

# AZAD JAMMU & KASHMIR

Strategic Provincial Investment Plan  
and Project Preparation for  
Rural Water Supply  
Sanitation and Health

822 PKJA 89

## INCEPTION REPORT

March, 1989

Wardrop-Acres  
Cowater International  
NESPAK

822-PKJA89-5189

# AZAD JAMMU & KASHMIR

---

Strategic Provincial Investment Plan  
and Project Preparation for  
Rural Water Supply  
Sanitation and Health.

## INCEPTION REPORT

LIBRARY, INTERNATIONAL REFERENCE  
OF DEVELOPMENT AND RURAL WATER SUPPLY  
AND SANITATION  
ROOM 207, 1100 13<sup>th</sup> AV. The Hague  
Tel. (070) 214011 ext. 141/142

RSN 5/89

LO:

022 PK.1A 89

March, 1989

Wardrop-Acres  
Cowater International  
NESPAK

# STATE OF AZAD JAMMU AND KASHMIR

## INCEPTION REPORT

### Table of Contents

<b>Executive Summary</b>		<u>PageNo.</u>
1.	<b>Introduction</b>	1
2.	<b>Project Organization and Methodology</b>	2
2.1	Project Organization and Management	2
2.2	Methodology	2
3	<b>Rural Water Supply, Sanitation and Health Sector.</b>	4
3.1	Overview of State	4
3.1.1	Physiographic Features	4
3.1.2	Population and Settlement Patterns	5
3.2	Status of the Sector	6
3.2.1	Coverage	6
3.2.2	Water Resources	8
3.2.3	Support of Water Supply and Sanitation Program.	8
3.2.4	Financial Resources.	10
3.3	Institutions	10
3.3.1	LGRDD and the Community	10
3.3.2	Councils	11
3.3.3	Public Health Engineering Department	11
3.3.4	Non-Government Organizations	13
3.4	Economy	13
3.5	Social	14
3.5.1	Social and Cultural Aspects of AJK	14
3.5.2	Community Involvement	16
3.5.3	Health Services	17
3.5.4	Perceptions, Beliefs and Taboos	18
3.5.5	Education	20
4.	<b>Identification of Issues</b>	20
4.1	Water Resources Issues	21
4.2	Water Supply Issues	21

4.3	Sanitation Issues	22
4.4	Drainage Issues	22
4.5	Institutional Issues	23
4.6	Financial Issues	24
4.7	Cost Recovery	24
4.8	Private Sector	25
4.9	Social	25
4.10	Population	25
4.11	Health	26
4.12	Human Resources Development	26
5	<b>Initiatives</b>	26
5.1	Institutional Structure Options	27
5.1.1	District Council Option for Communities with Population less than 1000.	28
5.1.2	LGRDD Option in Communities with Population less than 1000	29
5.1.3	The PHED Option in Communities with Population Greater than 1000.	30
5.1.4	The LGRDD Option for Communities with Population Greater than 1000	30
5.1.5	The District Council Option for Communities with Population Greater than 1000	31
5.2	Program Component Alternatives	31
5.2.1	Sector Data Base	31
5.2.2	Community Financing	31
5.2.3	Support to Hand-Pump Installers and Manufacturers	33
5.2.4	Latrine Dissemination for Human Wastes Disposal Initiatives	33
5.2.5	Credit for New Housing Latrines	35
5.2.6	Demonstration Household Latrines	35
5.2.7	Community/Line Department Interaction	36
5.2.8	Base Line Inventory Survey	37
5.2.9	Upgrading Polytechnical Education	38
5.2.10	Informational Programs for Elected Representatives	38
5.2.11	Development of In-House Training Facilities of LGRDD's	39
5.2.12	Skills Development and Technical Training	39
6.	<b>Workplan</b>	40
6.1	Data Collection	40

6.2	Data Analysis	41
6.3	Synthesis of Information	42
6.4	Formulation of Initiatives	42
6.5	Project Outputs	43

**APPENDICES**

APPENDIX I           Project Organization and Management

APPENDIX II         Methodology

1.    Data Collection
2.    Data Analysis
3.    Synthesis of Information
4.    Formulation of Initiatives
5.    Project Outputs

APPENDIX III        Detailed List of Project Activities.

## EXECUTIVE SUMMARY

After a brief introduction to the State, discussions were held with the Additional Chief Secretary, and Departments of Planning and Development, Local Government and Rural Development, Public Health Engineering (Circle) and Health. A number of issues were identified and discussed with government and UNICEF. This report presents the issues, preliminary conclusions which have been drawn and potential initiatives as options for consideration.

Of particular note is the fact that AJK has developed a substantial delivery capacity within the LGRDD for both rural water supply and sanitation and is making serious attempts at hygiene education. Water supply coverage is reportedly 44%. This significant achievement has been the result of LGRDD's involvement of the community which has been the principal driving force and supplier of resources behind the program. It is estimated that 30-50% of all capital costs in cash or kind as well as 100% of operating and maintenance costs come directly from the community. The LGRDD has successfully matched community resources with those resources required from outside i.e pipes and technical assistance.

Sanitation and hygiene education are much less advanced but with the help of UNICEF, AJK is making modest achievements.

The other agency involved in this sector is the PHED which has only in the past few years begun to take real responsibility in the urban sector. It is however, intending to reach down to populations of as low as 1000. Policies and practices of PHED are not the same as LGRDD. Its program does not utilize the resources of the community. Cost recovery in the urban centres does not cover operation and maintenance costs. As PHED proceeds to assume responsibility for the smaller communities the contrast between the two approaches will become more apparent as higher capital and operation and maintenance costs will have to be absorbed by the State for PHED. A suggestion is made that PHED begins now to draw

on community resources for lower unit costs and long term system sustainability in the future.

Several other potential initiatives presented are presented as options in this report. Some of them, such as the institutional framework and sharing of responsibilities between existing institutions, are intended to open a full range of alternatives aimed at cost effectiveness of services delivery while responding directly to the needs of the community. Unsolved questions of inequitable distribution of benefits, such as those households able to gain access to house connections without paying a higher price, or the distribution of water supply schemes being influenced by political considerations are also highlighted. Various options are given for hygiene education and sanitation although these do not stray far from the existing UNICEF/LGRDD model.

One of the primary constraints to sector development is financing. To a large extent LGRDD, operating in the smaller communities, has already established and proven its implementation methodology. However, human resources and institutional strengthening will be required before major expansion in rates of delivery can be expected. This strengthening can be made on a sound institutional and policy base. In this light, increased levels investment could usefully be made in the relatively near future. Currently the ADP allocations to this sector through the LGRDD are approaching Rs 30 million. This could be substantially expanded.

1. INTRODUCTION

The Government of Pakistan has embarked on an ambitious program to improve the country's rural infrastructure including water supply and sanitation. In 1987, a team of Pakistani and international consultants undertook a national review of the Sector. They presented a Sector Report to the Government in June, 1988.

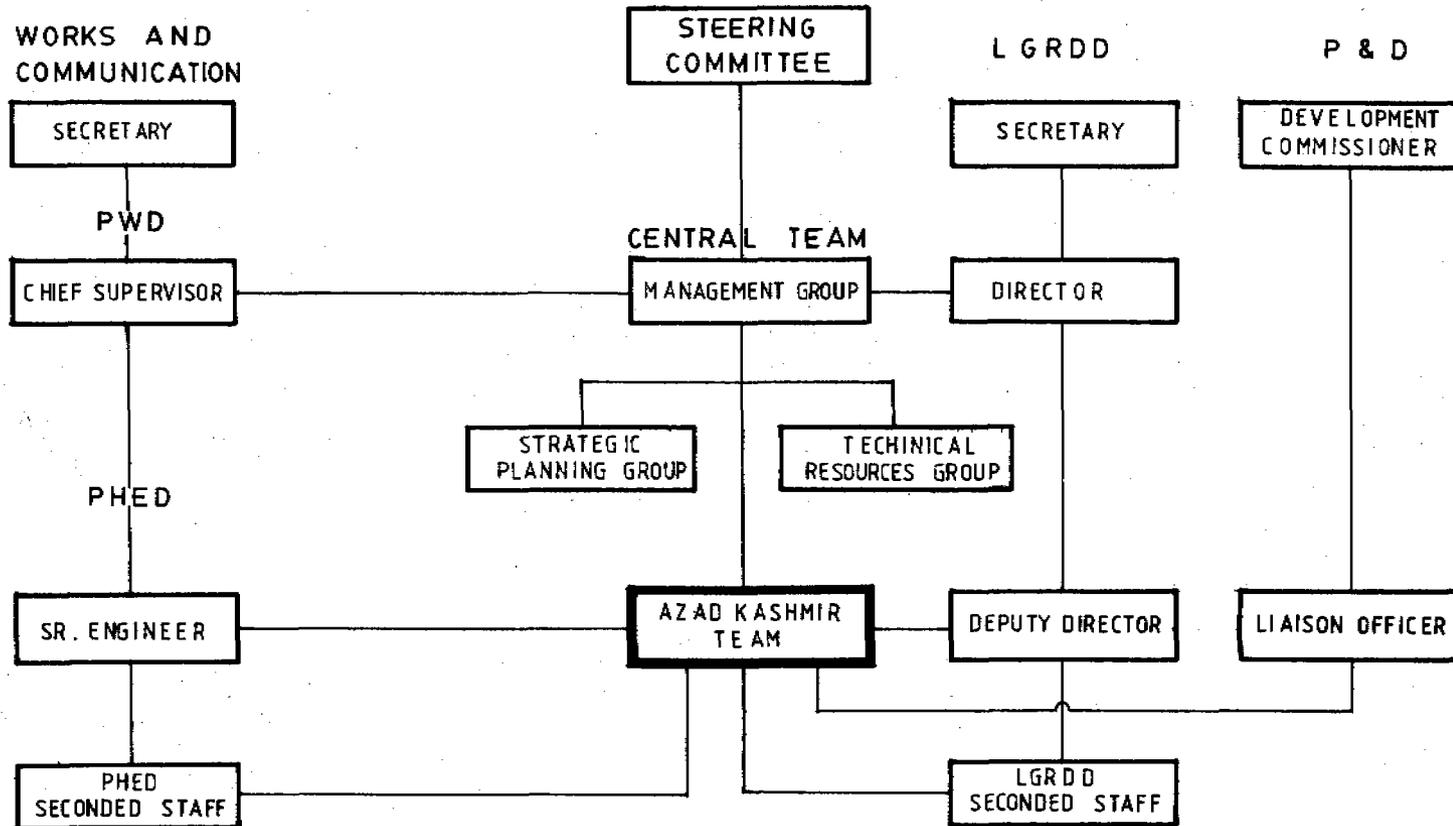
As a result of the Sector Review, the World Bank, initiated this Strategic Provincial Investment Planning and Project Preparation Process to assist the Provincial Government in the development of an investment strategy and identification of projects for implementation starting in 1990. The goal of the projects is to contribute to the betterment of health and overall quality of life of the rural populace through more cost effective and sustainable water supply, sanitation and hygiene education initiatives while maximising community involvement.

In late 1988, the World Bank, with the financial support of CIDA, engaged the project team of Wardrop-Acres in association with NESPAK, and Cowater International, as Consultants for the project.

The purpose of this report is to present the Project Team's approach to the work as a basis for discussion with the Government and the World Bank. An outline of the project organisation and methodology is presented and critical issues in the sector and their root causes are identified. A set of preliminary initiatives with implementation options are proposed as a preview of the likely direction of the investment plans.

As set out in the workplan in this report, the focus of the Team's activities in the next phase will be on refinement of the issues and initiatives through more detailed examination of existing data, some limited field checks and discussions with GOP staff. The preliminary initiatives will be reevaluated and additional initiatives will likely emerge. The specific initiatives that evolve will form the basis of the investment plan and the formulation of projects.

# PROJECT ORGANISATION FOR AZAD JAMMU & KASHMIR



## 2. PROJECT ORGANIZATION AND METHODOLOGY

### 2.1 Project Organization and Management

The Project is organised into teams of staff based in Islamabad and the Provinces. Responsibility for Project activities in AJK rests with the Islamabad team, led in this instance, by the two Deputy Project Managers, Quratul Ain Bakhteari and Sohail Abid. They will draw on the other members of the team as necessary.

A detailed presentation of the project staffing and individual responsibilities is presented in Appendix I.

### 2.2 Methodology

The project utilizes a Strategic Planning approach to the work programme in which key issues are identified and are used to focus the activities for the duration of the project term. The process is designed to quickly lead to programmes and initiatives which can be implemented and which will have a reasonable likelihood of success.

The process is an ongoing one in which data is collected, analyzed and used to arrive at an understanding of the strengths which can be built on and the weaknesses which need to be overcome. Through analysis, interrelationships in the sector are identified and are used in the development of potential initiatives. Gaps in the data result in more collection and analysis.

