Ministry of Foreign Affairs

Danida

DRAFT

Sector Programme Support Document

Water Supply and Sanitation Sector

BANGLADESH

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List of Abbreviations

ADB	Asian Development Bank
ADP	Annual Development Plan
BBS	Bangladesh Bureau of Statistics
BIDS	Bangladesh Institute of Development Studies
BUET	Bangladesh University of Engineering and Technology
CC	Coordination Committee
CPA	Chief Project Adviser
Danida	Danish International Development Assistance
DKK	Danish Kroner
DPHE	Department of Public Health Engineering
DTP	18 District Towns Project
DWASA	Dhaka Water and Sewerage Authority
ECNEC	Executive Committee of the National Economic Council
EE	Executive Engineer
EU	European Union
GDP	Gross Domestic Product
GNP	Gross National Product
GOB	Government of Bangladesh
ICDDR/B	International Centre for Diarrhoeal Disease Research, Bangladesh
IDB	Islamic Development Bank
ITN	International Training Network
LCG	Local Consultative Group
LGD	Local Government Division
LGED	Local Government Engineering Department
LWT	Low Water Table
MIE	Monitoring, Inspection, Evaluation
MIS	Management Information System
MLGRDC	Ministry of Local Government, Rural Development and Cooperatives
MOH	Ministry of Health
MWCA	Ministry of Women and Childrens Affairs
NEC	National Economic Council
NGO	Non-Government Organisation
NGO Forum	NGO Forum for Drinking Water and Sanitation
NILG	National Institute of Local Government
ODA	Overseas Development Authority
PCP	Project Concept Paper
PC	Planning Commission
PP	Project Proforma
PPWSH	Physical Planning, Water Supply and Housing
R&D	Research and Development
RWSG-SA	Regional Water and Sanitation Group - South Asia
SAE	Sub-Assistant Engineer
SC	Steering Committee
SDC	Swiss Development Cooperation

SIDA	Swedish International Development Agency
SPS	Sector Programme Support
SPSD	Sector Programme Support Document
SWMC	Surface Water Modeling Centre
TA	Technical Assistance
TAPP	Technical Assistance Project Proforma
Tk	Taka
TOR	Terms of Reference
TYRIP	Three Year Rolling Investment Plan
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development
USD	United States Dollars
VAT	Value Added Tax
WASA	Water and Sewerage Authorities
WATSAN	Water Supply and Sanitation Committees
WID	Women in Development
WSS	Water Supply and Sanitation

EXECUTIVE SUMMARY

National Framework and Danida Policies

Bangladesh is in the process of establishing a national policy framework for the water supply and sanitation (WSS) sector. Until now policies and practices in both the rural and urban sub-sectors have not been coordinated and sometimes have contradicted each other. Donors have often had different policies and interests which have been realised in the implementation of particular projects. The major donors have recently begun to coordinate policies in the sector and have encouraged a process of policy formulation on the part of the Bangladeshi authorities.

The responsible ministry for the sector, the Ministry of Local Government, Rural Development and Cooperatives (MLGRDC) through its Local Government Division (LGD) has initiated a WSS sector policy formulation process. It is being assisted in the drafting process by the UNDP/World Bank Regional Water and Sanitation Group, South Asia (RWSG-SA). A draft policy is expected to be available to be discussed by the donors at a national consultation workshop towards the end of 1997.

The main Government of Bangladesh (GOB) stakeholders in the sector are the Department of Public Health Engineering (DPHE) and the Local Government Engineering Bureau (LGED). DPHE has the statutory responsibility for water supply and sanitation and is the primary institution in the sector. LGED is responsible for other rural and urban infrastructure, but its activities sometimes overlap with DPHE's especially in urban areas. There are also numerous national, international and local NGOs who carry out WSS activities. The NGO Forum for Drinking Water and Sanitation is an umbrella body for some 560 NGOs working in the sector.

Danida's main policy concerns related to the sector can be summarised as follows:

- Gender specific, environmentally sound and sustainable poverty reduction through increased access to water and sanitation facilities and hygiene promotion activities.

- Good governance and democratisation through popular participation in implementation, ownership, operation and maintenance of water supply and sanitation facilities.

It is expected that GOB's coming sector policy will not contradict the above concerns in general terms. It is not known whether specific implementation strategies will be in accordance with Danida's water supply and sanitation sector strategy.

The Government of Bangladesh is in the process of drafting a new Local Government Act, which is expected to stimulate the decentralisation of central government responsibilities. This is expected to have an effect on the WSS sector in that local authorities such as pourashavas (municipalities), thanas and unions will have more responsibilities in the sector, and the roles of the main central government stakeholders may be adjusted accordingly. GOB is also promoting privatisation as a general policy, and this may also affect prospects for management of the sector.

This draft Sector Programme Support Document (SPSD) will have to be revised when the contents of the above policy initiatives are known in more detail.

Danida Activities

Danida has been active in the sector for many years, and has a long experience in the rural sub sector through support to the DPHE/UNICEF national rural water supply and sanitation programme. Other activities have included research, training and NGO support. Support to the urban sub-sector is on-going through a two phase project in the coastal areas promoting water supply and sanitation in pourashavas, thana headquarters and growth centres. The Danida Country Strategy for Bangladesh is now concentrating activities in the coastal belt.

Objectives for Sector Programme Support (SPS)

The Development Objective is:

The Government of Bangladesh assisted in improving: (i) water and sanitation services delivery, (ii) access and use of clean water and sanitation facilities, and (iii) hygiene practices that promote equitable and sustained health improvement.

The Immediate Objectives are:

i) Strengthened capacity of stakeholders as per their comparative advantage to provide water and sanitation facilities and promote hygiene.

ii) Increased coverage of water supply and sanitation facilities.

iii) Reduced incidences of diarrhoeal diseases and parasitic infestations, especially in children.

Sector Programme Support Components

The following components have been identified to be implemented in the period up to year 2006.

1. Coastal Area Rural Water Supply and Sanitation. A new activity envisaged over 8 years to be linked geographically and in management terms to the Urban component. To be formulated in late 1997. Expected to start 1999.

2. Coastal Area Urban Water Supply and Sanitation. Phase 2A and Phase 2B of the on-going project, over a 10 year period. To be reviewed to fit into the SPS framework.

3. Institutional Development Fund. A three year Pilot Phase, with possibility of extension, using a demand-driven strategy to support self-identified institutional development needs of all stakeholders in the sector. To be formulated in late 1997. Expected to start 1999.

4. NGO Forum for Drinking Water and Sanitation. An on-going project to support the NGO sector. Phase 2 to be completed in 1999; possible Phase 3 up to 2003.

5. International Training Network Centre (ITN). On-going project to support research, initiatives and activities in training. Phase 1 for 5 years up to 2001, with possible second phase for another three years.

6. Other components to be identified at a later stage.

Budget

The total budget for the SPS in the period 1999 (when the new components start) to 2006 will be approximately DKK 511 mill.

SPS Management and Organisation

A Steering Committee for the SPS will be the main management and coordination body. There will not be steering committees for individual components. The Steering Committee will be supported by a SPS Danida Advisory Group headed by a Chief Sector Adviser. The existing Danida Advisory Group for the Urban Project is recommended to be reorganised to become the SPS Advisory Group. Components will have Component Management Units staffed by the responsible officials of the partner organisation, with the possible support of Danida advisers.

Risks and Assumptions

It is assumed that the on-going policy formulation activities in Bangladesh regarding a WSS sector policy, a new Local Government Act and possible new initatives regarding privatisation will be completed in time for a final SPS Document to be produced and become operationalised in the near future. In fact it is a precondition for the finalization of the SPS Document that the Government of Bangladesh completes and approves its water supply and sanitation sector policy. This precondition is expected to be fulfilled by the end of 1997 or early 1998.

There is an element of uncertainty regarding the above policy formulation activities in that the exact contents of the various policies are still unknown. It is assumed that when they are complete, they will not in principle contradict Danida's overall policy concerns and that the operational strategies will by and large be compatible with Danida's water and sanitation sector policies.

The existence of a policy does not necessarily mean that it will be implemented. There is therefore a risk that operationalisation and implementation of the new sector policy will be slow. A related risk is that not all stakeholders will be equally enthusiastic about implementing the new policies, and that this may affect component implementation.

The proposed sector strategy, as also expressed in the immediate objectives, is to utilize comparative strengths of the various stakeholders in the sector to their best advantage. The stakeholders are: central government departments, local government authorities, NGOs, community groups, and the private sector. In large components it is probable that a number of different stakeholders will be involved in component implementation in areas of expertise in which they have their comparative advantage.

The success of the above strategy assumes that the various stakeholders will be willing to co-operate with each other, and that their staff accept the fact that they may have to work in ways which are somewhat different from normal practices. There is a risk that this acceptance may take some time to emerge.

1. INTRODUCTION

Danida has been involved in support to water supply and sanitation activities in Bangladesh since 1974. In 1995 a Strategy for Danish- Bangladeshi Cooperation was prepared which chose water supply and sanitation as one of the three main sectors in which Danida will concentrate its activities in the future.

In April 1996 Danida produced Guidelines for Sector Programme Support. Consequently, it has been decided to prepare a Sector Programme Suppport Document which will guide Danida's involvement in the sector over roughly the next 10 years.

As a result an Identification Team was fielded in Bangladesh in the period 5 to 25 April 1997 with the purpose of producing this Draft Sector Programme Support Document. The members of the Identification Team were:

- Mr Jan Møller Hansen, Team Leader, Adviser in Water Resources Management and Water Supply, TSA, Danida, Copenhagen.
- Mr Nigel Hawkesworth, Institutional Expert.
- Mr Steffen Hvam, Water Supply and Sanitation Expert.
- Ms Chitra Sundaram, Sociologist.
- Ms Inge-Merete Hirsholmen, Economist.
- Ms Anne Bolette Nyrop, Head of Section, Regional Department S.6, Danida, Copenhagen.

Mr Serajul Islam, Deputy Chief, Local Government Division, MLGRDC participated as the Government of Bangladesh resource person. Dr Charles Pendley and Ms Rekha Dayal of the UNDP/World Bank Regional Water and Sanitation Group, New Delhi also participated as resource persons.

The team would like to express its thanks to all officials and individuals met for the kind support and valuable information which the team received during its stay in Bangladesh and which highly facilitated the work of the team.

This report contains the views of the team which do not necessarily correspond to the views of Danida or the Government of Bangladesh. All proposals are subject to approval by the two governments.

2. SOCIO-ECONOMIC AND NATIONAL CONTEXT

2.1 Macro-economic Features

2.1.1 Government Policy

Bangladesh is among the world's poorest countries, according to the World Bank Development Report. The economy is predominantly agrarian, with some two-thirds of the population engaged in rural activities. The agricultural production dominates the national product, contributing to around 30% of GDP, having fallen from 38% in the early 1990s. Industry contributes over 11% of GDP, having risen from 10% in the early 1990s.

The main problem confronting the governments of Bangladesh has been how to promote economic growth. The country is highly dependent on foreign aid for development projects and for food for the poorest members of the population.

Economic policy in the 1970s and the 1980s was contained in a series of five-year plans, which largely failed to achieve their targets. GDP growth in the 1980s averaged a little over 3%. Modest progress has been made towards the long-term goals of achieving self-sufficiency in foodgrain production, a reduction in the rate of population growth and the alleviation of grinding poverty. The proportion of the population living below the poverty line is reported to have fallen from 57.5% in 1987 to 51.7% in 1994.

During 1991-96 the government in power, attempted to reduce current expenditure and increase tax revenue by expanding the tax base. In 1992 it introduced a value-added tax (VAT), more broadly based than the sales tax, which it replaced. The government also set about to improve revenue collection and the administration of the tax system. As revenue increased, the proportion of development projects which could be financed from domestic resources rose to 40% of the Annual Development Plan (ADP) (the government's capital expenditure programme) in 1996/97 from only 10% in 1990/91, reducing the country's dependence on foreign aid.

The new Government, which was formed in June 1996, has announced its commitment to re-establish macro-economic stability and to continue the reform programme to reach its objectives of poverty alleviation, strengthening the economy, and establishing an effective government. The priority areas include:

i) Restoring macro-economic stability. This is seen a prerequisite for development as it improves the investment climate, accelerates reforms, and protects the poor from high inflation.

ii) Improving public sector management. One of the declared objectives of the new Government is improving public sector management through reforms in the bureaucracy and decentralisation. Accountability of government, efficiency and quality of civil service, and law and order will be key areas for reforms. Strengthening local government will be achieved through administrative decentralisation by empowering the elected representatives. There appears to be a broad consensus that strengthening local governments and administration and fiscal decentralisation would be important steps towards achieving better governance.

iii) Creating an enabling environment for fostering a dynamic and competitive private sector through enabling the participation of the people in decision making, and increased involvement of NGOs and private sector operators in the supply and delivery of services. Stronger and more accountable local governments could also enable Bangladesh to benefit from the highly successful NGO sector and strengthening local government-NGO collaboration, for example in education, health, water and sanitation.

iv) Accelerating human resource development. Human resource development is necessary for raising living standards, reducing population growth, increasing productivity and competitiveness and increasing the internal efficiency of the service delivery system, including cost effectiveness and cost recovery.

2.1.2 Economic Performance

Macro-economic stability has been achieved with a modest inflation rate and a budget deficit of about 6% of GDP. However, the economic growth has remained below 5%, which is far less than what is needed for rapid poverty alleviation in Bangladesh. A sustained poverty reduction would require an economic growth of at least 7-8%.

Key macro-economic indicators 1990 - 1996

	1990	1991	1992	1993	1994	1995	1996 (plan)
GDP growth rate %	6.6	3.4	4.2	4.5	4.2	4.4	4.7
GNP per capita -USD	208	213	213	214	230	253	na
Savings (% of GDP)							
Domestic	2.7	4.2	6.0	7.6	9.1	8.3	na
National	5.8	7.4	9.7	11.7	13.8	13.1	na
Investment (% of GDP)							
Gross investment	12.8	11.5	12.1	14.3	15.4	16.6	17.0
Public	6.4	5.7	5.5	6.4	7.6	7.2	6.3
Private	6.4	5.8	6.6	7.9	7.8	9.4	10.7
Budget (% of GDP)							
Total revenue	9.3	9.6	10.9	12.0	12.2	12.1	12.1
Tax revenue	7.8	7.8	8.8	9.6	9.3	9.6	9.3
Total expenditure	17.2	16.8	16.8	17.8	18.1	18.9	18.3
Current expenditure	8.8	8.7	8.3	8.9	8.9	8.8	9.0
Overall budget deficit	-7.9	- 7.2	-5.9	-5.9	-6.0	-6.8	-6.3
Rate of inflation	9.3	8.9	5.1	1.3	1.8	5.2	4.1
Exchange rate Tk/USD	32.9	35.7	38.2	39.2	40.0	40.2	40.9

Source: Annual Economic Update, World Bank, July 1996

The savings and investment rates are still too low to support the level of employment generating growth, which would be needed for sustained poverty reduction. Gross investment in 1996 is expected to have improved over the 1995 level despite the cut in the ADP. The national saving rate is expected to have declined in 1996.

2.1.3 Fiscal Policies

The total revenue remains at about 12% of GDP. No progress has been made in revenue mobilisation, the tax reform remains incomplete and strengthening of the tax administration has still not been completed. The coverage of VAT was to be extended in 1996, however, the Government favoured to grant new VAT exemptions to some agricultural inputs. This may jeopardise the achievement of a wider coverage, weaken the incentive neutrality, and invite pressure from other groups.

The fiscal adjustment in 1996 came mainly from a lower ADP realisation from 9.3% of GDP to 8%. Revenue performance was barely on target, whereas current expenditure increased from 8.4% to 9% of GDP.

The 1997 Budget includes some new income tax policy measures, which include i) reduction in corporate income tax rate for financial institutions and non-resident companies; ii) exemption of agricultural income up to Tk 40,000 and capital gains bonus shares from income tax; iii) extension of the coverage of tax holidays; and iv) increase in general exemption limit for income tax from Tk 55,000 to 60,000.

Actual Budget 1995, Revised Budget 1996, and Budget for 1997

	1995		1996				1997	
	Actual		Budget		Revised Budget		Budget	
	Taka in billion	% of GDP	Taka in billion	% of GDP	Taka in billion	% of GDP	Taka in billion	% of GDP
Total revenue	141.8	12.1	155.7	12.0	157.1	12.1	172.8	12.0
Tax	111.9	9.6	120.6	9.3	120.8	9.3	138.7	9.7
Non-tax	29.9	2.6	35.1	2.7	36.3	2.8	34.1	2.4
Total Expenditure	221.5	18.9	248.2	19.1	238.5	18.3	254.2	17.7
Current	103.1	8.8	109.4	8.4	117.4	9.0	119.5	8.3
ADP	100.9	8.6	121.0	9.3	104.5	8.0	125.0	8.7
Overall budget deficit	-79.7	-6.8	-92.6	-7.1	-81.4	-6.2	-81.4	-5.7
Net foreign financing	57.5	4.9	65.9	5.0	53.4	4.1	55.9	3.9
Net domestic financing	22.2	1.9	26.7	2.0	28.0	2.1	25.4	1.8

Source: Annual Economic Update, World Bank, July 1996

The 1997 budget is based on the assumptions that the current expenditure for 1997 will be 2% over 1996 level and taxes will increase by about 15%. The ADP target is Tk 125 billion, reflecting a nominal increase of 20% of the 1996 revised budget.

2.2 Social Situation

2.2.1 Population and Health

With an estimated population of 120 million in 1995, a growth rate of around 2% per annum, and an average population density of over 810 persons per sq. km., Bangladesh is the most densely populated of the 45 countries classified by the UN as least developed. While 80% of the population lived in the rural areas in 1991 (census data), a high rate of rural-urban migration is estimated to have reduced this proportion to 77% in 1995, and by the turn of the century one-fourth of the population is expected to be living in urban areas.

Using different growth rates, the World Bank (1.8%) and UNDP (2.4%) estimate that the population will be 130 mill. or 144 mill. respectively by the year 2000. However, a study by the Bangladesh Institute of Development Studies (BIDS) of rural poverty trends in 1996 found that population growth in rural areas has slowed down considerably to 0.3% per year between 1988 and 1995. While out-migration accounted for nearly 1.0% per year decline in the rural population, there has also been substantial decline in the natural rate of growth. The 1995 survey found that the size of the 0-5 age cohort was about 20% less than the 6-10 age cohort. The number of households with one to two children increased, while those with three to four children decreased from 31% in 1990 to 19% in 1995.

Life expectancy at birth has risen from 39.6 years in 1960 to 58.7 years in 1995 (58.9 years for men and 58.0 years for women) and the sex ratio is 106 (males per 100 females). The poor health and nutritional status of the people is documented by several surveys, including the annual BBS-UNICEF surveys. Some of their findings are presented below:

	BBS-UNICEF	**UNDP**
Infant mortality rate	77 per 1,000 (1994)	106 per 1,000 (1993)
Under-5 mortality rate	134 per 1,000 (1994)	117 per 1,000 (1994)
Low weight live births	30% (1990)	50% (1990)
Severely malnourished children between 1-5 years of age	11% (1995) 8.7% (boys) 12.4% (girls)	
Children under 5 years who had diarrhoea within last 15 days of survey	14.2% (boys, 1995) 13.6% (girls)	
Children under 5 years who are: - moderately underweight - severely underweight - stunted	 43% (1992) 26% 64%	

It is estimated that over 40% of the population regularly consume less than 2,122 kilocalories per day ("poverty threshold" or "absolute poverty line"), while around half of these (25 mill. people) consume less than 1,805 kilocalories per day ("extreme poverty" or "hard core poor").

Gender discrimination is reflected in data showing that more boys are treated at health centres while self-treatment is more prevalent for girls, girl babies are breastfed for shorter periods and are more likely to be malnourished, and deaths for children between 1-4 years is 23% higher for girls than for boys. The reproductive health of women is still highly compromised due to inadequate facilities and access to reproductive health care, which is reflected in the maternal mortality rate of 459 per 100,000 live births in 1994 (UNDP reports an MMR of 859 per 100,000 live births in 1993).

BIDS (1996) found that there has been a general improvement in rural health status over the 1988-95 period. However, 12% of the rural population are chronically ill and 2.3% are disabled. While the overall morbidity rate is 12.5%, it is 15% for the extreme poor. The disease pattern has remained largely similar over the past decade, with a small number of diseases due to an unhygienic environment, poor living conditions and poor personal hygiene still playing a major role. Thus diarrhoeal diseases including cholera and dysentery account for 21% of illness, while cold and cough, viral fever and fever of unknown origin account for 41%.

A GOB-ADB study of urban poverty (1996) found that nearly 45% of the urban poor households had at least one sick member in the month preceding the survey, and one-fifth of the illnesses were diarrhoea/dysentery and gastro-intestinal diseases.

2.2.2 Education

According to the 1991 census, 32% of the population aged 7 years and above is literate. The adult literacy rate is 26% for women and 44% for men.

BIDS (1996) found that between 1990-95, the primary school participation rate in rural areas increased from 56% to 70% for the 6-10 year age group, and more so for girls than for boys so that the male-female disparity of 1990 had almost disappeared by 1995. The GOB-ADB urban poverty study found, however, that as many as 40% of children in the 6-14 year age group are currently not attending school, this rate being highest in the large cities.

2.2.3 Rural and Urban Poverty

Income and Employment

	Rural (1987)*	Rural (1994)*	Urban (1996)*
Total % under poverty line	57.5	51.7	60.9
% in moderate poverty	31.7	29.2	20.7
% in extreme poverty	25.8	22.5	40.2
Male labour force participation %	86	82	95
Female lab. force participation %	7.4	11.2	20
Boys' lab. force participation %	30.4	20.7	-
Girls' lab. force participation %	7.1	1.8	-

* Rural data from BIDS (1996) and urban data from GOB Planning Commission and ADB (1996)

BIDS' analysis of rural poverty trends over the period 1987-1994 concludes that rural poverty levels have declined. However, the degree of inequality in the distribution of landholdings and income remains high, with the bottom 40% owning less than 2% of the land and the top 10% owning around half the land in 1995. Also, employment and income opportunities in the non-farm sectors are captured by the relatively high-income groups because of their better access to capital and credit and the capacity to invest in education.

Female-Headed Households

The total population of rural female-headed households may exceed 4 million, and over 95% of these households fall below the poverty line, with one-third being among the extreme poor. On average their incomes are 40% lower than those of rural male-headed households even among the extreme poor. Ten percent of the urban poor households are headed by women.

In male-headed urban households, only one-fifth of the female household members earn an income, including 4% who work outside their home.

Housing

The proportion of rural households living in *jhupri* (flimsy shacks) declined from 9% to 2% during 1990-95. A major reason for this could be the distribution of tin sheets as relief material. The use of sanitary toilets increased from 7% to 22% in the same period, while the use of open space for defecation declined from 50% to 25%.

Nearly 90% of the urban poor in small towns own the plot of land they are currently occupying. About 75% of the houses of the urban poor are either *jhupri* or temporary structures. The environmental condition of urban poor habitats is very bad, with over 85% suffering from flooding and water logging.

Of the urban poor, 90% drink tap or tubewell water (mainly the latter). While 41% of the urban poor in Dhaka have access to a sanitary toilet, this figure is much lower for the small cities and towns. Less than 14% have access to a municipal garbage bin within a reasonable distance.

Services for the Poor

The BIDS (1996) study shows that both governmental as well as non-governmental organisations have only a limited coverage of the extreme poor. Thus only 3-5% of the extreme poor have access to safety net programmes such as food for work and vulnerable group development. Credit access is highest for the moderate poor (31%) as compared to the non-poor or extreme poor (21-22%). Only 12% of rural and urban poor households used government curative health services, though immunisation and family planning programmes have had greater success. Data also show that access to primary education, water supply and sanitation is linked to land ownership in the rural areas.

