESTRUCTURING TA TEAM • NEW NWSDB CHAIRMAN	THREAT TO EXISTING ORDER/RESISTANCE TO CHANGE
1986	DEVELOPING STRATEGIES FOR CHANGE • DEMONSTRATION PROJECTS • NEW PROCEDURES • NEW NWSDB CHAIRMAN	BEGINNING OF PROJECT ACCEPTANCE
1987	IMPLEMENTING CHANGE • DEFINE NWSDB VISIONS • DEVELOP PERFORMANCE INDICATORS • NEW NWSDB GENERAL MANAGER	CRITICISM BECOMES CONSTRUCTIVE
1988	WIDEN CHANGE SCOPE • INCREASED AUTONOMY • DONOR COORDINATION • ACCELERATE DECENTRALIZATION	CHANGE FROM PERSONAL TO CORPORATE AGENDA
1989	CONSOLIDATION • CORPORATE PLANNING • MANAGEMENT ACCOUNTABILITY • BUDGET DISCIPLINE	FINANCIAL MANAGEMENT MATURITY
1990	WIDEN CHANGE SCOPE • EXPANDED DECENTRALIZATION • COLOMBO MASTER PLAN • ENHANCED DELEGATION	IMPROVED NWSDB PERFORMANCE RECOGNISED
1991	TOWARDS SUSTAINABILITY • NATIONAL SECTOR POLICIES • RSC FINANCIAL AUTONOMY • EMPLOYEE PERFORMANCE EVALUATION	FINANCIALLY VIABLE-POLICIES UPHELD/ INCREASINGLY INSTITUTION DRIVEN

Figure 21

Institutional Development Phases

Resistance to Change

It is worthwhile dwelling for a moment on the "learning/adjusting" and "developing strategies for change" phases which were evident during the initial project implementation period in 1985/1986. The natural resistance to change which had been simmering since the project started in April 1985 finally came to a head in September that year when a statement in the minutes of a Project Steering Committee meeting were categorically rejected by the Engineers' Association in a letter directed to the TA Project Manager, NWSDB executive management and directors, Secretary/MLGHC and the ES Principal-in-Charge. The offending clause, which was reported verbatim from the discussion (see Box 15), was described as a calculated effort on the part of a member of the TA team to drive a wedge between the NWSDB management and engineers.

Box 15. Resistance to Change

- Reference to Steering Committee minutes " ... we, on behalf of the Board Engineers wish to categorically deny the facts attributed to us that 'without their agreement and support, the staff will sabotage the re-organisation and commit acts of disruption. ..."

  Letter from Engineers' Association to TA Project Manager (September 1985)

- "I am writing to express my serious concern at the continuing resistance in certain quarters within the NWSDB to the subject project and Government of Sri Lanka goals of reorganizing and strengthening the institutional capabilities of the NWSDB ..."

  Letter from AID Director to Secretary/MLGHC (April 1986)

- The executive committee of the Association have decided that the work of the USAID Project is not progressing towards its objectives and the present problems in the Board cannot be successfully solved in this manner. Therefore, the association made a representation to the Secretary/MLGHC to appoint an independent committee of local professionals to review the progress made by USAID Project up to date and to decide upon the future work programme.

  Engineers' Association Newsletter (April 1986)

Objection was also made to a leaked internal memo from a consultant to the other team members advising on what stance to take with regard to the qualifications criteria attached to job descriptions. The lesson learned here was that directiveness had to be sacrificed for the sake of support. However, resentment was by this time too entrenched and the particular consultant left the project before his contract term was completed.

The subject of resistance to change continued to tax the minds of those involved in the project, with the Engineers' Association in the forefront of the exchange of opinion (Box 15). However, by the middle of 1986 an important and discernible shift in emphasis occurred, as for the first time evidence surfaced that even the Engineers' Association could recognise the need for change and the fact that perhaps the ID project could be used to achieve such changes (see Box 16).

Box 16. A Discernible Shift in Emphasis - the Beginning of Project Acceptance

"The Association does not observe any remarkable changes of the project up to now and the areas highlighted by our proposals still remain unnoticed."

"The monitoring report of the project prepared by the Water and Sanitation for Health Project Consultants (WASH), does not include a fair assessment of the output of the projects or project achievements. It is only a biased assessment of Engineers' capabilities in the NWSDB. However, the unwarranted remarks about Engineers will serve no useful purpose, as far as this project is concerned."

"The consultants were not aware of the deficiencies in management systems and procedures. So far, no appreciable change has taken place. There is an urgent need to improve the training on management, secretarial work, office procedures, filing systems, replying to inquiries, delivery of correspondence etc. Delegation of authority continues to be a major administrative hazzle (sic)"

"Immediate arrangements should be made to improve the following priority areas.

- o Improvements to management systems and procedures.
- o Delegation of financial and administrative authority.
- o Improvements to Ground Water Section.
- o Strengthening the Regional Support Centres.
- o Present organisation structure to be restructured to accommodate World Bank, ADB and other Projects."

Memo from Engineers' Association to Secretary/MLGHC (June 1986)

These examples of resistance to change and the ready use made by those mounting the resistance to seek support from the external, political environment, were instrumental in bolstering and improving the liaison process between the ID consultants and the same external forces. There was now a common meeting ground and it was found that the objections raised by the various pressure groups could be put in perspective and almost

totally nullified by the adoption of appropriate strategies which had the backing of the external political sector. The use of this external force was, in effect, a form of leverage, but as discussed earlier it is perceived to be a legitimate component of the ID process, provided that the consultant does not become a slave to the whims of the political lobby. The process is supported by respected ID practitioners, as the following quotation from Kirkpatrick (1985) illustrates " ... There are two ways to make changes. They can be called the "coerced" versus the "participative" change cycle. The coerced change cycle begins by imposing change. The participative change cycle begins by getting people involved. With mature groups, the participative style is usually more effective. With immature people, the coerced approach may be effective because they are often dependent and not willing to take new responsibilities unless forced to do so. The most effective approach is usually a blend of the two, depending on the situation."

PROJECT START-UP

An ID project is usually commissioned at the behest of the institution, generally because its management or directors wish to improve the institution's effectiveness, or because it is moving into a new field or because new ownership demands a new business philosophy. In the case of the NWSDB the real impetus for change came initially from the donor community who wished to see an increased level of accountability and a greater return on their investments. The national government and NWSDB executive management readily accepted the concept since it was supportive of the long-term investment programme initiated by government in 1980 in response to the goals of the IDWSSD, and it was seen as a necessary adjustment to secure continuing financial support from ESAs.

Traditionally, an ID intervention proceeds along a carefully balanced path, specialist consultants are called in (assuming that there is no in-house OD/ID capability) to assess the weaknesses, and over time strategies are developed, in participation with the staff of the institution, to bring about change. In accordance with the theory of process consultation, reforms must be developed with the full involvement of the staff so that the ID process is "owned" by the institution.

The amount of effort to be expended by the ID consultant can vary. There is often more support for the gradualist approach, whereby the ID team build-up slowly following a period of cultural acclimation on the part of the TA Project Manager and perhaps his deputy. This approach also allows time for the consultant-client trust-bridge to be formed and hopefully lessens the chance of change resistance developing later in the project. The opposite of the gradualist philosophy is the sudden-shock approach, whereby a large TA team enters the institution en masse and, in a more prescriptive role, attempts to accelerate the change momentum. The pros and cons of these two approaches are listed in Table 7.

In the case of the NWSDB, the sudden-shock approach was used for project start-up. There were a number of reasons for this decision. The project had been developed during the first half of 1984 through visits of USAID-sponsored experts to assess NWSDB operations and it was firmly believed by USAID that the recommendations of such visits were wholly

appropriate, to the extent that they were enshrined as concrete objectives and outputs in the Project Paper. An additional reason was that the timeframe for the project did not permit a gradualist approach. Although the Project Paper specified an overall 5-year period, from project authorization in August 1984 to PACD in August 1989, the period allotted for TA input was only 40 months, from March 1985 to June 1988. Also, facility designs and invitations for bids for their construction, orders for vehicles and other commodities, a pre-implementation workshop and conditions precedent were all scheduled to be completed and met before mobilization of the TA team.

Table 7. Alternative Approaches to Initiating an ID Intervention

Approach	Advantages	Disadvantages
Gradualist	Cultural acclimation Builds trust-bridge Closely aligned to process consultation Consultant input can be scheduled to meet actual priority needs Encourages client ownership High chance of sustainability	Time consuming Client may delay change on grounds that problems still not identified Those opposing ID may use excuse that nothing is happening, hence no need.
Sudden-shock	Forces institution to study change Potential success in less time than with gradualist approach More appealing to ESAs Consultant input can be planned ahead of time.	High risk of casualties in consultant and client staff Too prescriptive (does not encourage client ownership) Chance of failure (no sustainability)

Although the TA consultants commenced almost on schedule (April 1985), none of the other actions listed above had been completed. The rapid build-up of consultant input, with more than 300 person-months being expended by the end of of 1986, was in direct response to the relatively rigid task accomplishment schedule set out in the Project Paper. Although the project duration was eventually extended substantially, the consultant input in the first 21 months still accounted for almost 40% of the total input (Figure 9).

The sudden-shock approach became highly visible during the project pre-implementation workshop held over a four-day period in April 1985 (WASH, 1985). Although the rationale for such an event was sound, (team building, introduction of TA team to NWSDB managers, issue discussion, developing work plans), it highlighted the widespread ignorance on behalf of NWSDB management regarding project objectives. When the NWSDB staff were given the impression that "the aims of this project will be achieved regardless of what you feel," the die was cast and the impression was gained of a highly prescriptive intervention.

A good example of the degree of confidence in the project design was the presentation at the workshop of a new NWSDB organization chart, upon the adoption of which depended one of the conditions precedent to disbursement. This chart (reproduced in Figure 22) had appeared in the Project Paper and was one of the recommendations of the visiting project design teams. The reaction to the new structure at the workshop belied the supposition that it had been developed with the full participation of NWSDB staff. The project had to live with this structure almost from day one, although modifications were made, the most significant being the conversion of the Addl GM (Support Services) post to Addl GM (Corporate Planning). It was understandably impossible to find anyone with a breadth of experience to cover financial, commercial, administration, personnel and training activities. Three candidates were appointed but all left and towards the end of 1989 the reality of the situation was accepted and the conversion made.

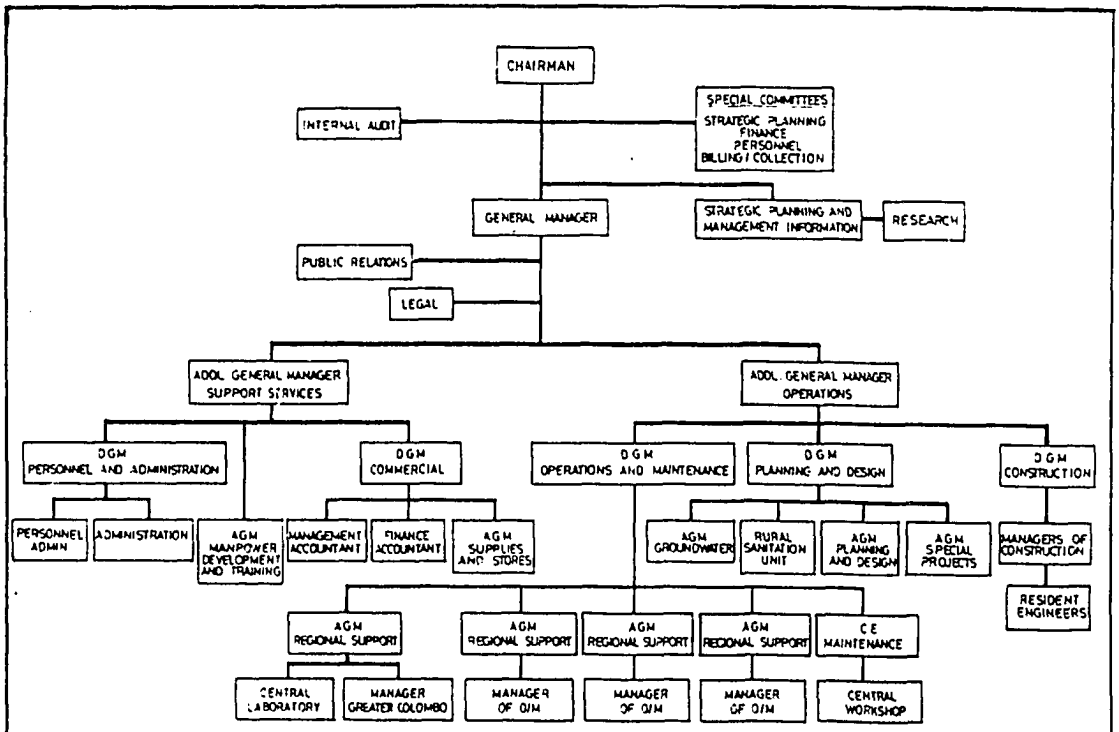

Figure 22

NEW NWSDB Organization Structure at Project Inception

It is probably correct to state that although this sudden-shock approach to project initiation and the almost totally prescriptive nature of the project design were totally counter to the more tradionalist philosophy of the gradualist approach, with all that it implied in terms of building client ownership of the change process, the positive result was that the institution was forced into addressing the change issues. This aspect is discussed in more detail as one of the lessons learned in Section 11.

IDENTIFICATION OF KEY AREAS

As the project progressed and the initial resistance began to subside, a strategy was mapped out to prioritize the consultant input in such a way that success could be achieved in key areas which would in turn generate increased support for further changes. The initial concept of overall outreach was changed to one based on pilot demonstration projects. In the time available and with the limited specialist resources (at least until the prime contract was amended) it quickly became evident that a great deal of effort was being expended for very little return. Countless consultant hours were being spent in protracted deliberations over such issues as job specifications, scheme design criteria, community participation techniques, and commodity listing. Important as these issues were, they were not directed towards the major focus of change to create a commercially-oriented water supply agency with considerably enhanced autonomy, in terms of its freedom to develop policies and implement procedures.

Six principal pathways to institutional strengthening were identified, not all at once, some only became apparent in the second year of the project. These pathways are identified in Figure 23, the pathway - nodes signifying specific interventions which were key building blocks in securing goal achievement.

The concept of pilot demonstration projects was applied to almost all the pathway nodes shown in Figure 23. In this way a more intensive concentration of effort could be directed, usually in a specific region, problems ironed out in a collaborative mode, and ownership by NWSDB staff secured relatively early. Since resistance to ID tended to be concentrated in Head Office, by virtue of the fact that the longer-serving engineers were based there and it was they who had the most to lose from regional decentralization and the building-up of expertise in non-traditional design/construct areas, demonstration projects were carried out whenever possible in the regions. There the younger managers had nothing to lose, they were less imbued with the more obstructive, highly conservative group culture in Colombo, and, to be frank, they were more in touch with the raison d'etre of the institution, namely the supply and sale of water to the NWSDB's consumers. Examples of such demonstration projects are listed below:

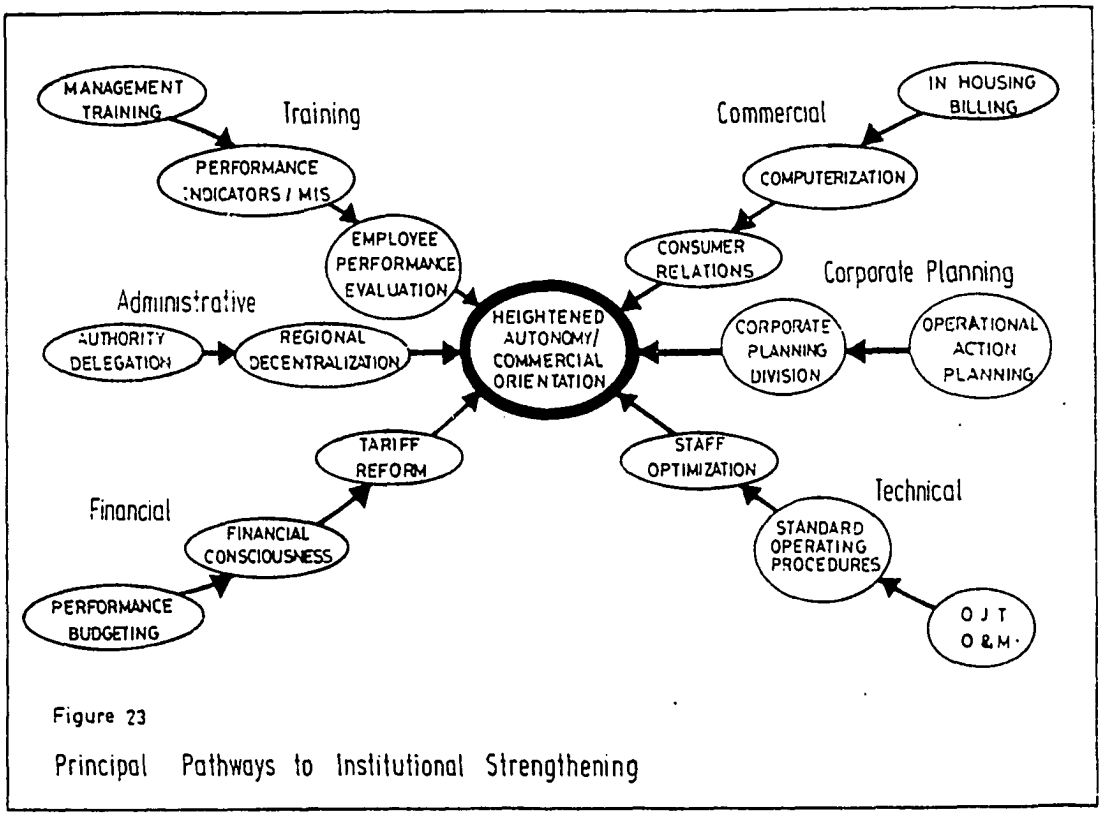

Figure 23

Principal Pathways to Institutional Strengthening

Pathway	Node	Demonstration Project Location
Training	Management training	All areas
	MIS	Kurunegala Region
	Employee performance evaluation	Kandy Region
Commercial	In-house billing	Greater Colombo
	Consumsr relations	Kandy Region
Administrative	Decentralization	Southern RSC
Corporate Planning	Operational action planning	Central RSC
Financial	Performance budgeting	Southern RSC
Technical	OJT/O&M	Southern/Central RSC
	Staff optimization	Southern RSC

The positive result of demonstrating the applicability of a particular strategy in one area was that the NWSDB staff associated with the pilot test became advocates of the process and helped to "sell" it to the rest of the institution. Also, as the project progressed, those regions or areas which had not been involved in the test started to demand that they also be included, they did not want to be left behind. Eventually, the process developed its own momentum and, particularly in issues related to decentralization, accelerated and expanded to such an extent that it was difficult for the ID team to provide the necessary support.

As a consequence of the increased demand, networking became accepted as a valid means of sharing experiences. A group of managers from one region would help to train others in a specific functional area. This development illustrated a major cultural change, the initial somewhat timid, exploratory exchanges of experience based on individual solution feeders (see Figure 5) eventually blossomed into collaborative workshops where staff from different regions shared experiences and developed action plans. There were numerous examples of such networking during the second half of the project, typical areas addressed included billing procedures, team building techniques, preventive maintenance, operational action planning, employee performance evaluation, community participation techniques and consumer relations.

PART THREE

PROJECT ACTIVITIES AND IMPORTANT LESSONS

ID Initiatives - Case Studies, Innovative ID Strategies, Project Monitoring and Evaluation and Lessons Learned.

This section highlights a series of individual ID initiatives which typify the wide range of areas covered by the project. The case studies have been selected to include both successful and not-so successful examples. The list is by no means exhaustive, neither are the examples set out in any particular order of priority. Nevertheless, the analyses serve to illustrate how ID interventions are affected by the mulifaceted forces previously discussed and how progress fluctuates as these forces come into play.

DECENTRALIZATION

Decentralization of the NWSDB was without doubt the most significant ID initiative undertaken, not least because it resulted in so many other positive spin-offs which assisted the ID momentum overall.

For almost the first year of project activities, with the exception of introducing in-house billing for Colombo, no specific attention was paid to regional decentralization since as described in Section 7 the initial project approach was more "broad brush," dealing with institution-wide issues such as personnel procedures, job procedures and authority delegation limits. At the first annual project monitoring workshop held in June 1986, a key note address by the Secretary/MLGHC described a new government commitment to decentralization of the government administrative machinery with the setting up of Provincial Councils and a new layer of smaller local authority bodies (Pradeshiya Sabhas).

This new national policy of decentralized government essentially marked the beginning of a return to the pre-colonial system of local government administration being based at the village level, and the NWSDB decentralization objective fitted very firmly into this national context. Within a very short period of time tentative areas of jurisdiction for the RSCs were determined through policy meetings involving NWSDB senior management and the parent Ministry, making the areas as contiguous as possible with the Provincial Council boundaries, and a start was made in Southern RSC as a pilot demonstration model.

A tremendous amount of enthusiasm was generated among the relatively young management team in Southern RSC and it very quickly became apparent that the initial scope of decentralization envisioned in the Project Paper was not going to satisfy their aspirations. Over almost a 2-year period, from June 1986 to the middle of 1988, the scope of regional decentralization was continually addressed at policy review meetings involving the parent Ministry, at the Project Steering Committee and at the annual project monitoring workshops. Drawing on the lessons learned in Southern RSC and on experience gained from Central RSC (where consultant intervention started early 1987) the shift of functional area responsibilities from Head Office to the RSCs finally assumed the dimensions shown in Table 8.

Table 8. Division of Responsibilities Between Head Office and the RSCs

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

This degree of Head Office authority delegation was far in excess of that ever envisaged at the start of the project and resistance to its implementation continued throughout the project from those based in Head Office, and particularly from those who had no prior experience in O&M or the other "new" areas of NWSDB responsibility. Even as late as the second half of 1989 the divergence of views as to how far decentralization should go was quite marked, as shown by the recommendations of working groups reviewing further decentralization goals. The composition of the group had a highly visible impact on the recommendations (see Box 17).

Box 17. Divergence of Views on Further Decentralization Goals

	Working Group Composition	Perceived Priorities
A.	Head Office bias (Senior managers of special projects, O&M back-up support and Colombo RSC)	o Upgrade management status o Ensure RSC reporting through Addl GM (Operations) to GM o Relate RSC planning to Corporate Plan (at that time centered in Head Office)
B.	RSC bias (Senior regional managers, non-technical functions)	o Include decentralization of groundwater o Expand financial autonomy o Provide more resources to enable more work to be performed at RSC level

Decentralization Progress

Of course, progress was not equally distributed, neither for all decentralized functions nor among all RSCs. The rate of decentralization for the four RSCs addressed is shown in Figure 24, based on a decentralization status matrix which is reproduced in Table 9. The fluctuating rate of progress shown in Figure 24 reflects the impact of various forces. The regression which occurred in Southern RSC, for example, from the third quarter 1987 to almost the end of 1988, was caused by the JVP insurrection which at that time was concentrated in the south of the island. During this period of regular curfews, work stoppages and heightened tension, regional management quite naturally focussed solely on basic essentials of supplying water, visits by consultants were not productive and for much of the period were not approved by USAID for security reasons.

Other major fluctuations evident in Figure 24 were caused by changes in senior regional management (Central RSC third quarter 1989 and third quarter 1990; Greater Colombo RSC early 1989), and by a too hastily conceived privatization proposal for Greater Colombo (end 1987) encouraged by resident advisors in the MLGHC, which eventually got nowhere because of the national elections and adverse security situation, but which did result in serious dissolusionment and depression within the RSC as evidenced by the low decentralization status in the middle of 1988.

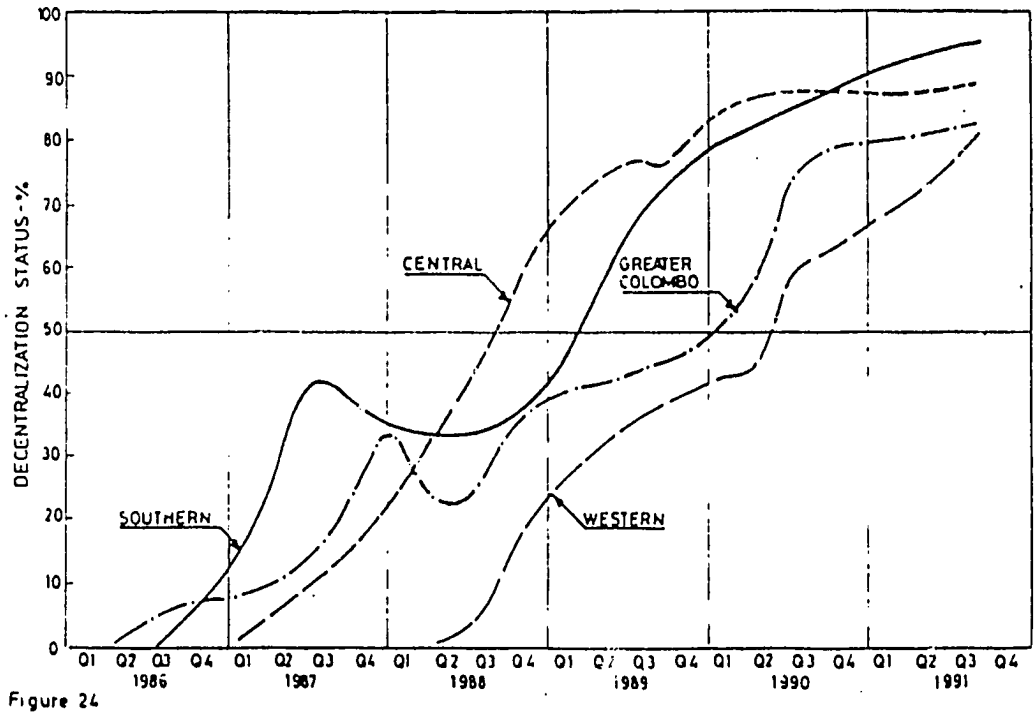

Figure 24

Regional Support Centre Decentralization Progress

Table 9 Decentralization Status Matrix

Indicator	Maximum Score	Explanation
Management upgrading	20	Team spirit, internal authority delegation, decision making
Forward planning capability	10	Operational plans, liaison with government agencies, assessing community needs
Budgeting ability	5	Performance budgeting, cost control, financial consciousness
Financial autonomy	20	Decentralized computerized general ledger, payroll
Personnel autonomy	5	Employee performance evaluation, counseling
Computerized billing	15	In-house computerized systems, disconnection campaigns, consumer awareness
Preventive maintenance/ operations control	10	Standard operating procedures, quality monitoring
Key staff resources	5	No key vacancies
Physical facilities	10	Office, stores, workshop, laboratory
	100	

The intervention periods necessary to reach various levels of decentralization status were as follows based on the matrix in Table 9 (in years):

RSC	Decentralization Status 50%	80%
Greater Colombo	3.75	5.5
Southern	2.75	3.5
Central	1.75	3.0
Western	2.25	3.5

It is interesting to note that in general it required from about 2 to 2.5 years to achieve 50% decentralization status and from 3 to 3.5 years to achieve 80% status. These periods do not include the time taken to achieve similar levels of decentralization in Greater Colombo RSC. In this case more effort was needed because of the far greater political interference and divided responsibilities (part of the Greater Colombo system was in fact managed by Colombo Municipal Council) and because of a far more unionised, recalcitrant workforce with a management tradition not conducive to implementing performance-based working procedures. The relatively short period experienced in Central RSC to achieve a reasonable degree of decentralization, compared to other regions, resulted from the following:

- o Experience gained by the TA team in Southern RSC enabled strategies to be adopted more quickly.
- o The TA team concentrated almost exclusively on Central RSC because of the problems in the south.
- o The Central RSC management developed a competitive spirit and wished to "overtake" Southern RSC in the decentralization stakes.

End-of-Project Status

The status of the programme at the end of the project was that 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 five RSCs as existing in August 1991 are shown in Figure 25, the number of piped water supply schemes and served population are summarised in Table 10. The level of financial authority enjoyed by the RSC senior managers at the end of the project was twenty times greater (Rs.500000 compared to Rs.25000) than that enjoyed by the engineer managers responsible for regional operation at project inception.

Table 10. NWSDB Regional Support Centres

Regional Support Centre	Office Location	Population Served (thousand)	Number of Schemes
Greater Colombo	Colombo	1500	1
Southern	Matara	278	23
Western	Colombo	404	48
Central	Kandy	493	87
North-Eastern	Trincomalee	270	40
	Total	2945	199

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. Variations in individual RSC organization structures did exist, these are discussed in the following sub-section.

New or rehabilitated office, laboratory, and workshop facilities had been provided in some of the locations. In-house micro-computer based billing and collection procedures had been established, and with the introduction of region-wide collection targets, financial performance had improved dramatically.

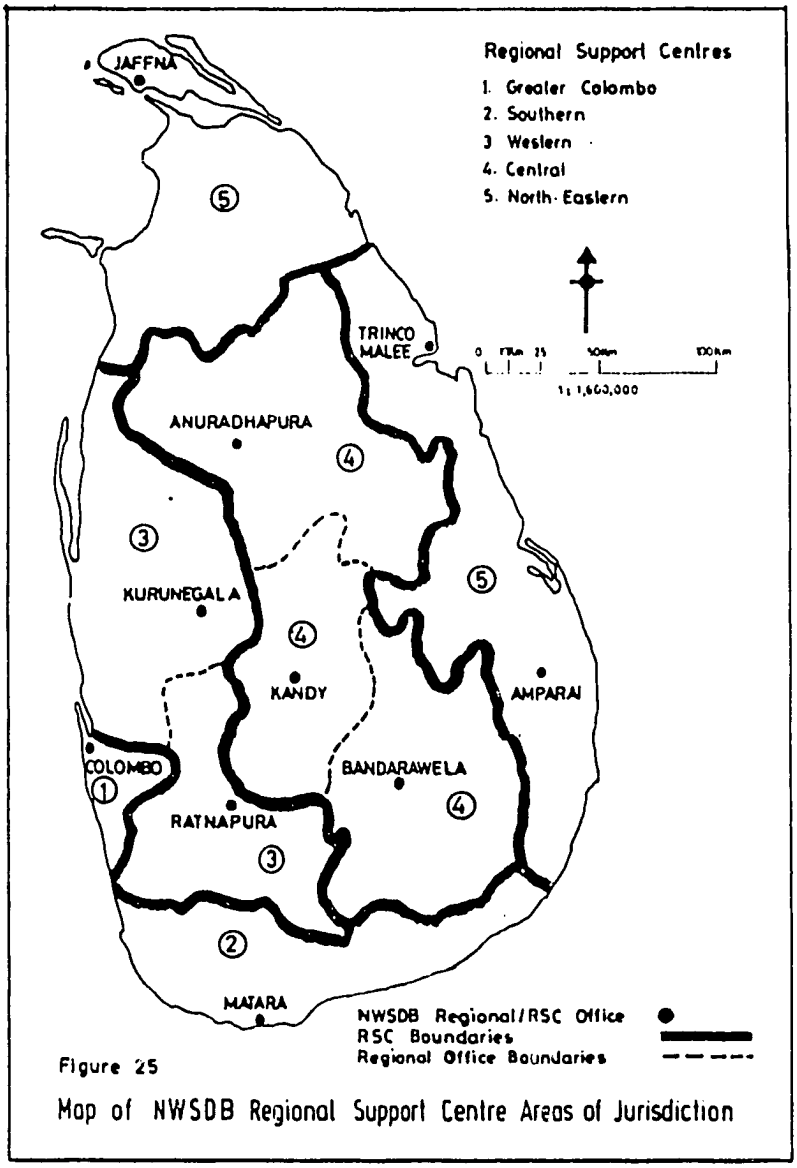

Figure 25

Map of NWSDB Regional Support Centre Areas of Jurisdiction

A major impact of decentralization was improved liaison with decentralized government agencies and communities and a much improved NWSDB-consumer interface. The RSC management now spends considerably more time in formal liaison meetings with decentralized government agencies. The DGM represents the RSC at monthly District Coordination Meetings, attended by the Provincial Chief Minister, MPs, and heads of other government departments, while other RSC managers have regular coordination meetings with Provincial Councils, Government Agents, etc. Whilst strengthening the coordination with the political forces at the regional level, this enhanced liaison process also has the positive effect of weakening the political interference generally. The regional politicians are more in touch with real community needs than their masters in Colombo who traditionally try to influence things through the NWSDB Head Office, which is equally out-of-touch with the real situation at grass-roots level.

Decentralization within the RSCs

An innovative approach first introduced in Southern RSC was the concept of a "Mobile RSC Office" whereby the RSC management and support staff visited towns in their area of authority on a rotation basis in order to discuss problems and explain the reasons for such measures as tariff increases, service interruptions, etc. The "Mobile Office" had the effect of introducing consumers to the District Engineer, OICs and other staff responsible for their area and also improved the responsiveness of the NWSDB staff to the consumers. This concept was most successful in the south of the country where the civil insurrection had created a wide gulf between the people residing in the area and public-sector officials. In 1991 Central RSC also adopted the strategy with similar success.

Care should be taken here not to draw too close a parallel between the RSC Mobile Office and the Mobile Presidential Secretariat introduced by central government in 1989. This latter process was introduced in an attempt to solve the problems of the rural masses through the personal intervention of the President, Ministers and other senior government officials, who visited specific areas en masse for a few days to receive representation from the local people. The process had good intentions but the method adopted tends to reaffirm the old system that nothing can be achieved without the intervention of the central authority.

The RSC Mobile Office, by comparison, genuinely seeks to address the issues at the RSC level (no Head Office officials attend) and to build communication links between the RSC staff and the consumers.

Decentralization Encourages Technical Improvements

One advantage of decentralization that became very evident early on in the programme was that administrative improvements tended to spur on technical improvements. For example, experience in Southern RSC showed that ID interventions in such areas as delegated responsibility, team building, developing a financial consciousness, improving purchasing procedures and accounting systems, gave the management both a pride in their more "efficient" systems and an incentive to improve their traditional technical priority areas. With their minds now less burdened by irritating administrative procedural delays they focussed on implementing preventive maintenance, increasing water quality monitoring, developing standard operating procedures for treatment plants and staff optimisation studies.

The success of Southern RSC can be contrasted with the difficulties experienced in Greater Colombo RSC during the initial period of the decentralization programme. There, a reluctance to accept new management styles based on performance criteria and a continuing refusal to hold individuals accountable for their actions resulted in an almost total rejection of interventions to upgrade technical operational performance. In fact on some occasions cooperation with specialist consultants in such areas as OD and O&M was totally withdrawn.

This observation mirrors that reported by Damanpaur and Evan (1984) who introduced the concept of "organizational lag," which stated that technical innovations tend to lag behind administrative innovations because changes in an organization's climate, personnel policies, internal relations, etc. tend to provide new opportunities for innovations in the technical area.

