

**COMMUNITY PARTICIPATION IN RURAL WATER
MANAGEMENT:
THE CASE OF NORTHERN PAKISTAN**

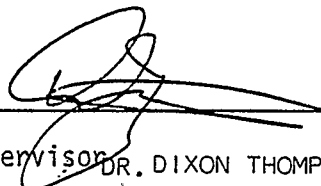
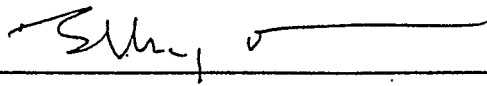
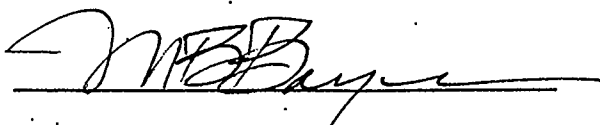
Pierre Blais

Faculty of Environmental Design
The University of Calgary

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THE UNIVERSITY OF CALGARY
FACULTY OF ENVIRONMENTAL DESIGN

The undersigned certify that they have read, and
recommend to the Faculty of Environmental Design
for acceptance, a Master's Degree Project entitled
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fulfillment of the requirements for the degree of
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Supervisor DR. DIXON THOMPSON
DR. STEVAN AMEYAW
DR. MAX BAYER, FACULTY OF MANAGEMENT

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ABSTRACT

COMMUNITY PARTICIPATION IN RURAL WATER MANAGEMENT: THE CASE OF NORTHERN PAKISTAN

Pierre Blais

17 February 1991

prepared in partial fulfillment of the requirements
of the M.E.Des. degree in the Faculty of Environmental Design,
The University of Calgary.

Supervisor: Dr. D.A.R. Thompson

Community involvement is being used by development agencies throughout the world to implement development programs. The literature abounds with different views, justifications, and methodologies on the topic.

The main points that can be drawn from the literature are the following: 1) Involvement by the recipient is a necessary but not sufficient condition for the success of development projects and programs. Community involvement can be especially effective when combined with adequate external help; 2) Participation is a right in itself; 3) The ideal level and form of participation depends on the social, economic, and cultural contexts, and should be carefully assessed before implementation; 4) To be successful, involvement from the community must be approved by the government, and fully integrated in its development planning and decision-making process.

The researcher postulates that only the representative and participative approaches to participation should be considered for widespread use. The participative approach is postulated to be the most suitable approach for the implementation of a rural water supply and sanitation program at the village level in the context of the Northern Areas of Pakistan. The two agencies currently implementing programs are not meeting the need of the population and should change their approach.

The local conditions and factors suggest that communities should be given more decision-making power through the participative approach. Using the participative approach would require that Village Organizations or User Groups be established at the village level and be recognized as a legitimate level of representation with the government.

KEY WORDS: Water management; Rural water supply and sanitation;
Community participation; Citizen participation; Northern Pakistan;
Northern Areas.

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GLOSSARY

ADP	Annual Development Plan
AKF	Aga Khan Foundation
AKHS	Aga Khan Health Services
AKRSP	Aga Khan Rural Support Program
BHU	Basic Health Unit
CBS	Community Basic Services
CHW	Community Health Worker
CIDA	Canadian International Development Agency
DC	District Council
DRMS	Development Research and Management Services
DWC	Development Working Party
EPI	Extended Program of Immunization
EVDS	Environmental Design
FCA	Federal Capital Area
GNP	Gross National Product
IMF	International Monetary Fund
IRDP	Integrated Rural Development Program
LB&RDD	Local Bodies and Rural Development Department
LGRD	Local Government and Rural Development

M&E Unit	Monitoring and Evaluation Unit
MDP	Master's Degree Project
NAC	Northern Areas Council
NAPWD	Northern Areas Public Works Department
NATCO	Northern Areas Transport Commission
NGO	Non-Governmental Organization
O&M	Operation and Maintenance
ODR	Opérations de Développement Rural
ORS	Oral Rehydration Salts
P&D Cell	Planning and Development Cell
PHEC	Public Health and Engineering Circle
PWP	People's Work Program
RWSS	Rural Water Supply and Sanitation
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TBA	Traditional Birth Attendant
UC	Union Council
UG	User Group
VO	Village Organization
VPC	Village Project Committee

INTRODUCTION

The World Bank project

In 1987, a joint World Bank / CIDA mission undertook a review of the rural water, health, and sanitation sector of Pakistan. This review identified eventual areas of intervention for improving service delivery. As a final recommendation, it called for the preparation of a long term investment plan for the sector in order to develop a framework which would include technical proposals as well as provisions for institutional and human resource development, hygiene education, and community management and financing (CIDA 1987).

Following this recommendation, the Strategic Provincial Investment Plan and Project Preparation for Rural Water Supply, Sanitation and Health Program was under way by the end of 1988. A project team consisting of Wardrop Engineering, Acres, CoWater International (all Canadian consultants), and Nespak (a Pakistani consulting firm) was contracted to carry it out. The program lasted approximately one year, involving four provincial teams; one working out of each province of Pakistan (Sind, Punjab, Baluchistan, and the Northwest Frontier Province). In addition, two teams were formed to cover the two territories of Pakistan (the Northern Areas, and Jammu & Kashmir). These two teams were involved on a part-time basis, and were based in Islamabad (Wardrop-Acres 1989).

Through this program, the Government of Pakistan aimed "to expand the coverage of water supply, sanitation and drainage facilities to people living in the rural areas" (Wardrop-Acres 1989, p.1). The provincial and territorial teams attempted to identify the needs of the population in their respective areas, and to assess the available resources. Through a strategic approach which involved an analysis of the strengths and weaknesses in the sector, a plan covering the next two Five Year Plans was developed to maximize coverage of services in the water supply, sanitation, and health sector. These Five Year Plans are the plans devised by the Government of Pakistan for insuring national development. The time period covered extends until 1998, with projections for the following 10 years.

Research objectives

An agreement of mutual collaboration was reached between Wardrop and myself. The terms of the agreement were that Wardrop would provide me with support to carry out

my research. In return, I would provide assistance to the Northern Areas team with their work. My contribution to the team was mostly in the form of assessing the institutional capacity in the Northern Areas for delivering water and sanitation schemes, in determining the current coverage for both water supply and sanitation throughout the area, and in helping to develop a strategy to efficiently increase coverage in the area. Part of the results of this Master's Degree Project (MDP) were included in the Final Strategic Investment Plan proposed by the Wardrop-Acres team to the Northern Areas Administration, and the Government of Pakistan (Wardrop-Acres, 1989). This MDP was undertaken to complement the Investment Plan in order to determine what form and level of community participation is the most appropriate for the Investment Plan. Field research during the summer of 1989 allowed me and the Northern Areas team to determine that high levels of participation were appropriate to the context of the Northern Areas, but due to the very tight schedule we had, it was not possible to assess the potential for community participation in as much detail as we wanted. Thus, this MDP complements the Final Strategic Investment Plan by focusing on community participation and how it constitutes the best approach to implement a rural water supply and sanitation program in the area. The tasks related to my participation to the World Bank project allowed me to travel extensively throughout the area, and provided me with an opportunity to gain information about the methods used for planning, implementing, and maintaining water supply installations in the area; it also gave me occasions to talk with a wide range of people involved in the sector, from residents of remote villages to the Administrator of the Northern Areas.

Since my research objectives were complementary to those of the World Bank project, I was able to gather my information while working with Wardrop-Acres.

Research objectives for the completion of this Master's Degree Project are defined as follows:

- 1) Summarize contemporary thought on the forms of community participation that are appropriate to the water and sanitation sector, putting a strong emphasis on the advantages and the problems related to the implementation of such forms of participation.
- 2) For the specific case of the Northern Areas, determine:
 - a) What are, currently, the factors leading to the successful completion and maintenance of water supply schemes;

- b) What level and form of community participation is most appropriate for generating and supporting improvements in the water and sanitation sector.
- 3) Propose an approach for implementing this model of community participation in the Northern Areas.

Approach

This MDP is based both on field work and theoretical research. Fieldwork involved four months in the Northern Areas of Pakistan, during which time inspection of existing projects and key informant interviews at all levels of decision-making were carried out, and the needs of the local population were assessed. Approval was granted by the Ethics Committee of the Faculty of Environmental Design to pursue observation in the field, using the participant-observer methodology, and key informant interviews. The theoretical component of the work involved research on the topic of community involvement, and was carried out in Pakistan, at the Asian Institute of Technology in Bangkok, and at The University of Calgary.

The final analysis that led to the development of the proposed action plan loosely followed a strategic approach, by stating objectives and goals, and analyzing the environment. Due to the very limited number of field options, scenarios were not developed. It is argued that a recipient community should always be given the opportunity to get involved in any direct development action which affects it. Therefore, it is assumed that for any particular situation there exists a certain level and form of community involvement that is appropriate. The challenge lies in determining what this appropriate level is.

Methodology

Literature review

Most of the research took place in Calgary, although much material was also accumulated and analyzed in Pakistan and in Bangkok. Some critical material and information about community involvement and rural development in the Northern Areas were gathered from the Aga Khan Rural Support Program and the UNICEF office for the Community Basic Services Program in Gilgit, as well as from the office of Development Research and Management Services (DRMS) in Islamabad.

At the Asian Institute of Technology, information was obtained from the library, mostly from periodicals in the development planning field.

Field visits

Field visits were an essential component of this research. All these visits were carried out using a four-wheel drive vehicle (or on foot when the village was not immediately adjacent to a road). There are only two paved roads in the Northern Areas; the Karakoram Highway, which goes from Islamabad to the Chinese border, passing through the Town of Gilgit; and a branch of the Karakoram Highway which links Gilgit to Skardu, in Baltistan District. These roads are accessible by automobile, except when conditions deteriorate, following a rain for example. Only a small number of the villages in the area are adjacent to these two roads, the majority are accessible only by very difficult roads; hence, the necessity for a four-wheel drive vehicle. The use of competent local drivers became a necessity.

Because it would have been very difficult to observe local conditions and customs in the communities without any interference on my part, the participant-observer methodology was followed. This involved being clearly identified by the villagers as an external observer, but also involved being able to witness local conditions first hand (Zeisel 1981, Chapter 8).

Local persons were hired to translate the local languages. There are more than six languages spoken in the area, which made translation a major concern, but fortunately no major problems were encountered; only in some remote parts of Baltistan, were any difficulties encountered in communicating with local people.

Selection of contacts within the villages

Due to the communication and transportation problems that exist in the Northern Areas, it was not possible to give notice of my visit to the villages. On arrival to a village, Mr. Farman Ali Khan, who was acting as both a translator and a driver, arranged meetings with key persons in the village. These persons were Union Council members, Village Project Committee members, or simply users of the existing water supply systems. Mr. Ali Khan had a very thorough knowledge of the Northern Areas and he also had contacts with many persons who could help me in my research. Mr. Ali Khan was certainly instrumental in making my visits successful.

Obviously, there are disadvantages to not being able to pre-arrange visits. I certainly missed numerous interviews because of this, but on the other hand, not giving notice of my visit allowed me to see first hand the condition of the water supply systems and how they were really used.

Field visits had three purposes:

- 1) The water supply schemes and sanitation procedures in more than 70 villages throughout the area were inspected. To arrive at a clear picture of the situation, and to avoid biases, an attempt was made to make the sample of villages visited as representative as possible. This was a difficult task, because very little information was available on the characteristics of these villages (total number, demographic data, population profiles, etc...). Nevertheless, villages were visited in all districts: small villages as well as large villages; villages with and without good access to roads; villages with and without existing water supply schemes; villages with successful, as well as villages with unsuccessful, water supply schemes; villages engaged in the Aga Khan Rural Support Program, and villages that refused to participate with AKRSP, or with the UNICEF Community Basic Services Program.

On site, where water supply schemes had been constructed, the different elements of the water distribution system were inspected: the intakes, reservoirs, distribution pipes, taps, and drainage installations (if existing). The need for repair, or for maintenance, was then estimated. The results of these inspections are summarized in Appendix 1.

- 2) Planning, construction, and maintenance procedures were discussed with villagers. Such discussions were carried out in as many villages as possible, and focused on the villagers' perception of their needs, and of their satisfaction with current practices for the implementation of water supply and sanitation schemes. Again, an attempt was made to get a varied sample of villagers: people were interviewed in villages with and without a water supply scheme or sanitation procedures; people were interviewed in villages with successful as well as unsuccessful water schemes; people were interviewed who had different levels of awareness of the existing water supply and sanitation programs.

The most serious problem with the interview process in the villages was the restriction with respect to interviewing women. For cultural and religious reasons, women are prevented from being associated with men from outside the immediate family entourage

(Weiss 1985). A few interviews were conducted with local women, but these were not representative, mostly because male relatives always had to be present during the interviews, and because these men always interfered with the interview.

Fortunately, it was possible to locate reliable key informants on women's conditions in the Northern Areas (these were mostly women involved with the Aga Khan Rural Support Program, the Aga Khan Health Services, the UNICEF Community Basic Services Program (CBS), or working with Wardrop-Acres). Although this represents an indirect source of information, it is felt that those key informants adequately provided the required information. Therefore, women's concerns for water supply, sanitation, and health were integrated into this research.

3) Undertake a basic assessment of local conditions and needs.

Being a participant-observer, it was possible to assess the local conditions and needs by observing the situation at the village level. Despite the fact that my status of observer was disclosed, it was still possible to gain reliable information. Visits to the villages were always granted without any problem by villagers or village officials. Usually, no warning was given to the population, which provided opportunities to witness first hand the situation in the villages, and allowed me to verify to a certain degree what was learned from discussions with villagers and from the key informant interviews.

Key informant interviews

Key informants from various specialities were interviewed by the researcher. Their expertise was sought on many different aspects of water supply, sanitation, health, rural development, government policies, local cultural context, involvement of women, and other topics. These persons were mostly attached to the following institutions:

1) The Government of the Northern Areas: these were employees from all levels of the Northern Areas Public Works Department; the Local Bodies & Rural Development Department; the Health Department; the Ministry of Kashmir Affairs and Northern Areas; and the Planning and Development Cell. Interviews occurred in each of the three districts of the Northern Areas.

2) The Local Government System: Union Council members from each district of the area; District Council members; and a member of the Northern Areas Council were interviewed regarding planning and management procedures, and the specific needs of the

people they represent. The Union Council members were particularly helpful because of their direct involvement with the CBS Program.

3) UNICEF CBS Program: past and present employees of the program were interviewed.

4) Aga Khan Rural Support Program: various employees, and members of Village Organizations were interviewed in both Gilgit and Baltistan Districts. Much information about AKRSP's procedures with community involvement was obtained.

For each interview, freedom to withdraw at any time from the interview was given to the interviewee; confidentiality was respected; and never any mention was made of the interviewee's name or position in the final document (unless the interviewee gave consent). As much as possible, interviews were made in a location that insured the privacy of the discussion; if this was not possible, extra care was given not to compromise the interviewee in front of the other persons present.

Document organization

The Introduction contains background information about the World Bank project in the water supply, sanitation and health sector in Pakistan, as well as the research objectives, and methodology of the MDP.

Chapter 1 contains the results of the literature review. It is a summary presenting the contemporary views on the topic of community involvement as an approach to development. In the first part of the chapter, an attempt was made to organize and classify the main approaches to community involvement into five groups; this was done by using a simple classification developed by DRMS (1989), and extending it to include other forms of participation. Following it, is a summary of the acknowledged benefits of community participation. The last part of the chapter addresses the problems of making participation successful. Particular attention was given to the lessons learned from experience.

The literature research revealed that much information exists about the advantages of participation, but that no fully developed model exists as to implementation methodology. Thus, I gathered the information available from specific case studies and attempted to make as complete a summary as possible of all the conditions most likely to create problems in implementing participation. The result is a general methodology which aims at foreseeing problems before they are encountered.

Chapter 2 is an introduction to Pakistan and the Northern Areas. It describes the political, economic, geographical and cultural conditions; it also makes an attempt to familiarize the reader with the problems facing the area in its efforts to promote development.

Chapter 3 presents the results of the assessment of the institutions involved in the water supply and sanitation sector in the Northern Areas. Attention is given to the evaluation of the existing procedures (with and without community involvement) for planning, implementing, and maintaining installations. This Chapter incorporates the results of the village inspections, the key informant interviews, and the discussions with villagers.

Chapter 4 is an assessment of the current situation regarding water supply, sanitation, and health, in terms of coverage and the existing need and demand for services among the population. The information that is presented here derives from official documents and observations in the villages.

Chapter 5 establishes the priorities and objectives required in order to improve service delivery in the Northern Areas. Secondly, it summarizes the strengths and weaknesses characterizing the environment in which action must be taken.

Chapter 6, using the previous analysis, derives an approach for implementing an appropriate form and level of community involvement. The approach integrates how to deal with the obstacles already mentioned in Chapter 2.

Appendix 1 is a summary of the results of the inspection of water supply schemes in 78 villages throughout the area.

Appendix 2 is an excerpt from the Final Strategic Investment Plan from the World Bank project. It presents a summary of the Investment Plan, which this MDP complement.

CHAPTER 1: COMMUNITY INVOLVEMENT AS AN APPROACH TO DEVELOPMENT

Three decades of experience in development

During the last three decades, massive efforts have been expended in implementing development programs throughout the world to improve the social and economic situation of developing countries. Unfortunately, despite the extent of the efforts, the outcome did not live up to expectation (Churchill 1987, p.2; Friedmann 1988, p.204; Briscoe 1988, p.1). Although some developing countries have definitely benefited from development programs and were able to improve their economic and social conditions, many more were not able to produce the same results; the situation in some countries including many in Africa has actually deteriorated (Barnet 1989). Sahelian countries have seen a decline in their economic production (Giri 1984), while other countries have seen reductions in investments, higher child death rates and population growth rates, exodus to urban centres, and reductions in food production (La Commission Mondiale sur l'Environnement et le Développement 1987, p.84).

Planning for development is no easy task as a result of the complex interrelations between the political, economic, social and cultural systems on which development depends. There are many elements which can be identified to explain the poor return on investment in many of these projects. One such factor that has been put forward in recent years is the lack of community participation in all stages of development projects, from planning to monitoring (Trí 1986, p.9). It is increasingly claimed by many (Friedmann 1987 and 1988; Korten, D.C., 1983; Briscoe 1988; Jedlicka 1987; and others), that involving the community in its own development is an essential criterion to insure the success of programs.

This chapter constitutes an attempt to summarize the current views on community involvement; this summary will then serve to identify alternatives for intervention in the water and sanitation sector in the Northern Areas of Pakistan.

Past experiences with community participation

The concept of participation is not new. Community involvement under various forms has been the traditional approach to decision-making in many societies throughout the world (Trí 1986, p.9). Many of these societies still hold these same values today.

For example, many native communities in Canada still rely on community participation for decision making . "Traditionally, decisions in native communities are not taken by representatives for a community, on the basis of a majority vote. Rather, issues are referred to the community for discussion. Each person has a voice and that voice is heard. Consultation continues until sufficient consensus is arrived at. There is, then, congruence between the predominantly consensual decision making tradition of native Canadians, and community-based planning processes which employ extensive community consultation" (Wolfe 1988 p.217). The present arrangement regarding Native self-government is not a successful one; the co-existence of two different decision-making systems, one consensual and the other based on majority vote, is certainly part of the problem (Wolfe 1988, p.218).

Attempts to incorporate traditional participative procedures into modern development projects started around the 1950s. Many case studies are known and documented; I will mention three. For example, in Kenya, the *harambee* tradition of mutual help was used by Jomo Kenyatta, a leader of the independence movement in Kenya in the early 1950s, who tried to draw upon the existing rural traditions of community self-help to prepare the country for independence. *Harambee* was not "just a group of people coming together for a particular cause, but a part of the community's social system" (Chauhan 1983, p.8).

A similar attempt was made in India in 1952, where a very large program of community development was launched; the program attempted to revive old traditions of community self-help in order to organize and motivate the communities. The atmosphere in India was particularly favorable to such a program at the time because of the political situation. Unfortunately, success was very short lived; unforeseen technical and administrative problems were encountered, and there was a lack of experience in trying to adapt participation within an already existing system which did not recognize the importance of input from the grassroots level (Chauhan 1983, p.10).

The Puebla Project, implemented in Mexico in the 1960s, is another example of an early attempt to rely on community participation. From 1967 to 1975, the Puebla Project was a success in using community involvement to improve agricultural production in its implementation area. Eventually, the Puebla Project lost its "project" status and became integrated within the Government of Mexico under the name of "Plan" Puebla.

Since these initial attempts, which were not always successful, many projects throughout the world have used community involvement to try improve the outcome of development projects. Community involvement has become an important strategy for project implementation (Colin 1986, p.59; Trí 1986, p.9), although even today, administrations, governments, and agencies often deliver programs without any form of public involvement. Community participation is increasingly mentioned in the literature; unfortunately, the development terminology has not kept pace with all the new approaches. As a result, the literature contains different terms to describe similar approaches, and conversely similar terms to describe different approaches. For example, the word "self-reliance" is used regularly in the literature, but not always with the same meaning. John Friedmann, in *Life Space and Economic Space*, refers to "self-reliance" as "self-generated efforts in carrying out a political will in whose information people take an active part" (Friedmann 1988, p.209). Friedmann's view of self-reliance is linked to the notion of "empowerment" (Friedmann 1987, p.396), which requires the transformation of the political community starting from the grass-root level (Friedmann 1987, p.362). On the other hand, Robert Lubar in his article on the Reaganization of the Third-World, uses the term "self-reliance" in a very different context. He links self-reliance with the private-enterprise approach where individuals must be provided with "the freedom and incentives ... to save and invest and apply their talents as traders and manufacturers" (Lubar 1981, p.82). For each author, "self-reliance" has a different meaning; and as a consequence, their proposed methods to achieve "self-reliance" are also very different.

A major problem with the concept of community participation is that it is almost always linked to ideology. Therefore, there is a need for a reference system that can assess the different approaches to community participation independently from the ideologies they are usually associated with. Unfortunately, such a reference system does not seem to have been developed yet. There is also the question of "level" and "form" of participation. Arnstein, for example, has developed a "ladder of citizen participation" that has ten "levels" of participation from "manipulation" (non-participation) to "citizen control" (100% participation) (Arnstein 1969). Arnstein does not address the issue of the "form" of participation. Participation can be effected through elected representatives, committees, voting, consensus decision-making, consultations, lobbying, co-operatives, unions, or other forms. Another classification that exists is by Colin (1986), but his proposed approaches to participation are linked to ideology. There is no provision for the "level" of involvement, the classification itself is far from being comprehensive, and only certain

forms are described such as co-operatives, worker control, and profit-sharing. Finally, the citizen participation scales that have been developed in the past are usually not adapted for the context of a developing economy. They cannot be applied where no stable socio-economic infrastructure is already in place (see Master's Degree Projects from Olsen (1976), Husband (1977), and Stanley (1985)). Citizen participation in developed countries is usually undertaken within a stable administrative environment where basic needs and public services are already provided to the community. In the case of developing countries, citizen participation is often used to provide the community with such basic needs and public services, which means operating in a very different environment.

To decide what form and what level of participation is required in the case of the Northern Areas, it was decided not to rely on these classifications or scales, but rather to review the literature and group similar approaches to community participation in development planning into a workable number of options. The end result is a classification describing the five approaches that are currently used the most for implementing development projects.

Definition of community participation, community involvement, and of the different approaches.

"Development" can be defined broadly as an attempt to improve living conditions of a certain population. It is assumed that equity is a major concern of any development program in that at least those who are presently worse-off are not made even more worse-off by a development initiative. Pareto optimality is very difficult to reach in practice: it is almost impossible to avoid at least a few persons being negatively affected when important reorganizations within political, social, economic, and cultural systems are required to improve the living conditions of the greater majority of the population. Development is aimed at the entire population, male as well as female, its function being to create an effective organizational structure for the administration and implementation of relevant policies.

It is important to understand that development is not restricted only to expanding material wealth, or endlessly pursuing growth; social and environmental issues are also a major concern. Development can and should be carried out respecting traditional values as much as possible, for as long as those values are ethically valid. It is obvious though that clashes will occur between new and traditional values. The best example of this being the

role women play in development. In many cultures, it is impossible to provide women with real opportunities without abandoning some traditional values.

A concept that must be defined is that of community participation. Broadly speaking, the term means that the community takes part in the processes which are, or will eventually, affect it. Participation can be achieved to varying degrees, and a distinction must be made between active and passive participation. While passive participation can be seen as "being consulted", active participation refers to "taking part". Therefore, active participation assumes that the community is willing and that it has an actual role in the decision making. For example, an isolated vote, without the possibility of consulting authorities or other citizens, is not considered to be active participation, neither is it considered active participation if the community is only consulted without being given the opportunity to take part in the decision-making process. In this study, "participation" will be assumed to mean active participation. The word "involvement" has a broader sense, and will be used when meaning any inclusion of the community, passive or active, and whether the community is willing or not to be involved.

It will also be assumed that any involvement of the community has as an objective the improvement of the living conditions of the entire community or of a certain neglected group within it. This implies that for genuine participation or involvement to occur, both sexes must be included in the process.

The range of forms participation can take is almost infinite. It is not surprising then that certain ambiguities and confusion arise when "participation" is mentioned. In the literature, it is common to encounter situations where "community participation" and "self-help approach" are indiscriminately referred to as being the same thing, whereas, approaches that are very different are referred to as "self-reliance". Better care must be taken to understand the various forms of involvement when elaborating development programs for it is easy to be misled by a terminology which finally only promises token participation. "Participation" has increasingly become a catch word to justify cuts in government spending and neglecting community-level initiatives. To draw a clearer picture of the current situation as to the various methods of involving the community, the different approaches to community participation have been separated into five styles: 1) the managerial approach; 2) the self-reliance approach; 3) the representative approach; 4) the participatory approach; and 5) the mobilization approach. Three of these approaches derive from DRMS (1989): the managerial approach, the representative approach, and the participatory approach. In DRMS (1989), the definitions of these approaches were rather short, so the

author will expand on those definitions (see below). The two remaining approaches (the mobilization approach, and the self-reliance approach) are defined by the author, and reflect two common ways of making communities participate.

- The **managerial approach** has been the most widespread approach to development for the last three decades: technical experts design and manage the development program on behalf of the recipient or beneficiary. This is a "no involvement - no participation" approach. It is assumed that due to an extended knowledge of their specialties, the experts are those with whom the task of decision-making should rest. A definite advantage of this method is that decisions can be made very expeditiously as only very few persons have decision-making power. But conversely, the community is not involved in the decision-making procedure and is even intentionally by-passed. Experience has shown that this can lead to serious mistakes: experts are usually from outside the community, if not from outside the country, and consequently lack knowledge about the local social and cultural systems. Very often the solutions proposed by foreign experts were not suited to the local conditions (Agarwala 1983; Lisk 1985; Korten, D.C. 1983). This approach is now being replaced with other approaches which rely increasingly on the involvement of the community.
- The **self-reliance approach** proposes a very high level of self-sufficiency in decision-making by the community. The terms "self-reliance" or "self-help" have often been used in this context to describe various forms and levels of community involvement. For this reason, and to avoid confusion, the definition of "self-reliance" will be narrowed to designate a decentralized approach where the community is practically left alone to decide and act upon its priorities. This signifies that very little help or guidance, if any, will be provided through external sources, constituting the extreme form of decentralization. Self-help is seldom consciously advocated. True participation is the real goal of the "self-help" approach, but usually as a result of inexperience with the techniques of participation and inadequate planning, the community winds up being left with very little support and must face the task alone.

"Self-help" is another catch word to justify spending reductions in the public sector. It is used by administrations and governments throughout the world. Recently, multilateral agencies such as the World Bank and the IMF, have set a trend toward decentralization and privatization; new policies to support the change have been imposed on many countries, especially in the form of conditions for loans and grants. An example of this behavior is the Second International Funders Conference for the Development

and Economic Recovery of Mali held in 1985. At this conference, it was decided to favor initiatives at the local level.

"La solution retenue pour le redressement des ODR (Opérations de Développement Rural) consistant à remplacer des structures nationales et à gestion de type administratif par des entités à caractère régional et au statut plus souple est un exemple de la tendance générale de la politique administrative malienne"¹
(Deuxième Conférence Internationale de Bailleurs de Fonds 1985, p.46).

Much emphasis at this conference was placed by major lenders to Mali on restructuring large systems to permit more input from grassroots. Very little attention, however, was given to the issue of providing these new local entities with the ability to undertake the task. No training was proposed for the new decision makers, and relatively little executive power was given to them apart from the power to spend certain categories of revenues generated at the regional and local levels.

The self-help approach, although a good incentive for community participation, is probably not very efficient because external guidance is needed in most cases. Leaving a community to rely almost solely on itself can lead to serious and costly mistakes, or even the abandonment of the program or project because the community is not able to adequately manage it.

- The **representative approach** is a method through which a community elects or nominates representatives who are responsible for determining the community's development priorities, and for representing the community's interests to external agencies or the government. Most of the population has a passive role; recognition of the community's position is made through the representatives. Official relations with external agencies are conducted through these representatives. This insures involvement of the community, but through minimal participation.

This approach is increasingly used by development agencies such as UNICEF and CIDA. A UNICEF project using this approach has been implemented in the Northern Areas of Pakistan and will be discussed later in this paper.

¹ "As a solution for rehabilitating the Rural Development Units, it has been decided to replace national structures having an administrative management style by more flexible regional bodies; this is an example of the current inclinations of the Malian administrative policy". Translation by the author.

- The **participatory approach** places problem identification, organization of resources, project management, and linking with outside agencies, almost entirely in the hands of the villagers. The objective is to convince each and every community member to participate as actively and as often as possible. The community takes the initiative whenever possible, but is not isolated; contact with external agencies is seen as a necessity, as an agent of change. This approach is similar to the self-reliance approach in that it recognizes the capacity of community members to act successfully in the pursuit of their own development, but it differs from the self-reliance approach in that it recognizes the need for external help to assist and guide the community. Also, this approach requires significantly more time to achieve its results than the managerial approach where decision-making power is concentrated with only a few persons. A good example of the participatory approach is given by the Daudzai Markaz Project implemented in Pakistan, and described by Khan S.S. (1980).
- The **mobilization approach** has been used mostly in socialist economies, such as in Tanzania (Freedman, D.H. 1985) and China (Chauhan 1983). The theory behind the mobilization approach is well described by John Friedmann as the "social mobilization" planning approach; "social mobilization is an ideology of the dispossessed, whose strength derives from social solidarity, from the seriousness of their political analysis, and from their unflinching determination to change the status quo." (Friedmann, J.; 1987, p.83). As Friedmann also mentions, to perform well it requires solidarity ; without a consensus, mobilization can be very unproductive, the only solution being "elimination" of the dissenting elements, therefore infringing on democratic rights. The "thinking" is done at the top, while the action takes place at the bottom. The big issues are dealt with at the higher levels, leaving the communities free to be innovative only to the extent of carrying out the instructions. Despite its shortcomings, mobilization can be a very effective approach to solve certain types of problems, namely those which require non-controversial solutions, or that require widespread action.

An example of successful application of the mobilization approach is that of a snail eradication program conducted in rural China over the past twenty years. The Dongfeng Brigade, near Shanghai, was a successful part of this program, and has been used as a case-study by Chauhan (1983). In this program, initiative came from the government, who first promoted a national program emphasizing preventive measures. Then, a local team, through its "barefoot" doctor, initiated an information campaign where the community members themselves were expected to spread information about

the program rather than having professionals try to convince the citizens of every village. Carriers of the disease were identified and treated by the doctor or at a local health unit. The communities were involved in building or upgrading irrigation and drainage channels, in changing methods of water supply and nightsoil disposal, and carrying out snail eradication in rivers and channels (Chauhan 1983, Chapter 1). Although there was actually "active participation" by the communities in this program, and participation was in fact an essential factor for the success of the anti-schistosomiasis program, the communities were involved mostly in the implementation aspect of the project. They were not involved in initiating the program, planning it, or taking responsibility for the monitoring. Such "participation" is probably better defined as "mobilization".

Input from the recipient community is increasingly recognized by development agencies as being essential for the success of most development projects, this has led to both representative and participatory approaches to slowly replace the managerial approach (CIDA 1987).

Community involvement as a right

The above definitions constitute the framework on which the rest of this research will rely. It will now be argued that, as a general rule, only the representative and participatory approaches should be considered when implementing development projects in a developing country context. The self-help and mobilization approaches, although involving the community, do not do so in a way that can be reproduced in most development projects. With the mobilization approach, the community does not take the initiative, but merely acts as a resource (usually labour) for the completion of the project. With the self-help approach, the risk of failure is too high due to the lack of support provided to the community. Probably the most important factor to consider with community involvement is that it is not only a development technique, but also a right in itself (Goulet 1989, p.166). Under the rights approach, which can be traced back to Kant, every individual is an ultimate end, and must not be used as a means (Kant 1964, p.96). This implies that persons must not be treated as objects, but rather as subjects. Governments or persons making decisions must provide opportunities to be heard to those likely to be affected; not doing so would be unacceptable because it would imply treating persons as objects. There are obviously limitations to this rule. The rights approach specifies that "each individual person has the right to freely act in any way he/she chooses, provided that choice recognizes the same freedom for every other person" (Stein and Harper 1987; p.1). Also, an exception must be made when a conflict arises between the basic rights of two or more

persons. In this case, other criteria must be used such as the utilitarian criteria, and in the end, someone's basic rights must be overridden. Under a Rawlsian approach, those persons likely to suffer the most harm must be given the overriding right, in this case though, the person suffering must be compensated by those who will benefit from the action or decision to be implemented (Stein and Harper 1987 p. 9).

Thus, community members have a moral right to be included in the planning process. There are however two exceptions: 1) if this right is actually declined by those community members; and 2) if the intention of those community members is to disrupt or obstruct intentionally. A situation where community members would decline their right to participate is conceivable when people prefer not to be bothered by the decision-making process, and when they trust the people in charge to carry out the work efficiently. This would be sufficient justification for using the representative approach or even the managerial approach. Despite the fact that each of the five approaches has its role to play in development planning, only the representative and participatory approaches should be considered for widespread use in Third World countries since they are the methods most likely to bring improvements and to respect the rights of individuals to democracy.

The advantages of community involvement

It is probably futile to attempt promoting one development approach as superior to any other approach, and no one approach can be singled out as being the ideal solution in any situation. It is essential for those persons responsible for implementing any program and project to analyze the context in which it is taking place, and then choose the approach which will be best suited for this context. There is more than one way of doing things; there is no universal and perfect approach to implementing development. Shortcomings and limitations must be expected as the by-product of any approach. Too often these shortcomings are neglected in the heat of the battle when the superiority of a particular approach is at issue. The keys to successful project or program completion are, first, the development of an adequate approach adapted to the specific context, and second, the adoption of a process to identify the shortcomings caused by the use of this particular approach. Measures must be integrated into the program to reduce the impact of these shortcomings, and to deal with the inevitable unforeseen effects. Procedures dealing with uncertainty management must be established, including a flexible program implementation process, an efficient monitoring system, a clear decision-making process, and finally, an adequate communication system between the institutions involved.

3

The following section contains a summary of the benefits of community participation that are most often mentioned in the literature. Although authors have different ways of describing the benefits arising from community involvement, the same arguments tend to come back repeatedly, and thus, the author has been able to classify those benefits into five categories: 1) adaptation of the planning process to its context; 2) efficient use of available resources; 3) insuring equity; 4) generating self-satisfaction among the community; and 5) providing opportunities to learn and to receive training.