2.2.4 Poor People's Perspectives

UNDP (1996) commissioned a national study of poor people's perspectives, where a participatory rural appraisal was carried out to identify the "expectations, needs, problems and priorities of the poor and other deprived groups in Bangladesh". The study was carried out in eight rural and two urban locations, including a tribal majority area and a *char* land. The rural locations were selected from among the fifty most economically depressed thanas identified in the Task Force Report on Poverty Alleviation (1991), while the urban slums are located in Dhaka and Chittagong. Over 3,300 persons from 58 villages/*paras* and 22 slums participated, and over two-thirds of them were women.

The study identified eleven major problems common to all rural areas and 14 common to the urban areas. In all areas more than 68% of problems are shared. A Prioritized Problem Index of Poor (PPIP) communities was developed to allow comparison of problems and priorities between communities. The ranking of problems arrived at through a cumulative PPIP is presented in Table 2.1 for rural men and women, urban women and urban mixed groups (mostly men).

Both men and women in slums indicated that access to safe drinking water is their most important problem, as much time and money is invested in fetching drinking water. (A case study in Dhaka City shows for example that the inhabitants of one squatter settlement paid Tk.1 for about 4 gallons of water, while DWASA charges are Tk. 16 for 1,000 gallons.) Slum women identify the lack of bathrooms as their second problem. They are concerned about lack of privacy and adolescent girls feel very insecure bathing in public. While access to safe drinking water ranks as seventh and eighth for rural men and women in general, in certain areas it is assigned a much higher rank.

The lack of sanitary latrines is ranked third by men and fourth by women in urban slums, while it is ranked as fifth by rural men and tenth by rural women.

Table 2.1 Priority Problems of the Poor

Problem	Rural		Urban	
	Women	Men	Women	Mixed Group
Not able to find work	1	1	7	2
Problem in accessing land/house/ homestead	2	4	12	5
Inability to pay dowry	3	3	3	10
Problem in educating children	4	6	5	4
Shortage of cash	5	6	10	-
Difficulties in accessing health care	6	2	8	6
Not enough food to eat	7	8	13	-
Lack of drinking water/tubewells	8	7	1	1
Shortage of capital	9	9	-	9
Lack of sanitary latrine	10	5	4	3
Not enough clothes to wear	11	10	-	-
No bathroom	-	-	2	8
Not able to own rickshaws	-	-	6	12
No security	-	-	9	11
No space	-	-	11	7

For rural women and men, their inability to find work is the most important problem. While rural men want opportunities for wage employment, rural women want opportunities for self employment based in their own homes.

The study found that 20% of villages/slums were totally unaware of any government services, and approximately 15% were totally unaware of NGO services. This neglect was particularly acute in the *char* areas and remote areas of Sylhet.

NGOs are mostly known for their credit provision. However, the poor are often dissatisfied with this service as the credit is often too small for productive purposes, repayment terms are not easy and the behaviour of the field workers unacceptable. Very few other NGO activities were mentioned by villagers. While health services are the government service most often mentioned by the poor, they complained that clinics and hospitals do not provide them with good treatment. Poor communities were also generally critical of local government and particularly their non-distribution of allocated relief and food aid. Tribals, *char* and slum dwellers were concerned about the lack of support from law and security enforcing agents.

The communities identified their expectations of government, non-government or private sector support for solving major problems. Many of the problems were thought to be solvable through assistance with one core problem, while some others were seen as having no solutions, especially in the short term. They did not see a role for local government in problem solving and preferred central government or NGOs providing assistance directly.

While the central government is expected to generate wage employment mostly for men, NGOs are expected to provide the skills training necessary for wage employment or to establish small cottage industries for mostly women. Provision of more schools and health facilities, credit for income generating activities, enforcement of dowry laws, and an accessible mechanism to bring cases of abuse of the laws to justice are the other expectations of the poor from government.

NGOs are seen to have a role in helping install tubewells and latrines, either through providing grants, subsidy or enabling payment by installment. The poor feel that they can themselves manage many of their problems including installation of tubewells and latrines if given the opportunity to earn. They are willing to contribute labour and see that their responsibility lies in maintaining facilities.

2.2.5 Conclusion

In conclusion, while rural poverty levels have declined since 1987, nearly 52% of the rural population and 61% of the urban population are still under the poverty line, and a large proportion of them live in extreme poverty. While the health situation of the poor has improved to some extent, their nutritional status is poor, the burden of disease is still high and the disease pattern remains largely unchanged and attributable to an unhygienic environment, poor living conditions and poor personal hygiene. About 40% of rural households are routinely exposed to crises due to illness related expenditures.

While men and women in urban slums said that access to drinking water is their most important problem, inability to find work is the most important problem for rural men and women. Lack of sanitary latrines is ranked third by men and fourth by women in slums, while it is ranked fifth by rural men and tenth by rural women.

2.3 Public Sector Reform

Bangladesh has been reviewing public sector reforms during the 1990s but few have been implemented, not least because the political situation has made it difficult for a government to undertake major initiatives. A Government Reorganization Committee (Nurun Nabi) was appointed by the previous government, but did not complete its work. The present government has appointed an Administrative Reforms Commission, but its work is at the beginning stage. Donors (USAID, UNDP, ODA) have sponsored studies and reports, the latest being the World Bank report "Government That Works: Reforming the Public Sector" July 1996.

The previous government reorganised local government so that the upazila parishard (councils) elected bodies were abolished, leaving elected councils only at the union level and in municipalities. The upazila was an administrative area containing a number of unions. The area still exists under the name thana, and is administered through the centralised civil service structure. Decentralization had previously been instituted in 1982.

The new government now in power is favourable to decentralisation. A Local Government Commission is studying the issue, and the process is expected to result in a new Local Government Act which will create elected bodies with powers of administration at various levels. It is expected that the union and thana levels will be included, and that all government departments existing at these levels, except the judiciary, will come under the local administration, and that these bodies will have revenue raising powers. Pourashavas (municipalities) already have elected bodies with administrative and some revenue raising powers.

When the report of the Local Government Commission is published, perhaps by June 1997, it will be considered by the Cabinet and a new Act may be ready by early 1998. The exact content of the Commission report is not yet known and the recommendations may be changed before becoming law. It is therefore not possible at the present time to make an accurate description of the future local government structure or of the consequences for the institutional framework for WSS activities.

Privatization is a priority of the government. A Privatization Board has been established in the Office of the Prime Minister. A new Chairman of the Board, an industrialist, has recently been appointed and it is expected that new initiatives will have strong political backing. In terms of the water supply sector, new privatization policies may give impetus to the possibilities for private management of piped water supply systems, and for the withdrawal of government from the production of latrine components.

It should be noted that there can be a long time delay between the adoption of a reform policy and its actual effective implementation. Therefore the expected public sector reforms may have a limited impact on the WSS sector in the immediate future.

3. WATER SUPPLY AND SANITATION SECTOR

3.1 Sector Definition

Bangladesh does not yet have an approved national water and sanitation policy, which would be expected to contain a definition of the sector. However, the sector is defined at present in administrative terms. The physical infrastructure aspects of water supply and sanitation are all found in the Ministry of Local Government, Rural Development and Co-operatives (MLGRDC). Drainage and solid waste fall under the same ministry. Water resources, however, such as flood control, irrigation, hydropower, etc are found in other ministerial structures. Health and hygiene activities are primarily the responsibility of the Ministry of Health (MOH), but they are increasingly being seen as an integral part of water and sanitation. See section 3.3 for the institutional framework of the sector.

Danida's SPS Guidelines and Sector Policy for Water and Sanitation taken together regard water supply and sanitation as being a sub-sector within the water resources management sector. However, in order to operationalise and ensure a more optimal use and impact of the Danida support within the sector, and to conform to the current Bangladesh administrative limits to the sector, it has been decided to concentrate the Danida support on water supply and sanitation. Other water-related activities such as irrigation, hydropower, flood forecasting and control etc. are not considered as part of the water supply and sanitation sector, even though these activities of course influence water resources management.

At present, Danida is supporting various activities within water resources management in Bangladesh, such as the Surface Water Modelling Centre (SWMC), Flood Forecasting and Warning Services (FAP 10) and the Meghna Estuary Study. However, as stipulated in the Danida Country Strategy for Bangladesh, it has been decided that Danida support to these projects will be phased out gradually over the coming years.

Therefore, the water supply and sanitation sector in Bangladesh will, in accordance with Danida's Sector Policy for Water Supply and Sanitation, include activities such as:

- water supply, primarily for domestic use, in rural and urban areas
- environmental sanitation and sewerage services
- health and hygiene promotion

3.2 Sector Policies

3.2.1 Steps Taken Towards a National Sector Policy

A number of donor supported studies over the past few years have encouraged the national formulation of a sector policy for water supply and sanitation. These studies include:

- Study to Formulate a National Policy on Water Supply, Sanitation and Hygiene in Urban Slums and Fringes; UNICEF, 1994.

- Situation Analysis of the Water Supply and Sanitation Sector; Local Government Division/MLGRDC, UNDP, UNICEF, UNDP/World Bank Water and Sanitation Program, 1994.

- Rural Water Supply and Sanitation: Conceptualizing Complementary Sector Programmes; Danida, Swiss Development Corporation, 1996.

Proposals for sector policies and strategies are also found in "Perspective Plan for Water Supply and Sanitation 1995-2010", Department of Public Health Engineering (DPHE), 1994, and in the Fourth Five Year Plan 1990-95.

In 1996 the Local Government Division (LGD) of MLGRDC requested the UNDP/World Bank Regional Water and Sanitation Group, South Asia to assist in the drafting of a national policy on water supply and sanitation. This work is now on-going and is being coordinated through the Planning Cell of LGD.

When government has agreed on a draft policy, the donors will be invited to give their comments, most probably at a national consultation workshop. This could take place as early as August 1997. Government will take the donors views into consideration and then submit a final document to the Cabinet. An official policy for the sector may thus be ready by the end of 1997. Danida's draft document for support to the sector (the SPSD) will need to be revised to include the official policy when it is ready.

3.2.2 Rural Policies

Bilateral and multilateral donors, NGOs and the government agencies involved have promoted various policies for rural water supply and sanitation, sometimes formulated in documents and sometimes formulated only in practice. The various policy initiatives have not always been in agreement with each other, and they are now being reviewed in the process of formulating the national policy. When that is complete, Danida's SPS document can be finalized, bearing in mind Danida's own overall policy issues and sector policies.

3.2.3 Urban Policies

The Asian Development Bank Institutional Development Project for DPHE and the Dutch assisted 12 District Towns (completed) and 18 District Towns (on-going) projects for urban water supply, sanitation, drainage and solid waste have assisted DPHE and MLGRDC in formulating a statement of policies for the urban sub-sector. These deal with the main principles of sharing of responsibilities and costs between the central government and local authorities, public awareness and participation, services to be directed towards disadvantaged groups, and the possibilities for privatization of services. The forthcoming national policy for the sector may include the above principles and provide more detailed guidelines.

3.2.4 Gender Policy

A gender policy has not yet been formulated for the sector. Under the initiative of the Ministry of Women and Child Affairs (MWCA), a national action plan for implementation of the Platform for Action by the LGD has been drafted (February 97), as a follow-up on the Beijing Conference. This points out that while the LGD is responsible for delivery of public and community services and plays an important role in the promotion of the institutional framework for local government, its mandate covers the population in general and does not specifically mention women as its beneficiaries. Women's issues are addressed in selected development projects on an ad-hoc basis.

The Action Plan specifies activities to be undertaken at the policy level in order to ensure that the draft Local Government Act integrates/incorporates equity and equality measures. It also specifies the institutional measures which need to be taken to promote gender balance and incorporate a gender perspective, as well as actions to promote skills and competencies of all staff as well as of women members of local government bodies and women managers. It addresses issues at programme level, research, linkages and coordination with other agencies including NGOs, and monitoring mechanisms. The plan specifies actions, objectives, activities, primary and secondary actors, indicators, resources and a time-frame.

3.2.5 Environment Policy

Environmental actions in Bangladesh were first organised by the Department of Public Health Engineering through the Waste Pollution Control Ordinance of 1973. Municipal bodies in different towns were also involved in environmental management activities. The Environment Pollution Control Ordinance of 1974 created the Department of Environment Pollution Control with four divisional offices.

The Fourth Five Year Plan 1990-95 contained the following objectives to promote, nuture, protect nature and natural resources and link departmental activities with environmental concerns in order to improve the quality of life.

1. Control and prevent environmental pollution and degradation related to soil, water and air.

2. Promote environment friendly activities in developed areas.

3. Preserve, protect and develop the natural resource base.

4. Strengthen the capacities of the public and private sectors to manage environmental concerns.

5. Create public awareness for participation in environment promotion activities.

3.3 Sector Organization

3.3.1 Institutional Framework and Stakeholders

Responsibilities

The statutory responsibility for the water supply and sanitation (WSS) sector is vested in the MLGRDC. It shares with the Planning Commission the tasks of policy decisions, sectoral allocation and funding, as well as project appraisals, approval, evaluation and monitoring. Within the LGD of MLGRDC there is a Planning Cell headed by a Joint Secretary who is Director General, Monitoring, Inspection and Evaluation and responsible for policy formulation and project approvals.

The functional responsibility of WSS is delegated to the DPHE in all rural and urban areas except Dhaka and Chittagong cities. The LGED is responsible for all infrastructure work except WSS activities.

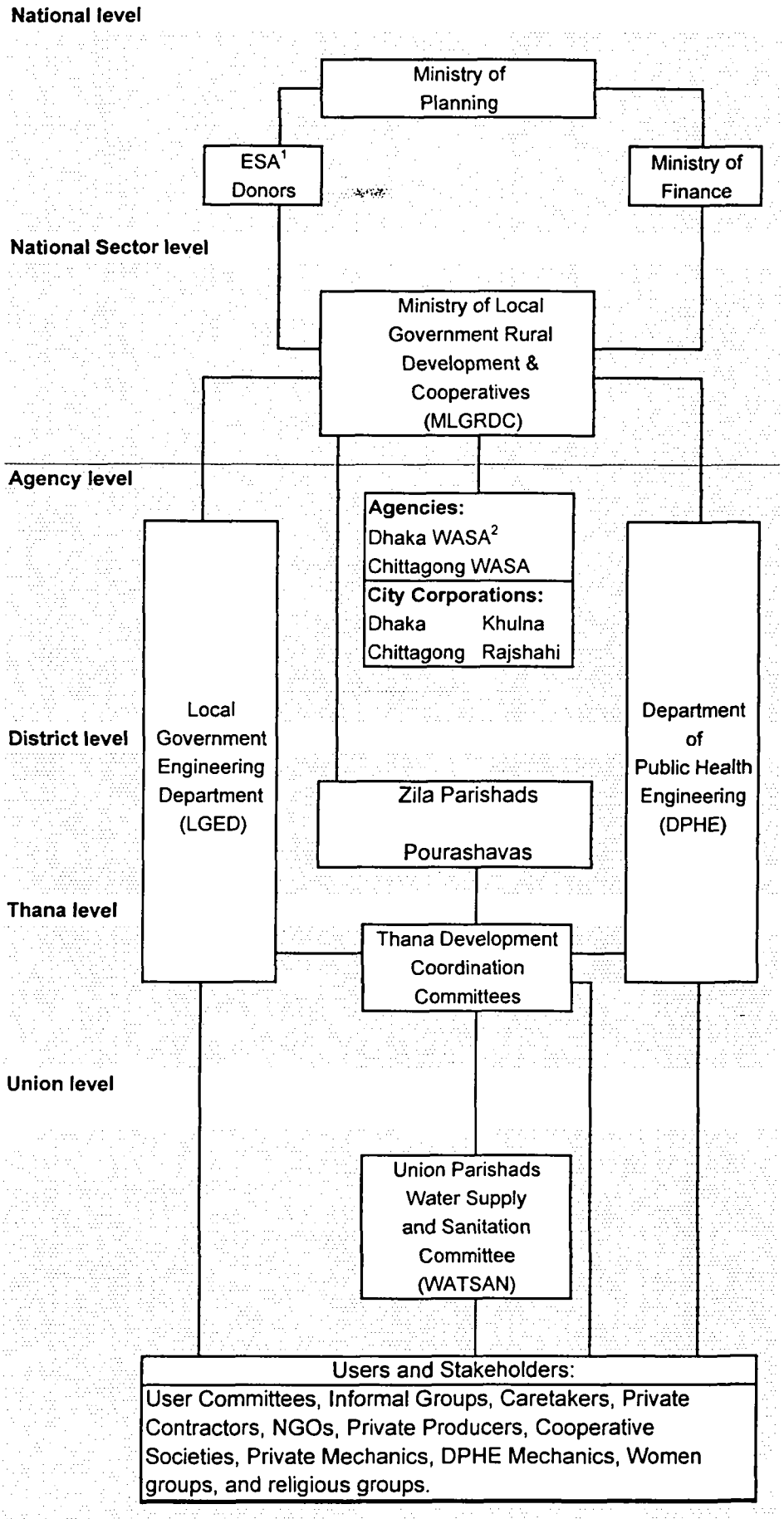
Water and sewerage in Dhaka and Chittagong is the responsibility of Water and Sewerage Authorities (WASAs), which are semi-autonomous bodies with boards of management that report directly to MLGRDC. City Corporations (CC) in Dhaka, Chittagong, Khulna and Rajshahi are responsible for drainage and solid waste management. Pourashavas (municipalities) are also responsible for drainage and waste management. Pourashavas have the statutory responsibility for provision, operation and maintenance of water supply, including piped water systems, but they have limited technical expertise and at present rely largely on DPHE and sometimes LGED for design, construction, operation and maintenance - apart from handpumps and household sanitary latrines which are maintained by the users.

See Fig 3.1 for the institutional framework of the sector.

DPHE is responsible for planning, designing and implementing water supply and sanitation services in rural areas, thana towns and pourashavas. DPHE has staff at zila (district) and thana levels and employs some tubewell mechanics and masons at union level.

LGED is responsible for infrastructure development in rural and urban areas, including feeder roads, culverts, small scale irrigation, solid waste and drainage. It has staff at the district and thana levels which provide technical guidance to the local authorities. Although LGED has no mandate to provide WSS services, it is involved in rehabilitation of water and sanitation services in some urban areas through participation in larger infrastructure improvement projects, as well as specific responsibility for upgrading urban slums. There is therefore some overlap of activities between DPHE and LGED in urban areas.

Fig. 3.1 Existing Institutions and Interactions



[1] ESA External Support Agencies
[2] WASA Water and Sewerage Authorities

Local Administrative Units

There are 64 zilas (districts), 460 thanas outside the City Corporation areas, 4451 unions and about 85,650 villages in Bangladesh. The four major cities are governed by City Corporations, and there are 127 other urban areas governed by municipal authorities called pourashavas.

Zila parishads (district councils) are involved in planning, implementation and monitoring of development activities in the district, including approval of plans from the thana level.

Thana Unnayan Samannaya Committees (thana development coordination committees) consisting of union parishad chairmen and government officers are responsible for planning, implementation and monitoring at the thana level.

Union parishads (union councils) are elected bodies responsible for promoting development activities. The Union Water Supply and Sanitation Committees (WATSAN committees), which include community leaders and DPHE representatives, should promote hygiene education and environmental sanitation and play a role in distribution of tubewells.

WATSAN committees have been established in all Unions, and are being promoted at the thana and pourashava levels.

Pourashavas are elected municipal councils under the administrative control of MLGRDC.

A new local government structure (see 2.3) is expected to increase the number of levels of directly elected local authorities, and decentralize responsibilites to a greater extent than at present.

NGOs and Private Sector

There are numerous NGOs active in the WSS sector. There is at least one local or national NGO in all unions of the country. Many of them promote water, sanitation and hygiene education either as a separate project or as part of a wider programme of village development that includes provision of credit and stimulation of local participation in development activities.

The NGO Forum for Drinking Water and Sanitation is an apex body for the sector. It has about 560 members which it assists in capacity building, channelling of resources, general advocacy, training, information, research, monitoring and evaluation. Since 1982 the members of NGO Forum have installed at least 16,000 tubewells and 123,000 latrines. Danida has supported NGO Forum since 1992.

The private sector has always been involved in WSS activities, and is expanding its activities. In 1991 it was estimated that private handpumps comprise 71% of all rural handpumps and 88% of all urban handpumps, while five years earlier it was estimated that only about one-third of rural pumps were private. Sanitary latrines are nearly all private. There are about 2,600 private producers of sanitary latrine components, and several hundred NGO village sanitation centres, with a total production larger than that of the DPHE village sanitation centres.

With the exception of Tara pumps, virtually all components and spare parts for hand tubewells and latrines are widely available in the private market. Many people in rural communities are making a living as handpump drillers, fitters, repairers and plumbers.

3.3.2 Staffing Situation

The Ministry set-up of Local Government Division consists of the Secretary, three Joint Secretaries, one Director General and a number of Deputy Secretaries and Assistant Secretaries. There is a field set-up at Division and District levels. The Ministry set-up of LGD has 50 sanctioned posts with 1 vacant post. The field set-up includes 66 sanctioned posts with 52 filled posts at division and district levels.

Table 3.3.1 Staff Position of Local Government, Departments and Agencies

	Sanctioned Posts*	Existing staff			
		Male	Female	Total	% female
Local Government Division (LGD)	50	43	6	49	12.2
LGD field set-up	66	51	1	52	1.9
Department of Public Health Engineering (DPHE)	188	182	3	185	1.6
Local Government Engineering Department (LGED)	610	581	29	610	4.8
National Institute of Local Government (NILG)	23	16	6	22	27.3
Total	937	873	45	918	4.9

Source: Report of the Sectoral Need Assessment on Local Government Division, December 1996
* From Sub-division and above

Department Level

Sanctioned posts are permanent and are financed under the Revenue Budget. There are many more posts financed under the Development Budget. These are mostly at lower levels and their continued existence depends on project financing. The total staff strength of DPHE and LGED, i.e. posts at all levels under Revenue Budget and Development Budget, is shown in tables 3.3.2 and 3.3.3.

Table 3.3.2 Staff Position of Department Public Health Engineering

	Total
Chief Engineer	1
Additional Chief Engineer	2
Superintending Engineer	13
Executive Engineer	87
Sub-divisional Engineer	81
Sub-assistant Engineer	764
Other Class I officer	18
Health Education	60
Chemist	4
Tubewell Mechanic	1,840
Village Sanitation/Mason/Labourer	1,800
Desk Staff	3,992
Total	8,662

Table 3.3.3 Staff Position of Local Government Engineering Department

	Total
Chief Engineer	1
Additional Chief Engineer	1
Superintending Engineer	4
Executive Engineer	68
Executive Engineer (Mechanic)	1
Assistant Chief Engineer	1
Assistant Engineer/Thana Engineer	528
Assistant Engineer (Mechanic)	23
Sub-assistant Engineer	984
Other	5,806
Other Support Staff	2,131
Total	9,548

Source: [1] Local Government Engineering Department, Information Brochure, October 1996

There are no women at policy-making and management levels of LGD, DPHE and LGED. The highest level at which women are represented is that of Executive Engineer (EE). In DPHE there are 2 women EEs out of a total of 87. In LGED the figure is 9 out of 68.

3.3.3 Sector Budgets and Financial Procedures

There is no separate sector budget for water supply in the Annual Development Plan (ADP); it is a sub-group of the Physical Planning, Water Supply and Housing (PPWSH) sector. The sector covers a wide range of activities important to the national economy and welfare of both urban and rural communities. The major areas covered are:

- physical planning of the whole country;
- construction of government offices and institutional buildings at administrative centres;
- provision of economic housing units for government servants;
- provision of private housing facilities for various income groups;
- provision for physical infrastructure in the existing as well as emerging urban areas;
- provision of safe drinking water supply, sewerage and sanitation in urban and rural areas with a view to improving environment and the quality of life of the people;
- development of basic infrastructure and services for newly created zila and upazila headquarters;
- development of tourism and recreation facilities;
- creation of physical facilities for the police, the Ansar, the Fire Services and Civil Defence; and
- research and development in the field of building materials and construction.