Tentative Decentralization Model

It is difficult to summarise the ID approach that was used to achieve this decentralization success. So many interventions were running concurrently that there was not, in fact, one specific intervention labelled "decentralization." If it is possible to define the "model" that evolved, it is probably something on the lines of that shown in Figure 26.

The ID team were involved in each of the activities indicated, with the intensity of involvement decreasing as the project progressed and the RSC staff gained more confidence in trying out new systems themselves without consultant support. A conscious effort was made to reduce the TA support in order to avoid the creation of an "ID bubble."

To conclude, decentralization of the NWSDB was a significant success and far exceeded the somewhat limited vision in the Project Paper. It is interesting to note that the strategies adopted to achieve decentralization concur in almost every case with the hypothetical operational principles suggested by Rondinelli and Nellis (1986) in a comprehensive review carried out for the World Bank of decentralization policies in developing countries (see Box 18).

Box 18. Basic Operational Principles for Successful Decentralization

- o Small-scale programmes expanded incrementally
- o New procedures should be kept simple and appropriate to the capacity of the organization (not too revolutionary)
- o Long-term gestation period before benefits realised. Testing and political support essential.
- o Gradual transfer of responsibilities backed up with training
- o ESA assistance must be phased out gradually, the organization must develop a capacity to support itself.
- o Training must also be given to central bodies so that they can appreciate the need for, and support, the decentralized organization.
- o Financial resources must also be transferred.

Adapted from Rondinelli and Nellis (1986) and proved to be totally applicable to the NWSDB decentralization process in Sri Lanka.

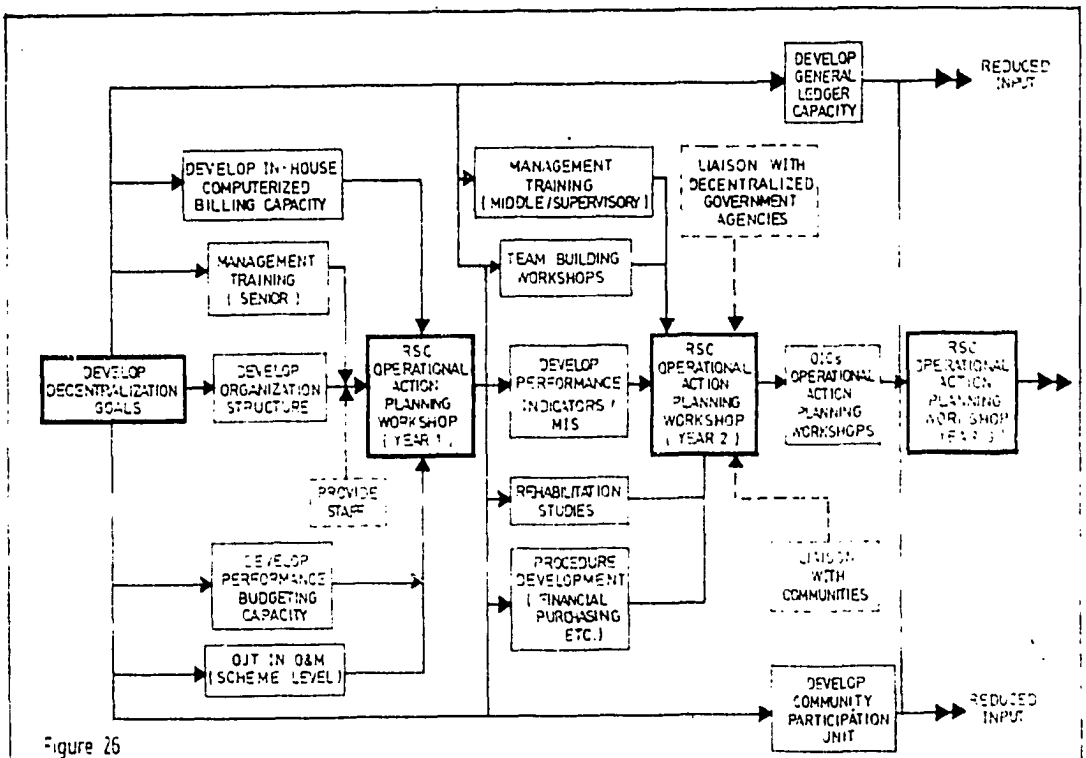

Figure 26
Building Decentralization Capacity Model

At the time of project completion the decentralization programme was still moving ahead under its own momentum, the enthusiasm of those involved was increased by talk of privatization and rumours that the NWSDB would be included in the overall government strategy for enhanced private sector involvement. The relatively young but mature managers in the RSCs, with a wider vision than their counterparts in Head Office, were excited by the prospects of possibly being given the opportunity to run their own RSCs on a franchised basis. By comparison, the more traditional capital projects oriented managers in Head Office where wondering at just what kind of monster the decentralization programme had created! This aspect is discussed further in Section 11 in the context of sustainability.

ORGANIZATION STRUCTURES

From its inception, the organization structure of the NWSDB was deemed to be rigid, almost like a fixed asset. With the public-sector propensity for guaranteed employment, a fixed cadre, and promotion based purely on years of seniority within the organization (once basic paper qualifications had been achieved), a fixed structure provided security and a barrier against untoward interference, either of a political or a personal disposition. The new organization structure included in the Project Paper (Figure 22) and handed down to the participants at the preimplementation workshop as something that was already agreed to, reinforced the concept of immutability.

Gradually, as the project progressed and particularly as the decentralization programme began to take effect, the constraints of a rigid structure became apparent. The concept of a Support Services Manager embracing a wide spectrum of financial, commercial, administrative, personnel and human resource development functions had limited success. Support Service managers were appointed in some of the RSCs, but with a much-reduced responsibility span, and in Head Office the Addl GM (Support Services) post was eventually converted to Addl GM (Corporate Planning) in an attempt to give a high visibility to the corporate planning function, but also to permit individual operating area plan development to be coordinated at the executive management level.

Changes in Organization Structure

By the end of the project the main NWSDB organization chart was as shown in Figure 27. Other key changes which had been incorporated as the project developed included DGM (Commercial) reporting to Addl GM (Operations) instead of being responsible for all financial activities, the elevation of AGMs (RSC) to DGMs (RSC) with the abolition of the Head Office post of DGM (O&M), the creation of a post of Chief Financial officer - DGM (Finance), the conversion of the AGM (Research) post to AGM (Colombo RSC) and the greater segregation of functional responsibilities in the planning and design and construction areas.

These changes generally resulted from the greator importance afforded the RSCs and reflected the practical linkages between commercial and operational areas. The high status given to the financial area was considered necessary because of the need to continually maintain a high

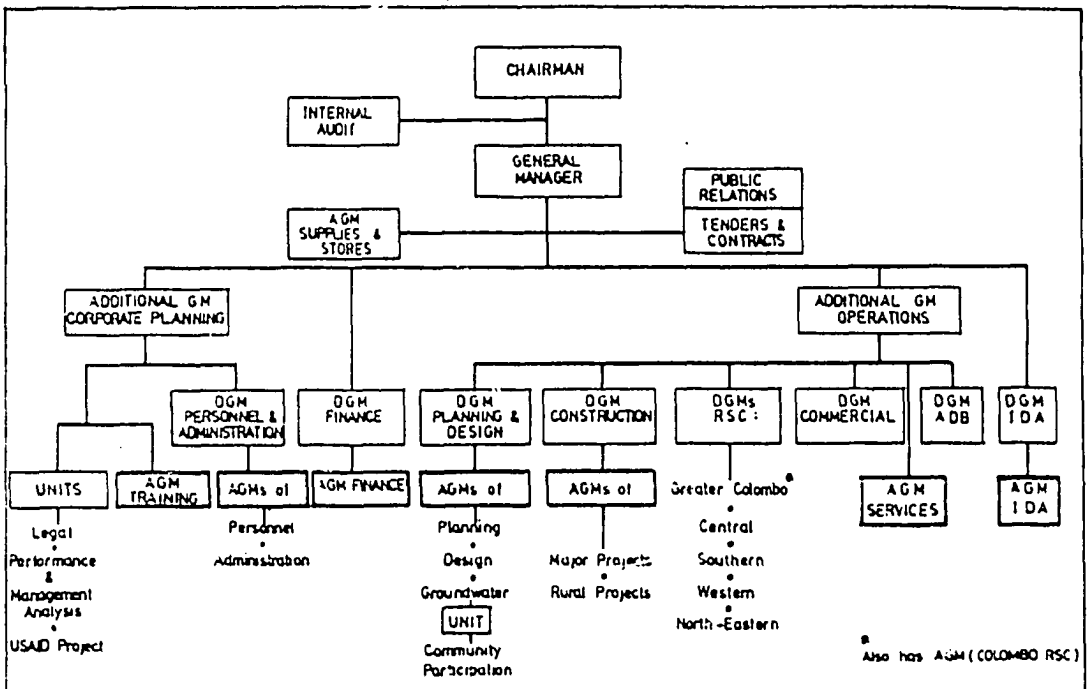

Figure 27

NWSDB Organization Structure at end of Project

profile on financial performance. An organization with 7300 employees (the approximate level early 1991 having increased from about 6000 in 1984) disbursing 3% of the total annual national capital budget demands a financial manager reporting direct to the Chief Executive Officer (GM).

Different organization structures evolved in the RSCs, reflecting the scale of operation and to some extent the personalities involved. Examples for the Southern, Central and Greater Colombo RSCs are shown in Figures 28, 29 and 30 respectively.

The inclusion of groundwater functions in the Southern RSC reflects a further decentralization move initiated early 1991 to disband the Head Office groundwater function. In Southern RSC groundwater development will be the responsibility of Manager (Construction), with maintenance carried out by the RSC Workshop (under Manager-O&M), and community participation aspects related to well siting and caretaker training handled by a sociologist reporting to Manager (Planning and Coordination). This absorption of groundwater functions by the RSC is an excellent example of an internal reorganization designed wholly by the RSC management (no TA involvement). It also aids staff optimization, no new management post has been created and only essential skilled technical staff have been transferred.

In most of these changes the role of the ID consultants was to act as catalysts, helping by suggesting alternative structures and attending NWSDB meetings where reorganization issues were addressed. Great care was taken not to fall into the trap of hastily agreeing to a new structure which was later found to be unworkable. All the key changes had to be approved by the Board of Directors, changing a structure again at short notice would have been embarrassing to say the least.

The NWSDB management was forced by circumstances to recognise the impossibility of operating within a fixed structure during a time of major change, and many hours were spent juggling alternative candidates to fit into the equally rigid designated numbers of senior (DGM, AGM) positions. As mentioned earlier, there were occasions when changing even one person of this rank had a domino effect, and when only one vacancy was available for three candidates of equal seniority (if not necessarily equal competence), similar machinations were performed to try to satisfy everyone, although not always in the best interests of the institution.

MANAGEMENT DEVELOPMENT

The basic inadequacies of the NWSDB management capabilities at the start of the project have been alluded to earlier, in the context of the cultural climate of the institution and the major shift in the agency's mission as it changed from a capital-projects oriented government department to a service/commercial oriented corporation.

The management profile of the NWSDB in 1985/1986 tended to show the following characteristics:

- Unwillingness to make decisions
- Limited delegation of responsibility, most decisions, even of an operational nature, made by executive management

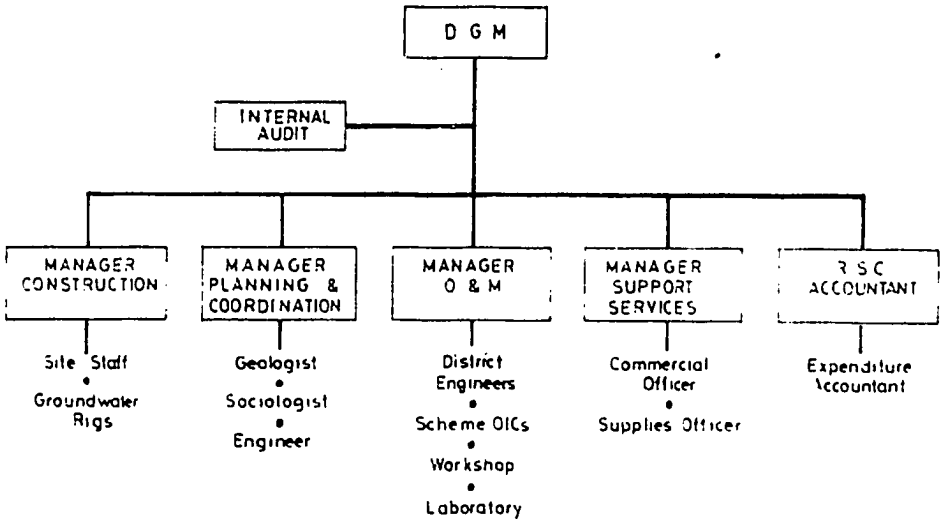

Figure 28

Organization Structure for Southern RSC

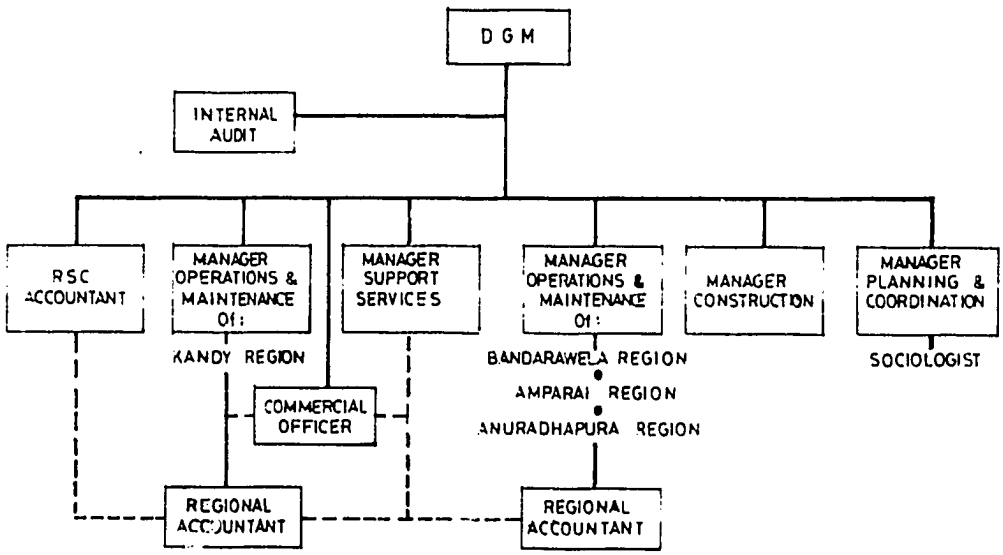

Figure 29

Organizational Structure for Central RSC

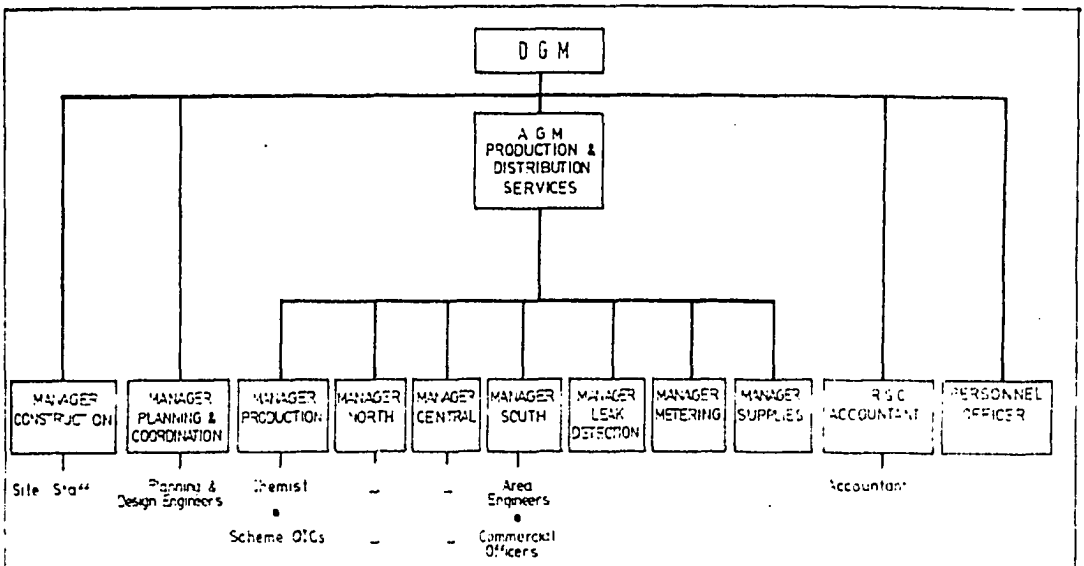

Figure 30

Organization Structure for Greater Colombo RSC

- Power and influence dominated by civil engineers who had a strong bias towards capital works.
- Limited group management skills, meetings dominated by individuals who were generally the most senior managers present
- Lack of accountability and suppression of initiative, reluctance to be innovative
- Absence of basic management systems (MIS, performance indicators, budgets).
- Strong sense of pessimism and criticism of the institution
- Strong resistance to change, although there was an awareness that change was required.

This profile was prepared from an extensive needs-assessment carried out by management development specialists from Training Resources Group (under the WASH Project). The profile was based on the specialists' involvement with the NWSDB from the early days of project design and from later interactions with both NWSDB staff and the TA team at the preimplementation workshop and the first annual monitoring workshop in June 1986.

The management inadequacies were not unique to the NWSDB, they were typical of any organization faced with a major role change. However, the degree of inadequacy was perhaps exacerbated by the fact that the NWSDB managers were engineers. This observation should not be construed as a derogatory remark on the management competence of engineers per se, rather it reflects experience from elsewhere which has shown that conventional western-influenced technological training does not necessarily lend itself to the development of good managers.

This situation has been highlighted recently by surveys in the USA and UK. For example, according to Smerdon (1989) only one-third of top managers in manufacturing companies in the USA have technological training, whilst in the UK only 10% of the directors of the ten top construction companies have engineering qualifications (Tebbutt, 1989). In Japan, by comparison, two-thirds of the top managers in technological companies have technological qualifications.

Perhaps one of the reasons for the fact that engineers tend to be unrecognised as managers is that their training makes them somewhat inflexible with an inability to understand organizational and human issues. A study reported by Brown and others (1981) showed that compared to management graduates, engineers were less socially oriented and exhibited lower degrees of confidence. However, it was also shown that engineers who received management training did take on the same positive characteristics, in terms of human relations, as exhibited by the management graduates.

The management development component of the ID project was, therefore, given high priority. A period of almost 18 months elapsed before the first formal intervention took place, but this time period was necessary to enable the intervention to be designed to suit the specific requirements and also to allow time for some "cooling off" of the initial strong resistance to the project. The effort put into the design of the intervention was well worth it. Specific day-to-day operational problem areas were used as case studies and the managers had first hand experience in relating their subsequent training to these problem areas. An important factor, which was not lost on the implementing team, was the desirability of tailoring the intervention to meet the Sri Lankan cultural features, rather than just replicating material used in western cultures (see Box 19).

Additionally, the exigencies of the accelerated decentralization thrust announced at the monitoring workshop in 1986 made the intervention even more timely since a decentralized organization tends to need more leadership than a centralized one. In the case of a centralised agency (the NWSDB at the start of the project), established procedures and precedent guide decision makers whereas during the changeover to a decentralized form a clear vision must be maintained and senior managers must be able to react to the changing circumstances.

Management Development Approach

The management development intervention comprised a series of interconnecting levels and continued at varying degrees of intensity over the duration of the project. The basic strategy adopted is shown in Figure 31, the details of the initial stages of the senior management training component have been reported in WASH (1988a).

The basic approach was to actively follow up the formal training courses with day-to-day coaching by the resident TA team. This follow-up manifested itself in two ways, through facilitating and assisting in every-day operational issues and through workshops designed to address specific issues. These workshops ranged from half a day to three days in duration and whenever possible were held away from the office, usually in

Box 19. Development of a Sri Lankan Management Culture

"Good management, in the West, is defined in the left brain tradition. It enforces the belief that management is primarily the application of skills and techniques of man's creation to dominate and exploit the nature. Such a belief is explicit in both the design and content of MBA programmes of the Western tradition. In contrast, our own cultural heritage of the East suggests a belief in which people should learn to work in harmony with nature and with each other. We must redefine the Western thought to provide for right brain skills such as intuition and value of harmony and integration: Management is an (Asian) Art, and a (Western) Science."

from Nanayakkara (1990)

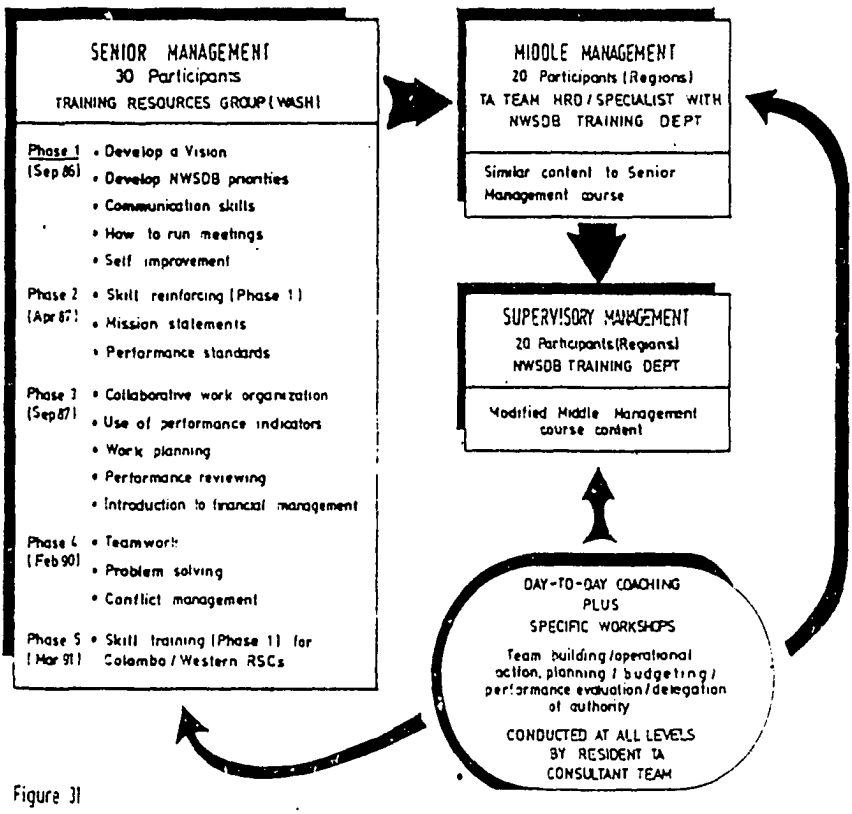

Figure 31

Management Development Strategy

a resort hotel. As for senior management training, the workshops were preceded by an intensive series of surveys designed to clarify need assessment, to surface problems and to secure the involvement of the NWSDB staff in the design and actual implementation of the training event.

The philosophy followed was to lessen the TA involvement in the workshop sessions as the project progressed. In the typical case of developing an operational analysis and action planning capacity in a particular RSC, for example, the first intervention would involve TA specialists working alongside the NWSDB managers, analysing problems and developing plans together. The next session, a year later, would see the TA team only participating in those areas where resources or training were lacking, and perhaps offering a critique of the plan presentation. The third year session would be carried out almost entirely by the RSC managers, with the consultants acting only as observers and offering coaching/comments after the presentations.

Not only did this process build up an in-house planning capacity, it also gave the managers valuable experience in presenting their plans in open forum before their peers. As the GM spontaneously announced to the participants when invited to witness the presentation of the annual operational plan in one RSC - "this is a remarkable development, in the space of just two years this young management group has demonstrated not only a high level of ability to work together as a team but is also now willing to discuss problem areas and past failures openly. Until very recently most of the group did not have the confidence to stand up and make a presentation let alone talk about their failures!"

Building team spirit was a hidden agenda in almost every management development initiative. The TA team laboured the point continually, constantly showing how the managers could profit from the support and experience of their peers and how a cohesive group was better able to establish a positive identity and thereby demand and receive additional resources. Over time, particularly at the regional level, high levels of team spirit were developed, regardless of the professional leanings of the managers or their seniority. A truly decentralized corporate identity came into existence during late 1989/early 1990, the upsurge of activities following the breaking of the JVP insurgency and the huge national sigh of relief with which it was accompanied, served as a spur to this development. From 1990 onwards decentralization had its own momentum and the formal management development interventions thereafter focussed on basic skill reinforcement and attention to specific issues that had not been touched on before (conflict management, liaison strategies with the political lobby, management systems, etc.)

The model shown in Figure 31 oscillated between formal interventions and informal but regular coaching. A formal senior management training course would be followed by constant reinforcing (lessons learned sessions, putting skills into practice) by the TA team, who in turn would identify new areas to be addressed by the next phase of the senior management course and so on. In a parallel loop, middle and supervisory management courses were conducted around the regions, following more or less the main areas covered at the senior level, and again reinforced by regular resident consultant involvement in day-to-day operational issues.

The day-to-day involvement of the resident team was nothing if not intensive. In order to build the management capacity of a particular group or region, it was often necessary, in addition to carrying out group-centred activities such as team building, to prepare individual development programmes for specific managers. This effort was very time-consuming, job duties and responsibilities had to be defined, ways of handling the job and reacting to pressures observed, then finally, an individual programme developed which built on the manager's strengths and attempted to eliminate his weaknesses. This type of one-on-one coaching could continue as long as two years for any one individual, involving consultant/manager "closed-door" sessions on at least a monthly frequency. The pressure for the consultant to become a crutch for the manager in such instances took a lot of resisting, in some cases a deliberate and sudden withdrawal of support had to be done, for a temporary period, to make the manager realise that he had to stand on his own feet. The timing of such withdrawal had to be calculated with care, so as not to have an adverse effect on the group's output (that would reflect badly on the group, the manager, and the consultant) and so as not to turn the manager away from the consultant. A sudden feeling of being "left in the cold" can be quite traumatic. There was one case, however, where a senior manager changed abruptly from positively supporting to aggressively denouncing the consultants' intervention when his own personal consultant support was removed. It took over a year to bring him round and only when he had been transferred to another post about which he knew almost nothing and was obliged to seek out support again.

Balancing Consultant Input with Development Needs

During the course of this management development effort it was constantly necessary to assess management performance so as to optimise the TA team's input. The NWSDB management development needs were large, but the TA team was limited, hence it was always necessary to try to resist swamping an area with too much attention to the detriment of other areas. The sequential nature of the decentralization progress was more or less in tandem with the areas of attention of the TA team (Figure 24). One method of assessment was the group maturity profile, reproduced in Table 11, which provided a coarse scoring mechanism for evaluating the effectiveness of eleven group characteristics. The two RSC examples shown in Table 11 illustrate how the management development status could be quite different in two RSCs at the same point in time, regardless of the fact that most of the RSC managers had participated in the formal courses. The high score for RSC 'A' resulted from a long period of consultant attention in the region concerned, the low score for RSC 'B' reflected the low level of follow-up attention given to the RSC at that particular time. An assessment system such as that shown in Table 11 is a useful tool, it enables priority areas to be defined, both among competing RSCs and within each RSC on which particular criterion attention should be directed.

By the start of 1991 most of the RSCs had a smooth-running system in place of regular task planning and performance review meetings. The contrast between the 1991 situation and that at project inception could not be more explicit. Gone were the Head Office meetings of all managers where random issues were addressed, often with a rolling agenda, where people all talked at once and where virtually no substantive decisions were taken or

Table 11 Group Maturity Profile Assessment

Criteria	RSC 'A'	RSC 'B'
1. Clear communication within group	3	3
2. Adequate mechanism for feedback (soliciting responses)	4	1
3. Adequate decision making procedure (consensus, total involvement)	5	2
4. Goal definition and acceptance (summarising, recording agreements)	5	1
5. Shared participation in group leadership (defined area of freedom for subordinates)	5	2
6. Acceptance of minority views and persons (or totally ignored)	4	3
7. Feeling of interdependence with authority persons (group cohesion)	4	5
8. Appreciation of linkages with external environment (consumers, other groups/ offices)	4	2
9. Degree of adherence to administrative/ historic procedures (degree of flexibility)	5	5
10. Group working efficiency (time management, interruptions, agendas)	4	1
11. Forward planning (what is the outcome of the group meeting, targets, responsibilities)	5	1
Total	48	26
Rating	87%	47%

Notes a) Score on basis of 1 (poor) to 5 (excellent with 3 being average
b) Assessments carried out first quarter 1989

follow-up action and accountability agreed. In their place were highly organised, well run meetings where communication skills were practised and performance indicators reviewed. A typical series of meetings is summarised in Box 20 (for Southern RSC).

Box 20. Typical RSC Management Meetings Programme

Participants	Frequency	Purpose
All RSC managers	weekly	progress review, coordination urgent problem resolution
DGM/Man.Construction	biweekly	construction progress
DGM/Man.Support Services/Commercial Officer	monthly	billing/collection progress
DGM/Mans.Support Services, O&M/ District Engineers	monthly	performance review - billing/ collection, consumer complaints
DGM/Mans. O&M. Planning & Coordination/ District Engineers	monthly	performance review - O&M
DGM/Supplies Officer	weekly	purchase orders

In addition DGM attends following monthly meetings in Colombo - billing and collection; technical operations, staff meeting; consultative committee (parliament); Management Cell (MHC); and participates in monthly District Coordination Meetings with decentralized government agencies (three districts in RSC).

Changing Management Styles

It is interesting to evaluate individual managers retrospectively over the life of project to see if there was any evidence of them changing their management styles to suit different work situations. This concept is central to the theory of situational leadership as propounded by Hersey and Blanchard (1988). Evidence from the project is mixed. Out of 14 senior managers (DGM upwards) who all participated in the formal senior management courses, only 5 (36%) exhibited any marked propensity to be able to change their styles. The balance 64% tended to remain more or less at the management competence level they were at when the project commenced. Although there was evidence of application of some of the peripheral skills which had been taught (communication skills for example), the deeper concepts such as teamwork, problem sharing, conflict resolution and holding staff accountable were not much in evidence. It should, however, be noted that only half of the sample had actually been faced with active day-to-day coaching by the TA team, and the 5 managers who exhibited a marked, positive change in style were members of this batch of 7. This observation suggests, although admittedly from a small sample, that formal training courses alone do not result in institutional management development. The key is continuing support and reinforcement through day-to-day facilitating and coaching on the part of resident ID consultants.

Evidence from the project lends credence to the situational leadership model, but it also shows that not all managers, in fact only a minority, appear to be capable of varying their styles to a substantive degree. Two examples will serve to illustrate the point. In one instance the manager of an RSC was transferred out and his place filled by a manager from another RSC. In accordance with the Hersey and Blanchard (1988) model, the transferred manager had a marked high task/low relationship style, characterised by a propensity for telling, guiding and directing his subordinates. As a result of his "benevolent dictator" approach his staff were protected (poor performance tended to be blamed on the system rather than the individual) and were fiercely loyal. The incoming manager by comparison, had a low task/high relationship style and was used in his previous RSC to participating, encouraging, and collaborating with his staff. The staff in his new area found it impossible at first to adjust to this new style. It was almost as if they were suddenly working in a vacuum, they had no orders to follow and they drifted. The new manager found it very difficult to adjust, what was required in this most difficult situation was a coercive approach, mixed with a more selling style (explaining, clarifying, persuading). Being coercive is not easy in the Sri Lankan culture, particularly among one's peers, and more so when the issues requiring assertiveness were those which were alien to the subordinates (individual accountability, performance reporting, etc). After a long gestation period a shift in attitudes did occur, but mainly on the part of the key subordinates not the manager. The staff slowly began to adjust following careful interventions by the TA team, attendance at formal management development courses, and most importantly, the easing out of some of the more obstructive "old guard" through application of leverage. On this occasion the leverage was managed within the NWSDB, recourse to the external environment was not necessary.

In the other example, a senior manager who had a very "motherly" style, and who was ultra-protective of his chosen clique but bitterly outspoken about those who were outsiders, was transferred to an area where the staff were accustomed to the low task/high behaviour supervision style. The motherly treatment meted out by the incoming manager was viewed as interference in unnecessary detail and the staff retreated into their collective shell. After a few weeks of increasing frustration the new manager sought the advice of the TA team and responded readily to a tailor-made development plan to help change his style. One of the biggest difficulties was in getting him to have confidence in his subordinates, once he saw that they could be trusted to do the job for which they were trained he could concentrate more on being a team player rather than a demi-god and group harmony was restored.

The other examples of specific ID initiatives described in this section were all supportive of the overall management development process. The management skills were not upgraded in a theoretical context, real live situations were chosen and the day-to-day involvement of the engineering staff in new areas and procedures such as performance budgeting, consumer relations, and billing and collection very soon impressed upon them the need to tune up their management skills. "To practice is to achieve" was the key dictum on this project.

CORPORATE PLANNING

One of the key objectives of the project was to establish an in-house corporate planning process (in the Project Paper the term strategic planning is used but during the latter stages of project implementation the term corporate planning was standardised to signify the linkage with corporate goals and to aid the development of a corporate agenda*). The rationale for this effort was to increase institutional autonomy in policy formulation and at the same time to reduce reliance on the parent Ministry for all substantive policy-related decisions.

The initial project objectives envisioned the formation of a corporate planning committee as a key step in the institutionalization of the process and early in 1986 a committee was formed, based in MLGHC, and chaired by a senior Ministry officer at the Additional Secretary level. Membership of the committee comprised the NWSDB Chairman and GM with co-opted members comprising the USAID Project Officer, the TA Project Manager and others as necessary depending on the agenda items. Later in the year the committee membership was expanded to include the MLGHC Director of Policy & Planning and a senior NWSDB manager to serve as technical secretary. The committee met monthly and reviewed and decided on policy and procedure recommendations submitted by various task forces and working groups. Typical items addressed were limits of financial and administrative delegation, procedures for project selection, functional area reorganization, role of community participation and financial viability.

Useful as these meetings were it soon became apparent that the committee was not actively helping the creation of a corporate planning process in the NWSDB. Being based in the MLGHC and chaired by a Ministry official it was little more than a formalized process to secure government clearance on policy and procedure recommendation emanating from working groups.

The Management Cell

During the first half of 1987 when the rapidly deteriorating financial status of the NWSDB became recognised, a request was made to USAID by MLGHC for the TA team to take on line management responsibilities. This approach had been followed earlier in the year when a local consultant DGM (Finance) had been retained by the NWSDB with executive management powers for financial management. Following a dialogue between USAID and MLGHC the decision was made to disband the corporate planning committee and to form a Management Cell which would report direct to Secretary/MLGHC on ID progress. The Cell would comprise NWSDB executive management, the TA Project Manager and his deputy and the resident expatriate advisor to Secretary/MLGHC. USAID did not agree to placing the TA consultants in line management positions since even ignoring any potential serious problems of contractural responsibility for NWSDB operations, this was rightly seen as a move guided by a desire to solve short-term problems (primarily those related to financial viability) and one which would not be in the long-term interests of the ID process. Line management responsibility would also be totally contrary to the basic principles of process consultation.