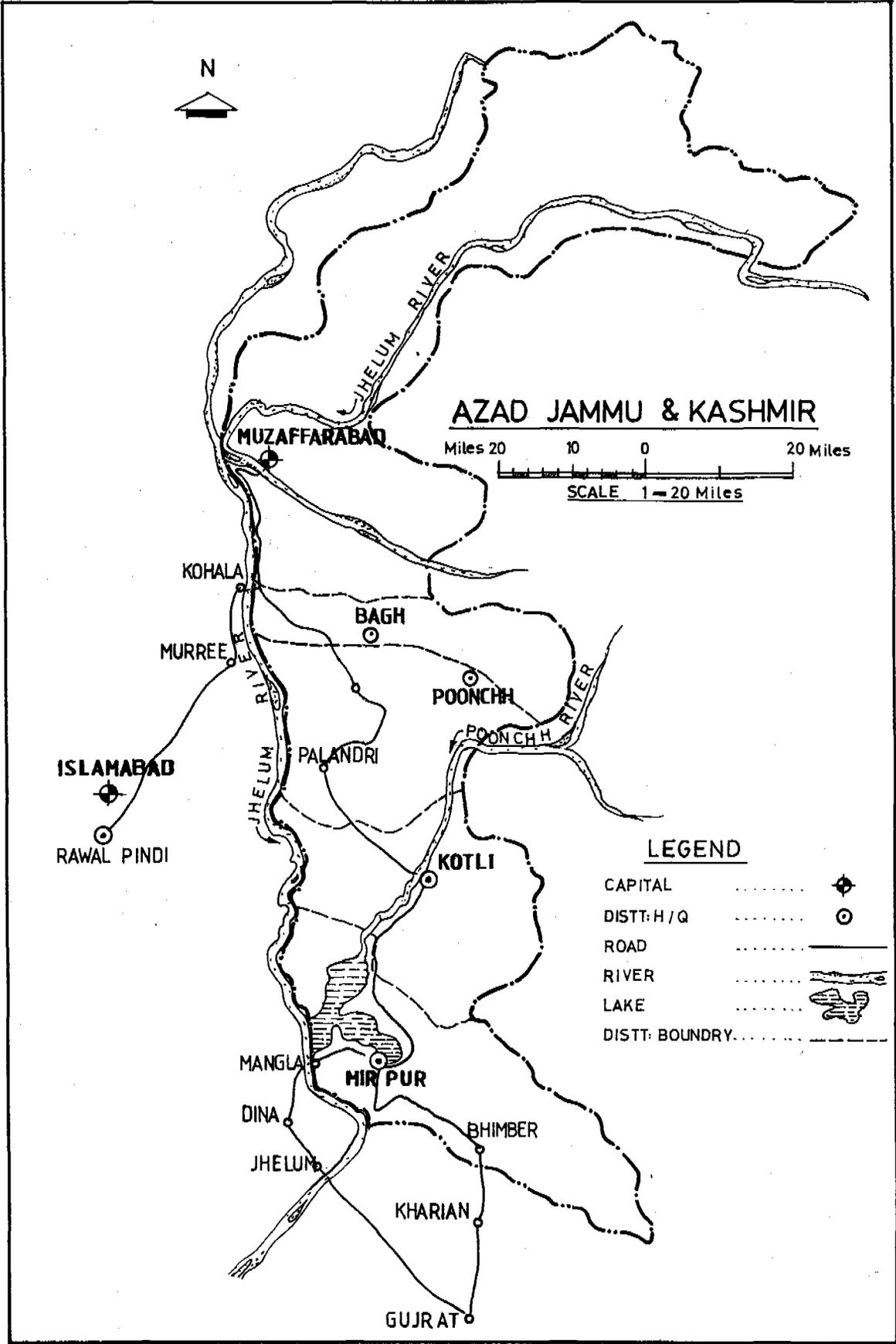
The following activities will be undertaken in the time periods shown:

- |                              |   |                             |
|------------------------------|---|-----------------------------|
| . Reconnaissance Survey      | - | Dec. 1 - Feb. 15, 1989;     |
| . Data Collection            | - | February 15 - September 30; |
| . Data Analysis              | - | March 1 - September 30;     |
| . Synthesis of Information   | - | March 15 - June 30;         |
| . Formulation of Initiatives | - | March 1 - October 30; and   |

The outputs of the project will be recommended Strategic Provincial Investment Plans and Project Identification documents in both draft and final form and a National Summary Investment Plan according to the following schedule:

- . June 11, 1989 - Draft Strategic Provincial Investment Plan;
- . Sept. 10, 1989 - Final Strategic Provincial Investment Plan;  
- Draft Project Identification Report; and
- Nov. 5, 1989 - Final Project Identification Report;  
- National Summary Investment Plan.

A detailed discussion of the methodology is presented in Appendix II.



**AZAD JAMMU & KASHMIR**

Miles 20 10 0 20 Miles  
SCALE 1 = 20 Miles

ISLAMABAD  
RAWAL PINDI

KOHALA  
MURREE

PALANDRI

BAGH

POONCH

KOTLI

MANGLA

HIR PUR

DINA

JHELUM

BHIMBER

KHARIAN

GUJRAT

MUZAFFARABAD

JHELUM RIVER

POONCH RIVER

### 3.0 RURAL WATER SUPPLY, SANITATION AND THE HEALTH SECTOR.

#### 3.1 Overview of the Province.

Azad Jammu and Kashmir (AJK) is a semiautonomous state created in 1947. The Prime Minister of AJK is the Chief Executive and he is supported by a council of Ministers.

The topography is mainly hilly and mountainous with valleys and stretches of plains. The main rivers are the Jhelum, Neelum and Poonch. The climate is sub-tropical highland type with an average yearly rainfall of 150 cm. The elevation ranges from 360 meters in the South to 4500 meters in the North. The snowline in winter is around 1200 meters while in summer it rises to 3300 meters.

The homogeneity and history of its people has made them socially and politically aware, making them better prepared than the provinces for development projects. A community consciousness exists and people are in the habit of working together for the common goals. Another indication of social development is the high literary rate as compared to the other provinces.

The state has 5 Districts, 30 Markaz and 180 Union Councils.

##### 3.1.1. Physiographic Features

###### Muzaffarabad District

The entire District is mountaineous with an overall elevation of 2000 meters. The extreme northern areas are occupied by high peaks ranging above 5000 meters. A major part of the District north of Muzaffarabad town is drained by the river Neelum and its tributaries. The average annual precipitation in the District is about 1500 mm.

### Mirpur District

This is a semi-mountainous District. The major part of Mirpur and Dudyar Tehsils is comprised of plains with low and scattered hills (pabbies) with height of about 300 meters. The southern part of Bhimber Tehsil is a piedmont plain, with hills about 600 meters high. The Jhelum river flows along the western boundary of the District. Rainfall is estimated at about 1450 mm annually.

### Poonch and Baagh Districts

The entire area is mountainous with high peaks in the north east. The Jhelum river flows along the western boundary from North to South. Precipitation is about 1500 mm annually.

### Kotli District

This District is also hilly, with heights ranging from 1000 to 1500 meters. The Poonch river flows through the District. Annual rainfall is about 1450 mm.

## 3.1.2 Population and Settlement Patterns

According to the 1981 Population Census, the total population of Azad Jammu and Kashmir (AJK) was 1.98 million people. Poonch is the most heavily populated District, accounting for 36% of the total AJK population. During the inter-censal period of 1972-81, the total population has grown at an annual rate of 2.8 percent, highest growth rate (3.42%) has been in Muzaffarabad District while the lowest growth rate (1.2 %) has been in Mirpur District. The average household size is 6.4 persons.

There are a total of 1149 rural localities in AJK, mainly larger settlements. A major proportion of population (ranging from 53% in Mirpur to 74% in Poonch) live in settlements with over 2000 people.

POPULATION, HOUSEHOLD SIZE AND ANNUAL GROWTH RATE IN  
AZAD JAMMU KASHMIR, 1981.

AREA/ DISTRICT	AREA (KM <sup>2</sup> )	POPULATION (000)	POPULATION DENSITY	HOUSEHOLD SIZE	INTERCENSAL ANNUAL RATE(72-81)
AZAD KASHMIR	<u>13297</u>	<u>1983</u>	<u>149</u>	<u>6.4</u>	<u>2.8</u>
MUZAFFARABAD	N.A	466	N.A	6.5	3.42
MIRPUR	N.A	429	N.A	5.9	1.25
POONCH & BAAGH	N.A	723	N.A	7.0	3.38
KOTLI	N.A	365	N.A	6.3	2.55

Poonch and Bagh Districts have the largest number of villages with 5000 or more people. They share 37% of rural population. Mirpur has the smallest number of villages over 5000 people, (8) with 15% of the population. However Mirpur has the largest number of small rural settlement (254) with populations below 1000 which make up 30% of rural population. Muzaffarabad and Kotli have 139 and 129 small settlements respectively.

Male and female distribution in AJK (according to the 1981 census) is 1.022 million male and 0.988 females.

The literacy rates of the state in 1981 averaged 25.66%, 40% for males and 10.08% for females.

### 3.2 Status of the Sector

#### 3.2.1 Coverage.

The AJK rural water supply and sanitation program has been an integral part of the LGRDD for many years, starting with the Village Aid program. Government and the private sector have reportedly achieved remarkable success in rural drinking water coverage. On a District basis water supply coverage is:

### AJK Water Supply Coverage by District.

	1981 Population (000's of people)	% Coverage
Muzaffarabad	466	38
Bagh	380	31
Kotli	368	38
Poonch	342	58
Mirpur	<u>427</u>	<u>56</u>
Total	1,983	44%

These are estimates only as there has been no recent comprehensive survey of water supply coverage. These figures omit coverage by individual groups but do reportedly include household handpumps.

Defecation is almost always in the fields and latrine coverage is estimated at 4% of the population. Latrines are being introduced through the UNICEF program, integrated with hygiene education. Although the methodology has been established and is successful, the sanitation program is in its early stages. The technology being used was the "Thai" pour-flush double pit toilet, but it was found less acceptable than the newer version brought from the UNDP/World Bank program in India. The pan has been renamed as the "Pakistani" latrine in AJK.

Drainage is not perceived as a problem in AJK except in the immediate surrounds of the standpipe and well/handpump. Localized drainage and soak-aways are being incorporated into current designs.

Important recent additions to tubewell designs which are being introduced to the Mirpur handpump program are a clothes washing area, a bath area, a livestock drinking trough as well as a soak-away. In discussions with government, the provision of the livestock drinking trough was emphasized.

### 3.2.2 Water Resources.

Water is generally available in the form of streams and springs in all Districts except Mirpur which is primarily groundwater sourced. There are difficulties in assessing spring sources which is adversely affecting the program as described in Section 4.1.a.

Almost without exception in the northern Districts, rural water is supplied through gravity water schemes. The technology involves spring catchment or stream intakes, supply mains, reservoirs and standpipes. Although the government designs for provision of standpipes only, there are many house connections to those houses that can afford them. In the southern District of Mirpur, water is supplied primarily through communal wells and household handpumps. UNICEF is now supporting the installation of communal tubewells fitted with handpumps in that District.

### 3.2.3 Support for Water Supply and Sanitation Programme.

UNICEF's assistance makes up roughly 10% of government programme in the sector. It began its contribution to the rural water supply sector of AJK in 1976 with a commitment to assist the government in installing several water supply schemes. By 1979 a population of approximately 250,000 was served.

In 1981, surveys conducted jointly by the AJK Local Government and Rural Development Department and UNICEF indicated that 92% of the population lacked awareness of sanitation problems. Water borne diseases and a lack of a hygienic environment were found to be contributing to high infant mortality rates and diseases including gastro-intestinal infections and malnutrition.

The Districts of Mirpur and Muzaffarabad were selected for a five-year (1981 to 1986) integrated water and sanitation programme with UNICEF providing technical and financial assistance. The long term objective was to improve the environmental health conditions of the local

population. To achieve this objective, the programme installed small water supply schemes and water-seal latrines in public institutions of both Districts, to encourage construction and use of latrines in at least 30% of village house holds. Educational materials for use in community motivation and training of implementors (local masons, technical staff, mechanics, water and sanitation promoters) were developed. Sanitation promoters were used extensively to initiate information exchange activities to influence and organise the rural population.

From 1977-85, UNICEF assisted the AJK government with the construction of 447 water supply schemes of which 330 were gravity and 177 were pumped schemes. From these 447 schemes, 600,000 people received improved water supply, 307,000 people with UNICEF's assistance.

During 1981-82, about 400 latrines were constructed, (including at all 87 public institutions in the District provided with water supplies), 55 water and sanitation committies were formed, and 6 female water and sanitation promoters and 44 local masons fully trained. The popular acceptance of this programme led to the expansion into two other Districts of AJK- Kotli and Poonch. Basic information on the project areas Markaz and their 91 villages has been collected and motivational work has begun in these villages. Some 72 water and sanitation committies have been formed.

Due to strong community participation, the average number of water supply schemes installed per year was raised from 50 to 85 during 1984-86. Separate full time staff was appointed by the government to meet the communities' demand. The up to date data on the yearly rate of implementation and number of schemes completed will be compiled in a report for UNICEF which is due shortly.

This year UNICEF initiated an experimental handpump, latrine, drainage and washing facility construction project.

The cost of the programme during 1981-82 was as follows:

. AJK Government	-	Rs.	1,702,000.
. Community share	-	Rs.	180,000.
. UNICEF	-	Rs.	3,120,000.

The Government provided 25% of the material cost and 75% of the labour cost. UNICEF contributed 75% of the material cost and the remaining 25% of the labour costs were provided by the communities.

There is a need for more information to assess and analyse the community participation with line departments.

According to rough estimates, 44% of AJK's population is covered with clean water supply and 4% are covered with sanitation. These figures seem to be low.

#### 3.2.4 Financial Resources.

Financial allocations come from two sources, the government and the communities themselves. Current estimates of ADP allocations for on-going and new development projects (excluding operations, maintenance and administration) for FY 1988/89 are Rs 23 million for rural water supply, and Rs 2.5 million for sanitation through the LGRDD. Added to this would be up to approximately Rs 2 million in grants matching community cash contributions.

### 3.3 Institutions

#### 3.3.1 LGRDD and the Community

The first institution involved in the provision of water supplies is the community itself. Throughout AJK, communities are very well aware of the required procedure. First they approach their Union Council and through their councillors their application reaches the District Council. Depending on need, availability of funds and influence, financial allocations and technical assistance are provided through the Local Government and Rural Development Department. The LGRDD works

through both its administrative and rural development wings. Projects are implemented through project managers and supervisors who work with the community in informing it of its responsibilities, organizational requirements and work program. The community provides up to 5% in cash and installs the principal components such as spring catchment and reservoirs before pipes are provided through the LGRDD. Technical survey and design is implemented through the Rural Development Department which also supervises construction of all elements. Discretionary powers over funds (and therefore projects) are given to the Advisory Council (25%), the District Councils (20%) and the Union Councils (55%). On a geographic basis funds are distributed to the various Districts as follows:

. Muzaffarabad	(24%);
. Mirpur	(22%);
. Poonch	(22%);
. Kotli	(18%); and
. Bagh	(14%).

### 3.3.2 Councils

The breakdown of Councils and Committees for the State is :

. Advisory Council	-	1;
. District councils	-	5;
. Union Councils	-	180;
. Municipal Committees	-	7; and
. Town Committes	-	10.

