

205.1

90CO

D r a f t

CONCEPT DEVELOPMENT

FOR

PHED INTEGRATED RURAL

WATER SUPPLY AND SANITATION SCHEMES

LIBRARY
INTERNATIONAL REFERENCE CENTRE
FOR COMMUNITY WATER SUPPLY AND
SANITATION (IRC)

THE INTEGRATED CONCEPT

by PHED Community Participation Team

9/90

205.1-90CO-7686

Key questions

Which responsibilities should/might the users take over in combined water supply and sanitation schemes?

Which support can the line departments, LGRDD, DoH and DoE, give to PHED water supply and sanitation schemes?

LIBRARY, NATIONAL INSTITUTE OF ENVIRONMENTAL
ENGINEERING AND WATER SUPPLY
RESEARCH (IRC)
P.O. Box 55100, 2509 AD The Hague
Tel. (070) 814911 ext. 141/142
BN 7686
LO: 205.1 90CO

Contents

	Page
Background	5
Summary of New Approach	8
Integrated Concept in Detail	10
Annex 1 Guidelines for Village Development Organizations	
Annex 2 Guidelines for Women Participation	
Annex 3 Guidelines for Community Operation and Maintenance	
Annex 4 Guidelines for Hygiene Education	
Annex 5 Guidelines for Role of Line Departments	

Abbreviations used:

AD Assistant Director

DoE Department of Education

DoH Department of Health

DPDAC District Planning Development Action Committee

LGRDD Local Government, Elections and Rural Development
Department

MPA Member of Provincial Assembly

PHED Public Health Engineering Department

P & D Planning and Development Department

RDWSC Rural District Water and Sanitation Committee

VDO Village Development Organization

XEN Executive Engineer

Background

The Government of Pakistan initiated a process to improve the quality of life and the health of the rural population through increased coverage with more sustainable and cost effective water and sanitation systems.

Cost sharing by government and users was emphasized as new approach during the National Sector Policy Conference, held in April 1988, in Islamabad. In future, the users need to pay for drinking water supply and take over operation and maintenance as far as possible. Community participation was considered as the appropriate vehicle for reaching this goal. Furthermore, water supply was to be complemented by hygiene education and sanitation.

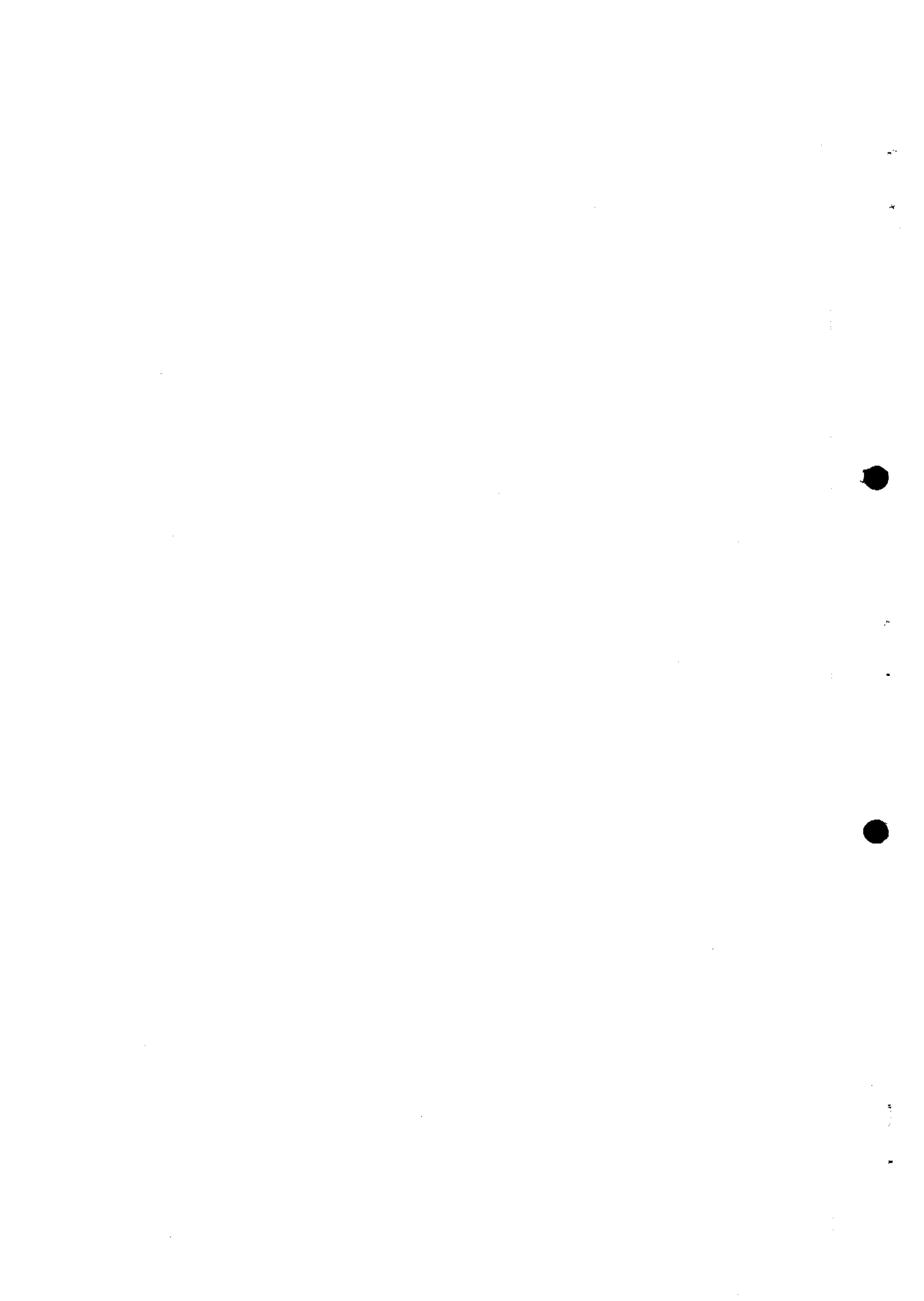
Subsequently, Provincial Sector Investment Plans have been prepared, coordinated by World Bank and financed by CIDA. The Plan for the North West Frontier Province advises on better coordination and cooperation among the respective line departments when implementing the above policy decisions. LGRDD, DoH and DoE are to support PHED with their expertise and their personnel by preparing the village communities for participation in combined water and sanitation programmes.