However, all sectoral expenditures, related to water supply, with a few exceptions are financed through the DPHE and the WASAs, though water and sanitation projects may also be initiated by Pourashava and Thanas from their block allocation under the ADP.

	Total no of projects		Investment projects		Total allocation[1]	
	No.	% of total	No.	% of total	No.	% of total
ADP	1,120	100.0	858	100.0	110,208	100.0
PPWSH	126	11.3	93	10.8	7,170	6.5
DPHE[2]	22	2.0	20	2.3	1,781	1.6
WASA[2]	9	0.8	7	0.8	852	0.8

[1] Exclusive block allocation and Technical Assistance (TA)
[2] DPHE has two TA projects and each of the WASA has a TA project

The total number of projects in the ADP 1996/97 is 1,120 amounting to about Tk 110,000 mill. of which 858 are investment programmes. The PPWSH sector has a total of 93 projects (total Tk 7,050 mill), 16 technical assistance (total Tk 208 mill), and 17 self financed programmes (total Tk 199 mill). The water supply and sanitation sector receives about 36.7% of the PPWSH allocation or 2.4% of the ADP 1996/97.

Public outlay for water and sanitation dropped from 2.48% in First Five Year Plan to 2.14% in the Second Five Year Plan to 1.25% in the Third Five Year Plan. In the Fourth Five Year Plan (1990 - 1995) the allocation is 1.41% of the budget. In 1996/97 it has increased to 2.4%, which shows the importance attached to water supply.

In the Fourth Five Year Plan the total development expenditure in the public sector during the plan period is estimated at Tk 219,425 mill in current prices or Tk 167,573 mill in 1984/85 prices. The plan allocation for Physical Planning, Water Supply and Housing in current prices was Tk 7,724 mill and Tk 5,858 mill in fixed prices or 3.5% of the total.

3.3.4 Expenditure and Revenue

GOB is increasingly financing rural water supply and sanitation projects without donor support. Thus, in the late 1980s virtually no public tubewells were sunk without UNICEF involvement. During 1994/95, 40-50% of the public tubewells were financed by GOB, and this percentage has increased further since then. The GOB sector allocation for the financial year 1997/98 as well as the tentative figures in the 1997-2002 Five Year Plan demonstrate GOB's continued priority given to the sector.

Water and Sewerage Authorities (WASA)

The financial situation of the WASAs is not satisfactory. High levels of water loss, poor revenue collection and general dissatisfaction with services are endemic to water and sanitation authorities in Bangladesh. Water through piped house connections is under-priced, and supply from street hydrants is free to consumers. Sanitation services are provided at subsidised prices or on the basis of instalments that are seldom realised.

Pourashavas

Property taxes are the most productive form of mobilisation of local resources in urban areas. The revenue base of the Pourashava administration is both weak and under-utilised. Holding or property taxes do not correspond to the population increase or economic activities due to current deficiencies in property assessment practices. Due to non-realisation of taxes, recurrent revenue expenditure are often being financed from central government development grant.

In most cases the Pourashava revenue income rarely covers the operation and maintenance cost of the water supply installations and never includes amortisation of capital costs. Water tariffs in municipalities are based on the diameter pipe size of house connections. Water service charges included in the property tax are set to partially cover the cost of water consumption from street hydrants. Revenue collected for water in municipal towns is normally not enough to cover the operating expenses. Many customers do not pay their bills. It is found that only some 60% of the expenditures are billed, and that only 50% of the bills are collected, resulting in about 30% of the expenditures being collected.

Unions

In 1993/94 the local government system was reorganised to provide more power and local accountability to the Union Parishads (Councils) which are elected bodies and liaise and work closely with government administration. The Parishads, however, are dependent on the technical support of various central government agencies for planning and execution of projects. The Union Parishads could play an important role in creating awareness of environmental sanitation.

The approach is now to put emphasis on enhancing sustainability of rural water supply systems through increased financial contribution and participation by users in every step of the installation process. It is postulated that the beneficiaries will acquire a sense of ownership by sharing cost of installation and maintenance.

3.3.5 Project Planning and Monitoring Procedures

In spite of the fact that the Fourth Five Year Plan asserts the necessity of a sector plan prior to project planning for a sector, water and sanitation projects are developed according to the interest and availability of bilateral and multi-lateral funding.

The first step in project planning and development procedures is the preparation of a Project Concept Paper (PCP) by the concerned department, which describes the concept of the proposed project. The PCP has to be approved by the Planning Commission. Based on the approved PCP the Planning Commission prepares a Project Proforma (PP). The PP gives many more details regarding the project targets and implementation plan (physical planning) including annual disbursement by financing sources.

The PP corresponds to the Project Documents prepared by Donors. The PP has been divided into two separate forms, one which is used for projects where the benefits can be measured in economic terms and a second for projects where benefits cannot be measured in economic terms.

The PP, including revisions, must be approved by the Executive Committee of the National Economic Council (ECNEC), which is the executive agency for implementation of policies decided by the National Economic Council (NEC), which is the highest political authority for development activities. ECNEC is the ultimate project approving authority.

The important document for a Technical Assistance Project comprising only Technical Assistance and no 'investment' component will be the Technical Assistance Project Proforma (TAPP).

The desired procedure is that the project will be entered into the ADP after approval of the PP. However, a large number of projects have been included in the ADP without formal approval. Out of the 1,120 projects in the ADP 1996/97 117 had been revised without the revision being approved, and 297 had an unapproved PCP.

The ADP is formulated in May-June on the basis of expected availability of internal and external resources. The financial disbursement given in the PP is entered into the ADP and the Five Year Plans. The actual flow of funds is controlled through the ADP and revisions of the ADP. Normally the ADP is revised due to changes in availability of funds.

After approval of the PP and inclusion in the ADP, requests for release of funds for the specific projects are placed on quarterly basis by the implementing agency, which in the case of water supply is DPHE (in some cases LGED), to the Ministry of Finance. The Ministry issues a Government Order in favour of the Chief Engineer, DPHE releasing funds upon request.

The Chief Engineer allocates funds to the Superintending Engineer in accordance with the proposed physical programme. The Superintending Engineer places the funds with the respective Executive Engineers, as per their requirements and progress of work.

Monitoring Procedures

The Planning Commission (PC) monitors activities of all ministries in the country. However, the LGD has its own monitoring mechanism, which is known as the Monitoring, Inspection and Evaluation (MIE) Wing. The Wing is headed by a Director General. The functions include monitoring, inspection and evaluation of the activities of the local bodies: union parishad, zila parishad, pourashavas, and City Corporations. The activities which are being monitored include organisational matters, financial performance, development activities and other basic information. The Wing is not equipped with modern technology and trained staff to run the programme effectively.

DPHE and WASAs are required to submit regular progress reports to ministries on different development activities. The reports consist largely of physical and financial progress. Little monitoring is directed toward targets other than installations, caretaker training or participation of women. Information and data collected from the field are processed manually and collated at central level. No summarised information is passed down the management chain to the originators of the data.

Sources of project funds are primarily public money, i.e. from Government ADP and the donors. The financial controls relating to the projects are the control methods and techniques used within the framework of government rules and procedures.

At DPHE monitoring is done by the Programme and Coordination Division that produces monthly progress reports. The Planning Commission prepares quarterly and annual reports and some other periodic reports using summarised data mainly from the monthly progress reports. These reports serve specific requirements, but are not effective as an assessment tool for in-depth analysis.

Routine audits are conducted by the government audit team. Essential observations of such audit controls cannot be ignored. At the end of a project, a comprehensive audit by government could be an effective tool to determine the management efficiency in utilising the project money.

3.4 Donor Supported Activities and Coordination

3.4.1 Danida Activities in the Sector

Danida has since 1974 been a major donor to the water supply and sanitation sector in Bangladesh. At present, Danida is providing support to the Water Supply, Sanitation and Drainage Project in Chaumohani and Laksmipur Pourashavas (Phase I) and its continuation, the Urban Water Supply and Sanitation Project (Phase II); NGO Forum for Drinking Water and Sanitation; and the International Training Network Centre (ITN) established at Bangladesh University of Engineering Technology (BUET). Danida is together with Swiss Development Cooperation (SDC) co-financing the national rural water supply and sanitation programmes implemented through UNICEF. However, Danida's bilateral support to UNICEF will terminate by 30 June 1998.

Danida is providing overall support to the UNDP/World Bank Regional Water and Sanitation Group, South Asia, and the Royal Danish Embassy is providing support under the local grant authority to various activities undertaken by RWSG-Bangladesh. An activity supported by the Royal Danish Embassy is the participatory sector development process by which the MLGRDC with RWSG-Bangladesh support is expected to draft a national sector policy and strategy for water supply and sanitation in Bangladesh.

3.4.2 Other Donor Project Activities

UNICEF has since the independence of Bangladesh supported DPHE's countrywide rural water supply and sanitation programme. Among others due to staff reductions and fund constraints, UNICEF will cease its past massive support to the sector and concentrate on strategic inputs with particular emphasis on cross-sectoral promotional activities to be replicated by other projects. As an example, UNICEF is supporting a decentralised accelerated district approach in five districts linking a number of child survival activities to be implemented through different government institutions. Noakhali and Patuakhali districts are among the five districts.

SDC has so far supported the DPHE/UNICEF national programme, and intends to support activities in the low water table area on a bilateral basis. The European Commission is also considering a project to finance replacement of pumps in areas affected by increased irrigation.

The Islamic Development Bank (IDB) has in the past financed a number of projects in the coastal belt, and is considering to continue such funding. The projects funded by the Islamic Development Bank deviate on vital issues from the projects supported by other donors. Thus, allocation of tubewells is not specifically targeting the poor, tubewells are given free, and the projects do not include sanitation and hygiene promotion.

A large number of small NGOs and some large NGOs with international affiliations carry out rural water supply, sanitation and hygiene promotion activities supported by different donors.

The main donors in the urban water supply and sanitation sector are the Netherlands and the Asian Development Bank (ADB). The Netherlands together with the DPHE completed a 12 District Towns Project, and is currently financing a 18 District Towns Project. ADB has completed a project of WSS in 5 Pourashavas, and is presently providing support to 9 District Towns as well as institutional support to DPHE. ADB is considering a third phase of their support to urban water supply and sanitation, and will be conducting a sector study in late 1997.

The donor funded activities in DPHE are listed in Annex 11 which is an extract from the Three Year Rolling Investment Plan (TYRIP) 1996-98. A summary of the donor funded DPHE projects listed in the TYRIP is shown below. This includes 14 on-going investment projects, 3 ongoing TA projects, 1 new investment project and 2 new TA projects. The total project costs amount to Tk 9,281.5 mill.

Donors	Total Tk mill	On-going Investment	On-going TA	New Investment	New TA
The Netherlands	1,749.0	1699.3	49.7	-	0
UNICEF	3,535.9	3388.8	134.5	-	12.6
DANIDA	1,585.8	1554.6	31.2	-	0
Asian Development Bank (ADB)	1,596.1	1246.1	-	350.0	0
Islamic Development Bank (IDB)	739.5	378.5	-	350.0	11
Saudi Arabia	75.2	75.2	-	-	0
Total	9,281.5	8,342.5	215.4	700.0	23.6

UNICEF is the largest provider of donor funds (38%) with the Netherlands, Danida and ADB providing 17-19% each.

Donors	% of Donor fund	On-going Investment	On-going TA	New Investment	New TA
The Netherlands	18.8	20.4	23.1	-	-
UNICEF	38.1	40.6	62.4	-	53.4
DANIDA	17.1	18.6	14.5	-	-
Asian Development Bank	17.2	14.9	-	50.0	-
Islamic Development Bank	8.0	4.5	-	50.0	46.6
Saudi Arabia	0.8	0.9	-	-	-
Total	100.0	100.0	100.0	100.0	100.0

The donor funded part of the total project cost varies. In UNICEF projects donor funds cover between 34% and 51%; ADB covers about 71%; the Netherlands from 71% to 88%; whereas Saudi Arabia, IDB and Danida covers between 90% to 97% of the total project costs.

The World Bank is financing a Rural Water Supply and Environmental Sanitation Sector Study which is planned to take place in late 1997. This may result in World Bank Support to the sector.

3.4.3 Financial Flow and Accounting Procedures

The financial flow depends on the donors. In case of bilateral projects the most used procedure is that the funds are channelled from the headquarters to the external account of the Embassy or the given representation in Bangladesh. Funds are then released, i.e. transferred to the project account and project costs are reimbursed in accordance with presented bills. In case of multilateral projects the funds are transferred to the headquarters of the multilateral agency, e.g. UNICEF in New York, and released in accordance with approved work plans and budgets and in accordance with procedures agreed between UN and the Government of Bangladesh.

The Dutch are implementing the 18 DTP (District Towns Project). The project was started in 1989 at which time all activities were implemented through DPHE. At present some 50% are being implemented by the pourashavas according to their own rules. The Dutch project is managed by a Team Leader for the Advisory Team and the government input is managed and controlled by a government appointed Project Director.

Cost estimates are prepared by the Advisory Team and approved by the Project Director on the recommendation of the Team Leader. The costs in the received tenders are not to exceed 5% as stipulated in the DPHE rules. Supervision on the contractors is carried out by DPHE.

In case of the pourashavas implemented projects they prepare annual work plans and budgets. The Pourashavas have to show that what they request is equal to the residual, i.e. revenue less expenditure. They can get 25% as advance (impress account), otherwise it is reimbursable bills.

As a part of the training programme for the pourashavas they prepare the bills, submit them to the Executive Engineer, who passes them on to the Dhaka Office for control.

The Government has the authority of auditing accounts through the Comptroller and Auditor-General and can supersede a Pourashava or corporation on ground of inefficiency and can suspend a Chairman/Mayor under certain circumstances.

DANIDA Procedures

All Danida funded projects are to follow the same procedures: funds are transferred from Danida Headquarters in Copenhagen to the Danida account in Bangladesh, from which account funds are disbursed directly to the established project account, operated by the Chief Project Adviser (CPA).

The government input is managed and controlled by the government appointed Project Director. In case there is no CPA, the recipient institution would open a project account and the Danida funds would be transferred to this account.

Payment for project input in foreign currency is done directly through Danida. In case of contract work, the implementing agency will issue the call for tender, Danida will participate in the selection of the contractor, mainly through the CPA, and only in few cases will an advance be paid. The normal procedure is reimbursement according to bills.

The financial control function is with the CPA. Danida can at any time field an audit team, who will conduct financial as well as physical inventory. Normally, Danida will initiate an Annual Audit. Selection of an audit firm is through tender.

3.4.4 Donor Coordinated Mechanisms

Donors in Bangladesh coordinate their activities through the Local Consultative Group (LCG). There are two sub-groups concerning the water supply and sanitation sector. An Urban Water Supply and Sanitation sub-group is chaired by the ADB office, and a Rural sub-group is chaired by the UNDP/World Bank RWSG-SA. Representatives of relevant sector departments participate in the meetings. The LCG sub-group meetings are a recent development, so it is not possible to describe specific coordination measures which have been undertaken apart from exchange of information and discussion of topics of common interest.

A National Task Force on Action Research in the sector includes representatives of GOB, donors and research institutes. It is chaired by the International Centre for Diarrhoeal Research.

3.5 Problems, Obstacles and Barriers

This section should look at the problems in the sector from the perspective of the government agencies involved in the sector. However, an accurate description of these issues cannot be made until GOB's draft sector policy is complete later in 1997.

A number of studies have been made by donors in cooperation with GOB. However, the low level of response by government to the recommendations gives the impression that the government agencies involved did not feel much ownership of the reports, and it is therefore not assessed to be of much relevance to refer to them in this chapter.

DPHE's "Perspective Plan for Water Supply and Sanitation 1995-2010" and the Fourth Five Year Plan (1990-95) are sources of information coming directly from government. However, the Fourth Five Year Plan is out of date and the Perspective Plan is a proposal which is still to be incorporated in the Fifth Five Year Plan (1997-2003) yet to be published. The information in this chapter is therefore rather general in character.

A further analysis of sector issues in relation to Danida policies and activities is contained in Chapter 5.

3.5.1 Institutional Issues

The existing process of public sector plan implementation is mainly top-down. A sectoral planning process in accordance with the macro-economic framework is supposed to ensure that foreign assistance is integrated into the sectoral programmes and priorities. However, this integration is by and large lacking at present.

The present mechanism for formulation and implementation of public sector projects through the ADP frequently lacks transparency in terms of input-output relationships and cash flow. The present mechanisms are deficient in monitoring the impact of projects on the poor and disadvantaged and in integrating such groups into the planning process.

The overall policy framework for the WSS sector has not yet been finalized, and the future local government structure is still being formulated. Even when these two issues have been politically resolved, there will remain a period during which new responsibilities and structures will have to be made operational.

It will take some time for local authorities to develop their expertise in the management of activities in the sector, and this will include their relationships to DPHE and LGED. The weak institutional capacity of the local authorities will need to be tackled by central government through mechanisms which have not yet been operationalized.

DPHE's Perspective Plan sees the need for establishing planning and MIS (Management Information Systems) units within DPHE, the pourashavas, NGOs and private enterprises. This need stems from a recognition that the existing physical and financial monitoring systems are not adequate for giving an accurate picture of the qualitative aspects of changes in behaviour and health conditions as a result of WSS interventions. Details are not available concerning the establishment of the MIS units.

The Perspective Plan proposes setting aside funds for institutional capacity building in terms of technical management support at the district headquarters, pourashavas and thana levels, as well as technical support to the private sector and NGOs.

3.5.2 Gender Issues

A gender policy for the sector is not yet formulated so the government agencies have no specific guidelines to implement.

The Perspective Plan acknowledges the significant role women can play in regards to health, hygiene and maintenance of facilities. Women should be ensured a place on the site selection committees for tubewells. At present, female tubewell mechanics are recruited on a pilot basis to do hygiene education as well as repairs.

The Plan recognizes that there are socio-cultural problems in regard to the promotion of a greater role for women in the sector, and that it is therefore necessary to proceed in a "realistic" manner.

The Fourth Five Year Plan identifies the following general constraints in regard to bringing women into the mainstream of development:

- Due to gender inequality and inferior status, women in and outside the family remain vulnerable, subordinate and dependent. Traditional social and institutional norms, customs and beliefs deter women from participating in socio-economic activities.

- Official statistics have failed to capture women's participation in economic activities.

- It is not only difficult for women to get paid jobs, but also to get wages equal to men. Women comprise over 77% of unpaid family workers. The majority of women are involved in unskilled and semi-skilled jobs with low returns and wages. They generally lose their jobs to men, when traditional working methods are transformed by introduction of new technologies.

- Female literacy is half that of males, which limits their opportunities for training and skill development.

- There is a lack of general awareness regarding the concept of WID leading towards a sectoral and gender differentiated approach in economic activities and employment.

3.5.3 Financial Constraints

During preparation of the five year plans, the low level of domestic resource mobilisation has been identified by GOB as a major constraint on economic growth and development. It has resulted in heavy dependence on external assistance to finance development expenditure. Current expenditure is growing faster than total government revenue.

Utilisation of project aid during the previous five year plans was sometimes delayed due to a shortage of matching funds in local currency. Some projects are dependent on tied assistance in some form or another, and this raises implementation costs.

3.5.4 Human Resource Constraints

There is no constraint in terms of numbers of government staff in the sector. Both DPHE and LGED are close to being fully staffed. However, lack of skills have been identified as a problem for pourashava staff, caretaker families, WATSAN committees, rural mechanics and the private sector. DPHE sees the need for establishing a training unit in the headquarters. Funds have been allocated for training in the Perspective Plan.

3.5.5 Technical Problems

The following general technical points have been identified in the Perspective Plan as being priority issues on which to base future planning.

- Coverage per person by tubewells is below the national average in low water table areas and the coastal belt.
- Coverage is not sufficient for persons to use clean water for all domestic purposes, and incidences of diarrhoeal and other water borne diseases are still high in spite of increased coverage over the past 20 years.
- Declining levels of groundwater in the dry season leads people to use unprotected water sources.
- There is a limited local capacity for manufacturing of the Tara pump.

A problem that has arisen recently is the extent of arsenic contamination in groundwater. The scope of the problem is still unknown, but the issue is causing considerable public concern.

4. DANIDA POLICIES

4.1 Overall Danida Policies

Poverty orientation constitutes a fundamental principle of Danish development assistance, as poverty and underdevelopment still affect large parts of the world with every fifth person on earth living in absolute poverty. Although the majority of the poor people in most countries live in rural areas, urban poverty is a growing problem.

Three cross-cutting issues are closely linked to the overall objective of poverty reduction:

- the role of women in the development process;
- environment;
- promotion of good governance and human rights.

Sustainable poverty reduction requires that assistance be gender specific, be based on the sustainable use of natural resources, and promote the political and economic participation of men and women in society.

4.1.1 Poverty Orientation

The poverty reduction strategy of Danish development assistance can be condensed into three main points:

- the promotion of sustainable and socially balanced economic growth;
- the development of the social sector, including the promotion of education and health services as prerequisites to the development of human resources;
- promoting popular participation in the development process, the development of a society based on the rule of law and good governance as prerequisites to stability and economic, social and political progress.

4.1.2 Role of Women in the Development Process

In most developing countries, women play a crucial role in development, not only as producers, but also as bearers of social responsibility and bringing up the next generation. Danish development assistance emphasises promotion of women's participation in development and strengthening the role of women in the development process.

Gender aspects should be analysed in connection with specific development assistance activities. At the same time, plans and goals should be formulated with a view to improving the situation of women and promoting their involvement in the development process. Women should participate on equal terms with men in decision-making processes and implementation of development goals in order to achieve development.

At the operational level emphasis will be placed on identifying specific goals for women's involvement in the development process and in ensuring full integration of women's interests throughout the project cycle.

4.1.3 Environment

The Government of Denmark will intensify efforts to incorporate the recommendations of the Rio Conference into Danish development policy. Moreover, Denmark will ensure that environmental aspects are fully incorporated into Denmark's poverty-oriented development assistance.

Main priorities are:

- environmental screening and environmental impact assessments, if necessary, will be undertaken for all physical development activities receiving Danish support;
- promotion of institutions which at the national and local levels can strengthen the sustainable management of natural resources;
- support to activities that enable the individual developing countries to better manage, preserve and use natural resources in a sustainable fashion.

4.1.4 Good Governance, Democratisation and Human Rights

Promotion of respect for human rights, democracy, and popular participation are deemed to be prerequisites for stability, economic, political, and social progress. Popular participation in the decision-making process is essential to the development of a stable society and to sustainable development. Included in the overall concepts are the notions of transparency, and accountability of elected persons and civil servants.

4.1.5 Support to Indigenous People

It is the policy of Danida to support the development efforts of cultural and linguistic minorities that may be marginalised socially, economically and geographically in the larger society. Support is intended to assist the people in self-help efforts related to human rights, institutions and economic development.

4.2 Water and Sanitation Sector Policies

The Danida Sector Policy Paper for Water Supply and Sanitation was published in 1992, and it is expected that a revised sector policy will be introduced in 1998. A number of the policies from 1992 have already been revised in practice. The main points of the present policy are as follows.

Denmark assigns high priority to the provision of water supply and sanitation as a way of contributing toward lasting improvement in the social and health regimes of the poorest population groups in recipient countries.

