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PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

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MAP(S): IBRD-[]

1. THE WATER SUPPLY, SEWERAGE AND SANITATION SECTOR

A. Sector Background

1.1 The provision of water supply and sanitation services in the Philippines has improved considerably over the past two decades. Following a major sector review in 1972, the current sector institutions were established and sector objectives, strategies and development plans defined. Between 1972 and 1980, water supply services were extended to an additional three million people, bringing the total population with access to safe water to around 22 million or about 45% of the population. By end-1987 this had increased and about 63% of the population had access to safe water by then, including 31% which was served by piped systems. However, while absolute service levels improved, the quality of service in the areas covered is often poor, with low water pressures throughout and rationed service in some areas. The rest of the population of about 21.2 million still relied on open dug wells, rainwater cisterns, lakes, ponds and streams with water of often doubtful quality.

1.2 Sanitation services have also been expanding. The 1980 census estimated that only about 56% of the population had access to water-borne sewerage (i.e. sanitary sewers or combined sewer/storm drain systems), septic tanks or pits for excreta disposal. A survey by the Department of Health (DOH) at end-1986 showed that by then about 69% of all households had safe excreta disposal facilities, about 15% had unsafe facilities and about 16% had nothing at all. In terms of population served, about 62% of the rural and 80% of the urban populations had access to sanitary facilities, with Metropolitan Manila having the highest service level at 93%. Pit or pour-flush latrines predominate throughout the country. In Metropolitan Manila, the dominant disposal facilities are septic tanks, many of which are not well maintained and are inefficient in treating the wastes which they discharge to surface water drainage systems. The only urban areas with water-borne sewerage systems are Metropolitan Manila, where only about 750,000 people or 9% of the population are served, and three other cities where service is provided to the central areas only. Because of the limited public sewerage systems

and inefficient private sanitary waste disposal facilities, untreated or poorly treated domestic sewage is a major source of urban and river pollution.

1.3 The Philippines has abundant water resources for domestic water supply, irrigation and industrial use. Average annual rainfall is about 2,300 mm, and there are 18 major and over 400 principal rivers, about 60 natural lakes, and a significant, well-documented quantity of groundwater. However, most of the rain is concentrated in four months, the monsoon season from about June to September, when floods and typhoon damage are major problems. During the remainder of the year, the rivers dry up, necessitating expensive dams and water regulation. With rapid population growth of about 2.8 %, the most accessible water sources, and the least costly to develop for community use, are already exploited. Many of these are now inadequate to support the present service areas. Development of water sources to serve the larger urban areas in the future will need to exploit more distant rivers, at a higher development cost. Similarly, the supply to rural communities increasingly requires development of deeper groundwater sources, at increased costs. Water pollution is a growing problem, and in 1986 the National Pollution Control Commission (NPCC) identified 37 major and principal rivers as seriously polluted due to discharges from domestic sewage, municipal solid wastes and industrial wastes. Health statistics reflect this situation, indicating the nationwide prevalence of water-borne and improper sanitation-related diseases. Substantial improvement of the country's water supply and sanitation facilities, particularly in the rural areas, has therefore high priority, to reduce the incidence of these diseases and to improve the general living standard of the population.

B. Sector Organization

1.4 The National Water Resources Council (NWRC), which includes representatives of the various sector institutions, is responsible for coordination and integration of all activities related to development and management of water resources. The Metropolitan Waterworks and Sewerage System (MWSS), established in 1972, is responsible for the development, operation and maintenance of water supply and sewerage systems in and around Metropolitan Manila. The MWSS Service Area (MSA) of about 150,000 ha includes Manila City, four adjoining cities and 32 municipalities. The Local Water Utilities Administration (LWUA), established in 1973, is responsible for providing technical and financial assistance for water supply and sewerage development to about 800 provincial municipalities with populations above 20,000 and, since 1987 on the absorption of the former Rural Waterworks Development Corporation (RWDC), for water supply the larger rural communities. Both MWSS and LWUA are semi-autonomous corporations which for administrative purposes are listed under the Department of Public Works and Highways (DPWH). The Department of Health (DOH) implements the rural sanitation program and monitors drinking water quality.

1.5 The operation and maintenance of urban water supply systems in the provinces is the responsibility of Local Government or, where established, of Water Districts (WD), which are also semi-autonomous public utilities, serving one or more municipalities. Waterworks and Sanitation Associations (WSA), which are non-government organizations (NGO), are responsible for the rural water supply systems. By mid-1989, some 490 WDs and about 1020 WSAs had been established. [ADD DPWH TOTALS] WDs are formed at the initiative of the local city or municipality, and following a public hearing, financial and technical assistance is sought from LWUA for system upgrading and development. The WD remains henceforth independent from local government but the Mayor nominates the first Board of Directors. WSAs are formed when rural communities request provision of

public wells or spring developments and accept the operation and maintenance responsibility.

C. Sector Financing

1.6 Sector development in Metropolitan Manila is financed through funds self-generated by MWSS, government equity contributions, and foreign or local loans. LWUA, which is a financial intermediary for the remaining municipalities in the Philippines, is also funded through government contributions and loans, and on-lends these funds to WDs for system development. The municipalities served by the WDs normally make some equity contribution, primarily through the hand over of existing water supply assets, to contribute towards part of the cost of development, while the financially weaker WDs may be eligible to receive some government grants. The WSAs also receive government equity contributions and benefit from grants provided through bilateral assistance.

1.7 The Government's general policy is to develop systems on the basis of a community's financial ability and willingness to pay. Accordingly, individual house connections - referred to as Level III service - are usually provided in the larger metropolitan and provincial urban areas, standpipe systems (Level II service) is provided in the small rural settlements, and shallow or deep wells with hand pumps (Level I service) is provided in the more dispersed rural areas. Tariffs in Metropolitan Manila have allowed MWSS to earn a financial rate of return of about 8% on its revalued net fixed assets in operation. For WDs tariffs are set to generate adequate levels of revenue to meet operation and maintenance costs and cover debt servicing costs or depreciation, whichever is greater. In rural areas, tariffs are expected to meet operation and maintenance costs and the debt servicing costs of distribution works related to the standpipe distribution network and

connections. However, because of extensive poverty, and political reluctance by some WDs to increase tariffs, water tariffs and collections in the WDs are often inadequate, resulting in financial deficits and delayed payments to LWUA, jeopardizing their collective financial viability. For WDs with excessive debt burdens, some debt rescheduling was provided but further financial restructuring may be needed to strengthen their finances and provide a reasonable debt to equity ratio.

1.8 Due to the depressed economic conditions and political changes that occurred during 1984-86, investment in water and sanitation services declined during that period. However, in 1987, the Government pledged its commitment to sector development by adopting the Water Supply, Sewerage and Sanitation Master Plan of the Philippines 1988 - 2000, which provides a well-integrated, but ambitious package of policies, programs and projects to be implemented in two stages, i.e. from 1988 to 1993 and from 1994 to the year 2000. Initiation of LWUA's part of the program was delayed due to protracted management / staff conflicts, but the recent appointment of a new LWUA Administrator seems likely to ensure that implementation will now proceed. The Government's commitment was further underscored by the announcement of the Accelerated Water Supply Program (AWSP) which was enacted by Congress under Republic Act No. 6716 in March, 1989.

D. Sectoral Issues and Constraints

1.9 Despite the progress made, a number of issues and constraints still impede sector development and performance, including problems related to financial issues, planning, the sector institutions, and operating efficiency. x

1.10 Funding. Government counterpart funds have generally been inadequate and not available when needed, largely due to economic crises and competing demands. Furthermore, funds which should have been

generated by MWSS, LWUA, WDs, and the WSAs have not materialized at the levels projected because of inadequate tariffs, high levels of unaccounted-for water (see para. 1.17), higher debt servicing costs because of foreign exchange losses through devaluation of the Philippine Peso, and poor collection efficiencies.

1.11 Billing and Collection. The poor billing and collection efficiency need to be addressed. Excessive amounts are overdue for collection and losses are incurred through illegal connections which reduce sector revenues. This results in higher average tariffs for that part of the population actually paying their bills. LWUA has a serious problem due to the poor collection performance of the WDs; its collection efficiency declined from 76% of billings in 1981 to 51% in 1987, and has been as low as 25% to 30% for WSA-operated systems - the latter were implemented through the now defunct RWDC. MWSS has improved its collection rate, but further efforts are needed to reduce its accounts receivable, which are approaching six months' billing, particularly from other government agencies.

1.12 Planning. Development in the sector tends to be adversely effected by over-optimistic planning and goals. Historical information on implementation capacity and expenditure rates is often overlooked in the planning process, as is the availability of local counterpart funds. The lack of pragmatic plans is a constraint to sector development since investment plans must often be curtailed during project implementation, causing external loans to be under-utilized. Similarly, water demand projections are sometimes unrealistic, resulting in over-investment, under-utilized capacity and financial deficits. Consequently, in project formulation, more emphasis is now given to improving water demand forecasts and financial planning, and establishing improved monitoring and management information systems during implementation.

113 Institutional Arrangements. The overall organization of the sector is basically sound, with some exceptions. NWRC coordinates water supply development, but no institution exists to coordinate sewerage and sanitation activities. Sewage disposal, sanitation and pollution control have received less attention than water supply. The proposed project, amongst other objectives, seeks to address this deficiency. The Department of Local Government (DLG) has played from time to time a role in the sector, largely through the United States Agency for International Development (USAID) funded Barangay Water Supply Projects. However, because of slow performance by DLG, USAID de-obligated part of its latest loan to BWSA. This action eliminated the competition between DLG and the regular sector agencies and has contributed to rationalizing the sector. Nevertheless, DLG has close links with Local Government and could play a major role in the institutional development of Local Government Units (Provincial and Municipal Development Staffs) and in fostering community participation in the BWSA. It is therefore rewarding to note that USAID has continued to support DLG in this training role.

114 Several organizational changes are needed within LWUA. Firstly, it should decentralize its operations, similar but at a smaller scale than DOH and DPWH, in order to better serve the provincial population. The present reorganization of LWUA, which includes a departmentalization into geographic areas, i.e. Luzon, Visayas and Mindanao, are a first step in this direction. Furthermore, since LWUA is moving progressively to serve the smaller municipalities, which may not be able to pay for adequate accounting, engineering and management, it may need to create larger and possibly province-wide WDs, providing for economies of scale and cross-subsidization which would ensure the provision of water services, albeit at different service levels, to all of the population in each region.

1.15 Institutional development in the WDs and the WSAs has been limited, causing institutional, operational and financial problems, particularly in the smaller and poorer WSAs. Since the provision of services in the rural areas relies mainly on community participation, the success of such programs will largely depend on mobilizing community support for the development and maintenance of water supply and sanitation facilities. Therefore, substantial strengthening of community development activities are required.

1.16 Groundwater Use. Excessive use of groundwater in the Metropolitan Manila Region is depleting the aquifer and resulting in salt water intrusion in the areas near Manila Bay. However, little can be done to prevent this deterioration until MWSS can provide additional water, eliminate shortages and ensure a more reliable supply. Curtailing the use of groundwater for existing industrial users, when they cannot be supplied by MWSS, would have a negative impact on industrial production and employment. The major users of groundwater in depleted zones have been identified by MWSS, and adequate transmission and distribution facilities will be provided under the Bank-assisted Angat Dam Optimization Project to provide a reliable supply and reduce excessive groundwater abstraction in these zones. If these problems persist after adequate supply capacities are provided by 1994, it would be necessary to enact legislation establishing more rigorous controls on water use, and allowing MWSS to charge for the exploitation of groundwater, to reduce its excessive use and contribute to the financing of expanded water supply facilities in the MSA.

1.17 Operational Efficiency. The water supply agencies currently receive no revenue for a large portion of the water distributed. MWSS, for example, has had non-revenue water (NRW) due to system losses, illegal use, faulty metering and poor administration at almost 60%. It is now carrying out a large-scale program to gradually reduce NRW to below 40%

by 1994. LWUA is also focussing on NRW problems in the WDs through its Operations and Maintenance Assistance Program (OMAP), which includes leak detection as well as the implementation of measures to prevent future through use of improved specifications for pipe materials and meters, and rigorous inspection of pipeline installation.

E. Previous Bank Lending

1.18 Except for a loan in 1964 for development of the Metropolitan Manila water supply system, the Bank's involvement in the sector essentially started in 1977 with the First Provincial Cities Water Supply Project (Loan 1415-PH, US\$23 million, Project Performance Audit Report No. 6422) to improve water supply to five provincial towns. Since then, five additional loans have been made comprising: (a) three for expansion of water supply and sewerage in Metropolitan Manila i.e. Loan 1615-PH, for US\$ 35.5 million in 1978 (Project Completion Report No. 7153); Loan 1814-PH, for US\$ 63.0 million in 1980; and Loan 2676-PH, for US\$ 69.09 million in 1986; (b) water supply in provincial towns (Loan 1710/Credit 920-PH, for US\$ 38.0 million in 1979); and (c) a national program of rural water supply and sanitation (i.e. Loan 2206-PH), for US\$ 35.5 million in 1982.

1.19 All of the above listed projects have substantially met or are expected to meet their physical and institutional objectives, although they have suffered construction delays and fallen short of their financial goals. Institutionally, the projects have been important in helping to establish satisfactory organization structures and bylaws, implement extensive training programs, improve the technology used, establish accounting and billing systems, and provide the capacity to implement a larger volume of water supply, sewerage and sanitation facilities.

1.20 Project implementation has normally been slow, with delays of two or more years, largely due to macroeconomic problems related to the

country's difficult economic and political situation culminating in the 1986 revolution. These problems resulted in rapid inflation, large currency devaluations, shortages of counterpart funds, business failures by contractors, a major reorganization of sector institutions and changes in senior management and technical staff in all institutions.

1.21 Recognizing these constraints, the Bank, under its Special Action Program (SAP), attempted to facilitate implementation by, among other things, increasing disbursement percentages, establishing Special Accounts, and working with the project entities to amend project scope. These measures, combined with actions taken by the implementing agencies to adjust to the new circumstances, helped ameliorate the situation somewhat. However, changes in the scope of some projects meant that about US\$ 60 million equivalent (about 20% of the Bank loans outstanding) could not be utilized before loan closing dates and had to be cancelled. Some institutional achievements were also diminished, due to discontinuity in top management positions and uneven professional interest.

F. Sector Strategy

1.22 The Bank's role in the sector is to assist the Government in implementing its sectoral program through the provision of needed financial resources and in gradually solving the sector issues and constraints described above. The Bank's past involvement in the sector has been instrumental in helping the Government to develop a well-conceived institutional framework and policies for the sector. In the future, given existing levels of service, Bank assistance will focus on the provision of service to the urban and rural poor as well as continued improvement in institutional capabilities, particularly in planning and system operation and maintenance.