The goal was set. However, a concept for bringing those ideas into life was lacking. The meeting with representatives of line departments, held on 29. 3. 1990 in the office of and chaired by the Secretary of Planning and Development Department, resolved in agreeing on:

- the formation of a Community Participation Team;
- secondment of personnel by the respective line departments as support to the work of the Team;
- development of an INTEGRATED CONCEPT concentrating on community participation, intersectoral cooperation and most urgently needed community maintenance.

The then formed PHED Community Participation Team consists of personnel of the head office of PHED, the Sanitation Division, the PHED Project Coordination Cell (KfW assisted), one NGO and the 'Pak/German Promotion of PHED, NWFP' Project. They received part-time support by personnel of LGRDD, DoH and DoE.

In addition, resource persons from other organizations and development projects were invited to share their experience with the Team in 4 two-day brain storming workshops.



The CONCEPT PROPOSAL developed during the period from June 3 to September 13, 1990 shows:

- * how the users can participate in each step of the process so that long-term sustainability might be achieved by creating a sense of ownership for the facilities constructed;
- * how village development organizations can be initiated by LGRDD as representative bodies for undertaking sustainable village development and how the VDO can plan and build the water and sanitation facilities jointly with PHED;
- * how the knowledge of village women on the problems they are facing due to the lack of safe water and proper sanitation can be utilized for planning and maintenance of facilities;
- * how the users can select the components of their future systems as well as those tasks in operation and maintenance which they are able to and want to take over; the concept also shows why a complementary maintenance system in addition to community operation and maintenance needs to be established;
- * how hygiene education can help the users learn to safeguard their drinking water from contamination and to use their sanitation facilities effectively; here support is required by DoH in health and hygiene education for village groups and by DoE for including such topics into school curricula;
- * and how finally the respective line departments can join hands for supporting the construction of water supply and sanitation facilities in rural areas.

After the approval of the INTEGRATED CONCEPT, it will be tested in a small number of villages for which funds already are available. Revision might then be necessary. At this stage, it will also be more clear how far the existing staff of the line departments can do the job after having received some briefing or training, and for which tasks additional personnel is required. If the output is expected to be improved, then some additional input is required. Pilot projects are then to follow for demonstrating the viability of this approach on a wider scale, in order to obtain the political backing for this concept.

Summary of New Approach

In the following, only those proposals are listed which have been made in addition to or as a departure from the procedures used presently by PHED.

STEPS NEW APPROACH

- 1 * Establishment of Provincial Steering Committee for the Integrated Concept (water supply, sanitation and hygiene education);
* Selection of district(s) as project areas;
-

- 2 * Formation of Rural District Water and Sanitation Committee;
* Agreement on support to PHED at district level;
-

- 3 * Selection of villages by MPA on the basis of willingness to cooperate and of existing community based organizations;
* PHED ascertains technical feasibility before final selection by MPA;
* Survey and investigation fund as lump sum amount with Chief Engineer;
-

- 4 * Formation of Village Development Organizations initiated by LGRDD;
-

- 5 * The Water and Sanitation Package is offered to the community for selecting the appropriate components;
-

- 6 * Written agreement on cooperation between PHED + VDO;
-

- 7 * The village profile is jointly prepared by PHED and VDO for utilization of local resources;
-

STEPS NEW APPROACH

- 8 * Preparation of design and cost estimates of alternative systems as basis for choosing among the different components and different systems;
- * Assistance by village women in design of facilities;
- * Emphasis on low-cost appropriate technology;
-

- 9 * Joint selection of facilities by PHED and VDO;
- * Facilities only are constructed provided the community agrees to take over routine and preventive maintenance;
-

10

- 11 * VDO clause in the contractor's contract giving some responsibility to the VDO;
- * Written agreement between contractor and VDO stating who will do what so that the work by contractor will not be delayed by VDO;
-

- 12 * Supervision of work jointly by PHED and VDO;
- * Ownership certificate for handing over the completed facilities to the community;
-

- 13 * Users' tasks in operation and maintenance identified through check lists;
- * some maintenance done by women;
- * Complementary maintenance by PHED through:
- mobile repair units and
- private workshops;
- * Monitoring by VDO and PHED;
- * Some monitoring by women.
-