### 3.3.3 Public Health Engineering Department

The Public Health Engineering Department is responsible for water and sewerage in the town and larger communities (generally above 5000 in population). Percentage of population with water supply are as follows:

Muzaffarabad 50%,

. Kotli	60%,
. Rawalcot	20%,
. Mirpur	80% and
. Bagh	35%.

All other towns have no centralized water supply systems to speak of. The PHED is responsible for 20 communities. These and their populations are as follows:

. Muzaffarabad	50,000;
. Mirpur	70,000;
. Rawalcot	17,000;
. Kotli	15,000;
. Nikyal	5,000;
. Sanhsa	5,000;
. Bimbur	15,000;
. Dudial	15,000;
. Hajira	8,000;
. Abasspur	7,000;
. Kaheota	10,000;
. Bagh	15,000;
. Dialkot	5,000;
. Pallandri	15,000;
. Cihkar	8,000;
. Chinari	5,000;
. Huttianballa	5,000;
. Huttiandupatta	6,000;
. Guridipatta	5,000; and
. Athmaqam	6,000.

Water is supplied by PHED through house connections. Cost recovery has not been able to match the costs of operating and maintaining the systems. The PHED does not incorporate community participation in its program. There is reason to question the advisability of extending PHED's methods of delivery to the smaller towns under its jurisdiction where, in the immediately adjacent areas, the rural population is

contributing 30-50% of capital costs and 100% of the operating and maintenance costs.

### 3.3.4 Non-Government Organizations

The non-governmental organizations (NGO's) are numerous in the State but tend to be charity and not developmental in orientation. They are generally weak on the organizational and management side. UNICEF is taking an increasing interest in the NGO's as a possible means of extending its support to women's development, hygiene education and sanitation. The People's Development Program will apply to the State and will be a means of reaching the NGO's with financing, and with government approval and support. However, the NGO's themselves will need strengthening, co-ordination and reorientation before such initiatives are effective.

### 3.4 Economy

The total farm area of AJK is 0.288 million hectares, with 59 percent of the area being cultivated. The area under forests is 0.583 million hectares. The cropping pattern is given below:

#### CROPPING PATTERN IN THE DISTRICTS OF AZAD KASHMIR (% of Cropped Area)

	Muzaffarabad	Mirpur	Poonch & Bagh	Kotli
Jawar/Bajra	89	40	73	48
Wheat	6	52	22	49
Fruits	3	3	1	2
Others	2	5	4	1
Total	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

The bulk of the cultivation is of foodgrains for human and animal consumption. The cultivation of fruits and other cash crops has yet to acquire significant importance in the region. However, even though the agricultural economy is relatively undeveloped, rural incomes have been

substantially augmented by the flow of remittances from the cities of Pakistan and from abroad. Consequently, the level of demand for services is high and households are willing to pay for such services.

Average monthly per capita income during 1983-84 was Rs. 2300.00. The total family income was estimated at Rs. 9,721 in 1981 out of which Rs. 6,902 i.e 71% was received from the farms.

### 3.5 Social

#### 3.5.1 Social and Cultural Aspects of AJK

The state shows a vast variety of ethno-geographic zones:

- . in the south, Mirpur shares the socio-cultural and economic characteristics with the Jhelum District in Punjab;
- . Kotli to the north of Mirpur, is like Kahuta and Lehtrar barani areas of northern Punjab;
- . Poonch, Bagh and the west and south west of Muzaffarabad are highly mountaineous, wet areas, similar to Murre, Abbottabad and Pahari areas;
- . North and east of Muzaffarabad, the Leepa and Neelam valleys are similar to Kafaristan; and
- . Gujari, Dogari speaking nomads are mainly from the north and north east of the state.

In Mirpur, the lands are usually barani (rain-fed) and segmented. Holdings are small like in Jhelum, but compared to the other 4 Districts of the state, they are bigger and agricultural output is more important due to tubewell irrigation in some areas. This is also the richest and the most developed District in the state, in part due to it's closeness to Punjab and important cities such as Islamabad/Rawalpindi and Lahore,

the presence of the important military base in Mangla, traditions of service in urban jobs particularly armed forces, and migration to U.K and Middle-east countries. The villagers are usually nucleated and larger compared to other areas in the state. Modern facilities, such as roads, schools, doctors, handpumps (public and individual) and electricity are generally available in the rural areas. The language spoken is Punjabi-Potohari. The important feature of social organization is biratheri and minimal lineages of settled Rajput and Gujar segmentary tribes.

Kotli is the smallest District in respect to size and population. It was inhabited mainly by Hindus before the 1948 war and now by series of immigrants, recently from the adjacent rural areas in the Indian held Kashmir. The lands are predominantly rocky, poor and rain fed, though villages are usually situated near streams, rivers and springs. People are poor, depending on livestock and forests as much as on agriculture for subsistence. The socio-economic conditions of recently immigrated people living in settlements near urban areas are much better. They have been allotted lands in Jhang and Mianwali areas of Punjab at very low cost. The educational level of these people is also higher than the others and they have benefitted from the economic opportunities available. The older inhabitants live in small segmented villages of minimal lineages of egalitarian nature. The new immigrants try to benefit from new alliances seeking economic opportunities.

Poonch, Baagh and the west and the south west of Muzaffarabad Districts are predominantly mountaineous. Pahari Rajputs, Gujars (settled), segmented tribes inhabit small scattered villages. Most people have two villages i.e they are semi-nomadic people who have houses in the higher mountains for summer, and in the lower parts of the hills for winter. Lands are cultivated in both villages. Sometimes men may not accompany women, children and cattle in the fall. The area is rich in forests, especially in Poonch but in other areas deforestation has caused an ecological disaster. People depend on a number of economic resources for survival: agriculture, forests, livestock and urban jobs.

Most of the people have lands but plot sizes are small. There are generally no service castes but tenants exist in the area. Some people may employ Gujar nomads as seasonal labour at harvest time. Rich people have turned their lands which are otherwise infertile, into fruit orchards and market gardens to serve Islamabad. They also own most of the private buses serving people daily from AJ & K to Rawalpindi and Lahore.

North and east of Muzaffarabad, Leepa and Neelam valley have remained the most backward and under developed due to multiple reasons: very little communications and roads, hard climatic conditions, one crop production due to the short summer and the inhabitant's religious differences from rest of the population of the State. These people are similar to Kafirs of Kafirstan and are considered uncivilized and ignorant of Islamic traditions by most of the other people in the State. Tourism, forests, famous mushrooms (moreille), and semi-precious stones have all been exploited in the area by the outsiders.

Generalized segregation of women may exist among these societies manifested in the division of labour and social space; however, this segregation is different from the Islamic form in that women and men dance together and music is highly appreciated.

### 3.5.2 Community Involvement

Communities in AJK appear to be particularly aware of their needs. High on the list of priorities is water supply. Their active participation in improving their own water supply has been vividly demonstrated throughout the State.

The traditional organizational system has been successfully integrated into the Union Council framework. Its success is largely due to the political and social awareness of the common man. The members of the community form the Water and Sanitation Committee (WSC) and co-ordinate with the Union Council. The WSC plays a pivotal role in needs assessment, planning, implementation, organizing the contributed funds,

construction and later operations, maintenance and cost recovery. Being formed along traditional lines, the village committee also inherits some faults. The influential people in the village also play a strong role on the committee. This gives them access to higher levels of service than are made available to the poorer groups such as through house connections.

### 3.5.3 Health Services

There are 923 hospital beds available in the state, averaging 0.441 per 1000 population. The number of doctors is 107 giving an average of 0.054 per 1000 population as compared to the national average of 0.169.

A Comparison of health facilities in 1947 and the present position is tabulated below:

HEALTH FACILITIES	POSITION IN 1947	POSITION IN 1985
Hospital Beds	30	923
Rural Health Centres	-	12
Basic Health Units	11	257
M.C.H Centres	-	17
Specialists	-	30
Administrative Doctors	-	19
Doctors	N.A	107
Dental Surgeons	-	18
Nurses	-	55
Lady Health Visistors	-	37
Village Dais	-	229
E.P.I Coverage	-	45%

The present health statistics are tabulated below:

. Infant Mortality rate	115/1000;
. Maternal mortality rate	9/1000;

Crude birth rate	44.3/1000;
Crude death rate	44.6/1000; and
Life exp - male	52.9
- female	51.8.

#### 3.5.4 Perceptions, Beliefs and Taboos

Regional variations may exist in respect to health determining behaviours and perceptions in AJ&K, little is known at this stage and more research will be conducted in the coming months. Some general socio-cultural aspects of the behaviours are described below.

##### Perceptions about excreta

As in many other areas of Pakistan, human adult excreta is considered polluting and it is avoided as a taboo. Though it may be associated with disease, it may not be perceived to be the cause of diarrhoea nor relate to other diseases caused by fecal-oral transmission.

Children's excreta is neither seen as harmful nor it is considered a taboo. Children's only food is mother's milk, and therefore the excreta is believed to be free from contamination.

Cow dung is used as a fertilizer, and in Mirpur and Kotli Districts, as fuel. It is not considered polluting at all.

##### Defecation Practices and Cleansing

In some areas of Mirpur where larger villages exist, and all over the State among better-off houses, people, particularly women, may have a special place constructed inside the house compound for this purpose. However most people go out to fields, forests and dry river-beds depending on the ecological conditions of the area. Men and women go separately to different places and at different times for defecation: women may go nearer the house and men may have to walk further. These places are known by everyone in the village and there is no trespassing

of women's space by men or vice versa. Children under five however, may defecate anywhere between the house and the field/terrace nearest to the house.

Wherever water is easily available, women may take it along for anal cleansing. Where water is difficult, women do the same as men - use leaves or earthballs. Usually the water is more easily available in the mountains and adults may wash hands in a river, spring or stream after defecation. Since children's excreta is not considered harmful, mothers may not wash hands after cleansing their babies.

#### Water Use and Distinctions in Different Sources.

In all Districts of AJK except Mirpur, surface water is available in abundance, and villages are usually situated near a river or a stream. However, when there are springs, women prefer to walk more to them to collect water for drinking and cooking and use the river water to wash laundry and for bathing. Though all running water may be considered clean, spring water is supposed to be pure and is preferred for drinking.

Diseases such as diarrhoea are not related to water. Water is usually collected in clay or metal containers which may not be washed regularly. Similarly, cups and glasses used at home for drinking water may not be kept clean.

Waste water is drained to the fields in mountainous areas, but in plains villages in Mirpur it may collect in the streets of the village.

#### Perceptions Related to the cause of Diarrhoea;

Although mother's milk is encouraged culturally, there are occasions when it is considered harmful for the baby. Mothers may eat "hot" food such as eggs or butter or cold foods such as lussi (butter-milk) which is supposed to contaminate her milk. There is a belief male children may get diarrhoea from the evil eye.

When the child catches diarrhoea, cow or goat milk may be tried. Frequent pregnancies and malnutrition may cause mothers to supplement her own milk or to depend entirely on bottles to feed children at ages as young as five months. It has been observed that more than 38% of children in rural areas of AJK are fed by bottles.

### 3.5.5 Education

In Azad Jammu and Kashmir, 92% of boys and 49% of girls of the primary age group (5-9) are in schools as compared with the national average of 80% and 32% respectively. It was planned to effect 100% enrollment for boys at the primary level by the end of the year 1985 and for girls by the year 1990 as against the target years of 1987 for boys and 1992 for girls fixed by national education policy.

The number of educational institutions in 1947 and their increase over the years is given in the table below which shows the quantum of progress made in the field in AJK:

INSTITUTIONS	Male	Female	Total
-Primary Schools	1407	1131	2538
-Middle Schools	403	331	734
-High Schools	234	101	335
-Degree Colleges	7	2	9

## 4. IDENTIFICATION OF ISSUES

The following discussion presents the issues facing this sector in AJK. It is by no means exhaustive but it does focus on the most important ones.

#### 4.1 Water Resources Issues

Water availability varies from District to District. In the northern three Districts, difficulties are being encountered in predicting flows from sources. In about 20% of cases the spring supply diminishes over the 2 to 3 year period following gravity water scheme installation. Water shortages during the dry months (June and July) are common.

The causes are not well defined but could well be a combination of deforestation and inadequate historical data. Although the World Food Program and the State Government are very active in reforestation, the effects of clear cutting in the past is being felt. Deforestation may also cause local climate changes which may significantly affect recharge of the aquifers. It is also said that global climate changes are having effects on rainfall and hence spring water availability in AJK.

In Mirpur District, surface water sources are not available and groundwater is often 150 ft. deep. This frequently necessitates a communal tubewell and hand pump, or electric pump being installed with the inherent problems for community based maintenance.

Ownership of water has posed difficulties and motivating owners to provide sources to the community is not always possible. Frequently, alternative sources must be found.

The winter climate has caused freezing lines and intakes, although this could be avoided through improved designs and proper burial of pipes.

#### 4.2 Water Supply Issues

Coverage with improved water supply remains the most important issue in LGRDD's program. Unequal distribution across the State is reflected in Mirpur and Poonch's coverage rates approaching 60%, more than twice Bagh District's coverage. Within each District there are also wide inequities between Union Councils and within villages where some people have house connections and others do not.

Reasons behind the above are historical and include accessibility of Districts and communities, political influence dominating project selection criteria and the most influential and wealthy families being able to access a disproportionate share of the benefits.

There have been inadequacies in program planning and engineering design as a result of shortages of qualified staff with good planning and design at the Central and District level

Procurement has been sited as a problem in the case of pipes brought in from overseas through UNICEF funding. This has caused delays in construction.

#### 4.3 Sanitation Issues

The perceived need for sanitation is very low, disease not being directly linked to inadequate methods of excreta disposal.

Although education (especially of women) is higher than in the Provinces, the root causes of the problem are lack of education and historical/cultural factors.

Compared to the Provinces, the women of the State have greater mobility and Purdah is less strictly observed. This has a beneficial effect on hygiene education and the dissemination of latrines and sanitation.

#### 4.4 Drainage Issues

There are no drainage issues of major importance in the state as water is not yet widely provided through house connections. Micro-drainage around the handpump and standpipe is now being incorporated into the program.

#### 4.5 Institutional Issues

The implementation strategies employed by the LGRDD include strong elements of community participation and cost recovery. These are missing from the PHED programs which assume total responsibility for construction and later operations and maintenance.