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* In this report corporate planning is used throughout

The Cell got off to a shaky start with the first meeting in August 1987 comprising all the DGMs, this was presumably the result of pressure brought to bear within the NWSDB to minimise the impact of outside advisors and to keep decision-making control within the engineering caucus. The degree of tension surrounding discussion of those agenda items dealing with the reorganization of the financial/commercial areas and the filling of the post of Addl GM (Support Services) indicated that at that stage in the institution's development, the Cell as composed at its inaugural meeting would not work. Following intervention by the MLGHC in the form of a reaffirmation of the Cell objectives, membership and responsibilities, subsequent meetings were restricted to the NWSDB Chairman, GM and Addl GM (Operations) together with the TA Project Manager, his deputy, consultant DGM (F) and Advisor/MLGHC. Meetings were held twice a month on average and about every six weeks the Secretary/MLGHC attended for key issue discussions.

The Management Cell proved to be a most valuable concept for the following reasons:

- Being based in the NWSDB it transferred the policy-making environment out of the parent Ministry
- Being chaired by the NWSDB Chairman and attended by executive management it forced the NWSDB hierachy to address policy rather than just operational issues
- The involvement of the Secretary/MLGHC in a progress monitoring role ensured that accountability was maintained and deadlines met
- The presence of consultant advisors to help prepare the agenda ensured that priority NWSDB, government policy and performance issues were addressed
- The presence of the Consultant DGM (F) ensured that financial viability issues were always kept in the forefront

As the project progressed, the membership of the Cell was expanded to include Addl GM (Corporate Planning), DGM (Commercial) and from mid-1990 two other DGMs on a rotation basis. This widening of membership was intended to gradually expose more of the NWSDB senior managers to high level policy discussions, the ultimate objective being to disband the Cell and institutionalize policy formulation through the in-house Corporate Planning Division (CPD) which was formed early 1990. The management maturity of the senior managers in 1990 was far superior to the level existing in 1987 when the first abortive attempt was made to secure a wide senior management representation in the Cell. Also from 1990 onwards most of the meetings took place in the parent Ministry, not because the MHC was taking over control but because the NWSDB was determined that senior MHC representatives be involved in key policy discussions. The NWSDB was now pressurizing the MHC for action.

Corporate Planning Group

Although the Management Cell served an essential role in the policy development area, particularly with respect to preparation of Cabinet Memoranda on performance improvement strategies, deliberations on tariff reform, extent of decentralization, etc., it still did not meet the needs

establishing a truly participative in-house corporate planning function. This inadequacy was recognised and in 1988 two separate units were formed, a Corporate Planning Group and the Performance and Management Analysis Unit (PMAU), the latter tasked with managing and developing further the embryonic MIS.

The Corporate Planning Group consisted of the NWSDB/GM (serving as Chairman), Addl GM (Operations), a senior DGM who later became Addl GM (Corporate Planning), and the consultants as before. The Group had more narrow terms of reference than the Cell, basically to assess the strengths and weaknesses of the organization and to prepare the first ever NWSDB-generated Corporate Plan (as opposed to one produced earlier in 1985 by external consultants). This first NWSDB Corporate Plan was issued in 1989, and although the role of the TA team in preparing the document had been substantial, there was nevertheless for the first time a plan which had been approved internally by NWSDB executive management and the Board of Directors, rather than produced by an external group.

Corporate Planning Division

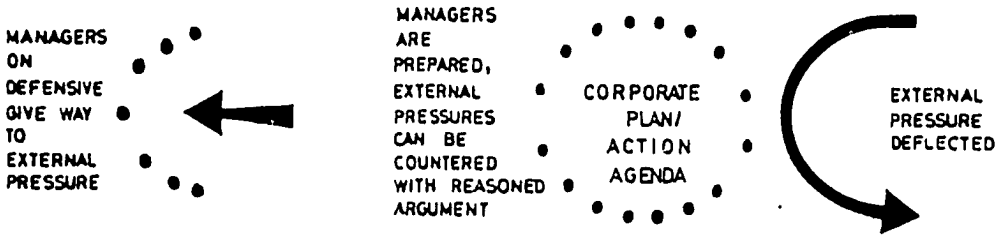
The WASH annual project monitoring event in 1988 concentrated on corporate planning issues and one of the monitoring team members, a senior Brazillian corporate planner from SANEPAR, recommended that the status of the Corporate Planning Group be considerably enhanced and that full time staff be provided in the areas of financial planning, MIS, systems analysis (organizational studies and data processing) and operational planning. This recommendation was fully endorsed and early in 1990 the Corporate Planning Group was superceded by the Corporate Planning Division headed by an Addl GM (the converted Addl GM/Support Services post). The CPD had a high visibility, on a par with the operations area, and was well-positioned to enhance the status of corporate planning within the organization.

The Institutionalization Process

Throughout 1990 the CPD spear-headed a programme of workshops designed with the specific purpose of securing total NWSDB management involvement in the corporate planning process. Following a two-day workshop in April attended by virtually all senior management to discuss various approaches to secure such involvement, a programme of two-day operational analysis/action planning workshops was held in the four RSCs and for the Head Office Planning and Design and Construction Departments. These events were attended by middle/senior management in each area and essentially followed the same format.

The basic message on each occasion was that the preparation and execution of a corporate plan was a fundamental step towards achieving corporate management. This objective was supported by all the participants because of the cohesive strength, based on sound planning principles, that it would give the institution, making it in turn more able to resist external forces and to be more in control of its own destiny (see Figure 32).

At each operational planning workshop the participants evaluated the strengths, weaknesses, opportunities and threats affecting their operations, conducted performance reviews and prepared formal plans for the three specific areas of O&M, water supply coverage and financial/management issues. The plans were predicated on meeting the NWSDB mission statement (which had been developed at one of the earlier project monitoring workshops) and which is shown in Box 21.



NWSDB 1985

INSTITUTION TOTALLY REACTIVE TO OUTSIDE ENVIRONMENT, NO COHESION NO CORPORATE AGENDA.

NWSDB 1991

CORPORATE PLAN PREPARED WITH FULL INVOLVEMENT OF MANAGERS PROVIDES SOUND BASIS FOR RESISTING PRESSURE OR AT LEAST SHOWING WHAT THE CONSEQUENCES WOULD BE IF THE IDEAS OF EXTERNAL ACTORS WERE TO BE IMPLEMENTED

Figure 32

Corporate Planning Supports Corporate Autonomy

Box 21. NWSDB Mission Statement

To serve as the Principal Agency responsible for providing a safe and adequate water supply to the population of Sri Lanka. In seeking to fulfill this mission the National Water Supply and Drainage Board recognises the need to conduct its operations within accepted criteria of financial viability and to eliminate recognised deficiencies over a reasonable period of time, thereby attaining a satisfactory balance between the quality of service provided and the cost to its customers of providing the service.

Prior to the workshops the managers had prepared detailed background papers setting out the current status and projections through 1995 for the following key operational areas (on an individual scheme basis):

- Population served
- Hours of service
- Quantity of water produced/billed
- Unaccounted-for-water
- Billings, collection, cost recovery
- Water quality monitoring (system samples with chlorine residual, presence of faecal coliforms)

For the first time, the NWSDB had an up-to-date data base on which to evaluate its actual level of service.

An interesting observation from the operational analysis workshops was how the participants' preferences varied for working group formation to develop the action plans. The more mature RSCs, for example, preferred three separate groups to study O&M, financial/management and water supply coverage; whereas those areas which had been less exposed to the ID intervention preferred all three issues to be studied by all groups. The advantages and disadvantages of these preferences are as follows:

	One group/one issue	Each group/all issues
Advantages :	• More time devoted to specific areas • Encourages more active participation	• Builds team spirit • Ideas shared among more people
Disadvantages:	• Recommendations may not reflect views of all participants	• One person may monopolise discussion • Less chance for involvement of more shy members

At a reconvening of all NWSDB senior managers at an intensive one-day workshop in September 1990 the individual area-based action plans were compressed into a NWSDB-wide action agenda with specific goals and more short-term targets established for the key areas of:

- Decentralization
- Service coverage (population served, new schemes/rehabilitation, policy on capital investment)
- O&M (reduction in unaccounted-for-water, improvement in water quality, preventive maintenance).
- Management improvement (staff optimisation, employee evaluation, overtime control)
- Financial issues (cost recovery, billing/collection targets, tariffs, decentralized financial autonomy).

Throughout the workshops held during 1990, the ID team acted as facilitators but by the final workshop considerably more than 90% of the workshop deliveries and workshop structure management was being enacted by the NWSDB staff themselves.

Based on the outcome of the September 1990 institutionalization of corporate planning workshop, the Corporate Planning Division prepared the 1991 Corporate Plan which was issued in the first quarter of the year. The plan concentrated not only on specific NWSDB objectives but also introduced a new national strategy designed to secure total coverage of the population by adequate water supply and sanitation facilities by the year 2000. The plan and strategy were presented at a two-day workshop in March 1991 attended by representatives from the major ESAs active in the sector and from the national implementing agencies (formal and informal sectors). The event was managed entirely by NWSDB staff. The basic goals and recommendations set out in the 1991 Corporate Plan were endorsed by the participants.

This event marked a significant turning point in the development of the NWSDB. The evolution of the corporate planning process outlined in Figure 33 had resulted in the 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.

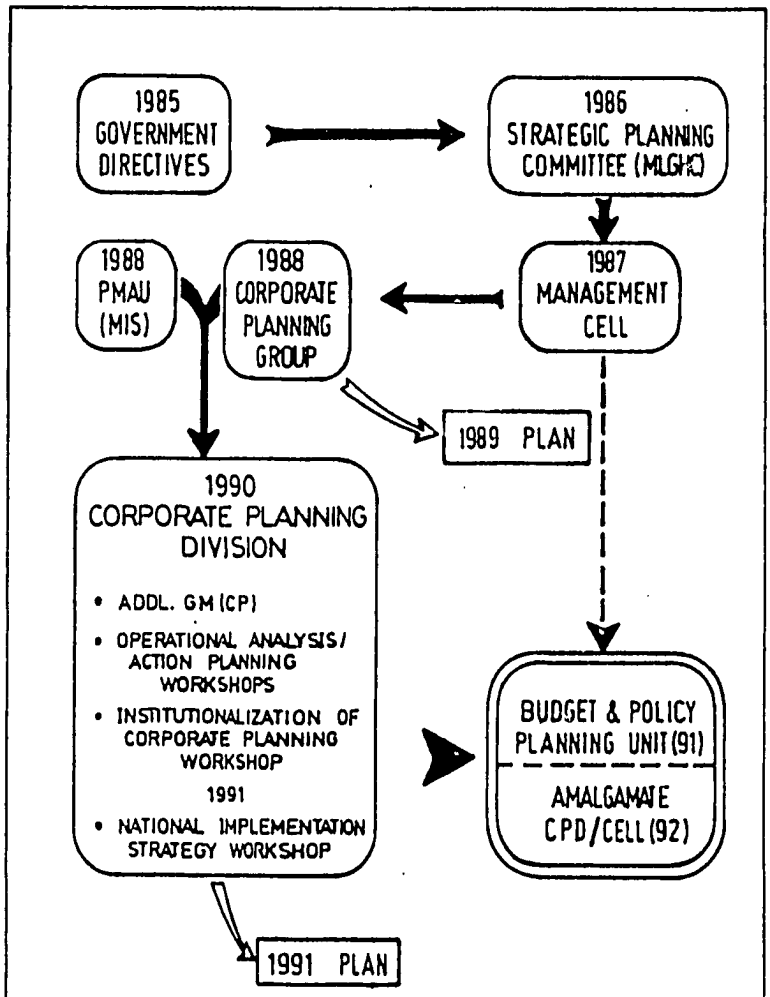


Figure 33

Evolution of Corporate Planning Function

PERFORMANCE BUDGETING

At the start of the ID project the financial consciousness of the NWSDB management was barely discernible. The absence of sound operations budgeting, financial planning or cost control philosophies generally, coupled with an ever-present support from the Treasury at the end of the year, were key reasons for the accelerating drift towards financial insolvency. Almost as soon as the project commenced the need to improve the financial status of the institution became a highly visible priority. The Sri Lankan Government attitude to continually bailing out loss-making public corporations was reversed and key foreign donors in the sector increasingly began to link their funding and resource commitments to NWSDB operational improvements. Such linkage was particularly stong in relation to meeting financial targets. Foreign donor support is significant, there being no less than 16 agencies actively involved in providing funds to the NWSDB to help it achieve its targets. The foreign-aid component of the NWSDB capital budget in 1990, for example, was 69%.

The decentralization programme had as one of its central aims the establishment of financially autonomous regional cost centres. As a prerequisite to such autonomy, improved financial performance was mandatory. The need for competent managers, with a total appreciation of the importance of cost-effective operations and an aptitude for sound financial management practices was, therefore, essential.

Capital Budget

From its formation in 1975, the NWSDB annual capital budget was always developed by the managers responsible for capital projects. This involvement of managers was understandable since they were virtually all civil engineers with a strong background in project design and construction supervision. Similarly, budget review by NWSDB executive management was equally thorough, since the officers concerned were almost without exception civil engineers who had risen through the ranks. Because historically adequate funds were provided by government for new projects, it was not difficult to reach agreement on the capital budget. The need for detailed feasibility studies or financial viability analyses was not seen as a major precursor of budget finalization.

Operations Budget

Because of the emphasis on capital projects, operations bugeting was traditionally not given much attention. Although submission of an annual operations budget to the Board of Directors and the Ministry of Finance was a statutory obligation, the budget as compiled had no input from those responsible for disbursing the funds, that is, the engineer line managers and their technical staff. The budget was prepared entirely within the Head Office finance department in the incremental manner, the previous year's costs being increased to allow for anticipated inflation and any known new activities. The budget was then distributed among senior managers but was not broken down to the cost centre level and distributed among regional managers. Since line managers were never involved in the budget preparation, little notice was taken of the expenditure limits. The deficits that invariably occurred were in any case covered by subsidies obtained from government.

Financial Planning

Historically, financial planning for the NWSDB was only performed at the behest of foreign donors to establish the capacity to repay loans for prospective new projects. Such planning was carried out either by officers of the lending agency or by external consultants hired on short-term contracts by the lending agencies. NWSDB management involvement in such planning was negligible. Assumptions were made on such issues as tariff increases and cost reductions with little appreciation of the local socio/ political and economic environments. As a result, loan covenants were entered into which were virtually untenable. Although the NWSDB was interested in receiving loans for new capital projects, management rarely identified with the financial plans that supported such loans.

An example of such inappropriate financial planning is shown in Table 12. The plan prepared by the donor consultants in 1986 was based on the NWSDB collecting sufficient revenue to cover its operating, maintenance, and working-capital requirements from 1987 onwards and also to cover debt service from 1989 onwards. A 10% real increase in tariff (over and above inflation) would be necessary in both 1987 and 1988 in order to achieve the plan target, with a 1% annual real increase over and above inflation thereafter. These targets were set against a background that showed that since domestic billing had been introduced in 1984, coverage of operating costs from total collections (including arrears) had only increased from 31% in 1984 to 61% in 1985, the year before the plan was prepared. Recovery of total cost, defined as operating costs plus debt service, had risen from 26% to 40% over the same period.

The alternative financial plan in Table 12 was prepared by the ID consultants early in 1987 in collaboration with the NWSDB. Based on "business as usual," which assumed that no tariff increase would occur, the projections showed a deteriorating financial situation. Instead of a projected operating surplus in 1992 of Rs.524 million the more realistic projection indicated a deficit of Rs.325 million. This exercise was used to awaken NWSDB management to the need for them to become involved in financial planning, not only to ensure that the financial health of the institution could thereby be improved but also to alert them to the risk of accepting foreign loans based on inappropriate financial projections that would only increase the debt service burden and make financial recovery even more difficult.

This initial awareness campaign was carried out through the form of training workshops for senior management and through presentations to the MLGHC and the Sri Lankan USAID Mission, attended by representatives of NWSDB executive management. This campaign was conducted against a background of increasing concern expressed by both the government and the major ESAs in the water supply sector (notably the World Bank and the ADB) about the deteriorating financial situation of the NWSDB. The government made it known that little or no funding would be made available from the Treasury to subsidise any future deficits and the NWSDB management now realized that survival of the institution was predicated on achieving financial improvements.

Initial Training in Budgeting

With the increasing financial awareness generated through the development of in-house billing procedures and the presentations on financial plans, the institutional environment was receptive to a more structured approach to budgeting. At the senior-manager training course held in 1987 (which was designed to impart collaborative work organization techniques, common goal setting, and performance review), the management of financial resources was used as the case study.

Table 12. Alternate Financial Projections for the NWSDB

Component	Million Rupees					
	1987	1988	1989	1990	1991	1992
Prepared by Donor Consultants						
Net revenue	336	461	714	838	1054	1315
Operating costs	321	388	447	485	592	611
Operating surplus/(deficit)	5	73	267	348	462	524
Debt service	163	198	255	344	429	503
Total surplus/(deficit)	(148)	(100)	12	4	33	21
Prepared by NWSDB/ID Project						
Net revenue	180	219	278	322	351	372
Operating costs	287	352	448	535	614	697
Operating surplus/(deficit)	(107)	(133)	(170)	(213)	(263)	(325)
Debt service	303	229	264	311	335	349
Total surplus/(deficit)	(410)	(362)	(434)	(524)	(598)	(674)

Note: Operating costs include direct expenditures and overheads and allow for inflation

This case study was built around a hypothetical operations budget that exposed managers for the first time to the concept of quantifying, in monetary terms, operational actions related to the provision of water supplies and the running of an operations and maintenance facility. Hypothetical data were presented to illustrate billings, collections, and expenditures; and the managers, through working groups, were asked to evaluate the budget proposals in an open forum. An important element of this initial budget training was an introductory presentation by the GM which identified the linkages between budgeting, financial management, and effective operations management.

Performance Budgeting

With the growing awareness among NWSDB managers of the need for financial discipline and the increasing external pressures to reverse the deteriorating financial situation, the internal NWSDB environment was appropriate to initiate a more rigorous approch to cost control through the operations budget. Following discussions with senior management and the newly appointed Chief Financial Officer, it was agreed that the 1988 operations budget would be performance-based, that is, costs and inputs would have to be matched to performance and output.

Budget-request forms, together with detailed compilation instructions, were developed by the ID project team and reviewed and tested with NWSDB counterparts. The forms were also used for the hypothetical case study at the senior-management training course previously referred to.

Budgets were prepared for a total of 328 cost centres, comprising individual water-supply schemes, regional offices, and Head Office support units such as planning and design, finance, public relations departments, etc. The budgets essentially represented operational plans for 1988 in financial terms. The compilers had to document what had been accomplished during 1987, how much had been spent, and what operational changes and associated costs were anticipated for 1988. Data inputs were defined in operating terms that could be understood by the technical managers. For example, anticipated scheme operations and maintenance costs were related to the quantity of water produced and the type of treatment process employed. The quantity of water produced was also compared to the amount billed in order to identify the amount unaccounted for. Billings were compared to collections and the planned rate of new connections for each customer category was specified. Particular note was taken of those cost elements that were suspected to be more difficult to control. For example, vehicle operating and maintenance costs were presented on a vehicle-by-vehicle basis as well as the anticipated travel distance for each vehicle. Any excess staff were identified on the forms under the heading of "Special Cadre," the intention being to transfer them to new schemes or construction projects or to keep them in abeyance until such time as they could be retrenched or absorbed elsewhere.

The first performance budget process required continuing support from the ID project team. Training and direct-management assistance was provided to Regional Managers and to selected OICs of water supply schemes. Input from accountants was specifically related to providing historical accounting data to the line managers and to check the accuracy of the completed budget requests.

Budget-Review Process

The initial operational management plan prepared by the scheme OIC on the budget-request forms was reviewed by the Manager (O&M) and modified as necessary to reflect resource constraints or performance expectations based on an evaluation of past achievements and anticipated improvements. A further review then took place by the Regional Manager responsible for all the schemes in his area of jurisdiction, with a final review at head office involving the Regional Manager, Manager (O&M), and DGM (O&M) and the GM or Additional GM. The role of the finance department was limited to checking for completeness and accuracy, although for the 1990 operational budget, a budget manager was appointed, attached to the finance department, to coordinate the whole process and ensure efficient liaison between the cost centres and Head Office management.

The budget review sessions were focussed primarily on operational issues. One of the inherent advantages of a performance budget is that it is ideal for activities that can be measured. For a water-supply authority like the NWSDB the major proportion of the annual operations budget is directly related to quantifiable water-supply activities. Typical issues that were raised at the budget-review sessions included:

- Comparison of power costs per quantity of water produced for similar treatment processes
- Staffing levels for similar treatment processes
- Vehicle running costs per distance travelled
- Unaccounted-for-water-reduction strategies
- Programme to increase collections from specific customer sectors.

The annual budget preparation process now covers about a four-month period. Scheme level OICs and cost-centre managers generally commence preparing the annual requests in July or August. The operations budget time table for the 1990 budget, for example, was as follows:

- Submission of cost-centre manager budget request to finance department: 25 August 1989
- Budget review sessions with GM and department heads: 4 September 1989
- Review of consolidated initial draft by NWSDB Chairman, GM and senior managers in order to make any adjustment to reflect anticipated financial constraints: 20 October 1989
- Presentation of proposed final budget to chairman and GM: 26 October 1989
- Presentation of budget to NWSDB Board of Directors for approval: 6 November 1989

With this timetable, the approved individual cost-centre budgets are available for distribution prior to the start of the budget year in January.

Budget-Monitoring Process

A key component of the ID programme to institutionalize performance budgeting was to establish a procedure for regular monitoring. A number of monitoring levels were established, from the scheme OIC to the MHC. Because the budget is based on costing performance, technical line managers can quickly appreciate both the technical and financial implications of acceptable and non-acceptable performance when it is expressed, for example, in terms of quantity of water produced, percentage of billings collected, and percentage of unaccounted-for-water, and compared to a similar system in a neighbouring region.

Monthly progress-review meetings enable senior cost-centre managers to compare performance. The inclusion of summarized monitoring data in the key management information report presented to the parent Ministry also ensures that NWSDB executive management is conscious of operations performance.

Experience has shown that performance budgeting is more successful for regional operations and functions rather than Head Office support functions. This situation is not only because operations activities are easier to quantify but also because technical line managers now recognize their fiscal responsibility. The collaborative development of performance targets and a comparison of results in an open forum among peers also assists in attention to good budget management.

One serious deficiency that quickly became apparent as a result of the budget-monitoring process was the delay in the cost centre receiving financial information on expenditures from the Head Office finance department. In many cases, items were charged to incorrect budget line items. A major effort was directed to rectifying this deficiency through collaborative workshop sessions involving line managers and accounts staff. In the past, most accounting had been done on a cash-payment basis, but at the insistence of the line managers accrual accounting was introduced in order to accurately show committed expenditures in a regular, timely manner.

Results

The introduction of performance budgeting in 1988 drastically improved cost-control and management effectiveness overall. As shown in Table 13, with the exception of 1989, actual expenditures from 1988 onwards were less than 3% above budget. The exceedance in 1989 was caused by a government - mandated salary increase of about 45% which was promulgated just before the national elections. The NWSDB had no control over this cost.

The management-improvement benefits directly resulting from the introduction of performance budgeting were numerous, the more significant being:

- Improved communications between plant managers, regional managers, and executive management
- Increased willingness to discuss performance openly against quantifiable indicators
- Acceptance of the need for financial management to be an integral component of operations management
- Enhanced understanding of fiancial issues by technical staff
- Acceptance of an element of competition to improve performance through the adoption of performance-related incentive schemes
- Sharing of experiences and identifying new initiatives to increase collections and reduce costs
- Recognition that increased management responsibility must be preceeded by improved financial performance.
- Collaborative goal setting
- Increasing establishment of a corporate identity

Table 13. Comparison of Operations Budget and Actual Expenditure

Year	Budget (millions of Rupees)	Actual (millions of Rupees)	Budget exceedence (%)
1984	no budget	179	-
1985	no budget	193	-
1986	190	225	18.4
1987	272	287	5.5
1988	358	365	2.0
1989	367	391	6.5
1990	413	425	2.9

Possible Future Budgeting Development

The peformance budget as implemented in the NWSDB related current or projected performance to current or projected cost. In order to make the process more output or service oriented a pilot demonstration was planned to introduce a zero-base budgeting approach, whereby resources and costs would be related to varying service levels, thereby resulting in a budget reflecting operational priorities.

The trial was carried out during 1991 in Southern RSC in selected water-supply schemes where line managers budgeted on the assumption that not all activities were essential, of equal importance, or were being performed well. This concept assumes that there is scope for improvement through eliminating some activities, or adding new ones using the same or fewer resources.

The new approach is concise and comprised the following steps:

- Define existing activities and outputs (the agreed 1991 performance budget)
- Define what services could be reduced or eliminated if funds were to be reduced by 10% (essential services and billing targets should be maintained)
- Define new minimum level of output resulting from the 10% reduction in funds
- Define what services could be expanded or added (in terms of operating surplus and/or level of service to customers) if funds were to be increased by 10%
- Define new expanded level of output resulting from the 10% increase in funds.
- Recommend a budget that reflects the perceived priorities at current resource levels (based on the minimum and expanded level analyses of resource outputs)

The 10% limits were imposed in order to provide a manageable framework, the intention being to encourage the managers to evaluate options in a structured manner, rather than to achieve significant cost savings at this stage.

The demonstration was successful and showed that the technique was suitable for replication in other areas, provided that the managers were as receptive as those in Southern RSC.

BILLING AND COLLECTION

Although billing of non-domestic consumers on the basis of metered water use commenced in 1981, direct billing of domestic consumers on an island-wide basis was only introduced in 1984, an earlier trial in Kotte (part of Colombo) having been cancelled because of heavy consumer resistance. Initially the billing was undertaken by a private bureau but under the ID project an-house micro-computer based billing system was introduced which by the end of the project covered the whole country (except North-Eastern RSC because of the adverse security situation). However, Ampara Region was serviced from Central RSC with billing print-outs being prepared in Colombo.

The introduction of an efficient billing and collection system was the fundamental key to improving the financial status of the institution. However, it was recognised that the introduction of improved billing systems alone would not necessarily result in improved collections if the service provided to the consumer did also not improve. During the early years of the project the NWSDB was very much in danger of falling into the fatal vortex of declining service levels leading to falling collections, with the inevitable end result of insolvency.

The comprehensive nature of the ID project allowed parallel interventions to take place in the areas of service improvement (increased emphasis on rehabilitation, improved water quality) and consumer relations, with attention also being paid to cost containment, thereby lessening the severity of future water price increases. The typical links between collection and service quality are shown in Figure 34.

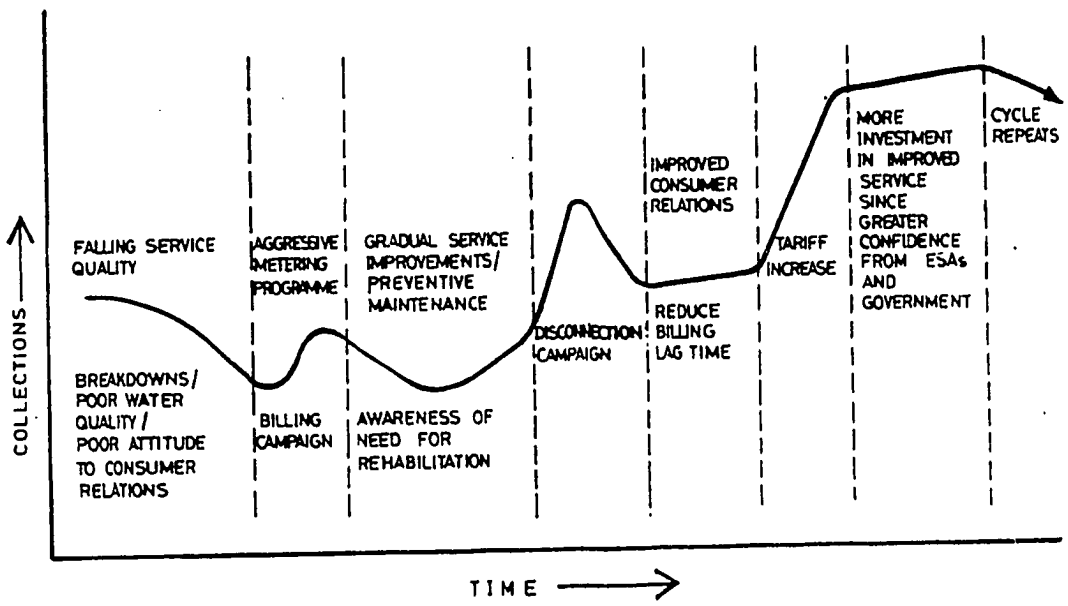


Figure 34

Impact of Operational Issues on Collections

Computerized System

The computerized system was developed around six modules which were menu driven for ease of operation and comprised the following:

- Metering
- Billing
- Payments and Instalment Plan
- Consumer Complaints
- Technical Service
- Management Information Reports

The metering module provided for entry of meter readings, verification and validations and checks for reasonableness of information, and provided output reports of water use above stipulated limits for follow up action. It also generated meter readers' itineraries and lists of unread meters. The validated readings were transferred to the billing module which also obtained information from the payments and other modules and processed and printed the bills.

The payment module provided for data entry of all payments made to units and collection banks. The payments were matched against the relevant customers account, analyzed to the relevant monthly bills and transferred to the billing module after validation. The module also included a sub-system to accommodate control and monitoring of instalment payments under an instalment payment scheme for new connections or arrears.

The consumer complaints module recorded the movement of the billing-related complaints and provided reports on the time taken to handle individual complaints and ageing of complaints by area and type of consumer.

The technical services module recorded requests for new connections and the movement of progress in installation. It also fed the main system with all new connections installed.

The management information module provided monthly statistical as well as accounting and other reports. Reports typically generated included:

- Consumption analysis for the month indicating units consumed by category; number of connections by category and revenue by category
- Summary of payments for the month
- Summary of billings for the month
- Age analysis of debtors for the month
- Overall debtors movement report for the month
- Collections statistical summary
- Water use statistical summary

The system was developed by the TA consultants working closely with the DGM (Commercial) who had the overall responsibility for the billing functions. By mid-1986 the system had been installed in six decentralized area offices serving Greater Colombo and by the end of the project had been replicated in a further two area offices in Colombo and all regional offices except Jaffna, Trincomalee and Ampara.

An analysis of the operating cost of the in-house system showed it to be only about 40% that of the private bureau used earlier, and even when depreciation charges for hardware were taken into account, the in-house system still only represented about 65% of the bureau cost. There were, of course, other advantages of the in-house system, such as timely availability of bills and information reports, and these are summarised in Table 14.

Table 14. Pros and Cons of In-House Billing

	In-House	Bureau
Advantages	More cost effective * Timely data output Data entry errors can be rectified quickly NWSDB management directly responsible Software can be modified	Specialist skills readily available
Disadvantages	Additional skills required Servicing of hardware not easy in remote locations	More expensive Less flexible Delays in bill production Errors in data entry may go undetected No "ownership" by NWSDB managers

* For consumer base in excess of about 5000.

There was, however, one serious disadvantage, namely that of the difficulty of the NWSDB developing an in-house capability to service the system and to develop further software modifications. Although the position of Data Processing Manager was incorporated into the NWSDB cadre, the stringencies of the qualification/experience/remuneration syndrome resulting from the concern of the entrenched professions that employees from the "peripheral areas" such as data processing should not receive more than they, meant that the salary level offered was almost one quarter to one fifth of that on offer for a competent data processor in the Sri Lankan private sector. Two candidates were hired during the period of project implementation, neither stayed very long when they realised that in addition to the low salary level there was almost total disregard for basic job needs such as vehicle, office telephone, budget for software, etc. How a Data Processing Manager can keep abreast of latest developments and service a range of computers scattered across the country without a budget or transport can only be imagined!

The TA data processing specialists served as back-up staff in the absence of NWSDB personnel, but at the end of the project a serious vacuum existed. Recourse will most probably be made to a service agreement with a local private company to provide additional software development initiatives and to engage in trouble-shooting activities.

Commercial Activities Organization

The key organization change in the area of billing and collection was the creation of a separate Commercial Department headed by a DGM. This new functional area came into being in 1986 but it was not until December of that year that the DGM (Commercial) post was confirmed through the intervention of the MLGHC. This itself was a significant step forward because the opposition from the engineer fraternity to an accountant being nominated a DGM was persistent to say the least. This resistance continued

to simmer throughout the project implementation period but by 1991 the forces of resistance had narrowed to relatively small pockets of less-experienced junior managers who perhaps had not had the chance to share in the positive assistance given by the DGM (Commercial) to the overall growth of a corporate commercial awareness.

With a full-time functional area handling commercial activities, total attention could be directed to installing the in-house sytems. Initially, efforts were concentrated in Greater Colombo since this area represented the major portion of potential revenue. The individual area offices were developed with the following responsibilities:

- Meter Reading
- Data entry of readings, validation and correction
- Rendering of bills
- Attending to consumer queries and complaints
- Collection of amounts due and follow up of outstandings
- Initiating reminders, red notices and disconnections
- Repairs and rectification of defective meters

The experience gained in implementing the Colombo system was used to develop an in-house capacity in the regions. The DGM (Commercial), in conjunction with the TA data processing specialists, was actively involved in this decentralization of billing systems. The concept of networking within the NWSDB, whereby one region assisted another, first evolved in this area. The new posts of Commercial Officer and Computer System Operator were institutionalized and all were filled from the existing staff after suitable training. One of the most pleasing developments was to witness how a new skill such as data processing could totally transfer the motivation and job-interest of a junior clerk, who had previously been functioning in a moribund fashion at about 30% capacity because of over-staffing and routine, boring work.

In addition to the creation of specialist posts within a separate commercial unit, an important additional initiative was to actively involve the regional operations managers in the billing and collection procedure. Although commercial officers were trained to operate the computerized system, the responsibililty for collections performance was vested in the regional manager who was traditionally a civil engineer. Progress meetings were held monthly at which the regional managers presented performance data, discussed problems, and jointly evaluated strategies to improve performance. Annual targets were negotiated for each region and incentive schemes introduced for such areas as identification of illegal connections, exceeding collection targets, and timely bill delivery. The success of this approach was that technical line managers assumed ownership of commercial functions and thereby became more aware of financial management issues.