1.23 A close dialogue has been maintained by the Bank with other External Support Agencies (ESA) with the objective of seeking their participation in a nation-wide rural water supply and sanitation program. The Government of Japan, through OECF, has already taken the initiative with the appraisal of a complementary project covering provinces in the Visayas and in Mindanao. The Asian Development Bank is implementing an Island Provinces Water Supply Project. The Governments of Belgium, Denmark and France also are supporting various ongoing projects. The Australian Government, through the Australian International Development Assistance Bureau (AIDAB) has formulated a project for about three provinces in Region IV in the Visayas to be implemented primarily through the involvement of NGO. The U.S. Government, through USAID, is assisting DLG with training for the institutional development of WSA. Altogether the proposed and ongoing projects cover some 45 to 50 of the 75 provinces in the Philippines. The Government of the Netherlands, through the Directorate General for International Support (DGIS), recently approved a grant for the International Training Network (ITN) which will support training activities in the sector. Indications of interest to provide support, in addition to that already granted, have come from the Governments of Denmark, Italy, the Netherlands, the Federal Republic of Germany and Singapore. Such a concerted and cooperative effort can be expected to have a significant impact on the improvement of the lives of the rural population

2. THE BORROWER, IMPLEMENTING AGENCIES AND BENEFICIARIES

2.1 The Government of the Republic of the Philippines, through the Department of Finance will, as is the usual practice, be the borrower. The proceeds of the loan would be passed on as budgetary appropriations to the implementing agencies described below.

A. Department of Public Works and Highways

2.2 The Department of Public Works and Highways (DPWH) is responsible for the planning, design, construction and maintenance of centrally funded infrastructure projects. The Department was created in 1981 with the merging of the then Department of Public Works and the Department of Public Highways. This reorganization was mainly to assure better cooperation of government staff on projects and to avoid duplication of respective field organizations. DPWH is headed by a Secretary who is assisted by five Undersecretaries (for Planning, Administration and Finance; Construction and Quality Control; and Design, Equipment and Maintenance). In addition, DPWH has six staff services and five Staff Bureaus. DPWH field organization consists of 15 Regional Offices, 101 District Offices and 60 City Offices. At present DPWH has an approved establishment of about 19,000 personnel of which about 1,300 are at Headquarters and about 17,700 at the field offices. DPWH in 1988 had an budget of P 8.6 billion. Because of the relatively low government salary scales there is a shortage of well experienced middle-level technical staff at DPWH Headquarters and in the field, particularly in the maintenance organization. To handle the overload DPWH employs about 2,300 contractual employees who are paid a 20 % loading on normal salaries but on the other hand do not receive the normal benefits awarded to full-time government employees.

2.3 Attached to the [] Division is the Project Management Office (PMO-RWS) for Rural Water Supply. It has a staff of 73 of which 2 are regular government employees and the remainder of 71 are contractual employees. The total includes about 30 professionally qualified engineers with an average of 2 years experience, 16 finance and administrative staff and 25 support staff including secretaries, messengers and drivers. The PMO is responsible for the coordination and implementation of the rural water supply projects funded through DPWH budgetary allocations, including those funded by ESA. At present the PMO's workload includes the ongoing Bank-assisted First Rural Water Supply and Sanitation Project (Ln. 2206-PH), the ADB-assisted Island Provinces Rural Water Supply Project (Ln. 821-PHI), the OECF-assisted Rural Water Supply III (Loan PH-P75) and the water supply components of the Second and Third Davao del Norte Irrigation Projects. In addition it is responsible for the overall coordination and implementation of the Accelerated Water Supply Program; which will be supported by the proposed Bank-assisted First Sector, the OECF supported Rural Water Supply Project currently under preparation, and those under consideration by other ESA. It is clear that with the limited resources and heavy work load the PMO is not in the position to supervise in detail the many ongoing and proposed projects. The formulation of the Bank-assisted project therefore includes an adequate level of consulting services.

B. Department of Health

2.4 The Department of Health (DOH) is the principal health policy-making and implementing agency of the Government. It has five organizational levels: (a) the central level, comprising DOH Headquarters; (b) the regional level, including offices of the Regional Directors of Health and general and specific hospitals; (c) the provincial level, including offices of the Provincial Health Officers and Provincial and District hospitals; (d) the the Municipal Health Officers; and (e) Rural Health Units

- including midwives and Barangay (village) Health Stations. DOH is headed by a Secretary who is assisted by five Undersecretaries of Health, and has an Executive Committee to decide program policies and priorities. A reorganization in 1988 streamlined DOH management in order to improve the efficiency and effectiveness of health service delivery. In 1988 responsibility for the operational budget was transferred to the provincial level, expanded the physical coverage of the public health care program, particularly at the Barangay level; and helped clarify responsibilities at each level of the health care delivery system. In 1988 DOH had a budget of P 5.3 billion. At present DOH has an approved staff establishment of about 69,000 of which about 3,000 are at headquarters, about 57,000 in the regional health offices and about 9,000 in the special hospitals.

2.5 Attached to the Office of Public Health is the Office of Environmental Health Service which is responsible for the implementation of the sanitation program. It has a staff of 44 of which 39 are regular employees and the remainder of five are contractual employees. The total includes three Medical Doctors, 21 Sanitary Engineers, seven administrative staff, and eight support staff including secretaries, messengers and drivers. At present the PMO's workload includes the sanitation component of the FRWSP and ...(PRESP). It plays a major role also in the preparation of the proposed project. As with the PMO at DPWH, the PMO at DOH is overloaded. With a limited scope for additional recruitment because of the curtailment on staff growth, it is clear that the DOH PMO must also rely on additional Contract Employees or Consultants for the implementation of the Sanitation program.

C. Local Water Utilities Administration

2.6 The Local Water Utilities Administration (LWUA) was established in 1973 under the Provincial Water Utilities Act, to be

responsible for the provision of financial and technical assistance for the development of water supply and sanitation at Level III service in the urban areas outside Metropolitan Manila. There are potentially about 800 municipalities falling under its jurisdiction. In 1988 LWUA absorbed the Rural Waterworks Development Corporation (RWDC) thus giving it the responsibility also to provide Level II water supply systems in the smaller settlements in the rural areas. LWUA is headed by an Administrator who is assisted by four Deputy Administrators (for Administration, Design, Engineering, and Finance). LWUA assists in the formation of Water District which are autonomous from local government, and in its efforts to decentralize has promoted the concept of the "Godfather" Water District which are expected to play a coordination and assisting role in their Regions. LWUA's new organization plan has an establishment of 1580 personnel, all located at Headquarters in Manila. The total staffing in the middle of 1989 is 927, of which 325 are in Engineering Services, 133 in Finance Services, 192 in Regulatory Services and 277 in others Departments (Administrative Services and the Office of the Administrator). Its capital and operating budget in 1988 amounted to P 488 million and P 159 million, respectively. Actual investments in projects in 1988 were P 202 million and operational expenditures P 89 million leaving after other expenditures an unspent balance of P 96 million.

2.7 LWUA has experienced considerable operational difficulties, initially because of the economic depression of the mid-80s and then as the after-effect of the revolution. Serious management/staff disputes broke out which resulted in a succession of acting Administrators or Officers-in-Charge managing LWUA, but with only limited executive powers. As a result LWUA has been virtually inactive over the last few years. A new Administrator was appointed in mid-1989 and LWUA is now on its way to regain its previous status as one of the leading water supply authorities in South East Asia. However, LWUA has paid a toll for the past events. It currently is in the throes of a major reorganization which as a first step

places a greater emphasis on regionalization of operations but which will take some time to become fully operational. A financial restructuring will be required to place LWUA anew on a sound financial footing.

2.8 Both locally and externally funded projects are implemented through LWUA's normal organizational structure which eliminates the need for special Project Management Offices. However LWUA appoints from amongst its staff experienced officers who play the major coordinating role between LWUA and ESA in respect of the normal day-to-day implementation arrangements of projects. At present LWUA's workload includes the ongoing Bank-assisted First Rural Water Supply and Sanitation Project (Ln. 2206-PH) - in as far as it took over the activities of RWDC, the ADB-assisted Water Supply Sector Project (Ln. 545-PHI), the Belgian-assisted project for five Municipalities in Cebu Province, the DANIDA assisted Projects for 35 towns and preparations for French assisted projects in WDs. It also is responsible for the preparation for potential projects for which LWUA will seek assistance from the Bank and the Australian, Danish, Italian, West German and governments.

2.9 Despite its past difficulties and staff losses and turnover, LWUA has remained a basically sound institution with a well qualified work force which includes 270 engineers, 75 professional finance staff, and about 633 other staff including administrative and legal personnel and support staff including secretaries, messengers and drivers. Apart from its financial difficulties which will be addressed as part of the proposed project, LWUA is believed to be in a satisfactory condition to tackle a reactivated role in the sector, and play its role in the implementation of the Accelerated Water Supply Program.

D. Department of Local Government

2.10 The Department of Local Government (DLG)

2.11 The Project Management for Rural Water Supply

2.12 The beneficiaries of the project will be the rural population. Close to three million people in the Luzon area will benefit from the water supply facilities to be provided and some nine million people in Luzon, Visayas and Mindanao will obtain sanitary latrines for excreta disposal.

3. THE PROJECT

A. Project Origin and Formulation

3.1 The Water Supply, Sewerage and Sanitation Master Plan of the Philippines 1988-2000 is a policy statement aimed at accelerated development of the sector. The Master Plan is in accord with the Medium-Term Philippine Development Plan covering the period 1988 to 1992. It provides a comprehensive framework through which the sector agencies are guided in preparing their long term plans in a sectoral approach. The Master Plan was launched at the Water Supply, Sewerage and Sanitation Decade Consultative Meeting, held in Manila in May 1988, at which all major multi and bilateral Funding and Aid agencies were represented. In line with the Master Plan, the Government sought Bank financial assistance for a proposed Water Supply, Sewerage and Sanitation Sector Project (identified as Project PH-D-6 in the Master Plan) which is to address the more urgent sectoral priorities, namely rural water supply and sanitation and environmental improvements (largely sewerage and sanitation facilities) in the larger provincial towns. In line with this thrust the Government enacted Republic Act 6716, of March 1989, for an Accelerated Water Supply Program covering the urgent provision of about 100,000 rural water systems (Level I) covering all the Barangays in the Philippines by 1992. While this target is over-ambitious, it does not diminish the validity to give the rural population the highest priority.

3.2 The proposed project therefore grew out of the Government's request for the Bank to contribute to sector development and in particular to respond to the implementation of the Accelerated Water Supply Program. The proposed project would follow closely on and would continue the development assistance under the ongoing First Rural Water Supply and Sanitation Project, (FRWSP, Loan 2206-PH) which is to close by the end of 1989. The review of the ongoing implementation of this

project provided certain lessons, such as, the need for better planning, closer coordination and monitoring of performance. Preparation of the proposed project started in late 1988, focussing particularly on a bottom-up planning approach and greater participation by Local Government Units (LGU). Assistance was provided by the UNDP/World Bank Community Water Supply Team, to formulate appropriate standards and specifications for handpump manufacture, well development and subsequent maintenance.

3.3 As a first positive step towards operationalizing the Government's decentralization policy, the project preparation and subsequent implementation will be carried out with active participation of the Provincial Development Staff (PDS) attached to the Office of each Provincial Governor. It will do so through the preparation of Provincial Water Supply, Sewerage and Sanitation Sector Plans. This provides the means for a closer LGU identification with the project and local community participation in the expression of aspirations. Equally important, it provides the LGU with a means to monitor the implementation performance of the central Government agencies and subsequent operations and maintenance. With financial assistance from the Danish Government, through the Danish International Development Agency (DANIDA), consultants were engaged to assist the PDS with the preparation of plans for the provinces of La Union and Cavite which are to serve as examples. These first two Plans were followed up, with additional grant funding from the same source, with the preparation of plans for a further six provinces to be included under the project. Assistance was also provided by the Manila Office of the United Nations Children's Emergency Fund (UNICEF) and a local NGO, the Tulungan sa Tubingan Foundation, to provide a local perspective to the formulation of the Plans. The project therefore operationalizes the Government's sectoral priorities enunciated in the Master Plan as well as its decentralization objectives.

? useful to have

3.4 Although for this first Sector project the physical targets, standards and specifications and implementation arrangements are spelled out in some detail, it is proposed, that as soon as it is shown that the innovations included in the project are operational, to allow the implementing agencies considerable flexibility in responding to changing sectoral needs. The proposed project is formulated with a realistic implementation period of 5 years taking into account the existing institutional and technical capabilities. The area of Luzon was selected as the focal point for the project proposed to be financed by the Bank reflecting the GOP's geographical focus of activities by ESA to thus avoid overlaps and achieve greater efficiency in implementation.

3.5 It is worthwhile to reiterate that although the Government's Accelerated Water Supply Program covers only the provision of water supply, the proposed project places equal emphasis on complementary sanitation, thus aiming to maximize the health benefits expected. In addition to Luzon area, the proposed sanitation component will therefore cover the Visayas and Mindanao areas aiming to improve the environmental sanitation throughout the country and complement the water supply projects assisted by other donors. Support programs such as education and community participation are also essential components of the project to ensure sustainability of the investments and achieve improved operation and maintenance of the facilities. The Implementing Guidelines of RA 6716 spell out the institutional arrangements necessary at the Central, Regional, Provincial/Municipal and Barangay levels.

3.6 To ensure the proper use and operation and maintenance of the water supply facilities, the Implementing Guidelines of RA 6716 call for the formation of Barangay Waterworks and Sanitation Associationa (BWSA); these cover the whole of the Barangay and substitute for the former Rural Waterworks and Sanitation Associations (RWSA) which were established for each single handpump or developed spring. The design of

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the proposed project relies heavily on the formation and functioning of the BWSAs which will own, operate and maintain the water supply facilities. Hence, a separate "Community Development" component is included in the project under which all the community based activities will be carried out.

B. Project Objectives

3.7 The main objective of the proposed project is to provide safe and adequate water easily accessible, and proper sanitation to the rural communities who lack such basic services and depend upon unsafe sources of water and use of unsanitary facilities for excreta disposal. Close to three million people in the Luzon area will benefit from the water supply facilities to be provided and some nine million people in Luzon, Visayas and Mindanao areas will obtain sanitary latrines for excreta disposal.

3.8 The institutional objectives of the proposed project are: (a) to assist the Government with its decentralization objectives seeking a greater role for LGU in planning, implementation and monitoring in the sector; (b) develop organizational arrangements for improved operation and maintenance of water supply facilities; (c) promote effective community participation in operations and maintenance to achieve sustainable sector development, and (d) train manpower in planning and implementing water supply and sanitation systems.