INTEGRATED CONCEPT ON RURAL WATER SUPPLY AND SANITATION

Phase I Project Identification

PROBLEMS IDENTIFIED	STEPS
<p>1.Cooperation and coordination among line departments on integrated water supply and sanitation not existing at provincial level.</p>	<p>STEP 1 JOINT IDENTIFICATION OF PROJECT AREA</p> <p>For better coordination and cooperation on the INTEGRATED CONCEPT, a provincial steering committee is formed which selects one or more districts as project areas on the basis of:</p> <ul style="list-style-type: none"> * present needs in water and sanitation * low economic conditions * low service coverage * poor water conditions * responsive MPAs and district council (e.g. matching grant) * absence of other water supply and sanitation programmes.
<p>2.Lack of formal platform for coordination at district level.</p>	<p>STEP 2 COORDINATION OF LINE DEPARTMENTS AT DISTRICT LEVEL FOR SUPPORT TO PHED</p> <p>Formation of Rural District Water and Sanitation Committee (RDWSC) by:</p> <ul style="list-style-type: none"> - briefing of Committee on <ul style="list-style-type: none"> * the INTEGRATED CONCEPT * conditions for a village to get water supply and sanitation. - agreement by departments on joint action at district level for support (VDO formation, hygiene education etc) to the PHED water and sanitation schemes.

PARTIES INVOLVED	COMMENTS/CONDITIONS
<p>Steering Committee:</p> <ul style="list-style-type: none"> * P & D chairing * PHED * LGRDD * DoH * DoE 	<p>1. <u>Concentration in one area</u> for giving support (VDD formation, hygiene education, etc.) to PHED water and sanitation schemes, the line departments concerned need to concentrate their activities in the identified district(s).</p> <p><i>dev. & implementation</i></p>
<p>Chairman District Council</p> <ul style="list-style-type: none"> * AD LGRDD * Xen PHED briefing * DHO * DEO 	<p>(Guidelines on the Role of Line Departments attached).</p>

PROBLEMS IDENTIFIED	STEPS
	<p data-bbox="627 719 1166 745">STEP 3 SELECTION OF VILLAGES</p> <p data-bbox="762 781 1422 842">3.1 MPAs select a number of villages on grounds of:</p> <ul data-bbox="842 880 1417 1003" style="list-style-type: none"> - willingness of community to cooperate and contribute; - existing community based organization in the village. <p data-bbox="762 1041 1437 1167">3.2 PHED ascertains technical feasibility through a brief preliminary survey resulting in a priority list.</p> <p data-bbox="762 1229 1318 1256">3.3 MPA does final selection.</p> <p data-bbox="762 1294 1123 1321">3.4 DPDAC approves.</p> <p data-bbox="762 1359 1241 1386">3.5 P & D approves funds.</p>

Phase 2 Project Formulation

<p data-bbox="204 1615 576 1771">4. Lack of representative village body for undertaking sustainable village development.</p>	<p data-bbox="627 1615 1246 1641">STEP 4 FORMATION OF VDO BY LGRDD</p> <p data-bbox="762 1680 1422 1771">4.1 Formation of VDO by LGRDD in those villages which have been selected by MPA.</p> <p data-bbox="762 1809 1437 1870">4.2 LGRDD informs PHED on formation of VDO.</p>
--	--

PARTIES INVOLVED	COMMENTS/CONDITIONS
<p data-bbox="263 723 491 815">MPA, union councillors, villagers</p> <p data-bbox="263 1043 438 1099">PHED and villagers</p>	<p data-bbox="630 1043 1436 1167">3.2 <u>Survey and Investigation Funds</u> Funds for survey and investigation are required in form of a lump sum amount with chief engineer.</p> <p data-bbox="630 1234 1476 1391">3.3 <u>Revised Selection</u> In case the villages selected by the MPA show poor response, the MPA should be involved again for selecting another village.</p>

<p data-bbox="266 1619 442 1675">LGRDD VILLAGERS</p>	<p data-bbox="633 1682 1401 1771">4.1 <u>Role of LGRDD</u> LGRDD to work as a coordinating body between VDO and departments.</p> <p data-bbox="713 1805 1401 1861">(Detailed guideline on VDO formation attached)</p>
--	---

PROBLEMS IDENTIFIED	STEPS
<p>5. Present policy does not put sufficient emphasis on PHED to work with the community.</p>	<p>STEP 5 INTRODUCTORY MEETINGS BETWEEN PHED AND VDO</p> <p>PHED holds meetings with the VDO to brief them and to arrive at a written agreement by discussing:</p> <ul style="list-style-type: none"> - their water needs + interest in sanitation; - the package deal of water supply, hygiene education, latrines, drainage, garbage disposal etc.; - cooperation between PHED and VDO through all steps of the program; - take-over of schemes by community + written agreement; - community operation + maintenance - complementary maintenance by PHED and private sector; - benefits of schemes in relation to health and hygiene education; - needs for preparing village profile.
	<p>STEP 6 WRITTEN AGREEMENT ON COOPERATION BETWEEN PHED AND VDO</p> <p>6.1 <u>VDO agrees to:</u></p> <ul style="list-style-type: none"> - jointly do the village profile; - motivate the villagers to support the VDO; - assist in planning and design of alternatives by proposing location of stand posts, etc.; - solve the problems faced by women due to the lack of proper water supply and sanitation facilities; - contribute in form of land, labour, material, matching grants, cash etc.; - jointly select the final system out of the package offered; - jointly supervise and construct the system; - take over operation and maintenance by doing and paying.