Danida has three overall objectives in regard to water supply and sanitation:

- Provision of equal access for as many people as possible in poor areas to water supply and sanitation facilities, while safeguarding the environment for future generations;
- Promoting the improvement of the community's social and economic development, especially relieving women and children of the time- and energy-consuming burden of fetching water;
- Ensuring sustainable water supply and sanitation facilities which will be effectively used to bring optimum socio-economic benefits and promote behavioural changes necessary to achieve health improvements.

These objectives are supported by 47 guidelines which cover the various sub-sectors in water supply and sanitation (see "Water Supply and Sanitation: Danida Sector Policies", Ministry of Foreign Affairs, 1992).

4.3 Danida Country Strategy for Bangladesh

In the 1970s, Bangladesh became one of the four main recipient countries for Danish development assistance, and in 1989, one of Denmark's programme countries. Danida prepared in 1994-95, in close collaboration with the Bangladeshi authorities a strategy for Danish-Bangladeshi development cooperation. The strategy was approved by the Danida Board in 1995.

According to the above strategy, Danida supported activities will be concentrated within the following sectors: i) agriculture, ii) water supply and sanitation, and iii) river transport. The activities will be concentrated in the districts of Noakhali, Laxmipur, Feni, Patuakhali and Barguna. These were chosen because they are part of the relatively poorer coastal belt where needs are greatest in terms of coverage of water supply and sanitation facilities. It is expected that regional development programmes based on a wide range of mutually supporting activities within a limited geographical area will achieve the desired development effect.

With relevance to the water supply and sanitation sector, the strategy states:

- The overall strategy aims at reducing crisis risks. Diseases constitute the most serious crisis situation for poor people. Water borne diseases are the most common cause of illness among poor people and by far the most common cause of death among children in the Danida priority districts.

- Danida will continue the policy dialogue with the authorities and other donors regarding a re-orientation of activities in the sector to include social and health aspects as well as physical infrastructure.

- When establishing the water supply and sanitation sector programme, Danida will focus on the coastal region with special problems in access to clean drinking water.

- Danida will seek to promote a decentralised administration of the sector and contribute to institutional development on a local level.

- The main thrust will be on social mobilization to improve hygienic use of clean water and the use of environmentally sound latrines, as well as changing people's hygiene habits with respect to reducing the risk of waterborne diseases.

- The sector programme for towns will include piped schemes, handpumps in fringe areas, private latrines, public toilets, solid waste removal, improved drainage and social mobilization for better hygiene.

- The users will be responsible for installing handpumps etc. in areas where traditional drilling methods and pumps can be used. Special water supply problems in certain geographic areas will continue to require technical and financial support. The users will be responsible for installation of latrines.

- Community participation in the development process and a firm social base of development activities are necessary prerequisites for sustainability. Development work should be appropriately divided between the national programmes and NGO projects so that they complement each other. The NGOs have had great success with social mobilization and reach and benefit the poorest groups more effectively than is the case with most Government programmes.

The country strategy incorporates the overall policy concerns of Danida, but does not specifically mention support to indigenous people

5. ANALYSIS OF THE WSS SECTOR IN RELATION TO DANIDA ACTIVITIES

5.1 Danida Country Strategy

5.1.1 General

The relevant parts of the Strategy for Danish - Bangladeshi Development Cooperation are described in Section 4.3. The strategy is found very suitable as the frame for the Danida support to the water supply and sanitation sector in Bangladesh. In particular, the following issues in the strategy should be emphasised:

- the main thrust will be on social mobilization for improved hygiene;
- the users will be responsible for installing handpumps in areas where traditional drilling methods and pumps can be used (i.e. the shallow water table area). Special water supply problems in certain geographic areas (i.e. the coastal belt) will continue to require technical and financial support. The users will be responsible for installation of latrines;
- decentralised administration and institutional development on a local level;
- development activities should be appropriately divided between the national programmes and NGO projects.

The strategy states that the sector programme for towns will include solid waste removal and improved drainage. The experience with such activities has so far been quite discouraging, most probably because there is not a genuinely felt need for such activities. It should, therefore be reconsidered whether or not such activities should continue to be included in the Danida supported activities.

The Danida supported coastal area urban water supply and sanitation project includes highly subsidised handpumps in pourashavas, thana centres and growth centres in Noakhali, Laxmipur and Feni districts. 80% of these urban areas are, however, located in areas where traditional drilling methods and pumps can be used. As stated above, the users in such areas will be responsible for the installations. There is, therefore, a need to reconsider the general promotion of highly subsidised shallow tubewells in the Danida supported urban project.

5.1.2 Delineation of Area of Intervention

According to DPHE, the coastal belt is defined as the area, where saline water prevents sinking of normal shallow tubewells.

Mainly due to technical and financial problems the coverage with safe water sources in the coastal belt amounts to 1 source per 180 persons only as compared to one source per 70 persons in the shallow water table area. The western part of the coastal belt (the districts west of Barguna up to the border) is by far the most underserved area while the central and eastern parts are relatively better served. It is, therefore, fully justified and in accordance with the Strategy for Danish-Bangladeshi Development Cooperation that Danida supports water supply activities in the western part of the coastal belt, even though they are not included in Danida's country strategy in terms of areas of concentration.

Danida has decided to concentrate its support in the districts of Noakhali, Feni, Laxmipur, Patuakhali and Barguna in the central part of the coastal belt. Patuakhali and Barguna are entirely located in the coastal belt as defined above, while approximately 80% of the three other districts fall in the shallow water table area outside the coastal belt and have already most probably a coverage with safe water sources exceeding the national target of one source per 75 persons in year 2002. Possible Danida support to rural water supply activities in the shallow water table area in these three districts is, therefore, difficult to justify and would not be in accordance with the Danida strategy. In spite of the high coverage in the shallow water table area there exists, however, underserved and neglected pockets without proper access to safe drinking water.

The problems in the eastern part of the coastal belt are relatively less than in the other parts of the coastal belt. Furthermore, due to logistic problems in the coastal belt, and the magnitude of the issues to be addressed, it may not be cost-efficient for Danida to spread its support too much. If Danida does not support activities in the eastern part of the coastal belt, a possible future support from the Islamic Development Bank could be concentrated here.

The general health condition in rural Bangladesh is poor and the coverage with sanitary latrines is low. This applies also for the areas considered for Danida support. There is, therefore, a need to support sanitation and hygiene promotion activities in these areas.

Danida has chosen to concentrate activities in the coastal belt because it is one of the geographical areas where the needs are greatest. Another area which is very under-served in relation to the rest of the country is the Chittagong Hill Tracts. This area has special political, social and cultural problems relating to the status of the indigenous people in the area. Government is currently reviewing its development assistance activities in the area. This area could be the subject of a component in the SPS at a later date.

5.2 Organizational Analysis

5.2.1 Government Agencies

A number of studies have analysed the water and sanitation sector in Bangladesh in detail. The most noteworthy are:

- "Organizational Study of the Department of Public Health Engineering", DPHE/UNICEF/Matrix Consultants, 1993;

- "Situation Analysis of the Water Supply and Sanitation Sector", Local Government Division/UNDP/UNICEF/RWSG, 1994;

- "Institutional Strengthening of the Department of Public Health Engineering", DPHE/Asian Development Bank, 1996.

In addition an organizational study of the LGED has been carried out by SIDA, but this covers all rural/urban infrastructure and not just the water and sanitation sector. The main points of these studies in regard to formulation of a sector strategy and choice of sector components for Danida are mentioned below.

MLGRDC Local Government Division has a Planning Cell which at the present time is co-ordinating the formulation of a sector policy. However, the Cell has limited staffing and resources and largely restricts its activities to a traditional approach to the sector in terms of approving projects and monitoring them in terms of expenditure and achievement of targets specified in the ADP. There is a need for the stimulation of policy development, coordination and performance monitoring at the ministry level.

Local authorities and communities do not have the necessary expertise and resources to participate fully in planning, implementation, operation and maintenance of installations. DPHE is responsible for WSS facilities at thana headquarters and growth centres.

Pourashavas have responsibility for WSS according to the existing Municipal Act (1977), but in practice the responsibilities are shared on an ad hoc basis with DPHE and sometimes LGED. There is no formalised institutional relationship between the central government agencies and the local authorities on this issue. Powers of decision making have tended to be determined by the control of the funds available.

DPHE has strong engineering expertise and traditions, and is orientated towards meeting physical installation targets. DPHE is not orientated towards social mobilization activities that focus on behavioural change in terms of water and sanitation. However, it has started to recognize, with the encouragement of donors, that such expertise is necessary and can be found among NGOs.

WATSAN committees do not necessarily represent the rural poor and women, and their influence on siting of installations often results in influential persons having control of handpumps. Subsidies often benefit the relatively wealthy more than the poor.

Successful water and sanitation programmes depend on a close linkage between water, sanitation and health. Government institutions have not been effective in creating the links. However, hardware installation does not necessarily have to be implemented by the same agencies who are skilled in community development, local resource mobilization, and hygiene education. Different agencies, in and outside government, can cooperate in the delivery of different services.

The Fourth Five Year Plan emphasized a strategy of shifting the public service delivery agencies from being "providers" to "facilitators". A new decentralization of government will shift responsibilities to the thana and union levels, leaving the central government agencies a more supportive role in technical guidance and training. DPHE and LGED staff are expected to become responsible to the local authorities, and where there is overlap of staff it is possible that positions will be combined, meaning that the present departmental structures at the local level may be changed and reduced.

The pourashava, thana and union levels of government are all expected to be popularly elected in the future, but they will not necessarily have a significant representation of women and the segments of the population who are worst served with water and sanitation facilities. These levels of government will not in the short term have much expertise and resources for the management of the WSS sector. Donor supported WSS activities at these levels will need to include long term capacity building interventions.

5.2.2 Non-Governmental Organizations

There are many NGOs in Bangladesh, locally, nationally and internationally based, who are experienced in social mobilization and community improvement activities. Some large NGOs are capable of implementing large scale rural WSS programmes, including hardware, social mobilization and health promotion activities. A large number of local NGOs have experience of combining water and sanitation activities with their other activities. No NGOs, however, have experience of construction and operation of piped water supply systems.

Experience in Bangladesh has shown that the government agencies have their comparative advantage in implementing hardware activities, such as installation of facilities, while NGOs have a comparative advantage in implementing software activities.

5.2.3 Private Sector

One of the new government's publicly stated policies is to encourage more involvement of the private sector in activities that were previously dominated by the public sector. This includes the water supply sector, where a start has been made on a pilot basis to privatize the water billing operations of the Dhaka Water and Sewerage Authority (DWASA).

Local authorities, such as pourashavas and union parishads, have leased out some sanitary services such as public toilets. This is similar to leasing out public markets and ferry ghats through competitive bidding. The local authorities already have the powers to lease out any service for which the public is willing to pay. Other services such as drainage and solid waste management are not in the same category because it is not possible to collect direct payment for these activities. However, there is an option for a local authority to contract out the service rather than having it done by its own staff.

The private sector has been involved through local consulting firms and contractors in the design, supervision and construction of piped water systems, drainage and solid waste collection systems, but not in their operation. At present, new piped water systems are planned to be operated by local authorities, and this will involve a considerable capacity building exercise in each case.

It is possible that operation and maintenance of piped water systems can be leased out to the private sector. This will save the local authorities the problems of managing the systems themselves, and at the same time they will be assured of a steady income. Private sector management would also be expected to be more efficient in order to secure profits. It can be accountable and transparent when based on a contract with the local authority that regulates pricing and service levels. However, a local authority may not be interested in privatization if it conflicts with other interests and priorities.

It may be argued that the private sector has no experience in operating piped water systems. Therefore, it may be useful to conduct a study to determine private sector expertise, capacity and interest. A few successful pilot privatizations (leasing out through competitive bidding of operation and maintenance) of piped water systems could indicate to the stakeholders in the sector whether this is a viable option.

The private sector is already deeply involved in all the technical aspects of the installation of rural water and sanitation facilities, including acting as contractors for government agencies, NGOs and donors. Operation and maintenance of the facilities are also privatized. There is a need for support to the private sector in order to improve technical knowledge and business practices, such as improving skills in tendering procedures, accounting systems and quality control.

5.2.4 Training

The water supply and sanitation sector lacks a coherent and coordinated educational and training strategy.

The educational institutions graduate engineers who are motivated and capable of assuming only engineering responsibilities. In line with development in the sector, there exists a need to reorient the educational system towards a higher emphasis on software issues such as community participation, hygiene promotion and communication skills. The links between the educational and the implementing sectors are weak.

Within DPHE, training does not have a high priority, in particular with regard to training in non-technical tasks. DPHE's budget for training activities is small and none of its training posts are permanent posts.

There is a tendency that actors within the sector carry out their own training programmes which in reality are not open for others, or at least will not be utilised by others. Thus, DPHE staff has not attended training courses at the Dhaka WASA training institute since 1986. This prevents a fruitful exchange of experience among trainees from different organisations. Similarly, outside trainers are not used to a great extent. Some organisations, such as Dhaka WASA, NGO Forum and some large NGOs have their own training centres. Lack of funds has prevented DPHE in establishing its own training centre. Most organisations cannot sufficiently utilise the investments made in their training facilities, and it is clear that sharing of facilities would be cost effective.

Hardly any training is offered to private sector personnel. Some donors sponsor project related training in the urban and rural sub-sectors, but these are not coordinated in an overall strategy by the agencies involved.

Not all implementing organisations fully acknowledge the importance of general training and communication skills. The trainers are often senior staff from the organisation who may not have communication skills and may not necessarily be open to changes.

There is a clear need for reorientation of educational and training activities within the sector. The engineering educational system should to a much greater extent prepare the students for their future work. Implementing organisations should concentrate on training needs assessment and preparation of training plans. Specialised training and types of training, for which the need is moderate within the organisation, should be carried out by specialised training institutions. When internal training is deemed appropriate, external trainers should be used to a much higher extent. The International Training Network (ITN) Centre at Bangladesh University of Engineering and Technology (BUET) could play an important role in connection with this reorientation.

5.3 Financial Issues

Counterpart government funds for a project cannot be guaranteed during the life of a project. In any one year the Annual Development Plan can reduce allocations that were previously agreed with a donor, in the interest of national economic planning.

Subsidies provided by government, bilateral and multilateral donors and NGOs for various services are not uniform, and can be different within the same geographical area. The coming national water sector policy should resolve this issue.

Some of the main financial management problems of piped water systems run by DPHE and pourashavas are:

- poor billing and collection rates leading to insufficient revenue for operation and maintenance,
- insufficient revenue generation to finance expansion of the systems,
- accounting systems inadequate and accounting/bookkeeping staff insufficiently trained,
- poor control of expenditures,
- little transparency and accountability to the customers.

5.4 Rural Water Supply and Sanitation

5.4.1 Lessons Learnt

The main lessons learnt from previous rural water supply and sanitation projects are:

- in spite of an impressive increase in the access to safe drinking water, the impact in terms of reduced incidence of diarrhoeal diseases and parasitic infestations among children has been modest. Consequently, much more emphasis should be given to community mobilisation and promotion of hygiene and sanitation while support to water supply installations should be concentrated in under-served areas and pockets;

- the main actors within the sector are: i) MLGRDC and DPHE, ii) local government institutions, iii) NGOs, and iv) the private sector. Past project implementation has not sufficiently taken into account the comparative advantages and disadvantages of these actors.

5.4.2 GOB/Danida Cost Sharing

The cost sharing in the DPHE/UNICEF rural water supply and sanitation programme has been based on the following principles:

- UNICEF has provided materials and GOB has paid the installation cost in connection with water supply installations;

- UNICEF has financed all software, training and research and development activities;

- GOB has provided: i) staff and offices, ii) expenses for operation of offices and transport of materials, and iii) custom duties and VAT.

The above cost sharing has in general worked well and should be applied in Danida supported projects. However, in order to promote DPHE ownership of activities such as staff training, hydrogeological investigations, and research and development activities, GOB should provide minor contributions for such activities.

5.4.3 User Contribution

DPHE provision of water supply installations and latrine components requires that the applicants provide a contribution which is determined by the MLGRDC as follows:

- 700 Tk for a shallow tubewell with handpump corresponding to approximately 15-20% of the total cost;

- 2,000 Tk for a deep tubewell with a handpump corresponding to approximately 5% of the total cost;

- 125 Tk for one slab and one ring corresponding to approximately 30% of the direct cost. There is no direct subsidy on sales of additional rings.

The MLGRDC has plans to increase the user contribution as of July 1997, but these plans have not yet been published. Increased user contribution is a political issue, and it remains to be confirmed.

The strategy of the main donors in the rural water supply and sanitation sector is that no subsidy should be given to shallow tubewell and latrine production in government programmes. In NGO programmes exclusively targeting under-served and neglected communities, a 50% subsidy has been accepted by SDC and Danida while no direct subsidy has been accepted in connection with NGO production of latrine components. With regard to deep tubewells, the issue is not so much the size of the subsidy, but that it should benefit the poor rather than persons with political influence.

5.4.4 Coordination With Other Projects

Depending on the availability of funds, UNICEF will most probably continue to support activities within the area of planned Danida support. This is not likely to pose problems as UNICEF and Danida are likely to support compatible strategies and have collaborated closely in Bangladesh for two decades without major problems.

The Islamic Development Bank follows an implementation strategy, which on vital points differs greatly from the Danida strategy. Thus, the Islamic Development Bank projects provide tubewells free of charge and the projects do not include hygiene and sanitation promotion. It may be desirable that the Islamic Development Bank concentrates its support outside the Danida supported areas such as in the eastern part of the coastal belt.

In addition to providing counterpart funds to a future Danida supported project, GOB may for political reasons continue to implement its own projects in the same area as the Danida supported component. This is acceptable, provided compatible strategies are followed in the different projects. However, as large areas of rural Bangladesh will be without donor support, GOB could advantageously concentrate its own projects in such areas.

5.4.5 Technical Water Supply Issues

The technologies to be applied in the coastal belt include:

- deep tubewells with a depth of 300'-1,000'. A deep tubewell costs 10 times more than a shallow tubewell and comprehensive hydrogeological and geophysical investigations may be required;

- shallow shrouded tubewells to be located near freshwater ponds. The siting of such tubewells is complicated, and often 2-4 negative attempts have to be made for each successful tubewell;

- iron removal plants treating groundwater from tubewells with handpumps. DPHE has had difficulties in ensuring a proper quality of the plants, and the maintenance of the plants is often posing problems. Two different types of iron removal plants have been developed with Danida support in two different DPHE projects. It should be assessed which type should be promoted in the future;

- pond sand filters treating surface water from freshwater ponds. DPHE has had difficulties in ensuring a proper quality of such filters. The technology can be quite costly, if fresh-water ponds are not available, and the maintenance of the pond sand filters is often posing problems;

- even when constructed correctly, tubewells will sooner or later choke up. DPHE has with some success introduced resinking of choked up deep tubewells;

- rainwater harvesting from roofs is being tested as a pilot activity. The potential for replication cannot be assessed at present.

In general the quality of the installations made by DPHE seems to be good, and DPHE has a proven capacity to implement large scale rural water supply programmes. Another comparative advantage of DPHE is its hydrogeological and geophysical expertise, which is quite important in the coastal belt. Thus, DPHE has: i) made hydrogeological maps of each union in the coastal belt, ii) established water table and water quality monitoring systems, iii) carried out mapping of iron-free aquifers, and iv) carried out comprehensive hydrogeological drilling programmes including geophysical logging of the boreholes.

Quite a number of small NGOs have included provision of safe drinking water in their activities. The organisational, hydrogeological and technical expertise of these NGOs is, however, limited. With regard to implementing large scale water supply programmes in the coastal belt, these NGOs do not constitute a viable alternative to DPHE. The large NGOs with international affiliation have limited practical experience in implementing the hardware part of rural water supply programmes.

During recent years, arsenic has been found in the groundwater throughout most parts of Bangladesh. The matter is under intensive investigation, and firm conclusions remain to be drawn. However, it appears that the arsenic content is considerably less in the deep aquifers, tapped in most tubewells in the coastal belt, than in the shallow aquifers. Furthermore, it appears that the problem is greater in the western part of the coastal belt than in the central and eastern parts. The long term implications of the presence of arsenic may be that either the deep aquifers should be exploited more or that treated surface water should be used at more locations.

5.4.6 Water Source Allocation and Site Selection

Within the framework of allocations in the ADPs, DPHE determines union allocations each year. In the coastal belt, where for example the subsidy on deep tubewells amounts to 95%, such allocations easily become a highly politicised issue. This is one of the reasons behind the disparities in coverage from thana to thana, which DPHE has not been able to address sufficiently.

In the DPHE/UNICEF programme, applicant groups of minimum 10 families can apply for subsidised water sources and all user families are supposed to contribute financially. The applications are addressed to the Union WATSAN Committees headed by the Union Parishad Chairman. In most cases, it will be the Union Parishad Chairman who will allocate the installations.

Different analyses initiated by RWSG-SA and the Danish Embassy in Dhaka during 1994-96 have concluded the following:

- broad based user participation is adversely affected by the local power structure, which introduces bias in siting tubewells;
- WATSAN Committees, consisting of local leaders, lack motivation and are guided more by personal motives of members than by community interest. Women are very under represented in the committees.
- influential members of a community are successful in capturing public tubewells for their personal use;
- the parishad leadership often uses tubewells to further political interests, rather than establishing transparent rules and procedures. To acquire a public tubewell requires influence;
- the rural poor are not the main beneficiaries of the subsidised water supply systems. Subsidies benefit the relatively well-to-do more than the poor;
- DPHE pumps are generally not procured by the poorest and probably serve their needs less than assumed;
- financial contributions are usually borne by the more affluent. Financial contributions have an obvious influence on perception of ownership and access. Contributors sometimes unjustly claim ownership in order to control access to and use of the tubewells. This breeds a client-patron dependency;
- non-owners of tubewells generally may only use the tubewells to draw water for drinking and cooking, but not for other domestic purposes;
- the existing inequities in access to public tubewells cannot be addressed through the present policy of government subsidised distribution;
- development agencies of the government are structurally incompatible with group based participatory development;
- sector institutions are not properly oriented to deal with the social aspects of water supply and sanitation interventions;
- involvement of NGOs both as an independent role-performer and as an agent of government agencies may go a long way in realising sector objectives;

- NGOs focus their efforts on delivering services to the poor, through their approach of forming groups. The group based approach introduces transparency, empowers the communities, targets the poor, and makes cost recovery easier;

- NGO provided tubewells appear to be the only means available for the poorest households to share ownership.

Taking into account the shared emphasis by Government of Bangladesh and Danida on reaching the poor and the overall sector objective of improving health through use of safe drinking water, the strategies and implementation practices applied so far have not been successful. Tubewell allocation procedures need to be revised emphasising: i) transparency, ii) reaching the poor, and iii) genuine community participation, especially of women, in all aspects of project planning and implementation.

In accordance with the Government's general decentralisation efforts, the allocation procedures should preferably be administered by the union parishads in close collaboration with local NGOs. However, if the above emphasis can not be ensured through the union parishads, other allocation procedures should be applied. In any case, NGOs should play a vital role in mobilising under-served communities and support them during the application process.

5.4.7 Maintenance of Water Supply Installations

The maintenance of the water supply installations is entirely the responsibility of the users. Previously, the DPHE tubewell mechanics would repair the pumps free of charge and provide spare parts at cost price, but an instruction from the MLGRDC dated March 1996 stated that DPHE should no longer be involved in the maintenance of the number 6 pumps, which are applied throughout the coastal belt. It is not clear to what extent this instruction is being respected.

In order to encourage the users to maintain the pumps on their own, DPHE is supposed to train one male and one female caretaker per installation.

5.4.8 Training of Caretakers

A male and a female caretaker are supposed to be selected by each beneficiary group and trained by the DPHE sub-assistant engineer and tubewell mechanics at thana level. The training is planned to comprise technical training and promotion of sanitation and hygiene practices.