1) Adapting the planning process to its context

Identification of needs

Development projects and programs are initiated to meet the perceived needs of a certain group. When the recipient group does not participate in the identification of these needs, outsiders must make a judgement as to what these needs are. Sometimes this is done by very competent persons, sometimes it is not. No matter how competent the outside expert is, the bottom line is that those with most knowledge about these needs reside within the community. Therefore, the community should be considered an "expert" about its own needs, on the same level as the external experts. However, the community is not the sole source of reliable information and judgement about its own needs. On certain matters, communities do not have the necessary detachment or expertise to assess their own needs; communities themselves can also be wrong. Thus, in most cases, a balanced collaboration between external experts and communities is likely to be the most effective approach. This means that community participation is a necessary but not sufficient condition for success. External guidance in assessing community needs can certainly be beneficial, and can even prevent a community from making irreversible mistakes. Thus, external experts should be part of most interventions to identify needs of a recipient community. Nevertheless, external experts should never be the sole expedient for identifying the needs of the community. Despite the fact that external experts can provide useful insight, experience indicates that all too often such experts can easily misinterpret needs. This can be especially true of incompetent "technical" experts from the First World. The difference between the conceptual frameworks of the experts and the recipients can be very wide, and perception of needs by the expert might be erroneous despite his/her high level of expertise. Yet again, participation by the community helps insure that its needs are appropriately identified.

Development of appropriate solutions

Properly identifying the needs of the recipient community is essential for implementing appropriate solutions. For the same reasons that it is important for the community to identify its own needs, it is important to include the community in the development of solutions. Similarly, it would be inappropriate to leave the responsibility of devising solutions entirely upon external agents. Again, because of the difference in conceptual frameworks, the proposed solutions might not be appropriate to the local culture and customs. Therefore, active community participation can help devise solutions that are appropriate to the social, cultural, and economic contexts of the community: "the participation by the people at large in decision-making is a prerequisite for generating forms and styles of endogenous and properly adapted development ..." (Trí 1986, p.54).

This is especially true about the choice of technology. Imposition of technology not appropriate for the recipient community is a contributing factor to the failure of development projects (Glennie 1983; Churchill 1987; Commission Mondiale sur l'Environnement et le Développement 1987; Agarwala 1983). When incompetent foreign experts or uninformed national experts are making the decisions on behalf of a community, it can happen that the chosen technology is too complex, or requires too much maintenance for the community to operate. For an incompetent outside expert, it is difficult to predict what the operating problems of a given technology will be - sometimes even very basic equipment parts are not available locally, or are very expensive. It follows that despite large sums of money having been spent on the project, equipment and infrastructures wind up being neglected and eventually abandoned by the community. Glennie (1983) describes very well the occurrence of such problems in the water supply and sanitation sector.

Development of acceptable solutions

Although simple technologies are more easily maintained, we must remember that "... the appropriate technology is not always the simplest and cheapest; users are able and willing to pay for services that they perceive to be valuable..." (Briscoe 1988, p.11). Even if a technology is easy to operate and maintain, it does not follow that this technology is what the population believe can meet their needs the best. Therefore, in some instances it might be preferable to choose more complex technologies to insure recipients will support the proposed solution.

By involving the community, it becomes easier to insure that a project will be accepted. When a solution is technically appropriate, it does not necessarily follow that it will be accepted by the community. Experience has shown that when a project is not accepted by the recipients, chances of success are drastically reduced. It is also easy to assume that the recommended procedures will simply be adopted by the community when, in fact, for various reasons (often of a cultural nature) such procedures might be totally unacceptable to the community. For example, the timing of construction work can pose such difficulties. Villagers may be very busy at certain periods of the year, and may be neither willing nor available to participate in a project. Choosing such a period threatens the success of a project; a more appropriate time, when no conflict occurs, must be found. Such a consideration is better dealt with through consultation with the community to insure that villagers will be available and enthusiastic to work.

As another example, a community might refuse a female physician at a health care centre, or it might refuse to use underground water if it comes from an area where ancestors have been buried. When such incidents occur after project implementation, they can seriously jeopardize the outcome of the project, not to mention the credibility of the project initiators. Such mishaps can lead to unfortunate and almost irreversible consequences.

2) Efficient use of resources

Financial and human resources at the village level are often believed to be non-existent, a belief that is sometimes used to justify the managerial approach. But the truth is that resources available at the village level, including labour and financial resources, are not always negligible and can make a real difference (Churchill 1987, pp.6-9; Friedmann 1988, p.210).

Reducing the burden on the government, and reducing the cost of certain services.

For most Third-World governments, financial resources are not sufficient considering the tasks to be performed. Thus, one cannot expect these governments to provide the same level of services that are available in the First World. By transferring some responsibilities to the community, the burden on the government and other external agencies to provide these services is reduced. Therefore, participation of communities can lower the cost of providing some basic services. Even if the communities' resources can help in reducing the expenses of providing services, one has to be careful not to create false economies by simply assuming that the community should work for free, or should con-

tribute at a higher level than it can support. For example, to insure a minimum level of enthusiasm and commitment it might be preferable to remunerate community members for some of their work. Giving monetary incentives to workers can result in better workmanship quality and, in the end, more savings than from simply not paying workers. Thus, with contributions from the recipient communities, the government can reduce the cost of providing certain categories of services.

Maintenance is a particularly difficult responsibility for understaffed and under equipped government agencies. By involving the community, it can become easier to meet the requirements for adequate maintenance, to foresee the capacity for maintenance in the future (Glennie 1983, p.98-99), and to reduce the burden on ill equipped government agencies. For example, by having meetings with the community at the planning stage of a program, it is easier to determine what the community itself can provide toward the maintenance and repair of equipment and infrastructures. It is usually preferable if maintenance is done by people who are constantly at the project site, in this case the villagers themselves. Also, if villagers carry out the maintenance, it is easier to determine if availability of material will be a constraint. Simply because the community is involved does not necessarily mean that all these problems will be solved, but it definitely helps in preventing such problems from happening.

Developing a sense of responsibility and commitment

In general, people tend to take better care of what they own, like, or what they perceive to be essential. Giving major responsibilities such as maintenance, repair, and monitoring to people who are not beneficiaries or users of a project will not provide much in the way of inherent motivation for production of good work. Incentives must be given, be they financial or of another nature.

Failure to include the community in the planning process will not encourage any sense of ownership or responsibility to the project. This means that neither the community members nor the external agents will feel any incentive to actually carry out maintenance, repairs, monitoring, or any kind of follow-up procedures. By closely involving the community throughout the planning, implementation, and maintenance phases of a project, a sense of responsibility can be created among the beneficiaries. It is usually assumed that "... the greater the involvement, the greater the degree of responsibility felt by the community" (Glennie 1983, p.98). This feeling, if nurtured properly, will help insure that close attention will be given to make the project a success after the implementation phase is

completed. Almost any project or program needs a follow-up to make sure that it is still on target. These follow-up procedures (i.e. monitoring and evaluation) usually involve careful scrutiny and revisions of the achievements of the project or program. Without a strong commitment, the result is usually the negligence of regular and attentive inspections that are necessary to maintain equipment, infrastructure, and regular planning procedures. By actually participating in the construction of infrastructures or installation of equipment, the community may develop a strong sense of ownership which will help insure future maintenance and fast repairs.

The perceived benefits from a project will also play an important role in generating a sense of responsibility. This is why it is sometimes easier to organize villagers around income-generating projects rather than ones in the social sector. Income generation provides the villagers with tangible results more rapidly (DRMS 1989, in the summary). If no financial benefits arise from a project, the other benefits must be well understood and represent a significant improvement and value for the community.

Insuring long term intervention

A problem often faced when projects rely heavily on external help is their short term scope. In general, expatriates themselves are on short term assignments, which means that the rate of turn-over within external agencies is high. Also, many aid and development agencies often have short term programs in the order of 2 or 3 years, rarely more than 5 years. As a result, the necessary continuity within programs and projects is not insured.

Having local people in charge helps insure a constant presence, and better continuity. With expatriates, there is always the possibility that they will abandon the project before completion for such reasons as illness (treatment is usually carried out in their home country), or the inability to adapt to the local culture. In the case of NGOs, volunteers are often used to work in the field, and not only are their contracts short, but the reasons that motivate their participation are not always the most appropriate. Many such volunteers want to live an "exotic experience", gain work experience, "take a break", or do volunteer work out of compassion for the peoples of developing countries. Although well motivated, they usually require a fairly long period of adaptation before becoming efficient at the job. It is not uncommon to hear that volunteers were "starting" to feel efficient only at the end of their term. Fortunately, many NGOs are now trying to hire more qualified, or specialized people who have more developed skills.

Such problems are less likely to arise when most responsibilities lie with local people. This is not to say that expatriates should not be given any responsibilities; quite the contrary, input from expatriates can be very valuable and even necessary. For example, expatriates can be invaluable with regard to technological transfer and management procedures, and providing neutrality when conflicts arise. The right balance between local and external cooperation must be achieved, and this implies that more responsibility ought to be left with the local people than is currently the norm.

3) Insuring equity

By giving more decision-making powers to the local people, a more efficient control can be exercised to insure that money and equipment are used as intended. Corruption and favoritism are problems that must be addressed because they can greatly reduce the efficiency of development programs. Part of the problem is that the persons with decision-making powers do not have to answer directly to the body they represent or employ them. Although community involvement in decision-making cannot eliminate the problem by itself, it can certainly help reduce the occurrence of these problems. Because equity does not automatically come along with community participation, procedures must be built in to insure that decision makers and persons with financial responsibilities have to answer directly to the people they are representing or that employ them.

Community participation can also help to insure a more adequate redistribution of benefits, as the poorer members are given an opportunity to express their ideas and needs. Adequate redistribution is always difficult to achieve, "... even where it is the genuine intention of governments that public services should benefit the poor, the incidence of the costs and benefits of public services can be as uneven between different income groups as the overall distribution of income and wealth" (Freedmann, D.H., 1985, p.138).

Community participation also favors utilization of local funds at the local level. When controlled centrally, local funds tend to be used for higher level (provincial or national) priorities. Therefore, decentralizing control over local funds to a certain degree can insure a minimum of funding for local initiatives.

Freedmann gives a good example of ways to insure equity by using community participation. "A self-help irrigation project constructed mainly by labour inputs from less well-to-do villagers, but with disproportionately greater potential benefits for rich farmers who stand to realize higher yields and, hence, incomes from their larger and now more

fertile plot of land, might usefully be associated with a water levy or some type of land tax on users. ... However, if it is the poorer segments of the community that stand to benefit substantially from a self-help irrigation project, through increased access to irrigated land, they too might pay back part of the benefits they derive. Their payments could take the form of an unrecompensed contribution of labour to other communal projects." (Freedmann, D.H. 1985, p.139).

4) Generating self-satisfaction for the participants

Improvement is the main objective of development interventions, and any improvement is bound to create a feeling of achievement - it is inherent to the development process. If the improvement has not been perceived to be significant enough, or if the recipient population has not understood the new benefits, then no sense of achievement will be felt by that population. A genuine feeling of self-satisfaction can play an important role in giving incentive to the community for further development initiatives.

A community that implements a development project successfully will feel more rewarded than if the same project is implemented by external agents. Because people usually feel more pride in what they personally achieve than in what they simply receive, community involvement can thus contribute to generating this feeling of achievement and self-satisfaction.

5) Creating a learning process, and a training ground

A very important fact about participation, often not mentioned as a benefit, is that community involvement constitutes for the participants a learning process in itself. Not only is small group decision making at the local level effective but it provides a better opportunity to adapt to change and learn from it (Jedlicka 1987). An individual receiving services directly from the government would not learn to adapt in the same way to change. Without a forum to exchange ideas, rural communities or their members can find themselves isolated from the rest of the world and even from one another. Traditional systems might not give the community the opportunity to assemble for discussions about development issues. By institutionalizing participation, such a forum can be created, allowing the members of the community to discuss and decide upon development initiatives. It gives them the opportunity to evaluate the various alternatives open to them, and also permits them to exchange views with other communities or foreign experts. This is very much a process where participants gain new knowledge.

It also allows people to become directly involved with a project and be trained in new fields of expertise, thereby expanding individual and community skills. For example, people might learn about certain specific construction methods, or about precise mechanical skills while employed to maintain hand pumps. Therefore, community participation can provide a training ground for rural people, training which otherwise would not be available.

Development is much dependent on individual initiative (the case in market economies) and individual commitment (typically in socialist economies). So, if the community members stay isolated from one another, chances for development initiatives to be successful are slim. By bringing community members together to discuss their own development priorities, exchange of ideas and active learning are promoted.

How to make it happen

The managerial or mobilization approaches are probably simpler to implement and more easily controlled than the participative or representative approaches. But the shortcomings of the former are of such significance that they must not be ignored. Even if participation is a right of a community, a right which can bring many benefits to the community, it has shortcomings. The literature contains insights on the benefits of participation (Friedmann 1987 and 1988; Korten, D.C., 1983; Goulet 1989; Colin 1986; and others), but the problems associated with participation, and their solutions, are widely ignored. These shortcomings and obstacles must be addressed if the approach is to be successful.

Participation will not happen by itself, external inputs will be needed. External (and local) interventions should aim at providing the following five inputs in order to sustain participation:

- 1) Skilled manpower, including the technicians, managers, planners, and administrators needed at the various levels of government.*
- 2) Financial resources, including public revenues and foreign exchange for development and recurrent expenditure.*
- 3) Physical resources: the supply of such development inputs as raw materials, machinery and spare parts including their movement, storage and distribution.*

4) *Information: the timely flow of data, decisions, guidelines, suggestions and reactions between different government agencies and different levels of government, as well as between government and the public; and*

5) *Leadership: at both the local and national levels capable of effectively guiding and gaining people's confidence and co-operation in carrying out development decisions.*
(Freedman, D. 1985, p. 131)

These five inputs are essential, and must be provided at all levels of intervention. The action plan to make participation successful must intervene specifically at the community level, at the administrative and political level, as well as within the larger society (Korten, F.F. 1981). Intervention should not be limited to the local level, a mistake that is often made. To ensure smooth operation, the administrative and political system must be adapted to integrate input from the communities. Obstacles exist at all three levels mentioned. The following section is an attempt to identify those obstacles that can hinder participation. Obstacles are divided into the three categories mentioned above: within the community; within the administrative and political systems; and within the society in general. Obstacles within the society relate to those obstacles involving the cultural conceptual framework, which can also affect the community and the political and administrative systems.

1) Obstacles within the community

Informing the communities

Even though participation was a part of some traditional cultures, it is far from being widespread or well understood within rural or urban communities. "A significant factor restricting participation by the poor is their low level of awareness" (Mathur 1986, p.32). There is a need to spread information about the benefits and the process of participation; and this responsibility lies mostly with external agents such as foreign and national government aid agencies, multilateral agencies, or NGOs.

The community must be provided with the basic information required to make an informed decision. To do so, it is often necessary to devise innovative ways of providing information to the recipients. The result of adequately informing a community is to stimulate the demand for the service to be provided. For example, in promoting sanitation there are likely to be problems in convincing villagers to participate because "villagers are not

aware of the link between human excreta and disease, and this relationship must continually be stressed" (Glennie 1983, p.116). When the link between excreta and disease is made by the population, it is more likely that the community will want to change their current situation. Creating awareness can be a very lengthy process as villagers have to abandon habits which have been theirs for a lifetime. Efforts must be made to bring information to the village about the potential benefits of participation.

Because a project aims at providing the community with a service that is felt to be needed, participation will not necessarily be automatic. Very often the recipients are not aware of the roles and procedures of the government, and consequently feel alienated from it. It is actually very common to witness people not wanting to be associated with the planning process at all for this reason. It can be very difficult to convince them that they should trust the government officials involved when experience has proven them the contrary, especially when corruption is rampant. Sometimes efforts must aim at gaining the confidence of the recipient population toward government officials or external agents.

Motivating the community, stimulating the demand

Community awareness must be complemented by a high level of motivation - without it the results will not be satisfactory. "Lack of motivation results in the inability to develop and overcome problems" (Glennie 1983, p.65). Problems are bound to occur; some are predictable but others are not likely to be foreseen at the planning stage. If the community is not well motivated, it risks being defeated by the first serious problem it encounters, and since participation means that an essential part of the responsibility lies with the community, the entire project is at risk of failing.

Sustaining enthusiasm past the initial implementation usually becomes increasingly difficult. Initially, when a hand pump is inaugurated, spirits can be very high, but the situation will be different one year later when the same hand-pump, or distribution system, requires repairs and maintenance. Therefore, motivation must be sustained on the long-term, and this is why understanding the benefits of a program or project is essential for the community. It must also be understood by external planners that the benefits they perceive are not necessarily the same as those perceived by the community. For example, initially villagers might not see the health benefits related with constructing latrines, but they might see their convenience and privacy, or experience a gain in status if they possess one. Although such perceptions are not sufficient to justify large scale programs, they must be utilized to stimulate the demand for the services, and increase motivation.

Unifying communities

To be efficient, participation requires good group dynamics within the community, but realizing this objective can be a major undertaking. Rural communities are often divided by race, religion, sex, language, or ethnicity. Even when these differences are not obvious, there are always distinctions according to status, income, family, or origin. Although eliminating these divisions is not necessarily the role of a development project, it is essential to insure that such divisions will not impede the delivery of the project. Community members might have been raised and educated within a segregated environment, and changing their perceptions about other groups or eliminating preconceived ideas can be very difficult if not impossible. In any attempt at community participation, action must be taken to unify the community at least to the extent necessary to decide upon the community's development alternatives. If the task is too difficult, it might become necessary to divide the community into workable units, and install a coordination procedure between these smaller groups. For example, there could be regular meetings between representatives of each group in order to resolve any mitigation or to coordinate actions in specific fields (education, water, health, etc.). Such a process might require some form of arbitration.

The same principle applies to large or diverse communities - a large number of members might make it too difficult for full participation to be effective, while a very diverse community might present problems when trying to reach a consensus. The members of such a large or diverse group might feel alienated if it becomes difficult for them to provide input or be listened to due to the size of the group. In this case, again, it might be necessary to divide the community in smaller groups, and to provide a coordination mechanism.

Providing local leadership

Receptivity and enthusiasm levels, as well as perceptions, will vary among villagers; some villagers are likely to strongly resist the program while others will be very supportive. Acceptance of any program will depend heavily on enterprising villagers acting as catalysts and assuming leadership, spreading enthusiasm within the community. They are an essential factor for the success of participation: "one has to be realistic: a participatory model in practical terms will rely on the enthusiasm of the village 'activists'" (DRMS 1989, in summary).

Particular attention must be given to identifying and integrating "activists" within the village because "from the standpoint of participation, the question of leadership assumes its greatest importance at the village level" (Freedman, D.H. 1985, p. 143). Rightfully, lack of local leadership is often referred to as a serious obstacle to community involvement. Whereas it is possible that leadership is lacking in certain villages, it is also possible that the local leadership is simply not properly identified and nurtured.

Providing an effective procedure for participation

When all the factors with respect to motivation, awareness, and leadership at the village level have been taken care of, it is essential that the implementing agency (government, NGO, or multilateral agency) provide the community with a suitable participation procedure where input from community members can receive adequate attention, and where responsibilities, roles, and duties are well understood by all.

Providing an effective procedure for participation is a very difficult task. The fact that such a procedure must allow for community members to talk freely can also give opportunities to persons who only want to obstruct or disrupt the process. But it is important not to restrict access to the process in a way that will reduce participation by interested community members. Procedures should be agreed to in advance by the majority on how to deal with obstructions.

The ways of insuring participation can vary - there can be committees, regular general assemblies, votes, open forums, consultations, etc. The important thing is to provide community members with an opportunity to be heard, and to provide opportunities for the community members to discuss alternatives and take decisions by majority or by consensus. There is probably not a perfect method to insure that all the above is done, but many different ways of insuring appropriate participation exist. The procedure must be adapted to the local context, and also, must be clearly understood and accessible to all. It will be the external agent's responsibility to negotiate with the community to create this procedure respecting the cultural context and the population's will.

Establishing a cost recovery system

With an approach that relies on community participation, part of the costs are borne by the community itself. This means that there must be a system in place to insure that everybody has the opportunity to contribute his/her share, and this system must be

understood and agreed to by all before being implemented. Contributions can take many forms. Not only can they be pecuniary, they also can be in the form of manual labor, construction materials, services, or even food products. Without a recovery system it is unlikely that the community's resources will be used efficiently, if at all. Experience has shown that common property is "nobody's property" when it comes to assuming the costs; thus, the necessity of a strict cost-recovery system. In small communities, this might simply mean delegating the task of collecting money to an individual whom everyone trusts and who possesses good judgement, and who can be flexible or strict as the circumstances dictate.

2) Obstacles within the political and administrative systems

Promoting full acceptance at all levels of government

In most developing countries, the segment of the population that is most affected by decisions from ruling authorities has very little say in the process; these are usually the poor, the landless, the unemployed, or sometimes the minorities. This is to be expected from dictatorial and autocratic governments, but the fact is that it is also true of many countries that have elected governments. Lack of public participation characterizes the whole administrative process of many developing countries, and "... autocratic administrative behavior is one of the major barriers to organizational change in the Third World" (Jedlicka 1987, p.75). Therefore, many countries cannot implement more effective and efficient economic development procedures due to the inflexibility of the administration. The administration must recognize two facts about participation: 1) it is a right in itself (although this right can be limited to avoid such consequences as defamation, slander, and abuse); and 2) it is very efficient when done properly. The principal authority in regard to the decision-making process is, of course, the government. Thus, without full acceptance at all levels, community involvement will not be integrated into the decision making process. "If management is not sincere and committed to effecting a real change, then such change efforts are largely a waste of time" (Jedlicka 1987, p.31).

It can be easy for an administration to propose some form of token participation to appease critics or to make the population feel it really is participating. Consciously or not, if the institutional organization is not adapted for public participation, the result might be adequate participation procedures, but the output generated from the participation of the communities is not integrated in the decision making system. "It is not unlike the typical head of department faculty committee process in a US University where the administrator

appoints a committee to carry out a study, which is allowed to relate their fact finding to him [/her]. Where upon he [/she], more often, promptly carries out his [/her] own pre-determined decision and proclaims he [/she] has been participative in his [/her] administrative practices." (Jedlicka 1987, p.94).

"The role of the state and its institutions in promoting popular participation is a highly controversial issue...", because participative structures can also be used in an autocratic manner by giving the government an extensive network that reaches down to the village level (Majeres 1985, p.37). Through this network it becomes possible to influence, control, and even spy and report on villagers' activities. This control is insured through "linking pins" which use coercion to insure convenient behavior from members. (Jedlicka 1987, pp.26-27). As a general rule, the state manipulation or controlled mass organizations which can be characteristic of the mobilization approach must be avoided.

Acceptance by the government must be genuine, complete and extend to all levels of administration. There is a need for the administration to understand and support the change to community involvement. If not, change cannot occur, and therefore some energy must be spent at convincing management. This can be very difficult, either because bureaucrats are not convinced that giving poorly educated people the authority to make decisions can or should be carried out, or because the existing system is actually a better one for them, and they do not appreciate forgoing some of the power or benefits they currently enjoy for a more democratic process.

Undertaking decentralization, structural adjustment, and institutional building

i) Decentralization and structural adjustment

Can popular participation in decision-making be effected through formal institutions within the planning system? For most developing countries, the answer to this question is "no". Having a willing government is not necessarily a guarantee for real public participation because existing institutional organization might not be adequate to sustain public participation. An "important reason for the poor performance of developing countries ... seems to lie in complex political and social requirements for initiating meaningful mass participation as an integral part of the development process itself" (Ng 1985, p.110). At the time of independence, many developing countries simply adopted the existing colonial administrative and political framework, one that is very often not appropriate for including community input. If development is to occur, the governments

must understand the need for adapting the political and administrative systems for community participation. This is not an easy task for there is likely to be strong resistance from people who gain by the existing system. Even the population which is supposed to benefit from it might oppose it if the advantages are not clearly demonstrated to them.

By giving local groups the possibility to make decisions concerning their own development, we actually withdraw such power from the central government or its various departments. This is a decentralization of the decision-making process which must be recognized as such. The formal decision-making process must, therefore, be adapted to accommodate the new situation. One of the worst mistakes that can be made is to assume that the existing system can be left intact while simultaneously implementing a community involvement strategy. There must be an adequate distribution of power between the central administration and the local level. This is not an alternative, decentralization requires a structural adjustment of the government; it is not an easy task, nor is there any proven recipe to carry it out. The existing organizational forms are either too rigid or too weak to respond with continuing innovation to the challenges of a rapidly-changing environment (DRMS 1989, in summary).

Decentralization can be carried out in various ways. Rondinelli and Nellis identify four approaches:

- 1) *"Deconcentration: this is the handing over of some administrative authority or responsibility to lower levels within central government ministries and agencies - a shifting of workload from centrally located officials to staff or offices outside the national capital. When it is more than mere reorganization, it gives some discretion to field agents to plan and implement programmes and projects, or to adjust central directives to local conditions, within guidelines set by the central ministry or agency headquarters"* (Rondinelli and Nellis 1986, p.6).
- 2) *"Delegation: this transfers managerial responsibility for specifically defined functions to organizations outside the regular bureaucratic structure. It implies that a sovereign authority transfers to an agent specified functions and duties, which the agent has broad discretion to carry out. However, ultimate responsibility remains with the sovereign authority."* (Rondinelli and Nellis 1986, p.7).
- 3) *"Devolution: this is the creation or strengthening, financially or legally, of sub-national units of government, whose activities are substantially outside the direct control of the*

central government. ..." (Rondinelli and Nellis 1986, p.8). It can be compared with our federal-provincial system which has entire fields such as law and order, construction and maintenance of public roads handed out to provincial governments.

4)"*Privatization: through privatization some governments have divested themselves of responsibility for functions either by transferring them to voluntary organizations or by allowing them to be performed by private enterprises.*" (Rondinelli and Nellis 1986, p.9). Privatization can be especially useful to improve the quality of services to the population. On the other hand, it can lead to serious problems when applied to sectors that are perceived as public goods (such as national parks or water), or that rely on depletable resources (such as fisheries).

Thus, decentralization can be effected to various extents. But recently, there has been heavy pressure on developing countries to use the privatization approach to decentralization, but privatization must not be seen as the only form decentralization may take. In some instances, the privatization approach is used by governments to justify not intervening, and is comparable to the self-reliance approach to community participation. The U.S., especially under the Reagan administration, has strongly pressed for more privatization in developing economies. An article published in the early eighties in *Fortune* magazine clearly described the philosophy of the Reagan administration concerning that matter. "The developing nations must shoulder a good deal of responsibility for their poverty, insofar as their economic policies frustrate the functioning of the market and discourage the emergence of a vigorous private sector. Finally, further aid will be conditioned upon their willingness to change those policies" (Lubar 1981, p.80). "The U.S. can impose whatever terms it wants on bilateral aid - direct loans or grants to another government - but the Administration also wants the rules applied to the multilateral aid provided by the World Bank, the International Monetary Fund, and the three regional development banks." (Lubar 1981, p.84). Although privatization can contribute to development, blindly applying this approach to any developing country is not planning sensitively.

Decision-making decentralization must be accompanied by some revenue control decentralization. The tax and levies recovery systems must be adapted to permit a redirection of money to the local and regional levels. There is usually some competition among the centre and the regions as to the appropriation of these funds. These funds are used differently at the national than at the local level. For example, capital formation, debt servicing, large infrastructures, and services will constitute national priorities. The

perception at the local level of how money is spent at the national level is not always favorable or even accurate.

In summary, a necessary condition for effective participation by communities is an institutional organization within the government that fully and genuinely integrates community input into the decision making process. Nevertheless, "... there is a need for caution in generalizing about the requirements of an institutional framework that is amenable to participatory oriented development planning, given the differences in socio-political settings, types of programs and activities, and so on, that provide illustrative examples for this study" (Lisk 1985, p.32). Organizational change must be sensitive to existing cultural, economic and political systems.

ii) Institutional building, strengthening, and development

For most developing countries, institutional change must be complemented by a strengthening of the institutional capacity. The institutions will need to be provided with essential human, financial and technical resources to be able to undertake their new mandate. Institutional building, strengthening, and development is essential for creating a stable and efficient system, but it requires a long period of time to be implemented successfully. This must be taken into account, mishaps are likely to happen and they should not immediately be pointed at to justify abandoning participatory or representative approaches.

Adopting a holistic approach involving multi-institutional coordination

Decentralizing decision-making powers can lead to serious problems of inefficiency: units of decision making are dispersed and actions can therefore be uncoordinated. For example, technology used for extracting water might vary within a single region, while economies of scale could be accomplished by a more uniform use of technology. The same applies to other fields of intervention. Decentralization of decision-making must be accompanied by appropriate measures for multi-institutional coordination. Not only is coordination needed because it helps to improve efficiency, but also because most development programs have a multi-disciplinary dimension which requires concerted action from various parties.

Because most developing countries have limited resources, utilizing them efficiently takes on greater importance; they must generate as much synergy as possible. The need for decentralization does not mean there should not be concerted action at the centre. Quite the

contrary, concertation and decentralization are not mutually exclusive as one might think at first; some measure of each can form the basis for an efficient holistic approach. Program elements must be dealt with interdependently, and not in isolation.

For any sort of holistic approach, a multi-institution intervention is required to insure the following:

- 1) The facilitation of continuous adjustment to changing conditions. This is a capacity to monitor implementation processes, to ensure that no single institution ignores or fails to detect problems or unmet needs.
- 2) Managing inter-institutional conflicts. An institution's performance often depends on other institutions' performance. It can be expected that involved agencies will attempt to protect their own image and autonomy, leading to inter-institutional conflicts that can seriously hamper service delivery.
- 3) Maintaining commitments. Most institutions will become involved with other activities, but it is essential that they do not eventually neglect their commitment to programs already in progress (Ickis 1983).

To carry out the above activities, some form of central authority is required.

Supporting organization of maintenance in practical and financial terms.

The resources of most rural communities can be very scarce financially and technically. Left alone, a community is bound to have very limited alternatives, and to make numerous mistakes which will eventually jeopardize the outcome of the program or project. Assistance must be provided before, during, and after program implementation. Responsibility for this support lies with the government and other external agents such as multilateral and bilateral agencies and NGOs. Thus, there must be a trade-off of responsibility between external agents and the community itself.

Timing of this support can be critical; the community's enthusiasm can decline quickly when equipment or parts take too much time to arrive. Therefore, the situation within the communities must be monitored carefully to identify when and what support is needed.

External agencies will have to keep regularly in touch with communities to monitor the situation. Also, financial help must be extended to the communities; for example, credit

programs must be instated either through the public or private sectors. The fact that a community has a recognized village organization implemented through a representative or participatory approach can provide the necessary credibility for negotiating loans and credit with local financial institutions.

3) Obstacles within the society

Providing accountability to the community.

Whatever form of participation is chosen, the community members and external agents who have specific responsibilities must be made accountable to the community. In the past, most persons involved would relate to their hierarchic supervisor rather than directly to the community, and in the case of external agents, whether the job was well-done or not, only minimal contact was established with the community. This does not do much towards giving field personnel and government department workers a sense of responsibility toward the community. By giving more responsibility to local villagers, and by creating a closer relationship between the workers and the community, it becomes possible to make those persons with specific responsibilities feel accountable to the community.

Insuring continuous situational analysis and strategic planning

"One thing is certain in the remaining days of the twentieth century and the early days of the twenty first: change is not going to occur quietly or neatly" (Jedlicka 1987, p.1). Therefore, the assumption that a planning approach devised in the early eighties will still be valid in the nineties can be very misleading.

Planning is an ever evolving process and should never rely on repetitive procedures. Rather, situational analysis must be integrated into the process in order to adapt it to the evolving needs of the population, and to the socio-economic changes likely to occur during and after the project's lifetime. There must be an iterative monitoring procedure included in the planning process, whereby periodic reassessment of the community's situation is undertaken and analyzed, and where decisions are strategically taken. This strategic approach must be implemented at all levels from the top of the planning departments down to village committees. Regular community meetings can insure that it is done if the people know some principles of strategic planning. Objectives must be reassessed periodically; strengths, weaknesses, threats and opportunities must be monitored. This can be difficult

to do without proper guidance, and this is where external intervention is essential, either from the government, a multilateral agency, or an NGO.

Acknowledging the "learning from experience" concept

The goal of any program is to be both effective *and* efficient. "But the initial objective is only to find something that works to improve the situation of the people, and in the process to learn more about the opportunities and constraints they face" (Korten D.C. 1983, p.214). The second objective is to become efficient in the service delivery by focusing on methods that yield the best results. The third objective must be to expand the application of the program methods. The planner's role is not only to minimize errors, but also to learn from those errors to improve the process and to make it efficient.

A concept that should be understood is that the human mind functions in two basic modes of thought - the analytical and intuitive-synthetic modes. It is usually the first mode of thought that is expected from managers. "But analysis is only one of the two basic modes of human thought. The other involves the intuitive-synthetic thought processes we bring to bear in association, acquiring connections, trial-and-error, and responding to the frequency and recency of stimuli" (Korten D.C., 1983, p.218). Of course, trial-and-error can lead to expensive mistakes if not to unethical results, so steps must be taken to minimize errors; but it must be recognized that for any development plan there is a component of uncertainty. For this reason, the development process must always remain flexible. It is sometimes preferable to continue with an approach which initially failed, if the reasons of its failures are found and can be corrected.

Involving women.

Involvement of women in development has become a priority for many international development agencies, and their role is increasingly being documented in the literature (see Briscoe 1988; Churchill 1987; Khan, N.S. 1986; Agarwal 1982; Stephens 1985; IDRC 1985 and 1981; Obbo 1985). Nevertheless, women are still generally not sufficiently involved in decision making regarding development issues. Involvement of women is justified on two premises: 1) ethical responsibility, and 2) effectiveness.

As persons, women have the same ethical rights as men, and therefore should be included in the participatory processes on the same grounds as men. Ethical relativism still holds that imposing sexual equality concepts in countries or regions where women are not currently treated equally is not being sensitive to values or beliefs held within this specific

culture. It also holds that local values should not be challenged because it is the right of these local people to hold those beliefs. But ethical relativism is a fallacy, culture cannot override ethics. Firstly, women as persons "are not merely subjective ends whose existence as an object of our actions has a value *for us* : they are *objective ends* - that is, things whose existence is in itself an end, and indeed an end such that in its place we can put no other end to which they should serve simply as means; for unless this is so, nothing at all of *absolute* value would be found anywhere" (Kant 1964, p.96). Secondly, a necessary condition for ethical judgement is the existence of common ethical values, and as Rawls argues, intrinsically, everyone (with minimal intellectual abilities) possess two moral powers : "a capacity for a sense of justice and a capacity for a conception of the good. A sense of justice is the capacity to understand, to apply, and to act from the public conception of justice which characterises the fair terms of social cooperation. The capacity for a conception of the good is the capacity to form, to revise, and rationally to pursue a conception of one's rational advantage, or good" (Rawls 1985, p.233). For example, almost everybody, no matter the culture, will agree that causing pain to others (except in self-defence) is something that is wrong. Given enough detachment, and given appropriate knowledge about the consequences of an action or a decision, everybody is able to make judgements on the rightness of such actions or decisions. Thus, everybody is able to know if something is right or wrong. Thus, everybody in the end is responsible for the the values they hold; if the values are wrong, it is their responsibility. This does not mean that someone will choose the right value when the choice is available. Someone always has the possibility to choose the wrong value because it is convenient for him/herself, or because this person does not have sufficient knowledge about the consequences of his/her actions. Consequently, it can be argued that: 1) if the persons who hold the belief that women should be kept away from the decision making process would consciously analyze, rather than simply accept, what they have been taught, and 2) if they would be provided with adequate information, they could agree that it is not right to prevent women from participating to the decision-making process. Ethical relativism must not be mistaken for cultural relativism; ethical relativism is not acceptable because ethics cannot be relative.