PHED was established to serve urban areas, and its existing policies and practices are now being applied to the smaller Marakas centres.

Engineering expertise has been incorporated into the LGRDD program but it still needs strengthening. Although the secondment of the Water and Sanitation Engineer to LGRDD from Public Works has substantially improved the technical quality of the LGRDD program, improvements are very much needed at the District and Marakas levels. The Engineers, Sub-engineers, Project Managers and Supervisors have a full range of responsibilities including rural roads and buildings. They have not had specialized training in water and sanitation.

Documentation and monitoring of projects is an issue of some concern. There is an apparent lack of accurate and reliable programme implementation data in a form that is readily accessible and available for planning and management.

UNICEF has supported local government in establishing a new cadre of staff, the sanitation promoter. There are now ten in the Districts, including seven females.

The elected representatives exert a strong influence over the project selection process. This is a natural outcome of the democratic process where elected representatives exert strong influences over government administration.

There are numerous NGO's operating in the State but they remain as small charity organizations at early stages of development for the most part. Several, however, may be useful in the delivery of water and sanitation

services. Little is known of their strengths and weaknesses. NGO's have not been strongly supported by government in the past. However with the People's Development Program this situation may change.

#### 4.6 Financial Issues

One constraint confronting development of this sector in the State is the dearth of available funds. Community involvement and felt needs for water supply and available institutional strengths would permit expansion and more rapid service delivery if funding were available.

The ADF allocation for this sector approximates Rs 30 million. Although this sector is highest in LGRDD priority and expenditures the allocation represents only 3% of the total development program for the State.

Problems are reported in the difficult and lengthy process of acquiring funds. Pre-audit is required and all funds, no matter how small, must go through the Accountant General for AJK. This takes a lot of time.

Although the process of getting funds through to the ultimate beneficiary is complicated and time consuming it does effect good monitoring and audit control.

#### 4.7 Cost Recovery

In the rural water supply program, capital cost recovery is partially achieved through the community itself paying for all costs except the pipes. In this way, the community pays for 30 to 50% of capital costs. Further, the rural communities manage and pay for all of the operation and maintenance costs of their schemes.

Although house connections in the served rural communities are common (even in schemes designed and intended only for stand pipes), benefiting households are not paying for the additional level of service.

This has been the result of a lack precedent in the past and a lack of clear policy and enforcement by the Union Councils. There also appears to be no established policy of cost recovery for service levels above the basic of standpipes and communal handpumps.

Cost recovery practices of the PHED do not cover capital or operation and maintenance costs.

Water supply has historically been looked upon as a free good and cost recovery for its delivery has not been implemented. Cost recovery from the urban areas has been avoided as politically too "hot" despite evidence to the contrary in the rural areas.

#### 4.8 Private Sector

There are no issues identified at this stage as sufficient details about the private sector are not yet available. The Sector will be studied early in March.

#### 4.9 Social

The past need of villagers for their own security and tenure within their communities has resulted in strong community organizational ability and an orientation towards self-help. This has a strong beneficial impact on the rural water and sanitation programs.

Education and consciousness of women, which has also benefited these programs, is high in AJK.

#### 4.10 Population

Population growth rates in AJK are high. Rapid growth of the target groups increases demand for services dramatically which government and the communities must eventually catch up with.

#### 4.11 Health

Infant mortality rates are high, roughly 125/1000. The principal causes are the water and sanitation related diseases often complicated by respiratory infections and malnutrition.

#### 4.12 Human Resources Development

Adequately trained personnel in the rural water and sanitation programs in AJK are in short supply. This pertains to all levels from the engineers at the centre to the rural extension workers.

This is a result of inadequate training prior to entry into government service and minimal training thereafter. In-service training tends to be very short and sporadic with little or no follow up. It has also been focused on one staff level whereas the whole chain of staff must be strengthened through training when programs are being upgraded.

Training programs must be linked and well monitored.

The community is aware of the technical aspects of the program (community level training is given in the UNICEF supported program). However, due to the nature of training of LGRDD and the Union Councils, there is little follow-up and monitoring.

The sanitation program is based on the training of sanitation promoters. There is no specialized training course (the Punjab-based Lalamusa program has been closed) for sanitation promoters or any other specializes personnel in this sector except at the post-graduate level.

### 5. **INITIATIVES**

Initiatives are presented below in two sections: Institutional Structure Options and Program Component Alternatives. All initiatives are presented as options for discussion by government and international agencies.

The options for institutional structure range from minor modification and strengthening of the existing institutional framework to substantial changes in institutional roles and ways of implementing projects.

Program components are also presented as options for consideration. They are presented under such main headings as cost recovery, the private sector, sanitation, and human resources development. Many of them represent individual projects. Most are opportunities for strengthening this sector through external technical assistance programs. It is as yet too early in this activity to detail the costs of such projects. Options for detailed investment plan and project preparation will be identified with government and donor agencies in March. Further field investigation of each of the selected options will be required before costs can be estimated to a reasonable degree of accuracy in June/July.

#### 5.1 Institutional Structure Options

The institutional structure option combinations are presented according to whether populations are greater or less than 1000. This population size break-point is not fixed but does represent the approximate division line between PHED and LGRDD interests and responsibilities as they currently exist. Some of these represent major changes from existing practices. With the exception of the LGRDD option in communities of less than 1000 population (which is currently in operation) it is recognized that these changes will take years to make. The process of change would be made in three stages:

- demonstration projects would be initiated in selected Districts and methodology established;

- consolidation stage would enable the establishment of standard practices and policies to be set down in procedural manuals and allow for the recruitment and/or retraining of new and existing staff; and

in the final stage, the program would be expanded within the demonstration Districts and into other Districts of the Province.

In each of the models presented below, there is an apparent element of increased staffing in government departments which will be partly offset by savings in programmes. Care must be exercised in ensuring that any increases are minimal and do not create future unbearable burdens. In most cases emphasis is placed on increased use of the private sector to better utilize the resources available to the sector. Permanent government staff positions should be reserved for situations where temporary resources cannot be obtained or are inappropriate.

Community Size and Programme Option

In Communities with Population					
Less Than 1000			Greater Than 1000		
Function	District Council in lead	LGRDD in lead	PHED in lead	LGRDD in lead	District Council in lead
Technical Assistance	Dist. Council	LGRDD	PHED	LGRDD	PHED
Planning	P & D LGRDD	P & D	P & D	P & D LGRDD	P & D Dis. Coun.
Project Management	Dist. Council	LGRDD	PHED	LGRDD	Dis. Coun.
Execution	Union Coun. & Community	Union Coun. & Community	Union Coun. & Town Committee	Union Coun. & Town Committee	Union Coun. & Town Committee

5.1.1 District Council Option for Communities with Population less than 1000

This option allows the community to play a strong role in the project by expressing its wishes through the elected representatives. In it, the District Council would take a strong lead role in providing the management and technical expertise. The LGRDD would be responsible for

District/sector planning for rural development and would have strong inputs to the P&D in their macro-planning. Heavy reliance would be placed on the Union Council for project execution through the community and its Community Based Organizations.

The initiative would involve establishment of a District level planning and project/program monitoring unit within the LGRDD staffed by planners, financial analysts, economists, and sociologists. At the District Council level, the initiative would include strengthening of technical capabilities and establishment of community development units staffed by sociologists and social workers (including females) within the Councils.

#### 5.1.2 LGRDD Option in Communities with Population less than 1000

This option has the to taking the lead role in providing the technical and management expertise for the project through its engineers, managers and supervisors. It depends heavily on the Union Council to carry out the project with strong community participation at the village level. Macro-planning would be carried out by the P&D Department.

The initiative in this option is strengthening the LGRDD in technical expertise and project management for a greatly expanded program. This would require the development of engineering and management staff with strong experience in rural water supply program delivery. The additional strengthening needed in project management reflects a need for staff with experience in community development within this sector. These staff could be drawn in from other projects (either government or NGO's).

Recognizing that for rural settlements with populations exceeding 1000, water supply systems will be larger and more technically complex, the following three options for institutional support are being presented for consideration.

5.1.3 The PHED Option for Communities with Population Greater than 1000

PHED has taken a lead role in providing the technical inputs of its engineers, managers and supervisors for the largest population centres such as Muzaffarabad, Kotli and Mirpur.. It would continue to act as an executing agency but in stronger collaboration with the Union Councils (or Town Councils in the case of rural towns). The macro planning functions would continue to be carried out by the P&D Department.

The initiative in this option would be to enhance interaction between the PHED and the community to create the required conditions for the community's involvement in operations and maintenance of the installed schemes. This would require the setting up of a wing within the PHED which would liaise with the community. Selected staff, especially women, who are experienced in community development would be seconded from projects (such as the Pak-German project or other Departments such as the LGRDD)

5.1.4 The LGRDD Option for Communities with Population Greater than 1000

This option has the LGRDD performing the lead role in providing technical and management expertise. The LGRDD would carry out macro-planning in association with the Provincial P&D. This option is dependant on the District Councils executing the project with the Union Councils and with strong community participation.

The initiative in this case would be to upgrade and strengthen the technical skills of the LGRDD. Studies would have to be undertaken to identify the training which would have to be imparted by a central group for the additional skills introduced into the LGRDD.

### 5.1.5 The District Council Option for Communities with Population greater than 1000

In this option, the District Council would perform the planning function in association with the Provincial P&D's. The executing agency would be the Union Council (or Town Councils) as they are closest to, and most representative of the beneficiaries. This is a key element of this option as it permits the needs of the community to be addressed directly. The PHED would provide the technical inputs of design and supervision of implementation. Consultancy services would be brought in by the District Councils. The upgrading of in-house skills of the District Council in planning, project management and monitoring would be required.

## 5.2 Program Component Alternatives

### 5.2.1 Sector Data Base

One of the less obvious constraints to development of this sector is the lack of reliable and consistent data on which rational plans for its development can be based. A data base is recommended to be set up within the P&D Department on a District basis to regularly collect and monitor such information as installed systems, technology and design, system functional status, water resources availability and quality, health statistics, community needs for services, the private sector, and population coverage. The data base should include information on all sector components: water supply, drainage, latrines and hygiene education.

### 5.2.2 Community Financing

Cost recovery is increasingly difficult as it moves away from the control of the beneficiary to bodies which cannot be held accountable for the services being provided. Where the beneficiary pays for services and is in control of those services, cost recovery is relatively easy. In AJK full cost recovery for O&M and 30-50% of

capital cost is being achieved. The key to success in this case is that the funds are collected by the community and payed out by the community for services that are rendered under the supervision of the community.

The institutional development initiatives described above should inherently incorporate a cost recovery component in accordance with the stated policy of:

"Service levels should reflect the expressed demand of the beneficiaries who should receive the service level that they desire, can afford, and can sustain in the long term. In order to accelerate equitable coverage the government should assist in the provision of a basic level of service.

"Users should bear part of the cost of provision of a basic level of service.....Moreover users should bear the full cost of operations and maintenance of their schemes" (National Policy Conference on Rural Water Supply and Sanitation, Islamabad, April, 1988)

For purposes of future PHED schemes, studies must now be undertaken to understand the principals and practices of community financing in those areas where it is succeeding. Full knowledge of motivation, collection, control of revenues, payments, supervision and inspection of services must be acquired.

Resources required include a central group of professionals to make the study of existing practices and detailed design of future PHED cost recovery policies and practices. District Councils and local bodies will be required to implement the cost recovery schemes in the larger communities with the assistance of PHED itself. Trials at the District level should be undertaken. Their successes and failures assessed, improvements made and the concepts widely disseminated and used.

### 5.2.3 Support to Hand-pump Installers and Manufacturers.

The World Bank Sector Review has highlighted the importance of the household hand-pump and the role which the private sector has in delivering them. A review of the private sector hand-pump installers in the Punjab confirmed their importance and also the need for their strengthening.

Currently, repair of installed hand-pumps costs the owner as much as and more than the original installation. This is a result of inappropriate technology and installation techniques. Shallow well hand-pump designs need upgrading and standardizing. This could be carried out through a thorough investigation of existing designs used in AJK and the Provinces and incorporation of designs from outside the country. Standardization would be more difficult but could be accomplished through licensing or franchise arrangements.

Courses for private sector hand-pump installers should be offered at such rural academies as at Lalamusa. The courses should be designed to be ultimately practical and have strong input from local installers themselves. It should focus on the proper installation and development of wells.

Investigations should be made into setting up credit facilities through banks, Union Councils or government departments for individual households wanting to purchase new or rehabilitate their existing handpump.

### 5.2.4 Latrine Dissemination for Human Wastes Disposal Initiative

This initiative describes the method of a latrine sanitation project delivery and the incentives behind that delivery which motivate for its success.

The dissemination of latrines is a household and private sector matter. The promotion, sale and installation of a latrine requires marketing and

delivery which only the private sector can muster. With very few exceptions (UNICEF/LGRDD programme) the private sector has been exclusively responsible for the dissemination of latrines (and septic tanks) in the rural areas. Latrines are a marketable commodity. Government should establish programs in support of the private sector.

The private sector in the form of masons (mystries) should promote and market latrines and make reasonable profits on their successful installation. The mason should be the prime mover and motivator of the household. In essence, the mason should market latrines and his services. He should install the latrines under inspection and final approval of the householder. He should inform the family as to its use, maintenance and repair. He should be the intermediary between the householder and the credit giving institution and act to simplify procedures, to fill out forms, acquire guarantors, short circuit red tape and generally assist the householder in his applying for outside credit.

The householder should own the latrine outright and be totally responsible for its upkeep, maintenance and repair like any other household commodity. Where necessary s/he should undertake a soft loan to pay the full capital costs. During and after construction s/he should ensure that the installation is entirely satisfactory.

UNICEF and the LGRDD have been very active in building up a successful sanitation program based on sanitation promoters, a new cadre of staff focusing on hygiene education, health promotion and the installation of latrines at the District level. This program lays less emphasis on the private sector but is otherwise uses field methodology which is similar to the one described above.