3.9 The proposed project particularly aims to assist the Government's efforts in decentralization of development. The preparation of Provincial Water Supply, Sewerage and Sanitation Sector Plan (PW4SP) by LGU, under the general guidance of DPWH, will devolve greater responsibility on the Provincial and Municipal governments, strengthen local planning capability through utilizing bottom-up approaches, improve implementation procedures, achieve self-reliance and sustainability in

community based water and sanitation programs, and improve the operation and maintenance of the constructed facilities.

C. Rationale for Bank Involvement

3.10 In line with the Bank strategy, the proposed project supports the Government's policy and efforts to raise the socio-economic conditions of rural populations in the Philippines. It fully supports the objectives of the Accelerated Water Supply Program, aimed to give the benefits of safe and adequate water supply directly to about 15 million Filipinos in the rural areas. The Bank's support at this stage is considered critical not only in assisting the Government in this major undertaking to further develop the sector, but also in continuing the sector development started under the FRWSP. It is also intended that the proposed project will provide the guidelines for other ESA to follow and thus cover the remaining provinces in the Philippines in a uniform manner.

3.11 Accrued benefits of improved water supply and sanitation in the rural areas include: (i) reduced morbidity and mortality, (ii) higher productivity and income, and (iii) reduce the burden and drudgery of carrying water. An analysis of the Philippines' statistics on trends of morbidity and mortality has shown that while mortality rate substantially declined, morbidity figures continued to display an increasing trend particularly for diarrhoeal diseases. While the infant mortality rate reduced in 1986 to 35 per thousand live births from 44.1 in 1981, the morbidity figures have shown an increasing trend during the same period. Diarrhoeal diseases which are strongly associated with unsafe water and poor hygiene and sanitation, are ranked second among the ten leading causes with an incidence rate of about 990 per 100,000 population in 1986. According to the Philippine Health Statistics the total number of cases for diarrhoeal diseases increased continuously by 3.2% over that of each preceding year.

3.12 From the above analysis it can be concluded that the impact of earlier programs to improve water and sanitation is not felt yet, as evidenced from the increasing morbidity rates. The reduction in the mortality rates, on the other hand, is attributed to improved health services particularly to the successful implementation of the primary health care program. The continued support to the rural water supply and sanitation subsector through a comprehensive community based approach including health education and community participation is, therefore, essential in maximizing the health benefits of the rural population.

D. Project Description

3.13 The proposed project will provide water supply and sanitation services to the rural Barangays in the Philippines. Luzon area is selected as the geographic focus of the project for water and sanitation investments. However, the sanitation component will expand to the Visayas and Mindanao areas to complement the water supply programs planned by GOP for financing by other donors. Hence, the sanitation component aims for nationwide coverage.

3.14 Luzon Area: The Luzon project area covers six regions (Regions I to V - excluding the National Capital Region which is part of the MWSS service area -, and the Cordilleras Autonomous Region (CAR) with a population of about 24 million people. There are 37 provinces in this populous area including 731 municipalities and 20 cities. In Luzon, the project area will cover 17800 Barangays. A table showing the regions, provinces, municipalities/cities, Barangays and respective populations is given in Annex [].

3.15 Visayas and Mindanao Areas: The Visayas area covers Regions VI to VIII with a population of 13.2 million. There are 16 provinces, 385

municipalities, 12 cities and 4300 Barangays. In Mindanao the population is 13.5 million in Regions IX to XII covering 22 provinces. There are 290 municipalities, 16 cities and 7900 Barangays.

3.16 The project would have four main components. The first component will cover the Level I (point sources) water supply schemes in the rural areas and will be implemented by DPWH. In general, it will include groundwater supply through shallow and deep wells, rain water collectors, development of springs, appropriate water treatment units and rehabilitation of existing wells in the Barangays. The second component will cover the implementation of sanitation facilities throughout the rural areas in Luzon, Visayas and Mindanao and will be implemented by DOH. The scope of the work will be the improvement of environmental sanitation in the Barangays and will include the provision of family latrines, well disinfections, school toilets, sullage removal units and pilot waste disposal facilities. Both the first and the second components will include consultancy services and training activities relevant to the work. A full description of the training activities is given in Annex 5 (B). The third component will cover preparatory activities for future sector projects and include technical assistance for studies to cover (a) urban environmental (sewerage/sanitation) improvements, (b) financial restructuring of LWUA, (c) computerization of LWUA's financial administration, and (d) feasibility studies and designs for urban water supply systems all of which will be implemented by LWUA. The fourth component covers institutional development activities planned to be implemented by DLG and LGUs at the local government levels.

3.17 A summary of the components to be included in the project is as follows:

(A) Rural Water Supply Facilities (Level I) in Luzon:

- (i) Drilling of about 11,000 Shallow Wells (Average depth of 12 m.);

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- (ii) Drilling of about 7,000 Deep Wells (Average depth of (60m);
- (iii) Procurement and installation of about 16,000 Hand Pumps together with casing and pipes for the above new wells;
- (iv) Development of about 1,000 Springs, including construction of spring boxes and laying of about 3,000 km. transmission pipelines;
- (v) Rehabilitation of about 5,000 existing non-functioning wells including replacement parts and Hand Pumps;
- (vi) Installation of about 200 rain water collectors;
- (vii) Procurement of equipment, materials and vehicles;
- (viii) Construction of 25 workshop buildings;
- (ix) Technical Assistance for the preparation of Provincial Water Supply, Sewerage and Sanitation Sector Plans;
- (x) Consultancy Services for project implementation; and
- (xi) A Community development and training program to support the formation and training of approximately 17,000 together with inservice training program.

(B) Rural Sanitation nation-wide:

- (i) Procurement and Installation of 1.5 million PVC water sealed our flush toilet bowls;
- (ii) Construction of 1,000 Barangay school toilets;
- (iii) Procurement of Chemicals for the disinfection of public wells;
- (iv) A Pilot Project covering the Procurement and Installation of 1,000 waste water treatment units;
- (v) 7600 sullage removal units;
- (vi) Provision of laboratory equipment for water quality surveillance;
- (vii) Procurement of Vehicles;

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(viii) Training programs for about 4,000 sanitary inspectors, 130 sanitarians and 210 chemists and laboratory technicians; and

(ix) A Health Education, Information and Communications Program conducted nationally.

(C) Technical Assistance and Support:

(i) to LWUA for:

- (a) Preparation of feasibility studies and designs for 72 future urban water supply schemes;
- (b) Preparation of National Sewerage and Sanitation Master Plan and Feasibility Studies.
- (c) Study for financial restructuring;
- (d) Preparation of Automation Plan; and
- (e) Training of LWUA, WD and BWSA staff.

(D) Guidance and assistance by DLG in the overall planning, implementation and monitoring of institution building and community development activities, particularly in regard to PPDO and the 60,000 training events related to the formation and training of BWSAs.

(ii) to DPWH for:

- (a) Preparation of Provincial Water Supply, Sewerage and Sanitation Sector Plans;
- (b) Computer Equipment and ancilleries; and
- (c) Consultancy Services for project implementation.

(iii) to DOH for:

- (a) Training of about 200 sanitary engineers and about 3000 Sanitary Inspectors,
- (b) assistance in the integrated training of BWSA; and
- (b) Health Education and development of IEC Material; and

(iv) to DLG for:

- (a) Training of Barangay Water Supply and Sanitation Association operators, maintenance and administration personnel;

E. Cost Estimates

3.18 The cost of the proposed project, including physical and price contingencies, is estimated at US\$ 150.6 million. Local and foreign exchange components are estimated at US\$ 92.3 million (61.3%) and US\$ 58.3 million (38.7%), respectively. The water supply component to be implemented by DPWH amounts to US\$ 92.1 (61.2%) of the total project cost, sanitation to be implemented by DOH amounting to US\$ 53.7 or 35.7 % of the total cost and technical assistance to benefit various central and local government agencies and the community to US\$ 1.5 or (1.0%).

3.19 It is planned to seek grant financing for a number of TA activities; however, in order not to delay the formulation and implementation of the project, and hence the development program, the required amounts have been included in the loan and would then subsequently be reallocated upon receipt of grants from ESA. The proposed Bank loan would cover the project's total foreign exchange cost, not covered by grants, of US\$ 56.0 million and US\$ 44.0 equivalent or 47.7 % of local currency financing. Costs have been estimated on the basis of October 1989 prices. Physical contingencies are estimated at an average of 5.0% of the base cost of all project components. Price contingencies are estimated at 9 % per annum for local costs throughout the period 1989-91 and at 8 % per annum thereafter and, for foreign costs, 7.2 % up to 1990 and 4.4% thereafter. Price contingencies are equal to 15.5% of base costs plus physical contingencies. Estimated costs are summarized in Table 3.1 and are given in detail in Appendix 4 A to D.

Table 3.1: Project Cost Summary

WORKS	-----MILLION PESOS -----			% OF BASE COST	---- MILLION US\$ ----			% Foreign
	Local	Foreign	Total		Local	Foreign	Total	
A. RURAL WATER SUPPLY - DPWH	863.4	749.2	1612.6	60.4%	40.2	34.9	75.1	46.5%
B. RURAL SANITATION - DOH	673.3	297.0	970.3	36.4%	31.3	13.8	45.2	30.6%
C. TA AND SUPPORT - LWUA	47.5	10.3	57.8	2.2%	2.2	0.5	2.7	17.8%
D. COMMUNITY DEVELOPMENT - DLG	27.8	0.0	27.8	1.0%	1.3	0.0	1.3	0.0%
BASIC COST, PRICES OF DEC. 1989	1611.9	1056.5	2668.4	100.0%	75.0	49.2	124.2	39.6%
PHYSICAL CONTINGENCIES	102.2	41.5	143.8	5.0%	4.4	1.8	6.2	29.1%
PRICE CONTINGENCIES	446.6	258.7	705.3	16.2%	12.9	7.3	20.2	36.3%
TOTAL PROJECT COST 1)	2160.8	1356.7	3517.5	121.2%	92.3	58.3	150.6	38.7%

1) Due to rounding the last digit in totals may appear different than the sum of digits.

3.20 Cost estimates are based on unit rates for similar works being carried out and financed under the First Rural Water Supply and Sanitation project which have been compared with ongoing similar projects. The average cost estimates are considered reasonable and realistic. The costs of consultant services are based on present consultant contracts for similar work in the country.

F. Financing Plan

3.21 On the basis of the Bank's maximum financing participation rate for social sector projects of 75 % of the total project cost of about P 3.5 billion (US\$ 150 million), less duties and taxes of about P 300 million (US\$ 15 million), the loan would be about US\$ 100 million. The financing plan would be as follows:

Pesos Million

US\$ million

	Local Forex Total			Local Forex Total		
Costs:						
DPWH Rural Water	1189	969	2158	50.5	41.5	92.1
DOH Sanitation		874	375	1249	37.5	16.2
5.7						
DLG Commun. Dev.	35	0	35	1.5	0.0	1.5
LWUA Proj. Prep.	62	13	75	2.7	0.6	3.2
	-----	-----	-----	-----	-----	-----
	2160	1357	3519	92.3	58.3	150.6
	=====	=====	=====	=====	=====	=====
Financing:						
Government	1110	0	1110	47.0	0.0	47.0
World Bank	1020	1307	2327	44.0	56.0	100.0
Bilat. Grants	30	50	80	1.3	2.3	3.6
	-----	-----	-----	-----	-----	-----
TOTAL FINANCING	2160	1357	3517	92.3	58.3	150.6
	=====	=====	=====	=====	=====	=====

3.22 The total annual budgetary allocations required, including that part which will be financed from external sources, amount to about: P 400 mn in 1990, P 700 mn in 1991, P 700 mn in 1992, P 800 mn in 1993, P 700 mn in 1994, and P 200 mn in 1995.

3.23 Note should however be taken of the expressed wish of the executing agencies to implement the project at a faster rate than reflected in these projections, so as to attempt to achieve the targets under the Accelerated Water Supply Program; this would increase the required budgetary appropriations proportionately.

Table 3.3: Annual Budgetary requirements

Year	----- Agency -----				TOTAL
	DPWH	DOH	LWUA	DLG	

	P mn.	P mn.	P mn.	P mn.	P mn.
1990	207	183	1	6	397
1991	412	300	38	8	759
1992	496	227	25	9	757
1993	530	247	10	8	795
1994	453	208	0	4	665
1995	60	84	0	0	145
	-----	-----	-----	-----	-----
TOTAL	2,158	1,249	74	35	3,518
	=====	=====	=====	=====	=====

3.24 As is the usual practice the Government would provide annual budgetary appropriations through the its normal budgetary processes, which for the first time will also include that part of expenditures funded from external sources. The Department of Budget and Management (DBM) manages the budgetary allocations and the Department of Finance (DOF) processes the fund releases. The Bank would establish a Special Account at the Central Bank against which the proportion funded by the Bank may be claimed (see para. []). Executing agencies would prepare Disbursement Requests on the basis of the disbursement rates as given in paragraph [] and use these as rthe supporting documents for withdrawals from the Special Account. Successive withdrawals would be summarized on Statements of Expenditure (SOE) and submitted to the Bank. The Bank will then replenish the Special Account.

G. Implementation

3.25 The implementation of the proposed project will be based largely on the institutional arrangements established for the implementation of the Accelerated Water Supply Program. The rural water supply component of the proposed project will, therefore, be implemented by DPWH which is mandated under RA 6716 as the lead agency for the

construction and rehabilitation of Level I water supply systems. DOH is the responsible agency for the implementation of the sanitation component. Both DPWH and LWUA will undertake preparatory activities for future sector projects. The role of DLG in sector development has been redefined through NEDA Board Resolution No.5 dated March 1989, as the responsible agency for administration and institutional strengthening of the LGUs in connection with the implementation of Level I water supply projects.

3.26 The magnitude of the Accelerated Water Supply Program necessitated the formulation of an inter-agency collaboration for an effective and efficient water supply program delivery. Consequently, a Memorandum of Agreement (MOA) dated August 1989 was entered between DPWH and DLG describing their roles along those of the LGUs in the implementation of Level I water supply projects. The water supply component of the proposed project will, therefore, be implemented in line with the above arrangements which places the responsibility for physical implementation and technical supervision on DPWH. The institutional development, covering all training and community development activities, will eventually be shouldered by DLG and the LGUs. The MOA further states that DPWH and DLG undertake a three-year program to develop the capability of the LGUs to assume responsibilities in project preparation, designing, conducting bidding and awarding contracts, monitoring and implementation of Level I water supply projects. DPWH has also entered into another Memorandum of Agreement with DOH and DECS for their assistance in the formation and organization of BWSAs and in the conduct of training activities.