Adapting the participation process to the local cultural, social, and political contexts

With both representative and participatory approaches, external agents will have influence on the planning process. "A ... significant problem is that relying upon the external introduces a certain degree of bias in whatever is developed, because inevitably it means the introduction of expatriate professionals who may or may not have the best

interests of the country in mind. There is, after all, a certain element of international professionals who, while they do a professional job, can also do a professional job that is irrelevant to the particular needs of the organization and country it serves" (Jedlicka 1987, p.69). Someone considered a professional in a developing country can turn out to be incompetent in a developing country context. As a consequence of this situation, traditional values and customs in many areas have been affected permanently and in some instances more or less eliminated. Such a loss is significant, as it is irreversible.

"A possible answer, then, to eliminate Western [technocratic?] bias is to come up with participatory approaches that are unique expressions of the country's culture. One, however, cannot become too self-assured that it is necessarily the best approach to change. One should not belittle all Western approaches just because it has become xenophobically chic to say that anything Western is evil or irrelevant to a developing country. What is needed is to use what is best from the West and reject what is bad" (Jedlicka 1987, p.52).

For most development interventions, the solution is a carefully adapted balance between local and external values. Fortunately, development agencies increasingly tend to respect local culture and traditional social and political systems.

Distributing institutional roles between population, government, NGOs, and private sector.

Various institutions must be involved in implementing programs and projects: NGOs; the government; multilateral and bilateral agencies; the community; and the private sector. Each of them contributes in different ways, and their roles are interchangeable only to a limited extent. For development to occur, all those institutions mentioned above must work together. A balance must be established that will give each of them a specific role to play. Each institution's role must be clearly defined and understood by all. Each institution must assume its responsibilities according to this distribution of responsibilities. All this must be done before any intervention is initiated.

Training

For their development to be sustainable, developing countries must build their own *autonomous* and *effective* planning processes; it cannot be expected that they will always be provided with development aid. Human resources must be developed in order to achieve this goal. The need for rearrangement, as discussed above, warrants new roles and duties

for the administrative personnel. The persons affected by rearrangement most likely do not possess the necessary skills to carry out their new roles and duties. New managers, administrators, and field officers, in particular, will need to learn these skills. Training, then, is needed at all levels of intervention, from the village up to the higher levels of decision-making within the government. However, experiences so far have not always been positive with respect to training in the Third World countries, but this is probably due to inadequate training rather than lack of a real need for that training

Poor management can certainly be pinpointed as a factor in the failure of many projects. Very often, links between project management and recipients are not maintained; community members do not receive materials or advice when it is needed, or field personnel are not properly equipped to carry out their work. "Indeed, ineffective administration is now increasingly recognized as an endemic source of trouble for a large number of development programmes" (Mathur 1986, p.95.).

Administrative skills and planning are crucial elements in a development program. Because developing countries cannot always rely on foreign experts, and on stable and uninterrupted foreign aid, it is essential that they build their own capacity to develop human resources. Such training must be aimed at both the people who already hold positions within the administrative system, and those who are going to be holding such positions in the future (the next generation). Continuing education must be encouraged, and the curriculum at higher level education centres must be adapted to the local conditions and include a strong practical component. Training must not aim exclusively at decision-making personnel, but also at extension staff. Key persons within departments involved in development implementation should also receive some training on planning, management, as well as technical and "social interaction" skills.

From the literature, there are four considerations that must be taken into account when attempting to adapt a training program to a development program. Those considerations described below constitute a summary of the ideas contained in Jedlicka 1987; Mathur 1986; Hussein 1988; Glennie 1983; CIDA 1987; Korten D.C. 1983.

- 1) Training must be given, at least partly, within the local context.** This insures that the training received is specific to the local or regional context. It also helps establish an in-house training capacity, which should eventually become self-sufficient. Training outside the target area is also very valuable, but is usually not sufficient by itself.

- 2) **Training must be project oriented.** On-the-job training as initial training is as important, if not more so, than training in courses. Again, this insures that the local context is taken into account, and that the training has a realistic touch. Close supervision is required when trainees start on the job, as well as adequate and abundant feedback.
- 3) **Training must teach adequate skills.** Technical aspects are not the only requirements of a good training program, skills for working with people must also be included. This can prove to be difficult as it relies much less on a textbook approach than on learning to set goals, and on dealing with changing human behavior patterns. Planning and management skills are also essential, not only for effective service delivery, but also for insuring organizational development.
- 4) **Training must teach adequate attitudes.** The right knowledge will not be useful without a sense of commitment, and a flexible mind set. "The most common attitude one finds in trainees is a strong belief that autocratic authority is the best way to do things" (Jedlicka 1987, p.71). If this attitude is not changed, the trainee will most likely behave in the exact manner the training program was aimed at preventing. Once a community has agreed to participate in a project or program, the implementing development agencies need to base their change efforts on people who know how to use positive reinforcement techniques and who will involve the entire community in planning, designing, and developing the project.

Training should be given both before and after practical experience has been gained in the field. Also, training must be provided within the right supportive environment; it must be part of a comprehensive program of development. "Bureaucracy is not policy neutral in all Third World countries. If status quo is what suits it best, no matter how many training programmes are undertaken this will make no difference to the development situation" (Mathur 1986, p.109).

Finally, training is not an end in itself. Training must be given with the understanding that after its completion, the trainee will be provided with the right position and an adequate material support by the implementing agency, the community, or some level of government that will have agreed to take part with the development program.

Appropriateness of participation

An important consideration that must be addressed from the beginning is whether participation should be seen as a goal or as a means. "Political militants committed to egalitarian participation on ideological grounds accept 'wasting time' in order to engage in full consultation, whether or not the practice proves effective". In such a context, participation is clearly seen as a goal. "On the other hand, some problem solvers defend popular consultation on the grounds that it is the best way of getting the job done, and achieving lasting results" (Goulet 1989, p.166). In the latter context, participation is seen as a means. As a goal or as a means, participation of the community is justified, and there is no reason why it cannot be both at the same time. Intrinsically, participation must be seen as a right for the population affected by any development project. Thus, participation must be seen first as a goal, and only after that, as a means of obtaining efficient delivery. The fact that participation requires time must not be seen as inefficient. If a community participates appropriately, the time invested in making the community participate will reap benefits later on.

Experience has shown that those development programs which do not adequately include the community tend to fail (Glennie 1983; Kortén 1983; Bergmann 1989); this is a fact which is increasingly recognized. Everyone must be given a chance to participate in his/her own development: "for economic take-off, the motivation of a few wealthy farmers and of a small entrepreneurial class is not enough" (Bergmann 1989, p.4). On the other hand we must be careful not to fall into the other extreme of using too much participation when it is not necessary. There is a whole spectrum between no participation at all, and the participative or mobilization approaches; the appropriate level of participation must be carefully determined. As was mentioned before, there are various approaches to encourage a community to participate; relying on only one of them would be wrong. The level of participation must be adapted to the current context. For example, with very large settlements and urban areas it can be more difficult to integrate participation in the decision-making process, because the citizens are often less concerned and it is more difficult to organize and coordinate the population. By combining the participative approach with the representative approach it becomes possible to ensure addressing local needs as well as coordinating larger-scale procedures.

It is essential to understand that participation will not occur by itself, but that it must be fostered as part of the larger plan and objectives of development. The government's responsibility in providing the needed support must be understood. "Participatory approaches are new to development practitioners, hence they lack experience in this area.

Often, participatory schemes are launched without sufficient prior preparation" (Mathur 1986, p.28)².

Community involvement can be said to be a necessary, but not sufficient, condition for the success of development programs, unless the task to be performed is either a very simple one or one that fulfills an obvious need for the community. Involving the community is not a guarantee of success - insuring adequate participation from the beneficiaries can be a very difficult undertaking. Community participation can produce significant benefits. However, it also has its own disadvantages and problems, most of them stemming from the complex social, political and administrative rearrangement that is required to accommodate true participation. There is no single method for implementing community participation. The form and level of participation must be adapted to the context in which the implementation occurs. The inherent disadvantages of the method that is chosen must be recognized and actions taken to eliminate or at least reduce them. Only then will community participation be appropriate.

Representation vs participation

The appropriate level of participation will vary under different circumstances. It is important to provide choices to the community as to the level of their individual participation. Even if participation is a right, it does not follow that everybody in the community must or should take part in all activities targeted towards development. If a certain project can be brought to completion efficiently with minimal participation from the community, then it is to the best interest of the community to do so. One of the precepts of being "developed", is to be able to make choices, so the community should be given such choices. The very fact that a community can decide itself upon such an issue requires a recognition of the value of the community members' judgement which is, in turn, the very essence of "participation". If a community makes such a decision through a process that is agreed by all, then the community has "participated".

The appropriateness of community involvement changes along with the local conditions and needs, as does the form of involvement. The need for the participatory approach decreases along with the level of economic independence of a community. For example, it might be perfectly justifiable to use the participatory approach to install and maintain hand

² Mathur is actually quoting: Bryant, C; White, L.G.. *Managing Rural Development: Peasant Participation in Rural Development*. West Hartford, CT. Kumarian Press, 1980.

pumps in a rural community in India. In this context, resources are scarce, and the limited tax base cannot cover the construction costs. On the other hand, it would be obviously inappropriate to use the participatory approach to build a new sewer line in a North American suburb. The population of this suburb would expect some level of government to cover the costs from public funds, and would actually refuse any involvement in the construction work of the sewer. Most North American people prefer to let the city administration deal with the details of implementing such works.

Would the participatory approach or the representative approach be appropriate in one context and not in the other? It is a question of the appropriate level of participation as determined by the context. For many people, participating in community activities is time consuming as well as energy consuming. It should be realized that community members prefer not to do the work if it is going to be done in any case. This explains why the population of the North American suburb will not get involved. The local government, by being elected, has been given the power to plan and implement such undertakings. It has also been given the financial capacity to do so through public funds generated by the tax system. This relieves each individual from the actual work while insuring involvement (in a passive form). The involvement is insured through the representative approach - it is indirect, but this is what most people in this context want. In a developing country, as the economy develops and more services are provided, the population should not be expected to participate in all aspects of further development actions.

It is essential to understand that each of the five approaches (managerial, self-reliance, mobilization, representative, and participatory) has an important role to play in development, and no single approach can replace the others. The level of participation must be matched to the particular context, and should be expected to vary as a country's or a region's social and economic situation evolves. In most cases, this means using the representative or the participatory approach.

Integrated planning

To be truly participative, and to insure long term sustainability, the planning initiatives must come from the community as much as possible. Although community participation might be introduced through a specific project, it should not be limited to this single project. Rather, instigating a community participation process should be an end in itself, and become part of an on-going planning process. Once the participatory process is instigated (assuming that the previously existing process was not adequate), the community

has a tool for decision-making on any issue that can arise. It is an institution which external agencies can interact with easily, and the community becomes much closer to being independent. After a first project, this new planning process can be used for taking further development actions, setting new objectives, and getting involved in other development initiatives. Community participation is an important link in insuring integrated planning.

Concluding remarks

Important benefits can be associated with involving the community in decision-making, thus justifying the use of community involvement as an approach to development. On the other hand, obstacles exist that can prevent community involvement to be effective or even successful; these obstacles must be recognized, and action must be taken to overcome them. In summary, the main points that can be drawn from the literature are the following:

- 1) Except in a very few special circumstances, participation from the recipient is a necessary but not sufficient condition for the success of development projects and programs.
- 2) Participation is a right in itself.
- 3) The ideal level and form of participation depends on social, economic, and cultural contexts, and should be carefully assessed before implementation of projects and programs.
- 4) To be successful, participation must be approved by the government, and be fully integrated in its development planning approach and decision making process.

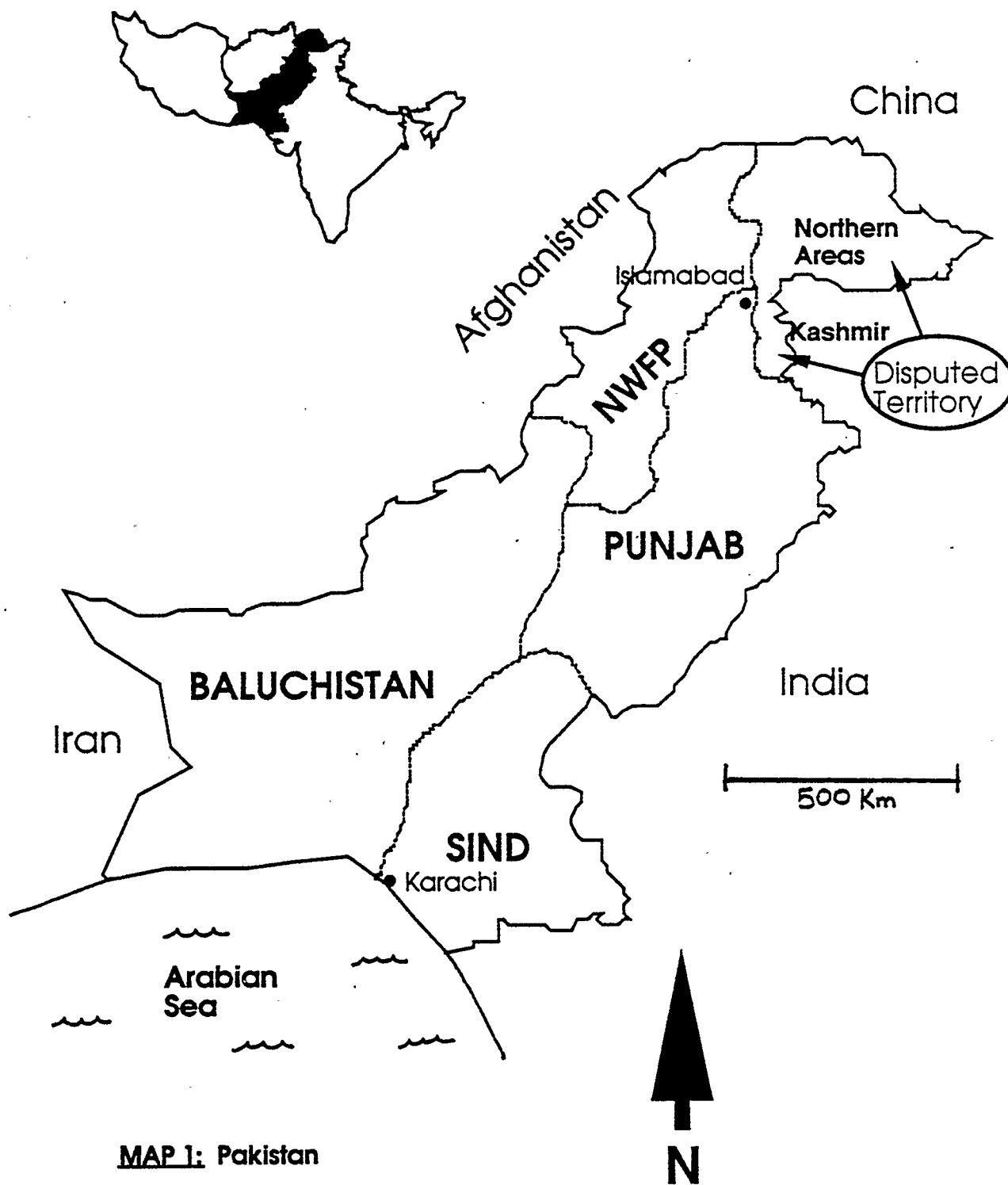
These four points will constitute the basis for the analysis of the case of the Northern Areas in the following chapters.

CHAPTER 2: PAKISTAN AND THE NORTHERN AREAS: SOME BACKGROUND INFORMATION

Pakistan

Located on the Arabian Sea, Pakistan shares borders with India to the East, Iran and Afghanistan to the West, and China to the North (see Map 1). The country was created out of the partitioning of British India on August 14th 1947. Pakistan has a very rich history that dates back to the dawn of civilization. The Indus Valley is the site of one of the oldest continuous civilization in the world (Zaman 1989, p.25). Recent archeological searches have led to the discovery of stone artifacts dating back between 400,000 to 500,000 years (Dani 1988, p.7). During the Bronze Age, the Indus civilization marked the first period of urbanization, circa 3,000 B.C. (Dani 1988, p.55). Around 2,000 B.C., the area was invaded by the Aryan people, and by 500 B.C, the Aryan people had expanded their civilization throughout most of the subcontinent (Weekes 1964, p.50). In the Iron Age, the second period of urbanization led to the rise of cities such as Takshasila (modern Taxila), Mulsthana (modern Multan), and Brahmanabad in Sind, around the Third century B.C. (Dani 1988, p.80). Artifacts and buildings unearthed reveal a very rich culture already impregnated by Buddhism, which began to spread in Pakistan around 550 B.C.. Archeological searches have revealed evidence of the passage of Alexander the Great in 327 B.C. (Dani 1988, p.77). Buddhism and Hinduism remained the dominant religions for more than 1,000 years until the early 700s A.D., when Islam reached the area. Islam first came to the subcontinent through its ports; in 710 A.D., Mohammed bin Qasim conquered Sind in Southern Pakistan (Weekes 1964, p.53). The peak of the Islamic period was probably reached during the reign of the Moghul Emperors between 1526 and 1857 A.D. when the Moghul built an empire that occupied, at its utmost extent, the northern part of India from the Arabian sea to the Gulf of Bengal (Stock 1975, p.271). During this period, tensions between Muslims and Hindus reached their highest levels. British colonization started in 1614 with the first outpost of the East India Company in Surat, near Bombay (Weekes 1964, p.59). From that day on, the British occupation would continue to expand until August 15th 1947, when England officially announced the independence of India and Pakistan. In 1956, Pakistan was declared an Islamic Republic (The Economist Intelligence Unit 1987, p.3).

Since its independence, Pakistan has seen a succession of military and civil governments, all of whom have had problems in generating economic development in the



country (The Economist Intelligence Unit 1987, p.3). Many problems were encountered in bilateral relations with India, with whom Pakistan has had border conflicts ever since its independence. The most important territorial conflict between the two nations concerns claims over the territory of Kashmir, which is currently divided between the two countries. India and Pakistan have been at war on three occasions: in 1948, 1965, and in 1971 when Bangladesh was partitioned, with the Indian army defeating the Pakistani Army. Ever since, the two countries have had tense relations, resulting in a build up of armaments. The last military President in Pakistan was General Zia-ul Haq who assumed the presidency in 1978. General Zia died in an airplane bombing in 1988. The elections that followed have seen the victory of the Pakistan People's Party headed by the first woman, Benazir Bhutto, ever to become leader of a Muslim state. Mrs. Bhutto's government was recalled by the President in 1990, and was defeated in the ensuing elections.

Politics and Population

Table 1. Some socio-demographic characteristics of Pakistan

Life expectancy (m/w)	59.0 / 59.2 years (1986)
Literacy rate	26.2 % (1981)
Total population	100.7 million (est. 1987)
Population growth rate	2.9-3.1 %
Religion	98% Muslim
GNP per capita/year	US\$ 380 (1985)

Source: The Economist Intelligence Unit 1987

"The territory of Pakistan today comprises: the four provinces of the Punjab, Sind, North West Frontier, and Baluchistan; the Federal Administered Tribal Areas (the Gilgit Agency in the north and the tribal areas along the border with Afghanistan); and the Federal Capital Area (FCA) of Islamabad. Pakistan also administers what is termed Azad Jammu and Kashmir, that part of the state of Jammu and Kashmir which Pakistan held after the 1948-49 war with India, but the official view is that pending a plebiscite the area remains formally independent" (The Economist Intelligence Unit 1987, p.8).

After independence, Pakistan adopted more or less the same system of administration that the British had used during the colonial period, and up to this day, this system has remained largely intact. This colonial system of administration is not adapted to the country's needs, is more targeted at revenue collection, and at keeping law and order than at generating development (Khan, S.S. 1980, p.7). Since independence, very little provision has been made to create genuine local development departments (Zaman 1989, p.31).

The military government in power in 1958 introduced the Basic Democracy System. This was an attempt at decentralization, accomplished by institutionalizing a four-tier system of elected councils, the lowest one being the Union Council, which had one elected person for every 10,000 citizens. The attempt failed in the long run after being politicized by the military government of the time; the Basic Democrats were granted the power to elect the national and provincial assemblies as well as the President of Pakistan (Rahman 1983, p.54-55). A similar idea to the Basic Democracies system was reintroduced in 1979 as the Local Government System.

Development planning since the independence

Pakistan started very early to plan for its economic and social development. In 1948, a Five-year Development Program was launched, and following it, in 1951, a Six-Year Development Program. Both programs were intended to be integrated plans, but actually looked more like simple wish lists than real plans (Weber and Dhungel 1988, p.5). After this first episode, development plans became a regular feature of the Government's policy-making. Starting in 1955, the government began establishing Five-Year Plans on a regular basis. With each plan, the Government gained experience, and with time, the quality and realism of the plans seem to have increased (Weber and Dhungel 1988, pp.5-18). Nevertheless, with each plan, results fell well short of the proposed targets. In general, it can be said that targets and objectives were much too optimistic, and did not foresee many of the problems which eventually surfaced (Weber and Dhungel 1988, pp.45-52).

Some specific development programs have had important impacts on the rural areas:

Village AID Program

This program operated between 1953 and 1960; it attempted to improve "...village life through the efforts of the villagers themselves..." (Weber 1988, p.21). It apparently "had all the ingredients of a good community development program" (Rahman 1983,

p.53). Unfortunately, class conflicts within the villages prevented the effective participation of the villagers (Khan, S.S. 1980, p.5). Also, due to the lack of training on the part of the field workers who were acting at the village level, and due to rivalry between involved departments, the Program was not successful and village Councils never "got off the ground" (Khan, S.S. 1980, p.4).

The Rural Works Program

In 1963, the Rural Works Program was launched. It was "...essentially an employment or job creation program, with the objective to improve the way of life of the rural population through involving them actively in the implementation of local development projects" (Weber 1988, p.22). Although it was successful in completing a large amount of projects, it did very little to develop administrative, planning, and technical skills at the local administration level (Khan, S.S. 1980, p.29). By 1971, the program was virtually at a standstill.

The Integrated Rural Development Program (IRDP)

In 1972, the IRDP was launched through a series of pilot projects. One of the first objectives was to determine the "Viable Unit of Development Administration". This unit became known as the "Markaz", and used the same jurisdiction as the local police station (Khan, S.S. 1980, p. 8). The Markaz were established as agricultural service centres (Weber 1988, p.23). The experience showed that input from the local people was indeed very valuable, and that the local people were the best source of information about their needs (Khan, S.S. 1980, p.16). Some of the pilot projects turned out to be very successful, but these were the exception rather than the rule. "Like other development models, the Integrated Rural Development Program also proved a frustrating experience in Pakistan. Except for a selected few, farmers became poorer and lost whatever confidence they had left in their traditional systems" (Rahman 1983, p.158).

"Even in the areas where Pakistan's IRDP was successful, the support and co-operation of the national departments remained weak. Evaluations of the programme in Manawala [Markaz] and Harappa [Markaz] found that representatives of some national agencies rarely attended meetings of the Markaz council. The project manager could get little support on technical matters from some national departments. Often the kinds of advice they provided were inappropriate for small-scale local development projects. In neither Markaz did representatives of most national

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departments receive adequate financial resources or transportation from their headquarters to be able to attend frequent co-ordinating meetings or to supervise their activities in the field. The IRDP approach did not fit well with the operating procedures of most national agencies, and they made little effort to change their ways of doing things" (Rondinelli 1986, p.16).

For all the above reasons, the Program was abandoned in 1979.

The People's Work Program (PWP)

This program was a continuation of the Rural Works Program, and was launched as part of the IRDP. The village assumed financial responsibility and provision of the labour, while some technical guidance was provided by the Markaz. The organizations were encouraged to make regular bank deposits, and to administer their funds. The banks, consequently, began to provide loans to the organizations, while previously they would not do the same for individuals. Contrary to its predecessor, the People's Work Program (PWP) put emphasis on maintenance, and on the ability of the Village Organization to undertake projects in the budget attribution (Khan, S.S. 1980, p.17-18). As with IRDP, a few projects proved to be successful, such as the experience of the Daudzai Markaz in the North West Frontier Province (Rahman 1983, p.157), but most of the projects failed. The PWP did not live up to expectation. According to a non-official group commissioned to evaluate the program, "...nearly 90% of the projects had no local contribution" (Khan, S.S. 1980, p.49). The experience gained at the Daudzai Markaz was replicated in the Northern Areas in 1982 by the Aga Khan Rural Support Program - the current General Manager of AKRSP has been one of the most prominent actors of the Daudzai Markaz project.

Local Government and Rural Development (LGRD)

In 1979, the government promulgated the Local Government order which established a multi-tier distribution of local government responsibilities. The system still exists today, but varies between provinces. As a general rule, there are three or four levels of elected representation from the village to the provincial levels. The Government of Pakistan institutionalized a Local Government and Rural Development Department in each province to administer and execute most of the rural development initiatives. The Department is really constituted of two wings: the local government wing, which provides assistance to the local bodies by providing grants-in-aid or by appointing administrative officers in the

local bodies to perform administrative functions; and the rural development wing which is the field component responsible for executing the Rural Works Programs, and for providing technical assistance to the local bodies (World Bank 1988, p.9). The Rural Works Program is similar in nature to the earlier "Works Program", except that now it is administered through the Local Government System. Funding for the Rural Works Program depends heavily on the priorities established by the Five-Year Plan.

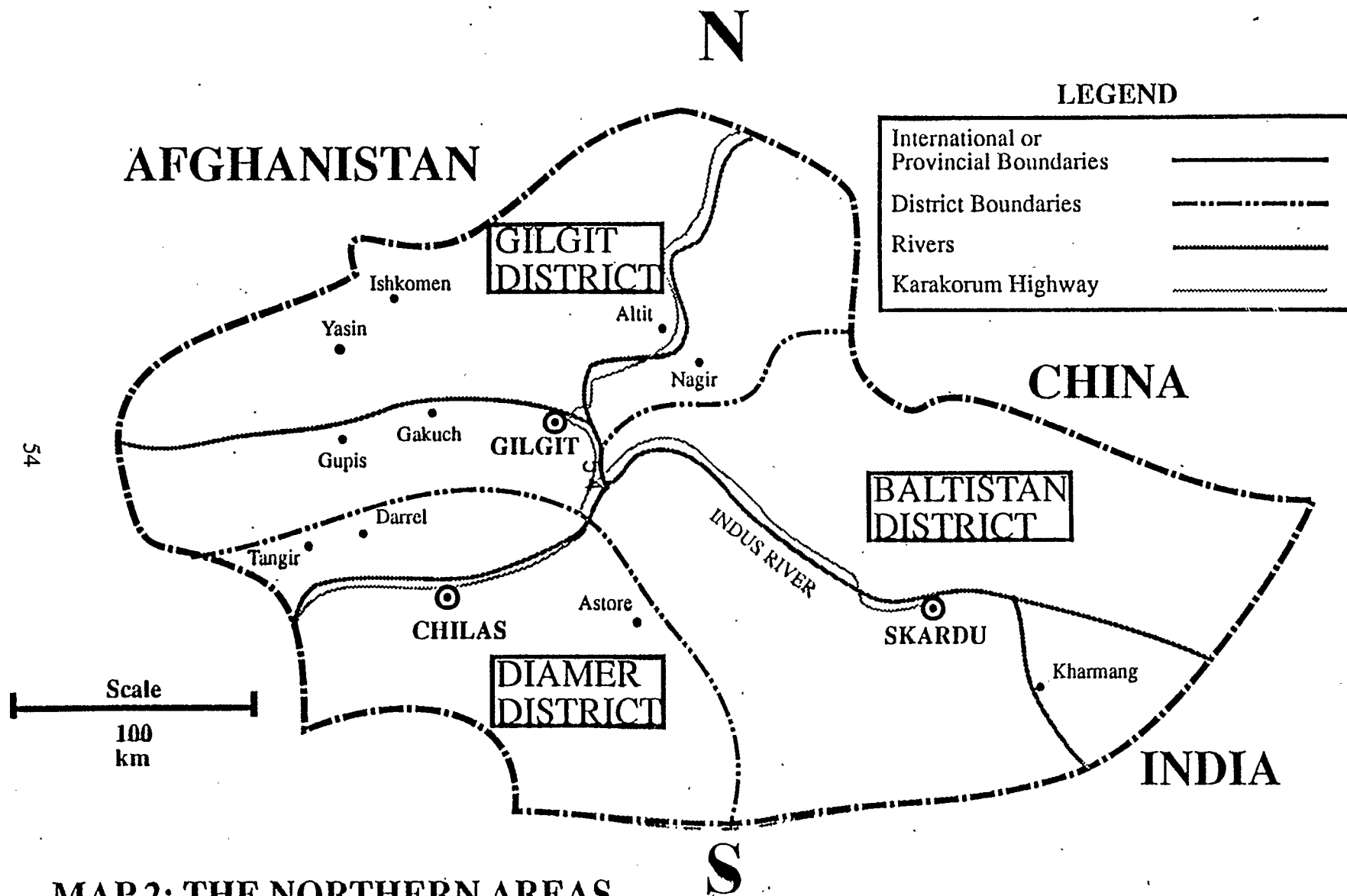
Northern Areas

Geography

The Northern Areas occupy the northernmost part of Pakistan, adjacent to Afghanistan's Wakhan corridor, China's Xin Jiang Province, and the area of Ladakh in India (see Map 2). The whole region is very mountainous due to the intense geomorphological activity, and probably one of the most rugged in the world. The villages of the area are dwarfed by four mountain ranges: the Himalayas, the Karakorums, the Hindu Kush, and the Pamirs. Most elevations in the area are at least 1,500 m above sea level, and more than half are above 4,500 m. The area contains 19 peaks higher than 7,600 m, among them K-2 and Nanga Parbat.

Because of the mountainous setting, "the Northern Areas display a great ecological variation over relatively short distances, both horizontally and vertically. Soils, rainfall and temperature vary with topography, elevation and aspect, shaping both the natural and the man-made environment. Temperatures are accentuated by the mass of the mountains and the aridity which limits the growth of vegetation that might otherwise insulate the rocky slopes. Below 3,000 m, precipitation is minimal, rarely exceeding 200 mm annually, but there is a strong gradient with altitude and at 6,000 m the equivalent of 2,000 mm a year falls as snow "(World Bank 1987, p.8). Within the habitable areas, temperatures can range between 40° C during summer and -20° C during winter.

The physical features of the region greatly influence the settlement patterns; villages are located on alluvial fans or valley bottoms, where agriculture is possible. Most villages have been built on very steep slopes, and most of the agriculture is done on man-made terraces. Habitable zones are very scarce and usually very limited in their extent, but where these limitations can be overcome, pockets of high agricultural productivity are found despite the problems farmers have to face to grow their crops.



MAP 2: THE NORTHERN AREAS

"Soils are relatively low in organic matter, very free-draining, contain virtually no clay, and have low natural fertility. As a result, water and nutrient retention is very poor and nutrient losses are aggravated by frequent irrigation and exacerbated by over-watering. Northern Areas soils need regular supplies of organic matter to improve both their structure and their nutrient-holding capacity. Other factors constraining agriculture include summertime heat stress at elevations below 2,400m, and the shortness of the growing season above that elevation, though local orographical effects create exceptions to this pattern that individual villages can exploit" (World Bank 1987, p.11).

Today, almost all the habitable land is already occupied by agriculture or by villages and towns; there is very little room, if at all, for the further expansion of human activities.

History

Although a remote region, the Northern Areas have a very ancient history. Some of the earliest engravings found in the area suggest human presence in late Neolithic period, around 3,000-4,000 B.C. (Dani 1988, p.98). Since the second Century B.C., the area has also seen many travellers using the Silk Route between India and China for the trade of silk and spices westward, and wool and precious metals eastward. Buddhist pilgrims from all over Asia travelled through the area. From China, pilgrims used the Silk Road in the 5th and 7th Centuries on their journeys to Swat where Tantric Buddhism originated, and Marco Polo travelled the Silk Road eastward into China in the 13th Century. The first Muslim missionaries brought Islam to Hunza and Nagar from Afghanistan in the 13th Century, but even after the start of Islamization, Buddhism had a strong influence on the area for many centuries, and it is only recently that the last areas have converted to Islam. Visiting villages in the Bagrot Valley in the early 1890s, Colonel Algernon Durand, who was the first British Agent of the Gilgit Agency, noted how pockets of Buddhism and Pagan beliefs still existed although Islam was the recognized religion:

"Before us, backed by the silent terraced fields of a dead generation, lay the little altar of a dead faith. And yet one felt it was not dead; the great god Pan laid his hand upon one's heart, all nature was filled by his presence, and one felt the impulse which brought the women there to offer their humble sacrifice to the living god of the stream and the hillside rather than turn to the cold deity of

Mahomedanism, so essentially the god for men, and not for women. (Durand 1974: orig. 1899, p.214).

The communities of the area were each quite distinct, each valley having developed its own identity. These small kingdoms were ruled through a feudal system, and were constantly at war with each other even before the arrival of the British in the Northern Areas in the 19th Century. Even today, each community is still somewhat unique and distinct, especially for those communities established away from the main access roads.

The first Europeans to reach Gilgit arrived in 1847, while the first British agent, Colonel Durand, was established in Gilgit in 1889, charged with the task of extending Kashmir's control up to the watersheds. The campaign to control Hunza, Chitral, and Chilas lasted until 1897. At the time of Pakistan's independence, because the population was mostly Muslim, the local rulers of Hunza, Nagar, Punial, Yasin, Ishkamen, and Gupis (current subdivisions of Gilgit District) all sent messages of accession to Pakistan on November 1947 (World Bank 1987, p.9). These local rulers (the *Mirs*) remained in power until 1974 when the feudal system was officially abolished. Ever since the arrival of the British, the feudal system has been in a state of gradual decline until its abolition. The disappearance of the traditional government system left the communities without any functional means of administration; only in 1979, did the Government of Pakistan establish a Local Government Order providing for the election of one person per village to form a Union Council (uniting 7 or 8 villages). Today, the Union Council has most of the responsibilities for the administration of its villages, but does not have the means to effectively carry out the task (this will be discussed further in the next chapter).