LGRDD could also establish sanitation (latrine) cells at the District level. These could be responsible for executing the support program in the form of investigating appropriate technologies (already available within the State) according to the beneficiary ethnic groupings. LGRDD could set up a training and licensing program for masons throughout the

State interested in becoming latrine installers. The sanitation (latrine) cells could establish promotion campaigns using the mass media such as radio and television promoting the installation and use of latrines and particularly informing the householder of his/her opportunities. As is now the case in the UNICEF/LGRDD program every attempt should be made to integrate sanitation into water supply and hygiene education programs.

#### 5.2.5 Credit for New Housing Latrines

In furthering the acceptance and dissemination of latrines, government should consider including latrines as an integral requirement of housing loans in rural areas. As the loan amount would automatically include the cost of the latrine the repayment would effect full cost recovery for the latrine. To ensure quality control the borrower would be issued standard pans and fittings at the time of construction and technical assistance (licenced mason) at the time of construction. The agency for dispensing housing financing could be either the House Finance Corporation, the Mobile Credit Officer of the Agricultural Development Bank, private banks or other financing mechanism currently providing small loans to agriculture or housing in the rural areas.

#### 5.2.6 Demonstration Household Latrines

Projects in Baldia and Orangi (Karachi) and in AJK demonstrate that success of household sanitation depends on practical demonstration, follow-up during and after construction, technical assistance and social support. These case studies and the Pak-German projects in NWFP and Baluchistan should be reviewed to determine the most effective means of demonstrating latrines within communities. Alternatives include:

selecting the poorest families (the zakat families, including widows) in the community and providing latrines without cost apart from the digging:

installing latrines at the offices of the Union Council. The LGRDD would provide the logistical and technical assistance however care would have to be taken to ensure that the toilet was maintained properly;

installation of demonstration latrines in new housing (as suggested above but at reduced cost) provided that they had a good chance of becoming real demonstrations and were not made accessible to only the immediate family; and

school latrines, but again ensuring that they are properly maintained. A filthy latrine has a decidedly negative demonstration impact. Likewise latrines at schools which are locked and kept for teachers use only.

#### 5.2.7 Community/Line Department Interaction

Unfortunately, line departments such as PHED without first hand experience in self-help projects frequently fail to see the potential for an active partnership between government, the elected representatives and the CBO's. Frequently staff of the line departments do not recognize the existence of informal organizations which have existed behind the scenes for years providing security and tenure for their members. It is important that these perceptions be replaced with better understanding and effective use of CBO's (and within them, women) under government support in this sector. An initiative which would create the required promotional tools to inform and convince government personnel is required.

Case studies providing detailed information on CBO's and their involvement in self-help development projects would be carried out. These would be from within the state and would target government employees which may be involved in community based water and sanitation projects. The case studies would be made of projects (in and out of this sector) which have been planned, financed and supervised by government agencies.

They should be presented on videos in local languages and prepared by professionals working closely with the government agencies involved.

They would then be used as promotional material for government agencies, and training institutions involved in training government personnel to develop a better understanding of the various roles and responsibilities of government, the community and the private sector in such projects.

Resources required would include a group of professionals (consultants, university or NGO) with documentation skills and experience in community development and preparation of audio-visuals. Financial and institutional resources would be required, the latter being in the form of perhaps the LGRDD as an operational base.

#### 5.2.8 Base Line Inventory Survey

Assessment of village communities' needs and conditions as a first step is essential in the overall planning of rural water supply and sanitation schemes. This was well proven in the Mansehra District Council Program. A survey which not only raised awareness amongst the villages about the future program but also allowed the District to better understand the needs of the communities was carried out. The base line survey would also provide information on the communities social-cultural, environmental and physical conditions.

The surveys should be carried out in all Districts intending to undertake community based water and sanitation programs by District Councils and/or LGRDD through Union Councils and executed by consultants to ensure quality control. The District Council and/or LGRDD should provide most of the personnel but the consultants should be responsible for establishing protocol, organizing survey teams, data collection analysis and preparation of reports.

The data base inventory should include existing water supply, sanitation and hygiene education coverages, community needs, potential for

community contributions, organizations, settlement and scheme distribution, water resources, and physical conditions. Such a data base will be invaluable, if not essential to rational planning and program monitoring in the State.

#### 5.2.9. Upgrading Polytechnical Education

Currently polytechnical institutes offer courses in the civil and mechanical disciplines in the Provinces. Some curricula is relevant to this sector. Graduates tend to gain employment in government as supervisors, sub-assistant engineers and sub-engineers.

An initiative is proposed which will upgrade teachers to improve existing curricula and provide refresher workshops for existing staff within PHED and LGRDD, as well as the private sector.

Polytechnical course curricula will be upgraded to more closely match the needs of this sector. This implies a modest degree of change and retraining of trainers. Technical assistance will be required as well as audiovisual aids, equipment and student learning materials.

#### 5.2.10 Informational Programs for Elected Representatives

Elected councillors of District and Union Councils generally attend training and orientation sessions soon after being inducted into office at the National Centre for Rural Development in Islamabad, and the Pakistan Academy for Rural Development, Peshawar. Elected representatives from AJK also attend these courses. These institutions could be used for disseminating the orientation materials (mentioned above) on community participation and project management. This initiative would require development of such promotional material, audio-visual aids and expansion of the faculty and other related inputs at the centre/academies to reach out to a higher proportion of elected Councillors.

#### 5.2.11 Development of In-House Training Facilities of LGRDD's

The LGRDD runs in-service training programs for employees but these tend to be short lived and lack follow-up. These needs to be strengthened and expanded to include Union Council Secretaries as well as Chairmen of the District Councils and Union Councils to impart project management and community development skills. The initiative would involve the development of relevant course outlines, learning materials, field work, audio-visual aids and out-reach capabilities. In addition, in-house training capabilities would need to be mobile reaching out to the District level.

#### 5.2.12 Skills Development and Technical Training

A network of technical and vocational training institutes is run by the State and NGO's. These institutes have the capability of imparting training middle level skills to masons, carpenters, pipe-fitters, plumbers, electricians, diesel mechanics etc. However, the outreach is currently is limited to the urban labour force down to the Marakas level. This initiative would involve the extension of the training programs to cover the rural areas through establishment using mobile training units at the Union Council level. In addition, the initiative would require modification of course contents to suit sector needs, modest upgrading of teaching staff, audio-visual aids, equipment and vehicles. The scope for involvement of the private sector in skill training programs could also be tested through this initiative by a training vouchers system run through the Union Councils. These vouchers would be encashed as effective payment of fees following the completion of training of workers from the rural private sector.

## 6. WORKPLAN

Project activities have been divided into categories as outlined in Section 2. Each category is discussed below and is supported by detailed lists of activities presented in Appendix III.

The project time span has been divided into five phases. At the end of the discussion below, a schedule of the main tasks the team expects to accomplish in each phase is presented. The schedule is a guideline for the development of expanded plans being compiled during the first half of March.

### 6.1 Data Collection

Preliminary data collection began in December, 1988 and was completed February 15, 1989. It identified and collected readily available secondary data and formed the basis for:

- . the division of the sector into sub-segments to be studied;
- . the definition of data bases, outlining data to be collected during the detailed data collection phase; and
- . the focus of project activities during the coming months.

The detailed data collection activities began mid February and will ~~continue~~ until June 15. During this period:

- . secondary data will be collected to assess specific issues and needs;
- . limited field studies will be undertaken to verify selected secondary data; and
- . some primary data collection will be undertaken using sampling techniques where secondary data are not available.

The final phase of data collection will fill gaps in the data which become apparent as initiatives are formulated.

In the schedule at the end of this section, data collection will occur in:

- . Phase II activities 2 to 7, focused by the analysis carried out for the Inception Report; and
- . Phase III activities 11 and 13, focused further by discussions of the Inception Report.

## 6.2 Data Analysis

Analysis of the detailed data collected will take place in parallel with the collection from March 1 - June 21.

Key critical issues, identified in the analysis of the initial data will be reviewed as more detailed information is collected. They will be confirmed as stated, or refined to reflect the new data. Issues judged to have an effect on the other issues, i.e. to "drive" the rest, will be given the highest priority.

In-depth analysis of each issue will determine:

- . the root causes of each issue - why the issue is important;
- . strengths which can be built on and weaknesses which must be overcome; and
- . conclusions reflecting types of action which can be taken.

The strengths and weaknesses will then be prioritized in order to identify actions of the greatest likelihood of success and areas in which the need is the greatest.

Through the analysis of the data, gaps will be identified. The process of data collection will start again, leading to more analysis using the methodology outlined above.

The conclusions reached will form the basis of the investment strategy. Projects will then be identified, and it may follow that needs for additional data will once again result in additional collection and analysis.

Analysis of data will take place in the schedule:

- . Phase II activities 2 to 6; and
- . Phase III activities 11 to 13.

### 6.3 Synthesis of Information

As data is being analyzed, the results are being evaluated for linkages. This synthesizing process will be carried out in parallel with data analysis, from March 15 until June 30. It will occur in Phase II activities 2 to 6, Phase III activity 11 as well as the subsequent phases.

Key interrelationships and constraints identified earlier will be verified by analyzing the conclusions reached in the analysis phase.

Strengths and weaknesses which overlap in several issues will be deemed to be of critical importance and will be given top emphasis.

### 6.4 Formulation of Initiatives

The formulation of initiatives is the last step in the process before identification of potential projects.

Goals will be developed for actions which will build on the available strengths and lessen the effects of the weaknesses.

For each goal, a set of specific objectives which are quantifiable and measurable will be established. The objectives will include a time element. They will be prioritized in terms of most pressing needs, having the broadest anticipated impact and short-term visible impacts and long-term benefits.

A set of strategies on how the goals and objectives are to be met will be set for each objective or set of objectives. Development of the strategies will be guided by the major issues and the overall project goal of developing projects which lead to affordable and sustainable water supply, sanitation, drainage and hygiene education projects while maximizing community participation. Criteria for evaluating the strategies will be defined and used to select ones which offer the appropriate impact, benefit, and likelihood of success. These strategies will be rolled into initiatives which will form the basis of the investment plan and from which projects will be identified.

Phase I activities concluded with a formulation process which produced a preliminary set of initiatives. These will be refined following the discussions of this report. Phase II activities 6 and 8 will narrow the refined initiatives to a specific set and Phase III activities 11 and 12 will lead to the selection of final initiatives for the investment plan and subsequent project identification.

#### 6.5 Project Outputs

The project outputs include a Strategic Provincial Investment Plan, Project Identification Reports and a National Summary Investment Plan as discussed in Section 2.

**STRATEGIC PLANNING METHODOLOGY  
PHASE I - JAN 6 TO FEB 25**

**RWSSHE SECTOR OF PAKISTAN**

**SEGMENTATION OF SECTOR**

**SCANNING THE SECTOR  
(BUILDING DATA BASES)**

**ANALYSIS OF DATA  
(IDENTIFY BROAD TOPICS/TREND  
ANALYSIS)**

**BROAD GOAL STATEMENT**

**IDENTIFICATION & SELECTION  
OF CRITICAL ISSUES  
"WHAT?"**

**PRIORITIZATION  
EMPHASISING THOSE CRITICAL  
ISSUES WHICH DRIVE THE  
OTHERS**

**LINKS**

**ROOT CAUSE ANALYSIS**

**LINKS**

**CONCLUSIONS**

**LINKS**

**SYNTHESIS  
OF CONCLUSIONS FOR  
EACH CRITICAL ISSUE / ID. INFO  
GAPS PER SEGMENT**

**LINKS**

**INCEPTION REPORT/  
PRELIMINARY INITIATIVES**

**PHASE II**

**WORKPLAN PHASE I - JAN 6 to FEB 28**

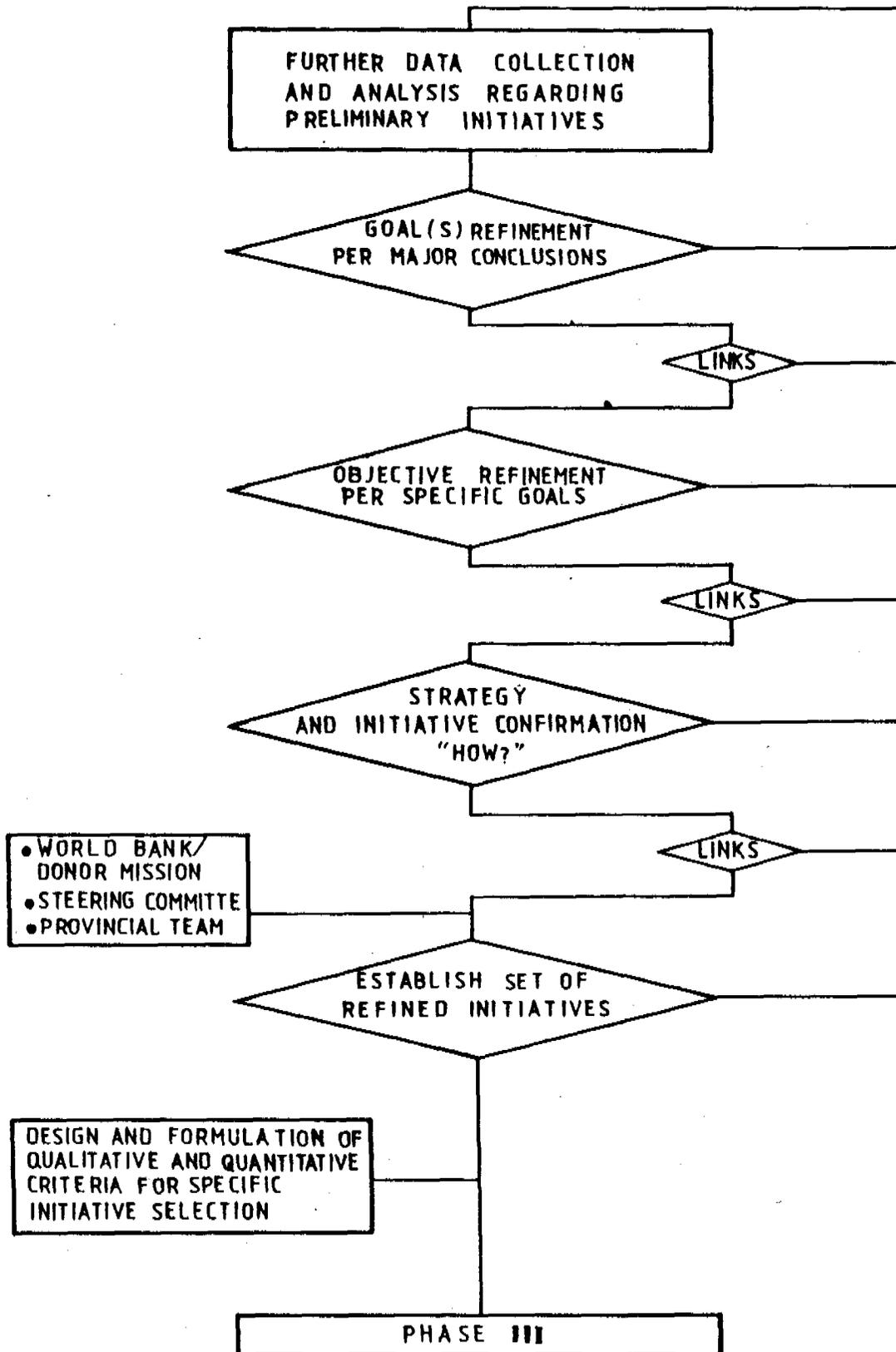
Initial reconnaissance of data and issues leading up to the Inception Report and a set of preliminary initiatives and indicative projects.