In 1990 a start was made to amalgamate the Commercial Department activities in Greater Colombo into the Colombo RSC. This amalgamation was in line with the overall regional decentralization concept, except that in the case of Colombo incorporation of billing activities in the RSC had been deferred pending evidence of sufficient capacity to handle such a major responsibility. The amalgamation process was designed on a phased basis to ensure that correct procedures were adopted and the risk of malpractice (such as collusion between meter readers and householders) minimised. The

transfer plan incorporated monitoring criteria to enable performance to be monitored. The pressure from the engineer-managers in Colombo RSC to transfer the responsibility as soon as possible was understandably intense since they felt that their RSC was being treated in a step-fatherly manner. The ID team, whilst supporting the transfer, tended to insist on evidence of satisfactory performance, and an occasions were accused of being "obstructionist." This comment was an interesting observation on the role being played by the ID team on this particular issue at such a late stage in the project; perhaps they were subconsciously assuming a certain degree of executive management responsibility which was really a retrograde step when efforts should have been concentrated on building sustainability.

Results

The emphasis on commercial activities produced excellent results over the life of project. The billing lag time (the time between meter reading and receipt of bill by consumer) which had averaged 6 months when billing was being carried out by a private bureau was reduced to 30 days.

Because of the improved service, consumer billing complaints fell dramatically from over 10% of billed connection to below 2% by 1989, although there was an increasing trend from 1990 onwards, up to about 3% in 1991, as a result of tariff increases and resultant queries by consumers as to why their bills were suddenly higher. A well-orchestrated public awareness campaign could have mitigated this trend.

Current collection ratios improved also as the consumer became accustomed to having to pay for water and the NWSDB became more aggressive in its collection practices. For example, during the first half of 1991 Colombo collections within 2 and 6 months of bill posting averaged about 60% and 74% respectively, compared to about 15% and 50% in 1986 when in-house billing and record-keeping commenced.

Disconnection campaigns were launched by the NWSDB and despite misgivings by senior management that such campaigns would result in a severe political backlash, the fears were basically unfounded. Although politically sensitive areas were avoided at election time, by and large the NWSDB was able to introduce a continuing programme of disconnections. On average, about 400 disconnections were carried out in Greater Colombo each month, equivalent to about 0.3% of connections. Similar campaigns were introduced in the regions, but rarely did the rate of disconnection exceed 0.5% of connections.

Improvements in billing and collections are shown in Table 15. The importance of Greater Colombo as a source of revenue is evident, the concentration of commercial, institutional and industrial customers in the metropolitan area, with the large metered population, result in Greater Colombo accounting for about 75% total collections on average. The reduction in billings which occurred in 1986 was caused by a cap of Rs.150 on domestic bills in Colombo imposed by the MLGHC as a result of adverse publicity on NWSDB billing efficiency. This adverse reaction was justified since it took some time for the billing errors to be resolved, one of the disadvantages of using a private bureau was that there was very little follow up by the NWSDB to check if correct data were being inputed and if the bills were correctly printed. Placing the billing responsibility in the NWSDB effectively forced attention on system performance. The cap was not lifted until late 1989 when ESA leverage linked to tariff reform was used to counter the cap which was itself a good example of political leverage acting on the NWSDB.

Table 15. Billing and Collection Performance

Area	Monthly Average - Million Rs.								
	1983	1984	1985	1986	1987	1988	1989	1990	1991
Greater Colombo									
Billings	6.5	18.7	21.3	13.5	15.5	16.7	16.8	32.0	52.5
Collections	1.6	4.7	9.9	11.3	12.7	13.1	13.9	26.9	34.7
Regions									
Billings	-	-	-	3.9	6.8	7.2	6.7	12.1	18.4
Collections	-	-	-	2.3	3.2	6.9	4.5	8.3	11.1
National Total									
Billings	6.5	18.7	21.3	17.4	22.3	23.9	23.5	44.1	70.9
Collections	1.6	4.7	9.9	13.6	15.9	20.0	18.4	35.2	45.8

Notes: 1984/1985 Colombo data include regions but regional billings and collections during this period were insignificant and in any case reliable records did not exist. 1991 averages are for first quarter only. Tariff increases occurred in 1990 and 1991.

FINANCIAL VIABILITY

The key project objective to turn the NWSDB into a financially viable organization was approached through a combination of the following ID initiatives:

- Billing and collection improvements
- Performance budgeting (develop financial consciousness)
- Management development (initiate performance-based operations)
- Corporate planning (raise visibility of financial viability goal through interaction with external environment)
- Financial procedures (upgrade existing systems)
- MIS (provide timely financial information)
- Cost containment measures
- 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 ESAs, MHC and Ministry of Finance).

Most of the related ID initiatives are discussed in more detail in other sections of this report, this sub-section will focus on the specific cost containment and tariff reform measures.

Task Force Analysis of Financial Performance

The first detailed analysis of the financial performance of the NWSDB was produced by a Financial/Commercial Policy Task Force at the beginning of 1987. This report highlighted the widening gap between performance and the covenants laid down by the IDA that sufficient revenue be generated to meet operating expenses and working capital requirements in 1987 and 1988. The report showed that at the end of 1986 the average collection rate (excluding arrears) was 54% in Greater Colombo, ranging from 70% in the commercial, industrial and hotel sectors to only 27% in the domestic sector. However, the regional collection rate was only 12%, averaging 7% for bulk billing schemes and 15% for direct billing schemes.

The task force recommenced a number of strategies to be implemented immediately within the tariff structure existing at that time. These strategies were:

- Remove Rs.150 cap on domestic bills in Greater Colombo
- Disconnection campaign for all consumer categories in Greater Colombo
- Instal bulk meters at Colombo Port (a major consumer)
- Charge for water supplied from public taps
- Concentrate on increasing collections from the government and institutional sectors
- Increase collections in the regions
- Identify unbilled water connections in Colombo
- Develop agreements with local authorities for the supply of water in bulk
- Reduce operating costs (overtime, travel, electricity)

Because of the strong adverse public reaction generated by the accelerated metering programme and the increase in erroneous bills as the bureau system was phased out and the in-house billing system introduced, there was understandably no support from the parent Ministry for any tariff increase. The message was - "put your house in order first" - and the strategies developed by the task force recognised this political reality.

All the strategies of the task force were endorsed at the MLGHC level, with the exception of the 'lifting' of the Rs.150 cap on domestic bills.

Cost Containment

Throughout the remainder of the project a series of cost containment measures were explored. Many came to naught because of the need to first invest money (which was not available) in order to secure more efficient operations and cost savings. However, with the gradual development of a financial consciousness among NWSDB managers, both the attitude to waste and the lack of cost control changed, with the result that operating costs as a whole were held below inflation, a significant achievement which vindicated the emphasis placed on performance budgeting as a management development tool. As shown in Table 16, annual operating cost increases during the life of project were below annual inflation rates from 1989 onwards, the year after performance budgeting was first introduced. The high cost increase in 1988 resulted from an average 45% increase in salary levels mandated by government, and an increase of about 16% in electricity tariffs.

The significance of personnel and power costs is evident from the following breakdown of NWSDB operating costs (based on 1991 figures), both items accounting for no less than 85% of the total cost:

Item	% Total Cost
Personnel	45.3
Utilities	40.2
Chemicals	7.6
Repairs, maintenance	6.9
	100.0

Table 16. Operating Cost and Inflation

Year	Operating Cost (Rs. million)	Cost Increase (%)	Inflation (%)
1983	163	-	-
1984	179	9.8	17.1
1985	195	8.9	14.9
1986	225	15.4	5.6
1987	287	27.6	2.5
1988	365	27.2	18.1
1989	391	7.1	18.5
1990	425	8.7	14.5
1991 (budget)	441	3.8	-

Electricity cost containment was attempted by switching over wherever possible to the time-of-day tariff (off-peak saving) and by carrying out preventive maintenance. Most of the pump sets were found to be highly inefficient, often well below 50%. As funds became available new equipment was installed and better operating regimes put into practice. An analysis of the results of a preventive maintenance programme implemented in Ampara Region in 1988 showed a net reduction in materials costs for repairs approaching 50%.

Staff cost reductions were not so easy to achieve because of the resistance to any policy or suggestion which hinted at retrenchment. A control on overtime was introduced at the end of 1989 and for January and February 1990 the total overtime rate averaged 7.8% of base salary, compared to an average of about 19% during the latter half of 1989. This reduction was achieved through the establishment of an overall NWSDB overtime target of 10% and a special performance monitoring committee chaired by the GM. However, the committee was disbanded from March, following which the overtime rate increased steadily and ended up at 15% base salary by the end of the year. New targets were renegotiated for the 1991 budget, based on a more realistic appreciation of the scheme-specific needs of the operational staff, and for the first half of 1991 the total overtime was reduced to around 12%, slightly over the target of 11.7%.

The experience of controlling overtime illustrated two important points, firstly the need to monitor performance closely on a regular basis and secondly, the need to develop regional-specific targets based on the exigencies of each particular situation.

Despite the resistance to staff optimization the results of an analysis of O&M staff deployment carried out by a specialist member of the ID team in Southern RSC, in conjunction with NWSDB managers, showed that in general plant personnel levels could be reduced by about 30% with no reduction in service quality, provided that certain essential resources were provided, such as housing quarters for plant caretakers, communication equipment, etc. During 1990 a series of initiatives at the Management Cell level, fully supported by NWSDB senior management, resulted in proposals being put to Cabinet for early retirement schemes with provision for compensation payments (severance pay) and other benefits. These initiatives were similar to a number of others being introduced in the public sector at that time by a government which was becoming increasingly committed to cost reduction and efficiency improvement measures.

Parallel to these moves a series of meetings were held, managed entirely by NWSDB executive management with no TA involvement, at which each functional area analysed its personnel resources and developed staff optimization plans. When the discussions were concluded by April 1991, it was apparent that the NWSDB could sustain an immediate reduction of about 800 personnel (from 7300 to 6500), a drop of 11%, generally in the lower grades.

This analysis marked the first time that the NWSDB had seriously entertained the possibility of staff retrenchment. An interesting observation, which can be explained to some extent by the culture of the institution, was that although detailed staff optimization plans were developed on a one-to-one basis (each functional area with executive management), when the issue of staff needs was raised at the monthly operational meetings which all functional areas attended, the requests were invariably for more staff! This was a clear example of peer protection and closing ranks. However, the more rational approach which was embodied as a corporate goal in the 1991 Corporate Plan prevailed, and a detailed staff cost reduction programme was prepared, which in turn was supported by the leading sector ESAs and made conditional to loan disbursement (see Box 22).

Box 22. Staff Cost Reduction Strategies

	Staff Numbers	Cost Saving (Rs.million/y)
1990 ACTUAL		
o Voluntary retirement	218	8.12
o Voluntary retrenchment	20	0.75
o Overtime 18% to 15.3%	-	4.70
1991 PLANNED		
o Pensionable retrenchment	500	18.63
o Overtime 15.3% to 11.7%	-	6.26
o Compulsory retirement (age 55)	95	3.58
o Terminate casual staff	91	1.95
o Discontinue retired staff	62	2.31
o Discontinue paying staff in other government agencies	46	1.71
Total	1033	48.01

Tariff Revision

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. This is apparent from the following comparison of billings expressed as a percentage of O&M costs, the trend had been downhill since 1986:

Year	Billings (Rs/million/y)	O&M Cost (Rs.million/y)	Billings (% O&M cost)
1984	224	179	125
1985	256	195	131
1986	209	225	93
1987	267	287	93
1988	287	365	79
1989	282	391	72

A Tariff Task Force was appointed in 1989 comprising representatives of NWSDB senior management from operational, financial and commercial functional areas, assisted by the TA team. A computerized tariff simulation model was developed and used to generate a range of different alternatives. Simultaneously constant lobbying was carried out to secure government approval for the lifting of the Rs.150 cap on domestic bills. Although the reason for the imposition of the cap may have been valid in 1986 when public criticism of the NWSDB was rampant, the environment had changed considerably and the cap was being increasingly seen as a licence for the rich to waste water (the average domestic water bill in Colombo by comparison was about Rs.40/month). The inequitable nature of the cap was contrary to the new government policy on poverty alleviation and finally, in the second half of 1989, the cap was abolished, with virtually no adverse publicity, certainly none of any significance.

The NWSDB 1989 Corporate Plan produced in June that year came out strongly for a tariff increase in January the following year and both the World Bank and ADB supported the recommendation by linking it to their loan disbursement programmes. Eventually the parent Ministry was convinced of the rationale for a tariff increase and a revised structure was implemented during the first half of 1990, later than planned with the inevitable result that the target of O&M cost recovery from current collections was not achieved, (although 99% of costs were recovered if arrears were also considered).

The tariff structure adopted in 1990 was heavily biased towards the non-domestic sector, for which the rates were doubled on average (Table 17). Except for the imposition of a service charge for all consumers, the domestic tariff was unchanged except for those consumers using more than 50 cu m/month, for which the rate was increased by 100%. Consumers in this bracket represented about 10% of the total domestic consumers in Greater Colombo. This timidity to impose an increase on the domestic sector, other than the minimum service charge, was a reflection of the acute concern by the political lobby of a public backlash. As it turned out the reaction was zero and the next increase in 1991 was far more severe, representing an

average of 60% for the domestic sector and another large increase, this time of 77%, for the non-domestic sector (Table 17). These increases were necessary to meet the 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 end 1991. The public reaction on this occasion was understandably more severe, a major factor contributing to this was the absence of any public relations campaign prior to the increase (see following sub-section).

A major shift in policy which accompanied the tariff revision in 1990 was the adoption of a national tariff for the 47 bulk supply schemes whereby the NWSDB sold water to local authorities in bulk. This policy was adopted in the belief that it would be politically more acceptable to have a small number of larger bulk schemes effectively subsidising the smaller schemes for which increases in the already high scheme-specific rates would be unacceptable. Time will tell whether this policy is workable, by the end of the project very few local authorities were paying the bulk rate and political expediency prevented the NWSDB from cutting the supply (although such concerns did not appear to prevent the CEB from cutting its supply in similar cases of non-payment).

Summary of Results

The combination of ID initiatives did result in the NWSDB becoming far more financially viable over the project duration. Each of the individual initiatives was probably equally important in achieving this goal, resort to the use of external stakeholders (ESAs) was only necessary to convince the parent Ministry of the need to increase tariffs, for by that time the mood within the NWSDB was wholeheartedly supportive of goal achievement.

It is perhaps worthwhile to summarise those actions of the parent Ministry, and of government in general, which acted against the financial interests of the NWSDB during the project period, if only to indicate why the ESA pressure was deemed necessary. These included the following:

Action	Revenue Loss (Rs.million/y)
• Domestic cap of Rs.150	20
• Free water for government schools	5
• Reduction in hotel tariff	4
• 90% discount for religious institutions	6
• Failure of National Housing Development Authority to pay sewerage charges	10
• Salary increase	39
• Electricity tariff increase	16

Despite the adverse factors, the progress achieved was substantial as shown in Table 18. Over the period 1984 to 1990, O&M costs increased by a factor of 2.3 times, whereas collections surged ahead by a factor of 7.5 times. As the NWSDB entered 1991 it was well on target to achieving its goal for that year.

Table 17 NWSDB Water Supply Tariff Changes

Category	1984-1989	1990 *	1991
DIRECT CONSUMERS			
Service Charge (Rs/month) All Consumers	0	5	5
Domestic (Rs/cu m)			
0-10 cu m	Free	Free	1
10-20 cu m	1	1	1.5
20-30 cu m	3	3	4.5
30-50 cu m	5.5	5.5	8
over 50 cu m	5.5	11	19.5
Standpost	0.8	0.8	1
Non-Domestic (Rs/cu m)			
Government Institutions and Commercial	5.5	11	19.5
Tourist Hotels and Industries	9	16.5	25.0
Shipping	15	50	75
Religious Institutions same as domestic with 90% rebate			
Flat Rate (Rs/month)			
Non-Domestic	40	500	500
Domestic	30	100	100
BULK CONSUMERS (Rs/cu m)			
Without Electricity	NA	1.75	2.50
With Electricity	NA	NA	4.00

* Direct consumer rates except the service charge were implemented 1 April 19.. , service charge was implemented 15 May 1990 and the bulk rate was implemented 1 August 1990.

1991 Tariff implemented 1 January

PUBLIC RELATIONS

There was very little need for a positive outlook on public relations when the NWSDB concentrated almost exclusively on the design and construction supervision of new water supply schemes. The routine procedure then was to prepare a handout, extolling the attributes of the political personalities opening the scheme as much as the scheme itself, with suitable hyperbole directed to how many consumers would be served, whilst tactfully ignoring such issues as the additional debt service imposed by the scheme or the real cost to the consumer if a viable tariff were to be implemented.

Table 18 NWSDB Financial Performance 1984 to 1990

Year	Billings (Rs.M)	Collections (Rs.M)	O&M Cost (Rs.M)	O&M Cost Recovery (%)	O&M Deficit (Rs.M)	O&M Plus Debt Service (Rs.M)	Total Cost Recovery (%)	Total Deficit (Rs.M)
1984	224	56	179	31	123	212	26	156
1985	256	119	195	61	76	299	40	180
1986	209	163	225	72	62	318	51	155
1987	267	191	287	67	96	504	38	313
1988	287	240	365	66	125	598	40	358
1989	282	221	391	57	170	685	32	464
1990	503	422	425	99	3	548	77	126

Note. Collections include arrears

At the start of the ID project, therefore, public relations in the NWSDB comprised a Publicity Officer who basically scanned the daily papers for adverse comments, prepared suitable rejoinders in case the parent Ministry asked for an explanation, and assisted in the preparation of new scheme handouts.

Initial Activities

The change of mission brought about through the ID intervention demanded a wholly new approach to public relations and a considerable amount of specialist input was allocated to this area (4% of total TA person-months). Early in the project a Public Relations Unit (PRU) was established, and a young team hired for training under the local TA specialist who had considerable prior experience in the Sri Lankan newspaper business plus serving as public relations advisor to a number of public sector agencies. Over the first three years of its existence (1986 through 1988), the PRU gradually initiated a campaign to make the general public more aware of the need to use water wisely and to pay for it. Typical activities included:

- TV coverage on national water supply issues (droughts)
- Production of documentary film on water treatment (from source to tap)
- Save-water campaign (posters, radio announcements)
- Nation-wide school poster competition on the value of water (prizes awarded by the Prime Minister)
- Education campaign for the media (explaining the problems of the NWSDB and putting problems in the right perspective)
- Radio features on aspects of NWSDB activities (interviews with senior managers)

The need to educate the public about such basic issues as the need to pay for the service received was of paramount importance since wide scale metering of water for domestic purposes only commenced in 1984. The press during this period was replete with articles extolling the principle of water as a free good (see Box 23), and the situation was not helped by a major opposition political party proclaiming that if it were elected to power again then water billing would be abolished!

> Box 23. Typical View on Value of Water
>
> "Water is a gift of nature to mankind for his essential needs. It is the heritage of men, animals and plants. Without it none can survive. What right has the Water Board to usurp the natural rights endowed and dictate its own terms? The Board itself obtains water from natural sources without any payment."
>
> General gist of quotes by "concerned citizens" in the national press

Accelerated Programme

The progress of the PRU was reviewed by the TA team at the end of 1988 and although it was recognised that a considerable amount of useful work had been carried out, it was also apparent that the NWSDB still had no appreciation of the value of good public relations. A strategy was therefore developed in conjunction with executive management and approved at the Management Cell, to accelerate the programme in order to develop a public relations consciousness among NWSDB staff and thereby to change the image of the institution from the internal "grass roots" level.

The accelerated programme consisted of the following key elements:

- Discussion sessions between PRU staff and NWSDB managers (in Head Ofice and the regions) to explain the concepts involved
- Visits by PRU staff to various operational areas. These had a twofold purpose, to introduce the PRU staff to operations staff and to teach the PRU staff about technical aspects of NWSDB operations
- Design and delivery of training courses on public relations to those staff members coming into day-to-day contact with the public (OICs, meter readers, cashiers, etc). These courses were designed with the assistance of the PRU and delivered by the NWSDB Training Section
- Specific training inputs from specialists from Penang Water Authority and SANEPAR
- Creation of post of Consumer Relations Officer in each Regional Office to be specifically responsible for dealing with consumer complaints
- Introduction of complaints monitoring systems within each region.
- Production of NWSDB Newssheet

This programme resulted in considerable success being achieved in developing a public relations consciousness at the consumer-NWSDB interface level, particularly in the regions. The decentralization and management development initiatives encouraged delegation of authority and following a successful pilot study in Kandy Region, where scheme OICs were given the responsiility for dealing with public complaints, a system of graduated complaints handling was replicated in most of the other regions. What the initial test in Kandy Region indicated was that the bulk of complaints were essentially linked to absence of basic information - why was the supply interrupted, why had new connections been stopped, why had the cost increased, etc. There was in reality very little strong criticism of NWSDB operations and with the exception of the vociferous minority residing in the more affluent areas of Colombo, and those with a particular political axe to grid, the vast majority of NWSDB consumers proved to be unusually long-suffering.

Public Relations Status at Project Completion

By the end of the project the level of public relation consciousness at the scheme/regional level was generally satisfactory. Complaints were being dealt with more expeditiously and in one particular RSC which had pursued a positive policy of forging links with the local devolved political bodies (local government, MPs, Government Agents, etc.) the Minister responsible for NWSDB affairs was so pleased with progress that he had no qualms about telling MPs from the area to direct their queries and complaints direct to the RSC-DGM. The successful "Mobile RSC Offices" held in Southern and Central RSC towards the end of the project were also factors which contributed to the improving public relations at the regional level.

Unfortunately the level of public relations consciousness was not so marked in Head Office, and particularly so in the upper levels of management. There were valid reasons for this situation. These were chiefly that the benefits of regular coaching in adopting new behaviour patterns had been concentrated more in the RSCs in conjunction with the decentralization programme, and because historically executive management had been subjected to a constant barrage of political interference, so that in order to survive certain skills had to be acquired and an objective, outreaching public relations attitude was not one of them.

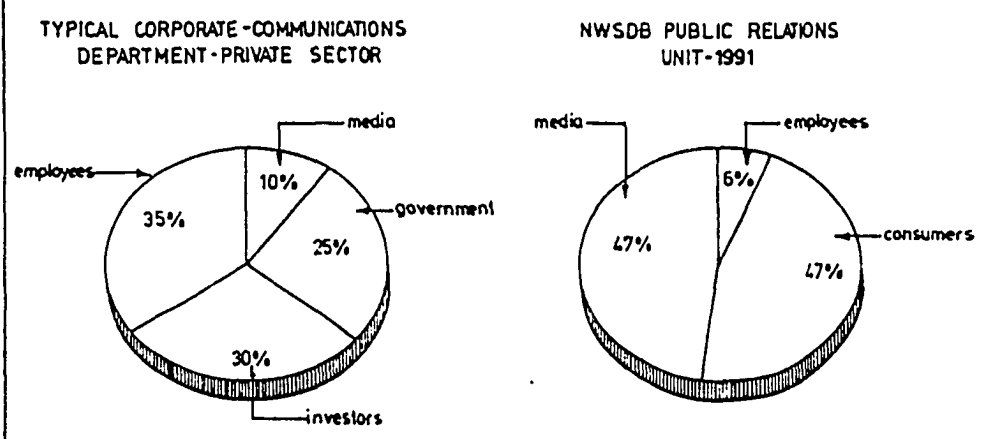
The net result was that at the national level the image of the NWSDB was little different from that at project inception (see Figure 35), despite the significant improvements in performance which had occurred and which were in fact recognised by many of the consumers, by ESAs and by the more enlightened members of the political lobby. The reluctance to take steps to portray a positive image at the national level resulted in bad publicity, attacks in the media and an adverse reaction from the parent Ministry.

The executive management fear of adverse reactions resulting from such a positive image were more imagined than real. Witness the case of the Ceylon Electricity Board (CEB) which days before the local government elections in 1991 was announcing over the radio that non-paying consumers in the Colombo area would be disconnected without a prior red notice. By comparison the NWSDB stopped disconnecting domestic consumers during the run-up to the election. Although the personalities were different, both the CEB and the NWSDB were operating in the same political environment and both agencies were committed to achieving similar financial targets. It was also true that there were probably just as many potential voters in Colombo with

Figure 35
Public Image of NWSDB in 1991
(From The Island 11 April 1991)

electricity and no piped water connections than those with a piped water connection but no electricity. The different attitude reflected the pervasive atmosphere of fear regarding all things political which haunted the upper echelons of the NWSDB Head Office. Very few attempts were being made by Head Office to brief the Minister on the real situation, on the successes and on the problems. No steps were taken to inform the public at the national level of major policy changes such as tariff increases. Even a 60% increase in rates implemented in January 1991 had no prior announcement, only when consumers started to examine their bills in disbelief was a hastily prepared handout sent with the bill.

The PRU was not being given the opportunity to develop into an effective corporate-communications department. A major portion of its resources were diverted to preparing briefing notes for MPs on planned new schemes and existing coverage, no mention being made of the need to reduce wastage or to pay for the service received. It was in effect, business as usual, with the bulk of the publicity materials being in response to political needs prompted by elections or regional tours by prominent dignatories. An analysis of PRU time allocation in 1991 is compared in Figure 36 to a typical model for an organization with a clear sense of mission and a desire to keep all external actors on its side. The PRU budget for 1991 was a pitiful Rs.600000, representing 0.14% of the annual operating budget of the NWSDB (a water supply authority with a well- developed mandate for positive image building would typically allocate around 2% of its annual operating budget to public relations activities). Since about 60% of the PRU budget was set aside for staff salaries and transport costs, there was precious little left for producing any public relations materials. The fact that anything was produced at all in such circumstances bears testimony to the dedication of the PRU staff who used their media contacts and propositioned sponsors such as consulting companies remourselessly!



(Source: Economist 1989c)

Figure 36

Allocation of Time on Image Building

A strategy was being designed through the CPD at the end of the project to contract a public relations/marketing group in an attempt to improve the overall image of the institution, but the details had not yet been documented for formal approval.

The net result of the public relations initiatives undertaken on the ID project was that at the "local" level a significant improvement had been achieved which, coupled with the creation of an embryonic corporate - communications unit, should have resulted in a vastly improved national image. Unfortunately, efforts to convince top management to unshackle the fears of political retribution which they believed would result from a positive, truthful, and objective approach to publicity all failed. If this experience showed nothing else, it at least underlined the long-term effect of the historical political forces at work in the institution, both the overt and the more insidious, and gave support to the ID strategy which was adopted to try to take into account such forces by working actively in the external environment. The strategy obviously failed, however, in the case of public relations.

MANAGEMENT INFORMATION SYSTEM

An essential support mechanism for the successful development of key ID initiatives such as decentralization, management development and corporate planning was the introduction of a reliable and timely management information system (MIS). At project inception the MIS then in existence was informal and highly fragmented, individual managers had their own data banks and although there existed a Statistics and Coordination Unit, its main purpose was to respond to frequent data requests from the parent Ministry, often of an ad hoc nature.

The net result was that the NWSDB was totally at the mercy of the external environment when it came to dealing with directives on operational issues. The fragmented NWSDB data base resulted in action having to be taken in response to what were often irrational, politically-motivated directives handed down from the parent Ministry. The confusion resulting from the inability to counter such directives is shown in Figure 37. Amazingly, the condition was such that the NWSDB was totally incapable of stating with confidence, for example, how much water was being delivered to the main distribution nodes in the Greater Colombo water supply system. This topic was raised repeatedly at MLGHC progress review meetings, and the inability to respond opened the door to a whole range of rhetoric and innuendo about the NWSDB operations in general, not all of which was true.

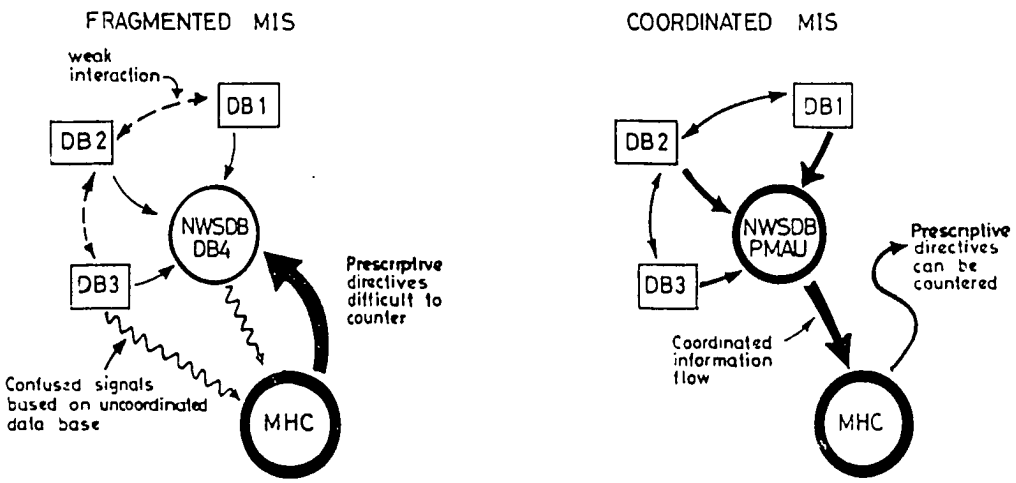


Figure 37

Coordinated MIS Results in Control of Activities

In conjunction with the senior management upgrading programme, the development of performance indicators and the setting up of the Management Cell in 1987, the need for an organised MIS was recognised by NWSDB management. Initially the effort concentrated on designing a financial/billing and collection MIS since this was a perceived priority area and suited the immediate information needs of the parent Ministry and ESAs. The system was developed quite quickly using a task force approach, the monthly billing and collection performance meetings aiding the widespread participation of regional management in the development process.

The responsibility for coordinating the MIS was assumed by the PMAU, which was formed in 1988, and the first ever Key Management Information Report was issued in March 1988. The data were inevitably somewhat sparse, focussing solely on billing and collection, but the report represented a major move forwards. For the next 18 months the Key Management Information Report was produced monthly until the Manager/PMAU went overseas on a training scholarship. It was not until November 1990 that production commenced again, following increasingly insistent demands from MHC and ESAs. The source of the demands should be noted, it was the external environment that was calling for the information, not NWSDB executive management.

It is perhaps worth digressing a little at this point in order to assess why this hiatus occurred and why there was an apparent lack of interest in MIS exhibited by top NWSDB management. At the senior and middle management levels the value of MIS was widely appreciated, it was by now inextricably linked to the preparation of the annual performance budget, was essential back-up for operational analysis and action planning sessions, and was being increasingly used at the regional level as an aid to performance monitoring.

The advantage of a coordinated MIS was well known, and it would have been thought that the concentration of knowledge and "power" which resulted from such a coordinated MIS (see Figure 37) would have been welcomed by top management in order to help counter the persistent demands and directives from the external political environment.

Perhaps one of the problems was that top management was operating in such an intense reactive mode that it basically did not have the time to digest the information provided and to use it to its own advantage. It is a fact that too much information, particularly computerized, can confuse the decision-maker. On the other hand, too little information makes the decision-maker wary of relying on the data. If the decision-maker does not want to make a decision on a particular issue, he can use the MIS as an excuse and ask for more detailed information. In this way a reiterative cycle sets in and the time to reach a decision is prolonged (see Figure 38).

The key is to select at the outset a system which suits the interpretive capability of the decison-maker, and which provides enough data to counter "what if" questions. Typical relationships between communication methods and decision-maker capability are shown in Figure 39.

The situation was not all negative, top management did make increasing use of the MIS over the life of the project, and particularly from November

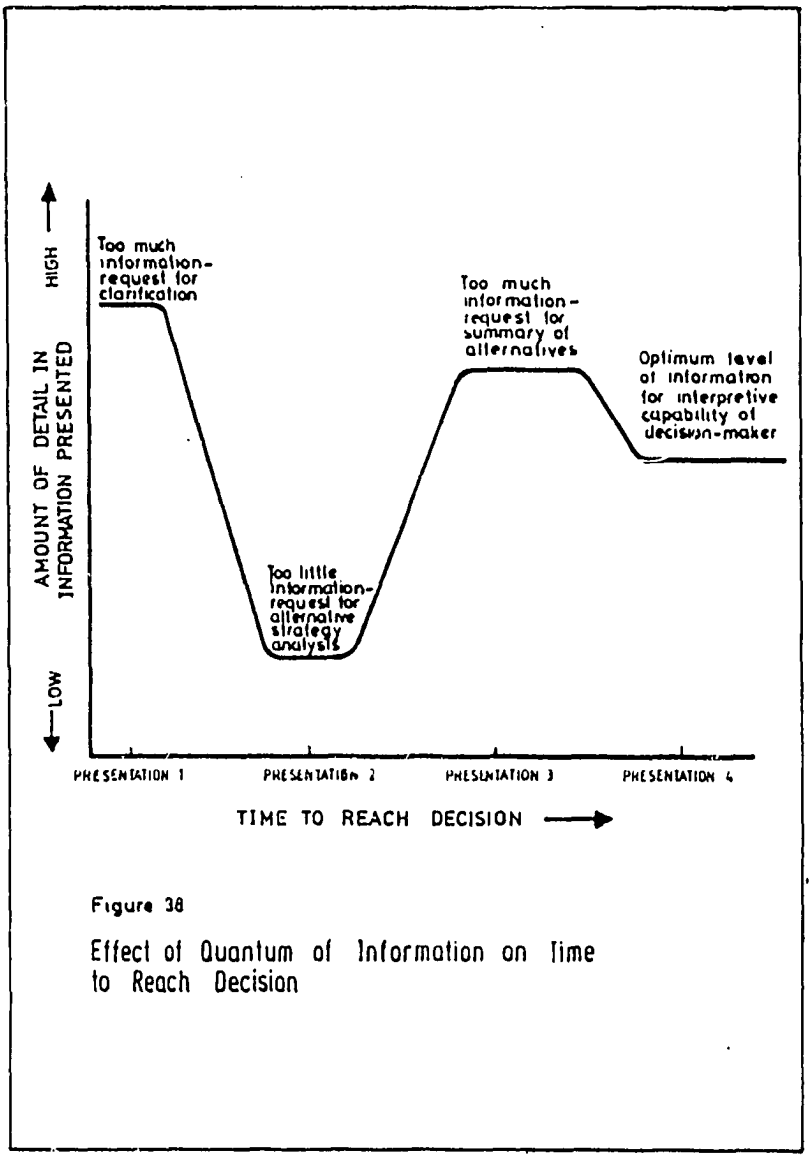


Figure 38

Effect of Quantum of Information on Time to Reach Decision

1990 onwards when the Key Management Information Report resumed production, it came to be used more and more as a forum for performance review at the Management Cell. The fact that by that time the CPD had been institutionalized, headed by a dedicated executive level manager, certainly assisted the gradual acceptance of the system at the top level.