In practice it is often a relatively well-to-do person who has paid the entire user contribution, and then selects the caretakers from his own family. For this reason, the caretakers may not feel an obligation to promote sanitation and hygiene practices among the poor and less influential families in the user group.

In spite of repeated training of the trainers and advocacy by UNICEF, the caretaker training was until recently in many cases not carried out at all or was done so rudimentarily that its value was negligible. For this reason, UNICEF introduced a bonus system, making the caretaker training in the DPHE/UNICEF programme financially attractive for the trainers. As a result, the caretaker training in this programme is now carried out, the length of the training has increased, and the quality has improved to some extent. There are, however, indications that the promotional part of the training is far from satisfactory. Bonus is not provided for the caretaker training in the other DPHE projects. This training has not been monitored, but it is reported that the training in a number of cases is hardly carried out.

The technical part of the training is not really necessary in connection with shallow or deep tubewells with number 6 pumps, as this pump is very simple and its maintenance is widely known. With regard to pond sand filters and iron removal plants, the technical part of the training is vital for the operation and maintenance of these schemes. The monitoring of the performance of such schemes and various SDC/Danida reviews have documented that the caretaker training was not sufficient and follow-up of the training was inadequate.

The motivational part of the training seems inadequate. When for example latrine owners were asked who motivated them to install a latrine, only very few mentioned the DPHE field staff undertaking the training. In the DPHE/RWSG-SA Handpump Training and Monitoring Programme supported by Danida, attempts are made to improve the caretaker training. A recent study and a review found that, in spite of a commendable effort in training and motivation of the trainers, the training is still not satisfactory. The regular trainers, i.e. the DPHE sub-assistant engineers and tubewell mechanics, have primarily been recruited to carry out technical work and are technically oriented. Furthermore, all thana based sub-assistant engineers and 99.5% of the tubewell mechanics are men. Their superiors, all male engineers, may not always give the quality of the caretaker training the necessary attention. Thus, there are attitudinal problems among DPHE field staff which may make DPHE less suitable for such work. Furthermore, the long term role of DPHE will be to facilitate rather than to implement. Caretaker training should, therefore, not be carried out by DPHE field staff, but by NGOs with relevant experience who acknowledge the importance of community mobilisation as well as sanitation and hygiene promotion activities.

5.4.9 Household Sanitation

The sanitation technologies available for rural areas are: i) water seal latrines with concrete rings (twin-pits, two pits or single pit), ii) latrines without water seal such as sanplat latrines, and iii) different kinds of home-made latrines. The latrine components are produced by DPHE, the private sector and NGOs.

DPHE has established two latrine production centres per thana. They produce only water seal latrines, and the production is subsidised. Different surveys have shown that the rural middle class, rather than the poor, benefits from this production. The productivity is low, lengthy administrative procedures discourage sales and, in spite of the subsidy, DPHE has difficulties in selling its production. Furthermore, the long term role of DPHE will be to facilitate rather than to implement. It will therefore be against the long term strategy for DPHE to continue such a production.

The private sector mainly produces latrines without water seal, but can respond to any demand from the buyers. The private sector's productivity is high. The demand for latrines is seasonal. Thus, during periods of the year with a low demand for latrines, private producers can produce other products such as drainage pipes. In spite of the fact that the private producers have to compete with subsidised DPHE latrines, several thousands private producers have started to produce latrine components during recent years, and their total production is now higher than DPHE's. The sale is normally in cash and without any administrative procedures.

A number of NGOs have set-up their own village sanitation centres. During recent years, approximately 200 centres have been set up with support from NGO Forum under SDC/ Danida funding. According to the guidelines for establishing NGO latrine production with support from NGO Forum, such centres should not be established within 5 kilometres from an existing latrine producer. In this way it should be ensured, that NGOs primarily produce latrines for under-served areas. Most NGOs produce only water seal latrines, but production of sanplat latrines is increasingly being promoted. The production is not directly subsidised, but the NGOs have normally received financial support for the establishment of the production centres. NGOs have the advantage that they work through community groups and can therefore effectively link production with promotion of sanitation and hygiene. Furthermore, some NGOs are able to link sale of latrine components with credit, which places water seal and/or sanplat latrines within the reach of more low-income families.

Home-made latrines are made from locally available materials and can be installed at a very low cost. According to different surveys, approximately half of the latrines in rural Bangladesh are of this type. Their disadvantages are that they collapse more easily than other types and may not always be as hygienic. However, they are better than nothing and represent an attractive alternative for those who cannot afford to buy a better type.

For the above reasons, it is difficult to justify continued DPHE subsidised production of latrine components, and the main donors in the rural water supply and sanitation sector have all clearly stated, that no donor funds should be spent on subsidising such a production. The private sector and NGOs constitute attractive alternatives.

Emptying of the latrine pits poses health and environmental problems if it is not done properly. The best option would be to move the latrine slab and the superstructure to a new pit and let the content of the old pit digest for at least a year and then use the pit content as fertiliser. Previously, many owners of latrines would hire a sweeper to empty the pit and dump the undigested content at a place convenient for him. There are indications that this malpractice is gradually being replaced by dumping the pit content in a hole dug nearby for that purpose and then covering it with soil. Little is, however, known, and in general the issue of pit emptying is not given high priority in the DPHE projects.

5.4.10 School Sanitation

An important element in the GOB/UNICEF Master Plan of Operation 1996-2000 is the promotion of a decentralised accelerated district approach where schools are used as foci and channels for behavioural change. It is commonly referred to as the school sanitation project. Thus sanitary and water facilities will be provided in primary schools to start the education of children on the concept of sanitation and hygiene and to increase girls' enrolment. These sanitary and water facilities are expected to serve as models for the community. Children will be motivated towards self discovery about hygienic behaviours and encouraged to take appropriate measures, personally and in the community.

The school sanitation concept is at present being tested in a few districts, including Noakhali district, and the preliminary results appear encouraging. An in-depth evaluation is planned to take place by the end of 1997.

It is expected that the evaluation will provide information on what the children have learnt and changes in their behaviour, as well as what they and the teachers have communicated to parents and community members and how this has been received. It is also important to know how well the school water supply and sanitation facilities have been constructed, their maintenance and use, and to identify problems and solutions in relation to this. A UNICEF evaluation in 1995 of water supply systems and sanitary latrines constructed in primary schools identified problems with maintenance of facilities including cleanliness of water storage tanks and missing or damaged taps. It found that more than half of the schools did not have a fund for maintenance of these facilities. About half of the latrines had soap or ash available for handwashing. The situation in these schools was an improvement compared to schools where similar facilities had been constructed in the first phase of the project. Since 1996, a major change has been introduced whereby School Management Committees have been given the responsibility for construction instead of contractors, based on a successful experiment in Moulvibazar.

Due to fund constraints and UNICEF's recent strategy to develop models for replication rather than being involved in large scale service delivery, other donors will be encouraged to replicate the model, as and when the model is ready for replication. It would be natural for a Danida supported project in the coastal belt to replicate this model, fully or partly.

5.4.11 Sanitation and Hygiene Promotion

Recognising that its efforts to improve child health were not having the desired impact, the DPHE/UNICEF programme in the late 1980s adopted an integrated approach to combat diarrhoeal diseases, combining the provision of water supply with intensive health education and installation of sanitary latrines. DPHE field staff were to educate tubewell beneficiaries, as well as organise seminars and inter-sectoral meetings to mobilise local government officials, field workers (especially health workers), teachers, NGOs and local political leaders. In practice, however, very little emphasis was placed on health education. The integrated approach deteriorated into the conditionality of potential tubewell beneficiary groups being required to construct latrines before a tubewell was installed, and little behavioural change took place.

After a period with intensive social mobilisation campaigns in Barisal district and Rajshahi division, the Social Mobilisation for Sanitation Project was started, initially for two years. It recognised the need for involving other agencies and organisations. Union Parishads were to act as the main channel to reach the people, through Union WATSAN Committees. NGO Forum was contracted to carry out intensive social mobilisation in 20 thanas, and a number of action research projects were to be carried out to try out alternative strategies. At the same time, DPHE was to be strengthened through the appointment of social scientists within the Village Sanitation Circle and through regular training of all DPHE field staff in communication. Though DPHE states that such training is carried out and that its field staff is involved in hygiene promotion, no documentation is available on the impact of these activities. It is also not clear as to what extent the DPHE Health Educators have been involved in training and hygiene promotion activities.

It is now generally recognised that DPHE is not the appropriate organisation for carrying out sanitation and hygiene promotion. As a technically oriented engineering organisation it has little use for, and understanding of, how to carry out activities such as community mobilisation and hygiene promotion, and the status of non-engineers in the organisation is low. In addition, almost all of the DPHE staff are male, while hygiene promotion activities are mainly directed towards women. The formation of Union WATSAN Committees has been a mechanical task and has not helped in promoting community participation, the committee members have received very little, if any, training/orientation and are reportedly not at all clear about their responsibilities and roles. As a consequence, in the current phase of the Social Mobilisation Project it is planned to strengthen the Union WATSAN Committees through logistical support, promotional materials, training, meetings, etc. In addition, much greater emphasis is placed on forming alliances with various government departments/directorates including health, family welfare, education and women's affairs, as well as Imams, NGOs and other organisations.

As mentioned in section 5.4.9, NGOs have much more success in promoting sanitation and hygiene because of their greater understanding of the communities they work with and the organisational and communication skills of NGO staff. Also, most of them work through organising groups for credit and income generation activities and are able to provide the poor with credit for acquiring tubewells and latrines. However, there is also evidence of NGOs not being present everywhere and of not including the poorest groups in their activities. This is one aspect which will need greater attention, especially as the programme moves more and more in the direction of under-served and neglected areas where the majority of the people are likely to be poor. Another issue to be addressed is the criticism by the poor of the behaviour of some NGO staff, mentioned earlier in section 2.2. The attitudes and communication skills of the NGO workers need, therefore, to be improved where necessary through training and supervision.

Programmes for hygiene promotion/health education are often based on the assumption that current practices are rooted in ignorance, and the provision of correct information and instructions will therefore result in changes in behaviour. However, this is a simplistic model which ignores peoples' incentives for continuing with certain types of "undesirable" behaviours, such as convenience, tradition, etc. It also ignores the constraints which prevent people from adopting "correct" practices, such as limited access to tubewell water, inadequate storage containers, inadequate facilities/privacy at the tubewell for washing and bathing, etc.

To be effective, hygiene promotion needs to be based on observation and analysis of the community's situation, behaviours and beliefs rather than just focusing on the transmission of standard messages.

It is important that hygiene promotion activities do not focus exclusively on women and that the role of men and children are given greater emphasis. The behavioural changes which are promoted, such as exclusive use of tubewell water, safe disposal of children's faeces, etc., involve additional time and labour, and promoting the participation of men and older children in these activities could help to reduce the workload of women who are already heavily burdened with responsibilities. Also, if all household members do not adopt appropriate hygiene practices, such as correct handling of water, the efforts of the women will be in vain.

The reports on the presence of arsenic in groundwater are potentially a serious threat to the drinking water programme and will need to be addressed, e.g. through provision of information by well-respected and qualified persons on actions to be taken. It is important that the well-known hazards associated with drinking contaminated surface water are kept in mind when making recommendations in this context, and the dangers from consuming tubewell water with small amounts of arsenic are weighed against the dangers from consuming non-tubewell water.

5.4.12 Research and Development

Research and Development (R&D) activities are coordinated by a R&D committee under DPHE. Within DPHE, the R&D Division is responsible for water supply R&D activities and the Village Sanitation Division is responsible for sanitation R&D activities. The Social Mobilisation Project is responsible for R&D activities in connection with hygiene promotion.

In addition to the hydrogeological activities, described in section 5.4.5, the R&D Division has been involved in a number of applied R&D activities in connection with assessment of the performance of the Tara pumps, the development of a mini-Tara pump and testing of rainwater harvesting schemes. R&D activities are in general not given a high priority by DPHE, and in practice UNICEF has taken the lead in virtually all R&D activities. The MLGRDC does not allocate funds for such activities. A recent exception is the investigations in connection with the occurrence of arsenic in groundwater where DPHE has played an active role.

The local capacity to undertake applied R&D activities is limited and neither DPHE nor UNICEF have been active in developing such a capacity. However, the ITN Centre project, implemented by BUET, supported by Danida and described in section 8.5, has as one of its objectives to improve the local capacity for applied R&D.

The whole area of environmental sanitation deserves more attention. There is also need for more knowledge about soil conditions and appropriate types of latrines. While there are guidelines about the distance that should be maintained between tubewells and latrines, apparently no such guidelines have been developed about distance from cattle sheds, drains, garbage dumping spots, etc.

Ways have to be found of raising awareness about such environmental threats. Monitoring of tubewell water quality is a generally neglected area, especially after flooding and where there is water logging, and simple methods for testing water quality are not available. The increasing use of pesticides and fertilisers in agriculture is also a threat to the quality of groundwater.

There is a need for more research to identify and promote those changes in behaviour which will actually contribute to improved health. Some of the very general messages which are presently promoted, such as use of tubewell water for all domestic purposes, are not only unrealistic for the majority of the poor, but will also be ineffective if adopted in isolation and not combined with other behavioural changes (such as water handling and storage practices, which are not emphasised as much). Nor is it documented that the use of pond water for bathing and washing clothes is detrimental to general health.

5.5 Urban Water Supply and Sanitation

5.5.1 Lessons Learnt

Valuable lessons, positive as well as negative, have been learnt from Phase 1 of the Danida supported project in the coastal areas as well as from projects supported by other donors. Quite a number of these lessons have been documented by a joint review in January 1997 of the Danida supported urban project. Examples will be given in the following, but the overall conclusions of the review team were:

- Phase 2 would benefit from a different approach to certain project components, and some other components need to be reconsidered;

- lessons about the pourashavas' ability to operate and sustain urban water supply facilities in particular are still to be learnt.

5.5.2 Definition of Urban Areas

Thana centres and growth centres have traditionally been included in rural rather than in urban programmes. However, such centres have been included in the Danida supported urban programme. With regard to thana centres to be supplied from piped water supply schemes this is fully justified, while the justification for including other centres in an urban programme is not obvious.

As and when Danida in the near future will support a rural water supply and sanitation programme in the coastal belt, it should be reconsidered in connection with the planned early 1998 review whether such centres should be included in the rural or in the urban project, and adjustments should be made accordingly, at the latest when Phase 2B of the urban project is formulated.

5.5.3 GOB/Danida Cost Sharing

GOB provides staff, office facilities, office expenses etc. for the Danida supported urban project. In the Dutch supported 18 District Town Project, GOB has in addition to the above inputs provided a part of the construction cost.

The GOB input to the Danida supported urban project is much less than in the DPHE/ UNICEF rural water supply and sanitation programme where GOB for example provides the magnitude of 40% of the total cost of tubewells with handpumps. It is difficult to see the rationale behind such a low GOB input to the Danida supported urban projects. The cost sharing could, therefore, be based upon the following principles:

- for tubewells with handpumps, GOB would provide the same input as in the DPHE/ UNICEF rural programme, i.e. all installation costs while Danida would provide all materials;

- for piped water supply schemes, GOB would provide 7.5% prior to the start of the construction work and the local government authorities responsible for the subsequent operation and maintenance would provide 7.5% in instalments to be financed from the water rates over a period of three years. Such instalments could finance a part of the activities in other towns.

- for other technologies, GOB would provide a minimum of 15% of the total construction cost.

5.5.4 Coordination with other Projects

Phase 2 of the Danida supported project overlaps with an LGED project financed by ADB. It remains to be confirmed that proper coordination mechanisms have been established, and that the two projects follow compatible strategies and policies.

Thana and growth centres in the coastal area are included in different rural projects such as GOB's own projects, UNICEF's Accelerated District Approach Project, and Islamic Development Bank projects. It is important that the Danida supported urban project and the other projects are properly coordinated and follow uniform strategies with regard to for example: i) allocation of tubewells, ii) user contribution, and iii) maintenance of handpumps.

5.5.5 Urban Slums

Some of the towns covered by Phase 2 of the Danida supported project contain slum areas. The Danida Country Strategy for Bangladesh specifically emphasises that Danida supported projects should include slum areas. It is generally acknowledged that the situation in slum areas requires special strategies to reach the absolute and landless poor living there and UNICEF in collaboration with MLGRDC and DPHE has initiated a study to formulate a national policy on water supply, sanitation and hygiene in urban slums and fringes.

The project document for the Danida supported urban project does not include a strategy for implementation of activities in slum areas. Such a strategy should be prepared and urban slum activities be implemented accordingly.

5.5.6 Strategy for Phasing out Phase 1 Activities

Phase 1 of the Danida supported urban project included a post-construction phase with a view to strengthen the pourashavas' capacity to operate and maintain the piped water schemes, the drains and the solid waste collection and disposal systems. The post-construction phase included financial assistance and short term consultancy inputs and was planned to cease by end June 1997, but the January 1997 Review Team identified the pourashavas' ability to operate and maintain as a possible killer assumption and recommended further support. This support was, however, not envisaged in the Government Agreement and the Project Document.

Intensive post-construction support is necessary, but should be followed by a phasing out period with a duration of at least 2 years. The phasing out period should not include direct financial support. This should apply for the Phase 1 as well as the planned Phase 2 schemes.

5.5.7 Design and Construction of Piped Water Supply Systems

The implementation of Phase 1 revealed a number of deficiencies in the applied design and construction procedures. Accordingly, some adjustments have been incorporated in the Project Document. The January 1997 Review Team analysed the lessons learnt from Phase 1 and recommended further adjustments. For example, the Review Team found that too many actors had participated in the supervision resulting in unclear responsibilities.

There is little experience in Bangladesh of piped water supply in thana centres. The design of piped schemes for thana centres can only to some extent be based on the experience from schemes implemented in pourashavas. The thana centres' ability to operate and maintain piped water schemes is likely to be very limited, and in the long run, it is not advisable to depend upon DPHE for operating and maintaining such schemes. It is, therefore, of utmost importance that the schemes are as simple as possible, and simpler than the Phase 1 schemes.

The planning of the piped water supply schemes appears supply driven and with little room for flexibility. Thus, the contracts for the production tubewells and the detailed design of the water works and the drainage systems have been signed before it has been ascertained whether the local authorities have the necessary capacity and/or willingness to operate and maintain the schemes. The advantages and disadvantages of such a strategy should, therefore be carefully assessed. Furthermore, the feasibility of using Danish drilling contractors in future Danida supported projects should also be assessed.

The Project Document does not take into account the implications of a possible arsenic content in the water to be supplied from the piped schemes.

5.5.8 Operation and Maintenance of Piped Water Supply Systems

The long term experience from the operation and maintenance of piped water schemes constructed by the Dutch supported 12 District Towns Project has not been properly documented. Neither the on-going Dutch supported 18 District Towns Project nor Phase 1 of the Danida supported urban project can provide much information about the pourashavas' long term capacity to operate and maintain piped schemes. Consequently, little is known about this. The Project Document neither addresses such issues in any detail nor identifies this as a major risk. The January 1997 Review Team found:

- the envisaged creation, through bye-laws, of semi-independent units for water supply with administration and accounts separated from other pourashava activities has not yet taken place;

- the present employment of operation and maintenance staff gives rise to concern over the future sustainability of the schemes. The schemes are operated either by newly appointed staff on master role basis or by staff allocated on part-time basis from the Administrative Departments. The two trained treatment plant operators in Laxmipur will be dismissed as per end June 1997.

Furthermore the Review Team concluded:

- the time necessary for training has been under-estimated;

- the technical and administrative section of the pourashavas need to be involved and strengthened at a much earlier point of time. This needs careful consideration from the outset of implementation;

- agreements with pourashavas should contain specific pre-conditions regarding for example staff under regular employment for operation and maintenance;

- the pourashavas may not be able to operate and maintain the piped water systems, which is a possible "killer assumption". This is a threat to the sustainability of the considerable investment made during phase 1.

It is, therefore important that the operation and maintenance of existing piped schemes is monitored and analyzed carefully, and that the implementation strategy as well as the operation and maintenance strategy are adjusted accordingly.

For thana centre piped schemes, virtually nothing is known about how to ensure their proper operation and maintenance. Firstly, as long as the Local Government Act has not been approved, it is not even known who should be responsible. Secondly, the ability of the thana and union administrations to operate and maintain the schemes may be highly questionable, in particular if the schemes are complicated. The project document has not set any operational preconditions for the organisation of the operation and maintenance of such schemes. The European Commission has set a precondition for supporting a thana centre piped water supply project that the schemes will be managed by fully autonomous bodies, both functionally and financially.

In order to avoid further loss of investment and be able to analyze the experience from establishing piped water schemes in thana centres, only two such schemes could be constructed in Phase 2A while the remaining schemes could be postponed to Phase 2B. In any case, tendering for construction work should not be started before the future organisation of operation and maintenance has been agreed upon and it has been guaranteed that the local authorities will provide the agreed inputs.

As a pilot activity, the operation and maintenance of a few schemes could be leased out to the private sector during Phase 2A. At least one of the schemes constructed during Phase 1 could be included in such a pilot activity.

5.5.9 Financial Sustainability Analysis of Piped Water

Cost recovery analysis was carried out in connection with piped water supply systems prior to the signing of the government agreement. 12 schemes were found financially sustainable if depreciation was excluded. The government agreement includes piped water schemes in these towns. According to the January 1997 Review Team, the present water tariffs and collection rates appear appropriate for recovery of operation and maintenance. If depreciation was included in the cost recovery analysis, the calculations showed that only 3 of the 12 schemes would be sustainable. According to the Danida policy, piped water schemes should only be established with Danida support if as a minimum the income can cover: i) all operation and maintenance costs, and ii) depreciation on components with short lifetime such as for example pumps. Such calculations have apparently not been made.

Cost recovery analysis conforming to Danida's policy should be carried out. In cases where a scheme will not be able to finance the replacement of components with short lifetime, the implementation of such a scheme should preferably not take place in Phase 2A.

The financial performance of the schemes established with support from Danida in Phase 1 as well as the schemes established in 12 and 18 district towns with support from the Dutch Government should be monitored. In the light of this, the analysis of the financial sustainability of the proposed Phase 2 Danida schemes could be reassessed. The number of piped schemes could be adjusted accordingly.

5.5.10 Tubewells with Handpumps

There are indications that the urban areas to be supplied with handpumps may not be underserved as compared to the surrounding rural areas. A handpump programme in the urban areas is therefore only justified if it exclusively targets the really poor and underserved. This should be reflected in the community mobilisation and site selection mechanisms. The project document does not contain operational guidelines to ensure this. According to the January 1997 Review Team, it has not been ascertained whether preference has been given to poorer baris when selecting sites for tubewells with handpumps.

The project document proposes the involvement of NGOs to promote community mobilisation and ensure fair site selection in Phase 2A. The experience from Phase 1 and the Dutch district towns project suggests, however, that NGOs are not available in all urban areas, and many rural NGOs are unwilling to move into urban areas because they believe that the two settings are very different from each other. In urban areas where NGOs are present they are usually not working in the water and sanitation sector. Though they are often willing to promote project activities if they are especially contracted to do so, they typically need additional staff as well as training in WSS activities. The advantages usually associated with NGOs, of being locally well established and responding to felt community needs, are therefore not present. NGOs were not involved in tubewell group formation and site selection procedures for the above-mentioned projects. These decisions were made by committees set up at the pourashava level, with project consultants having responsibility for final approval. In the Dutch project, the pourashavas initially bore the costs of installation and reimbursement was contingent upon approval by the consultant.

As the tubewell applications need to be approved by the elected pourashava chairman, procedures have to be established to ensure that unfair changes are not made. These could include greater transparency in decision-making and non-payment/non-reimbursement for inappropriate sites. At the local level it is also important that sufficient time is allowed for site selection activities to be carried out in consultation with female beneficiaries, as past experience shows that at times this has been a problem.