One of the major events in the history of the area is probably the arrival of the "jeepable" road. In the late 1960s, a road was constructed over the Babusar pass to reach Gilgit. In 1978, the first paved highway, the Karakorum Highway was inaugurated. The paved Karakorum highway now reaches the Chinese border where it continues on to Kashgar and Western China along the historic Silk Road; a section of the highway links Gilgit to Skardu in the Baltistan District. All other roads are not paved, but the network has been extended significantly in recent years and now reaches most valleys, although some of these roads are in very bad shape, not to mention dangerous to use. Roads have had a major impact on the economy of the area as well as on its culture. It is most likely that the major impact still has not been felt yet; tourism is taking an increasingly important role in the local economy. The number of mountaineers, hikers, and travellers passing through

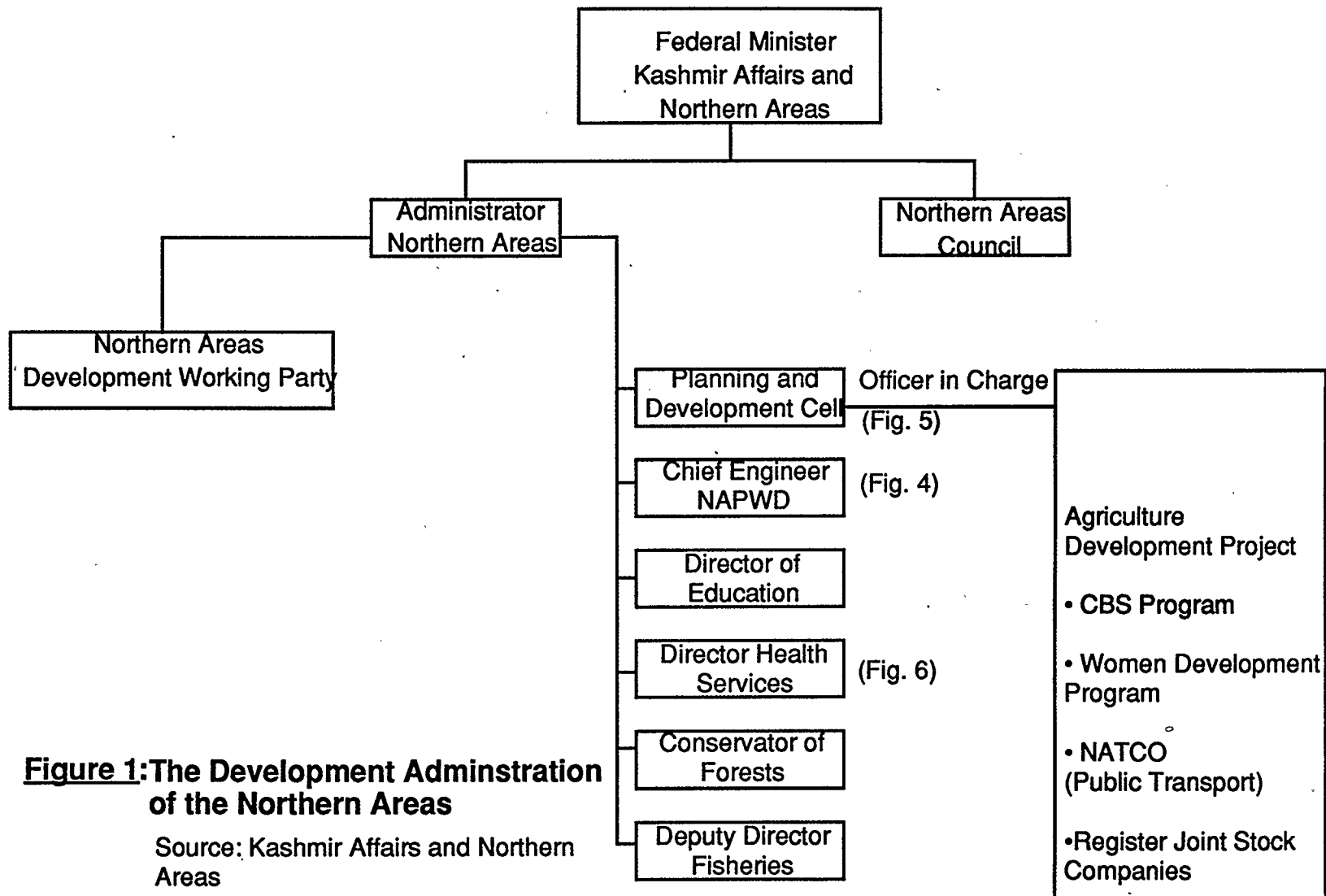
the area is increasing at an unprecedented rate, especially since the opening of the border with China in 1986.

Political system

Because parts of the Northern Areas are still claimed by both Pakistan and India, the political situation is very delicate. The Northern Areas, as well as Azad Jammu & Kashmir to the south, are not considered as provinces by the Government of Pakistan - they are administered as territories. The federal government of Pakistan through the Ministry of Kashmir Affairs and Northern Areas has an Administrator posted in Gilgit who is responsible for the area. The Administrator is the appointed executive arm of the Government of Pakistan. The Administrator is at the head of all the government departments acting in the area (see Figure 1). These include among others: the Northern Areas Public Works Department (NAPWD), the Local Bodies and Rural Development Department (LB&RDD), the Department of Health, the Department of Education, as well as the Planning and Development Cell (P&D Cell).

Local Government institutions were introduced in 1979, and form a multi-tier system. The highest tier of representation in the Northern Areas is the Northern Areas Council (NAC) which is constituted of 16 elected members from all three districts of the Northern Areas: Baltistan, Diamer, and Gilgit. The role of the NAC is only advisory, it has no legislative or executive powers. Its most important role regarding the development of the area is the attribution of the budget for the Annual Development Plan (ADP). In collaboration with the Union Councils, the NAC will distribute ADP funds to specific projects at the village level. Responsibility for implementation of the projects is usually given to the government line-departments. NAPWD and LB&RDD are the two departments responsible for implementing projects in the water supply and sanitation sector.

Below the NAC, are three District Councils, one for each district: Gilgit, Baltistan, and Diamer (see Figure 2). Below the District Councils are 107 Union Councils, each representing 7 or 8 villages. The Union Councils are the lowest tier, and act at the village level. Both types of councils are made of elected representatives. Their responsibilities will be described further in the next chapter.



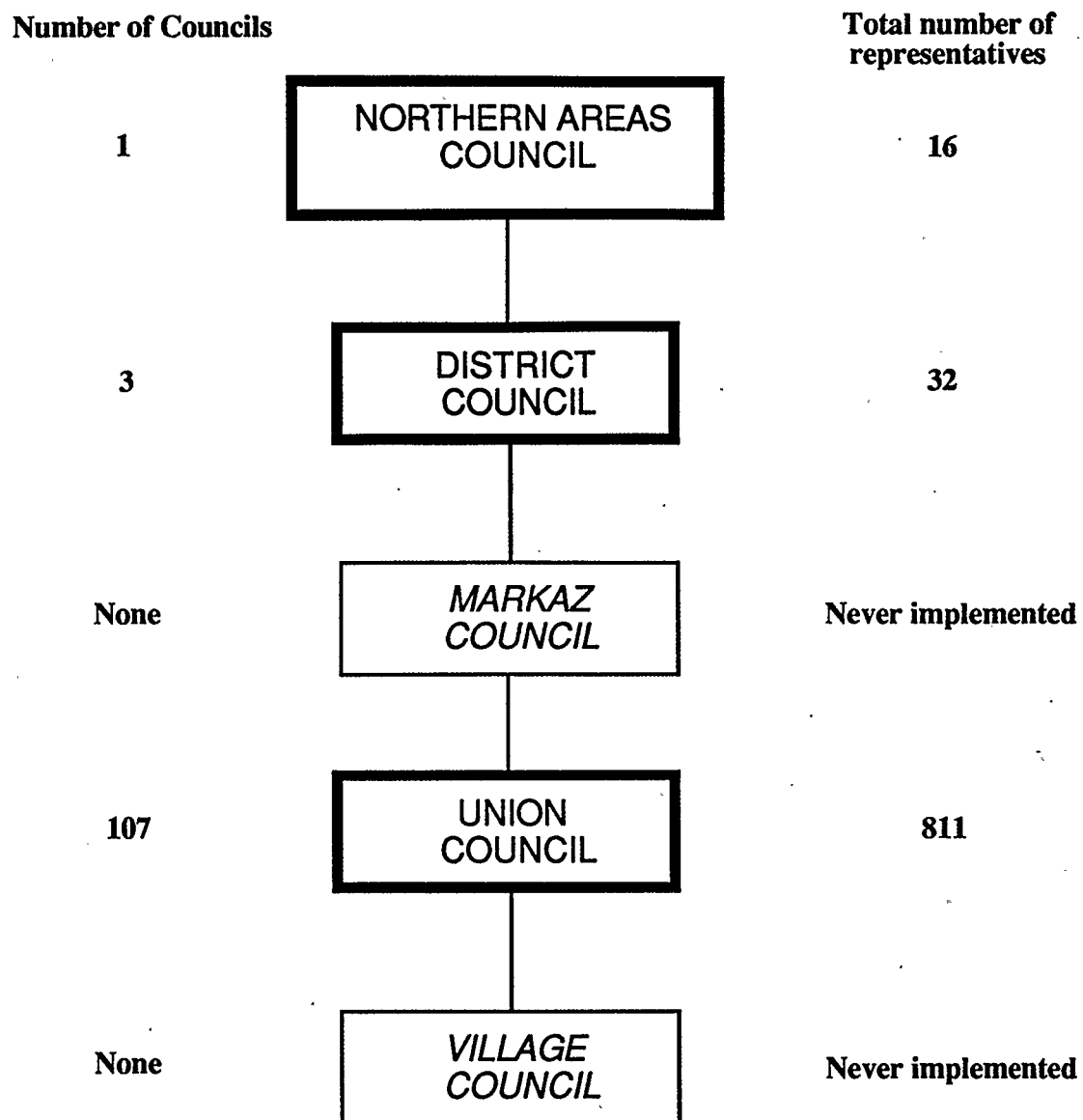


Figure 2: THE LOCAL GOVERNMENT SYSTEM

Source: Kashmir Affairs and Northern Areas

Population

The population of the Northern Areas is a complex mixture of indigenous peoples. They display a variety of ethnic origins (Central Asian, European, and Indian), of religious beliefs (Sunni, Shia, and Ismaili), and of languages (Shina, Burushaski, Wakhi, Khowar, and Balti - although English and Urdu are spreading rapidly throughout the area) (World Bank 1987, p.9).

Data on population is very scarce and unreliable. The latest reliable source for determining the total population of the area is the 1981 Population Census; from it, extrapolations were made to establish the current population characteristics. The total population of the Northern Areas is approximately 750,000 (see Table 2). Like data on population, reliable data about villages are difficult to find. The 1981 Population Census counted 762 established villages. Many of these villages are either large or scattered over a relatively large distance, and show distinct geographical, ethnic, or sectarian divisions (Wardrop-Acres 1989, pp.60-61). This means that some villages are constituted of more than one settlement; the exact number of these settlements (as opposed to villages) is unknown. A safe estimate is probably that there are more than 1,000 of them. Nearly half of the villages

Table 2: Estimated Population Statistics and Basic Data for the Northern Areas

	Gilgit	Baltistan	Diamer	Total
Population	309,400	282,780	158,740	750,920
Growth rate	4.35%	3.35%	3.68%	3.8%
Area (km2)	28,500	25,850	18,146	72,496
Urban Population	48,268	17,352	7,700	73,390
Percentage of total	15.6%	6.1%	4.9%	9.8%
Growth rate	6.6%	5.73%	4.0%	5.9%
Rural Population	261,132	265,428	150,970	677,530
Percentage of total	84.4%	93.9%	95.1%	90.2%
Growth total	3.84%	3.14%	3.6%	3.5%
No. of villages	284	227	251	762
No. of Rural Households	32,642	37,918	21,567	92,127
Average. Household size	8	7	7	7.4

Source: 1981 Population Census (projections), and AKRSP Project Area Data Book

are small villages - less than 500 persons (see Table 3). The dispersed settlement pattern of the Northern Areas has very important consequences for the provision of water and sanitation to the communities. It is much more difficult to service a dispersed population than a concentrated population.

Table 3: Population Distribution According to Village Size (1988)

	Small	Medium	Large	Total
Gilgit				
No. of Villages	122	139	23	284
Population	39,692	148,323	73,117	261,132
% of Population	15.2	56.8	28.0	100
% of total Villages	43.0	48.9	8.1	100
Baltistan				
No. of Villages	78	111	38	227
Population	24,154	119,177	122,097	265,428
% of Population	9.1	44.9	46.0	100
% of total Villages	34.4	48.9	16.7	100
Diamer				
No. of Villages	157	86	8	251
Population	49,065	76,844	25,061	150,970
% of Population	32.5	50.9	16.6	100
% of total Villages	62.5	34.3	3.2	100
Total				
No. of Villages	357	336	69	762
Population	112,911	344,344	220,275	677,530
% of Population	16.7	50.8	32.5	100
% of total Villages	46.9	44.1	9.1	100
Small Village:	Population less than 500			
Medium Village:	Population between 500 and 2,000			
Large Village	Population greater than 2,000			

Source: Projection from Population Census 1981

Rural water supply and sanitation

The traditional means of distributing drinking water is through irrigation channels that carry water from a source or from a river to the village (i.e., gravity systems). Often, channels have to be built on extremely steep grounds, sometimes on sheer rock faces in order to bring water to the villages. Once within the villages, the channels form an intricate network distributing water to the community for all domestic and agricultural uses. Considering the physical setting in which the channels have to be built, they constitute an engineering feat,

"...an old and established art, reflecting the centuries of wisdom of those whose livelihood depends on these channels. Many of the villages of Gilgit have stories of successive failures in channel construction. Many of the failed pioneers would return to their village of origin, others would try again. Finally, success would be achieved, and for that, the names and exploits of successful pioneers would become legend in the village they helped create. Until now ... some villages used the traditional method for determining the gradient of the channel. This entails the use of water as a level, and starting from the source to take the channel on an ad hoc line, hoping that it will come out with the desired command. This is fine if the scheme is possible, but if the result is to run into an impassable outcrop, or to drop so low that command is lost, this is only discovered after miles of channel have been constructed" (Husain, T. 1987, p.10).

The importance of the water channels for most villages is paramount, it determines if a certain location can be habitable. This explains why so much energy was put into constructing them as Col. Durand noted in the 1890s:

I spent some days making friends with the people, and visiting every yard of their watercourses, which were, as usual, a monument of patient skill. To carry water channels across the face of perpendicular conglomerate cliffs cut out of moraines by the action of a stream which rages below, sometimes impinging on one bank, sometimes on the other, is no easy matter even for that most handy of creatures, the Royal Engineer, however well he may be equipped. For the poor villager it is a labour of Sisyphus. The stream is always cutting away a frail prop, undermining a high retaining wall, breaking the side of the water channel, or washing away the intake headworks, and the work has to be done all over again. Truly, the

people compelled one's admiration by their steadfast patience and determination, and filled one with a desire to help them in every way in their desperate fight with nature.

- Col. Algernon Durand, British agent at Gilgit, 1889-1893. (From Durand 1899;1974, p. 213).

The Mirs (the feudal rulers) have played an important role in the construction of the water channels, "...they used the authority of the state to induce or constrain their subjects (through forced labour, land transfers, etc.) into constructing new channels, rehabilitating old ones, and developing new land. There was a system, therefore, to maintain and increase society's vital physical infrastructure" (Husain 1987, p.9). Despite the constraints put on some villagers, collective action remains the single most important factor in the success of the channels; even the cleaning of the channel, which is done once or twice a year when the channel is silted up, is done collectively (World Bank 1987, p.14).

A last factor worth mentioning in regard to the water supply sector, is that Islamic water laws do not provide any property rights to water resources; the laws only attach rights to the use of water by those who have constructed works to produce the water (Oosterbaan 1984, p.111). This must be taken into account when attempting to regulate water use; one must be careful in preventing private monopolies on water.

CHAPTER 3: INSTITUTIONAL ASSESSMENT

This chapter assesses the institutions (governmental and non-governmental) that are involved in the water and sanitation sector in the Northern Areas. Most of the information presented in this chapter was gained from interviews and from field visits. There is very little quantitative data available concerning the water supply and sanitation sector.

Local Government Institutions

The local government institutions (Northern Areas Council (NAC), District Councils (DC), Municipal Committees, and Union Councils (UC)) were introduced in 1979 to provide a structure for decision making, and for the representation of the people of the Northern Areas in the government of Pakistan; there are currently 1 NA Council, 3 District Councils, 3 Municipal Committees and 107 Union Councils (Ministry of Kashmir Affairs and Northern Areas 1979, p.1-5) (Figure 2, p.59)).

The Northern Areas Council (NAC) is the highest elected forum in the Northern Areas. It has 16 elected members and additional *ex officio* members, it is chaired by the Federal Minister for Kashmir Affairs and Northern Areas. The Council has the power to approve development projects worth up to Rs 60 million (Can\$ 3.3 million 1989). The body is provided technical support by the Development Working Party (DWP), which can approve projects of up to Rs 20 million (Can\$ 1.1 million 1989), and is responsible for the scrutiny of projects before approval by the Northern Areas Council (Hussein 1988, p.6). Unlike the provincial assemblies of the four provinces of Pakistan, the NAC is only an advisory body, it does not have legislative powers.

In addition to the NAC, there are three other active tiers of local government - the District and Union Councils, and the Municipal Committees. Of these, the first two are active in rural areas and are described and assessed below. These descriptions of responsibilities are taken from the Northern Areas Local Government Order, 1979. It is interesting to note that within this Order, there are provisions for two additional tiers of government which have not been operationalized: the *Dehi Council* which is a village council, and therefore below the Union Council; and the *Markaz Council* (between the Union Council and the District Council), which is supposed to include the Union Council members of the jurisdiction and sectoral department heads of the area. The Municipal Committees, being of an urban nature, will not be discussed.

The Union Council

This is the lowest tier of local government. It is an elected body representing, on average, 7 or 8 neighbouring villages. The members elect among themselves a Chairman and a Vice-Chairman.

In the water supply sector, the Union Council has the power: to prohibit use of water from any source suspected of being dangerous to public health; to provide and maintain wells, water pumps, tanks, ponds and other works for the supply of water; to adopt measures for preventing the contamination of the sources of drinking water. It is also responsible for taking any measure likely to promote the welfare, health, safety, comfort and convenience of the inhabitants of the village or visitors.

The District Council

There is one District Council representing each district of the Northern Areas. The District Councils have the following elected membership:

Gilgit District	12 members
Baltistan District	12 members
Diamer District	8 members

In addition, the government department heads for the district are *ex officio* members of the council, but do not have the right to vote.

The District Council has extensive administrative powers, especially concerning education, and public services and utilities. In the water sector, it is responsible for providing the water supply, construction, as well as repair and maintenance of water works and other sources of water supply. It is also responsible for promoting sanitation and public health, disseminating information on different matters affecting citizens, including hygiene and community development, promoting education in public health, adopting measures likely to promote the health and welfare of women, infants and children, and cooperating with other organizations engaged in activities similar to those of the District Council.

Assessment

Financially, the local councils are dependent almost totally on grants from the government. Organizationally, the Local Council system does not have any institutional mech-

anism at the village level (the *Dehi* or Village Council was never institutionalized). At the lowest level - the Union Council, a single individual represents one or sometimes more villages, with 7 or 8 villages forming the Union Council. As we saw above, responsibilities of the Union Council and its members are very wide-ranging, but they do not control the resources to assume these responsibilities. Without a sound financial and organizational base it would be unrealistic to expect local councils to undertake the planning, implementation and O&M of village-level water supply projects.

To add another tier of local government, such as a Village Council, might insure that the villages are included in the decision making process, but this would simply increase bureaucracy to an inefficient level.

Government Line Departments

The Northern Areas do not have the same status as the other provinces in Pakistan; the public departments of the area work under the Ministry of Kashmir Affairs and Northern Areas, and its appointed Administrator (see Figure 1). There are many different departments each with broad responsibilities, and those that are involved with the water and sanitation sectors are discussed below.

Local Bodies and Rural Development Department

Mandate and responsibilities

(The informations provided here were gained from CBS Program progress reports, key informant interviews, and field visits). LB&RDD acts in support of the local government institutions of the Northern Areas. Its general mandate is to assess the needs of the villages in terms of their social and economic development, and to take appropriate action for insuring their development (Deputy Director, LB&RDD; personal communication). Since 1982, LB&RDD has been involved with UNICEF to implement the Community Basic Services (CBS) Program which has a strong water supply and sanitation component. The CBS Program will be discussed further in the next chapter.

Organization and manpower (see Figure 3)

The Deputy Director is the head of the department (there is no position of Director, the department being the result of an important departmental reorganization in the late 1970s). There are three district offices in Skardu, Gilgit and Chilas (each headed by

Assistant Directors), under which, Project Managers are responsible for implementing projects at the sub-divisional level.

The total number of employees of LB&RDD is 163, including staff at the district and sub-divisional offices. A very large proportion of these employees (more than 70%) have administrative or support functions; LB&RDD suffers from a serious shortage of technical staff for execution of its work. There are only 4 assistant executive engineers (one for each district, and one in the rural development section), and 12 sub-engineers (one for each sub-division). Considering LB&RDD's responsibilities in social sector programs, it also seriously lacks female senior staff. Although the department has two female supervisors, no women have permanent positions involving intervention at the village level where they are much needed for setting an example to the local population, and insuring participation of the local women in all stages of project implementation.

Financial Resources (see Table 4)

The department has received an average of just over Rs 25 million (\$Can 1.4 million (1989)) per annum in Annual Development Program (ADP) funds for the five fiscal years ending 1989-90. Its 1989-90 allocation is no higher than the 1986-87 budget. This means that its development budget has declined significantly in real terms. The recurrent budget covering the regular operations of LB&RDD, however, has more than doubled in current rupee terms since 1986-87; for 1989-90, the recurrent budget is Rs 6.62 million (\$Can 375,000 (1989)). This represents a significant increase in both real and nominal terms.

The 1989-90 LB&RDD development allocation for water supply schemes was Rs 1.5 million (\$Can 83,000). The allocation for water supply development has been declining in both nominal and real terms since 1985-86. These reductions are probably due to special allocations in the ADP for the development of water supply schemes by the Northern Areas Council (Wardrop-Acres 1989, p.19).

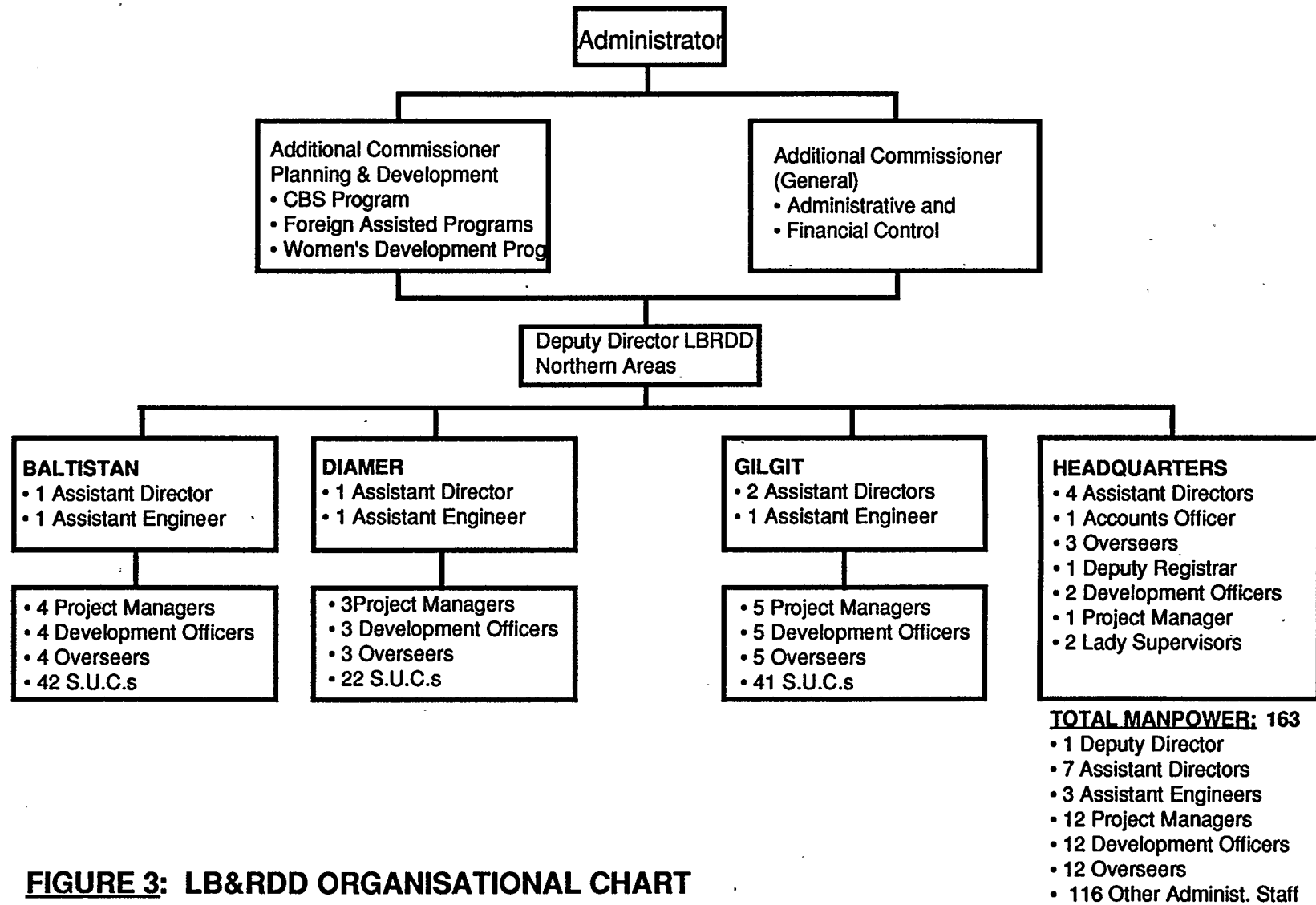


FIGURE 3: LB&RDD ORGANISATIONAL CHART

Source: LB&RDD

Table 4: NAPWD and LB&RDD Budgets (Rs. Million)

Year	LB&RDD			NAPWD		
	Develop- ment	Recurrent	Dev. for Water Supply	Develop- ment	Recurrent	Dev. for Water Supply
1985-86	20	1.58	2.1	172.84		7.1
1986-87	25.23	3.01	1.8	215.23	54.43	10.8
1987-88	32.5	5.6	1.8	235.44	67.85	9.1
1988-89	25.15	6.31	1.7	267.55	62.37	15.2
1989-90	25	6.62	1.5	324		15.6

Source: LB&RDD, and NAPWD.

Assessment of capacity

LB&RDD currently constitutes the most experienced institution with community involvement in the water supply and sanitation sector for the Northern Areas. LB&RDD performs a very important role in the development of the Northern Areas, but the distribution and composition of its staff seriously limits its capacity to do so. Some rearrangement is needed; more women, more technical and social intervention staff. Despite the problems associated with operating computers in an area like the Northern Areas, some level of computerization would help reduce the burden of administration and accounting.

The potential of LB&RDD is also restrained by its technical and managerial abilities. Field visits showed the extent of the technical capability problem: many water schemes were inappropriately designed, and had ceased to operate (see Appendix 1). The lack of management capacity appears particularly acute in the context of the large number of projects that are undertaken simultaneously by the department without proper assessment of the technical requirements and without insuring proper monitoring. LB&RDD is the support agency for the local government system, and consequently must approve, implement, and monitor an extremely large number of projects identified or proposed by the elected representatives on the Union, District, and Northern Areas Councils. LB&RDD is in no position to refuse or control the number of projects identified.

LB&RDD's training needs are mostly of a technical nature (civil engineering, construction skills,...). In addition, the sub-engineers and assistant executive engineers would probably benefit from better social organization skills. For the assistant executive engi-

neers and some assistant directors (sub-divisions) who implement projects at the village level, there is a need for better project management skills in order to insure project sustainability.

Northern Areas Public Works Department (NAPWD)

Mandate and responsibilities

The information presented here was gained from various NAPWD administrative documents, from field visits, and from key informant interviews.

The Northern Areas Public Works Department (NAPWD) has a very wide mandate entailing a variety of engineering responsibilities for providing services throughout the Northern Areas in the following four fields:

- Transport and communication;
- Physical planning, housing, and water supply;
- Power generation and transmission; and
- Irrigation.

In the water supply sector, NAPWD has been involved with the larger settlements, and has only implemented a few schemes in smaller settlements.

Organization and manpower (see Figure 4)

The Chief Engineer's office is the ultimate decision making body within NAPWD. Under its supervision are the SE (works) Unit, the Planning, Design and Monitoring Unit, and three regional circle offices. For both Gilgit and Baltistan, a special division is responsible for the water and power sector.

The NAPWD is a large department; there are 653 employees and the department has offices at the district and sub-division levels. To ensure its engineering functions, the department has a total of 5 superintending engineers, 13 executive engineers, 48 assistant executive engineers, and 14 overseers (sub-engineers). Much of the construction work is contracted to private enterprises. When considering the multiplicity of tasks NAPWD has to perform (construction of roads, bridges, buildings, water schemes,

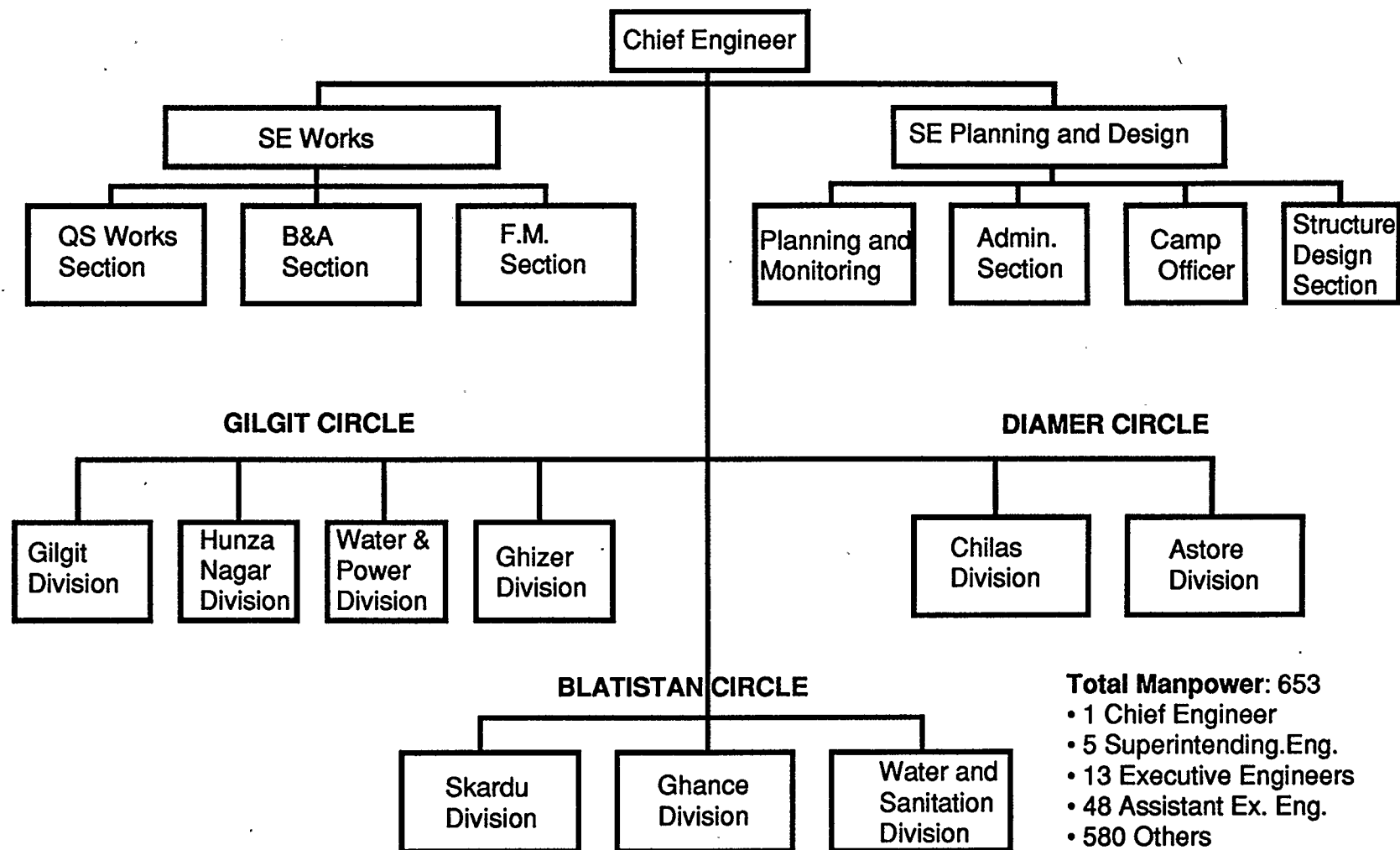


FIGURE 4: NAPWD ORGANIZATIONAL CHART

Source: NAPWD

hydro-electric stations, and others), it becomes obvious that its human resource are stretched to their limit. The executive engineers and the assistant engineers having to supervise all of the construction work, find themselves overloaded. As a consequence, they are not able to devote as much time as is needed on each undertaking.

Financial resources (see Table 4)

The NAPWD's allocation in the Annual Development Plan is shown in Table 4. Its allocation in 1989-90 was Rs 324 million (\$Can 18 million (1989)). This is 76% of the total Annual Development Budget for the Northern Areas. The recurrent budget of the department in 1988-89 was Rs 62.4 million (\$Can 3.5 million (1989)). The development budget of the department has grown at an average rate of about 10% in real terms each year. The recurrent budget has not grown by the same amount and may even have gone down in real terms. More than 80% of NAPWD's recurrent budget is spent on the maintenance of existing schemes.

Allocations for energy, transport and communication, irrigation, and physical planning and housing are all made to the NAPWD. In 1988-89, investments in transport and communication formed 46%, energy 23%, and physical planning and housing 10% of the NAPWD's budget.

The annual allocation to the water supply and drainage sector is made from the physical planning and housing budget allocated to the Northern Areas by the Ministry of Kashmir Affairs and Northern Areas; it was Rs 15.6 million in 1988-89 for both urban and rural areas (see Table 4) (Wardrop-Acres 1989). These allocations show a generally upward trend, but with wide variance over time.

Assessment

The strength of NAPWD resides in its technical capacity, its experience in implementing and maintaining water schemes, and its network of regional offices. Its weaknesses are the present overload, its very strict implementation procedure which does not allow for any new approaches, and its lack of interaction with the communities in which it undertakes work. It is the author's assessment that under the present arrangement, NAPWD would be unable to take any additional work - it is too overloaded. Also, it would be incapable of changing its approach without a major restructuring and a new mandate in the water supply, hygiene, and sanitation sector. Either it needs to increase its staff and physical resources, or it needs to get a more focused mandate which could be

fulfilled with the present resources. In addition, NAPWD would need to upgrade the level of its technical expertise by providing its overseers with additional training.

If NAPWD is ever to adopt a different approach - one that is more responsive to community needs - it would also require better social intervention and technical skills for the overseers and assistant executive engineers, and project management skills for the assistant executive engineers and the executive engineers.

Planning and Development Cell

Mandate and responsibilities

Within the Northern Areas Administration, a Planning and Development Cell has been created, and is headed by the Development Commissioner (P&D). The cell is responsible for planning, monitoring and coordination of the development process in the region, and is involved in many different social and economic sectors. The P&D Cell has the mandate to coordinate the development activities of the line departments and agencies.

Organization and manpower (see Figure 5).

The P&D Cell is headed by the Development Commissioner under the direct authority of the Administrator of the Northern Areas. The senior staff consists of four Assistant Chiefs, a Planning Officer, and a Research Officer.