O&M MIS

Although the financial MIS was integrated into the NWSDB operating environment relatively smoothly, the same cannot be said for the O&M MIS. A considerable account of field testing was carried out in one of the better managed regions and by the end of 1988 the O&M MIS was ready for replication. It was adopted by the DGM (O&M) as a standard and

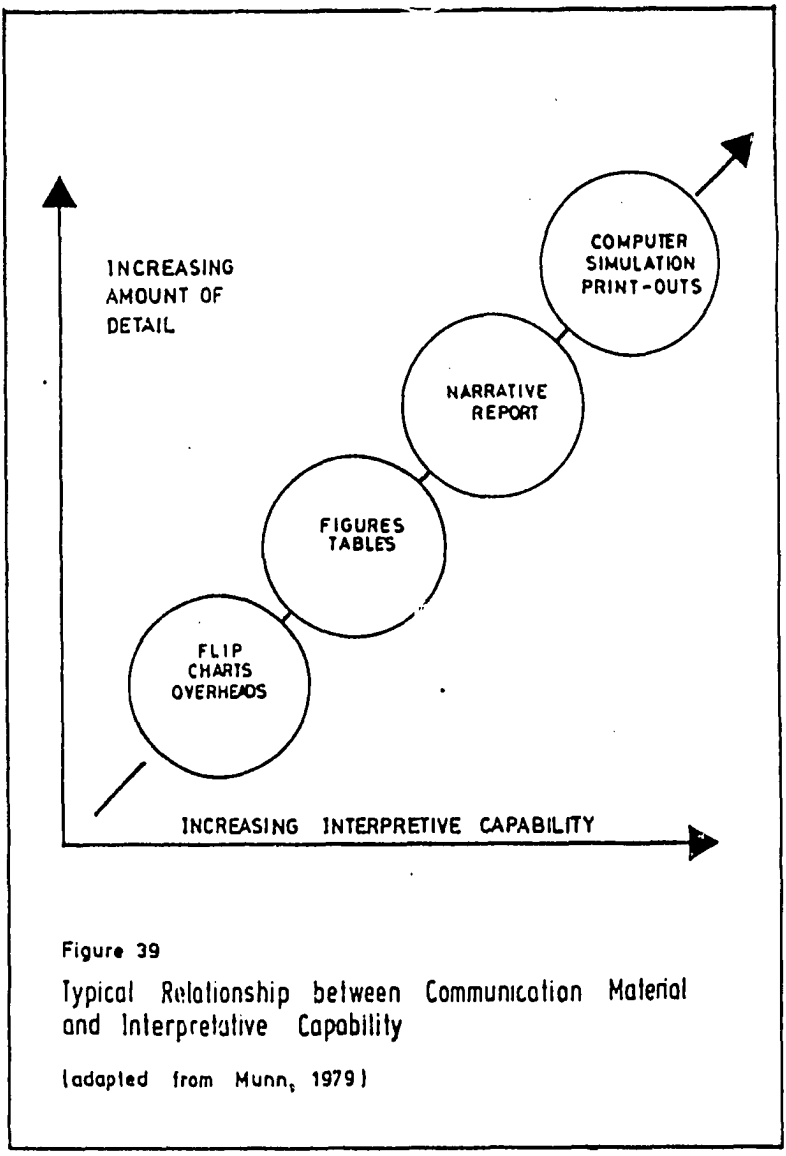


Figure 39

Typical Relationship between Communication Material and Interpretative Capability

(adapted from Munn, 1979)

presented to the other O&M managers at a Project Steering Committee meeting dedicated solely to MIS. At this meeting the manager of one of the larger RSCs complained that "he had not seen the forms" and suggested a workshop be held to review the system. This workshop took place, designed by the DGM (O&M) and the TA team, with an agenda structured so as to elicit specific reporting dates and levels of responsibility. The results were not as intended. The RSC manager who had requested the workshop in the first place controlled his working group which came out with the recommendations that the forms be changed and that a working group be set up to review the changes and decide on a new implementation schedule.

The net result was that the whole process was delayed by over a year. The final forms were in fact little changed from those developed in the field test but the RSC management had the satisfaction of now being "involved." The lesson learned here was that a key actor in the O&M area had been ignored in the development of the initial system. The problem was compounded by the fact that the same RSC never accepted the functional responsibility of the DGM (O&M) and hence the delay was seen as a way of usurping the latter's influence.

By the end of 1990 the O&M MIS was being used in a number of regions. The management at all levels welcomed the opportunity to have access to what came to be recognised as relevant, useful operating data. This observation accords with that noted by Tribus (1988) that all employees, if they are at all interested in their job, learn to keep their own statistics. Of course, O&M managers were not too interested in passing the information "up the line" to Head Office, the main benefit to them was that they had a reliable and timely picture of the operational environment in their own area of jurisdiction. This feeling of isolation from Head Office was, perhaps, subconsciously encouraged by the ongoing decentralization programme.

In the final project year top management did at last begin to appreciate the value of the O&M MIS. The production of the second NWSDB Corporate Plan with its emphasis on sectoral coverage goals and quality of service forced an analysis of the current status. The Key Management Information Report now began to incorporate some of the chief operational parameters (see Box 24) and it was actually proposed at the Management Cell that the Key Information Report supercede the routine data requests that emanated from MHC, most of which were at an incredible level of detail (distance travelled per vehicle, cost of telephone calls, for example). Such a request would have been unthinkable a few years earlier.

Box 24. Key Management Information Report

- Billing and collection data
- Arears trend
- Consumer complaints
- Disconnections
- Collection performance
- Water production
- Unaccounted-for-water
- Water quality
- Staff numbers
- Overtime analysis
- O&M cost compared to budget
- Capital budget progress

Computerization

The development of the MIS would not have been feasible without the parallel acceptance of computerization of various NWSDB activities. Surprising as it may seem now, there was considerable resistance to the introduction of computers to the NWSDB at first. In April 1985 there were only two microcomputers in the whole NWSDB, these were located in the

Planning and Design Department and were used essentially for word processing. The only reason they were there was because they had been handed over to the NWSDB from an earlier USAID-funded project in Jaffna. Although billing and collection, general ledger and payroll systems were computerized, they were all being handled by a private bureau.

When the first draft commodity procurement list was circulated, there was considerable pressure to delete the microcomputers which had been included for billing purposes. The typical comment from the engineer managers was - "what we want is lathes, not computers." The strategy adopted by the ID team was to concentrate first on the seemingly "non important" support service areas such as billing and collection, accounting and stores inventory. In this way the engineering functions were not threatened by a technological change which was considered at that time to be expensive and totally unnecessary.

The next step was for the ID engineering specialist to develop an embryonic water supply scheme data base on a microcomputer, and for a water supply distribution network to be modeled. These technical applications were well received and the resistance from the engineers all but disappeared. One final attempt to throw a spanner in the works was an accusation that the ID team were recommending old technology. This retort came from a group with suspected links (probably through high-pressure salesmanship and training events) to a local supplier of mini-computers. Fortunately, the ID computerization specialist was an expert in his field, had a personal knowledge of all the characters in the rapidly expanding Sri Lankan data processing market, and had recently assisted the World Bank in managing an Asian regional seminar in India at which the increasing application of microcomputers in the water supply industry had been upheld. Final capitulation came at the end of 1988 when the most reticent NWSDB manager installed a microcomputer in his own office!

By the end of the ID project the number of microcomputers in the NWSDB was in excess of 75. Of these about 40% were used for non-technical support functions and the balance evenly divided between direct technical applications and donor project use, which was a mix of technical and support functions. The advantages of computers were now recognised by the full spectrum of NWSBB management. The managers who had visited water supply authorities overseas had witnessed how microcomputers were essential operational tools, and a training course on MIS given by the GM of the Penang Water Authority (under the auspices of the WASH Project) gave further evidence of their usefulness.

There was, of course, the problem of filling the vacant post of Data Processing Manager. There was still a serious vacuum in this area when the ID team completed its contract (see discussion in sub-section Billing and Collection). Another problem was the difficulty in encouraging computer users to share. In the RSCs this problem was overcome by establishing "computer units" with time allocation being decided collaboratively in accordance with RSC priorities. However, in the Head Office there was a tendency for a computer to be seen as a status symbol, a manager who did not have the latest colour monitor behind his desk had not made it, even if he only used a small proportion of the capacity for word processing. The NWSDB had most certainly entered the computer age by the end of the ID project.

SUPPLIES AND STORES

Original Organization

The organization of supplies and stores functions at project inception was based on centralization in Colombo. As a result the service provided to individual functional areas tended to be less than satisfactory since the persons responsible for obtaining the materials were not at all interested in their use. The problem was compounded by the absence of a clearly defined management structure and the lack of an approved organization chart.

Recommended Changes

The reorganization of the NWSDB envisaged a new position of AGM (Supplies) to take on overall responsibility for supplies and stores functions. In accordance with the decentralization initiative it was decided to decentralize the supplies and stores functions to the RSC level and to replace Central Stores in Colombo by a transit warehouse which would serve as a consolidation warehouse for items ordered by each region from the Colombo delivery area. The central Supplies and Stores Section would then only be responsible for managing the transit warehouse, imports, purchases for Head Office (non-RSC), handling large quotations and tenders and approving purchases against budget allocations.

This proposed reorganization was envisaged to offer the following benefits:

- Local purchases at the regional level would be obtained in a more responsive manner
- Regional stores that were co-located could be amalgamated so as to be closer to the activities they serviced
- Paperwork would be reduced since Central Stores would no longer exist, all inventories would be regional based
- Staff savings would result

The basic objective of decentralizing these functions was to achieve more efficient coordination of supplies and user functions. In particular, the regional supplies units would meet the following objectives:

- Closer supervision of the supplies operations in the regions
- Better coordination between the supplies units and the consumer units
- Closer control of the stocks at the regional and the site stores
- Timely action for replenishment of stocks
- Elimination of unnecessary accumulation of stocks
- Proper accounting of every receipt and issue
- Prompt reconciliation of verified stocks and follow up of discrepancies

Implementation Experience

Very little progress was made in this area until 1988. One of the main reasons was the inordinate delay in hiring an AGM (Supplies). By the time the decision was made to take action the candidate selected at the interview had gone elsewhere and it was eventually necessary to appoint the candidate ranked sixth in the initial assessment. This situation is not surprising considering that a period of over one year had elapsed from the date of interview.

Initially efforts were concentrated on amalgamating co-located stores in the regions, initiating a stock count (particularly of the millions of rupees worth of pipes spread around the country, much of it deteriorating rapidly in the hot sun), and installing computerized inventory software packages.

In an attempt to accelerate progress a reorganizaion action plan was prepared in March 1988 and a monitoring task force set up under the chairmanship of the GM. Although the Board of Directors finally approved the reorganization structure in April of the same year, nothing much happened until the Secretary/MLGHC took an interest in progress and seconded one of his personal advisors to attend the task force meetings.

By the end of 1988 the reorganization was starting to take shape. Particularly in those RSCs which were further ahead in the decentralization programme, stores amalgamation had taken place and local purchasing procedures were being used. However, a number of suggested procedural improvements did not come to fruition. The use of an amalgamated form to replace a whole series of purchase requisition forms failed. The use of a master purchase order system was equally unsuccessful, partly because suppliers were reluctant to hold prices for more than 90 days, partly because the concept was so totally different from standard government procedures which demanded going through a quotation procedure for each separate purchase item, and perhaps also because it considerably reduced the opportunities for collusion between supplier and purchaser. Also, the concept of appointing a bonded supplies officer in each RSC, to be responsible for all procurement except those under urgent purchase orders and petty cash purchases, was never implemented.

In retrospect, these failures were mainly due to wide divergences of opinion between the ID team member working in this area and the NWSDB staff. The amalgamated purchase requisition form was not developed in a collaborative fashion, it was instead distributed to all concerned as the "new procedure." The master purchase order and bonded supplies officer concepts totally ignored the strong preference for deciding on commodity purchase issues by committee. History showed that in the Sri Lankan public sector lapses in procurement procedures were often the excuse for many career-damaging petitions and the NWSDB staff were understandably reluctant to abolish a committee system whereby a decision to purchase a particular item was taken collectively.

By the end of the project the RSC-based purchasing procedures were functioning reasonably well, the considerably enhanced delegated financial powers enabled most of the fast-moving items to be obtained locally. Stocks had been reduced to more manageable levels, two auctions held during 1988 at Central Stores did in fact realise a considerable sum, with non-moving items more than five years' old coming under the hammer.

However, procurement procedures for large bulk purchases still proved to be far too time-consuming. The example of the local commodity purchases under USAID funds is a case in point. A Head Office based committee was appointed in February 1988 to review and recommend the requisition orders placed by various sections. In December 1989, an incredible 23 months later, the committee finally notified the requisitioning parties of the

decisions made. Of course, all kinds of excuses were made, generally linked to new government procedures to eliminate waste through minimising new purchases, but basically the problem was that the committee had no direct interest whatsoever in the items being purchased since these were meant for sections other than their own. As a result the process had a very low priority, except when a committee member decided he would like to request an item for his particular section. Again, the lesson learned here justified the original decision to decentralize supplies procedures and to minimise the gap between the purchaser and the user.

BUILDING A TRAINING CAPACITY

The Project Paper envisaged a major emphasis on building-up the in-house training capabilities of the NWSDB. At the start of the project there were only four full-time Training Officers, the eventual reorganised Training Section was anticipated to be responsible for a cadre of about 80 staff, comprising not only various grades of Training Officers but also support service personnel and manpower planning specialists.

The ID team attempted to implement this major change as soon as the project commenced and detailed reorganization arrangements and resource needs were quickly prepared by the TA training specialist. However, what was not realised at that stage in the project was the very strong resistance to the proposed change from a majority of the senior management personnel. The proposals had not, it transpired later, been developed collaboratively with a representative sample of NWSDB staff. The project design team had liaised almost exclusively with the then Training Section Head, a highly competent trainer but unfortunately a non-professionally qualified engineer, the ramifications of which in the context of the engineers' culture are apparent from the discussion on institutional culture in Section 3.

The high visibility afforded the Training Section at the preimplementation workshop and the pressure from the project design team, of whom the representatives at the workshop were in fact specialised trainers, to elevate the section head to the new AGM (Training) post suggested a ram-rod approach to the bulk of the other NWSDB managers. Interference in personnel issues by foreigners was something that could not be condoned, and the resistance was inevitable.

The problems came to a head when a member of the ID team became over confident and tried to apply leverage through the MLGHC to have the AGM (Training) post confirmed. That this situation could happen at all indicated the state of chaos that the ID initiative was entering into towards the end of its first year. The leverage failed and on directions of the MLGHC, fully supported by USAID, a new strategy was adopted to reduce the size of the proposed Training Section specifically through avoidance of duplication of training resources by coordination with other training institutions in the country. During the first half of 1986 this new strategy was explored, and the much reduced impact of the revised Training Section was acceptable to the NWSDB in general.

This period of near-chaos, extending over late 1985/early 1986 saw the replacement of the TA Project Manager and Deputy Project Manager and a new NWSDB Chairman and GM.

The development of a new training competence within the NWSDB involved a continuing series of strategy changes (Figure 40). Despite these changes, achievements were considerable. 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 more notable achievements were the significant and deliberate change in emphasis from formal classroom training to OJT using NWSDB officers in a training mode. This 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 programme a significant amount of skill training was given by the ES Training Specialists and Training Section staff. During the last two years of the project, for example, the Training Section was able to offer in excess of 5000 person-days of training per quarter, compared to only 732 person-days during the last quarter of 1985.

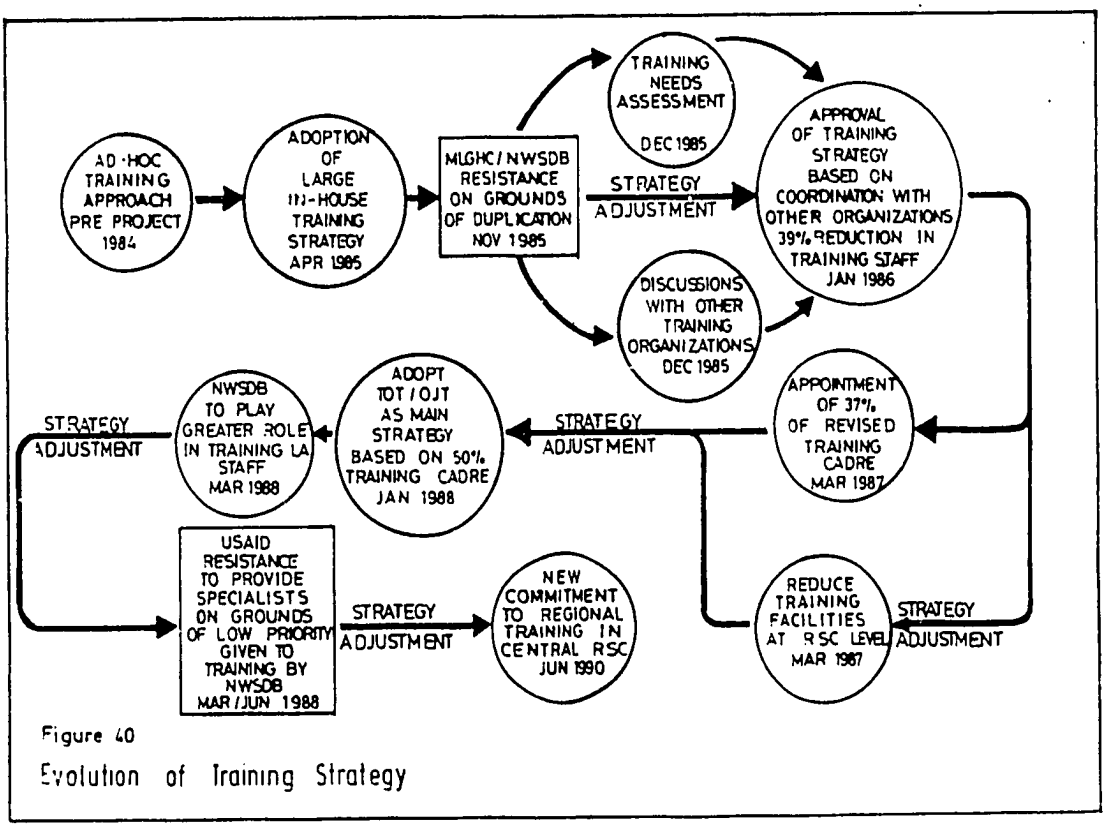


Figure 40

Evolution of Training Strategy

Some of the most impressive skills training was in upgrading basic management skills for middle managers and supervisors. These formal courses proved to be very successful, being carried out throughout the regions on a rotational basis.

It must be stated that these achievements occurred despite continuing constraints by NWSDB executive management in not granting the training function the recognition it deserved. For example, the reduced cadre was never adequately staffed, technical training staff devoted 30% of their time to mounting exhibitions rather than suporting 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. However, a breakthrough in the area of awarding overseas tours occurred in 1991 when, despite objections from the union concerned, candidates for overseas training in plant operation were selected on the basis of competence and motivation, not on seniority.

Although success was achieved in the O&M skill training area through the efforts of the TA O&M specialist, a satisfactory replication process was not developed, although not for the want of trying. The approach for upgrading O&M management capabilities was as follows:

1. The DGM (O&M) and the relevant RSC managers in collaboration with the TA team identified water supply schemes suitable for serving as upgrading and training models.
2. The consultants working with the scheme staff determined the immediate improvements necessary to upgrade the scheme prior to commencing training in process control.
3. During the upgrading, the consultants developed the training materials and oriented the staff.
4. Following the upgrading, the consutants trained the OIC, Shift Supervisors and Plant Operators.
5. In order to replicate the upgrading and training procedures two different procedures were tried. The first involved having those OICs that had participated with the consultants replicate the upgrading and training at other schemes in the region. The second approach was to have a multi-disciplined team comprising say an OIC, Chemist and Mechanical Engineer, do the upgrading and training in all regional schemes. TOT was also planned to be provided with the assistance of the Training Section.

The overall approach was generally successful at the specific schemes where the consultants were personally involved. However, although the programme received strong support from senior O&M management, the support from middle O&M management and plant supervisory staff was less than satisfactory.

Usually the consultants had to search for individuals at a scheme who were motivated enough to participate in the upgrading and training programme. OICs were often not available, being engaged in other actitivies. As a result schedules slipped and there was no successful replication by NWSDB staff. That this failure to replicate occurred despite the strong commitment of DGM (O&M) to site improvement and training was indicative of the types of management deficiencies that still required attention. These were as follows:

- A need for more discipline so that employees would be held accountable for performing tasks and meeting objectives.
- A need for staff to take the initiative to overcome obstacles and problems that confronted them in meeting their responsibilities.
- A need for staff to develop the ability of anticipating problems and their solutions rather than waiting for them to happen and then reacting to them, since by then it was usually too late to effect an optimum solution.
- A need for staff to learn to be more assertive in giving direction and insisting that directions be fully followed.
- A need for staff to motivate their subordinates to reach higher levels of management competence.

With the further development of general management capabilities and the enhanced decentralization programme, these needs were addressed as the project entered its final phases. Also a major networking event took place in July 1991 with a demonstration workshop being held at one of the most efficient plants in Southern RSC, attended by O&M managers and staff from other regions. This networking initiative notwithstanding, there was still a real need for O&M skill training in the fields of process control and preventive maintenance and whenever possible attempts were made to convince other ESAs to provide such TA in their project packages.

Throughout the project great stress was placed on learning from water authorities in other LDCs, particularly those in similar conditions (climate, socio/economic status). Study tours were arranged to Singapore, Penang and SANEPAR (Brazil), the latter two authorities were recognised as being highly efficient and models of utility agencies in LDCs.

During 1990 the NWSDB played host to visits by water utility officers from Bangladesh who had requested an exposure to NWDSB operations. Furthermore, in 1991 a request was received from Hanoi for the NWSDB to provide training to 12 officers in a range of functional areas. A small beginning perhaps, in the sense of the NWSDB become a centre of technology transfer and HRD for water supply agencies, but it demonstrates that the successful ID of the NWSDB was being recognised internationally. Such recognition and a request to share in the institution's experiences was a quantum leap from the situation existing in 1984.

EMPLOYEE PERFORMANCE EVALUATION

This ID initiative was floated with a certain degree of trepidation, bearing in mind the institutional cultural characteristics which suggested strong opposition to any form of staff assessment or promotion which was not tied to the Government of Sri Lanka Establishments Code or which was not based on strict adherence to the seniority list (years of service). This potentially adverse environment was not restricted to the NWSDB, it was representative of the Sri Lankan public sector in general.

An illuminating survey published by Nanayakkara (1984) had shown that official deception was widely prevalent, even though truthfulness was one of Sri Lankan society's cardinal religious precepts. This deception was particularly pervasive in the context of personnel evaluation. For example, the survey showed that 67% of officers in the public sector would willingly give a false certificate of good character to a negligent officer. The reasons stated were as follows:

- Compassionate grounds, so as not to spoil future employment opportunities
- Selfish motive, an opportunity to get rid of an officer who was a nuisance
- Negligence and delays were managerial problems which could only be solved by the organization as a whole
- The fall in efficiency was considered to be only a temporary problem

The scepticism of the NWSDB managers was understandable when viewed in this context, they basically believed that although performance evaluation was a "good thing," it would never work in Sri Lanka.

Despite the lack of enthusiasm on the part of the NWSDB counterparts, the basic components of an evaluation system were accepted in principle by the Board of Directors at the end of 1986 when formal approval was given to the new Personnel Procedures developed with the assistance of the TA team. From then on a two-pronged strategy was used to build up an acceptance of the principles involved. This strategy, which is outlined in Box 25, comprised stimulating the demand and defining the procedural details. A period of 4 years was necessary to gain widespread acceptance.

The recognition of need accelerated from 1988 onwards when it became apparent through operational performance review meetings that target non-achievement was not just system related, but also people related. With the enhanced management competence resulting from the formal training courses, and the introduction of performance budgeting and decentralization, the more progressive managers began to realise that the seniority system did not encourage promotion of the most competent people. It also came to be realised that an employee performance evaluation system would remove the growing frustration which was directly attributable to the seniority system.

Box 25. Employee Performance Evaluation

Build Recognition of Need

Mission statements	1987
Operational performance indicators	1987
Management information system	1988
Performance budgeting	1988
Operational performance review meetings	1988

Define Procedures

Board of Directors approve policy	Nov 1986
WASH workshop procedure overview	Jun 1987
Working group recommendations	Nov 1988
Field test Kandy Region	1989
Adopted as corporate goal and procedure defined	Sep 1990
Implementating training workshop in each functional area based on case studies	Jan 1991

The operational analysis and action planning workshops conducted during 1990 all recommended that the system be tried, and a series of demonstration evaluation sessions managed by the TA team helped to increase support. These demonstration sessions were based first on hypothetical case studies, than on real individuals within the functional area. The formal system was introduced at the beginning of 1991 and explained through a series of demonstration workshops held in each main functional area. The NWSDB counterparts in the Personnel and Administration area gradually took over responsibility for conducting these workshops (in Sinhala), a process which helped to build up NWSDB ownership of the employee performance evaluation procedures.

The evaluation criteria are summarised in Table 19, the basic process comprised the following steps:

- Observations of the employee's behaviour, preferably performance related
- Establishment of performance standards ranging from below to above normal expectations
- Comparison of observed behaviour with the standards
- Assessment of the significance of the difference between the observed and standard behaviour

Emphasis was placed on the need for a regular supervisor/employee participatory relationship, not just reliance on a formal review session. The need for feedback was seen as a key component, and the basic ground rules for achieving good feedback were highlighted as including:

- Goals and performance standards to be agreed beforehand
- The right balance to be struck between negative and positive feedback
- Specificity is essential so as to avoid vagueness and generalities
- Critical information not to be withheld just to avoid arguments and possible unpleasantness
- Feedback to concentrate on indentifiable job performance related behaviour, not on unsubstantiated general character traits
- The person receiving the feedback must be ready to receive it, advance notice of the evaluation interview must be given and the mutual collaboration environment emphasised

One of the attractive aspects of the system was a performance award, equivalent in value to an annual salary increment, which it was decided would be given to those achieving more than 80% in the evaluation scoring system (Table 19). Preliminary indications following the first series of evaluations carried out in 1991 were that considerably less than 5% of those evaluated were recommended for the award. At the other end of the scale, those scoring below 30% were not awarded the annual salary increment. About 10% of those evaluated fell into this category.

This ID initiative was a good example of how careful coaching, backed up with sound, collaborative demonstrations can realise success. The approach was gradual, not rushed, and any increase of pressure was carefully controlled to parallel the frustration resulting from the inadequacies of the traditional method of staff assessment and promotion.

Table 19. Employee Performance Evaluation Criteria

Executive Grades:

Criteria	Weight	Below Required Level 1	Meets Required Level 2	Exceeds Required Level 3	Greatly Exceeds Required Level 4	Score
Developed/used effective work plans	20					
Developed/used performance indicators	20					
Set and met work targets/ goals	20					
Developed/followed plan for developing staff	15					
Developed/controlled budget	15					
Overall estimate of work performance	10					
					Total	
					Express as % : Total/400 x 100	

Non-Executive Grades :

Criteria	Weight			Below Required Level 1	Meets Required Level 2	Exceeds Required Level 3	Greatly Exceeds Required Level 4	Score
	Technical Officer	Clerk	Labourer					
Attendance	15	15	20					
Leave	10	10	20					
Attitude to learning new skills	15	10	15					
Following procedures/ record keeping	10	20	10					
Quality/ meeting targets	20	20	15					
Devotion to work	20	15	10					
General conduct	10	10	10					

INCENTIVES

Incentives are often used in the more developed countries as a means of improving performance. Experience in the NWSDB prior to project inception indicated that financial incentives were acceptable in certain specific areas, provided that the population covered by the scheme was sufficiently large to eliminate any feelings of jealousy on the part of those excluded.

Typical examples of incentive schemes that were in place were the payments of a bonus to engineers engaged on special design projects, this was akin to the engineers working as a quasi private consulting group; and payments to those engaged on certain ESA support projects. The rationale for the former incentive was that special projects represented extra work, which was supposed to be carried out outside normal office hours; whereas the donor project payment was supposed to compensate for the officer having to work "harder" under the close supervision of an expatriate consultant, and maybe also to carry more responsibility at the same time.

A third payment, which was widespread, was for attending official meetings outside office hours. The net result of this system was that many of the ID-project related task force meetings and new regular meetings (such as the Project Evaluation Committee) tended to be held late afternoon or over the weekends, the excuse always being given that normal work activities took up all the regular hours. One of the most insidious of these "extra-curricula" events was the weekly performance review meeting at MLGHC, which during the first two years of the project attracted a cast of up to 80 NWSDB and other public sector officers, out of which maybe only five participated in the meeting deliberations. The attendance payment for this event at that time would have covered the cost of at least two man-months of a senior NWSDB manager.

The concept of incentive payments linked to productivity improvement is well-established in industries such as construction and mass production. It is also being increasingly used in the water supply field, with excellent results. In the Indianapolis Water Company, for example, the introduction of an incentive scheme for customer service operations doubled productivity and decreased overall mileage by 40% (Grasso, 1989).

During the ID project many attempts were made to introduce incentive programmes. Proposals were solicited from counterparts and working groups set up to generate ideas. The net result was discouraging, the tendency for the engineer managers to insist on the programmes involving just about everybody diluted the payment to such an extent that it was not worth pursuing.

A good example of this effect was the collections - incentive scheme whereby payments were to be provided to O&M staff in the regions for exceeding the specific regional collection targets. Insistence by the more recalcitrant engineers that <u>all</u> O&M staff be involved effectively halted the scheme and by the end of the project arguments were still continuing about the respective proportions of the incentive that should be paid to those directly and indirectly involved. It was difficult to see how the operator whose job it was to add lime to the raw water should participate in a scheme based on revenue generation. A far better alternative would be to devise a separate scheme for plant operators based on say, preventive maintenance and process control, with incentives being paid for reduced plant downtime, low turbidity levels in the treated water, reduced

electricity costs for pumping, etc. Unfortunately peer pressure prevailed and the RSC manager with essentially no progress to show in such operational improvement areas carried the other technical staff with him and the scheme never got off the ground during the time that he remained in charge of the RSC.

Despite the rhetoric against incentives, some progress was achieved. In the commercial area task-specific schemes were implemented, the advantage of them being highly task-specific was that those not directly involved in the task could not reasonably justify a demand to be covered by the scheme. Successful examples included piece rates for billing data entry, for folding and binding bills and for hand-delivering bills to the consumers. These rates were in lieu of overtime. Other successful applications were payments (ranging from Rs.50 to Rs.500) to NWSDB employees who reported unauthorised consumer connections and by-passes. In this case the payment was proportional to the first month's billing after the connection had been regularised. Disconnection crews were also paid incentives for exceeding an agreed norm, again the payments were in lieu of overtime and subsistence allowances.

In 1990 a competition was held to find the best managed Regional Office, in terms of overall housekeeping, staff attitudes, record keeping and consumer facilities. The offices were ranked by a visiting team (unannounced) of senior NWSDB managers and TA team members, and certificates awarded to those achieving the first three categories. The presentations were made by the GM at a meeting of operations managers and the effect was surprisingly different from that expected. Ignoring the chorus of "it should not have been done" which came forth from a dwindling section of Head Office management who were totally opposed to any form of differentiation on the basis of performance, those managers whose offices had been involved in the competition were very receptive. In fact the second-ranked office management team was determined to do better the year after and they publicly said so.

The introduction of a performance award for superior performance under the employee performance evaluation system was another example of how individual performance could be linked to financial gain. The objections to this concept were few since by the time the procedure was introduced the more forward-looking managers were desperately searching for a means of recognising superior performance.

As part of the overall cost-containment effort the attendance payments for meetings were drastically curtailed. This had the effect of rescheduling the Project Evaluation Committee meetings within normal working hours, which is where they should have been all along except that the attendance payment made late afternoon meetings more attractive. Needless to say, normal working output was not interrupted by this rescheduling! The weekly MLGHC progress review meetings had in any case been disbanded when the Management Cell was formed.

Efforts to introduce incentive allowances for O&M staff, such as standby allowances, met with little success, neither did the concept of paying allowances for the less-attractive regions where schooling, medical and similar facilities were not comparable with Colombo. However, a programme was initiated to provide housing quarters to regional management and a more equitable distribution of vehicles certainly eased one of the main historical concerns of staff posted outside Colombo.

Donor Project Incentives

The one system that did continue right through the project was that of certain ESAs paying incentives to NWSDB officers attached to their projects. Not all donor agencies followed this philosophy, USAID in particular was very strict in stipulating that government-sector officers should not benefit in this way. The payments in some cases were high, representing more than 50% of base salary. The system was upheld by those consulting firms associated with these projects on the grounds that - "you get what you pay for" - and without such payments counterparts do not produce. The experience on the WSSSP was totally the opposite. All direct counterpart staff performed satisfactorily, and this observation was also made by other ESAs who did not support such payments. The advantages and disadvantages of this kind of incentive are summarised in Table 20.

Over the project implementation period, some progress was achieved in making incentive payments a recognisable adjunct to improved performance. Contrary to the recommendation often made that incentive payments be as wide as possible (Mansfield and Odeh, 1989), experience in the NWSDB suggests that the more task-specific the incentive scheme, the more chance it has of acceptance. Perhaps this situation reflects the very strong sense of peer conformity in Sri Lanka compared to western society, a highly task-specific scheme can cut through such peer cohesiveness because it is obviously individual or at most, small group specific.

Table 20 Donor Project Allowances for Counterparts

Perceived Advantages

- Encourages counterparts to work harder
- Compensates for added responsibilities and new fields of work
- Consulting firms can rely on stong internal cohesion (counterparts want to stay because of the money)
- Consulting firms can use the carrot-and-stick approach - "you had better perform or you will be replaced and then you will have no allowance."

Actual Disadvantages

- Creates disharmony between counterparts and NWSDB staff in related fields, particularly at the working level where an RSC manager may be earning less than a more junior counterpart yet working longer hours (very much the case with regional O&M staff).
- Resource facilities for counterparts are often superior (vehicles, air-conditioned offices), this creates jealousy.
- Counterparts lose their objectivity, their goal is to prolong the project not make sure that the consulting firm performs.
- Encourages the use of PMUs, when the most effective donor project organization is an integrated team approach.
- Encourages isolated project "empires" of highly paid counterparts who assume an air of superiority over their previous colleagues.
- Discourages counterparts from re-entering the mainstream NWSDB operations upon project completion. The drop in living (working) style is difficult to accept.

COMMUNITY PARTICIPATION

Community participation was a principle component of the project element to improve health education and rural sanitation services. In accordance with the project objectives, the Rural Sanitation Unit (RSU) was formed in the second half of 1985, headed by a civil engineer in the Planning and Design Department.

The unit was initially set up to establish better links between NWSDB and the MOH, other government agencies and NGOs in the field of water and sanitation. The unit was also to serve as an in-house resource in environmental sanitation, health education and sociology within the NWDDB.

The perceived functions of the RSU were as follows:

- To help other sections of the NWSDB in identifying and solving sociological problems in water supply and sanitation
- To assist appropriate agencies in the government and the non-governmental organizations in understanding people and promoting self help and self reliance so that people could actively participate in the planning, construction and operation and maintenance of water supply and sanitation projects
- To ensure proper use of water and sanitation facilities
- To provide orientation and training in health education, environmental sanitation, control of water and sanitation related diseases, community organization and participatory approaches to NWSDB empolyees, field level officers of related government departments and personnel of the NGO sector
- To experiment with and share innovative methods and materials in rural water supplies and sanitation with the MOH, other agencies and the NGO sector.