PARTIES INVOLVED	COMMENTS/CONDITIONS
<p>LGRDD PHED VDO</p>	<p>5.1 <u>Water and Sanitation Package</u> The water and sanitation package offered by PHED is a proposal comprising of different components of water supply and sanitation facilities. These components are to be selected and constructed according to the responsibility the community can take over in operation and maintenance.</p> <p>The package also includes school sanitation and therefore hygiene education in schools.</p>
	<p>6.1 <u>Community Operation and Maintenance</u> In the long run the community is expected to take over O + M either by doing it or paying for it. In the present transitional period, the users are to take over O+M as much as they can and want to.</p>

PROBLEMS IDENTIFIED	STEPS
	<p>STEP 6 continued</p> <p>6.2 <u>PHED agrees to:</u></p> <ul style="list-style-type: none"> - provide technical support and coordination with other agencies; - partly finance the programme; - jointly plan, design and construct the facilities with the villagers - provide complementary maintenance services; - jointly identify support needs by VDO.
<p>7. Basic information on village conditions and resources not available.</p>	<p>STEP 7 PREPARATION OF VILLAGE PROFILE</p> <p>Joint collection of information by PHED and VDO from individuals, BHUs, union councils, CBOs, mosques, etc.</p> <ul style="list-style-type: none"> - socio economic data; - human resources; - infrastructure; - water.
<p>8. Present procedure for design does not sufficiently utilize the villagers' knowledge of local conditions.</p>	<p>STEP 8 DESIGN + TENTATIVE COST ESTIMATES OF ALTERNATIVE SYSTEMS</p> <p>prepared by PHED on the basis of suggestions by the villagers on:</p> <ul style="list-style-type: none"> - water Supply; (also women can assist in site selection of stand posts, community tanks etc.) - sanitation. (also women can assist in construction of latrines, etc.)

PARTIES INVOLVED	COMMENTS/CONDITIONS
<p>VDO PHED RDWSC</p>	<p>7.1 <u>Support by RDWSC</u> RDWSC to direct their sub-offices to extend support to the programme.</p> <p>7.2 <u>Village Resources</u> Individuals with certain skills like TBA, Ustazas, village groups such as Jirgas and facilities like BHUs and schools are to be involved as much as possible. Therefore the village profile should also provide information on their reliability and acceptability.</p>
<p>PHED VDO VILLAGERS</p>	<p>8.1 <u>Community Preferences</u> Before PHED prepares design + cost estimates of alternative systems, general view by the community on their choice of technology need to be discussed.</p> <p>8.2 <u>Appropriat Low Cost Technology</u> In areas where low cost technology such as hand pumps, and high cost technology such as tube wells, both are feasible, design + cost estimate are to be made for both alternatives, so that the community can choose the appropriate system.</p> <p>8.3 <u>Women Involvement</u> On the basis of problems faced by women in water supply and sanitation, village women involvement is to be organised through VDO with the support by DoE, DoH, LGRDD. (Detailed guidelines on women involvement attached).</p>

PROBLEMS IDENTIFIED	STEPS
<p>9. Usually the community does not know enough to make an informed choice among different systems.</p>	<p>STEP 9 JOINT SELECTION BY VDO + PHED OF FACILITIES TO BE CONSTRUCTED.</p> <p>9.1 The pros and cons of alternative systems such as tubewells and handpumps and of different components such as standposts, community tanks etc. are discussed and selected on the basis of:</p> <ul style="list-style-type: none"> - estimated construction costs; - duration of construction; - skills required; - duration of daily services; - operation costs; - user's responsibilities; - village contributions. <p>9.2 Written agreement on systems + components selected and on operation + maintenance.</p> <p>9.3 First component of the system is then chosen to start with.</p>
	<p>STEP 10 PREPARATION OF PC1 BY PHED</p> <p>covering all components of the project as listed in the contract between PHED and VDO + detailed cost estimates + time schedule.</p>

Phase 3 Project Implementation

	<p>STEP 11 ORGANIZATION OF WORKS</p> <p>11.1 Preparation of tender documents on the basis of PC1;</p> <p>11.2 Prequalification of contractor;</p> <p>11.3 Calling of tenders and awarding of contract;</p>
--	--

PARTIES INVOLVED	COMMENTS/CONDITIONS
PHED VDO Villagers	<p data-bbox="598 427 1356 459"><u>9.2 Community operation and maintenance</u></p> <p data-bbox="598 495 1471 618">On the basis of the checklists, users choose operation and maintenance activities for each component of the package deal such as tube well maintenance, handpump maintenance, etc.</p> <p data-bbox="598 654 1394 745">No facilities to be constructed if the community is not willing to at least take over routine + preventive maintenance.</p> <p data-bbox="598 810 1066 842"><u>9.3 Strengthening of VDO</u></p> <p data-bbox="598 878 1445 1032">If the VDO at this stage proves not to be fully organized or does not yet have the majority of the village as supporters, then only a small component of the water supply and sanitation package is to be implemented.</p> <p data-bbox="598 1068 1449 1128">Further components will be executed provided that support by the village is given.</p>
PHED	
PHED Contractor	<p data-bbox="598 1798 906 1830"><u>11.3 VDO CLAUSE:</u></p> <p data-bbox="598 1832 1431 1955">A special clause in the contract will cover the cooperation between contractor + VDO on material/transport, quality control, time schedule, mode of implementation.</p>