Responsibilities are distributed to each Assistant Chief according to a sector of development: education and health, engineering works; forest and agriculture; and industry. One Assistant Chief has been given additional responsibility for the Monitoring and Evaluation Unit (described below) which was formerly part of the Community Basic Services Program. Each Assistant Chief has the help of an economic investigator (two in the case of the Assistant Chief responsible for the M&E Unit). These economic investigators usually possess an M.A. in Economics or an MBA.

The Planning Officer is more specifically responsible for the Special Development Program. The Research Officer has responsibility for the preparation of the ADP, and the release and reappropriation of funds.

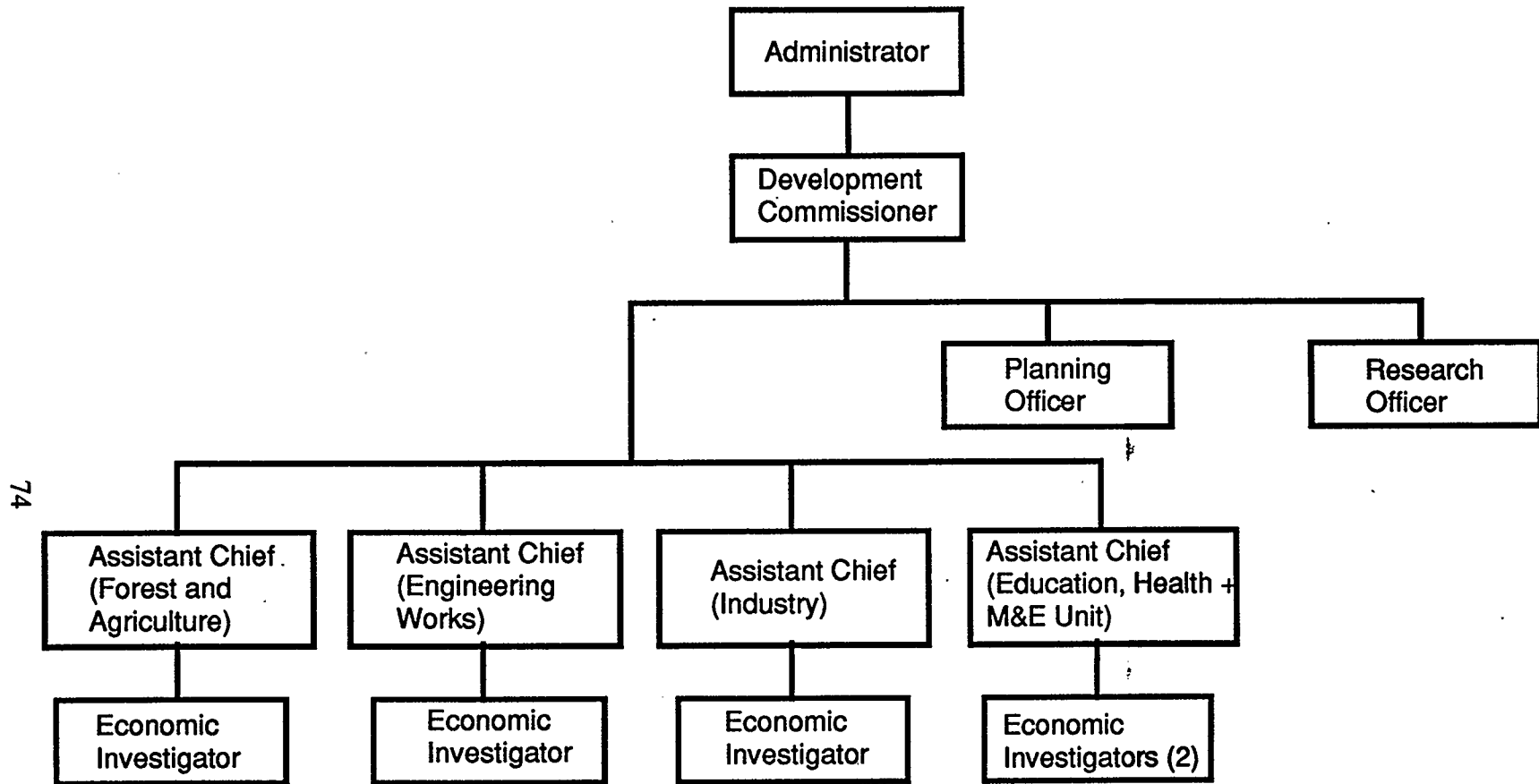


FIGURE 5: PLANNING AND DEVELOPMENT CELL ORGANIZATIONAL CHART

Source: P&D Cell

Assessment

The P&D Cell takes very little initiative by itself, it has more an administrative role than a planning one. Interviews with employees of the P&D Cell revealed that the assistant-chiefs and the economic investigators perform only administrative tasks such as linking the people of the Northern Areas (usually through its representative institutions such as the Union Councils) with the various government line departments, to facilitate the administrative process required for the execution of development projects. For example, they do not get involved with policy making, planning, financial matters, economic monitoring, or regional statistics. The few employees with adequate training cannot use their skills; or if they do, they do not receive any feedback on the quality of their work.

At present, the P&D Cell lacks the planning capacity required to fulfill its mandate; it should get more involved in the identification of projects. To achieve this task only some limited training would be required. The presence of this planning department within the Northern Areas Administration is a valuable asset; unfortunately, this resource is not used properly at the moment. Efforts must be made to strengthen it, and to give it more responsibilities. Because the P&D Cell already exists, costs to upgrade it should be minimal.

The Monitoring and Evaluation Unit

Mandate and responsibilities

The Monitoring and Evaluation Unit (M&E Unit) has been operational since 1982, when it was created for assisting the program management and coordination of the CBS Program by providing appropriate and timely information for decision-making (CBS Program 1988:1). The officers were to conduct field visits to collect fresh information from the projects under execution or just completed. This information was to be transmitted to the implementing agencies and the donors through field reports. Quarterly progress reports and annual reports have been produced since the creation of the Unit.

Since its creation, the M&E Unit went through many transformations. Initially, the Unit reported directly to the Administrator of the Northern Areas. A large part of its expenditures, including some of the salaries, were covered by UNICEF and the Aga Khan Foundation (AKF), the funds were distributed to LB&RDD, which in turn distributed them to the Unit. UNICEF and AKF support was withdrawn in June 1988; by mutual agreement, the Government was supposed to take responsibility for the Unit, and create the

corresponding positions, but lack of funds prevented it from happening. Instead, the Unit was placed under the supervision of the Planning and Development Cell, and most positions were not renewed, leaving the Unit with very limited staff. Moreover, the Unit was given new responsibilities within the P&D Cell, some of which were irrelevant to its mandate of monitoring and evaluating. As a result, it does not currently perform the monitoring and evaluation functions one would expect from it.

Organization and manpower

Originally, the Unit was headed by a Research Director, who supervised two M&E officers, one coordinator (women's activities), one coordinator (AKF), and nine support staff. The Unit was independent, reporting only to the Administrator of the Northern Areas and the donor agencies. The present status of the Monitoring and Evaluation Unit makes it a division of the P&D Cell, therefore under the supervision of the Development Commissioner (see Figure 5). The head of the M&E Unit is an Assistant Chief of the P&D Cell who also has other responsibilities in addition to those relating to the M&E Unit. Under his supervision there is only one economic investigator, and two support staff.

Assessment

Monitoring and evaluation is an essential part of water supply and sanitation projects. The present status of the Monitoring and Evaluation Unit prevents it from carrying out its mandate.

The Unit has been given responsibilities totally irrelevant to its mandate - it is basically confined to perform administrative tasks for the P&D Cell. It lost much of its field expertise when some of the positions were not renewed in June 1988. The physical and operational resources of the Unit are also limited.

Department of Health (see Figure 6)

The Department has control over 23 hospitals, 16 Basic Health Units (BHUs), 79 first-aid posts, and 103 rural dispensaries scattered throughout the Northern Areas. Unlike other provinces in Pakistan, the Department does not have a Health Education Unit. The department feels constrained by the absence of such a Unit and by the absence of trained female cadres at the village level.

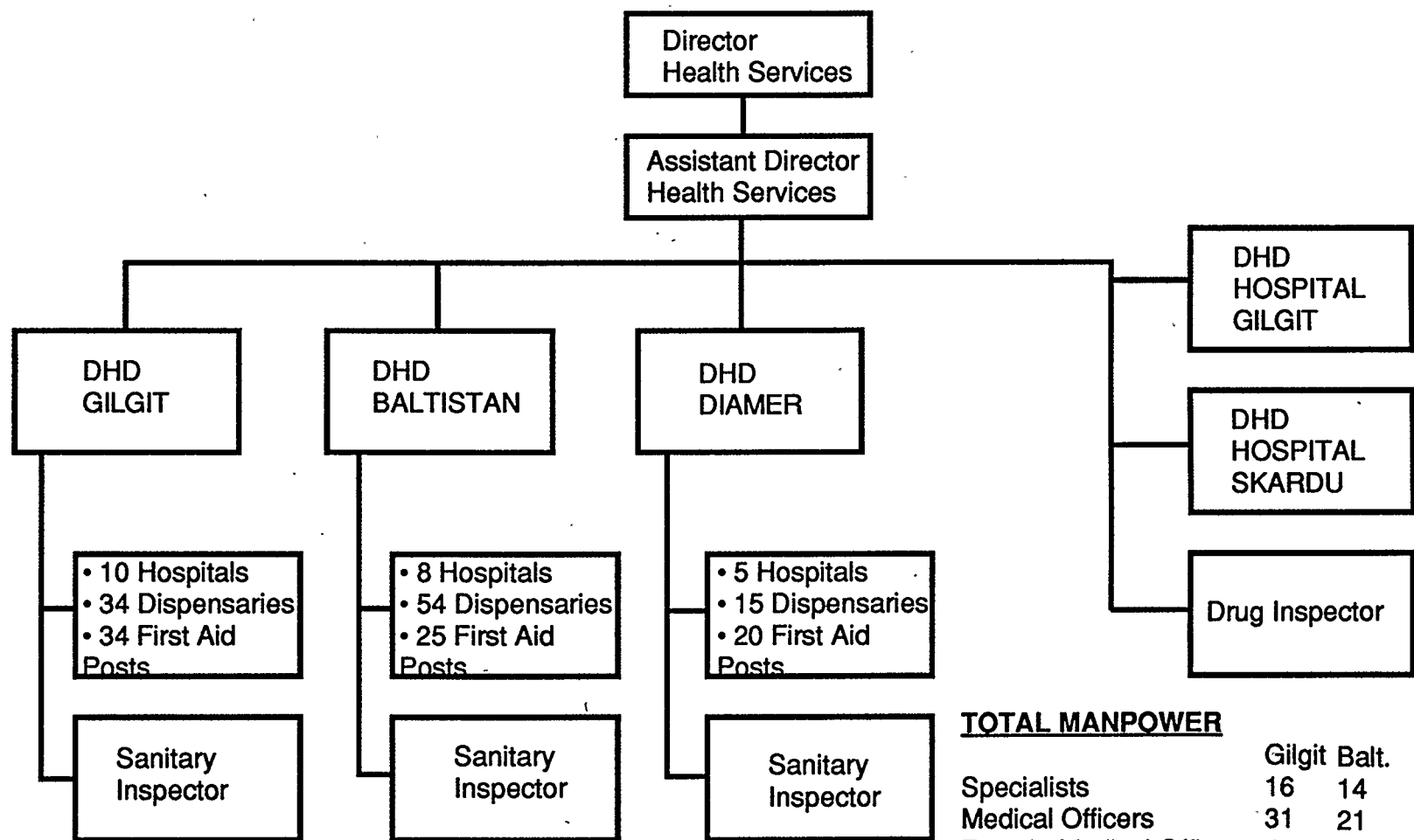


FIGURE 6: DEPARTMENT OF HEALTH ORGANIZATIONAL CHART
Source: Department of Health

TOTAL MANPOWER

	Gilgit Balt.		
Specialists	16	14	1
Medical Officers	31	21	17
Female Medical Officers	4	12	2
Dental Officers	1	6	4
Para Medical Staff	392	413	150
Others	279	327	89

The Department of Health has collaborated with other line departments and non-governmental organizations on several projects. It has helped organize training courses. Under the Community Basic Services program, the Department helped train 158 Traditional Birth Attendants (TBAs) and 196 Community Health and Nutrition Workers (CHWs) (CBS Progress report 1988). The Department is currently contemplating working on a school health program with the Department of Education and AKHS. The on-going activities of the Department of Health include:

- Expanded program of immunization;
- Diarrhoeal disease control;
- Training of Traditional Birth Attendants;
- Family planning;
- Iodine deficiency disorder program (iodized salts); and
- Training of nursing assistants at the district hospitals.

Assessment

The Department of Health, like the other departments of the Northern Areas, has very limited resources to carry out its mandate. Any additional responsibility will further strain these resources.

The Department has an extensive network of health outlets which covers all the regions of the Northern Areas, and constitutes an essential element in the propagation of hygiene knowledge. It also has links with NGOs (UNICEF, and the Aga Khan Foundation organizations) operating in the region. Despite the extent of the coverage, the capacity of the system is limited. Except for Gilgit and Skardu district hospitals, most hospitals are of very small size, and other outlets have even more limited resources.

The Department of Health lacks a clearly stated policy toward hygiene education. As a consequence, the Department's function is more curative than preventive. The population currently learns about hygiene indirectly through the Department's other activities, through the AKHS activities, and to a limited extent through the primary schools for the children.

Non-Governmental Organizations

The Aga Khan Rural Support Program

Established in December 1982, AKRSP is today one of the most successful and prominent NGOs in Pakistan. It operates in the districts of Gilgit and Baltistan in the Northern Areas, and the district of Chitral in the Northwest Frontier Province. It is a private, non-sectarian development program, headed by a resident General Manager reporting to a Board of Directors.

AKRSP has three principal objectives: (The following description of AKRSP is excerpted from Wardrop-Acres (1989).

- 1) Raising the incomes and quality of life of approximately one million people in the remote and poor areas in the mountainous north of Pakistan;
- 2) Developing institutional and technical models for equitable development;
- 3) Evolving sustainable, long-term strategies for productive management of natural resources in a dry and fragile mountain environment.

A fourth objective, conditional on the achievement of the first three, is to demonstrate approaches that can be replicated elsewhere.

AKRSP's approach is decentralized, i.e. village-based, participatory development. The broad rationale for this approach is the belief that the systems of development finance are incomplete without the organized participation of ordinary villagers in the process of development.

AKRSP, using the participatory approach to community involvement, has demonstrated how village organization can be utilized to make the administration of conventional development programs more effective and equitable: it has demonstrated a working model that provides the "missing link" at the village level. This is essentially a model of development administration through participatory Village Organizations. It has been replicated successfully throughout the project area (World Bank 1987).

An interim assessment of AKRSP was undertaken by the Operations Evaluation Department of the World Bank (1987). Another evaluation was planned for September-

October 1989, but was not available to the author at the time of writing). AKRSP gets much assistance from European and American governments.

Village Organizations (VOs):

The Village Organizations have been set up by the Aga Khan Rural Support Program in two districts of the Northern Areas: Gilgit and Baltistan. The VOs were established to fulfill AKRSP's goal of "increasing the capacity of local people to solve their own problems so that they could plan and implement their own development programs" (World Bank 1987, p.1). The VO becomes a forum which villagers use to make decisions. It is representative since a minimum of 75% of the households of the community must be members, and decisions are usually taken by consensus. To insure that villagers understand their responsibilities, terms of partnership are made and agreed upon publicly between the villagers and AKRSP; every member of the VO signs these terms of partnership. The VO meets regularly (once every week or two), and members are required to attend.

Strengths

- The VO is a participatory institution that is sustained by consensus; it insures community involvement in the decision making process.
- It is a body that meets regularly, therefore it can act upon problems just about as fast as they arise.
- It provides an effective way of accumulating and managing common savings, which is essential for O & M of water supply schemes.
- It also qualifies the community for bank loans, which would not be possible if villagers were to act on an individual basis.

Weaknesses

- It is not a legally recognized institution, and is therefore not a formal part of the Local Government system.
- In large villages, more than one VO exists, requiring meetings between representatives of each VO. In these instances regular management of the VO affairs are somewhat more complex.

- Presently, the women's organizations are separated from the VOs.
- The VOs have been institutionalized in only two districts of the Northern Areas: Gilgit and Baltistan. The District of Diamer does not have any VO.

Other Aga Khan Foundation Institutions

There are three other Aga Khan Institutions active in the Northern Areas: Aga Khan Education Services, Aga Khan Health Services, and Aga Khan Housing Board. These are funded by Ismaili community funds, and consequently most of their activities have concentrated in Ismaili areas. All three use very effective intervention methods by involving the community closely. Unfortunately they are not as yet very widespread throughout the Northern Areas, most of their activities having been in the Gilgit District.

Multilateral agencies

UNICEF

UNICEF has been very active in the Northern Areas in the last ten years. Most of UNICEF's activities in the water supply and sanitation, and health sectors were through the Community Basic Services Program (CBS). This program was designed by UNICEF but has been almost exclusively implemented in the field by the government departments (Dept. of Health, LB&RDD, P&D Cell). The CBS program was developed to provide a package of basic services to the women and children of the Northern Areas, with the following major objectives (CBS Program 1988:2, p.4):

- 1) Assist the local community organizations (formal and informal) in the organization and undertaking of local level planning, implementation and monitoring of basic services, as well as other improvement efforts based on perceived needs and local resources.
- 2) Train the village councillors, other village leaders and community volunteers, community workers, village project committee members in project administration, management recording and reporting, financial account keep, and community based monitoring of on-going projects activities.
- 3) Provide basic services for primary health care: sanitation; hygiene; functional adult literacy related to health and nutrition; and care to mothers and children through the organization of village project sub-committees.

- 4) Upgrade the skills, through training and education (communications), of Community Workers, i.e. Community Sanitary Workers, Community *Dai* (Traditional Birth Attendants), community skill training, community teachers, etc.
- 5) To help increase, both directly, and indirectly the income of poor families through skill training of women, to extend assistance in food production, as well as promoting village learning groups participation in functional literacy efforts.
- 6) Provide a potable water supply for 150 villages in the three districts of the Northern Areas by the end of December 1986.
- 7) Assist local communities in building up community schools.

The CBS program also set the following targets in 1982:

- To reduce infant and child mortality and morbidity due to communicable diseases, infantile diarrhoea, dysentery and related infections from the present level of 27.3% to 23% in the target areas.
- To reduce the prevalence of protein-calorie malnutrition in infants and children (0-5 years group) from the present level of 24.17% to 20% in the target areas.
- To reduce maternal mortality from 6.8 per thousand live births to 6 per thousand in the target areas.
- To increase school enrollment of the 5-9 year age group for boys from 21% to 35%, and for girls from 10% to 25% in the target areas.
- To increase rural women's participation in income generating activities from 24% to 40% in the target areas.

The action plan proposed to achieve the targets and objectives through completion of the following tasks:

- Construction of 150 water supply schemes and 150 demonstration water drainage systems.
- Construction of 300 demonstration latrines and encouragement to construct individual household garbage disposal pits and a minimum of five latrines in private households in

each village and to encourage the construction of three bio-gas plants by the community in each district.

- Training of 150 village plumber-cum-sanitary workers for maintenance of the water supply schemes and the sanitation facilities.
- Training of 150 Traditional Birth Attendants.
- Training of 150 Community Health and Nutrition Workers.
- To impart vocational skills training to 150 women.
- Establishment of 150 Community Women's Centres.
- To give refresher courses to primary school teachers and mid-level health personnel.
- Provide immunization to 90% of the 0-5 population in the selected 150 villages.
- Establish a system for effective distribution and use of Oral Rehydration Salts (ORS).
- Train 600 Village Project Committee members in program management techniques through community participation. The CBS Program relies almost entirely on the existing Local Government System to link with the villages. To represent the communities selected for the Program, the *Village Project Committee* was created; each of the 150 villages were expected to establish a Village Project Committee.

Although the CBS program was trying to reduce mortality and morbidity, it did not attempt to tackle the problems related to the resulting population growth.

Village Project Committees

The Village Project Committee (VPC) was established through the UNICEF sponsored Community Basic Services Program. Its mandate was to represent the community in planning, implementing, operating and maintaining CBS sponsored projects. The committee usually consists of four or five members; the Chairman is the local Union Council member, while the other members are nominated by the Chairman after consultation with the community. The VPC, as needed, can form sub-committees with specific tasks. The responsibilities of the VPC are to:

- 1) Maintain contact with the Local Government system - the Union and District Councils;
- 2) Plan and implement the CBS program with the participation of the local population;
- 3) Take charge of the financial management of the program at the field level;
- 4) Supervise and monitor program activities;
- 5) Nominate community workers on the program; and
- 6) Decide about the service charges in consultation with the community.

Strengths

- The VPC is fully integrated in the Local Government system, giving it a tangible legal status.
- By being a representative approach, it frees the villagers from some of the tasks related to decision making.

Weaknesses

- Although the Union and District Councils have responsibilities related to the water supply and sanitation sector, they do not have the means to carry out these responsibilities. The procedure they follow permits only isolated project interventions, without creating the opportunity for any concerted and coordinated action.
- The committee as an institution depends on representation by four or five individuals: the links with the political system can sometimes get in the way of insuring accountability to users. It allows individuals to neglect public good for their own political goals.

Private sector

The private sector in the Northern Areas provides various services for the water supply sector. The technical expertise necessary for the construction of water supply schemes and latrines is available. Most private enterprises find work by contracting to the NAPWD for construction of its water supply schemes. Skills needed for such undertakings include: digging the trenches, laying the pipes, fitting the pipes, and masonry work. A survey carried out by UNICEF showed that availability of skilled labour and the supply

of inputs are not a constraint in the sector, and that the major source of training for the private sector was on-the-job training (UNICEF 1989).

- Various sizes of pipes and various models of latrines are available in the markets of Gilgit and Skardu. Much of this hardware is Pakistani made, readily available, and of adequate quality.
- Many private contractors have gained experience working for NAPWD. These contractors usually hire local workers at the project site. There are also a few engineering consultants able to undertake relatively complex engineering works; most of them have had experience with NAPWD as well.

CHAPTER 4: THE CURRENT SITUATION IN THE RURAL WATER SUPPLY SECTOR OF THE NORTHERN AREAS

Water Supply

Coverage (see Table 5)

Compilation of records available with both NAPWD and LB&RDD show that 197 villages of the Northern Areas currently have a water supply system installed with the assistance of the Government. These existing schemes are reported to serve an estimated 181, 500 people. Field visits by the researcher to more than 70 of these villages showed that a large proportion, approximately 27% (see Appendix 1) of the reported completed schemes are currently not operational and, therefore, should not be counted in the total coverage. Another 32% of the existing schemes require important repairs (see Table 6, and Appendix 1). Thus, if field visits are representative of the overall situation, a total of 59% of those 197 schemes would either require important repairs or be out of commission. This means that only 41% or 81 of all existing schemes would be either operational or in need of minor repairs.

Basic Coverage Definition

Basic coverage is defined as having access to a safe (non-contaminated) drinking water source within 200 m of the house, which can provide a minimum of 20 litres per head per day. This is the minimum requirements recognized by the World Bank (Saunders and Warford 1976, p.5). The average water consumption in the rural areas of Pakistan, including domestic uses, is 48.1 litres per person per day (Ahmad 1978). Under this basic coverage definition, the existing traditional means of distributing and storing water (channels and water pits) are not considered to be safe. For gravity piped water systems, unprotected sources and inadequate reservoir maintenance (no regular cleaning) contribute to the contamination of the water supply. In such instances although a village may have an operational distribution system, its supply is not safe; such a village is not considered covered.

It is essential to note that "coverage" relates only to the technical aspect of providing access to a safe drinking water supply; it does not imply that the population uses this safe source adequately. This is why coverage should not be seen as an end in itself. Accomplishing 75% coverage, as proposed in the Five-Year Plan, means nothing if the population continues to rely on easier to use, but unsafe, sources for drinking water.

Table 5: Summary of Estimated Water Supply Coverage (1988)

District	Small villages	Medium villages	Large villages	Villages covered	TOTAL Population covered	% of pop. covered
Gilgit	12	60	10	82	77,760	30
Baltistan	25	43	14	82	80,029	30
Diamer	7	24	2	33	23,648	16
Total	44	127	26	197	181,437	27

Source: Estimates from NAPWD and LB&RDD documents

Table 6: Summary of inspections by the researcher of water supply installations (78 installations inspected)

Needed repairs	Gilgit	Baltistan	Diamer	Total	%
No repairs needed	10	6	5	21	27%
Minor repairs needed	4	6	1	11	14%
Major repairs needed	12	12	1	25	32%
Not-operational	13	5	3	21	27%
Total	39	29	10	78	100%

Source: Estimates from NAPWD and LB&RDD documents

Technology used

The similarity of settlement patterns and physiographic features throughout the Northern Areas calls for a limited range of technologies appropriate to the Region. Traditionally, the practice of using irrigation channels for distributing water and pits for storing it has been the main method for provision of drinking water; this method is still widely used throughout the area. Gravity piped systems is the new technology that has been adopted the most recently. Such a system usually consists of an intake chamber, a reservoir located above the village (to build enough pressure), a sedimentation tank or filtration tank when required, a distribution framework, and public taps shared among a few houses.

Targets

According to 1981 Census figures, there are 762 villages in the Northern Areas (see Table 3). This number does not include the smaller settlements that sometimes only com-

prise a handful of households, and which would bring the total number of villages well over 1000. The total number of settlements cannot be equated to the number of schemes required. Some large villages are really made up of smaller settlements scattered over a large area. Such villages require more than one system, the distance between the settlements being too large. For smaller villages, construction of piped systems is not economically justifiable; the per capita costs of construction would be very high, and the means of maintaining or repairing such a system, very limited. For these smaller villages, protecting the available water supply, and properly utilizing the traditional methods might be sufficient to insure a safe drinking water supply.

After having visited the area extensively, and having been able to appreciate the settlement patterns, it was decided (by the author and the Wardrop-Acres team) to set the minimal settlement size justifying intervention at 30 houses. Because settlement characteristics do vary within the Northern Areas, this figure is only used as an indication, and should not be taken as being exact for every settlement. There is no exact figure as to how many such settlements there are in the Northern Areas. The best sources available (government officials, and staff from NGOs involved in the area), and confirmed by field visits, put the estimate at around 625 villages. Included in this total, are villages where the population migrates seasonally. These latter villages should receive a lower priority than more stable villages due to the greater difficulty in organizing work and maintenance by the villagers under these circumstances.

Therefore, considering that already 197 villages (excluding the larger centres of Gilgit, Skardu, and Chilas which are not considered to be villages) have been provided with some level of service (operational or not), approximately 430 new schemes would need to be constructed. Virtually all of the required schemes are for small or medium sized villages as field visits have shown that most larger villages have already been provided with a scheme.

Rehabilitation needs (see Appendix 1)

Field visits showed that approximately 59% (or 116) of the schemes already completed need to be rehabilitated in some way. Moreover, it is very likely that a large proportion of schemes that are presently operational will need to be rehabilitated in the near future. The cost and amount of rehabilitation work varies widely from one scheme to another, making any estimate of the total cost of a rehabilitation program very crude. The most common problems are noted below:

- Burst pipes - cold temperatures during the winter often cause water to freeze in the pipes, often at the taps. New pipes are required to replace the damaged ones; and where the freezing has been caused by the pipes not being laid deep enough, excavation is required (sometimes quite extensively) to lay the pipes at the appropriate depth.
- Leaking tanks - the material or the workmanship used for the construction was of low quality. These tanks often need to be entirely reconstructed.
- Unprotected sources - the source itself can be contaminated. Sometimes, the solution is to treat the water (filtration), at other times contamination can be avoided simply by adequately protecting the source. Animal and human activity should be controlled above a source; also, incoming water should be filtered through a screen to avoid accumulation of debris, or small animals (frogs, snakes, etc.) in the reservoir. Similarly, a problem which seems to be common to most villages, is the lack of periodic cleaning of the water tank.
- Blocked pipes - the high content of silt in some streams used as sources, as well as accumulation of debris in the pipes, can cause them to block. These pipes must be freed of the debris, which involves digging them out, and installing appropriate screens in the different intakes.
- Low quality pipes - in a few instances, low quality pipes were laid, or PVC pipes were laid in an inappropriate manner. These pipes have been seriously damaged and need to be replaced; this means extensive work digging them out and replacing them.

Implementation approaches

Two government line-departments have been involved in implementing water schemes in the Northern Areas: LB&RDD and NAPWD. Both departments have executed schemes involving the same technology - gravity piped systems - but each using a different approach. As a general rule, NAPWD undertakes only the larger, higher cost projects, while LB&RDD undertakes smaller projects, usually through the CBS Program. NAPWD has completed 44 schemes whereas LB&RDD has completed 153 schemes. Both approaches have serious shortcomings; and considering the fact that coverage must be increased significantly, neither approach could be relied upon to sustain such an increase.

NAPWD approach

NAPWD's approach assumes that drinking water is a free good which everybody is entitled to receive, and that it is the Government's responsibility to provide such a service to every citizen. Therefore, all aspects of implementation and maintenance are taken over by the department; community involvement is non-existent. Under this approach, NAPWD carries feasibility studies for projects submitted by the District Councils (following recommendations of the Union Councils). Once a scheme is approved, and its costs determined, NAPWD will commission one or more private contractors to build it through a tendering process. All construction work is undertaken without involvement from the community. Finally, NAPWD hires permanent maintenance staff such as a plumber, a helper, a *chowkidar* (watchman), as well as providing all hardware needed, to ensure operation and maintenance.

Field visits have shown that, technically, such an approach has proven to be relatively effective. Almost all NAPWD schemes, approximately 85% (see Appendix 1), are still functioning, although sometimes with serious limitations. The main problem with this approach is that it is very costly. Even with the present incomplete coverage, funds are lacking to undertake much-needed repairs to some existing schemes. To extend the same level of service to all the villages of the Northern Areas would be impossible with projected resource availability. Moreover, this approach is not always sensitive to the population's needs; because the community is not involved, the end result does not always correspond to what is needed. Field visits have shown that many NAPWD schemes were covering only a small part of the village in which they were built, sometimes serving only official buildings (see Appendix 1).

NAPWD's approach is more suitable to larger settlements where the level of technical knowledge required is higher, and where it is more difficult to have efficient community participation in project implementation and maintenance.

LB&RDD approach

LB&RDD's expertise in water supply and sanitation comes primarily from its involvement with the UNICEF funded CBS Program. This program was implemented from 1981 to 1986, and involved 153 villages. At the end of the program, an extension was granted; the CBS Program is still being implemented today. With respect to water scheme implementation, LB&RDD has extended the CBS approach to all its other projects

not funded by UNICEF (which constitute only a minor portion of its activities). The CBS project employs an integrated approach to community health, centred around water supply and sanitation. Its package of development activities was developed after a comprehensive survey of felt needs in a random sample of villages in the project area. "The program planners felt that the results of the survey indicated that the community attached sufficient priority to the availability of drinking water to allow them to make the availability of the water contingent on acceptance of other components of health and sanitation which might not be that popular. As such, the basic package of services included components which, in the survey, had not been identified as priority needs by the community but which in the view of the program planners warranted inclusion due to the impact they would have on the target population" (Hussein 1988, p.10). The approach for implementing the schemes is mostly of the representative type, with minor influence from the mobilization approach. Delivery of the package was mostly insured using the existing government departments infrastructure. The community was expected to provide all the manpower needed for constructing the system, for maintaining it after completion, and also for paying for some expenses relating to the purchase of local materials.

Responsibility for the scheme rested with the Village Project Committee, which consisted of the local member of the Union Council along with 3-4 other persons. The Union Council member is the political, elected representative for the village; he is automatically appointed Chairman of the VPC, and is responsible for nominating the other members of the committee. Unfortunately, because time allocated to field visits was limited, and translation of the local dialects was sometimes difficult, full details of the operational procedures of these committees could not be thoroughly investigated, but it is nevertheless certain that many villages were not operating their Village Project Committees as they were supposed to, i.e. according to UNICEF directives. A Post Evaluation Report published by the Monitoring and Evaluation Unit in 1988 (before its transfer and reorganization within the P&D Cell) confirmed that the CBS Program fell far short of achieving its targets. The reasons that were mentioned are: minimal community participation, the Village Project Committees were unable to mobilize the resources of the village, and a lack of interest among the staff (CBS Program 1988:1). Although the program relied on the notion of "self-help", the community was not involved in the planning of the projects. The selection of villages to be participants was done at the District level; villagers were not given any choice in this selection. Many schemes were not maintained properly and are currently not operational. The program became increasingly target oriented when faced with delays, and as a result, involvement of the community became secondary to the

achievement of these targets (Hussein 1988, p.15). Field visits by the researcher have confirmed all of the above shortcomings (see Appendix 1).

Thus, relying on the field visits and key informant interviews he carried out, the researcher has identified the following factors to explain the shortcomings of the CBS program:

- The community was not sufficiently motivated, or educated, to use a safe drinking water source rather than the more accessible traditional source.
- The Village Project Committee is not an adequate form of representation in most cases. It relies heavily on a single individual - the Union Council member. Achievements will depend on the dynamism and integrity of this person. The community did not have a regular process permitting them to communicate with the program planners and VPC members.
- The community was not always made to understand its responsibilities. Although the CBS program relied on initiative from the community, very often, the villagers expected LB&RDD to be responsible for repairing the scheme.
- Many local people who were trained through the CBS program were not utilized effectively upon their return to the village after the completion of training. The knowledge gained was not put into use, and the trainees were not given significant responsibilities within their community because there was no forum at the village level for incorporating these trainees into an effective service delivery system, and compensating them for their services or supplies.
- The delivery of hardware or supervision was not reliable, causing the community's enthusiasm to drop significantly on many occasions.
- The community did not participate in the planning phase of the projects.
- Although women were the main target of such a program, they were virtually excluded from the planning and implementation process. This prevented much needed input from those most involved with water-related issues, the only exception being the TBA and the vocational skills components.
- The staff of the CBS Program was not sufficiently motivated.

Because of all these factors, and also because of its limited resources, the rate of implementation of LB&RDD is low. The opportunity cost of labour during the short summer season is fairly high, and motivating villagers to carry on work during that period can be difficult. The fact that the CBS program does not pay the villagers certainly contributes to this situation.

Extensive field visits to villages where LB&RDD had implemented schemes showed that the approach has serious shortcomings. Nevertheless, the CBS program has shown the way for further community involvement in water supply and sanitation projects in the Northern Areas.

The need

The traditional means of distributing water do not provide a safe source of drinking water. Table 7 shows the incidence of diarrhoea and death in the Northern Areas. The large number of cases of water-borne and water-related diseases reported by health workers (Government or AKHS) during field visits indicate the extent to which health can be related to drinking water in the region. Also, a report published by UNICEF indicates that 24% of infant and child morbidity are due to diarrhoea and dysentery, and that 15% of children suffer from worm infestations (UNICEF1988).

If health conditions are to be improved, alternative sources of potable water, or at least better management of the existing ones, must be provided to the population. According to current estimates based on field visits, and data available with both NAPWD and LB&RDD, water supply schemes have been built to reach approximately 27% of the total population (see Table 5). But if we consider only those schemes that are in satisfactory working order, approximately 41% of all the existing schemes (see Table 6), only 11% of the total rural population of the area can be said to have access to a safe drinking water supply.