From the start the RSU was heavily dependent on consultant support. One expatriate public health specialst and two highly qualified Sri Lankan experts (one social scientist and one health education specialist) formed a triumvirate which attempted to formulate policies and procedures in an area which, to be frank, held virtually zero interest at that time for the NWSDB. The presence of the Director of the MOH/Health Education Bureau on the Project Steering Committee was also an attempt to give high visibility to this project component.

During its first year of operation the RSU concentrated almost exclusively on two areas, the identification of demonstration sub-project sites in which to test community participation, health education and latrine construction approaches, and the preparation of a health education curriculum. Involvement of the NWSDB in these activities was minimal, except for having the final veto on the sub-project sites.

RSU Status Review

Because of the obvious lack of integration of the RSU with NWSDB operations a review was carried out in September 1986 using the TA contract resources to provide an expatriate health education consultant with specific LDC experience in community participation and low-cost technology options. The reviewer concurred with the general impression of the TA team that up to that date little integration had been achieved within the overall framework of the NWSDB, and that few indidivuals outside the RSU staff knew the purpose of the unit.

The evaluation did acknowledge that some initial efforts at integration had been made, of course, since RSU staff had worked with engineers from other units in the process of contributing to pre-feasibilility studies prior to beginning construction/rehabilitation at the demonstration sites. However, since such activities were mandated under the project it could not be said that genuine requests for assistance had originated from units outside the RSU. Such requests could have been one measure of the level of integration achieved.

Although the RSU had been formed as a result of a legitimate need to coordinate MOH and NWSDB operations in the area of sanitation, the actual mandate for rural sanitation, particularly latrines, remained with the MOH, thus further confusing the role of the RSU. Another factor in the apparent lack of support for the unit was its title; "Rural Sanitation Unit" did not convey the other important functions of the unit.

The reviewer recommended that for the RSU to become a viable unit which participated in the day-to-day activities of the NWSDB, it must be perceived as a useful group, with a long-term role within the agency. To project such an image within NWSDB and to improve the perception of the group by NWSDB staff (as well as those outside the agency), it was recommended that the name be changed to the Community Support Division (CSD). It was proposed that the new unit be located under the Addl GM (Operations), and headed by a DGM for Community Support. It was also proposed that the role of the unit be expanded, not only to facilitate community involvement in the initial project design process, but to encompass a larger role involving a continuing liaison and interface with communities in support of local institutional development, training in management, operation and maintenance, revenue generation, and development of spare parts supply systems.

Community Support and Sanitation Section (CSSS)

The review of the RSU served as a most useful means of clarifying the unit's objectives and suggesting strategies for its further development. The recommendation to elevate the status of the unit to DGM level was, of course, an impossibility in the climate of the NWSDB at that time. It is possible that even if it had been elevated to such a level, its acceptance and integration would not necessarily have been guaranteed. The problem was to integrate at the working level, a high status title did not mean instant integration (witness the failure of the Addl GM (Support Services) role).

The unit was retitled the CSSS, thereby diluting the rural emphasis and highlighting the community aspect, and its organization was modified slightly by elevating the unit manager's position to Chief Engineer reporting direct to DGM (Planning and Design). Probably a more significant modification was that the consultant triumvirate was abolished, the services of the expatriate consultant being terminated and the local input concentrated in the social scientist. There was now only one consultant manager to take responsibility for this key area, and he could liaise directly with his NWSDB counterpart. The era of slow decision making, confused/conflicting direction and over-concentration on internal systems rather than output was over, the lesson learned was clear, a trio of "prima donnas" does not lead to efficient implementation!

Over the next three years the rate of progress was considerably enhanced. Two senior NWSDB officers were enrolled in the Masters Public Health Course at the University of Hawaii, and a cadre of sociologists was also developed. Although these specialists were project-based, the strategy was to achieve their re-assignment to the CSSS through regional decentralization. A successful community participation process evolved through the development of the demonstration sub-projects. These involved pre-feasibility, feasibility and design phases, all of which incorporated community involvement on such issues as level of service, location of services and affordability.

The progress on such projects was slow, about half that estimated at the initial programme preparation stage (Bradley and Karunadasa 1989). This was entirely a result of lack of commitment by NWSDB to providing the necessary planning and design engineer resources. The TA team consistently refused to be responsible for the engineering aspects of the work, to do so would have completely negated the training and concept acceptance by NWSDB staff. Eventually, resources were allocated and the studies and investigations were carried out by NWSDB staff under overall guidance of the project team.

Community participation, health education and latrine construction, on the other hand, all proceeded on schedule through the dedication of the sociologisits and MOH officers responsible for collaboration in the field. All the sub-project communities were integrated into the project cycle, health education curricula developed and utilized and 5400 adult latrines constructed. An additional 1300 pre-school latrines were also constructed which demonstrated a significant impact on childhood diarrhoea episodes. This initiative was not a component of the original project design. Approximately 370 volunteer village health workers were trained to carry out health education activities.

In May 1988 a successful workshop on Community Participation in the Water Sector was organised by the CSSS and attended by representatives of the ESAs engaged on such activities in Sri Lanka, as well as from government agencies, NGOs and the NWSDB. Both the NWSDB chairman and GM participated actively in the proceedings. The participants addressed the key issues of community data base; community participation procedure; health education and monitoring/evaluation and coordination aspects.

The main recommendation emanating from the workshop was that the CSSS be decentralized to the RSC level, with the project-based sociologists eventually being absorbed by the NWSDB. Because of differences in community characteristics and other factors, it was agreed that no rigid procedure for ensuing effective community participation was possible. However, the following basic components were recommended as essential elements :

- Members of the local authority should be involved from the inception in the participatory planning process
- Involvement of all sections of the community must be assured through formal and informal community leaders
- Formation of an Action Committee is a necessary first step to involve community leaders in the project development
- Essential to form user/consumer groups to ensure acceptance of facilities and to encourage sense of ownership and payment for services.

- Public standposts should be "converted" to community standposts, in order to engender a feeling of responsibility and ownership. This concept applies equally to urban as well as to rural areas.
- Recovery of water charges can be carried out through existing community organizations such as thrift societies. These organizations should appoint a caretaker who will be responsible for collecting the charges. Any excess funds can be retained by the organization and used to benefit the members.
- Promotion of community awareness with regard to payment of water charges and reduction of water wastage should be encouraged through stickers, advertisements, posters, calendars, TV and other means.
- Construction using volunteers from the local community is more sustainable if the volunteers are paid since this ensures motivation. The payment to unskilled labourers could be in the form of food or a proportion of the total cost (say 50%) being paid to the local community organizations who would then decide how to use it. Skilled workers should preferably be paid full time.

Community Participation Unit (CPU)

Following the May 1988 workshop the need for the CSSS began to be realised by an increasingly wider spectrum of NWSDB officers. Decentralization commenced first in Central RSC with the appointment of a full time Social Science Officer in 1989. In July 1990 a workshop held in Central RSC to review the CSSS status recommended a further title change, this time to CPU, and an expansion of the staffing level to include a sociologist in each Regional Office and Community Relations Officers in each district. This final name change reflected the main role of the unit, that of ensuring the involvement of the community in the project cycle, from the initial planning stage to paying for the service provided and also carrying out basic maintenance for the more simple technology systems (handpumps, gravity piped schemes, for example).

Concluding Comments

At the end of the project the CPU was slowly advancing its coverage among the RSCs, with sociologists being attached to Southern and Western RSC as well as the original Central RSC. With the active support of ESAs, most projects outside the Greater Colombo area now included an element of community involvement, perhaps not as detailed and intensive as that developed on the demonstration sub-projects, but a start nevertheless. Also, affordability considerations were now an integral part of the project selection process and the formation of standpost committees was becoming almost a routine matter.

The acceptance of the community participation concept by the NWSDB actually took about 4 years (see Figure 41). The gradual change in emphasis, over the life of the project, including the modifications to the title of the unit, were key factors in this acceptance.

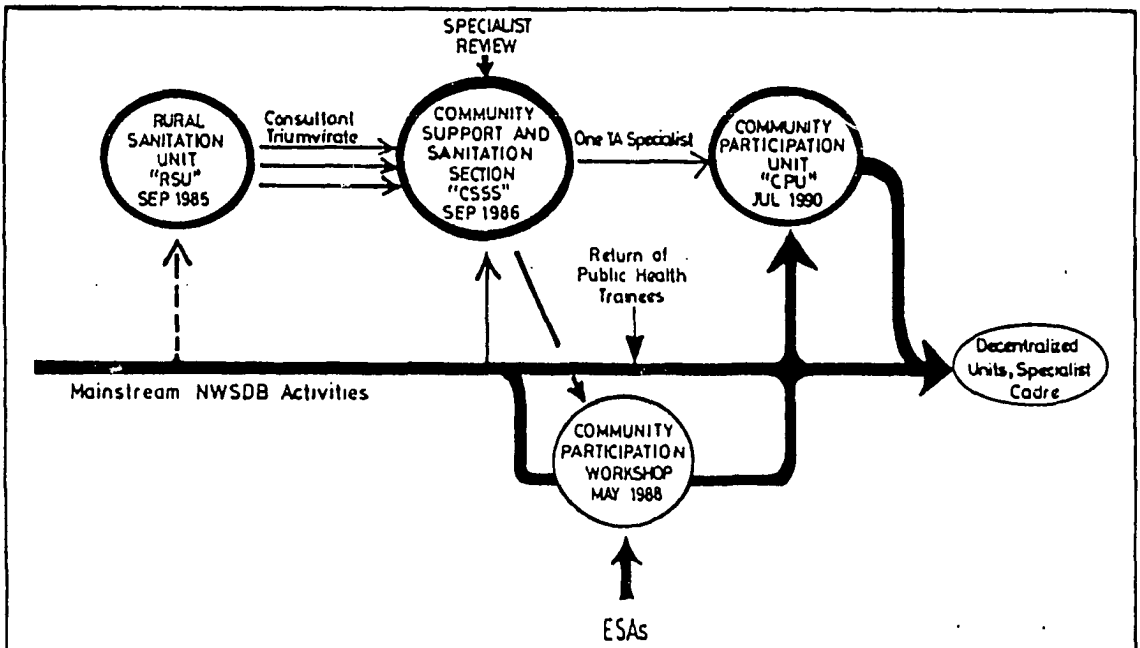


Figure 41

Evolution of Community Participation in the NWSDB

The original terms of reference called for six sub-projects and 15000 latrines. Only four projects were finally completed. Work in one project in Southern RSC was abandoned because of the adverse effects of the JVP insurrection on community involvement, and the sixth project which was located in Jaffna never started because of terrorist actitivies in the area. The time taken to secure NWSDB involvement in the engineering aspects of the four sub-projects was mentioned earlier. Actual construction work only commenced in 1990 when pressure was brought to bear by the political lobby and because by that time it became apparent to the NWSDB that USAID funds would not be available for such work beyond PACD. The reasons for such delays have been variously attributed to the lack of political pressure in the first place, the absence of cash incentives to induce the NWSDB design staff to carry out the work (this practice was common with some ESAs), and a general belief, particularly over the first half of the project, that this kind of work was a "one-off" experience, restricted to the WSSSP, and was therefore not a worthwhile topic for the design engineers. However, when construction did commence the NWSDB project management was exemplary, with a high demonstration of quality control and progress monitoring with the result that the work was completed on schedule. The approach used involved contracting local labour through the local authority, a system which generated employment and reduced costs (no hidden overheads).

It was perhaps inevitable, but when the community became involved in project planning the local MP had no need to apply pressure for a new scheme. In the absence of such political pressure NWSDB management did not give the project the necessary sustained level of commitment. This problem still exists, although to a much smaller degree and it is hoped that the problem will be resolved as the formalized project prioritization procedures become more widely adopted.

It is also true to state that the TA team were less than assiduous in attempting to secure the acceptance of the community participation process by the senior manager responsible for the CPU (or RSU and CSSS as it was at that stage). The ID component essentially stopped at the CPU manager level, and since this person had been one of the Masters Public Health candidates in Hawaii, he was most receptive of the concepts involved. Unfortunately, building the bridge to the next higher level of management did not occur, and it was only when a senior management staff rotation occurred that satisfactory progress was evident.

ENGINEERING INITIATIVES

The scope for ID initiatives in the engineering aspects of the NWSDB's operations was immense. This was understandable since the agency had traditionally concentrated on planning, design and construction supervision of new water supply facilities. However, developing ID strategies for the engineering area was a veritable minefield since one immediately came face-to-face with the formal point of change resistance, not just resistance to the change in overall mission, but a more fundamental opposition to being told that existing technical procedures could, perhaps, profit from some improvement.

The TA advisor in this area had effectively almost 100 counterparts, the number of engineers in senior and responsible positions. It was obviously an impossibility to attempt to cover all areas, so it was decided to concentrate on the planning area, together with the production of a series of technical procedure manuals. In addition support had to be given to the regional facilities programme and to the establishment of the new Research Section. This programme effectively ignored construction supervision, but it was believed that of the basic engineering functions being carried out by the NWSDB, that the staff were reasonably experienced at site supervision and construction management because of the recently completed Southwest Coast Project. Other consultants were available in any case under later World Bank funded assistance to help develop this activity. This supposition was vindicated by the excellent performance demonstrated on the construction of the demonstration sub-projects.

Planning Area

The demonstration sub-projects were used as a testing ground to develop manuals on prefeasibility and feasibility studies. Emphasis was placed on the need to involve the community from the beginning of the project-cycle. A detailed procedure was developed for project prioritization which later proved to be one of the key foundation blocks for helping to build an institutional capacity to resist political pressures which were applied for new schemes regardless of real need or financial viability.

The procedure laid down a step-by-step approach to involving the community, analysing the technical, social and financial feasibility and securing an agreement with the local authority, covering such items as cost recovery, prior to commencement of construction. A Project Evaluation Committee was formed to implement the procedure and to prioritize the competing projects. The procedure was approved by the MLGHC and circulated among all local authorities and MPs.

Experience over three years' application of the procedure indicated that it was most successful where the projects were funded by ESAs, since the ESAs were prone to stipulate the use of the procedure in the loan disbursement covenants. Many schemes did slip through the net, as was anticipated since there must always be some flexibility for political expediency. Perhaps the flexibility was unusually elastic during this period because of the national elections and the need for government to restore the confidence of the electorate by accelerating the provision of basic infrastructure facilities.

At virtually every major ID progress review meeting, the NWSDB managers requested more support for the procedure, and this request was increasingly backed up by the major sector ESAs. Although the procedure was not leakproof by any means, it was a major step forward in increasing the NWSDB awareness of financial and social issues, and the Project Evaluation Committee enabled potential projects to be screened by a cross-section of NWSDB disciplines. During 1990 regional project evaluation committees were also set up to spread the review process.

Manuals

A comprehensive series of design and procedure manuals was prepared during the first half of the project, using the concept of manual committees. The idea was for NWSDB specialists in a particular area to share ideas with the TA team and others, mainly Sri Lankan experts in the field under review. In this way the existing state of knowledge and practice could be defined, modified and expanded as necessary. The design manuals covered virtually all planning and design activities, including specialist areas such as groundwater development, rural sanitation, analytical quality control, etc. Procedure manuals focussed on such issues as project evaluation, project management, scheme commissioning, and formalized coordination among the various technical functional areas. The formal procedure for passage of a project from the inception to the commissioning stage involved no less than 80 discrete steps.

The method adopted to prepare the manuals collaboratively was time-consuming, at least 18 to 24 months being required for each committee to complete its first draft, but it ensured NWSDB ownership and reduced the risk of recommending inappropriate systems and technologies. Initially the requests for copies of the manuals were few but with the decentralization of the project planning and design functions (at least for minor schemes) from 1990 onwards, an increased demand for copies came from the RSCs. This was perhaps yet another indication of the wider receptivity of the younger management teams in the regions to use new procedures and to build up their confidence. There was no "loss of face" in the regions, the aim was to try to improve, not to adopt the more Head Office traits of defending past practices and downplaying the relevance and impact of the ID initiatives.

Facilities Construction

An important component of the decentralization and reorganization efforts was the construction or rehabiliatation of physical facilities, particularly regional offices, workshops and laboratories. The programme was large (see Box 26) but was plagued by delays and stoppages almost from its inception. The approach adopted was to first identify the scale of work required. This phase was accomplished through intensive discussions with functional area managers and visits to existing facilities to assess space allocation customs. The next phase was for the NWSDB to enter into a contract with a local engineering consulting firm which took on the responsibility for facility detailed design, contract detailing and supervision of construction.

This second phase resulted in a series of problems. The NWSDB essentially disagreed with the concept of using a private sector company and believed that it was perfectly capable of doing most of the work in-house. USAID was not in favour of this approach on the grounds that it would compete with ongoing work loads, and that it would not encourage private sector involvement. Although incentive allowances could not be paid to NWSDB staff to complete the work in a timely fashion, the NWSDB really had no option but to accept.

Designs were, therefore, checked with a mixture of reluctance and resentment, and delays gradually accumulated. The responsibility was not all the NWSDB; the local firm was equally if not more inclined to miss deadlines than the NWSDB. Contract accomplishment was a mix of successes and failures depending primarily on the competence and interest of the contractor. The civil disturbances of 1988/89 were often cited as the main reason for the delays, but the Southern RSC office facilities were completed most expeditiously, right in the heartland of the JVP.

The situation at the end of the project (see Box 26) was that out of 23 programmed physical facility installation contracts, 6 had been satisfactorily completed, 3 were to be completed at a later date using the NWSDB's own resources, and 14 others never got off the drawing board, were abandoned at the tender stage because of non-responsive bids, or were affected by the adverse security situation. The less than total completion did not materially effect the overall decentralization programme since other arrangements were made. For example, other ESAs provided additional space and facilities for Central RSC, Anuradhapura RSC was temporarily amalgamated with Central RSC and in Kurunegala Region local resources were mobilised to improve facilities.

These comments notwithstanding, the verdict on the overall facilities construction must be one of dismal failure. A completion record by CCD of 26% is unacceptable whatever the mitigating circumstances put forward. Obviously the adverse security situation was the prime factor for the two Jaffna contracts, and to a lessor extent for the two Ampara contracts. However, failures in the other areas appeared to be the result of a combination of low calibre contractors, less than adequate site supervision (in the sense of recording contractors' performance against targets), delays in completing design and contract documents, a refusal by government to accept bids for housing contracts which were above the engineer's estimate, price escalation over and above normal inflation rates (USAID stipulated fixed price contracts), and an overall reluctance on the part of the NWSDB and the local consulting engineering company to pressurise the contractors. As noted earlier, the strategy to use a local consulting engineering company was not welcomed by the NWSDB and the priority given to this programme thereafter was low as a result.

Box 26. Facilities Construction - Planned and Actual

Contract Programme	Actual
1. Upgrading Central Laboratory/ Training Section (Head Office)	Abandoned by Contractor
2. Upgrading Central Stores	Abandoned by Contractor
3. Upgrading Central Workshop	Abandoned by Contractor
4. Groundwater Stores (Colombo)	Completed
5. Southern RSC (Matara) - Office	Completed
6. Southern RSC - Workshop/Stores	To be completed by NWSDB
7. Southern RSC - Housing	Never started
8. Central RSC (Kandy) Office	Completed
9. Central RSC - Workshop/Stores	To be completed by NWSDB
10. Central RSC - Housing	Never started
11. Northern RSC (Anuradhapura) - Office/Workshop/Stores	To be completed by NWSDB
12. Northern RSC - Housing	Never started
13. Kurunegala Region - Stores/ Workshop	Never started
14. Kurunegala Region - Housing	Never started
15. Ratnapura Region - Office	Completed
16. Ratnapura Region - Workshop/ Stores	Never started
17. Ratnapura Region - Housing	Never started
18. Ampara Region - Office/ Workshop/Stores	Never started
19. Ampara Region - Housing	Never started
20. Bandarawela Region - Office/ Workshop/Stores	Completed
21. Bandarawela Region - Housing	Completed
22. Jaffna Region - Office/ Workshop/Stores	Never started
23. Jaffna Region - Housing	Never started

A point worth mentioning is that the space requirements in the RSC offices at the end of the project were 30 to 50% greater than envisaged during facility design. This increase was because the expanded decentralization programme now included the CPU, a computer unit, groundwater and enhanced financial services (general ledger, payroll in particular).

Research Unit

One of the engineering initiatives faced as a result of the implementation of a "fait accompli" organization chart at project inception was to develop a Research Unit, headed by an AGM (Research).

The concept of a fully-fledged NWSDB unit specializing in research was unproven and uncertain. How such a unit was to function within a future organization geared to plant operation and water sales had to be explored, as did the competing demands of existing research bodies in the external environment. A specialised short-term expatriate team member was brought in to address these issues and in addition an overseas study tour was arranged for the unit manager to inspect research organizations and procedures in a neighbouring Southeast Asian country.

The recommendation was made for a Research Committee to be formed which would promote research topics and review progress. Membership of this committee would be drawn from the existing Sri Lankan research establishments, notably the universities, as well as from the NWSDB. This committee was a failure, the outside members had no interest in attending, probably because the idea of a strong NWSDB Research Unit represented unwanted competition.

Ideas for research topics were solicited from within the organization, but the response was minimal. The usual rejoinder was that research, particularly on operational issues, could be carried out with the functional area's own resources. This comment totally overlooked the fact that few plant managers at that time realised how even a minimal amount of applied "research" into operational practices would pay dividends in improved operational performance. The more pertinent reason for the espoused attitude was that the Research Unit represented a political threat within the institution (this was before the concepts of corporate identity and team building had been raised).

Some research studies were carried out by external contractors since USAID and WHO provided the funding. The topics concerned with building a national computerized deep well inventory (hardly a research subject!) and optimising the design of reinforced concrete reservoirs were very successful. Others dealing with consumer attitudes to payment for water and slow sand filtrations were less so.

Following the completion of the USAID-funded research topics the Research Unit assumed a state of near limbo for almost two years until it was disbanded early in 1991 and the AGM position transferred to Greater Colombo RSC, which in retrospect was a far more beneficial use of a senior management position.

COLOMBO MASTER PLAN

As explained in Section 4, the TA contract was expanded in 1990 to include about 42 professional person-months for updating the Greater Colombo Water Supply Services Master Plan. Although this additional sub-project was not strictly speaking ID, an attempt was made to apply the lessons learned regarding consultant/counterpart cooperation and technology transfer. The approach adopted can be summarised as follows:

- Establish the plant development TA team in the Greater Colombo RSC office (not a separate PMU as with many other donor-funded projects)
- Form a Master Plan Steering Committee comprising senior NWSDB managers and the TA team and headed by the NWSDB Chairman, to meet monthly to review progress and agree on strategies
- Invite representatives from those FSAs (World Bank/UNDP) most likely to be interested in funding future water supply facilities in Colombo to attend the Steering Committee meetings.
- Hold coordination workshops with relevant agencies to discuss such issues as basic data sources, population growth, land use, water resource allocation, etc. These were usually half-day affairs (including lunch) and attracted a wide range of participants

- Work in close cooperation with NWSDB officers so that the planning techniques could be absorbed by the NWSDB as the project progressed

With the exception of the latter strategy, this approach was highly successful. The Steering Committee proved a valuable forum for exchange of ideas and for reaching agreement on key milestones. The coordination workshops were equally effective and helped to generate close linkages between the NWSDB and other agencies which would benefit the NWSDB on future occasions. Both these strategies essentially ensured that there would be no surprises when the final recommendations were produced, hence no time would be lost in proceeding immediately to design and construction of priority works, provided that funding was available.

Unfortunately the strategy of involving the NWSDB officers on a day-to-day basis was less successful. With the exception of the full-time counterpart project manager and regular, usually weekly, informal meetings with senior management from the Planning and Design Department, the involvement of the Greater Colombo RSC management was minimal. Of course, considerable support was given by the RSC operational units in providing data, conducting flow measurement surveys, etc. but the transfer of the basic planning technology to the RSC did not take place since there were no persons with either the time or the inclination to get involved. This situation was disappointing since the RSC did have a Planning and Coordination Unit and it had been hoped that at least some degree of interest would have been shown by this unit. The fact that the project did not pay allowances to NWSDB staff might have been a factor but that did not appear to deter the counterpart project manager (who was attached to the Head Office Planning Section) from performing his duties very effectively.

In this section the key innovative strategies used to accomplish ID are brought together. The interrelationships which bind the individual strategies are described and the proposition is put forward that without all the basic building blocks being in place, sustainable ID cannot be achieved.

BRIDGING THE GAP

Imagine an arched masonry bridge spanning a river, on the right bank is an institution constrained by tradition, focussing on issues which are not appropriate to the new mission demanded by its operating environment. On the other side of the river is the road leading to ID, but the bridge is incomplete with the keystone not in place. It is, therefore, impossible for the institution to move forward on the road to ID. This imaginary situation is pictured in Figure 42 for the case of the NWSDB. The institution's upgrading progress is being stymied by over-concentration on the traditional technical, engineering building blocks of planning, design and construction, and also by an over-centralized organization structure and a reactive mode to forces in the external environment.

The building blocks on the left side of the arch represent the keys to widening the institution's vision, but they cannot be linked to the traditional areas of concentration on the right side of the arch without the keystone being in place. The keystone represents OD, the key factor which when connected to all the other basic building blocks enables the institution to move forward along the path to ID.

In essence, OD is the catalyst which enables the driving forces of change to be converted into ID. In the case of the NWSDB these driving forces included:

- Corporate planning - introduced an operational analysis and action planning capability
- Financial management - through performance budgeting and billing/collection procedures a financial consciousness was developed
- Public relations - widened the vision, built confidence and narrowed the gap between the institution and its customers
- CPU - involvement of the community in the project cycle
- O&M - changed the emphasis from building new schemes to providing the consumer with a better quality service

The TA specialists responsible for these driving forces were aided by the OD specialists (and also to some extent by training specialists) to deliver their message in a way which would be easily assimilated by the counterparts and translated into appropriate implementation strategies.

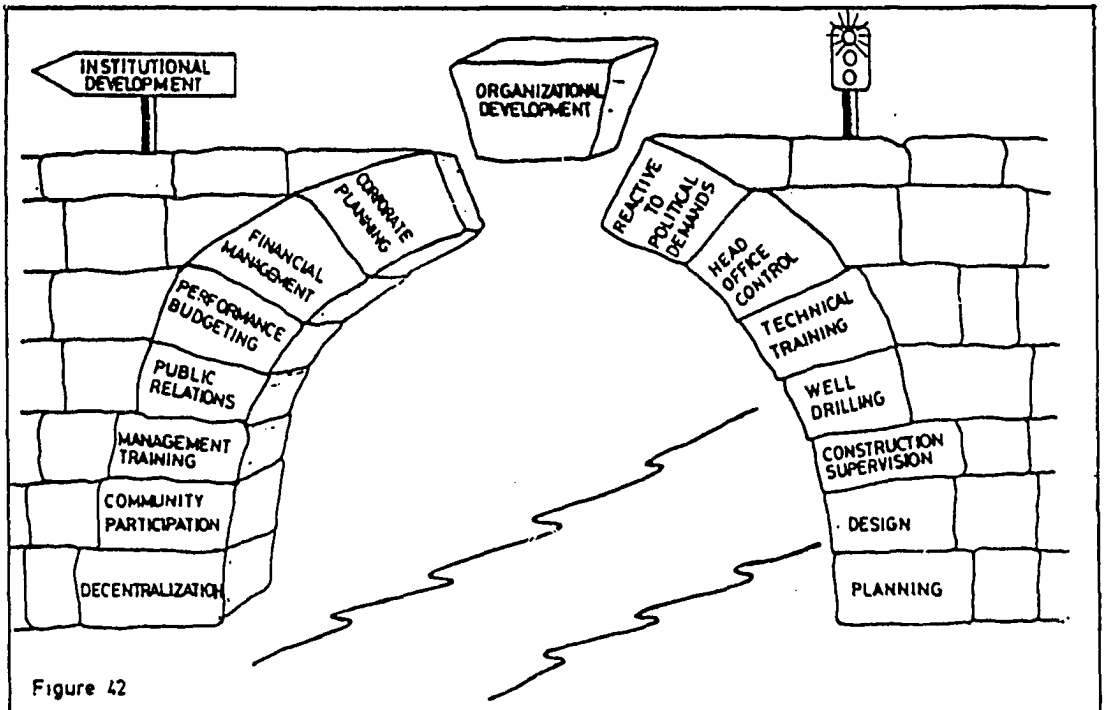


Figure 42

Bridging the gap - OD through Involvement

This digression on bridging the gap is necessary to place the following discussion on the key innovative ID strategies in the correct perspective. The four strategies which are described, namely inculcating ownership, developing a team spirit, establishing a corporate identity and involvement of the external environment, would not by themselves have had any impact on institutional upgrading. All four strategies operated within and around a web of discrete interventions, some of which were referred to in the example of the arch. The strategies supported the interventions, whilst at the same time the interventions depended on the strategies.

INCULCATING OWNERSHIP

The art of process consulting is to coax the client to develop his own solution to a problem. This does not mean that the client already has a store of solutions and only needs someone to help him unlock the door, if that were the situation the emphasis would not be on develop, but on "select." In the case of ID, the solution is unique to the institution because it must be consistent with the institutional culture. If the solution is imposed by the consultant, the client may not accept it, not because the proposal will not work but because the client does not want to be told how to put his house in order. Put in another way, the client must feel that he owns the solution, since only then will he support it and help to resist the opposing forces which will inevitably rise up in an effort to maintain the status quo. Inculcating ownership, therefore,

is the means by which the consultant jointly develops with the client a range of candidate solutions, whilst making sure that the final decision remains with the client.

The TA team used four approaches to develop NWSDB ownership of change strategies. These were as follows:

- One-on-one coaching
- Pilot demonstrations in restricted areas
- "Catalyst papers" to key decision-making/policy review groups
- Collaborative working groups covering a wide spectrum of NWSDB managers

Individual Coaching

One-on-one coaching was the favoured approach for addressing the definable individual problems, particularly those related to management style. The method is inevitably time consuming and without doubt the most exhausting, from the consultant's point of view. Success will only be achieved if the client is willing to "open-up" and discuss various interventions which might, at first sight, seem totally alien to his experience and latent capability.

Typical problems addressed with this approach were how to secure accountability of subordinates, how to deflect political interference, how to develop a team spirit and how to reconcile perceived internal power politics (usually related to Head Office versus the RSCs). As the project progressed the number of counterparts requesting this approach increased at an almost exponential rate. Unfortunately, consultant resources were insufficient to respond adequately to all the requests, not that the number of consultants was limited, but the team members with experience and competence in personal counselling and coaching were limited.

The time taken to "sell" a new mangement style could take as long as two years, even with regular one-on-one sessions at montnly intervals. The period shortened as the project progressed because as time went on it was possible for the client to draw comparisons with colleagues in the institution - real live role models are always better than examples from the consultant's previous experience.

Probably one of the most common problems raised during these sessions was how to encourage subordinates to improve performance. The aversion to being an unpopular manager was so strong that the NWSDB managers veered away from telling their staff that performance was poor and one of the pretexts for approaching a consultant for a series of face-to-face sessions was sometimes to try to have the consultant pass this message to the subordinates through the medium of a workshop or formal training session. The solution that "arose" in every case was for the manager to involve his subordinates in agreeing on work goals and then setting up performance review meetings. This method neutralized or depersonalized to some extent any negative feedback, and was a softer approach which was more akin to the manager's cultural mores.

The distinct advantage of individual coaching is that the sense of ownership can be very strong at the end of the coaching period. After all, a home visit from a personable salesperson is often more successful than an unsolicited advert dropped into the mail box.

Pilot Demonstration

This approach was commonly used to try out the various primary interventions (the building blocks on the left side of the arch referred to earlier) prior to their being replicated across the institution. Examples included the basic concept of decentralization, MIS, in-house billing and collection and O&M training. The approach was better suited to those issues which impacted more than one individual or group of people, all the examples listed had wide ranging effects, being multi-functional area in nature.

The method used was to select an area of the institution, usually a specific region, which appeared to be the most conducive for the success of the particular issue being tested. This selection of the test area was crucial, a wrong selection could result in non-acceptance of the intervention by the NWSDB as a whole. The selection followed a detailed assessment of alternative areas, often based on field visits and notes of interviews with regional managements. The opinions of all those members of the TA team who were even remotely involved in the issue were sought, and finally the selection was reviewed by counterpart officers, preferably at the higher management level since some of the interventions to be tested were sensitive. Counterparts known to be non- supportive of the interventions were not approached at this initiating stage. The formal stamp of approval was then obtained from the Project Steering Committee.

The results of this approach were mixed. Some interventions such as decentralization and in-house billing and collection were an instant success and spread rapidly across the institution when it became apparent that performance was improved and, more importantly, that the management involved actually enjoyed implementing the new systems. Other interventions such as O&M training and MIS were not easily replicated. Although both these interventions were successful in the regions where they were field tested, replication was very slow and it was necessary for the TA team to carry out repetitive demonstrations in other regions before the concepts began to be accepted. Perhaps the incentives attached to MIS and O&M training were much less than those related to decentralization and billing and collection, in the sense that the latter two had a greater, wide-reaching impact on the overall regional environment, whereas MIS and O&M training were more procedural in nature and restricted to a smaller group of individuals within the region. A series of one-on-one sessions might have resulted in faster acceptance of MIS and O&M training.

Catalyst Papers

In key policy areas the ownership had to be adopted by the highest levels of management. Typical examples included policies on cost containment, staff retrenchment, tariff increases, and changes to the organization structure. Because such issues invariably had political connotations they could not be addressed by the one-on-one approach since top management was concerned about the political ramifications of policy shifts. Neither could such issues be addressed by pilot field tests (since they were institution-wide policy issues), nor by collaborative workshops because the issues were invariably of a sensitive nature.

The approach of "catalyst papers" was simply the preparation of an issues paper (or strategy analysis paper) which reviewed the shortcomings of

current policy and recommended a range of changes. These papers were tabled at policy review bodies such as the Management Cell where they were discussed and a decision reached that reflected the external political as well as the internal NWSDB environment. The role of the consultant in this approach was to prepare the papers, not to lead or try to influence the ensuing discussions. The responsibility for the role of paper preparation was gradually transferred to the CPD as the project progressed.