PROBLEMS IDENTIFIED	STEPS
	<p>STEP 11 continued</p> <p>11.4 Minutes of meeting by contractor and VDO on provision of manpower, material, transport and related time schedule;</p> <p>11.5 Contractor + VDO having ready material, machinery and manpower on-site + establishing the stacking area.</p>
	<p>STEP 12 CONSTRUCTION OF FACILITIES</p> <p>12.1 Contractor + VDO are carrying-out construction work as agreed before;</p> <p>12.2 VDO to assist PHED in supervision of construction works.</p> <p>12.3 Completion of work;</p> <p>12.4 Handing over of schemes to community by jointly signing an ownership certificate.</p>
<p>1. Only a small portion of O + M costs is presently recovered.</p> <p>2. The original task of PHED water supply schemes is hampered by too much responsibilities in O + M.</p> <p>3. Present policy does not emphasize role of community in taking over O + M of schemes.</p>	<p>STEP 13 FOLLOW UP</p> <p>13.1 <u>Community operation and maintenance</u> on the basis of responsibilities taken over by users.</p> <p>13.2 The remaining tasks are to be covered by PHED and private sector through:</p> <ul style="list-style-type: none"> - <u>Mobile Repair Units</u> of PHED do preventive maintenance and on-site repairs; - <u>Workshops</u> do technically difficult repairs such as burnt motors.

PARTIES INVOLVED	COMMENTS/CONDITIONS
Contractor VDO	<p>11.4 <u>Sharing of works by contractor and VDO:</u> contractor and VDO carry out different parts of construction work. Only such construction works can be carried out by VDO which will not hamper the contractor's progress.</p>
Contractor VDO VDO PHED PHED VDO	<p>12.1 <u>Varying user involvement</u> Different components of the water and sanitation package will allow different degree of involvement by the users.</p> <p>12.2 <u>Training of supervisors</u> Those villagers who jointly with PHED supervise the construction work require on the job training.</p>
PHED PHED private sector	<p>13.1 <u>Maintenance by women</u> Women can be involved in routine maintenance of handpumps in their own houses.</p> <p>13.2 <u>Private sector repairs</u> Some repairs to be done by the manufacturer/other by private workshops. Stand-by pumps of the PHED Mobile Repair Units can reduce the fall-out time of the system provided the community is willing to pay for using a replacement.</p>

PROBLEMS IDENTIFIED	STEPS
	<p data-bbox="507 443 842 477">STEP 13 continued</p> <p data-bbox="667 510 1326 568">13.3 <u>Monitoring</u> is done jointly by PHED and users:</p> <ul data-bbox="667 600 1326 954" style="list-style-type: none">- data are collected at village level;- the PHED Monitoring Cell at headquarters then compares those data with what had been planned;- the processed information is then submitted to PHED management;- if necessary, action can be taken jointly with the other departments and the VDO.

PARTIES INVOLVED	COMMENTS/CONDITIONS
<p>PHED Villagers</p>	<p>13.3 <u>Monitoring by women</u></p> <p>Since women regularly visit and see the place where they fetch water they should be involved in monitoring the conditions of the standposts/handpumps and surroundings.</p>

CONCEPT DEVELOPMENT
FOR
PHED INTEGRATED RURAL
WATER SUPPLY AND SANITATION SCHEMES

GUIDELINES FOR
VILLAGE DEVELOPMENT ORGANIZATIONS

by PHED Community Participation Team

7/90

PHED is to implement integrated rural water supply and sanitation schemes in cooperation with VILLAGE DEVELOPMENT ORGANIZATIONS (VDOs). Those village organizations are to be established through the Local Government and Rural Development Department (LGRDD) before PHED starts with the work.

The VDO is understood as representative body responsible for undertaking sustainable village development.

Special people
problem solvers
representatives
of pop.

1. ESTABLISHMENT OF VDO BY LGRDD

The formation of VDOs is to be based on the already existing village organizations. However only those organizations are to be considered which are efficiently functioning.

1.1 LGRDD is to initiate the formation of the VDO by:

- holding an introductory meeting in the village;
- informing the villagers on the future water supply and sanitation programme;
- explaining the need and the procedures for the formation of a representative body (VDO);
- explaining the role and functions of VDO;
- introducing the rules of cooperation between the VDO and the concerned departments.

1.2 Formation of VDO with the assistance of LGRDD.

1.3 LGRDD signals PHED to start with the work.

2. CONDITIONS

2.1 Members of the VDO should be:

- resident in the village
(each household is represented by one member)
- minimum 18 years old
- acceptable to the villagers
- willing to pay a membership fee
- electing their own office bearers.

2.2 Initially, the VDO can start working with PHED supported by at least 25 % of village households. But at this stage the VDO is required to sign a contract with PHED to do all the necessary mobilization for gaining support and for developing into a representative body responsible for undertaking sustainable village development;

2.3 PHED offers a water and sanitation package consisting of water supply and of different components of sanitation facilities.

In case the VDO is not fully organized or does not have the majority of the village as supporters, only minor components of the PHED package are to be implemented in the initial stage.

Major components are then to be implemented provided that support by the village is there in the form of:

- contributions by the VDO to the first component as agreed earlier;
- expanding membership of VDO (up to 70%);
- supervision of work;
- written agreement to take over operation and maintenance.

During the process of planning and implementation, LGRDD and PHED have the task of identifying areas where the VDO needs further support like hygiene education, training, etc.