Information obtained from field visits indicates that many schemes are either not operating, not maintained properly, or do not draw water from proper sources, resulting in contaminated water being used for drinking purposes. This situation has important repercussions on future investments; a rehabilitation strategy must be developed to rectify these malfunctioning schemes. For some schemes, the corrective actions needed are very simple and involve little cost, but for other schemes, major works and investment are required. Already, 197 schemes have been constructed by NAPWD and LB&RDD, of which

approximately 59%, or about 116 schemes, require major rehabilitation, and another 14%, or about 28 schemes, need proper basic maintenance procedures to be reinstated (see Table 6). For schemes that require rehabilitation, part of the initial investment already made in building the scheme can be recovered. Because the pipes account for the larger part of the initial investment, and because in general pipes are still intact even in those schemes that require major repairs, the rehabilitation cost should be much lower than the initial construction cost.

Table 7: Incidence of diarrhoea in the Northern Areas

Age Group both sexes	Population	No. Cases	% of population	Number of deaths	% of population
0-1	60,067	8,355	14	306	0.5
1-5	109,114	13,149	12	75	0.1
6-14	147,009	8,815	6	16	0.01
15-45	286,224	10,368	4	33	0.01
Above 45	33,872	1,933	6	39	0.12
Total	636,286	42,620	7	469	0.07

Source: Northern Areas Council, 1985. Five Year Development Program with Community Participation and Plan of Action 1986-87 to 1990-91.

Ideally, all settlements in the Northern Areas should have their own piped water delivery system to insure protection of the supply from the source to the tap. To cover all of the villages would require the construction of a very large number of schemes, the majority of them covering only a small portion of the population (approximately 1,000 if all settlements are to be considered). Because many settlements are very small or have a very scattered population, and because this population represents only a fraction of the total population of the area, it might not be economically feasible to provide services to all settlements. The total cost of such an undertaking would be too high for the financial resources available because the per capita cost in smaller or widely dispersed settlements could not be borne by the community members. Unless an international agency (bilateral or multilateral) is prepared to cover the capital cost of a total coverage scenario, which is very unlikely, it will be only possible to build water supply schemes where it is economically efficient to do so.

It is possible to provide access to safe water for those smaller villages without necessarily having to build piped schemes. Because of the relatively low density of the smaller villages, action can be taken to adequately protect the water supply. Most villages

use water that comes directly from the mountains. Therefore, by instating rules on water use, such as preventing domestic animals from contaminating the supply (by erecting fences, or by designating drinking and grazing areas away from upstream intake), and by physically protecting the supply, is likely to be sufficient to insure a safe drinking water supply, or at least, much safer conditions than those which currently exist. Delegating some authority to a VHW, the Union Council Member, or the VO when present, would insure compliance with the rules. To insure that they understand the need for these rules, community members must be fully aware of hygiene principles, and apply them on a regular basis. Thus, for these smaller or scattered villages, a simple but effective program of hygiene education will probably bring as much improvement as the construction of a piped scheme.

Unfortunately, safe spring sources are not always available, and communities sometimes have to rely on stream water which is easily contaminated. Approximately 30% of all settlements rely on such sources (Wardrop-Acres 1989, Investment Plan, table 3.4); those would require sedimentation and filtration treatment.

Although water in the area is not abundant, and can even be scarce at certain times of the year, it is possible to manage efficiently the available water supply to satisfy the needs of the population. In some villages, scarce resources call for sensible water management, while in some other villages water quality is the most important problem.

The demand

Demand for rural water supply schemes in the Northern Areas is relatively large, the reason for it being the demonstration effect created by earlier interventions by both NAPWD and LB&RDD. A survey conducted in Chitral, Gilgit, and Baltistan by AKRSP has shown that 29 % of all households list clean drinking water as their first priority, 12 % as their second priority, and 7% as their third priority. A total of 3000 households in 40 villages were consulted (Wardrop-Acres 1989, p.63). Considering the fact that the link between clean water and health is not necessarily an obvious one, such numbers are quite significant.

Field visits confirmed these findings, there is a demand at the village level for piped water distribution systems. Only on a few occasions were statements made that piped water systems do not constitute a significant improvement for the village. However, benefits that were mentioned by villagers were not always health related; very often conve-

nience was stressed as the main benefit, while reliability, and sometimes status, were mentioned as well. Health benefits were not mentioned as being significant because there is a widespread belief that if water comes from springs it is "good for you", and this belief applies to spring water that has flowed through the village as well.

The demand for house connections was low, but considerations for future demand should be taken into account immediately and integrated in the design standards of all future schemes to be constructed.

Drainage

Drainage is not as much of a problem in the Northern Areas as it is in the southern parts of the Country. The only intervention concerning this problem is the CBS program. In some villages where the CBS program was implemented, aprons were also installed at the standposts, but very often the quality of construction was not very high, and most of these installations have ceased to be operational. Drainage should not constitute an intervention program of its own. Rather, it should be included in the construction specifications of the water schemes.

The need

The small size of most settlements, the physiography, and the climate found in the Northern Areas do not justify major investment in drainage schemes. Malaria is not endemic to the area, the only cases reported are those contracted in the southern part of the country.

Traditional water channels are present in all villages and regularly serve to drain domestic refuse waters. Also, most taps are located at these channels, the tap water running directly into them. Therefore, the current situation regarding drainage is encouraging, and new technologies are not necessarily required. In future scheme implementation, consideration must be given to locate public taps at the channels, and where channels are too distant, a small outlet should be added that drains to the nearest channel, or a concrete apron should be used along with a drainage pit filled with rocks to allow water to infiltrate the ground. Drainage can be insured through simple construction standards throughout the area.

The demand

Some form of drainage at the sites of the standposts appears to be a felt need, for without it, the site can become rapidly muddy and unsanitary. Other than that, drainage does not seem to be a major issue. Field visits by the researcher have shown that LB&RDD's previous experiences with drainage were not successful. The few aprons and drains that were constructed have been either inadequately built or maintained, and were eventually abandoned. Demand will most likely increase with increased knowledge of hygiene, increased number of house connections, and more water supply schemes being constructed in the area.

Human Waste Disposal

Coverage

Human waste disposal needs are met only to a minimal extent; the only project that implemented sanitation infrastructures on a significant scale in the Northern Areas is the CBS program. Through it, 120 demonstration latrines were installed in public places at a cost of approximately Rs 5 000 per unit (\$Can 275). Also, 880 less costly units were constructed in households with technical assistance. All these latrines were installed in villages participating in the CBS program; they are scattered throughout the Northern Areas. Independently, a minority of households have decided to install latrines in their homes. Most often, this is done when a new house is built rather than added to an existing one. Any program to install new latrines should take into account the problems of providing an existing traditional house with a latrine. This is especially true for the Baltistan district where the settlement pattern is quite different, most villages of the area being highly clustered.

Private household initiatives are usually undertaken by more affluent and more educated families. Data on coverage for urban housing units show that less than 43% of households have access to latrines in the Northern Areas (1981 Population Census). Overall, the total coverage for hygienic human waste disposal is believed to be approximately 3% (1981 population census). As of today, there is no reason to believe that coverage has increased to more than 5%.

Basic coverage definition

Basic coverage for human waste disposal is defined as a hygienic disposal of human waste, where danger of contamination from exposure to waste or from a vector (such as flies) is eliminated in the normal course of everyday activities. Any latrine that can hermetically contain human wastes and prevent contact with the waste until it is decomposed comes under this definition. Defecating in fields, even if these fields are little used, is not considered to be hygienic.

The population of the Baltistan District uses a particular means of human waste disposal known as the Balti latrine which is widely used in this district. This latrine, often a communal one, is a simple pit latrine. Excreta from the pit is used as manure in the fields, but its handling is usually not carried out hygienically because excreta is not fully decomposed when utilized. In the Northern Areas, organic fertilizer is an extremely precious resource since the soils are low in organic matter content. The shortage of organic fertilizer creates the pressures that inhibit villagers from allowing human or animal waste to decompose fully before using it as fertilizer (Wardrop-Acres 1989, p.48). The Balti latrine is not an hygienic method of disposing of human waste and therefore cannot be counted in the basic coverage. Finally, as for water supply, the climate of the Northern Areas is an important factor in the design of any form of human waste disposal.

The figures from the 1981 Population Census do not include a basic coverage definition; the figures report a larger coverage than actually exists.

Targets

Unlike the water supply schemes, installation of latrines is a household driven decision rather than a village-driven one. Size, and even location of the village (to some extent), do not influence the demand or need for proper human waste disposal. The target for basic coverage should include all households of the Northern Areas. This means that close to 95 % of all households are targeted.

However, unlike water supply schemes, for which there is a clearly articulated demand at the village level, the demand for latrines is more uncertain and varies from one household to another. Therefore, it is preferable to follow a demand-driven, household-oriented strategy rather than a target-oriented strategy for human waste disposal. Also, the different requirements for planning, construction, repair and maintenance of the latrines as

compared to the water supply systems mean that the strategy for implementation of a program to increase coverage should have a different approach than that of water supply schemes. This reality was not recognized by the CBS program. A different approach does not preclude coordinating activities with implementation of water supply schemes.

Technology used

The Balti latrine consists of an elevated platform sitting above a pit; an apron on the side is used to empty the pit. Except for the Balti latrine and its counterpart used by the Hunzakuts, there is no other traditional method of human waste disposal. Virtually everybody simply goes to the fields, and often, children will defecate directly into the water channels.

The technology of the flush latrine, which was introduced recently, is a more hygienic way of disposing of human waste. The latrine has a water seal, empties into a single deep pit, and has a concrete superstructure. The flush action can be obtained either by using a reservoir when the home has a house connection to the water distribution system, or by manually pouring water in the basin. Wastewater infiltrates the ground, and when the pit is full, the waste can be emptied, having had time to decompose, and then can be used as fertilizer. Considering the resources available, independent household systems such as latrines are the best alternative for human waste disposal. They provide the needed privacy (especially for women due to *Purdah* considerations), are a technically simpler solution than septic tanks or stabilization ponds, and are a lower cost solution compared to sewer systems¹. Also, most of the material required is available locally, or regionally (for the actual porcelain latrine). The CBS "demonstration" latrine has a cost of Rs 5 000 (\$Can 278) per unit, which is very expensive for most families in the area. The "household" latrines, also installed through the CBS program, have a lower cost of Rs 3 000 (\$Can 167).

Implementation approach

The UNICEF CBS program attempted to promote the use of latrines by building a demonstration latrine in all the villages participating in the program. A public place was chosen, often a school, so that people could access the latrine freely. But the very fact that

¹For an excellent review of alternative sanitation technologies adapted to cold climates see *Sanitation Technologies for Temperate and Cold Climates*, in Environmental Sanitation Reviews, No. 25 August 1988, Environmental Sanitation Information Center, Asian Institute of Technology.

it was a "public" latrine led to problems of maintenance. Field visits have shown that in most villages nobody took responsibility for cleaning and maintaining the latrine, and therefore, they became very dirty, actually setting a counter-example before being eventually abandoned. Moreover, the way the program was implemented, the household latrines that were installed did not produce a significant demonstration effect either, because they were used mostly privately. Other community members did not have good access to these new latrines, and did not participate in their construction.

The need

Considering the present situation concerning human waste disposal in the Northern Areas, it is important to improve practices. Many diseases that are common to the Northern Areas can be related to unhygienic habits, especially inappropriate human waste disposal (Northern Areas Council 1985; UNICEF 1988; Imdad 1989. Also, see Table 7). Hygienic disposal of human waste must be part, as much as provision of safe drinking water, of any health improvement program.

Apart from the main urban centres (Gilgit, Skardu, and Chilas), there is no need at the moment, or in the near future, for sewer networks. Total coverage for the Northern Areas is not known exactly, but is probably around 3-5%, Balti latrines not being considered as hygienic. Therefore, much work remains to be done to provide coverage to the rural areas.

The demand

Hygienic human waste disposal is not a perceived need by the population. An important factor to recognize is that the demand is generated at the household level, not at the village level. Currently, the financial capacity of households and their levels of education are probably the most important driving factors. The cost of the most simple pour-flush latrine being Rs. 3000 (\$Can 167), makes it a very big investment for most villagers.

Demand also varies by sex; women's demand for latrines, because of *purdah* considerations, is much greater than the men's. During most interviews with male villagers, latrines were not identified as an important need for them. In fact, many expressed the view that it was "very pleasant to go to the field". Most men do not consider using an enclosed space for defecation as very pleasant; unmaintained demonstration latrines constructed under LB&RDD certainly did act as counter-example in this regard.

Hygiene and Hygiene Education

There is currently no hygiene education program as such in the Northern Areas. The only occasions when knowledge of hygiene is spread is as a by-product of another health related program implemented either by the government through the health department or through an NGO. For example, the Department of Health has undertaken an Extended Program of Immunization (EPI), and as a result, women with children have visited dispensaries where immunization was provided, and which they might not have visited otherwise. On such visits, these mothers gained knowledge about hygiene, especially as related to infants and children.

The CBS experience of training VHWs was largely a failure because these trainees, who were selected among the villagers on a voluntary basis, were not given a position that corresponded to their training upon return to the village. They should have been given a prominent role by the Village Project Committees and the Department of Health, and sufficient motivation to assume their responsibilities, including pecuniary incentives. Although not currently used, these VHWs still constitute a potential force for disseminating knowledge about hygiene.

The Aga Khan Health Services has established a network of 18 Minor Medical Units within the Gilgit District. These Units help in disseminating knowledge about hygiene, and they seem to be effective in conveying the message that hygiene is related to health. Unfortunately they still have limited geographic coverage.

The need

The Northern Areas impose very harsh living conditions upon its population. This is reflected in the bleak health indicators for the Region (UNICEF 1988, and Northern Areas Council 1985). Such living conditions can affect people's hygienic habits. For example, bathing and washing can be problematic during winter. The fact that people know about hygiene does not necessarily mean that they will act accordingly or that it is always practical for them to adopt hygienic behavior at all times. Hygienic behavior requires an appropriate knowledge of basic hygiene notions and appropriate conditions to exercise this behavior. In the Northern Areas these two requirements are not always fulfilled. The fact that infant mortality is very high - 273 per 1000- and that the most common cause for admission at the Gilgit district hospital during the summer is gastro-enteritis, tend to support the assumption that hygienic conditions are not satisfactory.

In assessing the need for hygiene education one must be careful not to impute ignorance of hygiene principles when in fact unhygienic habits are the product of a heavy workload. This point is true for most water supply and sanitation projects in developing countries (Francisco 1986). Due to the short growing season, villagers find themselves extremely busy during certain periods of the year. This is especially true for women who, in addition to their responsibilities to agricultural production, also have domestic responsibilities, including fetching water. To reduce this overload of work, a woman might decide to fetch water from the nearest, as opposed to the the safest, source. Because most schemes do not have house connections, the channel is usually the nearest source. This behavior is independent of the woman's knowledge of hygiene. For her, the short-term benefits of fetching water from the close-by channel exceed the less obvious long-term benefits of using safe piped water.

Field visits showed the following problems to prevail throughout the region:

- Conflicting uses within the same water supply. In most villages where traditional means of accessing water are encountered, there are no specific regulations or common procedures to avoid conflicting uses from the same supply. Washing of clothes, and washing of children are carried out in the same channels used to distribute drinking water. Small children defecate directly into the channel, often helped by a parent. Animals are not kept away from the channels, resulting in contamination of the supply from their excrement. Food is washed at the channel. When the channels are diverted to serve private homes, domestic refuse is drained into them.
- Direct handling of dung and human waste is common, and generally not considered a "taboo" by the population, especially in Baltistan. "Cattle excreta, apart from being very important in the rural subsistence economy, is also perceived to possess healing and purifying qualities, e.g. dry cow dung is most commonly used (even among the more well-to-do families) in infants diapers to absorb the humidity at least until the age of 6 to 7 months. Fresh cow dung is also applied in winter on the face to prevent the skin from breaking due to excessive cold" (Imdad 1989, p.2). Also, the practice of washing one's hands with soap before eating, or after completion of manual work is not very widespread. This situation is slowly changing with the increasing Islamization in the area, and excreta is in the process of becoming a "taboo".

- Bottle feeding of infants is increasing in popularity among young mothers, but the practice of sterilizing the bottles is not widespread.
- Domestic waste is usually not disposed of properly.
- Food is not protected against flies, often sitting on a shelf or on the ground without being covered.
- In villages where there is an operational water scheme that supplies safe drinking water, it is common for the people to use contaminated channel water because the tap water is warmer than the channel water. The water flows through pipes that were not laid deep enough in the ground, and is heated by the sun. The people have a definite preference for cold drinking water.

A sufficient knowledge of hygiene principles among the recipient population is an essential condition for any water and sanitation program; the technical success of water schemes is not a guarantee of the success of the whole program. Field visits in the Northern Areas have confirmed this fact - even when clean water is available, people commonly use it inappropriately or use other sources. So far, there has not been any serious attempt to implement comprehensive hygiene education programs in the Area. Implementing such a program would require tackling the problem of finding adequate resource persons. Interviews of nurses training at the district hospital in Gilgit for this research indicated that even they were barely given any notions of hygiene in their training.

Because hygienic behavior is a necessary condition for good health, and because so many of the people of the Northern Areas do not possess the required knowledge of hygiene, hygiene education must constitute an important component of any program in the water supply and sanitation sector of the Region.

The demand

The demand for hygiene education by the local population has not been clearly formulated so far. The lack of understanding about the link between hygiene and health probably prevents most people from realizing the importance of hygiene, and also prevents most of the local population from being able to identify adequately its needs. The demand for hygiene education being low, it might be necessary to use an indirect approach toward teaching hygiene - for example, using the existing demand for piped water systems as a catalyst for the promotion of hygiene education.

CHAPTER 5: SITUATIONAL ANALYSIS

This chapter presents an analysis of the environment in which the water supply and sanitation program is to be implemented. Many elements are drawn from previous chapters: the analysis of the advantages and disadvantages of community involvement described in Chapter 1; the social, political and economic context of the Northern Areas described in Chapter 2; the institutional assessment described in Chapter 3, and the current situation in regard to the water supply and sanitation sector of the Northern Areas in Chapter 4.

The strategic approach

A simplified strategic approach is used to analyze this environment. Since the beginning of the 1980's, the strategic planning process has been used successfully in the public sector (for example, see Bryson; Einsweiler 1988). The approach which has been used can be described as follows. First, by defining the general objectives, a mission statement is set to aid in identifying the end product, or the target to be reached. Then, the context in which the action takes place is assessed, allowing for a better understanding of the conditions, and of the nature of the terrain that separates the present position and the target. This is done by subdividing the context into two components, the internal environment and the external environment. The former refers to those elements which are involved in service delivery, and which can be affected, changed, or adapted. An example in our case study would be the performance of a specific department such as LB&RDD. Subsequently, strengths and weaknesses of the internal environment are identified. The strengths are positive assets, or factors which would help in achieving objectives, and which must be built upon, whereas weaknesses are those factors which present limitations to achieving goals and objectives. The external environment refers to the portion of the environment which is outside the reach of the implementing organization, or which is difficult to change or affect. In this case study, this would be the larger political and economic situation. As for the internal environment, threats and opportunities in the external environment are identified, opportunities being those factors that will favour the attainment of goals and objectives, while threats are those factors which will make achieving goals and objectives more difficult, and to which the action plan must be adapted. This assessment is referred to as a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats). When the data gathering phase is complete, a situational analysis must be undertaken - the situational analysis then leads to the elaboration of a few best alternatives.

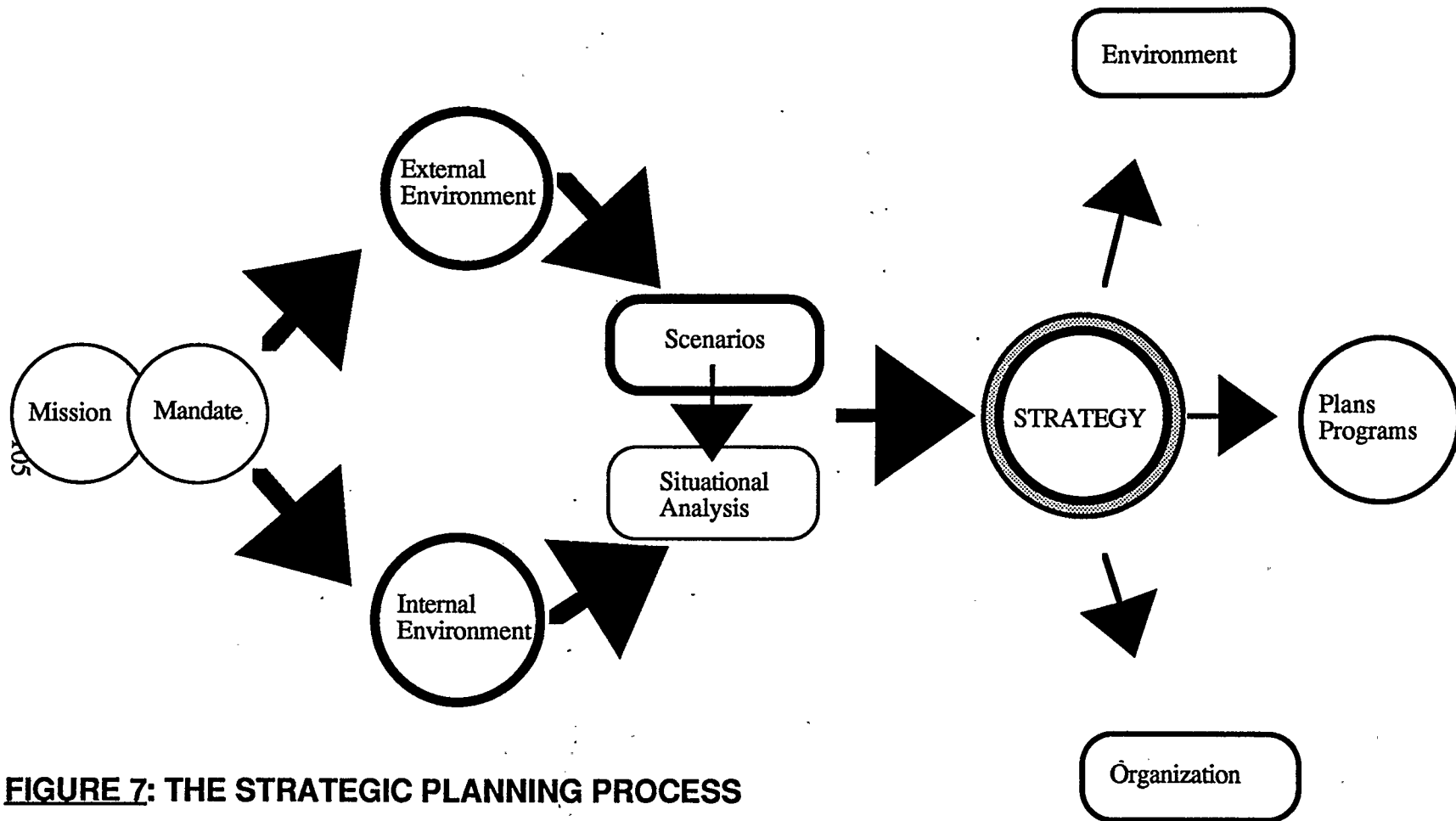


FIGURE 7: THE STRATEGIC PLANNING PROCESS

Source: EVDS 699 Strategic Planning

Finally, scenarios are developed which will predict as accurately as possible all the consequences that may be encountered.

For this research, the methodology will focus on SWOT analysis and situational analysis to arrive at the best solution. Scenarios were not developed, due to the permanent or stable nature of some of the weaknesses and threats present in our case. With the strategic approach, it is crucial that each developed scenario be a realistic possibility (Ascher 1983; p.26), otherwise scenarios lose their value as tools for constructing plausible futures. Because of the stable character of some weaknesses and threats of the Northern Areas environment, all scenarios would include very similar conditions. In this case, drawing extreme scenarios simply for the sake of presenting different futures would be counter-productive, it would divert our attention from the most likely conditions to be encountered.

Mission Statement

The mission statement has been kept general enough so as not to restrict the implementation methodology to be developed. It has three components:

- 1) Improve access to safe water in a sustainable manner throughout the area.

No quantitative targets have been fixed, but it will be assumed that the improvement should be as significant as possible while being carried out as efficiently as possible, keeping in mind that resources are limited.

Given the physical conditions encountered in the area, and the need for a technology which can be easily maintained, it is assumed that gravity piped water schemes are the best alternative for general use in the area. Experience has shown that they can be maintained properly when an appropriate procedure is followed, and field visits have shown that they are well accepted. Gravity piped water systems are particularly suited to situations of community involvement (Chauhan 1983).

- 2) Improve sanitation conditions in a sustainable manner.

As for water supply, no quantitative targets have been fixed, but it will be assumed that the improvement should be as significant as possible while being carried out as efficiently as possible keeping in mind that resources are limited.

Past experience in the area along with field visits to the area have shown that the most suitable technology for the conditions is probably the household pour-flush latrine emptying in a reservoir located outside the house. The reservoir should be accessible to be emptied as needed, so that the decomposed wastes can be used as manure. The proposed implementation methodology will assume such a technology.

3) Increase knowledge of hygiene principles among community members.

A better knowledge of hygiene principles will likely result in an increased demand for both a safe water supply and adequate sanitation. Knowledge of hygiene principles is also a necessary, although not a sufficient, condition for better health. Whereas women must be specifically targeted for any hygiene education program, provision should be made to also reach out to children and men.

4) Insure that proposals are ethically acceptable.

Any proposal put forward must respect individual rights, and be adapted to the current socio-cultural conditions. It must be as equitable as possible, both among villagers and between the different districts.

The environment

The first step is the analysis of both the external and internal environments. Below is an assessment of the conditions with which any initiative to implement water supply and sanitation programs in the Northern Areas will be confronted. It will help in determining what form of community participation is the most suitable. The following factors are derived from information already discussed in the previous chapters.

Strengths and weaknesses

Strengths

S-1 - *Acquired experience with proposed technology for water distribution and sanitation by NAPWD and LB&RDD.*

Although the CBS Program was not very successful in achieving its objectives, it permitted many villagers and department employees to gain valuable experience with the technology of gravity distribution systems and pour-flush latrines. The process of constructing the schemes has been tested, and many problems relating to the construction, and

Table 8. Summary of strengths, weaknesses, threats, and opportunities

STRENGTHS

- 1) Acquired experience with the proposed technology by LB&RDD and NAPWD
- 2) Acquired experience with institutionalizing community participation by AKRSP
- 3) Existing network of government departmental offices throughout the area
- 4) Strong demand for water supply schemes at the village level
- 5) Strong willingness to provide manual labour at the village level
- 6) Existing tradition of cooperation at village level

WEAKNESSES

- 1) Inefficient administrative system
- 2) Weak development planning capacity
- 3) Restrictions on the participation of women
- 4) Weak demand for sanitation services at the village level
- 5) Limited availability of disposable income at the village level
- 6) Unfavourable attitude by the Northern Areas Administration toward changes to Local Government System

OPPORTUNITIES

- 1) Current and future UNICEF funding

THREATS

- 1) Sectarian strifes
- 2) Inter-district tensions
- 3) Increasing out-migration from villages to larger centres
- 4) Limited government funding
- 5) Unstable political situation in regards to India's claims on the area
- 6) Transportation and communication problems
- 7) Limited capacity for increased population growth

organization of local workers have been identified for which solutions have been devised. NAPWD has gained valuable experience with gravity piped water schemes; the fact that NAPWD relied on private contractors for part of the work insured that the private sector of the Northern Areas has also gained valuable experience. The resulting experience should allow for easier implementation of water supply schemes in the future as compared to the first attempts in the early 1980s.

S-2 - Existing experience with institutionalizing community participation

The Aga Khan Rural Support Program has gained extremely valuable experience in institutionalizing high levels of community participation in two districts of the Northern Areas: Gilgit and Baltistan. The rate of success is impressive: over 95% of villages have a functioning Village Organization in Gilgit District (S.S. Khan, General Manager for AKRSP; personal communication). AKRSP's work has so far been oriented toward income generating projects, but indications are that non-income generating activities could work as well. AKRSP has clearly expressed its intention of expanding in the non-income generating sector for its second phase of operations which will begin in 1992. The initial reason for favouring income generating activities is that it was possible for the villagers to perceive tangible benefits from them, and thus stay motivated, and continue with the implementation of development projects. AKRSP now feels that, given the success of most Village Organizations, the time has come to expand into activities that have more of a social, as opposed to an economic, impact (S.S. Khan; personal communication).

From AKRSP's experience, knowledge has been acquired as to how to implement community participation within the specific context of the Northern Areas. The socio-cultural, and socio-economical environments of the region are well known to AKRSP field personnel. AKRSP is definitely the most knowledgeable institution in the region when it comes to making community participation successful, and this represents a valuable resource for any further attempts at implementing community participation in the area.

S-3 - Existing network of department offices throughout the area

All departments involved in the water supply, sanitation and health sector (LB&RDD, NAPWD, and Health) have an extensive network of offices or outlets throughout the Northern Areas. The government has been careful to maintain as evenly distributed a representation as possible in the three districts. This is a very important asset in support of future delivery of services, as such a network will help reach most of the

areas, and make services available to most of the population, if not all; this is especially valuable considering the unreliable road system.

S-4 - Strong demand for water supply schemes at the village level

The CBS survey (PEPAC 1989) along with field visits have shown that there is a genuine demand for distribution schemes within the communities. This means that relatively little effort will have to be expended in demonstrating the benefits of such installations. It also means that the population will be more easily motivated to provide input in construction and maintenance of water supply systems.

S-5 - Strong willingness to work at the village level

Field visits and discussions undertaken during the present research have shown that, in general, communities are willing to provide labour for projects which are perceived to be beneficial to the community.

S-6 - Existing tradition of cooperation for communal undertakings

The notion of cooperation at the village level is not a new one in the Northern Areas. "Hill irrigation and alpine pasture management both depend on high levels of cooperation between all households within villages if they are to be sustained. In the Northern Areas, such cooperation, coupled in the past with the sanction of the feudal rulers, the mirs, evolved to create local institutional arrangements that survived for generations" (World Bank 1987, p.19). Thus, the communities of the area have experience with high levels of participation, and people understand its benefits and how it functions.

The use of such traditional institutions certainly "...points to the manner in which development programs can have a greater impact" (Hussein 1988, p.5). It must be understood that such cooperation is not applicable to just any development initiative; it is limited to certain specific joint undertakings, the construction of water schemes can be considered as just such an undertaking.

The potential for community participation is very good, and thus, convincing community members of the advantages of cooperative action should not be difficult in most cases.

Weaknesses

W-1 - Inefficient administrative system

The current Local Government System falls short of being an effective means of local government. Having its origin in the colonial system, the structure of the Local Government System is not adapted to the needs of the Northern Areas, nor even to the rest of the country (Khan 1980, Hussein 1988, Zaman 1989, Weekes 1964). Rather than promoting input from members of the community, this form of representation favours the election of ambitious individuals, who will subsequently find it very convenient to devote more attention to their political careers than to the persons they represent. The current system functions as a launchpad for politically oriented persons (DRMS 1989, in summary).

W-2 - Weak development planning capacity

It can be argued that development is not a haphazard or accidental occurrence; but that effective planning is a determining factor. Without it, a region or a nation can only hope for successful isolated projects. An efficient planning capacity is essential in determining realistic objectives, analyzing the needs, demands, and the context in which intervention is to take place, and in following-up on intervention to allow for corrective measures.

Key informant interviews and field visits to village sites, as documented in Chapter 3, have revealed that the Northern Areas Administration does not possess the capacity to plan effectively. The main government agency currently responsible for planning is the Planning and Development Cell. Although its official role is that of planning, the Cell has developed a very passive administration procedure. There is no planning as such that is currently performed by the P&D Cell.

As a result, the needs and demand for services are not properly assessed, if at all by the Administration, which in turn implements projects that do not necessarily correspond to the needs of the population. The weak planning capacity also prevents effective follow-up on existing projects thereby wasting the knowledge gained from valuable experiences.

W-3 - Restraints on the participation of women

The cultural and religious context related to development in the Northern Areas prevents women from providing valuable inputs into the water supply and sanitation

sector. As a result, a very significant portion of the intended beneficiaries cannot actively participate in the development process. This is contrary to the basic requirement discussed earlier in Chapter 1, that everyone must be given the opportunity to be involved, of being a "subject rather than an object".

As experience in the area has shown (field findings by the researcher, and Hussein 1988, p.14), not including women in the planning process can lead to serious shortcomings in the program, given that women hold the greater responsibilities in terms of obtaining drinking water, and regarding children's health,

W-4 - Weak demand for sanitation services at the village level

Field findings as well as the CBS survey (PEPAC 1989) have shown that sanitation is not a major concern for most households. This indicates that extra efforts must be undertaken to make information about the benefits of sanitation available to the communities before implementing any program aimed at correcting the situation.

W-5 - Limited availability of disposable income for most households

A UNICEF survey revealed that 70% of households of the Northern Areas have an annual income of at least Rs 6,000 (\$Can 330), and that the lowest 20% of households have an income of less than Rs 1,200 (\$Can 67) (UNICEF 1988). Thus, it is understandable that most households do not have much in the way of financial resources to invest in "community ventures". Although most villagers seem willing to do manual labour, contributing financially is another matter. This problem limits the extent to which projects can be funded by the community.

W-6 - Unfavourable attitude by the Northern Areas Administration toward changes to the Local Government System

A common attitude among the higher levels of the Northern Areas Administration is that the Local Government System must be integrated in the development process, and that development should actually happen through the Local Government System. A common argument is: why use other means of reaching the local people when a system is already in place and operational? Any proposal to use means other than the Local Government System to involve the local population will receive a cold reception within the higher levels of the Northern Areas Administration. This makes a proposal of alternative solutions to community involvement more difficult to be accepted.

Opportunities and Threats

Opportunities

O-1 - Current and future UNICEF funding

UNICEF is currently funding part of the CBS program. In the past, funding was provided for training on a large scale, for institutionalizing the Monitoring and Evaluation Unit, for hardware in the construction of water supply schemes and latrines, and other health related activities (see Chapter 3). This funding is now more restricted, but UNICEF still provides the CBS Program with the galvanized iron pipes required to construct the distribution systems. There are no indications from UNICEF that this funding will be stopped in the near future. Because pipes represent the biggest investment for the villages, this funding is a critical asset.

Threats

T-1 - Sectarian strifes

Tensions among the three major Muslim sects in the area are a threat to the performance of any development initiative. Although no reliable data were available, it seems that many villages have religiously heterogeneous populations. The Gilgit District is certainly the most heterogeneous; many villages are populated by members from the three main sects found in the area.

Because community participation relies on cooperation, the existing tensions among the sects can potentially constitute a serious obstacle to the achievement of high levels of participation.

T-2 - Inter-district tensions

Along with, and partly generated by, the sectarian strifes, are tensions among the different districts. This has the potential for disturbing the Local Government System and certainly the planning process, as a certain district might attempt to increase its share of the pie. This problem might become more serious in the future as legislation has been recently passed to form two new districts out of the three existing districts in the Northern Areas. The new district of Ghizar will be formed out of Gilgit District, and the new district of Ghaince will be formed from the Baltistan District.

T-3 - Increasing out-migration from villages to larger centres

The recent manifestation of a better road network, especially the paved Karakorum Highway, has started to change the way of life of the people of the Northern Areas. The first road to be built was a jeepable track over the Babusar Pass built in the late 1960s, but the first paved highway was inaugurated only as recently as 1978. Some areas became accessible by road only in the last few years, while other areas still remain largely inaccessible. Better transportation has already affected village economies and the social fabric. Field visits by the researcher have confirmed that younger people have started migrating from the villages toward larger centres to seek employment. Also, in the last decade, economic exchanges at the village level have become increasingly dependent on currency. While households used to be fairly self-sufficient, they will most likely become increasingly dependent on economic exchanges outside their own village. Although a better transportation network has brought benefits to the area, it must be recognized that it will cause irreversible and largely uncontrollable change at the village level. This change will be felt down to the household level.