Collaborative Working Groups

This approach was equally as successful as the one-on-one approach since it enabled a representative sample of client staff to simultaneously assume ownership of a key intervention. The interventions selected for this approach were those linked to the more general management upgrading initiative such as building an operational analysis and action planning capacity, employee performance evaluation and performance budgeting. None of these issues were contentious at the time that the collaborative workshops were held, in fact most of the issues had been proposed as being essential to overall institutional upgrading at earlier annual monitoring workshops. The degree of ownership was, therefore, already quite high even before the issues were addressed. The role of the consultants in this approach was to help design the workshop, prepare background material and assist in the workshop management. Particular care was taken to encourage the NWSDB participants to take on the responsibilities for leading the individual working groups, reporting on the group deliberations and chairing the plenary discussion sessions. In this way ownership of the workshop outcome was virtually automatic.

TEAM SPIRIT

Having achieved a degree of individual ownership of the various ID interventions, the next stage is to convert the individual ownership to group ownership. This stage requires building a team spirit within a particular working area, office or region.

In the previous sub-section the use of collaborative working groups as a means of inculcating ownership was described. This approach was also apposite for generating a team spirit since the individual consensus could in actuality represent the group consensus. Of course, there were occasions in the earlier phases of the project when the groups were dominated by individuals and the evidence of a genuine team spirit was missing.

A more overt approach was usually adopted to develop a team spirit, namely to face the issue head-on and arrange regular meetings of managers at which the main topic of discussion was just that - how to work as a team. The advantages of teamwork were illustrated with case study examples, with every attempt being made to show how in many instances the group was already exhibiting teamwork even if it was not aware of it. This approach was most successful in the regions where the managers were quite young, willing to improve, and realised that they alone did not know all the answers. They also realised that strength grew out of cohesiveness and that a stronger region would be able to resist unwanted pressures from the external environment, which to their way of thinking also included Head Office.

The approach was not so successful in those areas where the top management was not attracted to a participative style. In such cases teamwork did exist, but often for selfish motives, for example to protect the manager who in turn cossetted the team from the unwanted discomforts of having to be accountable, contain costs, improve efficiency, etc. In these circumstances the approach was to concentrate on smaller divisions within the group (an area office, functional area unit, for example) in the hope that gradually a more cohesive attitude to supporting ID interventions would rise up through the system. Unfortunately this approach was only half successful. The smaller divisions did indeed develop a good team spirit but so long as the overall area management refused to accept some of the key interventions, the division members lost interest or became frustrated. Fortunately, only one of the RSCs suffered from this situation.

In explaining the application of team spirit the TA team relied heavily on examples from the actual work situation. The basic message was that effective teams would be able to establish work norms which were consistent with both productivity and fairness, to the extent that the group members would be able to hold themselves accountable to those norms. Sensitive and unpopular interventions such as controlling overtime and not approving unauthorised travel claims could only succeed if the group as a whole supported them. The consultants assisted by "helping the team members help themselves," usually in group sessions where the benefits to the organization as a whole of introducing such controls were explained and eventually "owned" through participatory workshops at which targets were developed.

Evidence of team spirit surfaced first in those areas which also readily absorbed other ID initiatives, particularly in the regions. In Central RSC, for example, vehicle running cost targets were introduced and annual increments withheld from almost 10% of the employees (for reasons of indiscipline such as poor attendance) when Head Office managers were still struggling with the problem of how to be tough and be popular at the same time.

In another example, again from an RSC, the most senior manager went overseas on a training course. The problem which arose was who should stand in for him during his absence. The most senior person in terms of NWSDB seniority did not exhibit sufficiently strong management capabilities, the most senior person in terms of experience was quite new to the NWSDB. The most competent person was in fact third in line in terms of seniority and length of experience. The senior manager could not appoint a "low seniority" person since that would be contrary to both the seniority culture and the wishes of the Engineers' Association, of which all were members. The answer was to call a meeting of the RSC management body and agree on who should stand-in. The outcome was that the most competent and least senior person was selected, proposed by the most experienced manager and seconded by the most senior (in NWSDB terms) manager. This was an excellent example of teamwork in action.

ESTABLISHING A CORPORATE IDENTITY

A corporate identity implies that the employees of the corporation are acting in such a way that they strive to meet organizational goals rather than serve personal interests. As summarised by Wiener (1982), the behavioural pattern resulting from a corporate identity has the following characteristics:

- Personal sacrifices made for the sake of the organization
- Persistence to meet organizational goals (not just a response to inducements or punishments)
- Personal preoccupation with the organization

Individual ownership followed by team spirit lead naturally to a corporate identity, provided that the goals of the organization are clearly defined, are achievable, and have been developed collaboratively.

The central theme running through the consultation sessions in all the TA activities was how to improve the institution. All the case studies and working group topics focussed on such issues as improving financial viability, improving consumer service, reducing plant down-time, etc. The concept of corporate identity did, therefore, evolve without too much recourse having to be made to overt strategies such as "corporate identity workshops." Of course, the interventions dealing with goal setting, mission development, performance budgeting, performance monitoring and in particular corporate planning, were all strongly supportive of corporate identity development even if it was not explicitly stated. The fact that the managers were negotiating and agreeing amongst themselves on institution - wide goals and targets inevitably transferred such debate from the personal (and group) to the corporate arena.

There was strong evidence of a sustainable corporate identity by the end of the project. The 1991 Corporate Plan was a good example of a corporate vision in practical terms, developed through an intensive series of collaborative workshops.

The degree of individual corporate identity, or personal commitment to the organization's goals, varied among the managers. Although the majority were positively committed, there were still some reactionary managers, almost exclusively Head Office based, who whilst persistently putting personal before corporate interests, believed that their views represented the majority. The facts spoke otherwise, as the following typical examples show:

- Reactionary Manager - The regional office competition was unfair since offices were at different stages of development and the fact that inspection visits were carried out without prior warning did not give the staff time to put their house in order
  The facts - regional office staff were delighted with the competition and had no qualms about the certificates being awarded at a peer group meeting
- Reactionary Manager - overtime should not be controlled since staff have grown accustomed to overtime as a regular source of income and because money is being wasted elsewhere (paying salaries of non-NWSDB employees, renting office space for other agencies)
  The facts - many managers were able to control overtime because of collaborative goal setting in their region and because they realised that this was one area where they could contribute to easing the financial crisis

- Reactionary Manager - it was not correct to delay an overseas training trip for the Budget Manager for the reason that budget returns were not in, he was not responsible for preparing the returns
  The facts - Budget Manager understood fully the need to complete the budget in accordance with the previously agreed timetable, he was quite prepared to delay his overseas trip
- Reactionary Manager - there must never be any talk of retrenchment, if staff optimization had to be addressed, talk in terms of retirement

  The facts - the avowed government policy was to turn around loss making public sector entitites through such means as retrenchment. A cabinet paper had already been submitted by the NWSDB specifically referring to a retrenchment policy, it was widely known, if not widely liked.

These examples were really drops in the ocean by the time the project was completed, the reactionary managers were still there but their pontificating was seen by the majority to be nothing to be concerned about. In fact such managers become more and more isolated as their subordinates increasingly went around them to obtain guidance and direction on issues which they knew would be seen as sensitive by their immediate supervisor. In other words, the institution matured along with the majority of its managers, the reactionary managers became less and less influential.

INVOLVEMENT OF EXTERNAL ENVIRONMENT

This strategy was two-pronged. One aim was to reduce the negative involvement, the other to increase the positive involvement. The strategy recognised that the institution did not function in isolation and that the external environment represented a major source of positve and negative forces. At the start of the project few of the positive forces were in evidence.

Reducing the Negative Involvement

Through the government structure/political lobby the NWSDB was impacted in five principal areas:

- Finance - all capital finance was channelled through government, when collections did not meet O&M costs the NWSDB was entirely reliant on government subsidies
- Scheme selection - the project prioritization procedure developed under the ID project required the parent Ministry to approve those projects being evaluated and also those being recommended for implementation. The procedure was bypassed on a number of occasions by government directive
- Staffing - pressures to hire unwanted staff were ever present, particularly prior to election periods. The presence of resident politically - appointed members of the Board of Directors tended to encourage such hiring, and also encouraged the tendency for those staff members faced with disciplinary action to seek political support, often on spurious grounds

- Internal procedures - despite being a public corporation, the NWSDB followed tradition in linking its remuneration, hiring and promotion policies to those of other line agencies of the parent Ministry. Direct interference by the Ministry was related to the calibre of the senior Ministry officers. An administrative, rather than a results-oriented bias, would typically result in the NWSDB being sent circulars instructing executive management when to hold internal meetings for the purpose of receiving consumers, what hours to work in the office and even what items of furniture to purchase. This degree of interference quite naturally prevented any exercise of initiative on the part of NWSDB management and the whole area of procedural reform became emasculated, if not entirely stifled
- Sector policy - it would be unrealistic to expect the NWSDB to be totally divorced from government policy regarding the national water supply sector. However, interference could arise if government attempted, for example, to minimise budget allocations for rehabilitation of existing schemes compared to construction of new schemes

Over the course of the ID project a series of interventions were implemented which had the effect of lessening the negative involvement of the external involvement. These included:

- Developing a financial management consciousness with resulting tariff adjustments and cost reductions
- Developing project selection criteria, involving the community and developing closer liaison with the political lobby at the regional level
- Developing job descriptions, upgrading management performance, building a team spirit and establishing a corporate identity.
- Introducing new personnel policies and procedures (particularly employee performance evaluation), considerably enhanced delegation of administrative and financial authority.
- Development of an in-house corporate planning capability

The degree of negative influence decreased sustainability, as shown in Table 21, which is an admittedly somewhat subjective measure of interference magnitude. By way of explanation the degree of financial influence is calculated on the basis of 50% for capital funds and 50% for O&M subsidies (if any). If the degree of autonomy is taken as 100% minus the influence rating, then it is apparent that the NWSDB autonomy increased from about 15% in 1984 to about 55% in 1991, an increase of 3.7 times. Since 100% autonomy is not feasible, so long as the NWSDB remains a public sector corporation, because there will always be government influence in the financial area (capital budget) and sector policy area (say 50%), the maximum hypothetical degree of autonomy would be say 72.5%. By the end of the project, therefore, the NWSDB had increased its degree of autonomy from about 20% to 75% of target.

Table 21. Quantification of Degree of Influence of External (Government) Environment

Area of Influence	Weight	1984 Degree of Influence (%)	1984 Influence Rating (%)	1991 Degree of Influence (%)	1991 Influence Rating (%)
Finance	40	85	34.0	50	20.0
Scheme selection	20	100	20.0	75	15.0
Staffing	15	50	7.5	10	1.5
Internal procedures	10	80	8.0	15	1.5
Sector policy	15	100	15.0	50	7.5
Sum	100		84.5		45.5

Note: Influence rating is product of degree of influence and weight.

Increasing the Positive Involvement

As discussed in Section 6, every attempt was made to harness the positive forces at work in the environment. These forces were represented by those ESAs with an interest in seeing the institution develop, and at the same time having strong financial leverage (through controlling loan disbursements); and key actors in government who had an objective interest in supporting any appropriate (and politically acceptable) initiative which would help to improve the NWSDB's effectiveness.

Examples of how such support was garnered have been presented earlier. Sometimes the strategy backfired, as for example when a resident consultant in the parent Ministry became so involved that he produced long missives to executive management on how the TA team should be handled. The advice was quite contrary to the philosophy of process consultation (see Box 27), and if acted upon, would have effectively placed the consultants in a no-win situation!

Most of the support was engineered to overcome cultural or political impediments to upgrading. A typical example of the former was when the recommendations of the first Tariff Task Force were presented to a meeting of senior managers. Certain representatives of executive management conveniently forgot that the task force had been a counterpart/consultant group, and instead placed the responsibility for recommending a price increase on the consultants! This about face was in order to show support for those senior managers who were politically against a price increase at any cost, and to sympathise with those who had not been involved in the task force. The harnessing of ESA support through the parent Ministry by way of setting financial conditions to loan disbursement eventually resulted in a tariff increase taking place.

Box 27. Advice to the NWSDB on How to Use the TA Team (circa late 1986)

"I urge you to become directly involved in the management and execution of the USAID-ID Project and to seek - AND, IN FACT, INSIST UPON their assistance in addressing and resolving the myriad of problems and needs at NWSDB. It would be difficult to identify a single major issue, problem or need confronting the NWSDB which does not fall within the scope of the project. Consequently, you should call upon the Consultant Team regularly, support them vigorously, and hold them accountable for results achieved."

As cautioned earlier in this report, the harnessing of the external environment in this manner was essential to project success but was also highly dangerous, since if it had become widely known at the time that such support was being canvassed, the confidence of the NWSDB managers in the TA team would have been destroyed. The timing had to be perfect, the correct key actor contacted and a high degree of confidentiality assured.

SECTION 10

PROJECT MONITORING AND EVALUATION

The various approaches to monitoring ID projects are addressed in this section. The proposition is put forward that the performance of the ID team is best reflected by the performance of the institution and a series of institutional performance indicators are presented to compare performance status before and at the end of the project. The formal USAID monitoring and evaluation procedures are also discussed.

PRINCIPLES INVOLVED

Monitoring and evaluating the progress of an ID project is vastly different from monitoring a more conventional intervention which has clearly defined physical outputs. The WSSSP involved a mix of capital development (physical outputs) and TA, but by the very nature of the ID initiatives, the TA was not easily measurable since it was the counterparts who had the final responsibility for implementing the recommendations, not the TA team.

The basic reason for the project was to improve the operating effectiveness of the NWSDB, hence monitoring the performance of the institution was a sine qua non in assessing the effectiveness of the consultants' efforts. This statement implies that any change in institutional status would be as a direct result of the ID interventions. Such a clearcut cause and effect relationship is not necessarily the case since there are other factors at work - impact of ESA policies, government directives, national political/economic climate, etc., but a way can be found to quantify the degree of cause and effect, at least subjectively, as described later.

As summarised by Isely and Warner (1986), there are five evaluation levels which apply to most development projects in the water and sanitation field, and in order to achieve a fully comprehensive picture of project status, all five levels should be addressed. The levels enumerated by Isely and Warner (1986) are listed below, with suitable examples specifically related to an ID initiative:

1. Inputs - personnel, materials, money
2. Operation - training, maintenance, new procedures, budgeting
3. Outputs - new facilities, financial status
4. Utilization - sustainability of new systems and procedures, continuing improvements
5. Impacts - consumer satisfaction, donor confidence, health status, sector policies, degree of autonomy.

It is necessary to be fully aware of the different levels of evaluation that can be applied, decide at what stage in the project life they should be implemented, and appreciate fully the linkages among the levels. Since the final aim is to produce an upgraded institution which will continue

in the upgraded state when the project is over, the viability (or sustainability) potential of the project must be measured throughout the project life, from initial project design to final completion. The essential point is to apply a systematic procedure for tracking sustainability considerations throughout the project cycle (USAID, 1988).

USAID APPROACH

The inherent difficulties of monitoring an ID project were recognised by USAID right from the start and the Project Paper contained specific sections highlighting the critical questions, key indicators, data collection and analysis necessary for project monitoring and evaluation. The project was designed by USAID/Colombo with an unusually high visibility given to the monitoring and evaluation functions, a fact which reflected the agency's experience in this area and also its concerns that the project be kept on track; it was after all an innovative project which was of keen interest to a wide spectrum of external observers, notably ESAs, the Sri Lankan Government and USAID/Washington.

Logical Framework Matrix

Overall monitoring was carried out on the basis of a logical framework matrix (reproduced in Table 22) which reflected most of the main objectives set out in Section 1. The use of this tool was widespread in USAID having been adopted following an analysis of earlier USAID evaluation methodology by PCI (1969). The analysis showed that the logical framework would overcome the three major problem areas which tended to constrain meaningful project evaluation, namely vague project planning (multiple objectives not clearly related to project activities); unclear management responsibility (reluctance to take on responsibility because of external factors beyond management's control); and a negative attitude in general to the evaluation concept (caused by lack of clear targets and responsibilities).

The project framework in Table 22 was used by USAID in its quarterly project implementation review reporting, but it was not adopted as such by the TA team until the second half of 1989 following recommendations of the Mid-Team Evaluation team, and an earlier USAID regional audit team which found great difficulty in reconciling project achievements with the original project objectives. The consultants had not adopted the framework earlier because it was considered to be far too vague for monitoring day-to-day project activities, since many of the indicators did not change from one quarter to another. It is interesting to note that the difficulty of quantifying progress on ID projects was also recognised by the USAID Project Officer (see Box 28).

Following the audit recommendations the framework was included in the contractor's quarterly progress report, although it was never used to monitor ongoing activities or to fine tune the direction of effort. The status completion data in Table 22 represent the best estimates at CCD. It will be noted that not all indicators show 100% completion. This situation reflects not only the fact that some of the indicators were not too relevant to the overall institutional upgrading, but also that priorities changed as the project progressed. The reasons for the non total completion were as follows:

Table 22. Logical Framework Matrix

Narrative Summary	Objectively Verifiable Indicators	Target Date		Status (% completion)
Outputs:	Magnitude of Output:			
1. Consolidated decentralized NWSDB placing increased emphasis on water supply system O&M.	1. New or renovated office, training, laboratory, workshop, workman and staff housing facilities with equipment, supplies and logistical support at the NWSDB Central Office, and 3 Regional Support Centres and 5 Regional Offices located throughout the country.	1. Consolidation	Jun 86	100
		Decentralization:		
		Facilities Construction	Dec 87	50
		Decentralized operations	Sep 90	85 (4 RSC)
		Commodities	Mar 88	99
2. Functional NWSDB units in each of the following areas:				
a. Management, strategic planning, policy making, public relations, Management Information System.	2a. Established, tested operating plans, procedures and manuals for each area of NWSDB operations.	2a. Strategic planning	Sep 90 (75% institutionalized)	85
		Policy making	Sep 90	90
		Public relations	Sep 88	100
b. Commercial budgeting, accounting financial planning, billing and collection, supplies and stores, tenders and contracts, fixed assets inventory.	2b. Trained and motivated staff in all NWSDB units (3000 permanent staff)	2b. MIS	May 88	65
		Budgeting/financial planning	Sep 90	90
		Supplies and Stores	Sep 88	100
		Tenders & contracts	Aug 87	100
		Fixed assets inventory	Jan 87	100
c. Human Resources Development - training systems development, skills training, personnel administration.	2c. 2 long-term trainees, 34 short-term overseas trainees, 15 in-country workshops	2c. Human resources development	Sep 88	100
		Personnel/Administration	Oct 86	100

Table 22. Logical Framework Matrix (continued)

Narrative Summary	Objectively Verifiable Indicators	Target Date	Status (% completion)
Outputs:	Magnitude of Output:		
d. Capital Facilities Management - facilities planning, design construction and rehabilitation.	2d. 5 Technical research studies completed.	2d. Capital facilities management	Nov 86 100
e. Operations and Maintenance - process control, maintenance management, water quality.		2e. O&M/process control	Sep 88 100
f. Special Services, internal audit, legal, information management, research, administration		2f. Internal audit Information management	Jul 87 100 Sep 90 80 Research Sep 88 100
3. A functioning Rural Sanitation Unit in the NWSDB.	3a. RSU at NWSDB Central Office 3b. Regional Sanitation teams in the field.		Jan 86 100 Jan 87 100
4. Subprojects serving as demonstration studies - (a) New NWSDB procedures for construction/ rehabilitation work and (b) Health Education & Sanitation via the RSU.	4a. Two new water supply systems construction sub-projects		Dec 87 0
	4b. Four water supply systems rehabilitation sub-projects.		Dec 87 100
	4c. 15,000 latrines constructed in six sub-projects		Aug 89 67 (100% in 4 projects)
	4d. Intensive health education including delivery to 6 sub-project areas.		Sep 88 67 (100% in 4 projects)
	4e. 3 socioeconomic research studies completed.		Dec 86 100

Note. Completion status refers to August 1991

Table 28. Difficulty of Measuring ID Performance

"I must stress that "real" institutional reform is often a painstakingly slow process and; thus, accomplishments to date in many areas are not measurable. That this process is, in fact, occuring at NWSDB is perhaps best evidenced by the significant number of personnel "casualties" to date among both the government and consultant ranks over certain more sensitive of the issues described. Nevertheless, the process continues, along with the project, towards the benefit of Sri Lanka."

From internal USAID memo (November, 1986)

Output	Explanation
1.	Facilities construction - poor progress by contractors, adverse security situation in some areas, low-key follow up by local consulting company responsible for construction management and general low priority by NWSDB (because of involvement of local consulting company).
1.	Decentralized operations - 85% completion in 4 RSCs is considerably greater than 100% in 3 RSCs (objectives). No work done in fifth RSC (North-Eastern) because of adverse security situation.
1.	Commodities - small items that were missing/damaged still under insurance review.
2a	Strategic planning - comprehensive staff resources lacking in CPD.
2a	Policy making - as above.
2b	MIS - replication of O&M - MIS still not complete and executive management acceptance of MIS still not totally positive.
2b	Budgeting/financial planning - zero based approach still under field test, financial planning still not totally taken over by counterparts.
2f	Information management - same comment as 2b MIS.
4a	New water supply sub-projects - not started because of adverse security situation (Jaffna and Southern RSC).
4b	Rehabilitation water supply sub-projects - construction only commenced in late 1990, but was completed in the four sub- projects which were implemented.
4c/4d	Latrines/health education - completed in the four sub-projects which were implemented.

Progress Reports

The monthly/quarterly progress reports submitted by the contactor to USAID were the most widely used monitoring tools since they spelled out in detail the most recent accomplishments and identified any problem areas. These reports, together with the field trip reports submitted by all members of the TA team visiting the regions, provided a timely data source to USAID. Although these documents did not relate progress to stated objectives as such, they did enable an overall comprehensive picture of the ID status to be derived, which was much more useful from USAID management's perspective than noting minuscule shifts in percent completion of the indicators in the logical framework matrix.

Annual Project Monitoring

An innovative and highly successful approach was the annual project monitoring carried out by a two-man team from WASH. The team leader remained unchanged throughout the project and since he had also been involved in the initial project preparation he had a comprehensive appreciation of project needs. The second member of the team was selected to reflect a current priority area at the time of project monitoring.

The procedure used was as follows:

- Monitoring team interviewed counterparts to assess their reaction to the project, to review progress, and to define problem areas and perceived priorities
- Monitoring team interviewed TA team to assess problems and progress since last visit
- Monitoring team interviewed USAID officers, parent Ministry officials and ESAs (if in-country at that time) to ascertain any positive/negative feedback or suggestions for priority shift
- Five-day workshop in an out-of-town location to address key ID issues and to develop an action plan for the next year. The workshop was attended by counterparts and the TA team.
- Presentation of final report with debriefings to USAID/ Colombo, NWSDB executive management, Secretary/MHC and TA Project Manager

This annual event was respected and appreciated by counterparts and consultants alike since it gave an opportunity for all the main internal NWSDB actors involved in the ID process to meet, away from the demands of day-to-day operations, and to discuss objectively how things were going. The fact that the monitoring team leader had been involved with the project from the outset meant that he knew all the personalities involved and could stand back and analyse exactly what was happening and why. The TA team certainly found the event highly profitable since it enabled priorities to be re-focussed and helped prevent the consultants from becoming institutionalized themselves.

At first a set of standardized assessment guidelines was used which had been developed during the early months of the project. These covered the following areas (WASH, 1988b):

- Organizational autonomy
- Leadership
- Management and administration
- Commercial orientation
- Consumer orientation
- Technical capability
- Developing and maintaining staff
- Organizational culture
- Interactions with key external institutions

Indicators were associated with each area and scored on a scale ranging from "very low" through "medium" to "very high." Although this tool proved useful for the first two years, it was dropped thereafter because it suffered from the same problem as the logical framework, which was that the indicators were too general to quantify significant change over annual periods. The monitoring team later based its assessments on specific ID initiatives which were more easily measurable and could be discussed constructively at the monitoring workshops.

Mid-Term Evaluation

Three and a half years into the project USAID commissioned a mid-term evaluation which had these objectives:

- Summarise progress achieved
- Identify major problems
- Assess the likelihood of the project achieving its goals
- Assess the project's effectiveness in addressing AID policy objectives
- Recommend modifications of project activities/implementation procedures
- Recommend any areas meriting special consideration.

The evaluation team, which comprised two expatriate consultants (specialists in project administration and water sector engineering/financial analysis respectively) and one Sri Lankan (the first chairman of the NWSDB), recognised that despite serious initial problems the ID initiatives were beginning to progress in a satisfactory manner. The team noted its concern about the deteriorating financial status of the NWSDB and recommended that the TA contract be extended to enable project goals to be attained. It was also recommended that the consultants include more meaningful performance indicators in their regular reporting to USAID which compared present and planned achievements (Dawson and others, 1989).

Project Audits

The project was audited on two occasions, being visited by teams from the USAID regional audit unit in Singapore. The first audit in 1988 was concerned with project inputs and their conversion into project outputs. Emphasis was placed on the traditional accounting type of audit (rather than process considerations), focussing on commodity utilization, quantifying achievement of objectives as stated in the Project Paper, and host country contributions. The audit team never did get to grips with the basic concepts of an ID project, perhaps because this wider horizon was not embodied in their terms of reference.

The audit report concentrated on the commodities and featured a picture of some partly-opened cardboard boxes lacking the mandatory USAID markings in the Central Laboratory (USAID, 1989). The report included the comment that "local resistance to the restructuring of the NWSDB delayed project progress," as if that was something unusual! The fact that resistance to change is to be expected and the fact that the original project duration of 40 months was woefully inadequate for an ID intervention were not mentioned.

The issue raised regarding the need to improve the monitoring and reporting of specific quantitiative indicators was well taken, and following a USAID-expert review of monitoring options early in 1989 the decision was made to reinstate the original logical framework matrix from the Project Paper, albeit with more relevant target completion dates.

The second audit in 1991 essentially focussed on the USAID Mission's approach to project management and on some of the financial reporting details of the contractor.

INTERNAL PROJECT MONITORING

The TA team used the following techniques to review progress:

- Staff meetings
- Initiative review meetings
- Monthly/Quarterly progress reports
- Operational action planning

Staff meetings provided a forum for the TA team to discuss openly their concerns, to share successes and problem-resolution strategies, and to broaden their appreciation of the wider ramifications of project activities. The meetings were attended by the expatriate and local members of the TA team and were usually held on a monthly basis. Although useful during the initial phases of the project, they were superceded by more intense initiative review meetings from 1987 onwards, since by that time the team members' areas of concentration were more clearly defined.

The initiative-review meetings were highly specific and involved key counterparts as well as consultants. This collaborative approach helped to strengthen consultant-counterpart links and enabled the real problem areas to be surfaced and addressed. Such meetings occurred in virtually all the main initiative areas and the TA Project Manager made it a point to attend as many as possible in order to keep abreast of the diverse activities taking place.

The contractor had an obligation to present a detailed progress report to USAID, on a monthly basis up to the mid-term evaluation, quarterly thereafter (a welcome recommendation of the evaluation team!). The reports discussed in detailed narrative activities undertaken and planned, as well as summarizing the more mundane details of staff input, resource mobilization and expenditures. The reports were also circulated among NWSDB senior managers, the parent Ministry, and relevant ESAs in order to widen the visibility of project activities and to help secure external support (notably from ESAs).

The operational action plan was the chief monitoring tool used by the consultants to quantify progress on a regular basis. The plan was flexible, in that new tasks were added as they evolved, and it covered the following main areas of activity:

- Project management
- Corporate planning
- MIS
- Decentralization
- Budget planning/control
- Billing and collection
- Public relations
- Engineering
- O&M
- Community support and sanitation
- HRD/training
- Colombo master plan update

A total of 154 individual tasks were identified, each task specifying the target date and person(s) responsible (a mix of counterparts and consultants). It was the flexible nature of this plan that confused the auditors since it could be construed as a licence to extend the contract! However, the technique was relied upon by the TA team to track specific initiatives and the inclusion of the counterpart names did result in some degree of leverage. The plan was submitted to USAID in each formal progress report.

A final internal monitoring system was the usually ad hoc progress review meetings which took place with the parent Ministry. These meetings were structured around a specific issue, often financial or management performance related, and were attended by senior representatives of the NWSDB and the TA team, or by the TA representatives alone depending on the issue. The opportunity was taken at such sessions to raise other issues which appeared to be blocking progress.

MONITORING INSTITUTIONAL PERFORMANCE

This discussion of monitoring institutional performance is based on the premise that the major part of the change in performance resulted from the ID project. It is believed that this premise is substantiated by the following facts:

- o The TA team was actively involved in mobilising positive external forces (ESAs, parent Ministry)
- o The leverage exerted by the ESAs was designed in consultation with the TA team to ensure that it would have the desired effect, ie. that it was achievable
- o Formal ESA mission aide memoires made specific reference to the need to continue upgrading the institution through the resources of the USAID project, and in certain instances made favourable reference to specific ID initiatives
- o The TA team was acutely conscious of the need to harmonize the main direction of institutional upgrading with the changing political environment. This harmonization was achieved through regular briefings at the Secretary/MHC level

- That resistance to change was eventually overcome is testament to the internal interventions taking place. The interventions were the sole purview of the TA team
- The annual project monitoring reports presented an objective assessment of progress, and focussed almost exclusively on the linkages between ID inputs and NWSDB operational requirements
- The counterpart staff, if questioned, would probably unanimously agree that the main reason for the change in the institution's effectiveness was the ID project

A review of key operational indicators for the before-project situation (year ending December 1984) and end-of-project status (year ending December 1990) is presented in Table 23. Data for 1991 have not been included, other than for the capital budget, because the major tariff increase which became effective at the beginning of the year could give a over-optimistic end-of-project status. The 1990 data represent the real status as it was at that time, not estimates or targets.

There can be no argument that in almost every case the NWSDB was in a far better position in 1990 than in 1984. Some apparent inconsistencies in Table 23 need an explanation. The fact that billings as a proportion of cost decrease over time reflects the inadequate tariff structure, the situation was rectified with the tariff increase in 1991 when billings represented 217% of budgeted O&M cost and about 190% of estimated total cost. Total arrears increased over the period but this can be explained by the increase in billed consumers. The average age of arrears did in fact remain relatively constant at about 12 to 13 months, with the exception of 1989 when the average age increased to 15 months because of the difficulties of billing and collection occasioned by the JVP insurrection.

One of the most important indicators in Table 23 is that of consumer complaints which was averaging 3% connections in 1990. This represented a slight increase on the situation in 1988 when the average was 2%, and could be accounted for by the tariff increase in 1990. A large proportion of the complaints were an unresolved backlog, mainly concerning such long-term issues as lack of water because of scarce resources. The indicators compare very favourably with a typical UK Water Authority rate of 1.5% to 2%.

The impact of decentralization is reflected in the indicators for financial authority, vehicles and training. Despite only a marginal increase in Training Sector cadre, the number of trainee person-days increased by almost 90% and the regional/Head Office training days ratio switched dramatically from 1:26 to 5:1.

The factor productivity change for key indicators can be expressed as follows:

Indicator	Factor Productivity Annual change (%) 1984-1990
Collection/O&M cost	18
Connections/Employees	10
Collections/Connections	18
Billed connections	13
Water production	5
O&M cost	13
Arrears	14
NWSDB inflation	13

Table 23. NWSDB Key Operational Indicators

Indicator	Before Project (1984)	End of Project (1990)
Piped water produced (M cu m/y)	155 (a)	219
Unaccounted-for-water (% produced)	40-50	37
Billed connections (thousand)	79 (a)	185
Employees (total)	6100	7128
Connections to employees ratio	13	26
Water produced (thousand cu m/y) to employees ratio	25	31
O&M cost (Rs million)	179	425
O&M cost (Rs per connection)	2266	2297
O&M cost (Rs per cu m produced)	1.15	1.94
Billings (Rs million)	224	503
Billings (% O&M cost)	125	118
Billings (Rs per connection)	2835	2719
Billing lag time (days)	180	30
Collections (Rs million)	56	422
Collections (% billings)	25	84
Current collections (% billings)	40 (b)	70
Collections (% O&M cost)	31	99
Collections (Rs per connection)	709	2281
Arrears (Rs million)	149	380 (d)
Capital budget (Rs million)	1126	2087 (e)
Rehabilitation (% capital budget)	0	62 (e)
Debt service (Rs million)	33	123
Total cost-O&M+debt service (Rs million)	212	548
Billings (% total cost)	106	92
Collections (% total cost)	26	77
Consumer complaints (% connection)	> 10	3
Regional management financial authority level (Rs thousand)	25	500
In-house microcomputers	2	75
Vehicles allocated to O&M/commercial (% total)	19 (b)	35
PRU full-time staff (c)	1	4
CPU full-time staff (c)	0	4 (f)
Training:		
Training Section staff (c)	26	30
Functional areas provided with training	70	125
Conducted by NWSDB - trainees	438	830
- person days	2673	4148
Liaison with other institutions - trainees	0	152
- person days	0	2603
Overseas - trainees	20	19
- person days	1075	293
Total training - trainees	458	991
- person days	3748	7044
Regional training days to Head Office training days ratio	1:26	5:1

Notes (a) Average of 1983/1985 data. (b) 1986 data (earlier years not available). (c) excludes support staff. (d) direct billing schemes only. In 1990 about Rs.60 million arrears in addition for local authority bulk billing schemes. (e) 1991 budget. (f) plus 6 to be hired during 1991

Although the average annual O&M cost increase over the period kept in line with NWSDB inflation, for the period 1988 to 1990 when performance budgeting was in effect the O&M cost increase averaged only 5% per year, compared to an effective NWSDB inflation of 17% per year.

The data in Table 24 compare the key indicator of billed connection/employee ratio with data from selected other countries. Although the NWSDB is the least efficient, the annual improvement rate of 10% compares well with those recorded in Brazil (5% per year) and Bangkok (6% per year), although both the Brazilian and Bangkok ratios are considerably more efficient than that of the NWSDB. It is perhaps worth noting that SANEPAR has the highest productivity in terms of number of connections to employees in the whole of South America (WHO 1989).

In-House Monitoring

By the end of the project there was also in existence in the more advanced RSCs a viable performance monitoring system designed to identify constraints to efficiency upgrading. Typical examples of performance indicators used in Southern RSC are shown in Box 29, the data in Tables 25 and 26 summarise actual 1990 internal monitoring data for specific commercial functions in one of the area offices in Greater Colombo RSC. The fact that such internal performance monitoring is taking place is an indicator in itself of the maturity of the organization.

CONCLUSIONS

A range of monitoring and evaluation mechanisms were in use over the life of project. On the basis of change in institutional performance there was irrefutable evidence that the institution had developed. The strategies adopted by the consultants to implement the project also strongly suggested that there was a strong cause and effect relationship between ID interventions and change in institutional status.