3.27 In an effort to establish a clearer understanding of the implementation procedure of the rural water supply program a national workshop was held in September 1989 to formulate an Institutional Development Program. A model was developed identifying the activities at the provincial, municipal and barangay levels to be undertaken by

respective agencies and units of DPWH, Provincial, Municipal and City Governments, Barangay Councils, BWSAs, DOH, DECS, and the NGOs. A Steering Committee would be formed to formulate guidelines and policies concerning the institutional aspects of rural water supply implementation. Two separate task forces would also be established under the Steering Committee namely, the Task Force on Community Development and the Task Force on Training. An important feature of the institutional arrangement would be the appointment of a community organizer or action officer by DLG in each province to be attached to PPDO. The Institutional Development Model and the Steering Committee Organization are given in Annexes [] and [] respectively.

3.28 At the national level, a Project Coordination Committee (PCC) will be established to ensure the efficient and effective implementation of the proposed project. The PCC will facilitate coordination, monitor progress and disbursements and conduct periodic review of project implementation. It will consist of senior representatives of the relevant sector agencies at Director level and will meet formally at the launching of the project and at least quarterly thereafter. The PCC will review and approve the Quarterly Progress Reports for submission to: (a) Secretaries of involved Departments, (b) concerned Provincial Governments, and (c) the Bank. It will maintain minutes of its proceedings which will be distributed with the Quarterly Reports. The PCC will have the following composition: DPWH PMO/RWS Project Director as Chairman; DOH Project Manager as member; LWUA Deputy Administrator as member; DLG Project Manager as member, and NEDA representative as member.

3.29 The Regional and District Engineering Offices of DPWH (RDO/DEO) will construct and install the water supply systems and rehabilitate the existing facilities under the overall guidance and direction of DPWH PMO/RWS. DEOs will initiate the formation of BWSAs, assist in the registration process and conduct training courses. A limited number of

water supply projects will be implemented by LGUs following an assessment of their capabilities by DPWH and DLG.

3.30 The Institutional Development Model described above and formulated for the Accelerated Water Supply Program is supplemented to cover the sanitation program which will be implemented by DOH. The Project Management Office, attached to the Environmental Health office of DOH, is responsible for the overall supervision of the sanitation program and will provide nationwide planning, programming, management, monitoring, reporting and logistic support. Through their grassroots organization at the Municipal and Barangay levels DOH will assist in the integrated training of the BWSAs. The Central PMO will also manage the bidding, procurement and supply of equipment and materials.

3.31 Implementation of the sanitation component will be undertaken by the Project Management Offices organized by DOH at several levels. The PMO at the regional level, will be responsible for monitoring operations in the region including training and guidance on technical matters provided by senior sanitary engineers and support staff. At the provincial level, sanitary engineers and supervising sanitarians under the Provincial Health Officer will be responsible for training of and technical assistance to the local inspectors. At the municipal level, the PMO is composed of the Municipal Health Officer as leader and the sanitary inspectors. The sanitary inspector will be the key person for the sanitary toilet construction and water quality surveillance of the proposed project. He will be assisted by the midwives and the health workers from the Barangay Health Stations. The PMOs at the Municipal level will implement the project activities related to health education, training, community motivation and organization in toilet construction and water surveillance using the Primary Health Care delivery organization.

- (iv) initiate community development activities, training courses and assist in the formation of the BWSAs.

(B) The Project Management Office at DOH will:

- (i) implement the Rural Sanitation Component;
- (ii) prepare IEC materials and conduct community health education programs;
- (iii) assist with the monitoring of implementation, operations performance, and health status at the Barangay level;
- (iv) undertake community development and training activities and assist in the formation of BWSAs.

(C) LWUA will:

- (i) supervise the preparation of feasibility studies and designs;
- (ii) provide technical assistance and training; and
- (iii) supervise the Financial Restructuring Study; and
- (iv) prepare the Sewerage and Sanitation Master Plan with the help of consultants.

(D) DLG will:

- (i) assist in the institutional development of LGUs for improved program delivery.

3.35 To assist with the research and testing of alternative options, the UNDP/World Bank Community Water Supply Team, based in Singapore, will provide the services of experts from time to time to advise on alternatives for maintenance of Level I water supply systems, manufacture of handpumps and for quality control, well drilling techniques including

hydrogeological advise, and community development and training. Terms of Reference for the contribution are given in Appendix [].

3.36 Under the auspices of the International Training Network (ITN), administered by LWUA under the direction of a Steering Committee on which concerned sector agencies and institutions of learning are represented, assistance will be sought for the formulation and execution of training courses for well drillers, measures to increase the numbers of hydrogeologists being educated in the Philippines, and for the production of Training Manuals pertaining to the various activities and skills in the water supply and sanitation sector.

3.37 Because of the considerable turnover and new staff which will participate in the implementation of the project, a Project Launching Workshop will be held before the commencement of the implementation of the Project, at which an overview will be given of the implementation arrangements and Bank procedures for Procurement, Engagement of Consultants, preparation of Disbursement Application including use of Statements of Expenditure, reporting and monitoring requirements, and preparation of Project Accounts and the audit thereof. The arrangements for the conduct of the Workshop, at which staffs of the implementing agencies and concerned Provincial Development Staffs will participate, will be made by the consultants to be engaged to assist with project implementation.

H. Procurement

3.38 Equipment and materials, shallow well and deepwell handpumps, vehicles, toilet bowls, pilot waste water treatment units, water testing equipment needed for the project amounting to about US\$ [] million are will be procured by ICB according to the Bank's procurement guidelines. A margin of preference equal to 15% of the CIF price or the prevailing

import duty, whichever is lower, will be granted to domestic manufacturers in bid evaluation. All ICB contracts will be subject to the Bank's prior review of procurement documentation and of proposed contract awards.

3.39 Civil works for the construction of 18,000 wells, 1000 spring development, 5000 rehabilitation works, 25 provincial workshop buildings, 800 Barangay school toilets, 1,500,000 toilet units, 7600 sullage removal units, and 1000 pilot waste water treatment units would be procured through local competitive procedures satisfactory to the Bank or through force account or community participation. On account of the magnitude of work ahead, DPWH has agreed moving towards packaging the well construction and handpump installations under large contracts to facilitate a rapid implementation rate and achieve standardization and economies of scale. Agreement is to be reached on procurement.

3.40 All consultancy services will be obtained on the basis of the Bank's Guidelines on the engagement of Consultants.

Table 3.4: PROCUREMENT SUMMARY
(US\$ million)

Procurement Method Project Element	ICB	LCB	Other	Total Cost
A. CIVIL WORKS		53.33 (34.80)		53.33 (34.80)
B. EQUIPMENT	51.21 (51.21)	0.43 (0.43)		51.64 (51.64)
C. TRAINING			17.14 (11.16)	17.14 (11.16)
D. CONSULTANCY SERVICES			5.49	5.49

			(5.49)	(5.49)
	-----	-----	-----	-----
TOTAL	51.21	53.75	22.63	122.19
	=====	=====	=====	=====

- Notes: 1. Amounts shown for each project element include contingencies.
 2. Figures in parenthesis are the respective amounts financed by the Bank loan.
 3. Total cost excludes land acquisition.

I. Disbursements

3.41 The categories of items to be financed out of the loan proceeds and the percentage of expenditures for items to be financed in each category are given below:

(A) Equipment and Materials: Items procured under ICB:

- (i) directly imported 100% of foreign expenditures;
- (ii) locally manufactured 100% of local expenditures (ex-factory);
- (iii) locally procured 65%

(B) Civil Works: Using Statements of Expenditure (SOE) based upon agreed amounts of completed facilities of various kinds formally handed over and covered by Certificates of Acceptance for water supply facilities, Certificates of Compliance for sanitation facilities, and Certificates of Completion for Workshops as follows:

- (i) wells US \$ 545 per completed well;
- (ii) workshop buildings US \$ 9000 per completed building
- (iii) toilet units US \$ 8 per completed unit
- (iv) sullage removal US \$ 23 " " "
- (v) school toilets US \$ 3700 " " "

(vi) pilot treatment units US \$ 290 " " "

(C) ~~Technical Assistance~~: 100% of total expenditures for consultancy services, for foreign training, and for Information /Education/Communication (IEC) materials.

3.42 To facilitate disbursement, a Special Account for the Bank's funds would be opened at the Philippine Central Bank, with an initial deposit of US\$ [] million equivalent, the estimated average expenditure for a four-month period. Applications for replenishment of the Special Account would be made when funds are down to 50% of the initial deposit or three months of expenditures, whichever comes first, subject to a minimum claim for reimbursement of US\$ 200,000.

3.43 A schedule of estimated disbursements is given in Annex [], Part [] which also shows the profile for previous water supply projects in the Philippines. The estimated disbursements generally follow the profile. The loan closing date would be June 3, 1995.

3.44 Loan disbursements will be made against contracts for []. [??? Interim certification of civil works completed and priced at unit rates in the contracts will be done by the supervisory consultants and certified by [].] Disbursements for minor civil works costs US\$ [] million or less; for equipment contracts valued at US\$ [] million or less each; and for training, would be made against statement of expenditures based on actual payments made to contractors, suppliers or training institutions.

J. Environmental Aspects

3.45 The provision of safe and adequate water supply and proper sanitation is expected to have positive environmental impacts on the lives of the people living in the rural Barangays. The environmental benefits of

the proposed project would be: (i) cleaner home and community environment; (ii) less stream and groundwater pollution, and (iii) more rational and prudent water use. The environmental sanitation component of the project will play a major role in introducing personal and household hygienic practices through effective health education leading to improved environmental health conditions. In addition to disposal of human wastes through properly constructed school and family latrines, the project will provide means for disposal of sullage waste from the kitchen and elsewhere to prevent the formation of polluted and unsanitary ponds around the houses. The elimination of odours from the water-seal pour-flush type latrines and the protection of the groundwater quality will further add to the quality of the rural environment. The proposed improvements are not expected to cause any noticeable environmental problems.

K. Women in Development

3.46 There is no doubt that improvements in basic human needs such as water supply and sanitation can have a positive impact on the lives of women and children in the rural areas. Apart from the health benefits expected, time saved and exhaustion prevented in carrying the water home is, indeed, a real benefit in itself and can be put to productive use. In addition to more time for leisure, other productive possibilities may open up such as: (i) increased work in agriculture; (ii) production of more food for family consumption and sale; (iii) participation in community programs; (iv) production of crafts and marketing activities for increased income, and (v) more time available for the care and feeding of children. Thus, the provision of potable and easily accessible water supply in adequate quantities and improvements in environmental sanitation through the proposed project is expected to have positive impacts on women in the rural Barangays.

3.47 The Philippine Constitution states: "The State recognizes the role of women in nation-building and shall ensure the fundamental equality before the law of women and men". To this effect, a Philippine Development Plan for Women for 1989 to 1992 was approved per Executive Order No. 348. Another legal issuance, Administrative Order No. 93 of the President, for "Strengthening the Office of the National Commission on the Role of Filipino Women and for Other Purposes" was also promulgated. The commission was created to ensure full integration of women for economic, social and cultural development at national, regional and international levels and to ensure further the equality between men and women. Accordingly, the Philippines is a society where women can and do play a prominent role; many hold senior positions in government, business and academia. In line with the national policies, women are well represented also at the local levels in positions such as school teachers, nurses, midwives, social and health workers.

3.48 Access to water supply and proper sanitation will benefit women, through their involvement in project identification, planning, implementation and particularly in operation and maintenance which has proven to be, in general, a key element to achieve success and sustainability in water and sanitation programs. Through the proposed project, the Bank jointly with the Government has strengthened ways and means by which women can play a more active participatory role. At the Barangay level the project envisages providing women with the tasks and opportunities for: (i) playing important roles with respect to formation and organization of BWSAs; (ii) serving as office holders in BWSAs; (iii) obtaining skills and experience in planning, implementation, management, financial, technical and operation and maintenance aspects of water supply and sanitation projects; (iv) assisting female members of the Barangay in the generation of a sense of awareness and belonging; (v) participation in training programs for well caretakers, operators and mechanics and related courses; (vi) allowing Barangay women to participate in health

education courses and personal and household hygiene exercises, and (vii) assisting in the achievement of self-reliance and effective community participation in water supply facilities and construction of family latrines. Records will be maintained of training given under the project to indicate the gender of the participants. Existing regulations governing the operation of WSA will be amended to provide for the appointment of women to the governing committees and provide equal access to membership.

L. Poverty Alleviation

3.49 The project through its contribution to meet the basic human needs of the rural communities, also addresses the issue of poverty alleviation. Provision of safe water supply and proper sanitation are also essential to and critical for the rural poor. Improvements in health and education can be impaired if the poor people's access to such basic services are not improved. The proposed project's objectives are to raise the standard of living in the long term in the rural Barangays. The most evident direct benefit from safe water supply and sanitation to be provided under the proposed project is the improvement of health expected to be realized through reduction in mortality and morbidity. Improved health, in return, is expected to lead to higher productivity and income, increased employment, improved labour use and enlarged farm output. Added income will result in further social and economic improvements and help to alleviate the poverty situation in the rural Barangays.

M. Private Enterprise Participation

3.50 Considering the substantial volume of work to achieve the objectives of the Accelerated Water Supply Program, active involvement of the private enterprise becomes imperative. Realizing the need for greater private sector participation, the Implementing Guidelines of RA 6716 dictate that the DPWH District Offices should execute projects both by

the administration and by contract. It is further stated that the method of execution will be dictated by several factors in the field such as equipment capacity, availability of drillers and contractors, time schedule, hydrogeological conditions, and location of projects. The District Engineer would assess the situation and decide on the proportioning of projects between the administration and the private contractors. Likewise, DPWH Department Order No. 117 S of 1988 mandates that projects be undertaken by Administration in a given district shall not exceed 25 percent of the total value of all projects therein costing one million pesos or less. The Order provides also that all available well drilling and civil works contractors are expected to be properly accredited following DPWH guidelines.

3.51 While the above guidelines are explicit in the role of the private sector, assessment of their capabilities against the size of works or packages of contracts to be executed is an essential factor. Supervision of the contractors' work would add more responsibility and additional work on the DPWH District administration. Central Government assistance through PMO at DPWH is considered essential in encouraging and controlling the private sector involvement in well drilling and civil works of water supply schemes. To achieve an accelerated program delivery, consideration should be given to eventual involvement of large local and possibly overseas contractors possibly through turn-key type operations and the packaging the works and goods under large contracts.