T-4 - Limited government funding

Government funding for the area is limited, even though it is relatively high on a per capita basis by comparison with the rest of the country. Considering the increasing debt load the country is facing, this is not likely to improve anytime in the near future. Any increase in government involvement in the water supply and sanitation sector would require more investment, something which might not be possible given expected budget restrictions. Lack of funding is being felt even today, as some departments struggle to maintain the present level of services.

T-5 - Unstable political situation in regards to India's claims on the area

The claims India has over parts of the Northern Areas create a certain amount of uncertainty in assessing the future of the region. Most importantly, they affect the degree to which other countries involve themselves in the area. Foreign government agencies and NGOs might prefer not to entangle themselves in the situation by appearing to support or displease either party. This would entail avoiding upsetting the Indian government by becoming involved in the Northern Areas, and as a result can certainly reduce the hopes of bringing in external financial and technical support. Although in the summer of 1989 the situation seemed to begin moving toward a resolution with high level meetings (The Nation

1989), the atmosphere seriously deteriorated in the spring of 1990 (Newsweek April 1990), and does not provide much hope for the near future.

T-6 - Communication and transportation problems

Transportation and communication will always be problematic in the area, and both will always be determining factors in any development program for the area. Marked improvements are not likely to occur in the near future, although some minor improvements are to be expected. This situation constitutes a serious restraint on the implementation and monitoring process, affecting hardware delivery, field visits, inspection, monitoring, educational programs, training, and inter-institution communications. It calls for higher expenditures on vehicles, and slower implementation rates. Under these circumstances, any program becomes more difficult to implement.

T-7 - Limited capacity for increased population growth

There is a significant shortage of usable land in the Northern Areas. The population has already developed all the land that had some potential. This means that social and economic development of the region cannot rely on increasing the land base. Efficient use of already existing resources is the only solution to make development happen. Any significant increase in population will most likely result in out-migration to larger centres.

Situational Analysis

Starting from the assumption that involvement is a right for the recipient of development programs, the question to ask is: what is the level of community participation that is most appropriate given the circumstances?

When analyzing the factors enumerated above, it can be observed that the limited government funding available (T-4), and the problems relating to transportation and communication (T-6) are strong arguments in favour of having highly autonomous communities, and thus of adopting the participative approach. It is important to note that these threats (about which little can be done) leave no alternative for the villagers; even if they do not take a more independent stance, they will not receive any more help. The only hope for the communities is that an external agency will take over responsibility for the implementation of a water supply and sanitation program that can meet their needs. This is not likely to occur, especially in light of the conditions imposed by the political situation with respect to India (T-5). Therefore, these two threats (T-4 and T-6) are probably the most important

factors to consider when determining an appropriate level of participation for the Northern Areas.

The existing tradition of communal works (S-6), and the experience with institutionalizing community participation through AKRSP's VOs (S-2) are also strong arguments in favour of a participative approach. These two factors, in contrast to the two previously cited (T-4 and T-6), are "available options", in the sense that although they favour the participative approach, they do not adversely affect any other approach that might be selected.

Both the ineffective administrative system (W-1) and the weak development planning capacity (W2) call for stronger community involvement in planning and management. This can be done either through a participative or an "improved" representative approach.

The current attitude of the Administration, being one that is against any change to the Local Government System (W-6), definitely acts as an incentive against more community involvement, effectively promoting the status quo. Implementing any other form of local government might be opposed by certain members of the departments involved in the area. Even with complete approval from the top (Ministry of Kashmir Affairs and Northern Areas), there is no assurance of genuine collaboration from all key administrators at the lower levels.

In summary, an efficient representative approach might be an alternative to the participative approach. But, because of T-4 (government funding) and T-6 (transport and communications), and because there is no realistic hope that these threats will be eliminated, the current situation in the Northern Areas calls for even greater involvement of the communities in the water supply and sanitation sector than is currently the case. In addition, S-2 (AKRSP's experience with community participation) and S-6 (existing tradition of communal work) are also strong incentives for the participative approach, thus making it appear to be the best alternative. Although this is true for the water supply and sanitation sector, the author cannot extend this statement to all other sectors of development without further research. Nevertheless, as the infrastructure is already in place once a basic community participation procedure has been institutionalized, it becomes relatively easy to gradually increase its responsibilities in other fields of development. This is the current position of AKRSP. It must also be understood that there is a limit to the amount of responsibility a community can shoulder in a participative approach. Sooner or later, sub-committees will have to be organized by the community to carry out additional work.

The above arguments all justify a participative approach. In addition, there are factors which will affect how easy or how difficult it will be to make the process successful.

The acquired experience with the required technology (S-1), the existing network of department offices throughout the area (S-3), and the current funding provided by UNICEF (O-1), will all contribute to make the process easier by reducing the necessary inputs (funding, software and hardware) required. The strong demand for water supply schemes (S-4) will make the communities feel more responsible for the planning, implementation, and maintenance of the schemes. As well, it will reduce efforts needed for an information campaign aimed at building awareness of issues related to water supply and sanitation. Similarly, the communities' willingness to provide manual labour (S-5) will make implementation much easier.

Using the participatory approach, it is essential to organize the communities in development organizations to manage specific projects, and make decisions at the village level. If these organizations are institutionalized and recognized as legal entities, they can benefit from a greater leverage for the negotiation of credit for local use on projects, related or not, to water and sanitation. With the current representative system, banking institutions tend to deal with villagers on an individual basis. This does not work in the favour of most Northern Areas households; essential credit for normal economic development is not made available to them because they do not possess the necessary income security or collateral required by lending institutions. The AKRSP experience has shown that the VOs can efficiently manage and negotiate their own finances (World Bank 1987). The experience of the People's Work Program, especially at the Daudzai Markaz (North West Frontier Province), showed that banks would make loans to organized villages, but would not do the same for individuals (Khan, S.S. 1980, p.18).

On the other hand, there are factors that are likely to make the success of community participation more difficult to achieve. These are:

- 1) The restraints on the participation of women (W-3);
- 2) The low demand for sanitation coverage (W-4);
- 3) The low levels of disposable income at the village level (W-5);
- 4) The sectarian strifes (T-1);

5) The inter-district tensions (T-2); and

6) The potential for migration from the villages to larger centres provided by the new roads (T-3).

Although these factors make implementing community participation more difficult, the same would hold equally true for any other approach as well; for example, the managerial approach or the representative approach. Thus, the implementation procedure must be adapted to these factors to insure success of the operation. It can be argued that, depending how it is carried out, community participation following the participative approach could even help reduce the negative effects of those factors enumerated above.

By installing a participative institution in the community, women's participation can be made easier than with the current Local Government System. In the current Local Government System women are automatically excluded from the process because of the wide public exposure they have to receive to be elected as Union Council members, or even to be nominated as members of the Village Project Committee of the CBS Program. The participative approach gives them better opportunities to become involved. For example, the opportunity exists for women to form VOs by themselves, as AKRSP is currently doing. It might also be possible with some external help to include women on specific sub-committees formed by the VOs to work on specific issues that relate to traditional women's responsibilities such as health and water. The forum created by the VO gives the opportunity to women to participate as a group rather than as individuals, and thus reduces public exposure. This is not to say that true participation by women will happen by itself, but opportunities are at least created through the participative approach.

An examination of the low demand for sanitation services reveals that the participative approach is probably the best approach to improve the situation. With the current representative approach, there is no opportunity for the community to obtain additional information about the topic, and even less opportunities to discuss the problems. A participative approach would provide villagers with a forum offering such opportunities.

The participative approach can help mobilize the financial resources of the community for common projects, which is not as easy with the representative approach. Also, as was stated earlier, by institutionalizing the community organizations it becomes possible for the communities to build stronger leverage in negotiations for credit with lending institutions, with the government, or even with NGOs. Therefore, a participative approach

would reduce the problem of the low level of financial resources in the village by permitting the accumulation of communal resources.

The participative approach, when successful, can help to build a stronger community (see Chapter 1). By having stronger communities, it then becomes possible to reduce the "push" factors causing migration from villages to larger centres, thus reducing the threat of a rural exodus that could seriously affect the village economy. Finally, the effect of the participative approach on the current sectarian strifes is more difficult to predict. The forum offered by the participative approach constitutes an opportunity for members of the various sects to solve their problems together, but by the same token, it provides more opportunities for confrontation. A participative approach can ideally be an opportunity for members of different sects to learn to work together. The AKRSP experience in Gilgit district has certainly shown that this is possible. Similarly, a participative approach would have no effect or very little effect on reducing the interdistrict tensions.

Conclusion

In conclusion, the participative approach is the most likely approach to result in successful development of the rural water supply and sanitation sector. The representative approach could serve as an alternative, but the current context encountered in the Northern Areas makes it a more difficult approach to use.

CHAPTER 6: AN IMPLEMENTATION APPROACH FOR THE NORTHERN AREAS

This chapter proposes specific actions and policies in the implementation of the participative approach for the rural water and sanitation sector of the Northern Areas. The approach is suggested for use at the village level, not necessarily at higher levels of government.

At the beginning of the previous chapter, three objectives were set . These objectives were:

- 1) To improve access to safe water;
- 2) To improve sanitation conditions; and
- 3) To insure that proposals are ethically acceptable.

To address the issues raised in the situational analysis, and to insure the sustainability of the proposal, the two following guidelines will form the basis for all recommendations put forward:

- 1) The public and private institutions of the Northern Areas involved in the rural water supply and sanitation sector should be strengthened. This is in the hope of making the Northern Areas as self-sufficient as possible, so that it depends on as little external help as is necessary to sustain its development. This is especially true in the areas of needs assessment, planning, program implementation, monitoring, research and development, maintenance, and, to a certain degree, decision-making.
- 2) Community participation needs to be increased, to allow for more adequate interventions in the communities.

Recommendations

The necessity for the participative approach has been recognized for the Northern Areas, and has been integrated along with the above objectives and considerations into an Investment Plan proposed by the Wardrop-Acres team (Wardrop-Acres 1989). Part of this plan has been reproduced in Appendix 2; if the reader is not familiar with this Plan, he/she is encouraged to read it.

3

The basis for most recommendations listed below is the necessity of the participative approach, and the need to strengthen the planning, administrative and technical capacity of the Northern Areas institutions. The following recommendations focus specifically on how to implement community involvement:

- Because of the existence of a participative process through the AKRSP in many villages of the Northern Areas, it is recommended that this resource be used as much as possible. New responsibilities in water supply and sanitation should be given to the existing VOs; and new VOs should be formed where they are needed and wanted, with the understanding that the community will become involved in the water supply and sanitation sector only when it feels ready to do so. If the community prefers to engage in income generating activities first, it will be their choice. Only communities that are sufficiently committed should engage in implementing water supply and sanitation programs. The communities should provide the labour for all construction (except for more technical work such as blasting), as well as the materials available locally, such as mortar, stones, sand, and the like.
- It is strongly recommended that the presence of a VO in the village be made a criterion for intervention. The presence of a VO is a testimony of the will of the villagers to get involved in their own development.
- The VO should be incorporated as a legitimate institution of the Local Government System. This does not necessarily require major changes to the existing Local Government Order. The responsibilities currently assumed by the Union Council Member would be transferred to the VOs, while the Union Council member would be given the role of intermediary between the VO and the other levels of government. The difference between the current approach and the one proposed is that the Union Council member would not be responsible any more for all that is prescribed in the Local Government Order; the VO would take over all these responsibilities. Under the current system, the Union Council Member is not provided with the means to fulfil his responsibilities. In the absence of a VO, the community may still be represented by the Union Council member, who would have the same responsibilities as under the current system.

Legitimizing the VOs would be a significant change in the official political process at the village level. However, adverse impacts from such a change are not likely to be so

significant. Although there currently exists a Local Government System in the Northern Areas, it has not really filled the vacuum created by the abolition of the feudal system in the early 70's. Also, the VO concept has been applied successfully for a number of years by AKRSP in two Northern Areas districts, proving that such a concept of community participation is adequate for the area. Although not an official level of government, for many villages the VO has become the most important decision-making body. There is no reason to believe that the concept would not be well received in the areas where it has not been applied yet.

The most significant adverse impact deriving from a change in the political system is not likely to be of a social nature. A strong negative reaction is very possible from people who have a stake in keeping the current Local Government System as it is. One way of reducing the importance of the adverse impacts might be to progressively transfer responsibilities from the current system to the participative system. Responsibility delegated to the participative system would only increase after its success with the new responsibilities has been proven and recognized. Economic development is already dealt with successfully by the VOs, leading the way to a new set of responsibilities in the water supply and sanitation sector immediately, while at a later date, after success is proven in the water supply and sanitation sector, new responsibilities could be added in other fields such as health and public administration.

- The Final Strategic Investment Plan for the rural water supply, sanitation, and health sector proposed by Wardrop-Acres should be adopted as such, or with only minor changes, by the Northern Areas Administration. Part of this Investment Plan is reproduced in Appendix 2.
- The Village Organization, or the User Group for the Diamer District (see Appendix 2), should hold most of the responsibility for implementing the water supply scheme, while the role of the government line-departments should be one of technical and administrative support, and of supervision.
- The greater responsibility for implementing the water supply schemes and the latrine construction program will rest with LB&RDD. It is recommended that a special section be created within LB&RDD for dealing especially with water supply and sanitation. The Monitoring and Evaluation Unit should be transferred from the P&D Cell to this new section: the Rural Water Supply and Sanitation (RWSS) Unit. In addition to the responsibilities inherited from the M&E Unit for monitoring at the village level, the role

of the Unit should be expanded from what LB&RDD's role currently is. It should include responsibilities for: planning the schemes in close collaboration with the VO; coordination between the various departments and NGOs involved throughout implementation, and after completion to insure maintenance; assessing training needs at the village level; carrying out research and development; promoting involvement of women; and, implement the sanitation and hygiene education programs. The RWSS Unit should become the main government agency responsible for the Rural Water Supply and Sanitation sector in the Northern Areas. NAPWD's responsibilities should be reduced to simply maintaining schemes already built by them in the larger centres (more than 2,000 people). Maintenance in larger centres is likely to be more problematic because of the larger population and the difficulty of using the participative approach in such a context. Thus, NAPWD's approach of providing all services is more appropriate to such conditions. Schemes in smaller centres should gradually be handed over to the communities. Maintenance costs for schemes already constructed by NAPWD are included in the Administration's recurring budget, and thus will not require any additional funding. This will result in reducing NAPWD's load, allowing more resources to be spent on their other responsibilities. It is recommended that some of NAPWD's personnel specialized in the water supply sector should be transferred to LB&RDD. This will help in the creation of the RWSS Unit, by building a stronger technical capacity.

- The approach to improve sanitation conditions must be different from that of water supply. Decision-making about sanitation is made at the household level rather than at the village level. This calls for a demand-driven approach: action must be taken to raise the demand for household latrines. This should be done by emphasising hygiene education for all, and by using the construction of a water supply scheme as the insertion point. By paying more attention to the necessity for clean water, people will be more receptive to sanitation issues. The RWSS Unit will coordinate implementation of water supply schemes with information campaigns at the VO level, construction of subsidized demonstration latrines in private homes (not public places), demonstrations of construction methods, and provision of credit to households interested in constructing their own latrines.
- The implementation of the above recommendations will require external funding. If the investment plan detailed in the Final Strategic Investment Plan, Vol.1 (Wardrop-Acres 1989) is accepted, the total cost would rise to US\$ 19.5 million in current terms. The

costs which would need to be covered by external sources would be US\$ 12.4 million in current terms. The investment would be spread over the next 8 years, 1990-91 to 1997-98 (see Appendix 2). The only way of covering this cost would be to draw on external donor money. An amount of US\$ 12 million over 8 years corresponds very well to the kind of development projects funded by foreign development agencies such as CIDA or the US Agency for International Development (USAID). The best strategy the Northern Areas can adopt to convince donors to provide funding is to propose an intervention package which is realistic to potential donors, and which clearly identifies what has to be done. It is essential that the Northern Areas authorities all work as a united front. Thus, the investment proposed by Wardrop-Acres (which was undertaken for the World Bank) should be agreed to as such, or with as few changes as possible. The next step for the Northern Areas, which has not been executed yet, is to prepare detailed proposals for the projects identified in the Investment Plan (creation of RWSS Unit, strengthening of the P&D Cell, transfer of the M&E Unit, etc.). The Administration of the Northern Areas should attempt to secure the involvement of one to three donors, because working with a limited number of donors is preferable to piecemeal interventions involving many smaller actions because of the need for effective coordination.

Population growth dilemma

One of the outcomes of the above recommendations, as well as the recommendations contained in the Wardrop-Acres report, will be an improvement in health for the population, and ultimately a reduction in mortality rates and an increase in population. This is a serious reason for concern since the area has an extremely limited capacity for population growth. This constitutes a dilemma that cannot be resolved satisfactorily: it is ethically unacceptable to control population growth or not attempting to reduce the mortality rates. However, the potential impacts of a significant increase in population cannot be ignored.

The solution that is most acceptable on ethical grounds, but does not necessarily have very good chances of success, is a public campaign to sensitize the population about the problems of population growth and improving the family planning capacity of the Northern Areas. Such an intervention could be carried out by the Department of Health if the Department has the resources for it, or through LB&RDD, although it would lead to a significant increase in its responsibilities.

How to make the participation process successful

We will now look at ways of insuring the success of the proposed Investment Plan (Appendix 2), as well as the recommendations described above, by describing how the plan will overcome the various obstacles to community involvement which are likely to be encountered, and which are mentioned in Chapter 1.

Spreading information at the village level

1) Information on the community participation process

In Gilgit and Baltistan Districts, AKRSP has already contacted many villages, and, therefore, there is little need to increase the effort to disseminate information about community participation. It should be AKRSP's responsibility to pursue its current efforts in establishing VO's in both of these areas; no additional funding should be required. In addition, the existence of a tradition of communal works should help the communities understand the requirements and benefits of community participation.

In Diamer District, mainly because of the sectarian strife, AKRSP is not well regarded by the population. Therefore, it will not be possible to use AKRSP in the district to implement Village Organizations. The only exception might be the people of the Astore Valley who have repeatedly requested the help of AKRSP in the past - requests which AKRSP has always turned down both because of its already busy schedule in the two other districts, and the greater risks of confrontation with unsympathetic elements in the Diamer District. For this particular situation, it is recommended that User Groups be allowed to form. These Groups would be formed not as an all-encompassing decision-making body, but strictly for the purpose of planning, implementing and maintaining the water supply and sanitation initiatives. This would work in the same manner as the VO but with limited responsibilities. The implementing agency should not be AKRSP, but rather LB&RDD through the RWSS Unit. This will require some training of LB&RDD personnel by AKRSP on the participative approach and intervention at the village level. Funding might be needed to support this activity, depending on AKRSP's capacity to provide training to LB&RDD at no cost. Such funding will probably have to come from external sources.

2) Information on water supply, sanitation, and hygiene

A program of hygiene education regarding water and sanitation must be created. Because it is important to strengthen the institutional capacity in this sector, the RWSS Unit

of LB&RDD should be given this responsibility. The Department of Health might have been another choice for this task, but it is felt that the education program should closely follow the planning and construction of water supply schemes and latrines in order to establish a context in which to teach the pertinent concepts, and also to sustain the population's enthusiasm. LB&RDD is the Department where most of the activities regarding water supply and sanitation will take place, and thus, is the most suitable agency to carry out this work through the RWSS Unit.

Motivating the community

Keeping the motivation levels high would be assisted by:

- 1) Making the communities aware of the benefits of safe water and sanitation through the education program discussed above.
- 2) Providing the communities with regular support and feedback. This would be done by the Monitoring and Evaluation Unit which should be transferred to LB&RDD, who will carry out field visits on a regular basis, and constantly assess the situation at the village level; and by LB&RDD who will provide some technical advice when problems occur.
- 3) Attempting to avoid delays in delivery of hardware as well as technical advice. This would be accomplished by undertaking projects at a rate that is realistic, and which can be supported by the government and NGO services, as well as by establishing strict procedures for ordering or distributing any hardware, to insure an effective service delivery procedure. The RWSS Unit would be responsible for hardware distribution.

The need for unified communities

Communities should be united to implement any component of this program. Where VOs already exist, and where there is more than one VO in a community, the structure should be retained. Coordination should be made through representatives of the different VOs as is currently done. Where no VOs are present, the community should be kept as unified as possible, but if there are natural aggregations, or if the community is very large, then consideration might be given to creating more than one VO or User Group.

Nurturing local leadership

It would be the responsibility of both AKRSP and the RWSS Unit to identify the local leaders, and convince these persons to nurture the community in taking initiatives.

Recovering the costs

The VOs and User Groups would be responsible for administering their own finances and negotiating loans on behalf of the community. This can be a difficult task to perform by inexperienced persons, and thus it would require some follow-up by external persons. AKRSP currently provides support to the communities to help them with the task; therefore, this responsibility should continue to lie with AKRSP. The current practice is that every VO member contributes towards accumulating savings for projects. The establishment of a VO would permit recovery of part of the costs of the construction of water supply schemes, and provide the ability to rely on loans to finance the construction of private latrines. It is imperative that villagers contribute financially to the construction and maintenance of the scheme. This would reduce the burden on the Government, and create a sense of ownership among the members of the community. Villagers' contributions would be especially important to insure maintenance, as minor repairs will inevitably be necessary in the future. In Diamer District, the RWSS Unit would have the responsibility of assisting the UGs in their search for loans.

Promoting full acceptance of the participative approach at all levels of government

In the case of the Northern Areas, this is probably the most significant obstacle to overcome in insuring the efficient participation from the community. Nevertheless, there is still the hope that the Northern Areas Administration will recognize the potential of the participative approach: firstly, the success of AKRSP is being increasingly recognized; secondly, in August 1989, a meeting was held between the Administrator of the Northern Areas and AKRSP's General Manager, and the Administrator informally recognized the value of the participative approach in the context of the Northern Areas.

To further the acceptance of community participation within the government, the departments should be integrated with the communities as much as is possible, and also ought to be given specific responsibilities with respect to technical and administrative support.

The need for institutional strengthening

Administrative capacity

The only recommended change to the administrative system is the addition to the Local Government System of the VO as an additional tier of local government at the lower level. Training would be required for community members who will have to administer meetings, and deal with financial accounts.

Planning capacity

Strengthening the development planning capacity is an initial priority which would insure the success of any program in the water supply and sanitation sector in the Northern Areas, or any other development program. The Planning and Development Cell needs to be given a stronger mandate in planning the development of the Northern Areas, including assessing the development needs, conceiving development policies and programs, and coordinating interventions. Because the Planning and Development Cell is already in place, costs would be reduced considerably. The major expense that is required in strengthening the Cell is training; most of the staff needs strong training in development planning, decision-making, and research design. Some expenses would also be incurred by the creation of some new positions. Once the Cell is strengthened it should become the most important player in generating development in the Northern Areas.

Technical capacity

If its responsibilities are reduced to merely maintaining its existing schemes, NAPWD's technical capacity is sufficient. LB&RDD's technical expertise, on the other hand, will need to be reinforced. Inspections of water supply schemes constructed under LB&RDD's supervision have shown that many schemes were inoperational, or in need of serious repairs due to technical factors (see Appendix 1), showing that LB&RDD's technical capacity is not sufficient to implement more schemes than it currently does. LB&RDD's expertise could be improved by the proposed transfer of personnel from NAPWD, and from providing technical training to the staff responsible for implementing and supervising construction of water schemes and latrine construction program.

To augment the technical capacity will require intervention by external agencies or institutions. The Northern Areas Administration will not likely be able to cover the costs related to this intervention, and therefore, external funding will have to be found.

Multi-institutional coordination

The presence of VOs and UGs as an officially recognized level of local government should help multi-institutional coordination by providing a permanent body in all the villages which government and development institutions would be able to use when intervening at the village level. Instead of having a number of committees to contact, one for each development initiative, only one body will need to be contacted. This should help in the coordination of projects and interventions in various fields. The VO or the UG would become the forum within the community where the different views of the members are expressed and unified.

Hopefully, the example given by the participative approach in the two other districts will motivate the communities in Diamer District to expand the responsibilities of the User Groups to other areas of development.

Intervention in the water supply and sanitation sector in the Northern Areas will require coordination between the institutions involved in the sector or ones that could potentially play a role. Such coordination for the whole Northern Areas would be effected through a Steering Committee made of representatives of all relevant departments or agencies. This steering committee should include the Northern Areas Council, the Northern Areas Public Works Department, the Planning and Development Cell, the Department of Health, the Local Bodies and Rural Development Department, the Aga Khan Rural Support Program, and the Department of Education. This would help insure that all aspects of intervention are covered and well coordinated. Eventually, other institutions could be added as NGOs or multilateral agencies get involved in the sector (see Figure 9 in Appendix 2). Regular meetings should be set. During the first few years, many schemes will be constructed, and thus, the Steering Committee should meet at least monthly. When the construction rate decreases, the committee would focus on maintenance and monitoring, and so would still need to meet regularly, but at a lower frequency. The cost of having the representatives meet should be very low since all the institutions involved have their offices in Gilgit. Each institution would be responsible for the cost of sending their representative

to the meeting, while the cost of the actual meeting (documentation, communications, facilities) should be LB&RDD's responsibility.

This committee should have important responsibilities, especially at the initial phases when external funding would need to be located. The Committee would be responsible for assembling an action plan package and contacting potential donors. If a good and realistic package is assembled, funding should not be difficult to obtain. Already, while preparing the Investment Plan for Wardrop-Acres in the summer of 1989, some agencies showed interest in the situation in the Northern Areas (the German Government aid agency and the Dutch Government's aid agency). Both agencies mentioned the importance of having a detailed plan of action provided by the Northern Areas Administration. Because the situation in the RWSS sector in the Northern Areas has not been extensively documented and researched, donors might tend to hesitate at undertaking the whole process of building such a plan by themselves.

Supporting organization of maintenance in practical and financial terms

Support in the field should be provided the new RWSS Unit within LB&RDD. The RWSS would provide technical and administrative guidance to the VOs and UGs for the maintenance and repair of the schemes. The Unit would be responsible for going into the field to supervise implementation of the scheme with the VOs and UGs, as well as to provide help at the request of the VOs or UGs. It would also be responsible, through the former M&E Unit, for monitoring the situation at the village level by making regular visits and inspections of the physical infrastructure and the administrative operation of the schemes and sanitation projects. Although the M&E Unit is to be integrated into the new RWSS Unit, it should be kept intact.

Fortunately, resources are already committed for part of the proposed functions of the LB&RDD; additional funding, however, will have to be provided. UNICEF can provide most of the funding for the pipes, while the VOs can provide most of the labour and local materials. Vehicles would have to come from donors, as would a portion of funding for new positions created by LB&RDD's new role. Some VOs or UGs might need extra support under certain circumstances, such as blasting equipment when villages are located in rocky terrain.

Providing accountability to the community

The participative approach, by giving every villager the chance to participate, insures that any action taken by the VO is accountable to the community. The villagers themselves decide if they need to delegate responsibilities, and if so, to whom. Persons having responsibilities are required to report directly to the villagers, unlike the representative approach, where persons with responsibilities were not made directly accountable to the community. The persons executing tasks related to implementation of the scheme - such as the village plumber, masons, fee collectors, etc.- will all report to the VO or UG.

Insuring continuous situational analysis and strategic planning

The P&D Cell is a very important institution in the Northern Areas; yet, its potential is currently not being utilized effectively. To remedy the situation, the Cell should be given a much stronger mandate toward the actual elaboration of development plans and programs. This would insure that the development process is properly monitored, and that policies and programs are accordingly adapted as the situation evolves. Again, this can be effected without much external help, since financial resources are currently attributed to this institution on a regular basis. External funding would be needed primarily for the provision of strong programs of human resource development to the P&D Cell personnel.

Acknowledging the "learning from experience" concept

No matter how detailed the final Investment Plan and the development package to be "sold" to the donors are, errors will occur. It is essential that the implementation method be kept flexible. This will be insured by both the P&D Cell, and the M&E Unit (through the new RWSS Unit). The M&E Unit will closely monitor the situation in the villages, and will report any problem (predicted or not) to the appropriate departments for corrective action to be taken. The P&D Cell will be responsible for developing policies and initiatives to accommodate any new finding.

Involving women

Involving women will be necessary to insure success of the program. The primary source of involvement of women would be through the diagnostic process (Wardrop-Acres 1989, p. 81), where women would be specifically asked about the community's needs and

requirements concerning water supply and sanitation. This would constitute a normal step of the water supply planning process for any new scheme to be implemented. In addition, the departments of Health, Education, and the RWSS Unit should try to give certain positions to women. The traditional role of women in water supply, sanitation, and health justifies their inclusion in the planning and implementation of water supply schemes and sanitation programs.

A significant impact of such activities will be a change in the traditional role of women, a change which could lead to significant adverse social impacts. Trying to predict these impacts is essential both for ethical reasons as well as for ensuring the success of the proposed interventions, however it is extremely difficult to predict these impacts accurately.

It can be postulated that tensions will be created between men and women, especially within the family nucleus, and that women themselves might have problems accepting their new role and coping with additional pressures. Social institutions such as education and health could feel the repercussions of changing the traditional role of women by having to accommodate women's new aspirations. Such repercussions could cause further tensions within these institutions.

To minimize the negative impacts, it is therefore important that change occurs at an adequate pace which could allow for society to adjust progressively. A compromise must be reached for change to be occurring fast enough yet as painlessly as possible. In a context like the Northern Areas for change to occur requires a certain level of intervention from the outside, however, change must be initiated as much as possible from within.

Adapting the participation process to the local cultural, social, and political contexts

A tradition of community participation and communal undertakings already exists in the Northern Areas. Since a water supply scheme benefits the whole community, the participative approach can be said to fit the cultural and social context. The vacuum created by abolishing the feudal system in the early 1970s was not adequately filled by the Local Government System imposed by the Government of Pakistan. By institutionalizing the VOs and UGs, the Northern Areas will have an administration system that is adapted to the local cultural, social, and political contexts.

Distributing institutional roles between the community, the government, NGOs, and the private sector

To insure that all parties involved in the implementation of a water supply scheme understand their respective responsibilities, it is recommended that *Terms of partnership* be agreed upon at one or few general meetings at the start of the project. Representatives from all institutions involved should meet with the community at large, and put down on paper the specific responsibilities of each party. A recording on tape should also be made of all the agreements specifying everybody's responsibilities. For example, the following should be determined: financial contributions of the community and the collection method; the material and equipment provided by donors; the monitoring, maintenance, and repair procedures; the schedule for VO meetings, and their procedures; the procedure for contacting the various departments; the labour provided by the community; the involvement of women; and any other significant responsibility taken by any party. These terms of partnership will help resolve any dispute, and will make the roles and duties of everyone much clearer; conflicts and misunderstandings will be much reduced.

Because the literacy rate is very low in the Northern Areas, it is suggested that any agreement on the terms of partnership be recorded on tape, in addition to being written down on paper. Such a practice is not new to the area, the Aga Khan Rural Support Program has used it successfully for a number of years in the Gilgit and Baltistan districts.

Training

Human resource development will constitute another essential component of the proposed program. Training will be required in the technical, planning, and social fields.

The RWSS Unit, due to its important responsibilities, will require both technical training and social intervention training for the new positions created as well as for the positions already filled within LB&RDD.

Training will be mostly the responsibility of the external agencies. Fortunately, a technical training centre is scheduled to be constructed in Gilgit in the next few years by the Department of Education (see Appendix 2). This will constitute a valuable human resource development asset which could be used by the external agencies to conduct training programs. It will help insure that the training is adapted to the local conditions, and will make a strong field component possible.

The Wardrop-Acres project: a final comment

The Wardrop-Acres project "Strategic Provincial Investment Plan and Project Preparation for Rural Water Supply, Sanitation and Health" constitutes a very important step toward improving the rural water supply and sanitation sector of Pakistan. One of the most significant achievements of the project was the recognition gained from officials at various levels of government, as well as within the World Bank, about the potential of community participation.

This particular project constituted a planning phase, while implementation is supposed to follow after provincial governments have accepted the recommendations of the planning phase and have secured the necessary financing. Although there are important benefits gained by separating the planning phase and the implementation phase, such as a greater flexibility for timing the implementation and ensuring that there is sufficient time to secure financing before starting to implement, there are also some disadvantages. The most important one being a lack of continuity when a significant proportion of the people involved in developing the plan might not be coming back for the implementation phase.

The project was very successful in addressing gender and development issues. A factor for this success is certainly the composition of the project teams: the number of female members was almost the same as the number of male members. Also, most women on the team were Pakistanis with considerable expertise in water supply, sanitation and health.

A major obstacle the project team had to overcome was time constraints. Developing a comprehensive plan for each province of a country with a population the size of Pakistan is an immense task, and having to carry it out within ten months is close to impossible. My recommendation would have been to extend the project period by at least six months, this would have improved feedback opportunities from the provincial governments, as well as provide better opportunities to explore additional alternatives and better assess the numerous implications of such a large-scale and long-term plan.

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APPENDIX 1: RESULTS OF THE FIELD VISITS

Objective and scope of the survey

The objective of this survey is to draw a better picture of the situation in the water and sanitation sector at the village level, in order to identify and better understand the factors leading to the success or failure of water supply projects in the Northern Areas. The survey was conducted over a three-month period from June to August 1989; it involved approximately three weeks in the field visiting villages. In all, 78 water supply schemes were surveyed - 58 executed under LB&RDD, and 20 by NAPWD.

This assessment involved meeting with members of the Village Project Committees, members of the Union Councils, villagers, and Government employees working at the sub-division level. In each village, discussions and interviews of the aforementioned persons took place. Opinions and views of these individuals were sought in order to assess the situation. In most villages, an inspection of the infrastructure (gravity systems) was undertaken. This inspection was not highly technical but was aimed at giving a context to the opinions and views expressed by the key informants and villagers. Therefore, the following information should not be regarded as a technical evaluation of the schemes, but as a quick assessment of the current situation at the village level, and as showing the kind of problems faced in the implementation of water supply and sanitation projects in the Northern Areas.

Four levels of repair needs have been identified, and are represented on a scale from 0 to 3. They are defined as follows:

- 0 The scheme is in good order, and does not need any repair or many major change in its maintenance procedure.
- 1 The scheme is in working condition, but needs improved operation and maintenance procedures, or minor repairs which would not incur any costs to the community. For example, the tank may need to be cleaned, the intake pipe may need to be covered with a mesh to filter debris, or responsibilities for maintenance need to be delegated.
- 2 Parts of the scheme (or in some instances, the entire scheme) are not operational due to a breakdown of one or two of the components of the scheme. The repairs

that are needed can be met at a cost which the community can support, with only limited supervision to be provided by the government departments. For example, most taps may need to be replaced, one or a few pipes have burst, the tank needs simple repairs, or some pipe fitting may be required.

- 3 The scheme is not operational due to a major breakdown of the various components of the system. The repairs would incur costs difficult for the community to bear, and close supervision from the government departments is required. An example of this would be a combination of some of the repairs mentioned above; a tank might need to be rebuilt entirely; or pipes may not have been laid deep enough necessitating digging them all out and reinstalling them.