Table 24. Comparison of Connection/Employee Ratios

Location	Year	Billed Connection to Employee Ratio
NWSDB	1984	13
	1990	26
Indonesia (a)		
Manado	1989	87
Bitung	1989	93
SANEPAR (Brazil)	1981	233
	1988	333
Penang (Malaysia)	1986	136
Bangkok (Thailand)	1979	80
	1989	148
England & Wales (b)		
Water Authorities	1988	321
Water Companies	1988	739

Note (a) Data from Mc Cullough and Walker (1990)
(b) Data from Water Authorities Association (1988)

Box 29. Typical RSC Performance Indicators

- o House connections :
  Connections made (against target)
  Estimated cost
  Achieved cost

- o Purchase orders :
  Number outstanding at month end
  Number of payments made
  Requests to stores outstanding
  Materials received

- o Personnel (disciplinary enquiries, transfers, etc.):
  Number outstanding at month end
  Actual completed (against target)

- o Consumer complaints :
  Number outstanding at month end
  Received during month
  Resolved during month
  Balance

Table 25. Internal Monitoring of Arrears

Category	January 1990	December 1990
Domestic		
% total	68.0	62.5
Age (m)	15	9
Commercial		
% total	17.2	23.6
Age (m)	11	7
Government Institutions		
% total	2.1	2.8
Age (m)	32	19
Industrial		
% total	2.6	3.1
Age (m)	3	6
Government Schools		
% total	3.5	4.6
Age (m)	33	47
Private Institutions		
% total	6.6	3.4
Age (m)	27	14

Noge. Data condensed from monthly monitoring reports.

Table 26. Internal Monitoring of Meter Reading

Indicator	January 1990	December 1990
Number of meters	8884	10665
Number of readers	16	13
Readings/m - reader	752	974
Meters defective (%)	4.7	5.9
Meters not recorded (%)	14.9	2.3
Estimated readings (%)	25.1	14.3

Note. Data condensed from monthly monitoring reports.

In terms of achieving the original discrete project objectives as set out in the logical framework matrix, not all were completed (Table 22). Changes in emphasis resulted in shifts in application of TA resources (the increase in RSCs from 3 to 5, the far greater importance attached to financial viability, for example). Some objectives were only partially met, facilities construction being the most prominant. However, this did not prevent the decentralization programme from achieving far more than was ever intended at project inception. Perhaps an input/output auditor concentrating on Table 22, would conclude that the TA team had failed, having achieved a score of only 54% (14 objectively verifiable indicators completed out of 26). A more objective evaluation with an understanding of the ID process would look at Table 23 and say that the project had been an unqualified success.

SECTION 11

LESSONS LEARNED

The key lessons learned during the implementation of the ID project are summarised and some general conclusions are stated regarding the optimal environment which may lead to a more successful ID intervention. The section also includes an assessment of the likelihood of the institution sustaining its improved effectiveness without the day-to-day support of the ID consultants.

INITIAL IMPACT

The initial impact of the project was to provoke a massive adverse reaction against change. The non-acceptance of the TA interventions simmered throughout 1985 (over a 9-month period) and finally came to a head at the end of the year when both the consultant and NWSDB top management were changed. The project was designed on the basis of a "sudden shock" rather than a gradual commencement, hence it could be construed that the sudden strong pressure exerted by the consultants naturally generated an equally strong opposing force from the NWSDB staff.

However, it is by no means a foregone conclusion that the resistance would have been any less even if a gradual approach had been adopted. The basic project design was quite prescriptive, mandating a new organization structure and linking final disbursements to the accomplishment of certain conditions precedent. The design, comprehensive as it was, had not been prepared with a wide involvement of NWSDB staff. The essential preconditions for a successful ID intervention as laid down by WASH (see Box 29), which was in fact heavily involved in the project design, were not followed in this instance. Hence it is believed that resistance to change would still have been a major factor to contend with even if a gradual approach to project commencement had been adopted, the only difference being that it would have taken longer to surface.

Box 29. What Not to Do in Project Design

"Projects that do not involve the institution's people actively in all stages of the effort may ultimately be subverted by forces within the institution itself. As always, people will be more committed to change if they have been a part of the process."

Extracted from WASH (1990)

Lessons Learned

- A sudden-shock approach to project start-up jolts the institution into having to face the change forces that are being unleashed. This in turn forces an introspective review on the part of the institution's staff of the current status and future goal of the organization

It is probably inevitable that some team members will have to be changed. On the WSSSP no less than five expatriate consultants had their contracts terminated early, for various reasons including cultural incompatability and poor performance. The need to make such sacrifices on a project of this nature must be accepted, if for no other reason than to demonstrate flexibility.

Although cultural adaptability is near-impossible to assess from a bio data sheet, a good indication is evidence of previous long-term work in similar cultural climates. This attribute may compensate for a certain lowering of the technical expertise rating, since the world's best water supply engineer would be worthless on an ID project if he refused to accept that the local engineers also had valid points of view which differed from his.

An ID project in an infrastructure agency such as the NWSDB benefits if the team members have direct management experience in similar agencies. Of equal importance is the need for the Project Manager to understand the basic attitudes of the institution's management. In the case of the NWSDB that made it absolutely essential for the Project Manager to be a civil engineer with experience in the water supply sector.

Lessons Learned:

- Prior regional experience in a long-term resident capacity is a highly desirable prerequisite for key team members
- The team should comprise a mix of technical (functional area) specialists and OD/ID experts. The technical specialists should have good people skills and should be amenable to being coached in such skills by other team members
- The Project Manager should have the same professional leaning as the key institution managers since this helps to strengthen the trust bridge between consultant/institution
- The Project Manager must continually evaluate his team's performance, be attuned to the undercurrents of negative feedback and be prepared to remove a team member immediately it appears that his continuation would jeopardise progress
- The consulting firm must be prepared to make sacrifices if necessary, substituting team members to save the client's (institution) face is a valid strategy and should not be rejected
- Team members, particularly those with a specialist technical input, will be more acceptable if they have had prior experience in an agency similar to the institution elsewhere
- Cultural norms from the consultants' home country must not be imposed on the institution, the team should be careful not to make comments which offend, nor to insist on strategies which make the institution uncomfortable (a female American consultant could, for example, find it impossible to develop an objective trust bridge with a male Asian counterpart)
- Large numbers of ID experts with experience in LDC public sector agencies do not exist. The team must be a careful balance of ID and technical experts and time must be allowed to enable the ID concepts to be absorbed by the team

TRANSFERRING OWNERSHIP

No matter what ID intervention is being implemented, it will not be sustained unless it is "owned" by the institution. This implies that the ID team must be skilled in the following areas:

- Working collaboratively with counterparts to develop change strategies
- Training counterparts to have a wider vision so that they begin to develop solutions to problems themselves
- Transferring a change concept to a counterpart in such a way that the counterpart believes that it was his idea
- Showing by example that ideas can work
- Recognising the optimum time when to introduce a new strategy and at what level in the organization (select the path of least resistance)

Such skills are not necessarily widespread and may have to be taught to the ID team. It takes time for an outsider to appreciate the power structures and effective communication links within an organization. Relying solely on perceived relationships (the formal organization chart) at the expense of the informal, which are often the more powerful relationships, may result in only a superficial ownership being assumed. The key internal actors and decision-makers must assume ownership for change strategies to succeed and new operating procedures to be implemented.

The overall pattern of change momentum should be carefully designed, focussing on macro-level strategies (such as decentralization, financial management and corporate planning in the case of the NWSDB), within which micro-level interventions can be developed (new procedures, planning workshops, etc.) It is often easier to obtain ownership of a macro-level strategy than a micro-level intervention because the former is wide-ranging and represents less of a threat to established order than a change in a specific procedure which is often individual or small group-specific. However, having established support for macro-level changes and designed the supporting performance indicators, the need for micro-level changes becomes more evident and resistance tends to dissolve.

Lessons Learned:

- All change strategies, new procedures and other project interventions must be owned by the counterparts. From ownership come acceptance and commitment which in turn lead to sustainability
- The consultants must be skilled at working collaboratively with the counterparts, there must be no hint of a strategy or procedure being imposed on the institution
- The potential benefits of implementing new systems must be highlighted in order to engender enthusiasm for supporting the systems
- Training in technology-transfer should be arranged early-on in the project for the ID team members
- The consultants should regularly review progress regarding acceptance of new systems and procedures in their own areas of specialization. The results should be shared among the team members and frequent "brainstorming" sessions held to develop improved strategies to overcome ownership-transfer problems

DELEGATION BREEDS CONFIDENCE

Transferring ownership of new systems and procedures is only the first step towards genuine ID, of equal importance is the delegation of responsibility and authority within the organization. A strongly hierarchical management system does not assist the overall upgrading of an institution whose span of responsibility, in terms of consumer base, is large, (covering the whole country in the case of the NWSDB). Limiting the transfer of ownership to the upper echelons of such a system would have only limited impact.

The key is to build up the management competence and delegate responsibilities. Executive management must have confidence to let go some of their authority and become less involved in day-to-day operational matters, whilst at the same time the more junior managers must gain confidence in taking on an increasing burden of management responsibility.

At the NWSDB the main thrust of a large proportion of the ID initiatives was based on such delegation. The comprehensive programme of regional decentralization was the classic example, but equally instrumental in pursuing the delegation goal were such initiatives as performance budgeting (making the line managers/supervisors financially responsible for their technical operations); in-house billing and collection (developing a unit-based financial consciousness); employee performance evaluation (enabling line managers to link unit manpower development to task needs); and MIS (enabling line managers to assess their performance in a quantifiable, timely manner).

Such initiatives had to be supported with the necessary skill upgrading and procedural reforms, of which there was an abundance, viz. formalized norms for delegation of financial and administrative authority; regionalized general ledger systems; middle/supervisory management training courses; a significant switch in training resource outputs from Head Office to the regions (by a factor of 130 times over the life of project); team building workshops; operational analysis and action planning workshops; performance indicators; etc.

Experience on the WSSSP with the whole delegation package was extremely positive. The young managers were highly receptive to new systems, as the project progressed and the more authority they were given, the more they wanted. Hand-in-hand with the confidence building was a quantifiable improvement in operational effectiveness which was becoming increasingly recognised by the external environment and commented favourably upon.

There was, of course, an understandable concern on the part of the more conservative managers in Head Office who were not directly related to the O&M area that the momentum of decentralization was leaving them high and dry with a more limited exposure and a more confined power base. Such preoccupations were generally well-founded, they were for the most part inevitable given the dramatic shift in overall mission direction, but it is perhaps a fact that the TA team paid insufficient attention to these areas. Consultant resources were spread quite thinly over the second half of the project when the demands for assistance from the regions exploded, and unfortunately not enough attention could be paid to those areas which felt that they were being left out in the cold.

Verifiable indicators of the positive effects of delegation of authority were many and have been referred to earlier. The vastly improved regional performance in terms of billing and collection, consumer complaints, community participation, etc. were tangible demonstrations of the benefits. Intangible, but by no means less important, were indicators such as smoother liaison and cooperation with the devolved government stucture and the regional political lobby, an increased tendency for the parent Ministry to refer complaints and service requests direct to regional management rather than to the NWSDB Chairman, and within the decentralized units themselves, an ability to fine tune the organization structure to suit the specific skills of key people and thereby introduce a greater degree of flexibility. This latter example is highly significant because it showed an in-house awareness of organizational design and related performance issues, an area that was totally alien to NWSDB management at project inception.

Lessons Learned:

- Positive delegation of authority programmes are essential for ensuring dissemination of new systems - ownership throughout the institution
- Regional decentralization is a valid means of achieving delegation and is highly suited to a service agency which has a large area of jurisdiction.
- Promotion of delegation programmes must be backed up with initiatives to increase management and technical skills and to provide the necessary systems and procedures
- The increased degree of confidence resulting from delegation manifests itself in a measurable improved operational performance and a willingness to take on more responsibilities
- Intangible benefits of delegation are significant and contribute greatly to the institutional upgrading as a whole, particularly in the areas of sectoral policy formulation and liaison with the external environment
- Care must be taken not to neglect those areas of the institution which are not directly involved in the delegation/ decentralization programme. Failure to become involved with such areas introduces the risk of creating a hardened resistance to change, which although small in size may hinder further ID initiatives if the personalities involved are sufficiently high in the management hierarchy

INTERNAL PERFORMANCE REVIEW

A major turning point in management attitudes is the adoption of performance review procedures. Once this concept is established it is possible for managers to realise that problems arise not because "of the inevitability of the public sector system," but because people have not done their jobs, the tasks have not been well defined, resources have not been provided, or because of similar definable and in most cases controllable causes.

An effective strategy to encourage performance review is to use case studies to demonstrate how lack of information makes a situation more difficult for a manager. If he finds the demands for action from his supervisors frustrating, the best way to relieve his frustration is to demonstrate why he cannot produce what is requested - hence he needs an information base.

Having established a data base he becomes aware of what he is managing and his supervisors can tailor their demands to targets which are achievable within the constraints of the operational system, monitoring performance is the next inevitable step.

This approach was adopted with the NWSDB by first concentrating on those areas which did not represent a threat to the professional egos of the engineer managers. In other words the technical/engineering functions were dealt with later, the first areas of attention were financial management (billing and collection, performance budgeting, cost containment) and the more esoteric technical areas (at least to a traditional civil engineer) such as water quality monitoring.

Performance indicators were developed collaboratively, at first in large group sessions so that all functional areas appreciated the fact that the total organization was moving in this direction. Later the indicators were refined in smaller, functional area or regional specific groups, often without any assistance from the ID team. In order to cover the full range of the monitoring spectrum (operators and supervisors), formal performance review meetings were institutionalized with the involvement of executive management. These were usually held at a monthly frequency and the more successful were functional area specific where problems in meeting targets could be shared and coping strategies evolved.

At these meetings individual area performance targets were negotiated and area-specific progress aired. This was a major break-through from the traditional peer conformity syndrome. As the project progressed an element of competition entered the discussions as regions compared performance and even requested the introduction of incentive programmes.

With a noticeable improvement in performance came an increased pride in carrying out the work, which in turn further strengthened performance. Particular care was taken at the start of this process to show just how ineffective the institution had been prior to the ID project, not to bolster the image of the ID consultants, but with the intention of showing the managers how they had improved over the period before monitoring was introduced without them actually realising it. Some of these comparisons were tenuous to say the least, bearing in mind that the data base in the early years was virtually non-existent, but it was considered a worthwhile exercise if only to give the managers confidence in their own abilities.

Lessons Learned:

- Performance indicators must be developed within the institution and must be seen to be relevant to the operations being measured
- Superior performance must be seen as something which benefits those responsible for the operation, not in monetary terms, but in terms of reduced interference by upper management

- Managers must be convinced that performance monitoring results in an easier working environment because operational problems are often linked to factors beyond their control. Monitoring will define those responsible
- Performance targets must be achievable
- Initially all functional areas should be involved in performance criteria development, even though some areas will never use them. This strategy supports institutional cohesiveness and prevents some areas from feeling that they have been singled out for monitoring
- The first areas to be monitored should preferably not relate to the principle disciplines of the managers. A more open and objective outlook is possible with new operational issues (such as financial management for engineers) since there are no entrenched ideas about what is right and wrong
- Performance review meetings should be held regularly, concentrating on specific functional areas. The meetings should be attended by top management (to show support for both the procedure and for those taking part) and peer review of area performance should be encouraged

EXTERNAL MONITORING EVENT

An innovative component of the WSSSP was the annual project monitoring event conducted by WASH. This event was highly beneficial to both the NWSDB and the consultants since it provided a forum for an in-depth review of ID progress, in particular to reassess priorities and to evaluate the resource inputs necessary for their achievement. By keeping the same team leader for each monitoring event, continuity of approach was maintained.

The intrinsic value of this project component was that a regular, objective review took place and progress was charted over time on the basis of a sound understanding of the overall ID goals. The fact that the team leader had also been involved in the initial project design provided an additional dimension of project goal appreciation.

The annual visit of the monitoring team was structured around formal interviews and a collaborative workshop attended by the whole TA team and chief counterparts. Open and frank discussions were encouraged and the final outcome was an action plan to cover the next year's efforts.

Lessons Learned:

- There is a real risk on a long-term ID project for the TA team to become caught up in the minutiae of procedural details rather than focussing on the overall vision. There is also a high risk that the TA team may drift from the admittedly more difficult and time-consuming process consultant role to a more prescriptive role, which may appear to result in heightened progress but does not ensure sustainability
- An external monitoring team visiting the project on a regular basis will help to counter the adverse tendencies mentioned above

- The monitoring team should be comprised of the same members (or least have the same Team Leader) in order to ensure continuity of approach
- The monitoring team members must be well versed in ID concepts, with a highly attuned cultural sensitivity
- The monitoring team must interact not only with the internal ID protagonists (consultants and counterparts) but also the key actors in the external environment (parent Ministry, ESAs)
- The monitoring team should leave behind a well-documented report summarising the concerns expressed at the interviews, the outcome of the workshop (particularly the action plan) and general impressions of project progress
- The team should focus continually on the issue of sustainability and not hesitate to recommend even major changes in project approach, resource inputs, project duration, etc. necessary to achieve this goal
- The monitoring team should be willing to offer advice of a confidential nature to the TA team to help them overcome any specific implementation problems

INVOLVEMENT OF EXTERNAL ENVIRONMENT

ID as defined in this report is not restricted to the internal organization, but encompasses also the external environment in which the institution operates. As a result a comprehensive ID project must seek to take into account the forces acting in the external environment, in such a way that positive forces are harnessed to support specific institutional upgrading initiatives and strategies adopted to counter those negative forces which adversely impact the upgrading process.

The performance of a public sector institution is inevitably influenced by the political environment, by virtue of the fact that it is government which has the final say on such key issues as tariff structures, level of capital investment and sector priorities. On the WSSSP the political environment was analysed in three ways, through discussion group sessions with counterparts (designed specifically to categorise the environmental opportunities and threats), through direct observation from attending performance review sessions at the parent Ministry, and from studying the history of earlier institutional upgrading initiatives (particularly the reasons for their success and failure). Having categorised the potential forces strategies were developed to take them into account.

Analysing the impact of the ESAs on institutional performance was much easier, since these agencies fitted into two general categories. On the one hand were those ESAs, usually bilateral, which had little interest in institutional upgrading, their main concern being to secure contracts for companies from their home base. On the other hand were those donors, usually multi-lateral, which were seriously concerned about return on investment and consciously seeking to tailor their lending portfolios to improve the the quality of life of the recipient country. Members of this second group were generally amenable to ideas to link their funding programmes to demonstrated operational performance improvement. The first group, being more closely allied to the political lobby, could only be countered by securing political support for more rational decision-making processes for new sector investment.

Two approaches were used to address the forces operating in the political environment. One was to openly discuss the problems, together with counterpart staff and the parent Ministry, and to constantly strive to devise procedures and policies which gradually nullified the negative pressures. An additional component of this strategy was to keep the parent Ministry well-informed of successes in the institutional upgrading process so that eventually realisation would dawn that past practices were often hindering the move to increased effectiveness. The second approach was for the TA team to seek out the potential individual supporters of the ID initiatives within the parent Ministry and to try to secure their support and intervention to remove internal blockages which were slowing down the upgrading process. In both these approaches the constant message conveyed to the political lobby was that an improved NWSDB would result in fewer consumer complaints (hence less pressure from MPs), and increased financial support from ESAs (hence enabling services to be expanded).

Lessons Learned:

- Political forces exist in the external environment which can be used to accelerate the overall ID momentum. Such forces should preferably be defined collaboratively with counterpart staff so the institution as a whole can realise the benefit to be gained of improving its performance so as appear to the external environment to be worthwhile supporting
- Formal meetings should be arranged on a frequent basis between the political lobby and the institution to review ID strategies and to openly discuss the effects of the external environment on the stated upgrading goals
- Efforts should be made to consciously involve in the ID process those ESAs who are committed to linking funding to evidence of operational performance improvement
- Negative forces in the external environment can only be dealt with by improving the institution's performance so that the positive forces outweight the negative forces. Defensive operating strategies can be implemented such as formalized procedures to prioritize schemes, review tariffs, give new connections, etc
- The ID team should identify those individuals in the external environment who can apply enough pressure to enable certain ID strategies to be accelerated if blockages within the institution arise. This strategy should preferably be covert (without the involvement of counterparts) and extreme care must be exercised to ensure that the forces unleashed are totally in accordance with the ID goals and do not negate the basic philosophy of achieving ID through the participative process
- Using the external environment to support institutional upgrading is a valid strategy, but the ID team must always be conscious of the fact that this strategy must remain secondary to that of helping the institution develop itself from within. It is all too easy to drift from the process consultation to the prescriptive mode, with the result that the external environment becomes the main instigator for performance upgrading. Improvements achieved in this way will not be sustainable.

LENGTH OF PROJECT

Experience on the WSSSP proved that successful ID takes time. The received wisdom of the few practitioners in this field is that it takes seven to ten years to turn around an institution so that reforms are sustained. The duration of the WSSSP was eventually extended to 77 months and when the project was nearing completion there was serious talk of a final 12-month extension to ensure, in USAID parlance, that a "sustainable tail" could be guaranteed. If granted, this extension would result in a total project duration of almost seven and a half years.

It is doubtful, looking back, if the project objectives could have been achieved in a shorter time. It could be argued that the unstable security situation in the country during 1988/1989 slowed down the implementation of new initiatives, or that a different mix of consultant specialization or more frequent changes in NWSDB top management would have accelerated the upgrading momentum. The counter argument is that because the institution was subjected to a series of profound cultural shocks during the life of the project (the initial "sudden-shock" of project start-up, the national security situation, changes in key NWSDB management, national elections, changes in key actors in the parent Ministry) that the changes introduced by the ID project were more easily assimilated. Further changes in executive management would probably have been counter-productive since from 1986 onwards there was consistency in leadership at the top level of the institution, a factor which provided a well-defined policy framework within which the TA team could operate.

Lesson Learned:

- ID takes time, six years is a <u>minimum</u> period on which to base the project design.

SUSTAINABILITY

Sustainability can be defined as the ability of the institution to perform effectively after the ID team has departed and after donor assistance has been terminated. Experience of ESAs who have worked in this field suggests that particularly important factors which support sustainability are a propitious political and economic climate, government policies that express a long-term commitment to the performance goals, skilled institutional management and financial strength to continually support the goals (USAID, 1988). Factors which suggest a strong likelihood of sustained performance at project completion were as follows:

Institution Related:

- Decentralized structure (responsive to consumers)
- Strong financial consciousness
- Acceptance of employee performance evaluation process
- Acceptance of community participation process
- Financially viable
- Corporate planning/policy development capability
- Competent management skills
- Potentially attractive for privatization

External Environment Related:

- Water supply sector policy issues being managed by NWSDB
- Strong support from ESAs
- Government economic policy framework strongly supports financial goals of NWSDB
- Parent Ministry highly appreciative of improved consumer satisfaction achieved through decentralized offices
- Strong liaison and coordination between decentralized NWSDB offices and local political lobby

A revealing comment made by a member of executive management towards the end of the project that "this project has made me look bad," was indeed evidence that in this particular case the institution had matured around him and that he was finding it difficult to respond to the new demands of performance monitoring, staff accountability, outward-looking vision, etc. However, it was also sobering to realise that in this particular case the ID intervention had not been able to change the behavioural pattern of this key manager.

The perceived need for an additional extension of TA assistance (one full-time expatriate specialist) for one year beyond CCD was primarily to give further support to the CPD, to finalise the decentralization of the RSCs (concentrating on Greater Colombo, Western Water and North-Eastern RSC - security situation permitting), to maintain the links with the supportive ESAs and to assess in more detail the potential for privatization of all or part of NWSDB operations.

The financial health of the institution undoubtedly makes the prospect of privatization more attractive. As shown in Table 27, the projected 1991 financial status indicates a substantial surplus for the institution as a whole, even taking into account a portion of debt service repayment. Two out of the five RSCs show a surplus and within Central RSC, which shows a deficit as a whole, Bandarawela Region is projected to earn a total surplus of Rs.6 million in 1991. Tariff increases projected for 1992 and 1993 will enable total debt service to be recovered from end 1993 onwards, these tariff increases are unlikely to be too onerous, probably less than 10% overall.

This healthy financial situation is attractive to the private sector and interest was already being expressed during 1991. Three examples of such interest were:

- Agreement to include a privatization study in the next phase of the ID project
- A decision by executive management to prepare terms of reference for privatization of commercial operations in Greater Colombo
- An expression of interest from a recently privatized British Water Authority to submit a proposal for privatization of various NWSDB services (commercial functions, distribution system management, total O&M including headworks)

Table 27. Estimated NWSDB Income and Expenditure Statements - 1991
(Rs million)

	Greater Colombo RSC (c)	Central RSC	Southern RSC	Western RSC	North-Eastern RSC	Total
Billings	648	90	38	109	9	894
Collections	574	69	32	91	8	774
O&M Cost (a)	218	72	56	61	21	428
Surplus (Deficit)	356	(3)	(24)	30	(13)	346
1/3 Debt Service (b)	26	8	7	9	3	53
Total Cost (a)	244	80	63	70	24	481
Surplus (Deficit)	330	(11)	(31)	21	(16)	293

Notes. (a) Includes Head Office overhead and accounts for income from new connections. (b) Applicable debt service at Government on-lending terms. (c) Excludes sewerage services (Rs.9 million total deficit).

There are, of course, other indications which can be construed as being not indicative of sustainability. A change in national government, for example, could result in the water tariff being abolished and the NWSDB having to revert to being a subsidised welfare agency (see Box 30). Also, the official "line" of the NWSDB unions (which includes the Engineers' Association) does not appear to be supportive of measures designed to stimulate cost effective operations (see Box 30).

One internal factor which is not really conducive to management development is the fact that the salary incentive reduces as one progress higher up the management scale. This situation is shown in Table 28 from which it is apparent that the incentive for NWSDB middle level managers to aspire to be senior level managers is much less than that for lower level managers aspiring to be middle level managers, and is in fact lower than that in the Sri Lankan public sector generally. The incentive ratios for the individual management grades in Table 29 tell the same story, an officer moving from AGM to DGM level takes on an increase in financial responsibility of 250%, but his salary change is only 12%. The incentive for a DGM to take on the considerably greater responsibilities of an Addl. GM is even less at 5%. These low incentive ratios must have an adverse effect on an individual's desire to take on added responsibilities, of course, privatization would change the situation completely.

CONCLUDING COMMENTS

The major lesson learned on the WSSSP has been that ID is possible to achieve in a public sector organization in a developing country. This conclusion is perhaps not so surprising when one considers the improvements that have been made in public sector organizations in more developed countries, excellent examples of which are the substantial cultural changes and operating improvements which occurred in British Steel and British Coal when both were still state-owned.

Box 30. Indicators Opposing Sustainability

Major National Opposition Political Party Policy

- "Water tax through meter readers will be done away with"

  Interview with Mr. A. Bandaranaike (Leader of the Opposition) published in The Island, 28 August 1988.

  "..... one of the first things we will do is to abolish the water tax and provide water service free of charge as it used to be in the seventies."

  Quotation from Mr. S. Jayewardena, former Opposition Leader Colombo Municipal Council, published in The Island, 5 May 1991.

NWSDB Unions' Policy

Some of the demands put to the Sri Lankan President by the Joint Trade Union Council (to which the Joint Front of the NWSDB Trade Unions is affiliated).

- Salary increase of 50%
- Reduce prices of medicine and other essential consumer goods and to impose a price-control on them
- Abolition of income tax from the earnings of private sector employees
- Stop privatization of government departments and other undertakings

Published in The Island, 27 October 1989.

Table 28. Salary Incentives for Managers

Management Level	Sri Lankan Public Sector		Sri Lankan Private Sector		NWSDB	
	Monthly Remuneration (Rs.1000)	Incentive Ratio	Monthly Remuneration (Rs.1000)	Incentive Ratio	Monthly Remuneration (Rs.1000)	Incentive Ratio
Senior	3.7	1.5	6.9	1.7	10.3	1.2
Middle	2.5	1.3	4.0	1.7	8.3	1.8
Lower	1.9	-	2.3	-	4.7	-

Notes: a) Sri Lankan public and private sector data from Jayasinghe and others (1985).
b) NWSDB data relate to 1991 levels, Senior defined as GM, Addl GM, DGM; middle as AGM, Chief Engineer; lower as graduate engineer.
c) Incentive ratio is mean remuneration of higher grade divided by mean remuneration of next lowest grade.

Table 29. Salary Levels for NWSDB Managers

Salary Grade	Mean Salary (Rs/m)	Incentive Ratio
General Manager	11000	1.10
Additional GM	10000	1.05
Deputy GM	9500	1.12
Assistant GM	8500	1.05
Chief Engineer	8100	-

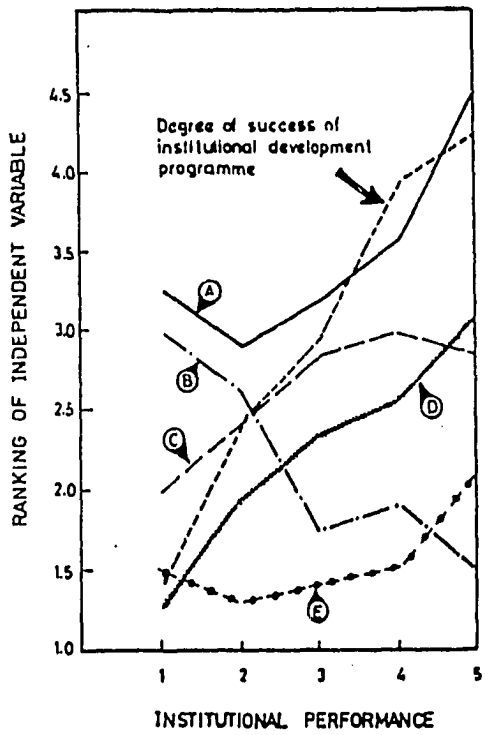
Notes: a) Data relate to 1991
b) Incentive ratio is salary of higher grade divided by salary of next lowest grade.

There are in fact important parallels which can be drawn between British Steel/British Coal and the NWSDB. In both cases external ID/OD specialists were brought in (although in the UK examples the chief actor took on line-management responsibility at the very top of the organization), and of equal importance, the national economic climate and government policies were fully supportive of the changes being promoted.

A detailed study of ID experienced elsewhere reported by Israel (1987), notably that on World Bank-financed projects, has shown that there is strong positive correlation between a financial surplus and high level of institutional performance. This correlation certainly existed in the NWSDB. It was also proposed by Israel (1987) that the two key factors which stimulate improved performance are the degree of specificity and competition. In the case of the NWSDB, market competition did not exist since the agency was virtually a monopoly supplier of piped water (more than 80% of the piped supplies in the country being provided by the NWSDB), but there were competition surrogates which stimulated performance, particularly at the RSC level, these included political pressures, internal comparisons with other RSCs, demands of ESAs, etc.

High-specificity activities such as regional operations (O&M, billing and collection, consumer service) were generally in the forefront of performance improvement, compared to the lower-specificity activities such as support services and the project development cycle. This observation concurs with that of Israel (1987) and also that of Hannan and Freeman (1977) who postulated that organizations that specialized (RSCs) would outperform those that generalized (Head Office) because a specialised organization concentrates on what it has to achieve whereas a generalized organization has time to waste continually adopting to changing environmental circumstances.

The tentative model developed by Israel (1987) linking institutional performance to various factors is shown in Figure 43. The experience on the WSSSP supports this model, the high degree of significance of reducing negative political forces, encouraging positive political forces, and improving management capabilities was clearly demonstrated.



A : Degree of specificity

B : Degree of political intervention

C : Degree of political support

D : Application of management techniques

E : Degree of competition

Figure 43

Impacts of Various Factors on Institutional Performance
(adapted from Israel, 1987)

A point has been made throughout this report that the project took place in an atmosphere of continuing cultural shock (see Figure 44). It is a matter of conjecture as to whether or not the same degree of success would have been achieved without such forces at work. It is suggested that a stable political environment, a healthy economy and an absence of internal strife would have significantly reduced government incentives to support the changes taking place in the NWSDB. At best, the ID process would conceivably have taken much longer than 77 months.

What of the future? The changes achieved over the last 77 months appear to be sustainable, although a further extension of one year being considered at the end of the project would undoubtedly still strengthen the institution in key areas. The possibility of privatization is now a real option, perhaps dividing the NWSDB into two components, an operational

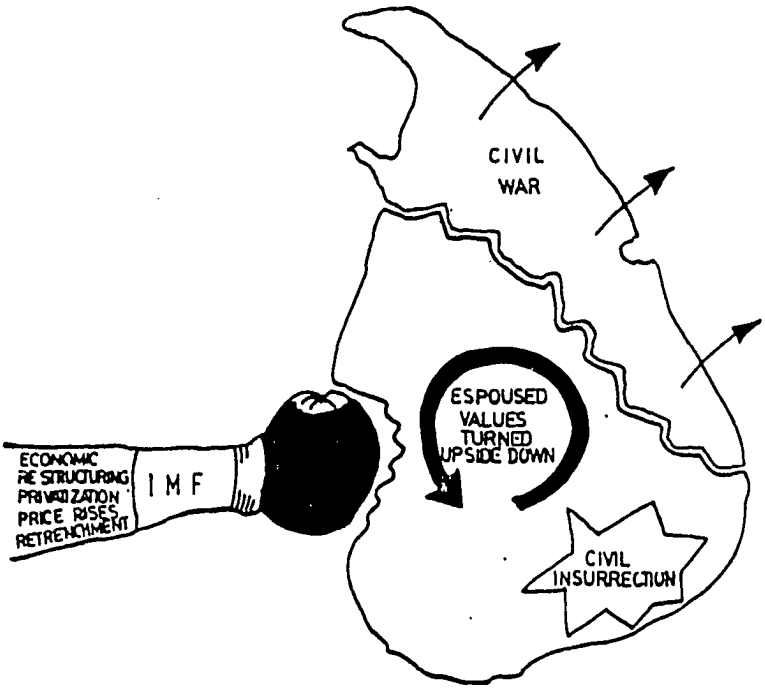


Figure 44

Sri Lanka - a Continuing State of Cultural Shock

(RSC-based) component which would be ideal for privatization and a capital-projects component which could be absorbed by other agencies or remain as an independent unit to carry out work on a competitive contract basis, would be a logical development. It would be interesting to speculate at what stage the NWSDB would be in now if this organizational option could have been adopted at project inception.

To conclude, the project bore out one of the lessons learned over ten years experience from the WASH project, namely that institutional change is usually more complicated than it appears initially and requires great willingness to revise plans and strategies in accordance with events (WASH, 1990). The comprehensive approach to project design was sound but the implementation of a comprehensive approach right from the project start failed. The later adoption of a more selective implementation strategy, focussing on the more receptive and feasible operational areas, was successful. This observation is in total agreement with one of the main conclusions of Israel (1987) that success in selective areas will have a ripple effect on other parts of the institution.

This report opened with review of experience with ID concepts in general. The point was made that while there appeared to be widespread commitment for ID, the commitment had yet to be translated into practice. Many projects espouse ID in name only, but are not particularly concerned with the details of its implementation. The ID project for the NWSDB has demonstrated that ID concepts can be put into practice provided that an institutional and external-environment specific approach is adopted.

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