3.52 The Bank carried out a review of the Philippine private enterprise capacity and quality of handpump manufacture, and well drilling and maintenance procedures. This identified the need to take positive action to facilitate a greater role by private enterprise and eventually reduce dependency on imported products and technologies to support sectoral development. The following comments are pertinent:

(A) Hand Pump Manufacture. The large volume manufacturing capacity and quality control for the production of handpumps does not currently exist in the Philippines. However, with the establishment of clear specifications and assistance to local manufacturers this capacity could probably be established over a 12 month period. The Bank has assessed the possibility to provide this assistance, possibly with the help of UNDP/World Bank Community Water Supply Team, based on the experience gained through the Bank's comprehensive field testing of hand pumps. This is currently under discussion:

(B) Well Drilling. It appears that there is currently an inadequate capacity for well drilling at the volume required under the Accelerated Water Supply Program. Pending the motivation of private enterprise to enter this field, it appears that at least the start of the program should be undertaken by the responsible Government authorities. However, consideration should be given to eventual involvement of large local and overseas contractors, possibly through turn key operations;

(C) Maintenance Procedures. To instill a greater degree of responsibility for quality control by the responsible implementing agencies, it would seem appropriate to require a warranty period of at least one year following installation during which they will be responsible for maintenance. Simultaneously, efforts should be made to develop a private enterprise capacity for maintenance of wells and handpumps.

4. OPERATIONS, MAINTENANCE AND FINANCIAL MATTERS

A. Operations and Maintenance

4.1 A well structured set of institutional arrangements will be required to ensure the sustainability of the project through appropriate operations and maintenance procedures and practices. The Bank proposes that completed and fully functioning wells be formally handed over to the concerned BWSA, with participation of the Provincial or Municipal Government, under which the concerned LGU and BWSA will accept the maintenance responsibility. However, to ensure the implementation of the project in a satisfactory and workman-like manner, especially as regards quality control, it is proposed that the responsible implementing agencies warrant the satisfactory performance of wells drilled and pumps installed against defective material and poor workmanship for a period of one year after installation, during which the cost of major repairs will be for their account. Thereafter, the maintenance responsibility will fall exclusively on the users of the wells. Agreement is to be reached during negotiations regarding the warranty period.

4.2 Three alternatives models of technical support are possible: firstly, in those areas where Water Districts (WD) are willing and able to provide back-up support, the so-called "Godfather" Water District developed by LWUA, the WD could provide technical assistance and support to the BWSA in return for payment for the service provided; in other areas DPWH Regional or District Offices or Provincial Public Works Offices could provide support on the same basis; and, finally, encouragement will be given by the Government for a greater private enterprise role through the training of local area technicians. The preparation of individual PW4SP will include specific consideration and recommendations as to the most appropriate operation and maintenance arrangements for the rural water supply facilities to be provided in the province.

B. Financial Matters

4.3 Recognizing the limited ability to pay for water by the rural population, the Government by virtue of NEDA Board resolution No. 5 (s. 1989) resolved that the Government will meet the cost of source development outside the Metro Manila area. The communities concerned would be required to meet the capital cost of any reticulation works, which would be financed by way of loan, and operation and maintenance costs. These principles have already been recognized in earlier projects. However, this general principle needs clarification as it should apply only to the depressed rural areas, in accordance with affordability criteria, and not for Level III system which are provided to the relatively more affluent urban areas.

4.4 A review was carried out of the Communities' willingness and Ability to Pay for the services proposed to be provided as a means to underscore the Government's financial policy decisions. The results (RESULTS AWAITED)

C. Progress Reporting and Monitoring

4.5 Strict monitoring is required of (a): Project Implementation in respect of progress in relation to plans and expenditures incurred and in terms of quality control; and (b) subsequent operations and maintenance, population served and measurable health benefits. Monitoring would be undertaken working from BWSA upwards, through the DOH voluntary health workers and midwives. A monitoring system would be put in place, with the help of consultants, to ensure that under LGUs are trained to annually report to the provincial governments on the number and location of wells installed under the project and their functioning. Provincial Governments would include this information in the updates of the PW4SP, and in reports

to the PCC which would be required to include the information in the reports submitted as defined under paras. [] to [] above. The reports would be submitted to the Bank each quarter commencing in July 1989 and would form the basis for the review of progress. Annex [], Part [] gives the format for Project Monitoring Indices which will be used.

4.6 The PMO-RWS would be required to prepare a Project Completion Report (PCR) covering the experience gained during the implementation of the project, within six months of the loan closing date of June 30, 1996. Agreement will be sought at Loan Negotiations regarding the reporting and submission of a Project Completion Report no later than six months after the loan closing date.

C. Auditing

4.7 DPWH, DOH and LWUA would establish and maintain separate project accounts for expenditures incurred under the project. Assurances will be sought during negotiations that DPWH, DOH and LWUA would furnish to the Bank, within six months of the end of each fiscal year, audit reports prepared by independent auditors acceptable to the Bank. The audit would contain a separate opinion where SOE have been used as a basis for disbursement. Similarly, financial records would be maintained showing the transactions in the Special Accounts, which must be audited and submitted to the Bank along with the Project Accounts.

5. ECONOMIC EVALUATION AND PROJECT RISKS

{COMMENT: TONY WITH PPR HELP TO DEVELOP THESE PARAGRAPHS}

A. Benefits and Sensitivity Analysis

5.1 The main benefit of the proposed project is that it puts in place the institutional arrangements, standards and specifications to lead to a sector lending approach under which the Bank and other ESA can support the financing of time slices of the sectoral development program, thus leading to a self-sustaining program of development in which the Central and Local Governments and the Communities concerned can jointly cooperate and participate.

B. Risks

5.2 There is a risk that the greater degree of decentralization embodied in the proposed project may proceed at a slower pace than anticipated; however, to mitigate against this risk the Bank is concurrently assisting the Government with a Decentralization and Local Government Development Study which is expected to lead to a rationalization the role of central and local government. The Accelerated program will require the acceptance of new procurement and project management approaches. This implies that Central Government agencies should change existing contracting arrangements for well drilling to one of bulk-contracts covering drilling of hundreds of wells, and procurement of larger packages of handpumps per contract. Central agencies should also be prepared to make more extensive use of consultants. The proposed project includes these innovations and are expected to facilitate the projected implementation rates.

6. AGREEMENTS REACHED AND RECOMMENDATION

6.1 During negotiations agreement will be sought with the Government that:

{COMMENT: COVENANTS TO BE DEVELOPED BY MISSION}

(a)

(b)

(c)

6.2 It will be a condition of Loan Effectiveness that at least six Provincial Investment Plans were prepared.

6.3 Subject to the above conditions and agreements, the proposed project would constitute a suitable basis for a Bank loan of US\$ [] million equivalent, for a period of 20 years, including a grace periods of 5 years, at the standard variable interest rate. The borrower would be the Government of the Republic of the Philippines.

PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

TRAINING AND COMMUNITY DEVELOPMENT

Context

1. Among the lessons of experience learned from more than a decade of GOP and donor project investment in the national Rural Water Supply and Sanitation Program (RWSSP), the key to success has been found to be the ability and willingness of rural communities to manage and direct their own operations, and to plan for and finance their system operations and maintenance; i.e., to become self-sustaining. This has led most donor agencies to design RWSSP projects in which a major objective was institution building, to complement and support the construction of physical facilities.
2. There is no doubt that at all levels from Central through local government units (LGU), commitment to the importance of institution building in the rural water supply and sanitation sector is high. It is also clear that training is recognized as the primary instrument to accomplish community development, capacity building, and skill transfer among end-users - the ultimate beneficiaries of the RWSSP.
3. Despite the commitment and effort of all concerned with sectoral development, the results of institutional and training investments to date show that many improvements are needed. Whereas physical targets have been met, and even exceeded, only a small number of the BWSAs that have been formed to own, operate, and maintain their systems, are still functioning satisfactorily, especially at Level I (23 percent under the Bank-financed FRWSSP). Many others have ceased to function as mandated resulting in a high incidence of systems in need of repair or rehabilitation.
4. However, the constraints on sustainable rural water supply and sanitation development, including continuous training, are many and varied. They include, for example;
 - (a) the sheer volume, and geographic dispersion, of training needs generated by providing safe water, improved sanitation, and health education to all unserved rural communities.
 - (b) inadequate staff resources at provincial and municipal levels available to devote their

services full-time in managing, coordinating, implementing, and monitoring a continuous, province-wide, rural water supply training program, including providing follow-up technical assistance to RWSSAs once formed;

- (b) insufficient funds to cover the direct costs of implementing provincial training programs, including technical assistance, vehicles, equipment, travel, per diem, fuel, honoraria, etc.;
- (c) a backlog of training needs among the staffs of Provincial Planning and Development Offices (PPDO), Provincial Water Supply and Sanitation Development Task Forces (PWSSDTF), and LGUs, particularly in regard to training skills, and community mobilization and development;
- (d) difficulties in providing effective hands-on skills training for BWSA members, operators, and caretakers, and synchronizing such training with system construction phases; and
- (e) difficulty in establishing and maintaining the necessary degree of inter-agency coordination from national through to local government levels.

5. In preparing the proposed project, program agencies recognized that the overall situation regarding the existing availability of institutional, manpower and training resources falls short of what will be required to underpin successful project implementation. The project addresses these constraints by including a project-related training component designed to strengthen current shortfalls, and to support the achievement of RWSSP objectives.

Objectives

6. In setting objectives for manpower development, and devising an appropriate strategy for achieving them, the proposed project has been guided by the main themes and policies embodied in the Water Supply, Sewerage and Sanitation Master Plan, 1988-2000, and related GOP regulations including, in particular, Republic Act 6716. Accordingly, training component objectives will be as follows.
7. The overall objective of the training support to be financed by the proposed project is to assist agencies to systematically develop the attitudes, knowledge, and skills required for the adequate performance of all persons participating, either individually or collectively, in the

management and execution of the rural water supply and sanitation program (RWSSP). More specifically, community development and training objectives aim to:

- (a) obtain the commitment and support of civic leaders, especially at provincial and municipal levels, through consultation and information dissemination;
- (b) strengthen the competence of program agency staff at all levels, with priority on PMUs, the PWSSOIF, the Integrated Provincial Health Offices (IPHO), and regional and provincial Master Trainer Teams (MTT), in the areas of their technical, community development, and training responsibilities;
- (c) prepare local government staff for their role in coordinating, implementing and monitoring program activities within their boundaries;
- (d) mobilize and train barangay communities to form self-sustaining BWSA's to manage, operate and maintain the facilities to be provided;
- (e) reduce the incidence of water-borne and water-related diseases through the provision of a health education program for rural communities and schools; and
- (f) improve inter-agency coordination arrangements for the implementation of complementary training activities.

Training Strategy.

8. Issues. In determining an appropriate training component implementation strategy the following prevalent issues were identified and addressed:

- (a) Volume: the volume and dispersion of training to be provided; for example, the number of training events in relation to the proposed physical targets, and the need to synchronize the timing of training events with respective construction phases;
- (b) Resources: the resources and logistical support required to implement the training program compared with existing resources available at municipal, provincial, regional, and national levels;
- (c) Methodology: the selection of appropriate training

methodologies; for example, the need to provide hands-on training relevant to the type of system to be managed, operated and maintained by a BWSA;

- (b) Policy: the need to provide continuing technical and institutional assistance following system turnover to BWSAs, and
- (c) Cost: in accordance with GPP policy for the rural water supply and sanitation sector, training is provided at no cost to rural communities (who will operate the largest element of total training costs); GPP funds for RWSSP training support are limited and requisite funding therefore should be agreed.

9. Accordingly, the framework for the training implementation strategy will comprise the following main elements:

- (a) adoption of the "cascade" principle of training from national through to end-user levels;
- (d) extending the annual in-house staff training programs of national program agencies and PMUs, more widely to relevant provincial-level staff;
- (b) integrating motivational, orientation, and information dissemination campaigns, particularly those targeted on municipal and barangay officials;
- (c) maximising the training role of community-based program personnel i.e. rural sanitarians, barangay health workers, and midwives;
- (d) encouraging greater participation of women in the planning and implementation of RWSSP, including BWSA membership, and operations and maintenance of facilities;
- (e) establishing in each municipality a small number of demonstration BWSA's to provide the venue for conducting skills training for small groups of officers, operators and caretakers from newly formed BWSA's;
- (f) reinforcing the pivotal role of PPDO institutional development and training staff with NGO technical assistance (or US Peace Corps Volunteers) specialising in community mobilization and development; and
- (g) reimbursement by the Bank of the project-related incremental costs of training, education, and information dissemination programs of implementing

agencies, on the basis of BWSAs formed and fully functioning.

Target Audiences

10. One of the phenomena of all RWSSPs is the variety, and level, of respective target groups who need training to underpin the success of the proposed program. The Philippine RWSSP is no exception to this general rule, and target audiences of the proposed training component include technical cadres at the each planning and implementation level (national, regional, provincial, and municipal), officers of the many BWSAs to be formed to own, operate and maintain the facilities, end-users - the beneficiaries of the the water supply and sanitation facilities to be provided, and school children, trained through health and hygiene curricula in the proper use of the facilities.
11. The volume of training will be large. Taking three target groups as examples to highlight the increased volume of skills training (as compared with earlier programs) that will be generated by the construction targets of the proposed project:
 - under the RWS component, up to 17,000 Level I BWSAs are expected to be formed, creating a training demand for some 34,000 BWSA officers to be trained in the management and financial upkeep of their Associations;
 - the RWS component will also train 22,000 caretakers to operate and provide first-line maintenance to Level I water supply systems constructed or rehabilitated under the RWS component; and
 - about 4,000 rural sanitary inspectors will receive training under the sanitation component.
12. Details of target groups for training are included in the following program description.

The Community Development and Training Program

13. A description of the training required to support the RWS and sanitation components is given below, and an overall summary of training programs that will collectively form the training component is given at Attachment 1.
14. Rural Water Supply Component.

GOPI's decentralization policy for implementing the RWSSP, coupled with the PMO-RWS role as the principal manager and coordinator of the proposed project, will increase, rather than diminish, the PMO's overall training responsibilities. Training support for the RWS component will focus on two sets of related training needs:

- In-service training - of program staff at each level of the DPWH organizational network. This training will be addressed through the extension and expansion of the DPWH annual in-service national training program, conducted in-house, through technical assistance support, and by making use of locally available, in-country training and education programs. Priority will be given to strengthening competence in technical, institutional, and community development activities. A summary of the subject areas to be covered by this program is given at Attachment 1. About 75 training recipients per year are expected to benefit from these programs at a unit cost of Pesos 1,000 per person per year.

 - Community mobilization and development - within barangays to form self-sustaining BWSAs which will own, operate and maintain the facilities to be constructed or rehabilitated under project-assisted PW4SPs. The overall institutional development and training methodology will be participative, on-the-job and, with the help of specialist NGO, or other, technical assistance, continuous. The venue for delivering skills training (covering both RWS and sanitation) to small groups of BWSA officers, operators and caretakers will be provided by a group of demonstration BWSAs established in each municipality.
15. Institutional development action plans for BWSAs will be incorporated in PW4SPs. Overall coordination and monitoring will be provided by the institutional development and training staff of PPDOs assisted by PWSSDTF, Provincial Master Trainer Teams (PMTT), LGOs, and NGOs.