The very poor are often not able to pay the required amount in one instalment, and therefore need credit and the option to repay in small instalments. The revolving fund proposed for latrines in Phase 2A should also make loans available for tubewells.

The project document does not specify the user contribution for tubewell with handpumps. During Phase 1, the user contributions were identical to the ones in the DPHE/UNICEF rural programme corresponding to 5% contribution for deep tubewells and 15-20% for shallow tubewells.

A minimum of 80% of Noakhali, Feni and Laxmipur districts are located in the shallow water table area. The strategy of the main donors in the rural water supply and sanitation sector is that no subsidy should be given to shallow tubewells in Government programmes. In the Danida supported NGO Forum programme, which exclusively targets underserved and neglected communities, a 50% user contribution is insisted upon by NGO Forum. It is therefore a problem if the Danida supported urban project only demands 15-20% user contribution for shallow tubewells, in particular because the beneficiaries of such tubewells will not necessarily be the poor.

The project document does not include: i) installation of iron removal plants, ii) sinking of shallow shrouded tubewells, and iii) sinking of choked tubewells. When appropriate, such technologies should be promoted. It should be assessed whether the iron removal plant developed by a Danida adviser under the UNICEF/DPHE programme or the iron removal plant developed by another Danida adviser under the Danida supported urban programme should be promoted.

The project document does not take into account the implications of a likely arsenic content in the water to be supplied from a number of the tubewells with handpumps.

Caretaker family training should be conducted in connection with new installations, but the emphasis should be on promotion of sanitation and hygiene rather than on technical aspects of repairing handpumps. It should be considered to use the relevant parts of the caretaker family training package being developed by the Handpump Training and Monitoring Project.

According to the strategy followed by the main rural water supply donors such as UNICEF, SDC and Danida, operation and maintenance of tubewells, including distribution of spares, should take place without any public sector involvement. The present practice of pourashavas providing the services of tubewell mechanics to users who demand it and who pay the cost of spare parts should be stopped.

5.5.11 Sanitation

The project document aims at reducing the subsidy on household latrines, with a view to removing the subsidy entirely beyond the time span of the project. The project document does not, however, contain any operational commitment to reduce the subsidy. During Phase 1, the project provided the same subsidy as the DPHE/UNICEF rural programme. The MLGRDC and DPHE have so far been of the opinion that this level of subsidy should be maintained. The project document states that it is important to follow a uniform DPHE sanitation policy.

The main donors in the rural water supply and sanitation sector have all clearly stated that the public sector should stop the production of latrine components and that such components should not be subsidised. The Danida supported urban projects should, therefore, preferably not provide any support to public sector latrine production and not finance any subsidies on latrines. This also includes the use of contractors to produce latrine components for the different local government institutions. The production of latrine components should be done by the private sector and the NGOs, the latter having the added advantage that they can provide credit in connection with sales of latrine components. In accordance with the project document, the project should provide funds for this as a part of the poverty orientation strategy.

The project document does not mention promotion of other types of latrines than water seal latrines with pits lined with concrete rings in spite of the fact that other, and cheaper, types have been promoted with some success in the DPHE/UNICEF programme. Investigations have shown that subsidised water seal latrines in general are purchased by the middle class rather than by the poor. Promotion of sanitation should, therefore, include different technologies ranging from twin-pit or two pit latrines over water seal latrines and sanplat latrines to home-made latrines.

Emptying of household latrine pits poses special hygienic problems if not done in a proper manner, but the Project document does not address this vital environmental and health issue.

As mentioned in section 5.4.10, DPHE and UNICEF are promoting a school sanitation project, which appears to be quite successful. School sanitation activities have a great potential to improve long term behavioural sanitation and hygiene practices. The project document does not include school sanitation activities.

The project document includes the construction of a number of public toilets and recommends as a pilot activity to test the use of suction vehicles for emptying the septic tanks of the public toilets. The January 1997 Review Team was concerned with the proper maintenance of community latrines/public toilets and recommends that community latrines should be avoided. The Review Team also found that the purchase of a truck with suction equipment was not likely to be sustainable.

5.5.12 Drainage and Solid Waste

DPHE has a government mandate to be responsible for water supply and sanitation in Bangladesh outside Dhaka and Chittagong. However, this mandate does not include drainage and solid waste. With regard to such activities, Danida can provide its support either through DPHE or through LGED. From an administrative point of view, it is easier to support all activities through one rather than two departments. The lessons learnt from different projects working through different departments at national level should be analyzed. Based on such analyses, it should be decided which department is the most appropriate to collaborate with in the long run.

The project document hardly mentions operation and maintenance of drainage and solid waste in operational terms and has not identified any risk in connection with such activities.

The January 1997 Review Team observed:

- most drains are completely blocked. The benefit is very limited due to total lack of maintenance/cleaning. The drainage situation is the same in towns supported by other donors;

- solid waste collection and disposal have received little attention and the problems with garbage have not been solved. Disposal sites have not been properly prepared. Leachate from the waste may pollute the groundwater;

- functioning solid waste management is a prerequisite for functioning surface water drains.

The Review Team concluded:

- a different strategy for drainage and solid waste is needed in Phase 2;

- the project should monitor the drainage system in Choumohani and Laxmipur and new project towns for 2-3 years before major investments in drains are made.

The issue of collection and disposal of hazardous waste, which for health and environmental reasons is of great concern for Danida in other countries, has not been addressed in the project document.

5.5.13 Hygiene Promotion

The responsibility for hygiene promotion and health education officially lies with the health authorities. As there is no tradition of different government departments working together and as the health department sets its own priorities, WSS activities are not jointly implemented by the two departments. Attempts in Phase 1 and in the Dutch project to involve health staff have had little success. The passing of the new Local Government Act might open up for such collaboration, but the contents of the Act are still unknown. If the Act promotes integration of efforts, the capacity and distribution of staff will need to be looked into and ways found for working together.

Among the alternatives tried are the use of DPHE tubewell mechanics and latrine masons, and establishment of pourashava WATSAN committees of varying sizes and with various types of members. These have not proved effective. The Dutch and Danida supported urban projects have tried to involve local NGOs to carry out community mobilisation and hygiene promotion activities. However, as described in section 5.5.10, this has not always been possible. Experience from the Dutch project suggests that where smaller NGOs are supported with personnel and training for WSS, they have been dedicated in carrying out their responsibilities. While the Danida Phase 1 project did not succeed in involving existing NGOs in one pourashava, in the other it was able to establish some form of collaboration with a few of them. In its last year, the Danida project experimented with using some of the best caretakers as hygiene promoters and monitors of neighbouring installations, with positive results. There is thus still a need to try out different models based on an analysis of the prevailing situation.

Through sustained efforts and experimentation, the Dutch project has been successful in establishing Water and Sanitation Surveillance Committees at ward level with the female ward commissioner as chairperson. These serve as the focal point for community participation.

Both the Dutch and the Danida projects found that whereas it had been difficult in the early stages to convince people to accept even subsidised latrines, by the end of the project the demand far exceeded the project's supply. In Choumohani the pourashava is reported to have provided 30 tubewells and 150 latrine sets to the genuinely poor out of its earnings, while in Laxmipur the pourashava has paid half the price for latrines for 400 poor persons.

The impact study for fringe areas covered in Phase 1 found that the project had been successful in achieving high rates of tubewell water consumption and in raising access to and use of sanitary latrines by all adult household members. There was also significant change in hygienic practices related to latrine use, and in improved knowledge levels among project households.

Hygiene promotion activities had initially tended to focus entirely on women, perhaps as a reaction to earlier projects where women's roles had been neglected. This implies that women have been made solely responsible for family hygiene without taking into account the extra workload involved in, for instance, collecting tubewell water. It also ignores the role of men in decision-making related to investing in toilets. This was recognised towards the end of Phase 1, when tea stall sessions were introduced to motivate men. The role of men and children in maintaining hygiene needs greater emphasis, and ways to be found for raising their understanding of the relationship between water, sanitation and health.

5.5.14 Integration of the Present Project into a Sector Programme

The formal basis for the implementation of Phase 2A is the government agreement with the project document as well as a Project Concept Paper approved by GOB. The day-to-day project implementation will be based upon a plan of operation to be prepared and updated regularly by the project management. For a number of reasons, the project strategy needs to be reconsidered for the project to be a component in the Danida supported sector programme:

- the project was designed some years ago and could, therefore not take into account the following documents: i) Danida Guidelines for Sector Programme Support, ii) Strategy for Danish-Bangladeshi development cooperation, iii) GOB policy and strategy for the urban water supply and sanitation sector under preparation, iii) the Sector Programme Support Document under preparation, and iv) the Local Government Act under preparation;

- once the Danida supported Coastal Belt Rural Water Supply and Sanitation Component has been planned, it will be necessary to adjust the urban project to avoid overlapping and ensure consistency between the two components;

- since the Phase 2 project was planned, important lessons have been learnt from the Phase 1 activities in Choumohani and Laxmipur. Furthermore, the outcome of the studies to be undertaken at the beginning of Phase 2 is likely to lead to a revision of the Phase 2 strategy;

- on a number of important issues the project document has not described the strategy in operational terms. This applies for example to: i) community mobilisation, ii) hygiene promotion, and iii) how to reach the poor.

- the rationale behind the chosen organisational set-up is not obvious. The 7 Danida advisers appear to be able to devote some of their time to activities beyond the present urban project;

- phasing-out support to the Phase 1 schemes beyond June 1997 has not been included in the project document.

It is expected that the first annual joint review of the urban project will be undertaken in the beginning of 1998. The aim of this review will among others be to recommend adjustments transforming the present project into a genuine component in the Danida Sector Programme Support.

5.6 NGO Activities

A large number of NGOs implement water supply, sanitation and hygiene promotion activities as an integrated part of their community oriented activities. As compared to government programmes, the comparative advantages of NGOs are:

- their ability to reach the poorer and more neglected communities through user groups;
- their ability to work trans-sectoral, for example by linking the provision of water supply and sanitation with general health promotion activities and by providing credit in connection with sales of latrines;
- their emphasis on software activities such as community mobilization, training and hygiene promotion;
- gender issues are addressed to a considerable extent.

It is important to support NGOs in finding ways of reaching the poorest sections, as studies suggest that they are at present not always doing so.

As compared to DPHE, most NGOs are weak in large scale provision of water supply installations.

The NGO Forum for Drinking Water Supply and Sanitation supports 560 NGOs within the sector. This support includes: i) materials for water supply installations, ii) funds to start latrine production, iii) training, iv) promotional materials, and v) ad-hoc support through 10 regional offices.

The inputs of NGOs are increasingly acknowledged as being important for achieving GOB's overall goals as well as the specific sector goals.

NGOs can play an important role within the water supply and sanitation sector as described in the following models:

1. Small NGOs include water supply and sanitation activities in their general community mobilisation activities. Each NGO will follow its own strategy to be designed in collaboration with its community groups. NGO Forum continues to provide support to these NGOs following its present strategy. Such a model is really demand driven, but the small NGOs will hardly be able on their own to provide large scale service delivery. The model will in particular be suitable to reach poor and underserved groups, which seldom benefit fully from government programmes;

2. Small NGOs work on contract basis for government programmes or programmes implemented by large NGOs. This model has been utilised rather successfully by the DPHE/UNICEF social mobilisation project and by large NGOs such as CARE. This model is less demand driven than model 1, but can make use of the comparative advantage of small NGOs in relation to DPHE/large NGOs and can, therefore, be used to provide demand driven large scale service delivery;

3. Large NGOs with international affiliation combine the comparative advantage of being NGOs and at the same time having considerable organisational and software professional expertise which makes it possible for them to be responsible for some or all aspects of large scale projects. This applies in particular to large NGOs working through local NGOs at field level.

The optimal involvement of NGOs will be achieved if: i) model 1 is applied to reach underserved communities in areas which in general are well served, and ii) a combination of model 2 and 3 is applied in connection with large scale programmes.

5.7 Coordination of Danida Activities

5.7.1 Coordination with other Sectors

Danida's strategy of concentrating its activities in the five coastal districts of Barguna, Patuakhali, Lakshimpur, Noakhali and Feni will result in a number of components within different sectors being implemented in the same geographical areas. For example, it is expected that components in agriculture, fisheries, water supply and sanitation, and good governance and human rights will take place simultaneously in the same districts.

All these activities will be carried out in cooperation with the local authorities, possibly assisting the local authorities with capacity building related to sectoral activities. Obviously, coordination should take place in terms of logistics and a common approach to the local authorities. A mechanism will need to be in place to ensure that overlaps do not occur and that the local authorities are not confused by a multiplicity of approaches from the same donor.

It appears that most components will have some activities related to institutional support to the various local authorities, and in fact this will be a cross-cutting activity that may require close coordination. In this context Danida may wish to consider a broader support to decentralization of government in these geographical areas which would strengthen the local administrations in general management aspects as well as with regard to sector specific activities.

5.7.2 Coordination within the Sector

There is a need to coordinate the different Danida supported components in order to avoid duplication of activities and ensure consistency between the implementation strategies of the different components. The coordination should take place during the design as well as the implementation of the components.

Design of Components

The coordination of the design of the new components is on-going as part of the preparation of the draft Sector Programme Support Document (SPSD) and will be operationalised in project documents for each component. For the ongoing projects, project documents and agreements have been finalised prior to the preparation of the draft SPSD. These components will, therefore not necessarily be in accordance with the draft SPSD.

With regard to the NGO Forum component and the ITN component, described in sections 8.4 and 8.5 respectively, there does not seem to be an immediate need for revision of the project documents in order to make them compatible with the strategy in the draft SPSD and with other Danida supported components.

The Danida supported urban project in the coastal area, discussed in section 5.5 and described in section 8.2, was planned at a time when Danida did not directly support rural water supply and sanitation activities in this area. The strategy for the envisaged future Danida support to a rural water supply and sanitation component in the coastal belt is likely to deviate from the strategy in the Danida supported urban project. Furthermore, the urban project includes thana centres and some growth centres, which traditionally have been covered by DPHE's rural projects. As described in section 8.2, the strategy for the urban component, therefore needs to be reconsidered. This could be done by revising the present project document covering the ongoing Phase 2A (1996-2001) during the planned review of the project in early 1998. Alternatively the revision could take place during the planning of Phase 2B covering the period 2001 - 2006.

Implementation of Components

The Danida supported urban project has: i) one Central Coordination Unit supported by a Danida Advisory Group staffed with 3 expatriate and 2 local advisers, ii) 2 Project Management Units in Noakhali and Patuakhali respectively, each with 2 expatriate and 4 local advisers, and iii) a central consultant office staffed with expatriate and local consultants with a total input of 100 expatriate and 200 local professional man-months. The expatriate inputs appear unnecessarily high and are not in accordance with the Danida strategy for sector programme support which emphasises the use of short term expatriate consultants/advisers and long term local consultants/advisers.

The Danida Advisory Group and the two Project Management Units (to be renamed Component Management Units) could be maintained, but their roles and functions should be changed. For instance, the centrally located SPS Danida Advisory Group would be responsible for coordination of all components in the SPS. See Chapter 12 for an outline of the Advisory Group duties.

The long term expatriate staffing should more or less be retained. However, when the contracts with the present advisers expire, one of the engineers in the Danida Advisory Group should be replaced by a person with institutional and financial background. With regard to the implementation of the rural project in the western part of the coastal belt, it will be necessary to establish an additional Component Management Unit in Khulna. It may also be necessary to recruit additional local advisers for the offices in Noakhali and Patuakhali.

5.8 Involvement of the Danish Resource Base

5.8.1 Danida Country Strategy

The strategy for Danish-Bangladeshi development cooperation states that:

- Danish private companies have a considerable expertise and experience within the three priority sectors, and in certain cases comparative advantages;

- Danish companies will be involved in hydrogeological research and a Denmark-Bangladesh joint venture in connection with deep drilling is under consideration. *Moreover, Danish consultants will be involved in the planning and implementation of* urban water supply in the form of water installations with a system for water distribution;

- cooperation with Danish research institutions and other resource bases will be established as appropriate in connection with support to research and transfer of technology;

- in the future there will be a need for fewer but more centrally placed sector specialists. In a number of management and administrative areas it will still be necessary to have long-term Danish advisers to ensure that Danish assistance objectives are met and that Danish funds are used in accordance with the Danish terms of agreement. This technical assistance will be supplemented by short-term consultants.

5.8.2 Technical Assistance

There is a need for expatriate technical assistance through consultants or advisers in connection with implementation of water supply and sanitation projects. The main tasks of such a Danish technical assistance should be to provide: i) specific expertise not readily available in Bangladesh, ii) on-the-job training of local counterparts, iii) management of technical assistance funds, iv) financial control and quality assurance, and v) ensure that components are implemented in accordance with the project documents and the strategy for Danish development assistance.

Traditionally, expatriate consulting firms provide the technical assistance in connection with urban schemes, while donor recruited advisers are normally appointed in connection with rural projects. The capacity of a number of local consultants and advisers is acknowledged by the donors, and expatriate technical assistance is therefore often combined with local technical assistance.

The Danish resource base is deemed to have the necessary capacity to provide the required technical assistance. The use of consulting firms in connection with relatively complex technologies, such as piped water schemes, is assessed to be the most appropriate.

For other types of activities, Danida recruited long term advisers and/or short term consultants may be the most appropriate.

5.8.3 Contractors

In general local contractors and artisans are capable of implementing water supply and sanitation activities, provided they are properly supervised in order to ensure an adequate quality of the work.

Based on the experience from Phase 1 of the Danida urban water supply and sanitation project, Danida has found that local drilling contractors did not possess the necessary qualifications and equipment and were not able to respect agreed time schedules. Danida has, therefore decided to use a Danish drilling contractor in collaboration with a local contractor to carry out the drilling in connection with piped water schemes in Phase 2 of the Danida supported urban water supply and sanitation project.

6. OBJECTIVES FOR DANIDA SECTOR SUPPORT

According to Danida Guidelines for Sector Programme Support the objectives for Danida's assistance will be part or all of the national objectives expressed in the National Sector Programme Document, if available, or deduced from the analysis of the situation.

At present there is no National Sector Programme Document, hence the objectives for Danida's assistance have been deduced from the national objectives in the various plan documents and from an analysis of the present situation.

The Fifth Five Year Plan will be available after July 1997. However, the Fourth Five Year Plan (1990 - 1995) under the Physical Planning, Water Supply and Housing Sector, which covers a wide range of activities important to the national economy and the welfare of urban and rural communities, states that: 'Provision of clean water, improved sanitation and hygiene are the basic elements of primary health care and are essential preconditions for improvement of public health'.

The present Three Year Rolling Investment Programme (1995/96 - 1997/98) stipulates the major development goals, priorities and policies of Bangladesh as: i) alleviation of poverty, ii) generation of productive employment, iii) integration of all disadvantaged groups of people in the society, including women, in the national development process, iv) attainment of self-sufficiency in food, v) development of human resources and their effective utilisation mainly through synchronisation and strengthening of the overall social infrastructure.

6.1 Development Objective

The development objective of the Danida Sector Programme Support has been identified as: The Government of Bangladesh assisted in improving:

i) water and sanitation services delivery;
ii) access and use of clean water and sanitation facilities; and
iii) hygiene practises so as to promote equitable and sustained health improvement.

6.2 Immediate Objectives

The immediate objectives of the Danida Sector Programme Support have been identified as:

i) Strengthened capacity of stakeholders as per their comparative advantages to provide water and sanitation facilities and to promote hygiene;
ii) Increased coverage of water supply and sanitation facilities;
iii) Reduced incidences of diarrhoeal diseases and parasitic infestation, especially in children.

Formulating the SPS is a process in itself. The continuation of the SPS process and the dialogue with the stakeholders in the sector will take its departure point from the coming national water supply and sanitation policy expected to be presented for discussion by mid-1997. Finalising this policy and its approval by the Government has yet to take place, and it is still too early to predict the content of the sector policy. Moreover, the consultation with the various donors and other stakeholders in the sector will be important for implementing the national water supply and sanitation policy.

Another important issue that will influence the design of the SPS and its components is the new Local Government Act, which is expected to be introduced by the Government later this year. The implications for the future SPS and its components are still unknown.

The objectives of the present and planned components are shown in the figure overleaf. Three of the components are existing projects, whereas two new components have been outlined in context of the identified objectives of SPS. The objectives of the three existing projects do not fully conform to the SPS objectives, but cannot be changed at this time.

7. STRATEGIC CHOICE AND RISK ASSESSMENT

7.1 *Options Considered*

This section looks at the component options considered for the sector programme support on the basis of the description of the sector in Chapter 3 and the analysis carried out in Chapter 5.

Activities in the water supply and sanitation sector in Bangladesh are basically grouped into two sub-sectors: rural and urban. This can be seen in the budget allocations and project descriptions of GOB and the donors, and is illustrated in Chapters 3 and 5. There is also a cross-cutting group of activities which can be called institutional support. This includes training, research, policy development, and support to various organisational development initiatives.

Danida's sector programme support activities in terms of components should follow the existing sector set-up. The SPS will thereby be aligned with GOB's sector concept, and will have the possibility of having a broad impact on the sector and policy development. Thus, the component options can be grouped into three main fields:

(i) support to rural water supply, sanitation and hygiene promotion;

(ii) support to urban water supply, sanitation and hygiene promotion;

(iii) institutional support to the sector.

Within these headings there can be various components with more specific mandates.

Geographically, the options are to adhere to Danida's country strategy and concentrate on the five districts of the coastal belt or to spread activities around the country. These options were discussed in section 5.1.2 which concluded that the country strategy arguments for the coastal belt are valid, and that activities can also include the western part of the coastal belt. Chittagong Hill Tracts could be included in the SPS at a later date.

The options below are discussed in relation to the possible institutional linkages for the components.

7.1.1 Rural Options

(i) The traditional model for implementation of rural water supply and sanitation activities is to work through the DPHE structure at national, district and thana levels. The Union WATSAN committees is involved at the lowest level of institutions which are responsible for social mobilisation, health and hygiene promotion. This model is the one applied to the DPHE/UNICEF programmes.

(ii) DPHE will be the executing agency and will work with other organisations who will implement various activities in accordance with their comparative strength of experience. Thus, DPHE will be responsible for hardware activities while national and local NGOs will be responsible for software activities. Union parishads will coordinate activities at the local level. A central coordination unit would be managed by DPHE with technical assistance from the donor.

(iii) Implementation can be wholly through a large national or international NGO which has demonstrated competence in both the hardware and software aspects of rural water supply and sanitation.

The above options apply to the implementation/installation phase of the component activities. There is only one option with regard to operation and maintenance of facilities: the facilities are to be operated and maintained by the users. This is already a policy and common practice for government agencies and donors.

7.1.2 Urban Options

Components in urban areas such as pourashavas, thana centres and growth centres will be implemented in cooperation with the local authority. As executing agency, there is a choice between DPHE and LGED. DPHE is specialised in water supply and sanitation, while LGED has a broader experience including drainage, solid waste management and slum improvement. An NGO option for software activities is also relevant.

With respect to operation and maintenance, the situation is the same as for rural activities concerning facilities such as handpumps and household sanitary latrines. However, there are a number of different management options for piped water supply systems and services such as public toilets, drainage and solid waste disposal.

Implementation/installation options:

(i) DPHE and the local authority;

(ii) LGED and the local authority;

(iii) DPHE, the local authority and a NGO to implement software activities;

(iv) LGED, the local authority and a NGO to implement software activities.

The existing Danida urban water supply and sanitation project in the coastal area is implemented through DPHE, with the involvement of the local authorities and NGOs for software activities.