Summary of findings

The district-wise summary of scheme assessment is given below. This is followed by detailed reports on each of the three districts.

Summary table

LB&RDD schemes

Level of repair	Gilgit	Baltistan	Diamer	Total	%
0	3	5	3	11	19
1	1	5	1	7	13
2	10	11	1	22	40
3	11	4	3	18	31
Total	25	25	8	58	

NAPWD schemes

Level of repair	Gilgit	Baltistan	Diamer	Total	%
0	7	1	2	10	50
1	3	1	0	4	20
2	2	1	0	3	15
3	2	1	0	3	15
Total	14	4	2	20	

Detailed report on Gilgit District

<i>Gilgit and Punial Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Naupura	3	LB&RD	1000	Tank leaking and not in use. Intake from irrigation channel. Pipes laid on the surface, thus water is too warm to be consumed.
Jagir Baseen	-	LB&RD	3000 ?	Under construction, almost completed.
Danyore	?	NAPW	12 000	Irregular service. +90% population covered.
Henzel	1	LB&RD		Pipes get clogged. Villagers do repairs themselves.
Gulapur	0	LB&RD		Villagers do minor repairs. At present 35% covered. Pipes for a 2nd tank are missing.
Gich	2	LB&RD		50% covered. Villagers in the vicinity of a breakdown are responsible for repairs
Singal	1	NAPWD	1300	50% covered. Unprotected source. LB&RD scheme to be started.
Bubur Bala	3	LB&RD	1000	+90% covered. Tank leaking. Villagers willing to repair if funds are provided.
Bubur Paeen	-	LB&RD	1100	Under construction. Tank completed. Half the pipes laid. Villagers organized a fund. +90% covered when completed.
Sher Qilah	0	NAPW		Excellent condition, but service is irregular due to small size of tank. Second tank to be built.
Gakuch	?	NAPW		Small scheme only for official buildings.

<i>Gupis Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Phandar	3	LB&RD		Scheme still under construction after 5 years. Village scattered over long distance. Limited coverage.
Gulagh Muli	3	LB&RD		100% covered. Pipes not deep enough. Piped water not used in summer: too warm. Unprotected source. Tank not maintained, grass and plants growing in it; lots of insects.
Shamaran	2	LB&RD		Pipes burst last winter. Otherwise, people happy with the system.
Charmoyan	3	LB&RD		50% covered. Tank too small. Burst pipes.
Gupis 1	2	NAPW		Small scheme for official buildings and few houses.
Gupis 2	3	LB&RD		Small scheme, only few houses covered. Inappropriate source.

<i>Yasin Valley</i> Community	Level of repair	Dept	Approx. population	Remarks
Yasin	-	NAPW		Under construction, still needs some pipe fitting.
Taus	-	NAPW		Under construction
Deretch (Harpo)	0	LB&RD	275	60% covered. Good system, good maintenance.
Shot	2	LB&RD	250	Scheme completed but not operational yet because one pipe between intake and reservoir is still missing. Otherwise, 100% covered.
Hundur	-	LB&RD		Scheme never implemented. LB&RD did a survey but dropped the project. Villagers say they wanted the scheme.

Sandi	-	LB&RD		Scheme never implemented, villagers refused self-help principle. Wanted the scheme free "like NAPWD". Channel water is perceived by many to be the "best water".
Gujalti	3	LB&RD	1000	50% covered. Tank leaking. Pipes not laid deep enough because scheme constructed during winter. Intermittent service. Maintenance person "not reliable".
Roshen	2	LB&RD	800	Not completed yet. When completed 80% covered. Tank has no roof.
Sumal	2	LB&RD	800	80% covered. Supply is low. Blocked pipes: due to some villagers (from "a powerful family") who intentionally divert water for irrigation. Service of plumber not reliable because he is not paid.

<i>Ishkomen Valley</i> Community	Level of repair	Dept.	Approx. Population	Remarks
Chatorkhan	3	NAPW	1100	Small scheme for official buildings. PVC pipes were used; bursting problems. The scheme is presently being extended to the whole village.
Pakura	-	LB&RD		New scheme. Tank completed but no pipes are available yet.
Nominabad Bala	3	LB&RD		Tank completed, and pipes received "4 years ago" but never installed. Unity problems among the villagers.
Faizabad	3	LB&RD		Abandoned scheme. Digging is too difficult, too many large stones; needs blasting.

<i>Hunza Valley</i> Community	Level of repair	Dept.	Approx. Population	Remarks
Altit	2	LB&RD	2200	Operational, but needs sedimentation tank and/or filtration tank.
Moaminabad	2	LB&RD	3500	Presently not operational, but usually works. Water is too muddy, the tank silts up rapidly. Tank badly built.
Hyderabad	2	LB&RD		Presently not operational. PVC pipes were installed; some were later replaced, but some are still present. Some of these pipes are damaged.
Nasirabad	2	LB&RD	2500	Operational. Water very muddy. Nobody responsible for repairs.
Khanabad	2	LB&RD	900	+90% covered, but villagers complain about pipe shortages (only 1100 rft). Plumber feels not paid enough, he has to volunteer his time.

Report on Baltistan District

<i>Rondu Valley</i> Communtiy	Level of repair	Dept.	Approx. Population	Remarks
Dambodas	0	NAPW	180?	Successful system
Basho	0	LB&RD	160?	Successful system

<i>Skardu Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Hotto	2-3	LB&RD		Infrastructure not inspected. Does not work since 1 year.
Kumrah	0-1	LB&RD		Infrastructure not inspected. Apparently working well.
Ghamba	0-1	NAPW		Infrastructure not inspected. Apparently working well.

Hussainabad	0	NAPW		Working well. 65% covered.
Thorgo	1	NAPW		Piped water used in winter, but in summer source is mainly used for irrigation. People using the same channels for drinking water
Thorgo Bala	3	LB&RD	400	Very low pressure when working. Pipes not laid deep enough. No maintenance system. Taps need to be replaced. Presently not working.

<i>Shigar Valley</i> Communtiy	Level of repair	Dept.	Approx. population	Remarks
Marapa Blassan	1	NAPW	1400	System works well but intermitently
Shigar	0-1	NAPW		System works well but intermitently. Source does not provide enough water on a continuous basis.
Chorka	-	NAPW		Under construction since 1987.
Hourou-chouse	2	NAPW	640	100% covered. One of the main line pipes crosses a river; the system has to be shut down when the river is high during the summer to prevent clogging of the pipes from silt.
Alchori	3	NAPW	1600	90% covered. Water from stream gets very muddy at some times. Needs a sedimentation tank.
Tsildi-Kashmal	3	NAPW		One source for two villages: shortage of water.
Sisko	3	LB&RD		Officially there is supposed to be an LB&RD scheme here, but no pipes or tank to be seen.
Matulu	2	LB&RD	550	Large pipes have burst last winter. Villagers requested LB&RDD for new pipes. 85% covered.
Zagonda	2-3	LB&RD	800	Part of the scheme does not work.

<i>Khapulu Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Gowari	0-1	LB&RD		System working well
Yougo	2-3	LB&RD	2000	Plumber left the village to work in the army. Yougo is a typical Balti village: constructing latrines and installing pipes is difficult because the houses are densely clustered. Two lines out of 6 are broken down. Pipes not laid deep enough, many rocks. Villagers do not maintain themselves, apart from very simple repairs which can be done with rubber bands or some plastic.
Balghar	0	LB&RD	1050	Working well
Barra	2	LB&RD	2000	100% covered. Main pipe broken where it crosses the river.
Khapulu	2	LB&RD		Many taps are leaking. Otherwise good maintenance. Four different sources are used.
Surmon	0-1	LB&RD		Infrastructure not inspected Apparently working well.
Saling	2-3	LB&RD		Infrastructure not inspected. 50% covered ?
Keris	1	LB&RD	3500	Working well, but channel water widely used.
Goal	-	LB&RD	3000	Under construction. Should be 100% covered when completed.

<i>Kharmang Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Sirmik Gons	2	LB&RD	1700	Most taps are not working properly. Lack of maintenance.
Mehdiabad Guzbar	2	NAPW	175	Presently broken down.
Mehdiabad Panda	0-1	LB&RD	450	Infrastructure not inspected. Apparently working well.
Mathoka	3	LB&RD	500	Tank not high enough, no pressure. Tank needs cleaning. Not operational.
Sando	3	LB&RD	575	Not operational. Tank and intake out of order. Some taps need to be replaced.
Serling	0	NAPW	450	Working well.
Gons	0-1	LB&RD	450	Working well.
Pari	0	NAPW	1000	Working well. 100% covered.
Ingut	-	NAPW	600	Under construction.
Ghandus	2	LB&RD		Not operational. Some pipes burst. No resources for maintenance.

The next few schemes are located in an area where mobility is restricted. Information was gathered by interviewing a Union Council member, and some villagers familiar with the area.

Baghicha	0-1	LB&RD	1550	Infrastructure not inspected. Apparently in operation
Tarkoti	0-1	LB&RD	750	Infrastructure not inspected. Apparently in operation.
Hamzigoun	0-1	NAPW	450	Infrastructure not inspected. Apparently in operation.
Olding	0-1	NAPW		Infrastructure not inspected. Apparently in operation.
Morol	2-3	LB&RD		Infrastructure not inspected. Not operational. Pipes have burst.
Tchachatang	2-3	LB&RD		Infrastructure not inspected. Not operational. Pipes have burst.

Report on Diamer District

<i>Chilas</i> Community	Level of repair	Dept.	Approx. population	Remarks
Gais Paeen	3	LB&RD		Project dropped after installation of a few pipes, villagers did not feel the need for it anymore.
Gais Bala	2	LB&RD		Not operational. Pipes burst, villagers not interested in repairing them.
Ginni	-	LB&RD		Still under construction. Villagers migrate to higher valleys during the summer. Makes construction very slow. Pipes inadequately stored. The pipes that have been installed were not laid deep enough.

<i>Darrel Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Palati	3	LB&RD		System working very well with a total of 20 taps in this village, but all of them have been installed at the mosque, for ablutions. Not a single communal tap or house connection. Women do not seem to fetch water at the mosque, they use channel water.
Gayel	1	LB&RD	1500	Operational.
Phuguch	-	LB&RD	800	Under construction.
Gumari	1	LB&RD	3000	Operational.

<i>Tangir Valley</i> Community	Level of repair	Dept.	Approx. population	Remarks
Diamer	-	NAPW	8000	Under construction.
Jaglote	-	NAPW	9000	Under construction.
Gali Paeen	-	NAPW	800	Under construction

Gali Bala	-	NAPW	900	Under construction.
Chumari	0	NAPW	2400	In operation, working well.
Darkali Bala	0-1	LB&RD	1500	Infrastructure not inspected. Apparently working well.
Mushki	0	NAPW	3500	Operational, working well.
Khai Batogah	3	LB&RD		Badly maintained scheme. Half the taps out of order. One of the two lines clogged.
Darang Goharabad	0-1	LB&RD	450	Operational, working well.

APPENDIX 2: FINAL STRATEGIC INVESTMENT PLAN

This appendix is an excerpt of the Chapter 5 of the Final Strategic Investment Plan (Vol. 1) proposed to the Government of Pakistan by Wardrop-Acres (Wardrop-Acres 1989).

5.1 The Investment Plan Described in Brief

The Investment Plan¹ is for the next eight years, that is, for fiscal years 1990-1991 to 1997-98. It covers the remaining three years of the Seventh Plan Period and the five years of the Eight Plan Period. The plan is designed to meet some of the basic requirements of the Northern Areas in rural water supply, sanitation, and health.

The total Investment Plan for the Northern Areas in constant 1988-89 prices is Rs 368.7 million. Table 9 gives a detailed cost breakdown by year. The total Investment Plan for the remaining three years of the Seventh Plan period is Rs 168 million and the amount for the five years of the Eight Plan period is Rs 200.6 million.

Plan allocations are divided as follows:

Table 9: Cost breakdown per year of the Investment Plan

Water supply schemes	63%
Institutional strengthening	23%
Operations and maintenance	6%
Rehabilitation of existing schemes	3%
Revolving credit	2%
Hygiene education, human resource development, sanitation and water quality testing	2%

[...]

Foreign technical assistance forms 31% of the institutional strengthening component.

¹Unless explicitly mentioned all costs are in constant 1988-1989 prices.

5.2 Target Service Coverage

The Investment Plan for the coverage of water supply in the Northern Areas is driven by the enhanced institutional capacity of the implementing agencies. This capacity allows the achievement of 100% coverage in villages with a population of more than 2,000 population, and 70% coverage in villages with a population of less than 2,000. The total water supply coverage of the rural population in the Investment Plan period will be 78% . The coverage estimates incorporate the projected growth in population. A total of 164 small, 180 medium and 43 large water supply schemes will be implemented during the Investment Plan period.

There is no specific target for the sanitation program in terms of overall coverage: this is a demand driven program that would depend on household demand. It is estimated that an additional 2.3% of the population will be covered as a result of the demonstration latrine program. [...]

The recommended human resource development program of Rs 3.26 million has four major categories of training. The program includes management, technical, field, and foreign training. The training of technical and field staff form the major share of investments in the human resource development program. Management and foreign training will take up 6% each of the human resource development component.

An amount of Rs 9.2 million has been allocated for revolving credit among four main categories. It is recommended that 68% of this revolving credit be given for household connections, 22% for investments in household level sanitation facilities, 9% for rehabilitation, and 2% for hygiene education.

5.3 The Strategic Investment Plan by District

In view of the Government's concern with equity considerations in the investment between the three Districts the level of investment in Diamer for water supply coverage has been kept at a slightly higher rate.

[...] The percentage of the population covered in Baltistan and Gilgit is at the same level and much lower in Diamer at the beginning of the Investment Plan period. However, by the end of the Investment Plan period in 1998 the gap in the percentage of the total rural population covered in the Districts is much lower. The sanitation program is linked to the

water supply program and as such a slightly higher effort in the implementation of the sanitation program is recommended for Diamer.

5.4 Alternative Scenario Analysis

The provision of water supply coverage of the rural population in the Northern Areas is most sensitive to two factors: scheme size and implementation rate. The first scenario evaluates the coverage attained at the current implementation rate of NAPWD and LB&RDD. Considering the past trend, on average 8 large and 17 small or medium schemes are planned to be implemented by NAPWD and LB&RDD respectively until 1998. The coverage attained at the end of the Eight Five Year Plan is 50% at a cost of Rs 134.15 million. Thus, with the current implementation rate the coverage would be far below the 75% target set by the government.

Varying scheme size has an impact on cost and coverage. The larger schemes are more cost effective because they cover a larger number of people. If priority is assigned to large and small villages so that 100% population in these settlement sizes is covered by 1998, then 478 schemes are required at an estimated cost of Rs 247.55 million. A comparison of this scenario with that recommended in the Investment Plan shows that both the number of schemes and the unit cost of schemes increases but the coverage goes down to 68%. This fall in coverage is due to the fact that small villages constitute a very small percentage (approximately 15% in 1998) of the total population.

The third scenario was designed to achieve 100% coverage by the end of 1998. The plan proposes 565 schemes to be implemented in the next 8 years. The estimated cost of these schemes is Rs 299.3 million. However, the actual cost might be higher as some of the villages are very small, scattered and remote. The cost of schemes in these villages will be very high and needs to be calculated on a village to village basis.

5.5 Plan Management and Implementation

5.5.1 Institutional Arrangements

The institutional arrangements that are being suggested for the Northern Areas attempt to minimize expenditure on recurrent categories, build on the existing strength of existing institutions and encourage links between existing government departments and non-governmental organizations, and between the grass-roots level institutions and the

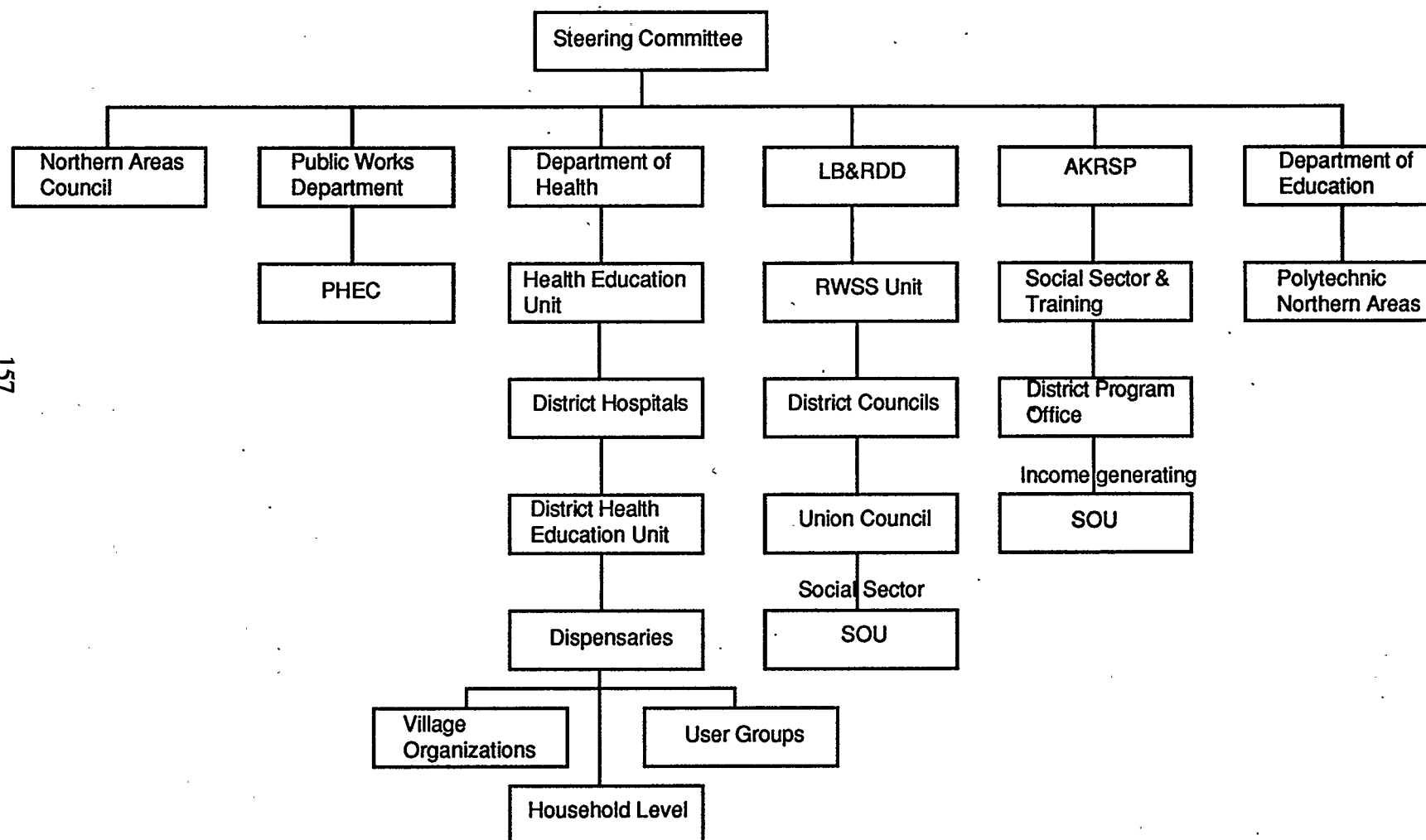
government line departments. The institutional roles are premised on the strategic considerations presented in the preceding section on strategy.

A survey of the institutions in the Northern Areas indicates that several of the departments which are involved with the implementation of the water supply, sanitation and health sector in the rest of the country do not exist in the Northern Areas. For example, there is no Public Health Engineering Department and no Health Education Unit within the Department of Health. This made it difficult for the line departments to have access to the rural population.

The institutional arrangements that are being proposed for the execution of the Investment Plan are presented in Figure 8. From this graphic representation it becomes clear that administrative reform is being proposed at three levels:

- A second administrative tier is being created in the existing organizational structure. This new tier is being created with the understanding that the increased level of community participation envisaged in the implementation of the targets in the sector requires a more responsive administration.
- Arrangements are being proposed to secure direct contact with village level organizations through the creation of a field unit called the Social Organization Unit for social sector programs.
- A government line department will be actively associated with the task of developing village level organizations for the implementation of development programs.

The institutional arrangements suggested here concern the Public Works Department, the Local Bodies and Rural Development Department, the Aga Khan Rural Support Program, the Department of Health, the proposed polytechnic planned for the Northern Areas by the Education Department, the Village Organizations formed by men and women in the districts of Gilgit and Baltistan, and the User Groups for the District of Diamer.



**FIGURE 8 INSTITUTIONAL ARRANGEMENTS
IN THE NORTHERN AREAS**

Source: (Wardrop-Acres 1989)

The Northern Areas Public Works Department

It is recommended that a Public Health and Engineering Circle (PHEC) be created within the existing NAPWD. The creation of this Circle is being recommended keeping in mind that once 100% coverage of water supply and sanitation is achieved in the large villages (projected by the end of the 1994-95 financial year) the orientation of the PHEC should be with the efficient management of its schemes. The orientation of the NAPWD as a whole is with construction of roads, bridges and irrigation channels. A high level of investment in the transport and communication sectors is projected for NAPWD in the future. This concentration on the achievement of physical targets will not allow it to play an efficient management role in the water supply and drainage schemes in the present administrative structure. With the growth in the urban population in the Northern Areas and the resulting increase in the number of villages of population above 2,000, the nature of the problem of water supply and drainage in areas where NAPWD is currently operating will also change. A NAPWD with a Public Health Engineering focus will be more relevant to meet some of these changing needs. The recommendation of a PHEC is being made to secure this clear demarcation of responsibilities.

The PHEC will have five main responsibilities under the proposed strategy in the Investment Plan:

- Responsibility for the construction of water supply and drainage systems in towns and in villages with a population of more than 2,000;
- The maintenance of water supply and drainage systems in towns and villages with a population of more than 2,000;
- Collection of user charges from all the consumers of water supply. This user charge will meet the cost of scheme operations and maintenance and some of the cost of capital works and minor repairs;
- A greater responsibility for water quality and control of its schemes in collaboration with the Department of Health;
- Collection of data pertaining to water resources in the Northern Areas along with a reference for the special design criterion and engineering skills required in these areas.

The Local Bodies and Rural Development Department

The Local Bodies and Rural Development Department is recommended as the leading implementing agency in all villages. Where Village Organizations exist, this role will involve coordination, monitoring, and providing assistance in key areas. Where Village Organizations do not exist, this role of coordination will have to be preceded by efforts at institution development at the village level. This institution could be the entry point for income-generating programs at a subsequent stage. LB&RDD will not implement schemes itself in any village.

A Rural Water Supply and Sanitation Unit has been proposed within LB&RDD for the implementation of schemes through the Village Organizations and User Groups. The main responsibility of the RWSS Unit within LB&RDD will be the following:

- To conduct diagnostic surveys with Village Organizations (VOs) in Gilgit and Baltistan, and User Groups (UGs) in Diamer to assess the need for water supply and sanitation components.
- To coordinate the implementation of the water supply schemes through the VOs and UGs by contracting the services of the Aga Khan Rural Support Program or private contractors for preparing scheme feasibilities, design and cost estimates.
- To ensure the participation of women in the diagnostic process so that concerns of the women in villages are reflected in scheme identification, planning, implementation, and management.
- To initiate a sanitation program by motivation and demonstration of appropriate technology in villages.
- To coordinate the provision of inputs and access to credit for sanitation through contact with private contractors, credit institutions and development projects.
- To coordinate the training of village masons, plumbers, female hygiene education workers and others involved in the sector by organizing short, basic refresher courses through development projects and non-governmental organizations working in the sector (Aga Khan Foundation, AKRSP, etc).

Aga Khan Rural Support Program

The Aga Khan Rural Support Program has indicated a strong interest in supporting the proposed RWSS Sector Investment Plan. This support is premised on two main tenets of AKRSP's Second Phase Strategy: (i) to involve the Village Organizations in a wider range of activities, particularly in the social sector; and, (ii) to ensure the sustainability of the Village Organization by encouraging its acceptance by the Government as a grass-roots development organization for village projects. AKRSP has repeatedly emphasized that the Village Organization should be seen as a village level institution through which all development agencies, not only AKRSP, can have effective and sustainable access to the village. As such, it is relevant to reiterate the following:

- The sustainability of local institutions requires that the VOs initially sponsored by AKRSP should develop the maturity and confidence to reach beyond AKRSP for access to resources for on-going development;
- AKRSP's functional mandate is in the income-generating sector; the VOs sponsored by it and organized around income-generation represent the forum through which agencies other than AKRSP can obtain sustainable, broad-based community participation.

The main roles envisaged for AKRSP in the Investment Plan are the following:

- AKRSP will facilitate the RWSS Unit in its access to the Village Organizations by providing orientation sessions and information to the staff of the RWSS Unit;
- AKRSP will assist the Local Bodies and Rural Development Department by providing engineering staff for technical surveys;
- AKRSP will assist in the coordination for credit and the supply of inputs to Village Organizations. AKRSP will organize workshops to enable input suppliers, staff of the RWSS Unit and representatives of other line departments who understand the system of banking and credit which the AKRSP has initiated at the village level;
- Organizing training sessions for the members of the RWSS Unit in community organization and development through field assignments of 6-12 months and through their participation in the program planning process at AKRSP;

- AKRSP will assist in the training of the female staff of the RWSS Unit by arranging 6-12 months field assignments with the field coordinators.

The Monitoring and Evaluation Unit

The Monitoring and Evaluation Unit which was envisaged as the monitoring arm of the Community Basic Services Program but was left out without a clear mandate since the discontinuation of the CBS Program, can be merged with the RWSS Unit and entrusted with the Monitoring and Evaluation responsibility for the RWSS sector. The specific responsibilities of the M&E Unit will be the following:

- To establish a monitoring system which provides up to date information on scheme implementation, operations and maintenance;
- To provide feedback to the principal line departments and agencies on the constraints and bottlenecks in the sector and suggest means of alleviating these.

Department of Health

The Department of Health will be the lead agency in water testing and in the prevention of water borne diseases through its district hospitals and village level dispensaries. The Rural Water Supply and Sanitation Unit will work closely with these village level dispensaries in the delivery of hygiene education messages and in ensuring the supply of essential inputs like water filter bags, oral dehydration salts, iodized salts, etc. The specific responsibilities of the Department of Health will be the following:

- To conduct a comprehensive survey of water quality in the Northern Areas. This survey will help to identify the areas where special efforts need to be made to reduce infant mortality, prevent goitre and reduce the other ailments (skin and eye infections) among women.
- To establish three laboratories in the Northern Areas, one in each of the present district headquarters. These laboratories will, upon the request of the Public Works Department, Rural Water Supply and Sanitation Unit, other line departments and individual households, conduct water tests on samples given to them. The laboratories will charge an appropriate fee for such tests. Where the contamination level is high or where more sophisticated tests are required the laboratories will arrange to have the water quality tested in the more sophisticated facilities (e.g. Risalpur) in the country.

- The 103 dispensaries of the Department of Health will be provided simple water testing kits. These dispensaries will conduct water tests upon the request of the Village Organizations, individual households and any village group requesting such a test. The dispensaries will charge an appropriate fee for the tests.
- Whenever such water tests are conducted by the district laboratories and the dispensaries, appropriate recommendations will be made on measures to improve the quality of the contaminated water.
- The women staff of the Rural Water Supply and Sanitation Unit will closely coordinate with the Traditional Birth Attendants midwives, and other staff of the Health Department for the delivery of hygiene education messages, supplies for the improvement in water quality and medicines for water borne diseases, etc.

Department of Education

The establishment of a polytechnic for the Northern Areas has been recently approved at a total cost of Rs 45 million. The polytechnic will offer a three year post matric diploma course in the three fields of civil, mechanical, and electrical engineering. It will have the capacity to train 30 students in each field per year. This polytechnic will be the training institute for engineers for the Northern Areas in the future. For the short term, the responsibility for training will be handled by the polytechnic in Peshawar, the Aga Khan Rural Support Program, and the Local Bodies and Rural Development Department.

The Union Council

The Union Council is not being given a direct role in implementation. However, the institutional arrangements suggested here do not exclude members of the Union Council. In fact the Union Council members can play an active part in village level development by coordinating the disbursement of funds at their disposal and by using their influence to encourage scheme implementation. The main point regarding the role of the Union Council members is that their position in the Village Organization or User Group should not be dictated from above but should be decided internally by the community they are serving.

Village Organizations

The Village Organizations will be the lead implementing agency for water supply and sanitation programs in Gilgit and parts of Baltistan District. These organizations will collaborate with the LB&RDD, the AKRSP, and the private sector in the implementation and management of these schemes. The process of community participation is given in Annex 5 and detailed Terms of Partnership between LB&RDD and the Village Organizations are given in Annex 6. The specific functions of the Village Organization are outlined below:

- The Village Organization will be the lead implementing agency for water supply schemes in Gilgit and Baltistan Districts. The Village Organization will identify the need and communicate it to the Rural Water Supply and Sanitation Unit of the LB&RDD;
- The Village Organization will implement the scheme in accordance with the Terms of Partnership reproduced in Annex 6.
- The Village Organization will operate and maintain the scheme and be fully responsible for the costs of these functions.
- The Village Organization will act as the financial intermediary in coordinating the credit needs of its members for the extension of household water connections, latrines, etc.
- The Village Organization will select village men and women for training in skills required to operate and manage the water supply schemes and for other components of the package. The Village Organization will be responsible for putting in place a system which ensures that the trainees are remunerated for services and reimbursed for the supply of crucial inputs.

The User Group

The concept of the User Group is being advanced for the implementation of schemes in Diamer where Village Organizations do not exist. The same approach of participatory development which has been so successful in the formation of Village Organizations is being recommended for the formation of the User Group. The major distinction between a Village Organization and the User Group is that the Group is not created with the specific objective of developing the institutional infrastructure at the village

level but for the short term purpose of implementation of the scheme. The Management Group of the Aga Khan Rural Support Program felt confident that this approach would succeed in Diamer District and felt that the User Groups could be the precursor to the formation of sustainable institutions at the village level.

5.5.2 Organization

Coordination at the Northern Areas Level

It is proposed that a Steering Committee be constituted for overall coordination and collaboration of the Investment Plan (Figure 9). The Northern Areas Administrator will be the Chairman of this Committee, and the Development Commissioner will be the Deputy Chairman. The representatives of the Planning and Development Cell, NAPWD, LB&RDD, the Departments of Health and Education, AKRSP, the Aga Khan Foundation and the donors would be members of the Committee.

The Steering Committee will meet once a month to discuss progress in implementation, future targets and the coordination needs for effective implementation of the Investment Plan. The Monitoring and Evaluation Unit under the guidance of the RWSS Unit will take a lead role in following progress and in keeping detailed records of the decisions of the Steering Committee.

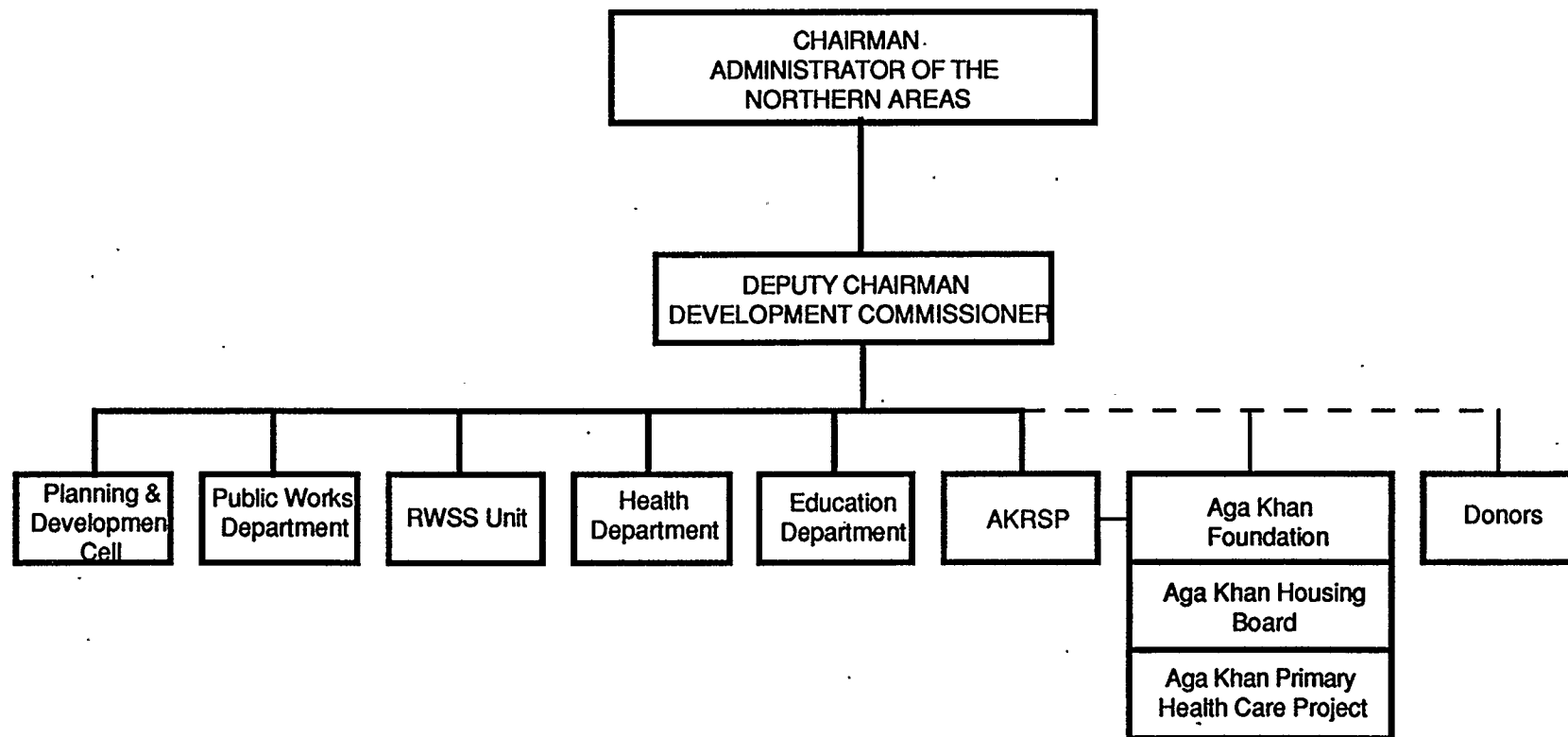
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Coordination at the District Level

A District Coordination Committee will be formed with representatives of the major departments on the same pattern as the Steering Committee. These meetings will discuss coordination needs at the District level. Periodic meetings of the staff of the Rural Water Supply and Sanitation Unit in the Districts will be held for sharing the lessons learnt during the implementation process.

Coordination at the Village Level

Coordination between the Village Organizations and User Groups for exchange of information and sharing of experiences is essential for the effective implementation of the targets of the Investment Plan and for training the community to manage village level development projects. The Aga Khan Rural Support Program arranges a monthly conference of the managers of Village Organizations. This has proved to be an effective forum



**FIGURE 9: RURAL WATER SUPPLY, SANITATION AND HYGIENE
EDUCATION STEERING COMMITTEE**

Source: (Wardrop-Acres 1989)

for information sharing between Village Organizations, future village level planning and for introduction of new programs. The National Fertilizer Corporation, commercial banks and government line departments have used this forum effectively. It is recommended that the AKRSP forum established in Gilgit and Baltistan be used for the implementation of the Investment Plan. A similar forum should be established in Diamer