 16. Based on indicators derived from pilot PW4SPs, the Level I physical target of the proposed project (including rehabilitation), is likely to generate the task of forming about 17,000 BWSAs, and training 34,000 BWSA officers and 22,000 caretakers. This assessment excludes the probable need to strengthen existing BWSAs reported to be only partially functioning.

RWS Training Program and Cost

17. On the basis of the planned physical targets for the construction and rehabilitation of Level I facilities under the RWS component, Table 1 gives an order-of-magnitude estimate of the cost of providing institutional and training support for the formation and operation of approximately 17,000 BWSAs.

Table 1: Estimated Volume and Cost of Training to Support the Formation of BWSAs.

Training Event ^{1/}	Total No of Events	Cost Per Event	Total Cost	Average Annual Cost ^{2/}

(P'000)				
<u>General</u>				
i. Orientation	74	1.8	133	27
ii. Dissemination	1,500	660	990	198
Sub-total	1,574		1,123	225
<u>Level I</u>				
iii. BWSA Formation	53,349	0.4	21,339	4,268
iv. Basic Skills I	1,778	2.4	4,267	853
v. Basic Skills II	3,667	0.72	2,640	528
Sub-total	58,794		28,246	5,649
Grand Total	60,368		29,369	5,874

1/ For description see Attachment 1

2/ Base cost prices at end 1989.

18. The following assumptions were made in estimating the volume and cost of training to be provided:

(a) None of the beneficiary barangays for new systems currently has a functioning Level I BWSA and, therefore, approximately 17,000 BWSAs would need to be formed.

(b) BWSAs would be formed, if not already existing and functioning, for rehabilitated systems.

(c) The combined 22,000 Level I systems to be constructed and

rehabilitated, would be distributed among approximately 37 provinces, 731 municipalities, and 17,000 barangays in Luzon.

- (d) Each of the 22,000 Level I facilities will be provided with a caretaker.
- (e) To report progress and provide an opportunity for feedback, Orientation Conferences for municipal mayors and civic leaders will be repeated at the mid-point of the plan period.
- (f) Implementation of the training program would be spearheaded by PMTI, reinforced from Regional and National Master Trainer Teams, and supported by NGO technical assistance.
- (g) The project would be implemented over a five-year period.
- (h) The construction program would be spread evenly over the project period.

Sanitation Component.

19. Training support for the proposed rural sanitation program will comprise the following main activities:
- (a) A rural health and hygiene education program, conducted nationally through the DOH organizational network, and focussing on rural communities, especially women and school children. The program will be supported by centrally produced information, education and communication materials.
 - (b) Completion of the remaining phase of the DOH National Sanitarian Training Program (NSTP) launched in 1983 and covering about 3,000 rural sanitary inspectors (RSI).
 - (c) Repetition of Phase 1 of the NSTP for about 1,300 RSI recruited to replace high RSI wastage rate, particularly among those employed by municipalities (i.e. as temporary staff).
 - (d) Re-introduction of the National Sanitation Trainer Program to train up to 30 key supervising sanitarians per year from all regions, as trainers and supervisors at provincial and district levels.
 - (e) An in-house training program conducted centrally by DOH for about 210 regional and provincial chemists and laboratory technicians to support the proposed drinking water quality management programs.
 - (f) A skills training program in the construction of 1.5 million water-sealed pour flush toilets, and about 7,600 sullage removal units. Following the "cascade" principle, target audiences will be the staff of Integrated Provincial Health

Offices (IPHO), and Rural Health Units (RHU) at municipal level who, in turn, will train households and schools.

20. The order-of-magnitude base cost of implementing the above sanitation component training programs is estimated to be about P 95 million, of which about P 61 million will be allocated to education and communication materials. A cost breakdown is given at Attachment 2.

Implementation

21. While DOH and DPWH will be autonomous in regard to the implementation of respective project components under their control, including related institutional development and training, the Government's decentralization policy will substantially enlarge the role and responsibilities of PDS in RWSSP planning, implementation, operation and maintenance, and monitoring functions. By far the largest proportion of the overall project-related institutional, educational, and training activity will take place within rural communities. The focal point for coordinating the implementation of these complementary training activities therefore will be PPDO staff of respective provinces under the overall guidance of DLG.
21. The coordination function will cover the delivery of community development, education, and training programs by a cadre of support staff mobilized from the following sources:
- PPDO institutional development and training staff;
 - Project consultants;
 - Provincial consultants;
 - Technical staff of DEO;
 - PMTT, reinforced from regional master trainer teams;
 - IPHO;
 - Water Districts (WD) for Level II and III systems;
 - Municipal sanitarians and RSI;
 - NGOs, and voluntary organizations, either local or foreign (e.g. parent-teachers associations, US Peace Corps); and
 - Demonstration BWSAs;

23. The extent and manner by which the resources for training implementation will be combined at provincial level will depend largely on the size and nature of specific training programs prepared to support each PW4SP and, accordingly, will vary from province to province. It is expected that in some cases existing staff complements, particularly of PPDO, may need reinforcing with temporary staff hired for the project duration. Such project-related incremental costs will be reimbursed using Statements of Expenditure (SOE) based on agreed amounts of completed facilities including the formation of fully functioning BWSAs (para 24).
24. Implementation progress reports submitted annually by Provincial Governments to the Project Coordination Committee (PCC) will include a separate section on the monitoring results of the PW4SP community development and training programs.

Costs

25. The total base cost of the training component is estimated to be about P 158 million (direct and indirect), of which 12 percent represents foreign costs. Assessment of the project-related incremental training costs incurred in implementing the RWS and sanitation training programs (i.e., temporary staff, incentives and honoraria, travelling/per diem, and fuel and transportation, etc), will be based on agreed amounts in respect of: (a) civil works, i.e. toilet units, and sullage removal units completed, in the case of the sanitation component; and (b) community development, i.e. the formation of fully functioning BWSA, in the case of the RWS component.
26. The cost of the BWSA training program (formation and skills training) is related directly to the number of Level I systems to be constructed, or rehabilitated. This is in accordance with GOP policy which requires that a BWSA will be formed, or re-trained, for a rehabilitated system as well as for a new system. Also in general accordance with provincial training policies, such expenses as providing snacks for the participants of community development events within barangays, have been excluded from the training component cost estimate. A breakdown of the estimated total costs of the community development and training program is given at Attachment 2.

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FIRST WATER SUPPLY, SEWERAGE, AND SANITATION SECTOR PROJECT

The Community Development and Training Program

In accordance with national sector strategy for community-level institutional development, the set of project-related training activities provided to support each stage of rural water supply and sanitation (RWSS) development is summarized as follows:

1. Orientation and Information Dissemination

- (a) Orientation Conference : A one-day conference for all municipal mayors to promote the Provincial RWSS program and, through consultation, seek the commitment of municipal leaders. Unit cost per event, 20-30 participants: Pesos 1,800.
- (b) Information Dissemination Meetings : A follow-up one-day meeting conducted within each municipality to inform barangay officials about the Provincial RWSS Program, and to encourage their participation in the program, particularly in regard to the mandatory formation of BWSAs. Unit cost per event, average of 20 participants: Pesos 660.

2. Community Mobilization and Development

A series of meetings and workshops conducted within each barangay to motivate, encourage, and mobilize community participation to avail themselves of the benefits of the Provincial RWSS program by agreeing to form a BWSA. Separate meetings will be held to cover BWSA formation and organization, roles and duties of elected officers, and turnover of the system to the BWSA. In the case of Level II, and III systems additional pre-formation meetings will be held to explain, and present findings of, the system feasibility study. Unit cost per event, based on average number of households per barangay: Pesos 400.

3. BWSA Skills Training

Practical on-the-job training conducted for small groups of BWSA officers, operators, and caretakers. The venue for skills training will be one or more demonstration BWSAs to be established in each municipality. Officers of the demonstration BWSA may assist in conducting skills training and will receive special coaching for this role. The objective of skills training will be to develop competence in BWSA management procedures, accounts and bookkeeping, billing and collection, and operation and preventive maintenance of water supply systems. For maximum effectiveness, skills training will be scheduled prior to system turnover to the BWSA. Skills training will be followed-up within one-month of completion by technical and/or institutional assistance arranged, or provided, by the PPDO through respective municipalities. The duration of training will vary from one to three days depending on whether for Level I, II, or III systems. Unit cost per trainee/day: Pesos 60.

4. Sanitation Skills Training

Skills training in the construction of water-sealed toilets and sullage disposal. The target audience will be rural sanitary inspectors (RSI) who, in turn, will transfer skills to households and schools in their allotted barangays. Training will be provided centrally under arrangements made either by the Regional or Provincial Health Offices. Unit cost for 20 RSI for three days: Pesos 3,000.

5. Health Education Program

This will form part of the national rural community health education program on safe drinking water and good environmental sanitation. The program will be coordinated by DOH, who will provide posters, instructional handouts, and comics, and implemented through the network of health personnel at regional, provincial, municipal, and barangay levels. All health personnel directly involved in the RWSS program would receive training on the dissemination of the health education program to the rural communities and schools. The duration of training will vary from one to four days, depending on levels of direct involvement. Average unit cost per person per day; Pesos 60.

6. In-Service Training

Review of the overall training implications of the RWS and sanitation components indicates that the broad areas of competence (i.e. possible training needs) that are expected to require strengthening by training, are as follows:

Program Level: Target audiences: technical staff of program agencies at national, regional, provincial and municipal levels:

(a) Hydrogeology: well drilling, water quality analysis.

- (b) Groundwater Hydrology.
- (c) Sanitary Engineering: design, construction supervision, water quality control, chlorination and chemical dosing.
- (d) Water Examination: Physical, chemical and bacteriological examination of water, surveillance, sampling, and analysis.
- (e) Civil Engineering: design, well drilling operations, construction supervision.
- (f) Pumping Operations: performance, safe capacity, testing, O & M, rehabilitation.
- (g) Wastewater Treatment; Pilot prefabricated treatment units
- (h) Surveying.
- (i) O & M: Levels I, II, and III water supply and sanitation systems.
- (j) Management: public health, planning and budgeting, accounting and financial systems, user charges, management reporting, project feasibility analysis.
- (k) Institutional Development: community organization and development, management principles and practice, trainor training, training analysis, program design, training delivery methodologies (including skills transfer), follow-up monitoring and evaluation.
- (l) Media Development: Design and dissemination of information, education and communication materials.
- (m) Research and Development: appropriate techniques for planning, design, and construction of water sources and distribution systems.
- (n) Computer Operations and Data Processing

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FIRST WATER SUPPLY, SEWERAGE, AND SANITATION SECTOR PROJECT

Community Development and Training Program

Cost Estimate & Breakdown

ITEM	COST 1/ (P1000)
1. <u>RWS Training</u>	
(a) <u>Community Development</u>	
Orientation/Consultation	153
Information Dissemination	990
Level 1 BWSA Formation	21,000
NGO Technical Assistance (TA)	1,000
DLG Community Organizers (37 No.)	18,000
Sub-Total	41,123
(b) <u>Skills Training</u>	
BWSA Skills Training I	4,267
BWSA Skills Training II	2,640
In-service (Program Agencies)	375
NGO Technical Assistance (TA)	1,000
PMO-RWS TA for Institutional Dev 2/	(4,000)
Sub-Total	8,291
(c) <u>Vehicles & Equipment</u>	11,000
(d) <u>IEC Materials</u>	2,500
Grand Total	62,914

2. Sanitation Training

(a) Community Development

(See separate component)

(b) Training

Phase II NSTP (for 2,800 RSI)	17,500
Phase I NSTP (repeat for 1,300 new RSI)	8,125
Toilet/Sullage Construction	1,665
Trainer training (UP/IPH)	900
Water Quality Management	828
PMU-DOH TA for Training Support 2/	(1,450)

Sub-total	29,018

(c) Training Equipment

Field training and demonstration kits for RSI.	4,837
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(d). IEC Materials 61,000

Grand Total 94,855

Consolidated Grand Total (RWS & Sanitation) 157,769

1/ - Base costs at end 1989.

2/ - Included in Project TA contract

Explanatory Notes

(i) It is assumed that trainer training for toilet and sullage construction, and the Health Education Program, will be completed by Year Two.

(ii) NGO technical assistance will be provide on a pilot basis to assist five or six of the first PW4SP to be implemented. It will focus on providing in-house training in community development, and to assist in establishing demonstration BWSAs.

(iii) One set of maintenance tools and equipment has been included ITEM 1(c) for each demonstration BWSA to be established (average of two per municipality) for institutional development and training purposes.

PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

PREPARATION OF PROVINCIAL WATER SUPPLY,
SEWERAGE AND SANITATION SECTOR PLANS

TERMS OF REFERENCE

I. BACKGROUND.

1. The Government of the Philippines has with assistance from external donors over the years made considerable progress in the water supply sector. Its activities are guided by the Water Supply, Sewerage and Sanitation Master Plan 1988 - 2000 which sets out the overall goals. Development in the sector has in the past largely been directed by central organizations but the Government is now in a process of restructuring the administration in general aiming at decentralizing of planning, implementation, operation and maintenance of infrastructure facilities. In the water supply sector some decentralization has already taken place in larger municipalities through the establishment of Water Districts (WD). However, the Government desires to strengthen WDs and to expand their supply area. To be able to plan the efforts required, the Government has decided to develop Provincial Plans for investment and institutional development in the sector. The Provincial Planning and Development Officer will be responsible for the preparation of the Plans with the assistance of the Water Districts. Where no Water Districts have yet resumed the responsibility, DPWH and LWUA will provide the assistance. It has suggested to prepare a number of such plans and to engage consultants to assist the Provincial administration in this task. The Government has approached Danida and the World Bank with a request to assist in securing grant finance for the required consultancy services.

II. OBJECTIVES.

2. The purpose of this work is to:

- i) establish criteria for assessing the needs within and between Provinces;
- ii) form the basis for the implementation of the World Bank's First Water Supply, Sewerage and Sanitation Sector Project now under preparation;
- iii) propose Medium Term (Five Year) Sector Investment Plans for the priority Provinces, based on Long-term Development Plans to the year 2010; and
- iv) recommend arrangements for implementation and identify the needs for institutional strengthening.

III. SCOPE OF CONSULTING SERVICES.

A. General.

3. The Consultant shall assist the Provincial Development Councils in conducting all surveys, collection and analysis of demographic, physical, economic and financial data as described herein to attain the objectives stated above. In the conduct of his work the Consultant shall collaborate closely with the Regional Development Committee's staff, notably NEDA's Regional Offices (NROs), Department of Local Government (DLG) and national agencies operating within the provinces. The Consultant shall be solely responsible, however, for the interpretation of all data and recommendations in their report. The geographical scope for the year 2010 Long-term Development Plans and the Medium-Term Sector Investment Plans shall be six Provinces.