Operation and maintenance options:

Piped water systems can be operated by:

(i) DPHE;

(ii) The local authority. This option is in the process of becoming operational in the Phase 2 towns, Lakshimpur and Chaumahoni, of the existing Danida urban project in the coastal area, and has been chosen for the Phase 2 schemes;

(iii) Privatization through leasing out the facilities for operation and maintenance to a private company through competitive bidding. This option has not yet been tried in Bangladesh.

Services from which a profit can be obtained, such as public toilets, can be leased out to private operators, as already the case in a number of pourashavas, or can be managed directly by the local administrations.

Services which have no potential for profit, such as drainage and solid waste removal, can either be managed by the local authority or contracted out for a set fee to the private sector.

7.1.3 Institutional Support Options

Institutional support to the sector can be seen in broad terms of supporting the wide variety of institutions active in the sector, and in terms of concentrating support on specific institutions. There is a wide variety of activities that can be supported such as: human resource development, administrative systems development, research and development, equipment.

Within government, the central institution concerning the sector is the MLGRDC, and within the ministry it is the Planning Cell in the Local Government Division. The Planning Cell has not clearly defined its need for institutional support at present, but it could play a coordinating role for such support.

Support could also be concentrated on a key department in MLGRDC such as DPHE or LGED. LGED already receives considerable institutional support from various donors. DPHE has been the subject of a number of organisational studies, but has not yet clearly identified its needs.

There are numerous NGOs in the sector who may benefit from institutional support if they can identify their own needs and have the capacity to utilise the support.

Local authorities have expertise and capacity problems with regard to planning and management of water supply and sanitation facilities, and their needs may grow as more government responsibilities are decentralised.

In summary, the options are:

(i) Concentrate institutional support at the central government level with a particular institution which is the primary partner of Danida in the sector.

(ii) Spread support out to the wide variety of institutions involved in the sector. The existing Danida projects supporting the International Training Network Centre and the NGO Forum can be included under such an option.

7.2 Justifications for Strategic Choice

7.2.1 Criteria for Assessing Options

These criteria are based on GOB and Danida's main policy concerns where they are relevant to this sector.

1. The degree to which the options can contribute to the realisation of the policy concerns of gender specific poverty reduction, good governance, women's participation in decision-making, environmental sustainability, and management of facilities at the lowest appropriate level.

2. Flexibility in the institutional structures that allow for participation of all relevant stakeholders on the basis of their comparative strengths.

3. Accountability and transparency of implementation, operation and maintenance activities.

4. Financial and institutional sustainability of the management systems put in place for the operation and maintenance of the installations.

5. The existence of on-going Danida projects, if they fit into the objectives of SPS.

6. Possibilities for the choice of sector programme components being acceptable to the Bangladesh government.

7.2.2 Options Assessed in Relation to Criteria

All of the criteria are important, but some of them carry more weight than others when making an assessment of what is realistically possible. For instance, any choice has to be acceptable to the Bangladesh authorities in the sector, and this will probably mean that radical departures from normal practice can be ruled out. On the other hand, the analysis in Chapter 5 has shown that new thinking and approaches are required in order to meet most of the criteria above.

The existing Danida projects in the sector have been found to fit into the objectives of the SPS. The already agreed upon institutional and management arrangements for these projects have to be respected when determining the SPS components, and these arrangements can affect the choice of institutional options for new components.

Rural Options

Experience has shown, as noted in section 5.4, that there are some shortcomings with option (1) in relation to criteria 1, 2, 3 and 4. Option (iii), the wholly NGO option, may be more satisfactory in terms of the first four criteria, but it may not be acceptable to the Bangladeshi authorities (criteria 6).

Option (ii), a combination of DPHE and NGOs, appears to be the one with the best combination of actors. It is also similar to the model used at present in Danida's on-going coastal area urban project. Hence there could be possibilities for synergy between the rural and urban projects in terms of management structure and logistics.

Option (ii) is thus deemed the most appropriate for Danida's involvement in rural water supply and sanitation.

Urban Options

The component concerning urban water supply and sanitation is on-going and Phase 2 is now starting in the coastal area. The options here are restricted by the government agreement already signed for the period 2A (1996-2001). This agreement specifies option (iii) for implementation and option (ii) for operation and maintenance of piped water systems. There is a possibility to adjust the component through the review process, during which other institutional options for operation and maintenance, such as privatization, can be considered.

Institutional Support Options

The option (i) of concentrating support on Danida's partner in the sector, DPHE, is a logical one in terms of assisting the effectiveness of the implementation activities of DPHE and in terms of assisting DPHE to reorient itself to take more account of developments in the sector - such as placing more emphasis on the aspects described in the first four criteria in section 7.2.1.

However, institutional support sponsored by other donors has not shown many results - mainly because the identified needs did not have the 100% backing of DPHE. It is likely that the coming GOB water supply and sanitation sector policy and the changing roles of the various actors in the sector will result in DPHE itself defining some new institutional support needs.

For institutional support activities to be successful, not least in relation to the criteria above, it is vital that the host institutions identify their own needs and see the necessity for seeking external assistance in order to meet those needs.

The above considerations point to the second option for institutional support. Such a model would be able to support the identified needs of DPHE and any other relevant organisation within and outside government, so that the sector as a whole has the possibility of meeting institutional needs. This model would require to be linked to a government organisation in order to be acceptable, but it would still require a high degree of independence so that applications for support to identified needs can be evaluated on an neutral basis.

Option (ii) would also include activities such as the present on-going Danida projects that support NGO organisational involvement in the sector through the NGO Forum, and training through the International Training Network Centre.

7.2.3 Final Choice

On the basis of the above, it is recommended that the sector programme support comprise the following components:

Rural

1. Coastal Area Rural Water Supply and Sanitation, Phase 1 (1998-2001) and Phase 2 (2001-2006). To be implemented through DPHE, NGOs and local authorities.

Urban

2. Coastal Area Urban Water Supply Water and Sanitation, Phase 2A (1996-2001) and Phase 2B (2001-2006). On-going.

Institutional Support

3. Institutional Development Fund, Pilot Phase (1998-2001) with possibility of extension. To be linked to the Local Government Division, MLGRDC and managed through a Fund with a Management Committee.

4. NGO Forum for Drinking Water and Sanitation. On-going project (1997-2000) with possibility of extension.

5. International Training Network Centre. Continuation of the on-going project (1996-2001) and possibility of an extension period to secure sustainability.

Other

6. Components yet to be defined. An amount of 10-15% of the total sector budget will be allocated for these components.

7.3 Target Groups

The target groups of the rural and urban components are the low income groups in the component operational areas which at present are under-served with water and sanitation facilities as compared to the national average of service coverage. It is recognised that persons outside the target groups, especially in urban areas, will also receive services as a result of component activities.

Target groups for the institutional support components are all stakeholders in the sector.

7.4 Ownership, Accountability and Sustainability

7.4.1 Ownership

The water supply and sanitation sector policy formulation process in Bangladesh is still in progress. It is a process that has been initiated by the Local Government Division of MLGRDC, and it is expected that the ministry will complete a draft policy document before discussing it with other stakeholders, in particular the donors. It appears that the ministry wishes to emphasize that the process is not donor-driven and that ownership lies firmly on the Bangladeshi side. Such a situation is in accordance with Danida's sector policy formulation process.

Danida's own water supply and sanitation policies emphasize that ownership of WSS installations should be at the lowest appropriate level in order to ensure sustainability, meaning that the users and consumers should have a stake in ensuring that the installations keep functioning in an effective manner. This consideration has been taken into account in the discussion of components and their institutional linkages in 7.2 above.

The expected government decentralisation may be a positive factor in this regard, and it is hoped that the future water sector policy will emphasize such aspects as community/user involvement in the whole process of water supply, sanitation and health promotion activities. Component design and implementation should also ensure that ownership at the target group level is promoted through bodies that have experience and interest in this aspect - such as NGOs and appropriate local authorities.

Cost-sharing modalities will be a means of reinforcing a sense of ownership by the users and government agencies.

7.4.2 Accountability

One of the effects of decentralisation is expected to be an increased political accountability, in that political and administrative decisions are taken at lower levels and therefore have a better chance of being influenced by the local population. However, this does not necessarily mean that the target groups of the poorer segments of the population will have any greater influence than before, but rather that the local elite may have more influence.

There is a chance that decentralisation will improve financial accountability to the donors and national authorities in that disbursement and accounting routines may become shorter. There will also be scope for component activities to assist in improving these routines, if the local authorities are interested, so that they take account of local conditions. However, decentralisation can also mean that local bodies, without the necessary levels of expertise and experience, will be given powers that may be misused.

There is a chance that privatisation, where appropriate and feasible and if carefully managed, can contribute to greater transparency and accountability of particular installations.

7.4.3 Sustainability

The sector policy development process has been initiated by the MLGRDC and should therefore be sustainable, provided that the present level of interest is maintained by the senior officers.

Two of the proposed components of the SPS, Institutional Support and support to the International Training Network Centre, can be characterised as investments in sustainability. They will strengthen the capability of human resources, institutional structures, management systems and installation processes.

The sustainability of the hardware outputs of the component activities, such as tubewells, latrines, piped water systems, etc. will be dependent on the extent to which the users have a sense of ownership of the installations and/or to which extent the management of the installations is transparent, accountable and efficient. The components will be designed with regard to these issues.

Sustainability of the software activities, such as health and hygiene education cannot be assured by creating a sense of ownership. Financial resources will have to be continuously available for the health education staff of local authorities and NGOs involved, and this may not necessarily be assured by the end of the component implementation periods. However, the long term perspective of the SPS makes it possible that modalities may be arrived at to ensure the sustainability of these activities in the future.

7.5 Risk Assessment

The major uncertainties at the national level which may have an influence on the SPS are:

(i) The sector policy for water supply and sanitation is not yet complete, and there is a risk that it may contain policies that are not compatible with Danida's overall policy concerns and water sector policies. Taking into account what is unofficially known about the drafting process, this risk is judged to be at a low level.

(ii) A related and more serious risk is that the operationalisation and implementation process of the new sector policies may be slow, and that not all sector stakeholders will implement it with the same degree of enthusiasm. This could lead to misunderstandings between Danida and its partners in GOB. This risk is judged to be relatively high but acceptable on the grounds that the existence of a sector policy, even if it has difficulties in being implemented, is better than the present situation where there is lack of clarity about what the sector policy should be.

(iii) The content of the expected Local Government Act establishing the new local government structure is not yet known, so there is a risk that there may not be a significant decentralisation of government responsibilities. If this risk becomes a reality it will mostly affect the possibilities for local management of water supply and sanitation activities in urban centres. Rural facilities would not really be affected as they are already being handed over to the users for operation and maintenance.

(iv) There may be a risk in the long term that sector policy developments combined with decentralisation will result in a restructuring of major sector institutions, such as DPHE. Local authorities, for example, may want to reduce staff numbers and merge departments under their jurisdiction. This risk would not be serious for the implementation of components as any changes would be gradual and would merely involve a shift of emphasis to more cooperation with local authorities.

(v) There is a risk that GOB and/or donors will reduce their financial allocations to the sector. In the case of GOB it may mean that cost sharing funds for a component may be more difficult to secure. This risk is judged to be low, as long as the Bangladesh economy continues to expand at a reasonable rate and revenue raising by government continues to increase. The provision of safe drinking water is considered to be a key political issue, so there is not a great risk that the sector receives less priority in the ADPs than at present.

8. PROGRAMME SUPPORT COMPONENTS

8.1 Coastal Area Rural Water Supply and Sanitation

Danida has for more than two decades supported DPHE's country-wide rural water supply and sanitation programme through UNICEF. This funding arrangement will cease by 30 June 1998.

A new rural water supply and sanitation component has been identified and is outlined below. The component will be formulated by a team of expatriate and local consultants during the second half of 1997. The basis for the formulation will be the draft Sector Programme Support Document as well as Danida's and the Government of Bangladesh's preliminary comments to the Document. Draft terms of reference for the formulation are attached in Annex 6.

Objectives

The objectives of the rural water supply and sanitation component will be:

i) Strengthened capacity of stakeholders as per their comparative advantage to provide water and sanitation facilities and to promote hygiene.

ii) Increased coverage of water supply and sanitation facilities.

iii) Reduced incidence of diarrhoeal diseases and parasitic infestations, especially in children.

Project Area

The project area covers:

i) All thanas in the districts of Noakhali, Feni, Laxmipur, Barguna, Patuakhali, and

ii) all thanas with salinity problems west of these districts.

Outputs

The outputs of the component, such as number of tubewells, will be determined in connection with the formulation of the component later in 1997.

Organisation and Management

The rural component will be subdivided into two phases where Phase 1 will cover the period up to end 2001 and Phase 2 the period 2002-2006.

During Phase 1, DPHE will be the executing agency, while local government institutions may be executing agencies during Phase 2 in accordance with the Local Government Act to be approved by the Government.

The rural component is proposed to be implemented through the urban component organisational structure described in section 8.2, i.e.:

i) A Central Coordination Unit in Dhaka supported by a SPS Danida Advisory Group,

ii) Project Management Units (to be renamed Component Management Units) in Maijdee and Patuakhali. Furthermore, a Component Management Unit, most probably staffed with local advisers will be set up in Khulna.

During Phase 1, the rural component will be implemented by:

i) DPHE in close collaboration with local government institutions,

ii) one or more large NGO(s) with international affiliation(s) in close collaboration with small local NGOs, and

iii) the Component Management Units.

The main responsibilities of DPHE will be: i) overall planning including allocation of water points for each union in accordance with the Annual Development Plans, ii) hydrogeological activities, iii) procurement of local materials, transport and storage of local and imported materials, iv) selection and supervision of contractors, v) monitoring and quality assurance.

Approval of applications for water points will be done by the Union Parishad in close collaboration with NGOs following transparent procedures which ensure that particular emphasis is given to under-served and disadvantaged user groups. Reasons for rejecting applications will be explained to the applicants.

The main responsibilities of the NGOs will be: i) community mobilization, in particular in connection with application for water points and selection of sites, ii) caretaker family training, iii) sanitation promotion including support to latrine production, iv) provision of credit for latrines and user contribution for tubewells, v) promotion of personal and environmental hygiene in collaboration with local government health staff taking into consideration the lessons learnt from the UNICEF-supported activities, and vi) implementation of a school sanitation programme following the guidelines under preparation by UNICEF.

The main functions of the Central Coordination Unit in Dhaka supported by a Danida Advisory Group will be: i) overall coordination of implementation activities, ii) recruitment and management of one or more large NGO(s), iii) monitoring, iv) approval and reimbursement of DPHE procurement of local materials, v) purchase of imported materials, and vi) quality assurance and auditing.

Inputs

Danida will finance the following inputs: i) the Danida Advisory Group and the Component Management Units, ii) software activities, iii) imported and local materials for water points, and iv) part of the hydrogeological activities.

GOB will finance the following inputs: i) government staff, offices and office expenses, ii) sinking cost for tubewells and construction cost for other types of water supply technology, iii) custom duties and VAT, and iv) part of the hydrogeological activities.

8.2 Coastal Area Urban Water Supply and Sanitation

Objective

The objective of the urban water supply component is a contribution towards improved health conditions of the target communities through provision of safe drinking water and environmental sanitation services with particular emphasis on sustainability of the systems.

Project Area and Phasing

The Danida supported Urban Water Supply and Sanitation Project covered the pourashavas of Choumohani and Laxmipur during Phase 1, which is now complete.

Phase 2, with a total duration of 10 years, is planned to cover 7 pourashavas, 16 thana centres and 30 growth centres in the districts of Noakhali, Feni, Laxmipur, Barguna, and Patuakhali, Phase 2A covers the 5-year period 1996-2001, while Phase 2B is planned to cover the period 2001-2006. A government agreement has been signed for Phase 2A in December 1996 and includes a Danida grant of DKK 123.4 million and 7 expatriate advisers.

Outputs

Neither the government agreement nor the project document specify the number of urban areas to be covered during Phase 2A. The total outputs for Phase 2 include:

i) 12 piped water supply systems,

ii) 2631 tubewells with handpumps,

iii) 142 kilometres of drains (rehabilitated, re-excavated or new),

iv) solid waste collection systems with 874 dust bins, 278 push carts, 4 tractors with trailers and 1 truck,

v) 7823 household latrines,

vi) 125 public toilets (rehabilitated or new),

vii) staff trained for operation and maintenance of the schemes,

viii) raised awareness about health and hygiene.

Organisation and Management

DPHE is the executing agency. A Central Coordination Unit supported by a Danida Advisory Group in Dhaka and two Project Management Units, located in Maijdee and Patuakhali, has been established. The units will be supported by 7 expatriate and 10 local advisers.

Production tubewells for the piped water supply systems will be drilled by a Danish drilling contractor. An expatriate consulting engineering company in joint venture with a local company will undertake the supervision of the drilling, detailed design, training and institutional development. The companies will provide a total input of 100 expatriate and 200 local professional man-months.

DPHE will be responsible for the construction of the piped water supply systems, while local authorities will be responsible for the implementation of other technologies. Details about the role of local authorities will be elaborated after the Local Government Act has been approved and implemented.

Community mobilization as well as promotion of hygiene and sanitation will be implemented through NGOs.

Component implementation will be based on a plan of operation to be prepared by project management. The plan of operation will be reviewed and updated with regular intervals. Annual joint reviews will be carried out, and the first is scheduled to take place early 1998. The aim of this review will among others be to recommend the adjustments needed for transforming the present project into a genuine component in the SPS.

A detailed description of this on-going component can be found in the Project Document, which is formally part of the draft SPS document as Annex 7, but which is printed separately.

8.3 Institutional Development Fund

A new component has been identified to provide institutional support to the sector organisations. Its full title is Institutional Development Fund for Water Supply, Sanitation and Hygiene Education. The component will be formulated by a Danida team in late 1997. A draft Terms of Reference is contained in Annex 8.

Objective

The objective of the component is:

Strengthened institutional capacity of the stakeholders within the water supply and sanitation sector.

The strategic thinking behind the component is to respond to institutional needs only when the needs are first identified by the stakeholders and are expressed in applications for support. This idea is based on experience which shows that institutional support activities can only succeed when they are genuinely demand-driven. Support can be given to all stakeholders in the sector provided that certain criteria are met. The stakeholders would include central government departments, local government authorities, NGOs, research and training institutes.

Outputs

Specific outputs will be identified under formulation, but in general will consist of a number of completed capacity building activities carried out by a number of stakeholder organisations.

Activities

The Fund management will publicise the procedures and criteria for support to all stakeholders. The criteria, to be detailed under formulation, will include: i) definition of organisations that can be supported, ii) the types of activities that can be supported, iii) size of grants available, iv) amount of cost-sharing to be provided by the recipient organisation.

Examples of activities that could be supported are: human resource development, organisational restructuring, training in administrative systems (planning, accounting, record-keeping, computerisation, monitoring, etc), research and studies, consultancy assistance, equipment. In general, innovative approaches and new thinking will be encouraged.

The Fund will not be an open-ended pool for any kind of support. Emphasis will be on using locally based resources to improve the service delivery management systems of organisations which have demonstrated experience in the field and can generate their own resources. The Fund, therefore, would not be mandated to support infrastructure activities such as construction of offices and purchase of vehicles, nor would overseas training be supported.

There will be a monitoring system to report on the effects of the activities.

Organisation and Management

The Fund is proposed to be linked to the Local Government Division of the Ministry of Local Government, Rural Development and Cooperatives through a Management Committee to be chaired by a representative of the Secretary, Local Government Division. The Management Committee would include representatives of other stakeholders and Danida, and would make the final decisions about allocation of grants.

The Fund would otherwise be administratively independent of the ministry. Funds would flow directly from Danida. A secretariat would be locally staffed and would be responsible to the SPS Danida Chief Sector Adviser.

The idea of such a Fund is an innovative approach to supporting institutions in the water and sanitation sector. It is therefore recommended that a three year pilot phase be initially designed to generate experience and provide the basis for a decision on expansion and extension.

8.4 NGO Forum Integrated Water and Sanitation Programme through Partner Organizations

Danida has together with SDC supported the NGO Forum Integrated Water and Sanitation Programme through Partner Organizations since 1992. A joint SDC/Danida review in 1995 was satisfied with the performance of the project and recommended an extension of the project.

The present support covers the period April 1997 - March 2000. A review of the component is scheduled for late 1998.

Objectives

The objectives of the NGO Forum component are:

i) Men, women and children within the intervention areas adhere to proper hygiene practices, use hygienic latrines and use safe water for most purposes.

ii) Establishment of a community based networking and service delivery process for facilitating and promoting safe water, environmental sanitation and personal hygiene within the programme intervention areas.

The Danida support to NGO Forum acknowledges the comparative advantages of its partner NGOs with regard to: i) reaching the poor and underserved through community groups, ii) following an integrated approach linking water and sanitation with other activities such as health and credit, iii) giving emphasis to software activities, and iv) gender sensitivity, e.g. 60% of the NGO field workers are women as compared to less than 0.5% in DPHE.

Activities

The NGO Forum component will emphasize:

i) capacity building among partner NGOs through training and some ad-hoc implementation support;

ii) provision of materials for water supply installations to be implemented by partner NGO;

iii) support to the establishment of NGO village sanitation centres to be run on a cost recovery basis;

iv) production and distribution of communication materials to partner NGOs;

v) some promotional activities, information dissemination, advocacy and information services.

Organisation and Management

The component is being implemented by the secretariat of the NGO Forum for Drinking Water and Sanitation.

During the period 1997-2000, Danida will provide a grant to NGO Forum of Taka 85 mill corresponding to approximately DKK 13.5 mill.

Depending on a successful performance of the component during 1997-2000, the support to NGO Forum is foreseen to continue. The design of such a possible continuation cannot be described in detail at present as it will be based upon the lessons learnt from the on-going activities and take into account the future involvement of partner NGOs in the implementation of other Danida supported activities. The continuation of the support to NGO Forum may, however, in particular address under-served communities in areas where no donor funded projects are being implemented.

A detailed description of this component can be found in the Appraisal Report, which is formally part of the draft SPS document as Annex 9, but printed separately.

8.5 International Training Network Centre (ITN)

The ITN Centre component was started in October 1996 and is planned to continue for five years up to October 2001. A review of the component is scheduled for September 1997.

Objectives

The objectives of the ITN Centre component are:

i) Improved human resource base for promotion and wider application of appropriate i.e. socially acceptable, affordable and sustainable low-cost water supply and sanitation for low income groups.

ii) Strengthened local capacity for training, information dissemination as well as applied research and development activities.

Activities

The component will emphasize:

i) education of engineers and technicians will be reoriented to put more emphasis on low-cost technology, community mobilisation, hygiene promotion and communication skills;

ii) the links between basic engineering education and refresher training will be strengthened through a narrowing of the gaps between the implementing sector and the educational institutions;

iii) the applied research and development capacity of educational institutions will be strengthened.

Organisation and Management

Danida is supporting the ITN Centre through the UNDP/World Bank RWSG-SA by providing a grant of approximately USD 1.5 mill and an adviser for the first year of implementation.

The component is implemented by the Bangladesh University of Engineering and Technology (BUET) at which the International Training Network Centre is based. Activities will be implemented through a national network of cooperating institutions with the ITN Centre at BUET as the focal point.

Depending on a successful performance of the component during 1997-2002, the support to the ITN Centre component is foreseen to continue beyond 2002. The design of such a possible continued support will to a great extent be based upon the lessons learnt from the ongoing activities and cannot be described in detail at present. However, the continuation will represent a phasing-out of the Danida support and emphasize sustainability of the ITN Centre through income generating activities. Furthermore the institutional set-up of the ITN Centre will be reconsidered and may result in a transformation of the ITN Centre into an independent NGO with professional links to BUET.

Details of this component can be found in the Project Document, which is formally part of the draft SPS document as Annex 10, but printed separately.