3. FUNCTIONS OF ESTABLISHED VDO

- 3.1 To be responsible for undertaking sustainable village development.
- 3.2 To act as link between villagers, external agencies and local organizations.
- 3.3 To make decisions on behalf of the village.
- 3.4 To manage finances, records, etc.
- 3.5 To ensure woman participation in solving problems faced by women due to poor water supply and sanitation.

3.6 To plan and to execute village development schemes on the basis of:

- identification of problems;
- proposing solutions (planning, cost estimates, etc.);
- identification of existing village resources (technical, personnel, materials, etc.);
- securing additional resources if required;
- construction of individual schemes like water supply/ drainage, etc.;
- operation and maintenance.

4. LEGALIZATION OF VDO

There is the need to recognize the VDO by registration, since the VDO requires a financial and resource base (funds, grants, credits, savings) for future integrated village development.

CONCEPT DEVELOPMENT
FOR
PHED INTEGRATED RURAL
WATER SUPPLY AND SANITATION SCHEMES

GUIDELINES
FOR WOMEN PARTICIPATION

PHED is to implement integrated rural water supply and sanitation schemes of which women due to their connection to water and sanitation are the main beneficiaries.

The INTEGRATED CONCEPT applied in those schemes does not have room for the promotion of the social and economic development of women. It only can assist in solving those problems which village women are facing due to the lack of safe water and proper sanitation.

1. SCOPE OF WOMEN INVOLVEMENT

In their households, women are responsible for water provision, for family care and for family hygiene. They know best - better than men - which problems they are facing. Consequently, water supply and sanitation facilities need to be built based on their knowledge and resourcefulness by:

- * women identify their problems related to water supply and sanitation;
- * women take part in developing solutions;
- * women contribute to the program in areas they choose.

2. METHODOLOGY

Women participation in the INTEGRATED CONCEPT is not considered as an additional component. Similar to community participation, where the users are to be involved in all steps from planning to operation and maintenance, women are to be involved in those steps where they can contribute.

In such cases, the Village Development Organization (VDO) is to initiate gatherings of the women of the village. The women meet and develop proposals which then are integrated by the VDO into the respective step of the program. Wherever required, the assistance by other departments like Department of Health or the Department of Education is sought.

EXAMPLE A

ASSISTANCE BY WOMEN IN THE DESIGN OF THE WATER SUPPLY FACILITIES

Access to women in a traditional society is possible only with the consent of men.

- * The first step is getting the commitment by the VDO to support women involvement.

Due to their workload, village women only are interested in concrete actions related to their actual problems.

- * Second step is with the consent of the VDO, to organize a medical camp for children which their mothers will attend.

(For facilitating the access to village women, the Department of Health is to second a mobile team for organizing medical camps for children in all villages of the INTEGRATED CONCEPT.)

- * During the medical camp, the women are briefed by a female PHED representative on the water supply and sanitation package, the importance their own suggestions might have, and that they are invited to a women meeting. At the same time, data on actual diseases of those present can be collected.

A neutral place for regular women meetings is required and a local woman for organizing such meetings, both to be identified by the VDO.

- * During the first meeting, the women are discussing their problems and how those problems relate to the planned water supply and sanitation facilities. A topic for health education like diarrhoea is chosen by them for the following meeting.
- * During the consecutive meetings, health education at their own choice or hygiene education related to the planned water supply and sanitation facilities are given. This prepares the ground for discussing what type of system and which components they prefer like house connections or community tank, tube well, hand pumps, etc. Then they can develop proposals for their own contributions like site selection of stand posts, etc.
- * The proposals made and contributions offered are then to be integrated into the program by the VDO.

EXAMPLE B

ASSISTANCE BY WOMEN IN SAFEGUARDING THE FUNCTIONING OF THE SYSTEM

Women who regularly fetch water from the community stand post or from the community hand pump can be involved in monitoring the functioning of and the cleanliness around the system.

Women also can learn to do routine maintenance of their household hand pumps.

3. MANPOWER REQUIREMENTS

- mobile team of Department of Health for medical camps;
- 1 female PHED representative for briefing on the INTEGRATED CONCEPT, for discussing the proposals made and the contributions offered and for training the village women selected on how to conduct the women meetings;
- 1 village woman to be jointly selected by the VDO and PHED to be trained by PHED
- 2 health/hygiene educators of the Department of Health like LHV, etc.

CONCEPT DEVELOPMENT
FOR
PHED INTEGRATED RURAL
WATER SUPPLY AND SANITATION SCHEMES

GUIDELINES FOR
COMMUNITY OPERATION AND MAINTENANCE

by PHED Community Participation Team

9/90

PHED is to implement integrated rural water supply and sanitation schemes with user involvement. The costs of such schemes cannot any longer be borne entirely by the government. Furthermore, the burden of operation and maintenance on PHED has grown that large to hemper PHED's original responsibility of planning and building new systems.

The INTEGRATED CONCEPT explores how far communities can be made responsible for operation and maintenance and in which types of systems which operation and maintenance tasks the users might take over. With that experience, the development of a tariff system should follow.

1. Transitional Period

Those communities for which water supply and sanitation facilities are constructed are to take over the entire costs of operation and maintenance in the future. Furthermore, PHED is to be released as much as possible from its present responsibility of operating and maintaining completed systems.

The duration of a transitional period until those two goals can be reached will depend on:

- the quality of motivational as well as technical personnel employed for realizing the INTEGRATED CONCEPT;
- the willingness of recipient communities to cooperate;
- and the political backing of the new approach.