4. The Consultant's prime responsibility would be to assist the Provincial Development Staff with the preparation of six Provincial Water Supply, Sewerage and Sanitation Sector Plans (PW4SP). Incidental to that task the consultant will review the experience and performance of the Provincial and Municipal Administrations in the implementation of ongoing projects. A particularly important part of this assistance would be to advise Local Government (i.e. Provincial and Municipal Development Staffs) in making sure that the experiences on the earlier rural projects are used beneficially in the preparation of the proposed First Water Supply, Sewerage and Sanitation Sector Project, now under preparation. The preparation of the six Provincial Water Supply, Sewerage and Sanitation Sector Plans is a continuation of the assignment for preparation of sample investment plans for the Provinces of Cavite and La Union. The Plans shall be based upon the model and criteria developed through those first two plans.

B. Work of the Consultant.

5. The major task of the Consultant is to play a leading role in the preparation of Medium-Term Investment Plans for the Province of Ifugao in the Cordellera Administrative Region; Ilocos Sur in Region I; Isabela in Region II; Nueva Ecija in Region III; Romblon in Region IV; and Sorsogon in Region IV. These provinces have been selected to be representative samples of various geological and socio-economical conditions. The plans will form the basis for the proposed Bank financed Sector Loan.

6. Each PW4SP will cover the following:

(a) a description of geographical, hydro-geological and economic development and demographic features of the Province;

(b) a summary of the health statistics for the Province and its subdivisions based on Department of Health Barangay Health Statistics;

(c) the current status as regards the level of Water Supply (Level I, II, and III), Sewerage (or combined sewerage and drainage) and Sanitation covering both physical provision, operations and maintenance; and institutional development;

(d) Long-term Development Plans for the Provinces to the year 2010 in line with the national policies and strategies set in the National Water Supply, Sewerage and Sanitation Master Plan 1988 - 2000, including a projection of demographic trends, possible changes in standards and the resulting additional needs, expressed both in terms of physical measures and investment cost expressed at current 1989 prices;

(e) on the basis of economic development status of the Province, as well as taking into consideration the Government sector goals to recommend optimum service levels for the planning periods; and

(f) a Medium-Term (Five Year) Investment Plan including an assessment of the current shortfall in physical terms (of facilities, supporting construction and operation and maintenance capabilities, including vehicles, equipment, stores, workshops etc., Training Requirements and institutional development); the public investments required to meet target levels of service. The Medium Term Investment Plan shall for each of the years in the period 1991 - 1996 specify works for implementation and their relative priority, differentiating between responsible implementing agencies; showing needs expressed in physical and financial terms; allowing for physical and price contingencies. The estimates should separately show requirements for feasibility studies and designs, projects investment, motor vehicles including motor bikes, tools and equipment, chemicals for chlorination of newly constructed wells, training by category and other institutional development needs.

7. The Consultant will prepare a separate brief report, supported by maps and outline technical drawings of the current status and proposals putting forward recommendations, including those of the participating central and Local Government Units (LCU) in respect of:

(a) preparation of the PW4SP for the remaining provinces in Luzon included in the proposed Bank financed project;

(b) preparation of the PW4SP for those Provinces in the Philippines where water supply projects are being implemented by other donors, and where the sanitation component of the proposed Bank financed project will be implemented supplementary to the water supply projects;

(c) Preparation of PW4SP for the remaining provinces of the Philippines;

(d) implementation of the project through the Barangay Waterworks and Sanitation Associations (BWSA), Rural Waterworks and Sanitation Associations (RWSA), WDs, DPWH and LWUA; coordination mechanisms between local and central agencies; resolution of priorities as established through the Provincial Plans and funding requirements

(e) operation and maintenance arrangements, particularly those for Level I and II Water Supply systems; and

(f) monitoring arrangements to review the functioning, subsequent to implementation, of system and facilities provided and performance of institutions.

IV. APPOINTMENT OF CONSULTANT.

8. This assignment is planned to be carried out by the consultant who has already prepared the two first PW4SPs. DANIDA will on behalf of the Government of the Philippines appoint the Consultant and will cover fees, insurance, travel and other expenses. The Consultant will be responsible to DPWH which will keep DANIDA and the World Bank fully informed on the progress of the work. DANIDA and the Bank will from time to time consult with the agency and the Consultant.

V. TIME SCHEDULE AND REPORTING REQUIREMENTS.

9. The work is planned to commence not later than the end of November 1989 and the assignment will be completed within six months after appointment.

10. Four weeks after commencement the Consultant shall submit 30 copies of his inception report and the first progress report to DPWH, to be followed by progress reports every second month thereafter (also in 30 copies).

11. It is proposed that the Consultant make a presentation of his findings to a joint meeting at the executing agency, at which the Provincial Development Staffs, DLG, DPWH, DOH and LWUA are represented. This will be towards the end of the assignment.

12. Completion of report writing may be undertaken at the consultants' home office, following the completion of field work. The final report shall be transmitted to the executive agency, Danida and the Bank within four weeks following completion of field work.

13. The Consultant will prepare 150 copies of each of the final PW4SP, of which one should be an original in type written or printed form and the remaining as photo copies, and make available computer diskettes in MSDOS format holding the text and any graphics included in the Plans.

14. The Consultant will provide 100 copies of the separate report on future projects incorporating the comments of national implementing agencies and local experts.

VI. TRAINING

15. The Consultant will be expected to make every effort to transfer their skills to Provincial Development Staff with whom they are working. This will primarily be done through assisting the local staff in planning data collections, analysis of collected data and preparation of plans and monitoring systems. The assignment will be initiated by the Consultant through the conduct of a workshop in which planning staff from the selected provinces will participate in preparing the work for their own provinces in conformity with the models already developed. To facilitate a build-up of local skills the Consultant shall maximize the use of local professionals, preferably by coopting local consulting firms in the works.

VII. DATA, SERVICES AND FACILITIES TO BE PROVIDED BY THE GOVERNMENT

Support by DLG, DPWH, DOH, LWUA and NEDA

16. DLG, DPWH, DOH, LWUA and NEDA will provide all local support required by the Consultant including access to all relevant files and data and to personnel who have been involved with provincial and rural water supply and sanitation projects and with the planning of the proposed sector project. DLG, DOH, DPWH and LWUA will each second one staff member to work full time with the Consultant. The Consultant shall provide his own local transportation, office space, secretarial and computer services.

VIII. ESTIMATE.

17. The estimate is prepared for budgeting purposes, only, and the Consultant, shall in making his proposal independently assess the inputs necessary to meet the objectives of the consultancy.

	Man-weeks or Nos.	Rate	Sub-tot. US\$	Total US\$
(a) Expatriates. Water and Sanit. Engineer, Hydro-geologist,	48	3,500		168,000
(b) Local consultants	104	350		36,400
(c) Refundable				
i) Internat. Travels	4	10,000	40,000	
ii) Local Travel	24	750	18,000	
iii) Printing	Lump		<u>30,000</u>	
				88,000

(d) Workshops				
i) 18 Participants, 2 x 1 week, Board & Lodging(250 P/d), Transport(200 P/r-trip), Hall Rents(1000 P/d)			5,000	
ii) Computers, printers	6	3,000	<u>18,000</u>	<u>23,000</u>
(e) Physical and Price contingencies				44,600
Total				<u>360,000</u>

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PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

Terms of Reference for
Preparation of Third Water Supply,
Sewerage and Sanitation Sanitation Project

I. BACKGROUND.

1. In 1987 the Government of the Philippines prepared its Water Supply, Sewerage and Sanitation Master Plan of the Philippines, 1988 - 2000 outlining sector objectives, policies, program, institutional arrangements and economical considerations. Historically, in the Philippines and elsewhere, water supply has been given first priority in supply of public services while the wastewater from human and industrial consumption has been dealt with at later stages of development.

2. At the end of 1986 only about 360,000 households were connected to a pipd sewerage system. Only 69 % of all households had sanitary toilet facilities, 15 % had unsanitary facilities and 16 % had no facilities at all. Service levels were generally higher in urban areas at 73 %, with 93 % in Metro Manila, while in rural areas only 62 % of the population was served. Apart from parts of Metro Manila, piped sewerage systems have only been installed in Bagio City, Zamboanga City and Cebu City. Only about 25 % of the sewerage in Metro Manila and the system in Zamboanga receives treatment before disposal to the recipient; the system in Cebu City, which had capacity to service the entire reclaimed area is serving a bottling plant only and the plant in Bagio City lacks a collection network.

3. The Master Plan provided a more balanced program and it contains in the first phase of the program, 1988 - 1992, in addition to projects in Manila, 6 projects in cities and 6 projects in other urban areas. The second phase, 1993 - 2000, contains additionally projects in 4 cities and in 8 other urban areas. Targets for toilet construction is for 1.5 million and 2.8 million for each of the two phases of the Plan, respectively.

4. The Government realizes the need for sustainable developments within the means of the urban administrations and has charged LWUA with the responsibility of developing a national strategy and preparation of a subsequent investment project suitable for financial support by External Supporting Agencies (ESA). The proposed consultancy is expected to identify an optimum development sequence consisting of a staged development and implementation of a series of feasible sewerage and sanitation projects to meet the near term needs of (i) Zamboanga City, (ii) Cebu City, (iii) Daet (part of Camarines Norte Water District), (iv) Ozamis City (part of Misamis Occ. Water District) and (iv) Butuan City. The approach should be sufficiently flexible to permit the simultaneous application of different technological solutions low-cost or otherwise, taking into account the needs, means and preferences of each city/town area.

II. OBJECTIVES.

5. The objectives of the consultancy is to prepare background and feasibility studies for five cities for sustainable intervention in sewerage, sanitation and solid waste management and based thereon to establish:

- (a) recommendations for national policies and strategies for the subsector; and
- (b) an investment program of physical and institutional measures which will optimally improve the environment in the five cities.

III. SCOPE OF CONSULTING SERVICES.

A. General.

6. The Consultant shall conduct all surveys, collection and analysis of demographic, physical, economic and financial data to attain the objectives stated above and shall not be confined by what is specified in these terms of reference. In the conduct of his work the Consultant shall collaborate closely with both (i) central agencies and departments and (ii) Provincial and Municipal Administrations. The Consultant shall, however, be solely responsible for the interpretation of all data and recommendations in his reports.

7. In the following summary activities have been grouped together for reasons of clarity but the Consultant shall in his work ensure full cross referencing between the tasks described.

B. Work of the Consultant.

8. The work shall cover the following major phases:
- (a) review of the existing studies and plans pertaining to the sector,
 - (b) for each of the five urban areas make recommendations for a long term strategic sewerage, sanitation and waste investment plan, and a feasibility consultancy for the investment for a eight year period, 1992 - 2000, taking into consideration reasonable scenario's for likely future development of the towns/cities; and
 - (c) based on the findings during the review of the existing situation within the sector and in preparation of the feasibility studies the Consultant shall propose national policies and strategies for the sector.

C. Scope of Work.

9. The Consultant shall acquaint himself with existing studies and plans within the sector in the Philippines and shall summarize the status of ongoing studies.

Existing Situation.

10. For each of the five towns/cities the review of the existing situations shall include:

- (a) general information on administrative organization, staffing numbers and qualifications;
- (b) economic and health indicators;
- (c) present service coverage and standards in human waste disposal; and
- (d) shall show the developments of these fields during the last 10 years.

Future Demand

11. The future requirements for waste and wastewater services shall be based on consideration of:

- (a) population projections and densities, water consumption, geophysical and climatic conditions and conditions of the recipients;
- (b) sewerage and sanitation service needs in all residential zones; and
- (c) waste disposal needs for commerce, industry and institutions.

Service Standards

12. Service standards for different zones of the city/town shall be based on:

- (a) explicitly stated criteria, which shall reflect the characteristics of the development as well as the relative environmental importance of the waste types and quantities;
- (b) technical and financial feasibility;
- (c) community preferences, affordability and willingness to pay; and
- (d) application of the criteria to the range of technological options.

Feasibility Consultancy for Projects for 1992 - 2000

13. The Consultant shall prepare a feasibility consultancy for the proposed waste and wastewater projects for period 1992 - 2000, based on alternative strategies analysis of coverage, cost, health and environmental impact, covering private and public components of the investments in:

- (a) rehabilitation of existing sewerage and sanitation facilities and strengthening of institutional procedures;
- (b) construction of new facilities, including the following:
 - (i) on site systems (septic tanks, pits and desludging services);
 - (ii) off site systems (sewerage, simplified sewerage);
 - (iii) intermediate systems (interceptors, trunk and smallbore sewers);
 - (iv) waste treatment facilities;
 - (v) final disposal of septic tank and leaching pit sludge; and
 - (vi) final disposal of effluent.
- (c) a package of support activities such as public motivation, user education, health education as well as education and training needed to plan, promote, construct, operate and maintain the system; and
- (d) equipment and other measures for effective operation and maintenance of desludging equipment and all other mechanical equipment for maintenance of installed facilities (including spares).

14. The Consultant shall:

- (a) determine operating procedures and maintenance requirements;
- (b) define responsibilities for project implementation;
- (c) prepare cost estimates and implementation schedule; and
- (d) assess environmental impacts of proposals.
- (e) prepare recommendations for preparation of detailed design, including terms of reference for necessary consultancies and estimated cost for the detailed design;

Financial and Institutional Aspects

15. The Consultant shall also:

- (a) prepare a Provisional Investment Plan for the proposed project(s) including the cost recovery proposal for estimated capital and recurrent costs. These plans shall differentiate between private and public investments and as the private investments may be of considerable importance the Consultant shall consider availability of funds as well as institutional arrangements. Given the breath of the participants this may vary from credit facilities for industries to social marketing to individual households;

- (b) review existing legislation, institutional arrangements and administrative and operational procedures and recommend such changes which will enable the proposed projects to be sustainable. Where the Consultant recommends changes in regulations and legislation he is required to draft the proposed new regulations and legislation including necessary referencing to other regulations affected by the proposals.
- (c) define coordination required with existing city planning water supply, solid waste and drainage agencies;
- (d) list key actions necessary to implement policies and projects;
- (e) identify the local and national agencies or individual to be responsible for each action, together with a suggested time table; and
- (f) provide outline scope of work and detailed activities need to be undertaken.

C. Time Schedule and Reporting Requirements.

16. The consultancy is expected to be completed within 12 months and the Consultant shall submit his draft proposals to LWUA for both feasibility studies and the policy and strategy recommendations nine months after commencing the consultancy. The Government agencies will in the two months following the submission of the draft proposals review and comment after which the Consultant shall finalize the consultancy within one month.

17. Within four weeks of commencement of the consultancy the Consultant shall submit 30 copies of his Inception Report and he shall every month thereafter submit 30 copies of a brief Monthly Progress Report highlighting the progress of the work and issues needing Government's or agencies' resolution.