8.6 Other Components

The preliminary planning of the SPS as reflected in this draft SPS document envisages a time frame up to about the year 2006. It is clear that all possible interventions cannot be described at the present time, and there should therefore be room for identification of other components that fit within the framework of the SPS and respond to future needs. To this end an amount of DKK 68 mill has been reserved in the overall budget to finance possible future components.

An example of a component idea that may be relevant within a few years time is briefly mentioned below.

Water Supply and Sanitation in Chittagong Hill Tracts

As stated in Chapter 4, Danida's overall strategy for indigenous people has not been operationalised in the Country Strategy for Bangladesh. It could, however, be relevant for the Chittagong Hill Tracts. This area is to a considerable extent inhabited by ethnic minorities which are considered as indigenous people.

The coverage with safe water sources is often far below the national average in this area, due to, among other factors, the hydrogeological conditions which are not only complicated but also completely different from the conditions in the rest of Bangladesh. In addition, the particular political situation in the Chittagong Hill Tracts makes it difficult for UN agencies, donors and large NGOs with international affiliation to work in the area.

UNICEF is at present investigating the possibilities for improving the water supply in the Chittagong Hill Tracts through a major NGO. If this attempt is successful, a pilot project will be implemented to develop a model for such a collaboration. It is not UNICEF's intention to fund a replication of the developed model. It would be in full accordance with the general Danida strategy to finance such a replication on bilateral terms.

Such a component could be identified when the political conditions are favourable.

9. BUDGET

The following table provides information about the tentative Danish contribution to the different components in the sector programme support during the period 1998 - 2005. The amounts are indicative, in particular for the second half of the period.

The components are sub-divided into the following three categories:

- ongoing components;
- identified components or components to be identified during 1997;
- component ideas.

An annual amount has been added as unallocated funds to cover components to be identified at a later stage.

The annual allocation will increase gradually from DKK 40 mill in 1998 to approximately DKK 70 mill in year 2002 and remain stable at that level up to year 2005.

Budget for Danida's Support to the Water Supply and Sanitation Sector in Bangladesh, 1998 - 2005 (million DKK)

	1998	1999	2000	2001	2002	2003	2004	2005	Total	Status
Rural Water Supply, Phase 1		15	20	20					55	B
Rural Water Supply, Phase 2					20	20	20	20	80	C
Rural Water Supply, Phase 2A	28	28	27	22					105	A
Rural Water Supply, Phase 2B					25	25	25	25	100	B
Institutional Support, Phase 1		3	5	5					13	B
Institutional Support, Phase 2					5	5	5	5	20	C
NGO Forum, Phase 2	7	7	7						21	A
NGO Forum, Phase 3				7	7	7	7	7	35	C
ITN Centre, Phase 1	2	2	2	1					7	A
ITN Centre, Phase 2				1	2	2	1	1	7	C
Unallocated Funds	3	5	10	10	10	10	10	10	68	-
TOTAL	40	60	71	66	69	69	68	68	511	

Status:

A = ongoing components
B = Identified components or components to be identified during 1997
C = Component not yet identified

10. ASSUMPTIONS AND PRECONDITIONS

The following assumptions and preconditions are related to the objectives of the SPS and the components.

10.1 Development Objective

The Government of Bangladesh assisted in improving: (i) water and sanitation services delivery; (ii) access and use of clean water and sanitation facilities; and (iii) hygiene practices so as to promote equitable and sustained health improvement.

In order for Danida to be able to assist the Government of Bangladesh in the ways described above, the following preconditions and assumptions apply.

It is a precondition for the finalization of the SPS document that the Government of Bangladesh completes and approves its water supply and sanitation sector policy. This precondition is expected to be fulfilled in 1997.

It is assumed that principles of the GOB sector policy on water and sanitation will not contradict Danida's overall policy concerns, and that the operational policies will by and large be compatible with Danida's water and sanitation sector policies.

After approval of the GOB sector policy it is assumed that the MLGRDC will take steps to implement the policy without delay.

10.2 Immediate Objectives

Strengthened capacity of stakeholders as per their comparative advantage to provide water and sanitation facilities and to promote hygiene.

Increased coverage of water supply and sanitation facilities.

Reduced incidence of diarrhoeal diseases and parasitic infestations, especially in children.

It is assumed that the steps taken towards decentralization of government will result in a process that leads to increased responsibility and capacity of local authorities to implement, operate and maintain water and sanitation facilities. This process may have a long term perspective, but the fact that it has begun will facilitate the promotion of the management of water and sanitation facilities at the lowest appropriate levels of government.

It is assumed that the various stakeholders (government agencies, local authorities, NGOs and private sector) will have the necessary expertise and counterpart funds for participating in WSS and hygiene activities.

It is assumed that the various stakeholders will actively cooperate with each other so that their comparative advantages can be effectively utilized. This assumption includes the aspect of the staff of the various agencies accepting the changes and new roles that may be inherent in the coming sector policy. Such an acceptance may not be immediate, but may take some time to emerge.

11. INDICATORS

11.1 Indicators for Development Objective

The development objective is process orientated towards assisting the Government of Bangladesh in improving performance in the water and sanitation sector. The indicator would be:

- Government of Bangladesh has a comprehensive policy framework that addresses the issues in the development objective.
- The policies are being implemented by GOB in its own programmes and in cooperation with donors.

Means of Verification

- GOB sector policy document;
- Sector reports of multilateral and bilateral donors;
- SPS progress reports.

11.2 Indicators for Immediate Objectives

The immediate objectives deal with: strengthened capacity of stakeholders; increased coverage of water supply and sanitation facilities; reduced incidences of waterborne diseases. The indicators would include:

- Decline in number of reported incidences of diarrhoeal diseases and parasitic infestations in children.
- Increased use of clean water for all household purposes.
- Reduced distances to clean water sources.
- Increased number of persons practising sanitary excreta disposal.
- Greater cost efficiency of implementation by stakeholders, i.e. more people reached and more services delivered for the same investment.

Indicators for increased coverage of water supply and sanitation facilities will include those to be published in the Fifth Five Year Plan, which will be available later in 1997. These indicators will include for example: number of persons to be served by one tubewell; piped water production capacity in urban areas; number of sanitary latrines in a defined population area.

Means of Verification

- Annual Bangladesh Statistics.
- Stakeholders monitoring and progress reports.
- Household surveys in component operational areas.
- Sector studies and research reports.
- Component progress reports.
- SPS progress reports

12. SECTOR PROGRAMME SUPPORT MANAGEMENT AND ORGANISATION

12.1 Management and Coordination

At the inter-governmental level, the Sector Programme Support will be governed by a Country Agreement between Bangladesh and Denmark, to be signed by the Ministry of Finance on the Bangladeshi side and the Ministry of Foreign Affairs on the Danish side. The SPS will be part of the agenda of the Annual Consultations between the two governments, which cover the whole scope of Danish assistance.

Input to the Annual Consultations will be provided by an Annual Joint Review of the SPS. The Annual Joint Review will base its findings on field visits, the Annual Progress Reports of the SPS as a whole and its components, and review reports for the individual components. See Chapter13 for details of the review process.

At the national level the SPS will be governed by a Steering Committee, which will meet twice a year to review progress, ensure coordination, and make recommendations on implementation of components and developments within the SPS. Components will not have their own steering committees, as this is regarded as an unnecessary duplication of the use of scarce time and resources. The Steering Committee will include the following:

- Secretary, LGD, MLGRDC (Chairman)
- Representative of Planning Commission
- Chief Engineer, DPHE
- Danish Embassy Representative
- Chief Sector Adviser (Secretary)

The Steering Committee can co-opt other members as it sees fit - for instance, representatives of NGOs, local authorities, related institutes. See Fig. 12.1 for the structure of the SPS organization.

The Steering Committee will be supported by a Danida appointed SPS Danida Advisory Group to be based in Dhaka, which will include no more than three expatriate specialists, one of whom will be designated Chief Sector Adviser. They will cover the institutional, engineering and socio-economic areas of expertise. For practical purposes the Team will be based in DPHE, which is Danida's main partner in the sector. The terms of reference for the existing advisory team for Danida's urban water supply and sanitation project should be changed so that they take on the role of sector advisers. The duties of the Advisory Group will include the following:

- Coordinate component activities at the national level so that they complement each other in terms of policies, practices, logistics, etc.

- Act as the link between the various geographic locations of the various components, and as the link to the national level institutions and resources.

- Advise the relevant national institutions about component implementation issues.
- Receive, review and comment on monitoring and progress reports.
- Follow the developments in national sector policy making and assist where appropriate.
- Participate in the management of the Institutional Support Component.
- Prepare a consolidated Progress Report semi-annually for consideration by the Steering Committee.

Each component will have a Component Management Unit staffed by the responsible official of the partner organisation, with the possible support of Danida appointed advisers.

12.2 Planning

Revisions and adjustments to the SPS and its components will be initiated through the Annual Joint Review process. The Annual Joint Review should take place about 6 months before the Annual Consultations so that recommended changes can have time to be agreed upon by the relevant agencies before being confirmed at the Annual Consultations.

The relevant sections of the endorsed and agreed Minutes of the Annual Consultations will become part of the country agreement concerning the SPS. Through these minutes the two governments will commit themselves to make the changes in their relevant documents, such as Project Proformas and Plans of Operation, which are necessary for implementation of the recommendations.

13. MONITORING, REPORTING, REVIEW AND EVALUATION

13.1 Monitoring, Reporting and Reviews

Overall monitoring of the SPS depends on component monitoring and progress reporting and on SPS progress reporting. Monitoring done at component level will be described in each of the individual component documents. Monitoring of the SPS will use the indicators of the development and immediate objectives. Verification will be done through the means described in Chapter 11. Monitoring data will be contained in the progress reports. The Annual Joint Review will describe SPS progress on the basis of the component progress reports, component review reports and SPS progress reports.

Annual Joint Reviews will provide a mechanism for adjusting the SPS programme and its components on a yearly basis. The Annual Joint Reviews also have the purpose of ensuring that the SPS programme and its components accumulate experiences and respond to these and possible changes in the external political, economic and social environment. The Annual Joint Reviews are expected to provide valuable information for the Annual Consultation between the Government of Bangladesh and the Government of Denmark.

The Chief Sector Adviser of the Danida Advisory Group will be responsible for preparing SPS Progress Reports, which will be endorsed by the Steering Committee, and which will be submitted to the Royal Danish Embassy in Dhaka.

At the component level, progress reports will be prepared by the component management. The component progress reports will provide detailed information on progress, performance and impact of activities within individual components.

Table 13.1 below shows the respective responsibilities at various levels.

Table 13.1 SPS Progress and Review Reports

Report Title	Timing	Prepared by:	Submitted to:
1. Component Progress Reports	Semi-annual	Component Management	Steering Committee (SC), MLGRDC, Danida
2. SPS Progress Reports	Semi-annual	Chief Sector Adviser	SC, MLGRDC, Danida
3. Component Review Reports	As specified in component documents	Joint GOB and Danida	Planning Commission (PC), SC, MLGRDC; Danida
4. SPS Review Reports	Annual	Joint GOB and Danida	PC, SC, MLGRDC, Danida
5. Evaluation Reports	To be decided	Joint GOB and Danida	PC, SC, MLGRDC, Danida
6. Component Completion Reports	End of component	Component Management	PC, SC, MLGRDC, Danida
7. SPS Completion Report	End of Danida support to sector	Joint GOB and Danida	PC; SC, MLGRDC, Danida

13.2 Evaluation

The Evaluation and Research Department, Danida Copenhagen, will decide whether or not to conduct an evaluation of the SPS Programme and its components. The GOB may at any point in the process indicate its position on the matter to the Royal Danish Embassy.

14. ACCOUNTING AND AUDITING

The accounting and auditing of the SPS will follow the general Danida rules as given in the Framework for Accounting, General Guidelines, and Decentralised Project Accounting.

Danida assigns high priority to proper administration of grants, well prepared budgeting and continuous financial control of the Danish development assistance. Danida is accountable to the Auditor of Public Accounts and the Auditor General, and consequently programme and component accounting should be up-to-date and fully transparent. The department StS.2 at Danida headquarters, Ministry of Foreign Affairs, attends to central budgetary matters relating to development assistance and provides the executive management of the accounting and monitoring of decentralised disbursements at Danish embassies.

StS.2 in conjunction with the Danish Ministry of Finance stipulates the total appropriation to be made for Danish development assistance for each financial year, one year in advance, usually in March or April. The includes the quotas for bilateral and multilateral assistance and the division of assistance between the individual recipient countries.

The general rules governing Danish appropriations are laid down in the Budget Instructions 1996 prepared by the Danish Ministry of Finance. The basic rule is that a grant should only be used for the purpose it was authorised for. When an activity is completed, all unused funds revert to Danida. Where appropriate, unspent funds may be used to prolong project or component activities, though this is subject to regulation. If a project or component budget is to be overspent, or contingencies used, this may only be done with advance permission from Danida.

The authority to adjust grants, including administrative adjustments due to changes in currency, wages etc., lies with the individual departments of Danida and the embassies.

Once projects or components are approved by the Danida Board and the Danish Ministry of Finance they become the responsibility of the regional departments and embassies. A system of decentralised budgeting ensures that funds are available for each project or component from a rolling budget based on a five year plan.

Decentralised Component Accounting

Component accounting systems shall provide component management with an up-to-date financial status and present timely financial reports to Danida and the Government of Bangladesh. Components within the decentralised accounting system remain directly accountable to Danida, but shall maintain their own accounts, while reporting expenditures on a monthly basis. The system shall provide efficient control and monitoring of component funds and other assets made available to the component.

Each component has a number of budget lines in the Danida accounting system. The budget line will normally reflect the budget approved by the Danida Board, which is formed by the programme or component document and should be supported by yearly work plans and a cash flow estimate. Major budget shifts can only be made after agreement with Danida.

Audits should be arranged locally with a reputable accounting firm or Government auditor as agreed by the Danish Embassy in Dhaka and the submission of the final audit will be subject to approval by the Danish Embassy's representative prior to forwarding to Danida headquarters.

Danida Component Advisers and the Chief Sector Adviser have the responsibility for the economic management of Danida funds. Responsibilities include the establishment of:

- means to ensure that funds are appropriately accounted for,
- secure accounting systems,
- rules for the authorisation of vouchers, cheques etc.,
- recordings of cash and bank assets and liability for them,
- control of the project budget,
- supervision of petty cash,
- maintenance and control of stores,
- control of vehicles.

Funds are normally transferred from the Danish Embassy to a project account at the project's request. A simple accounting procedure is in place to acknowledge receipt of funds.

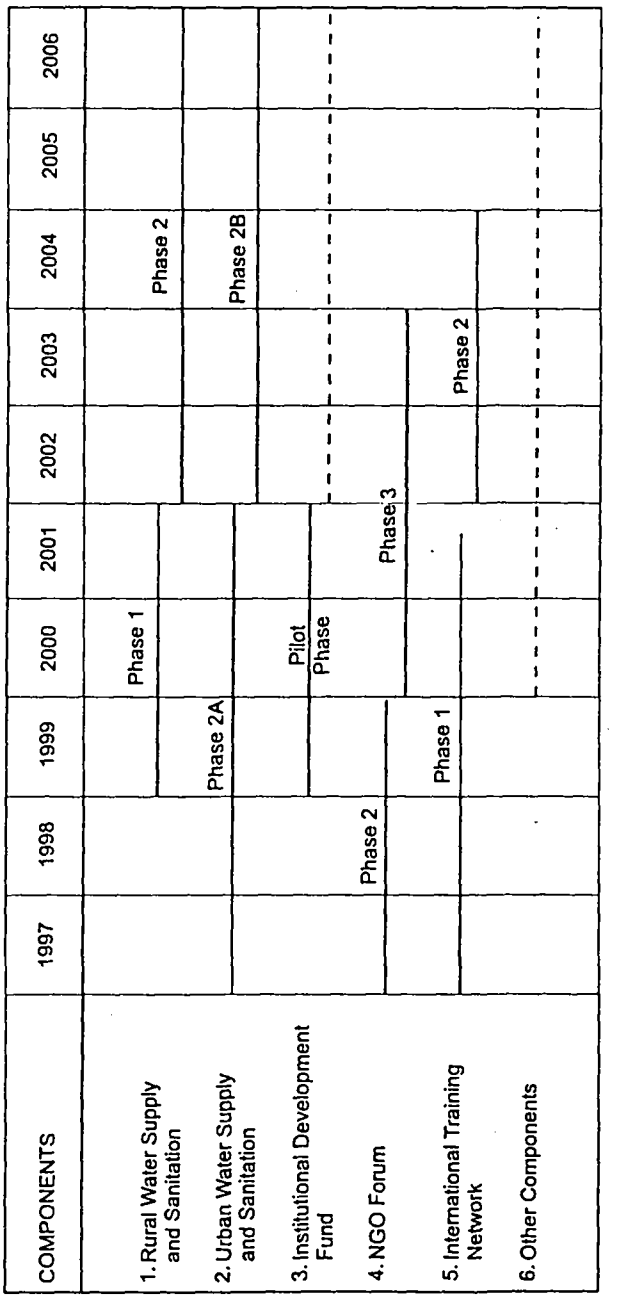
Each month an account shall be prepared for the Government of Bangladesh and Danida which shall include the preparation of internal accounts, using FORB2 and a management report.

Accounts are closed and an audit undertaken on an annual basis.

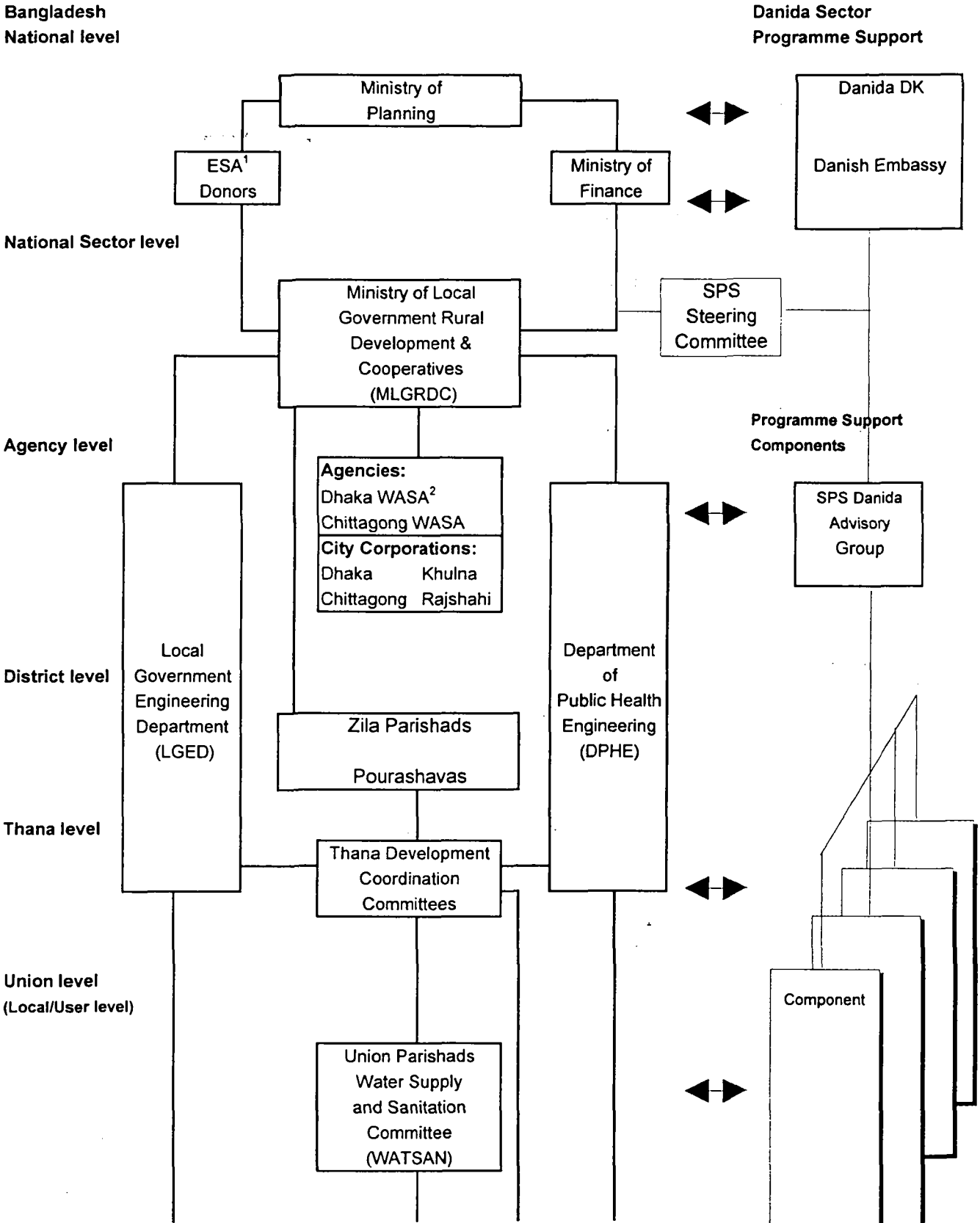
Danida holds the right to withhold payment of funds until sufficient documentation has been received on previous expenditures.

15. GENERAL IMPLEMENTATION PLAN

The plan envisages Danida Sector Programme support up to the year 2006. Component activities shown below are divided into phases, which are anticipated at the present time. A possible second phase of the Institutional Development Fund Component is shown as a dotted line because the first phase is a pilot activity.



Institutions and Interactions



[1] ESA External Support Agencies
[2] WASA Water and Sewerage Authorities

Government of Bangladesh - National level

Danida Sector Programme Support

Fundamental Principles of State Policy
There are eighteen fundamental principles of state policy of which five are expressed as follows: (i) Promotion of local government institutions; (ii) Participation of women in national life; (iii) Democracy and human rights; (iv) Provision of basic necessities of life; (v) Improvement of public health and reductions in mortality and morbidity.

Programme level

Development objective
The Government of Bangladesh assisted in improving: (i) water and sanitation services delivery; (ii) access and use of clean water and sanitation facilities; and (iii) hygiene practices so as to promote equitable and sustained health improvement.

National Sector level

Objectives:
The objectives for water supply and sanitation sector have not yet been defined. However, the objectives in the social sector programme are: (i) improved human resource base; (ii) increased internal effeciency of service delivery system through enhanced accountability, participation of the people in decision making, and increased involvement of NGOs and private sector operators in the supply and delivery system.

Immediate objectives
- Strengthened capacity of stakeholders as per their comparative advantage to provide water and sanitation facilities and to promote hygiene;
- Increased coverage of water supply and sanitation facilities;
- Reduced incidence of diarrhoeal diseases and parasitic infestation, especially in children.

Component level

Component: Institutional Support.

Development Objective: Strengthened institutional capacity of the stakeholders within the water supply and sanitation sector.

Component: Coastal Area Urban Water Supply and Sanitation.

Development Objective: Improved health conditions of the target communities.

Component: Coastal Area Rural Water Supply and Sanitation

Development Objectives: (i) Strengthened capacity of stakeholders as per their comparative advantage to provide water and sanitation facilities and to promote hygiene; (ii) increased coverage of water supply and sanitation facilities;(iii) reduced incidence of diarrhoeal diseases and parasitic infestation, especially in children.

Component: NGO Forum for Drinking Water and Sanitation

Development Objectives: (i) men, women and children within the intervention areas adhere to proper hygiene practices, use hygienic latrines and use safe water for most purposes; and (ii) establishment of a community based networking and service delivery process for facilitating and promoting safe water, environmental sanitation and personal hygiene within the programme intervention areas.

Component: International Training Network Centre (ITN)

Development Objectives: (i) improved human resource base for promotion and wider application of appropriate i.e. socially acceptable, affordable and sustainable low-cost water supply and sanitation for low income groups; and (ii) strengthened local capacity for training, information dissemination as well as applied research and development activities.

Sector Programme Support Process