**WORKPLAN PHASE II - MAR 1 to APR 1**

Enhancement of data and refinement of preliminary initiatives identified in the Inception Report in order to establish the set of refined initiatives:

ACTIVITY	APPROX. TIME REQUIRED	COMPLETION DATE	RESPONS- IBILITY
<b>1. PREPARATION OF DETAILED WORKPLAN FOR PHASE II</b>		05/03/89	
-----			
Prepare detailed workplan for Phase III and review with MG	02 days		PT/CT
<b>2. REVIEW AND ENHANCEMENT OF STRATEGIC ANALYSIS BASED ON INCEPTION REPORT</b>		14/03/89	
-----			
2.1 Review conclusions of inception report and identify data gaps for each key issues of each subsegment	01 day		PT
2.2 Prioritise data gaps and collect highest priority data	10 days		PT
2.3 Analyse data and identify new trends	10 days		PT
2.4 Revise root causes and refine conclusions for each key issue	01 day		PT
<b>3. GOAL REFINEMENT</b>		15/03/89	
-----			
3.1 Refine goals and formulate new ones in light of new data and conclusions	01 day		PT
3.2 Review linkages between goals and synthesise into major goals for each subsegment	01 day		PT

**STRATEGIC PLANNING METHODOLOGY**  
**PHASE II - FEB 26 TO MAR 31**



<b>4.Objective Refinement</b>		<b>16/03/89</b>	
<b>4.1 Refine objectives and formulate new ones for each major goal</b>	<b>01 day</b>		<b>PT</b>
<b>4.2 Review linkages between objectives and synthesise into major objectives for each major goal within each subsegment</b>	<b>01 day</b>		<b>PT</b>
<b>5.STRATEGY CONFIRMATION AND REFINEMENT</b>		<b>26/03/89</b>	
<b>5.1 Confirm formulated strategies and establish new ones that will best achieve major objectives</b>	<b>02 days</b>		<b>PT</b>
<b>5.2 Review linkages between strategies and synthesise into major strategies for each subsegment</b>	<b>01 day</b>		<b>PT</b>
<b>5.3 Compare major strategies with strategic options in the Inception Report .</b>	<b>01 day</b>		<b>PT</b>
<b>6.INITIATIVE CONFIRMATION AND REFINEMENT</b>		<b>26/03/89</b>	
<b>6.1 Refine preliminary initiatives and if needed formulate new ones</b>	<b>03 days</b>		<b>PT</b>
<b>6.2 Review linkages between initiatives of each goal and synthesise for each subsegment</b>	<b>02 days</b>		<b>PT</b>
<b>7.WB/DONOR MISSION</b>		<b>12/03/89</b>	
<b>7.1 Meeting with Steering Committee, WB and prospective donors to review contents of Inception Report</b>	<b>02 days</b>	<b>to</b>	<b>PT/CT</b>
<b>7.2 Confirmation by WB of order of magnitude of expected foreign investment into the sector</b>		<b>26/03/89</b>	
<b>8. ESTABLISH A REFINED SET OF INITIATIVES IN CONSIDERATION OF STEERING COMMITTEE/ WB-DONOR MISSION RECOMMENDATIONS</b>	<b>02 days</b>	<b>31/03/89</b>	<b>PT</b>

**9. FORMULATION OF INITIATIVE SELECTION CRITERIA**

---

Design qualitative and quantitative criteria for the selection of specific initiatives      07 days    31/03/89      CT

**10. PREPARATION OF DETAILED WORKPLAN FOR PHASE III**

---

Prepare detailed workplan for Phase III and review with MG      02 days    31/03/89      PT

**STRATEGIC PLANNING METHODOLOGY**  
**PHASE III APRIL - JUNE**

CONTINUATION OF REITERATION  
PROCESS OF PHASE II (AND I)  
AS TO CONFIRM REFINED SET  
OF STRATEGIES AND INITIATIVES

APPLY CRITERIA FOR  
INITIATIVE SELECTION

ESTABLISH  
SET OF SPECIFIC  
INITIATIVES

FORMULATE PRELIMINARY  
STRATEGIC PROVINCIAL INVESTMENT PLAN  
(SPIP)

- WB\_DONOR MISSION - II
- STEERING COMMITTEE
- PT

DRAFT PROJECT  
IDENTIFICATION,  
SELECTION, APPROVAL  
IMPLEMENTATION AND ASSESMENT  
METHODOLOGIES

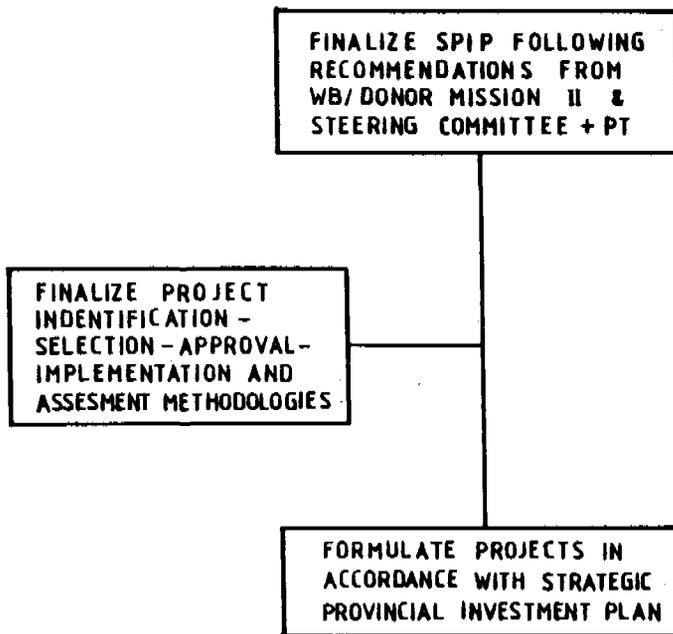
PHASE IV

## WORKPLAN PHASE III - APRIL 2 to JUNE 11

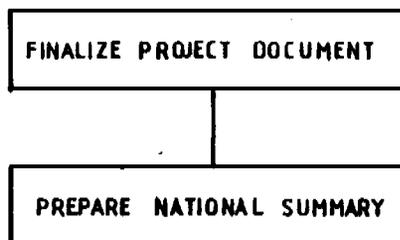
Selection of most appropriate and feasible of the refined initiatives to be developed into a preliminary strategic provincial investment plan

ACTIVITY	APPROX. TIME REQUIRED	COMPLETION DATE	RESPONS- IBILITY
<b>11. CONTINUATION OF STRATEGIC ANALYSIS</b>			
<hr/>			
11.1 Collect additional data in support of refined initiatives and to meet selection requirements	10 days		PT/CT
11.2 Refine strategic analysis, goals, objectives, strategies and initiatives in light of latest data	05 days		PT/CT
<b>12. SPECIFIC INITIATIVE SELECTION</b>		13/05/89	
<hr/>			
12.1 Apply qualitative criteria to refined initiatives to select a short list of initiatives	02 days		PT/CT
12.2 Apply quantitative criteria to the short list of refined initiatives to select final set of specific initiatives	05 days		PT/CT
<b>13. PRELIMINARY STRATEGIC INVESTMENT PLAN FORMULATION</b>			
<hr/>			
13.1 Group specific initiatives into programmes	01 day		PT
13.2 Assess resource requirements and time frames for each programme	04 days		PT/CT
13.3 Allocate resources for the '90-'93 and '94-'97 planning periods	10 days		PT/CT
13.4 Produce preliminary strategic provincial investment plan	15 days	20/05/89	PT/CT
13.5 Deliver Preliminary Strategic Investment Plan		11/06/89	PT
14. DRAFT METHODOLOGIES FOR PROJECT IDENTIFICATION, SELECTION, APPROVAL, IMPLEMENTATION AND ASSESSMENT FOR FUTURE USE BY LOCAL EXECUTING AGENCIES	10 days	11/06/89	CT
<hr/>			
15. PREPARATION OF DETAILED WORKPLAN FOR PHASE IV AND REVIEW WITH MG	02 days	11/06/89	PT/CT

STRATEGIC PLANNING METHODOLOGY  
PHASE IV JUNE - AUGUST 1989



PHASE V  
SEP - NOV 1989



**WORKPLAN PHASE IV - JUNE 12 to SEPT 10**

Finalisation of strategic provincial investment plan and preliminary project document preparation:

<b>ACTIVITY</b>	<b>APPROX. TIME REQUIRED</b>	<b>COMPLETION DATE</b>	<b>RESPONS- IBILITY</b>
16. REVIEW OF PRELIMINARY STRATEGIC INVESTMENT PLANS WITH WB AND STEERING COMMITTEE	02 days	25/06/89 to 09/07/89	PT/CT
-----			
17. FINALISATION OF STRATEGIC INVESTMENT PLAN			To be defined
-----			
18. FORMULATION OF RELATED PROJECTS WITHIN STRATEGIC INVESTMENT PLAN FRAMEWORK			
-----			
19. FINALISATION OF METHODOLOGIES FOR PROJECT IDENTIFICATION, SELECTION, APPROVAL, IMPLEMENTATION AND ASSESSMENT			
-----			
20. PREPARATION OF DETAILED WORKPLAN FOR PHASE V AND REVIEW WITH MG			
-----			

**WORKPLAN PHASE V - SEPT 11 to NOV 05**

Finalisation of projects and preparation of national summary report

<b>ACTIVITY</b>	<b>APPROX. TIME REQUIRED</b>	<b>COMPLETION DATE</b>	<b>RESPONS- IBILITY</b>
21. PREPARATION OF FINAL PROJECT DOCUMENTS			To be defined
-----			
22. PREPARATION OF NATIONAL SUMMARY REPORT			To be defined
-----			

STRATEGIC PROVINCIAL INVESTMENT PLAN AND PROJECT PREPARATION  
FOR RURAL WATER SUPPLY SANITATION AND HEALTH  
OF PAKISTAN  
WORK PLAN BAR CHART

ACTIVITY TITLE	ACTIVITY DESCRIPTION	COMPLETION DATE	MARCH 1989					
			Mk.1	Mk.2	Mk.3	Mk.4	Mk.5	
1. PREPARATION OF DETAILED WORK PLAN FOR PHASE II	Prepare work plan and review with central team	05/03/89	XXXXXXXXXX					
2. REVIEW AND ENHANCEMENT OF STRATEGIC ANALYSIS BASED ON INCEPTION REPORT	2.1 Identify data gaps 2.2 Collect additional data 2.3 Analyse new data 2.4 Refine conclusions	14/03/89	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
3. GOAL REFINEMENT	3.1 Refine goals and formulate new ones 3.2 Review links and synthesise	15/03/89	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
4. OBJECTIVE REFINEMENT	4.1 Refine objectives and formulate new ones 4.2 Review links and synthesise	16/03/89	XXXXXXXXXXXXXXXXXXXXXXXXXXXX					
5. STRATEGY CONFIRMATION AND REFINEMENT	5.1 Confirm strategies and establish new ones 5.2 Review links and synthesise 5.3 Compare strategies with Inception Report and refine	26/03/89	XX					
6. INITIATIVE CONFIRMATION AND REFINEMENT	6.1 Refine preliminary initiatives. Formulate new ones 6.2 Review links and synthesise	26/03/89	XX					
7. WORLD BANK/DONOR MISSION and STEERING COMMITTEE MEETINGS	7.1 Meetings to review Inception Report 7.2 Confirmation of order of investment	12/03/89 to 26/03/89				XXXXXXXXXXXXXXXXXXXXXXXXXXXX		
8. ESTABLISH REFINED SET OF INITIATIVES		31/03/89				XX		







## HUMAN RESOURCES SCHEDULE

POSITION	NAME	MONTHS REMAINING	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
			REVIEW	PRELIM SPIP	FINAL SPIP + PRELIM PP	FINAL PP + NS					
<b>MANAGEMENT GROUP</b>											
PROJECT DIRECTOR	MC GINNIS		■			■				■	
PROJECT CODIRECTOR	MC GARRY		■	-	-	-	-	-			
PROJECT MANAGER	FOY		■	■	■	■	■	■	■	■	■
DEPUTY PROJECT MANAGER	ABID		■	■	■	■	■	■	■	■	■
DEPUTY PROJECT MANAGER	BAKHTEARI		■	■	■	■	■	■	■	■	■
MANAGEMENT ADVISOR	ASHWORTH				■			■			
<b>STRATEGIC PLANNING GROUP</b>											
STRATEGIC PLANNER	RATHIER		■	■	■	■	■				
ADVISOR PLANNING	WEBSTER				■	■		■			
ECONOMIST	PASHA		■	■	■	■		■	■	■	■
FINANCIAL ANALYST	KARDAR		■	■	■	■	■	■	■	■	■
SOCIOLOGIST	BAKTHEARI			AS	A	B	O	V	E		
DEMOGRAPHER	KHAN		■	■	■	■	■				