18. The Government recognizes that not all policy issues can be resolved before the Consultant is required to embark on preparation of the feasibility studies. To ensure that the feasibility studies can lead to implementable projects the Consultant shall keep a close dialogue with all involved agencies and shall in writing as early as possible and in each Monthly Progress Report identify issues needing Government action and the related implications.

IV. TRAINING.

19. The Consultant will be expected to make every effort to transfer skills to Provincial and Municipal Development Staffs with whom they are working. This will primarily be done through assisting the local staffs in planning data collections, analysis of collected data and preparation of plans and monitoring systems and by coopting local consulting companies in the works.

V. DATA, SERVICES AND FACILITIES TO BE PROVIDED BY THE GOVERNMENT

20. LWUA will introduce the Consultant to the appropriate agencies which will provide all local support required by the Consultant including access to all relevant files and data and to personnel who have been involved with provincial and rural water supply and sanitation projects and with the planning of the proposed sector project. LWUA will also provide such local transportation, office space, secretarial and computer services as may reasonably be requested by the Consultant for the purposes of this assignment.

VI. ESTIMATE.

21. The estimate is prepared for budgeting purposes, only, and the Consultant shall in making his proposal independently assess the inputs necessary to meet the objectives of the consultancy.

	Man-months or Nos.	Rate 1)	Sub-tot. US\$	Total US\$
(a) Expatriates. Coordinator Water and Sanitary Engineers, Sociologist, Economist, Speci.	25	12,000		300,000
(b) Local consultants	138	1,400	193,200	
(c) Refundable				
(i) International Travel	6	10,000	60,000	
(ii) Local Travel and Transp.	40	750	30,000	
(iii) Printing	Lump		<u>30,000</u>	
(iv) Office Exp. incl. Computer Support & Support Staff		<u>20,000</u>		140,000
(d) Seminars	Lump			<u>20,000</u>
Total				652,200 =====

1) Rates include all expenses incl. Housing in Manila.

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PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

FINANCIAL RESTRUCTURING STUDY FOR LWUA

TERMS OF REFERENCE

Background

1. The Local Water Utilities Administration (LWUA) was established in 1972 under the Provincial Water Utilities Act of 1973. Its charter is to assist with the formation of Water Districts (WDs), prepare feasibility studies and designs, arrange for the construction of water supply systems, assist with institutional development, provide finance for these activities and recover the cost from WDs by way of loan repayments made by WDs to LWUA.
2. As is common with new organizations, LWUA concentrated in its formative years on physical development, as a means to overcome the neglect in maintenance, upgrading and expansion of water supply systems in the provincial cities and towns. At some later point of time LWUA started to place more emphasis on institutional development of the WDs. A greater degree of specialization on finance matters - in line with its role as an intermediate development Bank - started in the early 80s.
3. By the end of 1987 nearly 400 WDs were formed, 320 of which received assistance from LWUA. At that time total loans granted amounted to P 2.7 billion of which P 1.6 billion had been drawn down. From the beginning it was apparent that LWUA's institutional and financial viability was almost totally dependent on the success or failure of the WDs created by LWUA. Some 80 percent of LWUA's investment were placed with the largest 20 WDs. While up till about 1985 a substantial impact was made in terms of physical and institutional development, many of the larger WD were not meeting their financial commitments to LWUA. To review its past performance and to determine the future direction a Corporate Planning Study was undertaken in 1985 by joint-consultants Walker (Canada) and Superius (Philippines). This Study produced a number of important recommendations but was not acted upon for the reasons given in para. 4 below.
4. During the last five years the Philippines experienced a major economic recession, and a revolution and change in Government in 1986. On the change of Government, LWUA in line with all other government corporations received a new Board and Management. A period of severe management/staff conflicts broke out which lasted almost without interruption till early 1989 when a new Administrator was appointed.
5. Following this period of stagnation, LWUA under its new leadership, wishes to reactivate its operations and has sought World Bank financial assistance to finance its next major phase of development of WDs. As a result of the takeover of RWDC, in addition to assisting WDs, which were expected to meet almost all of the capital and operating and maintenance costs

of their systems, LWUA now also has a role in the rural areas where it will provide small and simpler systems, the capital cost of which will be almost totally funded by grants. Its financial policies therefore require updating.

6. The World Bank is now assisting LWUA with the formulation of a new project which is scheduled for appraisal in early 1990. As part of this project preparation, it is proposed to undertake a Financial Restructuring Study the objective of which would be to present the Government with options to place LWUA on a sound financial footing. This Study and the Government's actions to restore LWUA's credit rating would be a pre-condition before it could assume addition outside financial liabilities from multi-lateral financing agencies.

Objectives .

7. The purpose of the study is to formulate proposals for consideration by the relevant Government authorities in the Philippines which would place LWUA on a sound financial footing and allow it to sustain its long term financial viability.

Consultant Services

8. The consultant's will conduct the work so as to achieve the above objective. LWUA has agreed to provide the data, services and facilities described below. The Consultant shall, however, be solely responsible for interpretation of data and for the recommendations in his Report.

9. The consultant will undertake, but not necessarily limit his work, to the following tasks:

LWUA's and WDs' current and projected financial position:

- (a) carry out an analyses of LWUA's and of the twenty largest WDs' current financial position and future trend, the latter by means of a financial projection, based on current and committed investment and assuming a continuation of current financial policies, procedures and practices;

WDs' Financial Restructuring:

- (b) estimate the debt servicing capabilities of the twenty largest WD, based on their best and achievable efforts;
- (c) by inference estimate the debt servicing capabilities of the remaining smaller WDs;
- (d) on the basis of (a), (b) and (c) above compute the potential total debt service recoveries from WDs and compare this with their indebtedness to LWUA, and formulate proposals for the financial restructuring of WDs;

RWSA Financial Restructuring:

- (e) assess the potential debt servicing recoveries from RWSA and compare this with their indebtedness to LWUA, and formulate proposals for the financial restructuring of RWSA;

LWUA's Financial Restructuring:

- (f) assess LWUA's debt servicing commitments for loans obtained from the Government and any other lenders, to fund Water District physical and institutional development and compare this with the potential debt service recoveries from WDs;
- (g) assess LWUA's debt servicing commitments for any loans taken over from the defunct Rural Waterworks Development Corporation (RWDC), and those since incurred, to fund RWSA development and compare this with the potential debt servicing recoveries from RWSA;
- (h) estimate that part of LWUA's current operating costs which could reasonably be charged against project development costs;
- (i) determine whether any part of the project development cost could reasonably be expected to be recovered from present and prospective WDs and RWSAs or covered by Government grants or subsidies;
- (j) compute the level of subsidies and grants to which LWUA was entitled since its inception based on the provisions in its Charter and those covenanted in Loan and Credit Agreements with External Support Agencies (ESA);
- (k) review LWUA's current Balance Sheet and assess whether it carries any uncollectible deferred or other assets or unverified liabilities; which, should be taken into account in any financial restructuring;
- (l) estimate the extent of financial restructuring required for LWUA taking into account (a) a conservative estimate of its debt service recoveries from WDs and RWSA; (b) the share of operating costs estimated as a reasonable charge against the administration of the current portfolio, (c) any previous shortfall in subsidies or grants, and (d) any adjustments required as regards non-performing assets carried in the Balance Sheet;
- (m) develop alternative options for the financial restructuring of LWUA, and test each of the alternatives through the preparation of long term financial projections, including not only the present portfolio but also any ongoing or proposed projects, such as, the Bank-assisted project now under preparation;

Financial Policy Review:

- (n) review the Government's and LWUA's current financial policies as regards financial support to WDs and RWSA for funding physical development, and institutional development including training, noting especially the different cost recovery levels, and assess whether these policies will sustain LWUA's long term financial viability;
- (o) to the extent that any policies, reviewed under (o) above, would seem to require modification for LWUA to be able to discharge its functions and retain its financial viability or require reiteration by the Government, develop alternative policies for consideration by LWUA and the Government;

Presentation of Findings and Recommendations

- (p) make a presentation to the LWUA management, and to the Board if requested, substantiating the findings and recommendations of the Study; and
- (q) assist LWUA in its discussions with other agencies of government which will be a party to considering and processing the financial restructuring.

Data, Services and Facilities to be provided by LWUA

10. Prior to the Consultant commencing his assignment LWUA's Financial Department will have prepared drafts of the financial position and projections required under para. 8 (a) and (b) above, will prepare tables of all financial particulars known at this stage, and summarize the Government's and LWUA's current financial policies.

11. LWUA's Finance Department will make available experienced and adequate counterpart staff, provide access to all records and relevant staff with experience in implementing the water supply development program, provide local transportation to visit LWUA and selected WDs and RWSA, office space, and secretarial and computing support.

Reports

12. The Consultant will submit an Inception Report within one month from start in the field; thereafter, draft reports for each successive stage of the Study as identified in para. 8 above, will form the basis of a separate report to be submitted to LWUA and the Bank for comment within one week of completing each successive step.

13. The major phase, described in paras. 9 (e) and (m) above, bringing all foregoing components together should be the main Report and should be submitted in draft form to LWUA and the Bank for comment within two weeks of

the completion of this task and be finalized within a further two weeks following receipt of LWUA's and the Bank's comments.

Appointment of Consultant

14. It is proposed that the consultant be selected and appointed under the provisions of a Bank-administered Consultant Trust Fund, in accordance with the Bank's Guidelines for the Engagement of Consultants.

Timetable and Plan of Action

15. The Study, which is an integral part of the preparation of the proposed Bank-assisted project, is expected to start in January 1990 and be completed in June 1990.

16. The estimate is prepared for budgeting purposes, only, and the Consultant shall in making his proposal independently assess the inputs necessary to meet the objectives of the consultancy.

	Man-months or Nos.	Rate 1)	Sub-tot. US\$	Total US\$
(a) Expatriates. Financial Analyst, Auditor or Specialist		10	12,000	120,000
(b) Local consultants, Financial Analyst, Accountants, Auditor	20	1,200		24,000
(c) Refundable				
(a) International Travel		3	10,000	30,000
(b) Local Travel and Transport		10		75000
(c) Printing Lump			5,000	5,000
(d) Office Exp. incl. Computer Support and Support Staff		40		<u>125000</u>
				56,500
Total				<u>204,500</u> =====

1) Rates include all expenses incl. Housing in Manila.

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PHILIPPINES

FIRST WATER SUPPLY, SEWERAGE AND SANITATION SECTOR PROJECT

TERMS OF REFERENCE FOR CONSULTANCY SERVICES FOR

PROJECT IMPLEMENTATION

I. INTRODUCTION

1. The Philippine Government, through its various water agencies, has launched a massive watersupply, sewerage and sanitation program as embodied in the updated Medium-Term Philippine Development Plan (1988-92). Said program is in consonance with the draft Water Supply, Sewerage and Sanitation Master Plan (1988-2000). The main objectives of the updated plan to increase the water service coverage from the 1987 level of about 63% to about 92% by 1992 and the reduce the incidence of water-borne diseases by 16% at the end of the plan period.

2. As the primary executing agency for implementing the rural water supply program, the Department of Public Works and Highways (DPWH) will carry out the implementation of the Water Supply, Sewerage and Sanitation Sector Project in coordination with the Department of Health (DOH) and the Local Water Utilities Administration (LWUA).

3. The Project involves the construction of 17,000 Level I systems comprising 9,000 shallow wells, 7,000 deep wells and 1,000 spring development projects, rehabilitation of 5,000 Level I systems, construction of 25 workshop buildings, construction of 1,500,000 household toilets, disinfection of about 800,000 wells, construction of 800 school toilets, research and development project for 1,000 pilot waste water treatment facilities, preparation and dissemination of Information Education Communication (IEC) materials and construction of 63 Level III systems. Parallel to this, procurement of equipment and vehicles will also be undertaken, together with the conduct of training programs and engagement of the consultants.

4. With the magnitude and complexity of the Project, consultancy services and technical assistance are deemed necessary to strengthen the implementing agencies' capabilities in undertaking their Project.

II. OBJECTIVES

5. To contribute in the successful implementation of the Project and its supporting activities.

6. To initiate and/or extend technical and institutional assistance relative to the following:

- (a) administration and control;

- (b) feasibility studies and design;
- (c) construction supervision of water supply; and
- (d) conduct training programs and the formation of Barangay Waterworks and Sanitation Association (BWSA).

III. SCOPE OF SERVICE

7. Taking into consideration the objectives set forth in this Terms of Reference, the scope of services are outlined as follows:

- (a) Undertake an overall assessment of water supply plans, programs and accomplishments in relation to the preparation of an updated Master Plan.
- (b) Prepare feasibility studies and designs of both conventional and small-bore sewerage systems?
- (c) Review existing policies on sewerage and formulate related policies.
- (d) Prepare a detailed report as a major input for the preparation of a Nation-wide Sewerage Master Plan.
- (e) Prepare a detailed evaluation report of all non-functional water supply systems in Luzon area and submit recommendation on optional utilization of these wells.
- (f) Initiate and/or assist in the formation of BWSA.
- (g) Assist in the review of training and IEC needs of the water supply program, the development of IEC materials and the conduct of training programs.
- (h) Conduct research and development studies in the water supply.
- (i) Prepare reports, programs and projects on the above scope of services to include proposed monitoring and evaluation program components.
- (j) Participation in meetings and conferences called for purposes that are deemed necessary.

IV. OUTPUTS EXPECTED

8. In accordance with the above Scope of Services, the following are expected to be produced:

- (a) Inception report.
- (b) Monthly progress/accomplishment report.

- (c) Technical reports.
- (d) Detailed drawings and specifications.
- (e) Report input for the preparation of a Nation-wide Sewerage Master Plan.
- (f) Evaluation report on all non-functional water systems nation-wide.
- (g) Report on job site inspection.
- (h) Inception report.
- (i) Final report.

V. EXPERTS REQUIRED AND MAN-MONTHS

9. In the implementation of the aforementioned scope of services, the list of experts and corresponding estimated number of man-months, as shown in the following table, will be needed.

Designation	Foreign		Local		Total	
	No.	M-Mo.	No.	M-Mo.	No.	M-Mo.
Project Manager			1	24	1	24
Deputy Project Mgr.	1	24			1	24
Civil/Sanitary Engineer	1	12	3	72	4	84
Planning Specialist			1	18	1	18
Computer System Analyst	1	12	1	18	2	30
Training Specialist	1	10	2	36	3	46
TOTAL	4	58	8	148	12	226

VI. FACILITIES AND SUPPORT STAFF TO BE PROVIDED TO THE CONSULTANTS

10. For the purposes of carrying out this Terms of Reference, certain facilities and staff would be required and are expected as follows:

- (a) Office establishment.
- (b) Necessary office supplies and office equipment.

- (c) Two (2) motor vehicles for use by the consultants with running and maintenance cost, including two (2) drivers.
- (d) Support local personnel.