2. Procedures

The INTEGRATED CONCEPT involves the users in all steps of development from planning the facilities until handing them over with an ownership certificate so that operation and maintenance as well as monitoring rests with the community.

The key issue is that the community with the assistance by PHED can select their own system among those systems feasible and those components most appropriate to their resources. However, their choice must be guided by the understanding that they do not get any facilities provided they do not agree to at least take over routine and preventive maintenance. This refers to all systems, to gravity fed systems, household hand pumps as well as tube well systems.

Procedures leading to community operation and maintenance:

- Jointly prepared village profile providing information on village conditions and resources;
- Discussion by PHED and community on preferences of the users for certain components like community tank versus public stand posts, or stand posts versus house connections;
- On the basis of local conditions, which might allow for different systems to be built like gravity system, tube well and hand pumps, and on the basis of the community's preferences on certain components of the scheme, PHED prepares the design and cost estimates of those systems feasible and with components preferred by the community;

- Joint selection of final system and final components on the basis of construction as well as operation and repair costs, manpower required, hours of daily supply, and of all factors affecting the sustainability of the facilities to be built;
- With check lists for each component prepared earlier by PHED the community selects those operation and maintenance tasks which they think they can take and want to take over;
- written agreement.

Routine and preventive maintenance as well as most of repair of gravity systems and household hand pumps are likely to be carried out by the users. A community based monitoring system will be the safeguard for the regular functioning of the facilities.

However, for more complicated systems like tube wells complementary services are required.

3. Mobile Repair Units

Those units are to be stationed at all PHED sub-offices. Their responsibilities will be:

- management of complementary operation and maintenance;
- monitoring link between community and the Monitoring Cell at PHED headquarters;
- training of villagers on routine and preventive maintenance on the basis of check lists;
- trouble shooting which can be done on-site;
- assisting the community of getting major repairs done by the private sector;
- organizing major repairs caused by catastrophes beyond the ability of the community to pay for;
- organizing the rehabilitation of schemes at the end of their design life.

4. Private Sector

Whenever repairs cannot be done on site, then the Mobile Repair Unit of PHED involves the private sector by, in the case of tube wells, taking out the pump and giving it for repair either to the manufacturer or to a private workshop.

This ensures proper handling on site and selection of trustworthy repair workshops.

For the period of repair, the Mobile Repair Unit can offer a stand-by pump so that the community does not suffer from long periods without services.

5. Sharing of costs

During the transitional period, the following cost sharing might bring the users closer to be willing to pay most, if not all, operation and maintenance costs:

PHED is to take over the costs for

- personnel, offices and vehicles of the Mobile Repair Units;
- hardship cases where communities due to the natural conditions have to accept expensive systems although they cannot pay for them;
- repairs due to catastrophe;
- rehabilitation of systems at the end of their design life.

The community is to take over the costs for:

- routine and preventive operation and maintenance;
- spare parts for on-site repairs by Mobile Repair Units;
- renting stand-by pumps so that replacements can be purchased;
- costs of major repairs done by manufacturers or private workshops.

On the basis of reliable services provided by the PHED Mobile Repair Units, willingness might be built up within the community in future to take over the entire costs of operation and maintenance.

**CONCEPT DEVELOPMENT
FOR
PHED INTEGRATED RURAL
WATER SUPPLY AND SANITATION SCHEMES**

**GUIDELINES
FOR HYGIENE EDUCATION**

by PHED Community Participation Team

9/90

1. Need for Hygiene Education

In the rural areas many people suffer from water borne and sanitation related diseases. The impact by unsafe water and poor sanitation on their health is not understood. Moreover, the Government does not have any comprehensive program on hygiene education for common people and school children.

2. Target Groups

- 2.1 Since women are responsible for water provision, for family care and for family hygiene, women should be given priority in hygiene education.
- 2.2 Since school children are the future users of the water supply and sanitation facilities built under the Integrated Concept, they need to be educated on personal hygiene and on aspects related to the effective use of those facilities.
- 2.3 The rest of the community also needs to be made aware how the new facilities can help in preventing common diseases.

3. Methodology

3.1 FOR WOMEN

- * On request by PHED, the Health Department is to organize medical camps for women and children in those villages selected for the program:
 - as access to women for informing them on the government program;
 - for finding out from which common diseases they suffer;
 - for sensitizing the women to get health and hygiene education;
 - for arranging future women meetings to discuss their problems related to water and sanitation.
- * During the first meeting, they discuss their problems and choose place, time and the first topic for health education.

- * During subsequent meetings more health education of their choice is given. Then hygiene education related to the effective use of the facilities built can follow. Consequently, they can start discussing their own inputs to the water and sanitation program.

3.2 FOR SCHOOL CHILDREN

- * Hygiene education for school children is to focus on personal hygiene, general cleanliness of the school environment and on school sanitation.
- * Through the program and with the assistance by the VDO the school's existing sanitary facilities are to be improved or new ones built. The provision of facilities will depend on the readiness of the school for operating and keeping them clean after completion.
- * Education on the proper use of the school facilities is the entry point for teaching how to effectively use the village facilities.

3.3 REST OF THE COMMUNITY

Whenever appropriate, like in the briefing meetings by PHED with the VDO, individual groups of the village will be given hygiene education, always related to ensuring the effectiveness of the facilities built.