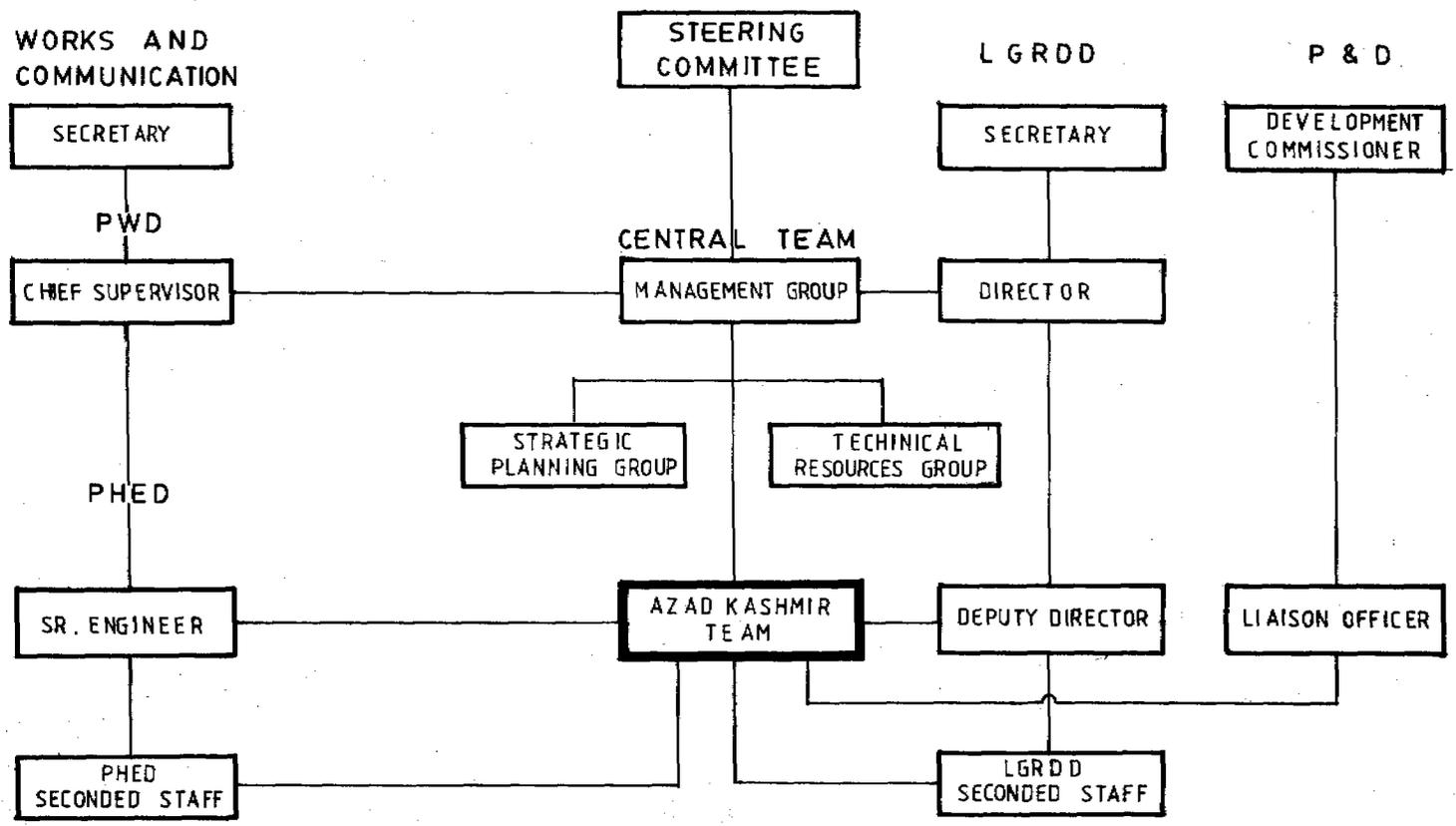
## HUMAN RESOURCES SCHEDULE

POSITION	NAME	MONTHS REMAINING	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
			REVIEW	PRELIM SPIP	FINAL SPIP+PRELIM PP	FINAL PP+ NS					
<b>TECH RESOURCES GROUP</b>											
HYDROGEOLOGIST	SHAH		█	█	█	█	█	█			
RURAL WATER ENGINEERS	CARR		█	█	█	█	█	█	█	█	█
PUBLIC HEALTH	GOLDTHORPE							█			
HEALTH	IMDAD		█	█	█	█	█	█	█	█	█
ADULT EDUCATION	ETHERINGTON				█		█	█			
HUMAN RES. DEVELOPMENT	ELLIS				█	█		█	█		
INSTITUTIONS/P.SECTOR	O'CALLAGHAN				█	█					
COST RECOVERY ECON.	GHAUS			█	█	█					
WS+S	KALBERMATTEN			█	█						
<b>PROVINCIAL TEAMS</b>											
TEAM LEADERS			█	█	█	█	█	█	█	█	█
SOCIOLOGISTS			█	█	█	█	█	█	█	█	█
SOCIOLOGIST	SHAHEED			█	█	█	█	█			
ENGINEERS (SR)					█	█	█	█	█	█	█
ENGINEERS (JR)					█	█			█		
FINANCIAL ANALYSTS									█	█	█

**Appendix**

**I**

# PROJECT ORGANISATION FOR AZAD JAMMU & KASHMIR



**PROJECT ORGANIZATION AND MANAGEMENT**

Project Staff are organized into the Provincial Teams and the support group made up of the Management, Strategic Planning and Technical Resources staff as illustrated in Figure I-1. The Provincial Teams are based in the respective Public Health Engineering Department offices and the support staff is based in Islamabad.

Provincial Teams are charged with developing the investment plan and identifying projects for implementation. The Islamabad Team is taking the lead role in AJK activities.

The Islamabad based staff are also responsible for the overall direction of the project and provide support to all four Provincial Teams. The Management Group monitors the day to day management process and its extension to the Provincial level, ensures goals are reached on time and provides liaison with the Federal Government and the World Bank. The Project Director and Co-Director are based in Canada and visit the project from time to time to ensure it operates within contractual guidelines and to provide management and technical advice. The Project Manager has overall operational responsibility for the project and all staff report to him. He is supported by two Deputy Project Managers who provide guidance and technical support to the Sociologists and Engineers on the Provincial Teams and by an Advisor - Management/Engineering on short-term assignments.

The Strategic Planning Group takes the lead in developing methodologies and criteria and works with the Provincial team to apply and to modify them as necessary to meet local conditions. All of the staff in this group are on long term assignments.

The Technical Resources Group is comprised mainly of short-term staff who provide technical inputs in their area of expertise to both the Islamabad and Provincial Teams.

**Appendix**

**II**

**METHODOLOGY**

The project uses a Strategic Planning approach to the work. Strategic Planning differs from Comprehensive Planning in that it focuses on key issues and interrelationships in order to quickly arrive at appropriate programmes for implementation while the latter is much more broad based and attempts to identify all components of a specific subject. For example it is necessary to review the economy of the province. Using a strategic approach, only those items of the economy which have a direct bearing on the water supply, sanitation and health sector will be considered - eg. income levels, ability to pay for services, income generating activities which affect the way water is used. In a comprehensive study, all aspects of the economy would be studied.

The methodology is comprised of six categories of activities:

. Project Initiation	-	Series 100 activities;
. Data Collection	-	Series 200 activities;
. Data Analysis	-	Series 300 activities;
. Synthesis of Information	-	Series 400 activities;
. Initiatives Formulation	-	Series 500 activities;
. Outputs	-	Series 600 activities.

Since the project initiation activities related only to project start up and this phase is now complete, they are not discussed in this report.

1. Data Collection

Data collection activities are divided into three categories. The preliminary data collection began in December before the project was formally initiated and was completed by February 15, 1989. This work identified the availability of secondary data, collected what was readily available and formed the basis for:

- . the division of the sector into sub-segments to be studied:
  - water resources;
  - water supply;
  - sanitation and drainage (disposal of sullage and storm water);
  - disposal of human waste;
  - institutions subdivided into:
    - . government departments;
    - . District and Union Councils;
    - . Elected Representatives; and
    - . Non-Governmental Organizations (NGOs);
  - economy;
  - financial resources;
  - cost recovery;
  - private sector;
  - social/cultural subdivided into:
    - . communities;
    - . role of women;
    - . practices, beliefs, and behaviours; and
    - . community organizations;
  - population;
  - health; and
  - human resources development;
- . the definition of data bases, outlining data to be collected; and

the focus of project activities in the coming months.

Further detailed data collection began mid February and will continue until June 15. Activities are aimed at collecting the information defined by the data bases. Selected secondary data will be verified by independent field studies and some primary data collection will be undertaken using sampling techniques where secondary data are not available. It is anticipated that investigation may be needed to gain an understanding of the rural communities - the beliefs and behaviours of the populace, the availability and strength of village organizations which could be involved in project implementation, and the ability and willingness of people to pay for services.

During the period July 1 - September 30, data collection will be focused on project identification. Analysis of the data collected and identification of potential initiatives will both highlight data gaps to be filled, resulting in the final phase of data collection.

## 2. Data Analysis

Analysis of the data collected will also be an ongoing activity.

The preliminary analysis phase ended February 15, 1989 and provided:

- . preliminary identification of issues to be studied in each subsegment;
- . preliminary selection and prioritization of the key critical issues (those which drive the rest) for each subsegment;
- . preliminary analysis of the key critical issues, including their root causes and identification of data gaps; and
- . conclusions reached.

## APPENDIX II

Analysis of the detailed data collected will continue in parallel with the collection activities and will end June 30, 1989. During this phase the following activities will be carried out:

- . review of the preliminary identification of key critical issues in the light of the additional data collected;
  - . prioritization of key critical issues and an in depth analysis of them identify:
    - factors which are the basis of the issue being of critical importance (root causes);
    - strengths which can be built on and weaknesses which must be addressed; and
    - conclusions reached;
  - . prioritization of strengths and weaknesses; and
  - . identification of data gaps, collection of the data and analysis of it using the same methodology outlined above.
- In the final phase, July 1 - September 30, additional data collected for project identification will be analyzed in the same way.

### 3. Synthesis of Information

As a result of the analysis of data, conclusions will be reached based on quantitative and qualitative assessment of root causes. These conclusions will then be studied or synthesized to identify the key interrelationships and constraints. Strengths and weaknesses which overlap in several issues will be given top emphasis.

Synthesis is an ongoing activity, tied into the collection and analysis of data. The major effort will end June 30, but conclusions reached as

the result of the more focused project identification data collection will also be checked for interrelationships with other conclusions.

4. Formulation of Initiatives

In order to formulate initiatives which will lead to projects, specific objectives and strategies must be devised and criteria to select the most appropriate ones developed.

Within the overall goals of the project, specific objectives will be set based on the interrelationships identified among the conclusions. The objectives will define in broad terms initiatives which will build on existing strengths and opportunities and lessen the effects of weaknesses.

For each goal, a series of objectives will be set which are quantifiable, measurable, and include a time element. The objectives will then be prioritized in terms of:

- . most pressing needs;
- . broadest anticipated impacts; and
- . short-term visible impacts and long-term benefits.

The objectives serve to further quantify the goals.

A set of strategies for meeting each objective or set of objectives will then be formulated. The overall project goal of developing projects to improve the health and quality of life of the rural population through more cost effective and sustainable water supply, sanitation and hygiene education initiatives while maximising community involvement, will focus the development of the strategies as it did in the analysis of issues.

Criteria to evaluate the different strategies will be developed. Criteria which could be used include:

- . likelihood of success;
- . potential for community involvement;
- . potential for the involvement of women; and
- . coverage to be achieved and impact expected.

Using the criteria, the best strategies will be selected and result in recommended projects.

## 5. Project Outputs

The outputs of the project include this Inception Report, a Strategic Provincial Investment Plan, National Summary Investment Plan and Project Identification Reports.

The Inception Report is being submitted March 4, 1989, two months after the project was initiated.

The Strategic Provincial Investment Plan will be presented to the Government in draft form three months later, June 10, 1989, and in final form, September 9, 1989.

### 5.1 Report Format for Strategic Provincial Investment Plan

The formulation of objectives outlined in the previous section will form the basis of the investment strategy. The contents of the report defining the strategy will be finalised in the coming months, but the initial outline is:

- . Rural Water Supply, Sanitation and Health Sector
  - current situation;
  - Government priorities and targets for increased coverage (Seventh Five Year Plan, 1988 - 1993 and Perspective Plan, 1993 - 1998; and
  - sector issues.

Population and Demand

- overall and rural population projections;
- present and future demand for services;
- population to be served; and
- proposed service levels.

Investment Strategy

- objectives;
- analysis of alternative strategies; and
- investment criteria.

The Investment Plan

- size and components of investment plan by sub-sector (based on order of magnitude cost estimates);
- Provincial Investment Plan;
- types of investments - 1990 - 1993; and
- types of investments - 1994 - 1997.

Financing

- prospects of overall macro resource availability;
- projections of Government allocations to the sector;
- involvement of donor agencies;
- future operations and maintenance cost requirements;
- affordability and willingness to pay of beneficiaries;
- mechanisms for cost recovery; and
- overall financing plan.

Project Management and Implementation

- institutional arrangements;
- organization and management;

- involvement of communities;
- operation and maintenance; and
- personnel/training requirements.

## 5.2 Outline of Identification Reports for Projects to be Implemented 1990-93

Draft project identification reports will be submitted September 9, 1989 and in final form, November 4, 1989. The format of the reports will also be developed during the coming months, but the initial outline for a water/sanitation project to be implemented in the period 1990 - 1993 includes:

### The Water Supply, Sanitation and Health Sector

- provincial background;
- economic and health indicators;
- water resources and control;
- present service coverage and standards;
- sector goals;
- staffing requirements and training needs;
- financial implications; and
- involvement of international agencies.

### The Project Area and the Need for a Project

- planning horizon;
- project area;
- population patterns;
- economic and social conditions;
- regional development prospects;
- existing and future land use patterns;
- sector institutions;
- available water resources;
- existing water supply systems and population served;
- existing sanitation systems and population served;

## APPENDIX II

- existing drainage and solid wastes removal systems and population served; and
- need for a project.

### Strategic Plan for Water Supply, Sanitation and Hygiene Education

- objectives;
- water supply service standards;
- sanitation and drainage service standards;
- community preferences and affordability;
- capital availability;
- future demands for water services;
- future demands for sanitation services;
- future demands for drainage services; and
- strategic plan for water supply, sanitation and drainage, and hygiene education.

### Proposed Project

- project definition;
- institutional responsibilities; and
- financial aspects.

### Conclusions and Recommendations

- conclusions;
- issues; and
- recommended actions.

5.3 Outline of Identification Reports for Projects to be Implemented 1994-98

The outline of water supply projects which could be considered for the subsequent period, 1994 - 1998 is:

- . a map showing the project area and definition of the intended beneficiaries;
- . explanation of how the project complies with the strategic investment plan;
- . description of the present services in the project area with an outline of the deficiencies of the services;
- . summary of the main objectives of the project, indicating the number of people to be served, anticipated standards of service and expected conditions in the project area after the project is completed;
- . outline of the proposed project components in terms of physical facilities and supporting activities - e.g. hygiene education, training;
- . estimate of the local and foreign costs of implementing the projects and proposals for cost recovery;
- . description of the institutional responsibilities for the future project feasibility study, detailed design and implementation; and
- . recommendations for future actions regarding the project.

Both project identification report outlines suggested above are for integrated water supply, sanitation and hygiene education projects. They will be modified as needed for other types of projects - human resource development, community development.

**Appendix**

**III**

## DETAILED LIST OF PROJECT ACTIVITIES

200 Data Collection210 Water Resources, Rural Water Supply, Sanitation and Drainage

211 Compile data on the physical environment including sources of ground water and surface water, and rainfall.

212 Using secondary data, determine coverage in terms of the number of villages with water supply, sanitation and drainage services, grouped by District and population.

213 Identify the technologies used:

water supplies - ground water or surface water sources;  
 - hand pump or mechanized pumps;  
 - treatment and distribution facilities;  
 - public or private ownership, operation and maintenance;

. sanitation; and

. drainage.

214 Using sampling techniques, examine arrangements for operation and maintenance and analyze existing data to gain an appreciation of system status:

. number operating;

. number operating but needing repair; and

. number not operating.

215 Identify present criteria for design, project prioritization and selection and special criteria for underdeveloped areas.

220 Institutional Assessment

221 Identify institutions involved in the province and each district and their mandates including responsibilities for the planning, design, implementation, operation and maintenance of water supply, sanitation and drainage systems or the provision of related services:

Government Departments:

- PHED;
- LGRDD;
- Department of Education (including schools);
- Health Department (including Traditional Birth Attendants and Lady Health Visitors);
- WAPDA; and
- Social Welfare;

District and Union Councils;

Elected Representatives;

Non Governmental Organizations;

Private Sector; and

special projects with particular attention to the methodology and relationship between agencies, private sector and donor agencies.

222 Determine institutions' organizational structure:

- organization chart;
- basis for making promotional appointments; and
- scheme of service.

223 Examine the institutions' management philosophy, policy and guidelines.

224 Examine funding mechanisms:

- . source of the funds, financial year, and operating budget (salaries, expenses and revenues);
- . method of establishing operating budgets and justifications used; and
- . review of funds transfer mechanisms in the province vis-a-vis urban and rural.

225 Examine training institutions and determine:

- . class timetable, class size, and ages and gender of students;
- . curricula, facilities, learning materials and text books;
- . attendance policies and achievement; and
- . educational level classification system.

226 Identify the Provincial/National linkages:

- . composition of the coordinating body and frequency of meeting;
- . guidelines, mandate, and authority/approval levels of staff;
- . how staff are appointed to the coordinating body; and
- . appraise the effectiveness of the linkages.

227 Examine staff development/training:

- . training policy;
- . scope of development - i.e. is it limited to specific groups;
- . performance appraisal procedures;
- . assessment and licensing of teachers in schools and training institutions;
- . job opportunities after graduation and promotion policy;

APPENDIX III,

- . incentives for staff to take training and opportunities available - training courses, seminars, workshops, study tours, fellowships, scholarships or training of trainers;
  - . facilities;
  - . instruction level and quality, equipment and training aids;
  - . locations; and
  - . hostel/accommodations and allowances, and costs involved.
- 228 Assess the capacity to undertake an accelerated development programme.
- 230 Economy
- 231 Examine the rural economy, focusing on level of prosperity and ability to pay for services.
- 232 Identify regional development at the district level:
- . income levels and affordability;
  - . demand for water supply, sanitation, and drainage;
  - . production indicators - number of tube wells, tractors; . service indicators - number of roads, banks, schools.
- 232 Review sources of funds for provincial departments and recent government statements leading to a forecast of the likely future funding.
- 233 Review cost recovery experience in this and other service sectors.
- 234 Determine the magnitude of capital costs of civil, mechanical and electrical components of water supply, sanitation and drainage facilities, and operation and maintenance costs.
- 235 Study the Private Sector in terms of:
- . technologies, designs, and standards used by the private sector; and

the sector's role as:

- a consultant;
- a contractor;
- a supplier of hand and mechanized pumps and construction materials;
- a manufacturer of pumps, drill rigs and supplies, and construction materials;
- a participant in operation and maintenance activities;
- a financier for hand pumps; and
- an owner or operator of a community water supply system.

240 Social/Cultural

241 Study communities in terms of:

community leadership and its relationship with water related issues;

- . ethnic segmentation in the community;
- . level of experience with water and sanitation issues; and
- . knowledge and awareness of water, sanitation and health.

242 Review the role of women in the community:

- . perceptions regarding women which are held by the women themselves and by others;
- . general levels of knowledge women possess;
- . restrictions placed on women by the purdah system;
- . women's access to independent economic means;
- . their role in water issues; and
- . skills available to women and the opportunity to gain new skills.

243 Determine local practices and attitudes:

- . allocation of responsibility with respect to waste and sullage collection and disposal;
  - . defecation practices;
  - . solid waste disposal;
  - . hygiene, care of children and preparation of food;
  - . understanding of linkages between hygiene and health;
  - . responsibility for the maintenance of rural water supply and sanitation facilities and health education delivery; and
  - . perceptions of how well their needs are being met.
- 244 Review the existence, activity level and experience of community based organizations:
- . number of formal and informal groups;
  - . level of activity;
  - . past involvement with water supply, sanitation, drainage and hygiene education;
  - . numbers of people involved; and
  - . the quality of the groups.
- 245 Define community involvement:
- . current situation; and
  - . what villagers want and are capable of with respect to planning, construction, management, operation, maintenance and financing of water supply, sanitation and drainage facilities.
- 250 Population
- 251 Estimate the population and population growth rate from existing data in terms of:
- . village size - number of people living in mauzas of the following size categories on a district basis:

- 200 - 500 people;
  - 500 - 1000 people;
  - 1000 - 2000 people;
  - 2000 - 5000 people; and
  - 5000 - 10000 people; and
- population densities.
- 252 Identify the physical pattern of rural settlements and numbers in different population.
- 260 Health
- 261 Obtain health indicators, especially the incidence of water related diseases.
- 262 Review existing health services and allocation of resources.
- 263 Assess past experience in hygiene education indicating the goals of the programme and coverage achieved.
- 270 Human Resources Development
- 271 Inventory all training organizations and efforts:
- . school system, including mosque, primary, secondary, polytechnical and universities - numbers, number of students and teachers, number of lady teachers and curricula;
  - . institutional or job related training at the Union and District Council, line department and private sector level; and
  - . village level training in project management, community organization and operations and maintenance.
- 272 Identify recipients of present human resource development programmes:

- . staff in institutions;
  - . local government officials; and
  - . villagers.
- 280 Government Policy
- 281 Identify government priorities and sector objectives on a national and provincial basis.
- 282 Define cost recovery policies:
- . tariffs and collection mechanisms for public utility managed schemes;
  - . community financing mechanisms for user-managed schemes; and
  - . recurrent expenditure shortfalls and their impact on operation and maintenance.
- 283 Identify present investment criteria.
- 290 Data Collection Associated with Assessment of Past Investments
- 291 Assemble data on recent investments in the sector, criteria for selection of project investment priorities, and present plans.
- 300 Data Analysis
- 310 Analysis Process
- 311 Assess the reliability of data being collected.
- 312 Review the preliminary identification of the Key Critical Issues in light of more data collected. Prioritize the Key Critical Issues.
- 313 Analyze the Key Critical Issues:

- . identification of root causes;
  - . identification of strengths and weaknesses; and
  - . conclusions.
- 314 Priorize strengths and weaknesses.
- 320 Water Supply, Sanitation and Hygiene Education
- 321 Assess the implications of the physical pattern of rural settlements for the design of systems.
- 322 Establish the causes of present systems being inoperative.
- 323 Evaluate current technologies being used from the point of view of appropriateness, sustainability, acceptability, affordability, ease of operation and maintenance, and potential for community participation.
- 324 Establish design criteria:
- . service levels and technology options to be used for each socio-economic module; and
  - . daily production requirements per capita of each water supply technology type.
- 325 Determine the number of communities by population category who need:
- . no change to the existing system;
  - . repair/rehabilitation of existing system;
  - . expansion of existing system; or
  - . a new water supply, sanitation or drainage system.

330 Institutional Development

- 331 Establish the commonality of mandates among PHED, LGRDD, DH, DE, WAPDA, and the private sector.
- 332 Propose an allocation of responsibility within the agencies, identifying which agency has:
- . sole responsibility; or
  - . joint responsibility - prime or sub.

333 Assess where strengthening would be desirable for each organization.

344 Establish what data WAPDA possesses which could be made available to other institutions.

340 Economy

341 Assess the likely magnitude of future funding for the sector.

342 Establish affordable and acceptable tariff structures.

342 Assess the technologies being used by the private sector for construction, operation and maintenance, and capital and recurrent cost recovery.

343 Evaluate construction materials available and needed and their costs.

344 Establish the availability of water supply system equipment, costs, local manufacturing, quality control and distribution mechanism.

345 Assess the financial needs of the private sector.

350 Social/Cultural

351 Evaluate communities' desire and ability to participate in planning, design, construction, management, operations and maintenance, and financing capital and recurrent costs.

352 Assess the need for external community motivation and mobilization.

353 Evaluate the special needs of low income areas and develop relevant mechanisms.

354 Establish the presence of community organizations which may be used in project implementation.

355 Evaluate the need for hygiene education.

360 Human Resources Development

361 Assess the status of water resources knowledge affecting the choice of technology, competing demands, and water system management and control methods, and their adequacy.

362 Evaluate technical and financial training needs in institutions, the private sector, the community and local politicians.

363 Assess the role of schools, TBA's, and other health workers.

364 Establish staff shortages by institution and category.

370 Government Policy

371 Assess the impact of recurrent expenditure shortfalls on water supply, sanitation, drainage and determine its financial needs.

380 Review Sector Investments

381 Compare the past rate of investments made in rural water, sanitation and hygiene systems to the targets set.

382 Identify reasons for variances.

400 Synthesis of Information410 Identify Key Inter-relationships and Constraints

411 Assessment of the relationships and constraints by the Provincial team.

412 Review with the Project Central Support Group.

413 Review with the Provincial Government.

420 Define Initiatives

421 Assessment by the Provincial Team.

422 Input from the Project Central Support Group.

423 Preparation of proposals.

424 Review with government staff to reach concensus.

430 Establish Community, Private Sector, and Institutional Roles

431 Examine issues in provincial meetings with inputs from community groups, private sector representatives, line departments and project central support staff.

432 Prepare proposals.

APPENDIX III

433 Achieve concensus to provide guidelines for the formulation of projects.

440 Determine Human Resources Development Approach

441 Identify alternative training approaches.

442 Prepare proposals for method of delivery.

443 Review with government staff and obtain concensus.

500 Formulation of Initiatives

510 The Planning Process

511 Strategic Planning Group develops seminars for Provincial Planning Teams.

512 Strategic Planning Group monitors and evaluates the process in each province to achieve consistency in its application.

520 Provincial Investment Plans

521 Strategic Planning Group establish levels of investment in conjunction with GOP authorities and discusses them with Provincial Teams.

522 Provincial Teams prepare a draft investment plan based on the conclusions reached.

523 Finalize the investment plan.

530 Initiative Identification and Selection

531 Establish goals, objectives and evaluation criteria:

- . formulate potential goals, objectives and criteria through meetings with Provincial Teams;
  - . Provincial Teams present proposed goals, objectives and criteria to GOP authorities for approval;
  - . Provincial Teams identify high priority geographic areas and target groups and ensure initiatives being considered are representative of the views and wishes of the communities.
- 532 Identify potential initiatives and prioritize in a workshop format through advocacy bargaining approach.
- 533 Select initiatives through goals achievement process.
- 540 Provincial Project Documentation
- 541 Strategic Planning Group develops format and methodology for project documentation.
- 542 Strategic Planning Group holds seminar to familiarize Provincial Planning Teams with the documentation preparation process.
- 543 Provincial Teams prepare project documentation.
- 544 Economic and financial analysis of proposed projects.
- 550 National Summary Investment Plan
- 551 Review of Provincial Investment Plans by Strategic Planning Group
- 552 Feedback of national level analysis to Provincial Teams.
- 553 Preparation of National Investment Plan by Strategic Planning Group.

600 Project Outputs610 Inception Report

611 Write Inception Reports based on preliminary analysis of data gathered and identifying:

- . present situation;
- . objectives;
- . options to be considered; and
- . methodology for the study duration.

612 Review the report with GOP officials and refine.

613 Prepare the final report.

620 Strategic Provincial Investment Plans

621 Prepare a preliminary first draft of one provincial investment plan.

622 Review the report with appropriate Government and World Bank personnel and refine having had this additional input.

623 Prepare draft provincial investment plans based on the format of the approved preliminary report.

624 Review the report with appropriate Government and World Bank personnel and refine as appropriate.

625 Submit the final investment report.

630 Project Identification Reports

631 Prepare draft project identification reports and discuss with Government and World Bank staff and refine as appropriate.

632 Submit final reports.

640 National Summary Investment Plan

641 Prepare and submit a national summary of the provincial investment plans.

642 Develop proposed implementation programmes identifying local, Provincial, National and foreign components.