4. Teaching Materials required

- 4.1 A set of health education lessons on common diseases like diarrhoea, jaundice, worm infestation, etc. among which the women can choose is to be made available.
- 4.2 Similarly, a set of hygiene education lessons related to the impact and proper use of the new facilities is to be prepared like
 - cleanliness around the public stand post;
 - clean transport of water to the house;
 - clean storage of water;
 - transfer of diseases from faeces of sick people and children;
 - toilet habits.
- 4.3 Lessons on personal hygiene, school cleanliness and those listed under 4.2 need to be integrated into the school curricula along with the water and sanitation program.

CONCEPT DEVELOPMENT
FOR
PHED INTEGRATED RURAL
WATER SUPPLY AND SANITATION SCHEMES

GUIDELINES FOR
ROLE OF LINE DEPARTMENTS

PHED is to implement integrated rural water supply and sanitation schemes with user involvement. According to the proposals made by the Provincial Sector Investment Plan, the line departments LGRDD, DoH and DoE are to support PHED with village mobilization, hygiene education, etc. in executing those schemes.

Presently, however, the above 3 line departments are not equipped with sufficient and well trained staff for assisting a large water supply and sanitation program of PHED.

The proposals made here show the requirements of the PHED Integrated Concept. To meet those requirements the line departments need to specify which of their existing staff can take over some of the support tasks and for which tasks additional staff is needed.

1. Support by LGRDD

1.1 The main task of LGRDD is to

- initiate the formation of village development organizations (VDO) for undertaking sustainable village development;
- coordinate between VDO and line departments and other agencies;
- provide training in management to VDO nominees.

1.2 Manpower requirements:

- 2 social organizers (existing staff) in each district where PHED is executing the Integrated Concept;
- training at LGRDD's existing training facilities.

2. Support by DoH

2.1 The main task of DoH is to

- organize medical camps as an access to village women;
- provide health and hygiene education to certain groups of the village;
- train hygiene educators at village level like TBAs, school teachers and others.

2.2 Manpower requirements:

- Provincial Mobile Team comprising of one doctor, two female health educators and one driver for organizing medical camps;
- one female master trainer to train female village hygiene educators in the village;
- training in health and hygiene education for men by DoH's existing training facilities.

3. Support by DoE

3.1 The main task of DoE is to

- include hygiene education into school curricula;
- improve the sanitary facilities of those village schools where the Integrated Concept is executed;
- arrange personal hygiene competitions in schools.

3.2 Manpower requirements:

- existing teaching staff to be trained by DoH.

4. PHED's changing tasks in the Integrated Concept

4.1 The main tasks of PHED include

- implementation of the Integrated Concept like coordination with the Provincial Steering Committee, etc.;
- coordinating the support by line departments;
- briefing all parties involved;
- survey (technical feasibility + village profile jointly with VDO);
- design + cost estimates of alternative systems;
- initiating and supervising the construction of facilities;
- technical training of VDO nominees;
- monitoring jointly with VDO;
- complementary operation and maintenance by Mobile Repair Units.

4.2 Existing PHED personnel to be trained:

- the respective executive engineers along with the implementation of the Integrated Concept;
- the respective sub-divisional officers and overseers;
- designer and draftsmen on low-cost technology in water supply and sanitation.

4.3 Additional personnel required:

- one executive engineer in-charge of coordinating the Integrated Concept;
(briefing of Provincial Steering Committee, MPAs and district committees; coordination with line departments and within PHED)
- Monitoring Cell at PHED headquarters consisting of one executive engineer and two sub-engineers;
(briefing of VDOs; monitoring of construction; processing of data and submission to PHED management)
- per Mobile Repair Unit, one mechanical engineer in-charge and one mechanic, one electrician, one welder and one driver as field staff;
(trouble shooting; on-site repairs; arranging major repairs through private sector; monitoring of completed systems; liaison with Monitoring Cell)
- per district one female PHED representative;
(coordination with DoH at district level; briefing of women on Integrated Concept; coordination between women groups and VDO).

ACKNOWLEDGEMENT

The members of the PHED Community Participation Team are grateful for the continuous encouragement and guidance by the Chief Engineer of PHED and the Executive Engineer of the PHE Sanitation Division. Only their support as well as the contributions received from representatives of LGRDD, DoH and DoE and from colleagues of various invited institutions and projects made the preparation of this report possible.

PHED Community Participation Team

Seconded by:

PROJECT CO-ORDINATION CELL

- | | |
|--------------------------|------------------------------------|
| 1. Shahzad Perwaiz | Project Co-ordinator |
| 2. Dr. Tariq Jabbar Khan | Hygiene Education Specialist |
| 3. Zakauallah Khan | Community Participation Specialist |
| 4. Shamim Sultana | Women Participation Specialist |

PHE SANITATION DIVISION

- | | |
|----------------------|---------------------------|
| 1. Shaukat Jahangiri | Senior Motivation Officer |
| 2. Javed Akhtar | Asstt. Motivation Officer |
| 3. Jalal-ud-Din | Asstt. Motivation Officer |
| 4. Afshan Bano Saeed | Lady Health Educator |

NON GOVERNMENTAL ORGANISATION

- | | |
|-------------------------|----------------------|
| 1. Mohammad Shafiq Khan | Senior Field Officer |
|-------------------------|----------------------|

PAK/GERMAN PROMOTION OF PHED

- | | |
|---------------------|-------------------------------|
| 1. Nasreen Khattack | Women Participation Adviser |
| 2. Rauf | Asst. Administrator |
| 3. Javed Shaukat | Asst. Administrator |
| 4. Ingo Guhr | Community Development Adviser |