Community Management of Rural Water Supplies in Developing Countries

An Ongoing Participatory Action Research Project

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Report to the WSSCC Barbados Global Forum
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Executive Summary

A team from each of six water programme support agencies in as many countries[1], together with men and women from 24 rural communities, a national reference group in each country and an international reference group[2] are investigating how communities manage the maintenance, finance and use of their installed water supply systems.

The primary aim of this action research project is to develop and document a participatory research and support methodology which both the agencies and communities can continue to use for other situations and future problems and can share with fellow water organizations and colleagues in their neighbourhood and country. Other aims are to establish a structured exchange of know-how between all water agencies dealing with rural water management in the six countries and strengthen operational policies on and support for community water management. At the international level the groups aim at increasing the knowledge on how to bring about effective community water management systems.

The process and results will increase our insights into what comprehensive, gender-sensitive community management of local water resources and domestic water supply can achieve and what agency approaches, and tools can help rural communities and their local water management organizations to obtain and preserve an effective water supply service.

The 24 project communities have been selected based on their interest to take part in the project and their representativeness of the usual water management situations, in terms of geohydrology, mix of water supply technologies and socio-economic conditions. Each project/community team in each country identifies the local strengths in community water management, assesses and analyses remaining problems and develops and test tools and methods to reduce or solve these problems. Each project/community team has a mix of men and women including a technical and social specialist, representatives from the community water management organizations and the water users.

The project teams began their work with the preparation of a situation analysis on local management of rural water supply systems in their countries. Their study involved the review of documents and interviews with staff of all agencies who deal with the rural water sector, on their policies and strategies for the local management of rural water systems after their completion. Each team also made an in-depth case study of how one rural community was managing their improved water supply system. The country studies, which will be published shortly[3], formed the basis for comparing experiences in a project workshop and for jointly developing a design for the action research process,

1 PAID in Cameroon, CINARA in Colombia, Agua del Pueblo in Guatemala, NETWAS in Kenya, NEWAH in Nepal and the AGA KHAN Foundation in Pakistan
2 Members: Mrs. Grazia Borrini (IUCN-Switzerland), Mr. Bunker Roy (SWRC - India), Mr. Orlando Fals Borda (Universidad Nacional - Colombia), Mrs. Teresa Kavita (Catholic Diocese Machakos - Kenya) and Mr. John Thompson (IIED - England)
3 'Water supplies managed by rural communities - Country reports and case studies from Cameroon, Colombia, Guatemala, Kenya, Nepal and Pakistan', forthcoming early 1996, IRC, The Hague, The Netherlands

the selection of communities, the formation of local research groups and the participatory assessment and analysis of local management practices and results.

The national and international reference groups have since been formed and community-level action research has started. Both the process and the results will increase our insights into what comprehensive, gender-sensitive community management of local water resources and domestic water supply can achieve, and which agency approaches, and tools can help rural communities and their local water management organizations in obtaining and preserving an effective water supply service. For more information the names and addresses of the seven organizations and project teams are given as an annex.

Report to the Council

1. Background

At the Rabat Global Forum of the Collaborative Council in September 1993 it was recommended to the Council that it consider the creation of a working group to make an inventory of existing forms of community management and to provide guidelines and recommendations on how NGOs can best be involved as regular partners. The new issue of the role of users and the importance of involving communities in all stages of a project, and of community management in general was recognized in many cases but did not lead to a council-mandated activity. During the start-up meeting in The Hague in March 1994, investigation of the possibility of initiating advocacy and developing guidelines on community management was added to the Rabat Action Programme (RAP) activity list as A 14.

One of the mechanisms for implementing this RAP activity could be the dissemination of the results of the DGIS-funded world-wide participatory action research project on the role of rural communities in the management of their water supply and sanitation. The overall objective of this project is to improve the efficiency, sustainability and cost effectiveness of water supply management by rural communities in the South. The project is being undertaken over a four-year period by IRC International Water and Sanitation Centre with partner NGOs in six countries in Latin America, Africa and Asia. This report explains the approach, content, objectives and some of the preliminary results of this action research project.

2. Introduction

There is a growing trend in most countries in the South to encourage rural communities to manage their water supply schemes. Furthermore ESAs are promoting decentralization and greater community involvement in decision making and management. As a result many governments are trying to change their role from "provider" to "facilitator" and are placing more emphasis on water resources management at the lowest appropriate level. This, however, brings out the need for empowerment of the users and interaction between, users, NGOs, private sector and local government.

Decentralization and stronger user's involvement, however, faces many constraints. On the side of the agencies there is a strong tradition and focus on construction of water supply systems. Little emphasis is put on the establishment of management capacity at local level for lack of experiences and strategies. On the community side, there is often a lack of experience with management of water supply systems and a lack of tools to cope with their operation.

Experiences reveal a significant potential within user communities to take up management roles. Supporting a more prominent role for communities as managers of

improved water supply systems has several advantages. It can lead to greater efficiency in system performance and improve cost-effectiveness for both communities and agencies and offers better prospects for the long-term sustainability of water supply systems.

The understanding of community management is not fully established, and weaknesses and gaps exist, preventing communities from benefitting from their water supply systems. Problems include: insufficient capacity building, partial coverage of user populations, lack of effective and equitable financing systems, absence of suitable management tools, environmental degradation of watersheds and absence of proper gender balance in planning for, contributions to and control over the established water service.

Much can be achieved by building on experience with locally developed management patterns for traditional water sources. Water collection and use are often regulated by explicit or implicit agreements. Many of these agreements are made by women, who have long played a crucial role in the traditional management of water sources and have also proven to be capable of taking responsibility for complex technologies, as well as managing basic care of water points. Women can therefore play decisive and indispensable roles in ensuring the success of water improvement programmes, when neither party is overburdened or excluded and when work, functions, authority and training are divided in a well-balanced way.

Community management does not imply that communities must take care of everything or pay the full costs. The idea of partnership allows scope for shared responsibilities between supporting agencies and communities. The functions to be performed by local management organizations can thus vary considerably, depending upon the agreed division of responsibility between the agency and the community.

Many agencies and communities are struggling and trying to find solutions. The action research project on community management focuses precisely on this interface. The project started in 1994 with financial support from the Netherlands Government (DGIS). It is the logical follow-up to a workshop with seven partner organizations from the South on community-managed water supplies held in November 1992 at the IRC International Water and Sanitation Centre in The Hague, with support from DGIS, UNDP, UNICEF, WHO and World Bank, and an earlier literature review concerning community management. The workshop resulted in a report published in 1993, *Community Management Today: The Role of Communities in the Management of Improved Water Supply Systems*. Both the literature review and the workshop results showed that while progress had been made in the management of water supply systems by communities, there was still considerable need for further development.

The project is being implemented by PAID in Cameroon, CINARA in Colombia, Agua del Pueblo in Guatemala, NETWAS in Kenya, NEWAH in Nepal and Aga Khan Rural Support Programme in Pakistan, in close collaboration with IRC (International Water and Sanitation Centre, The Netherlands)[4]. Together with the national partners the

4 The research project is titled "The role of communities in the management of water supply systems, Participatory field research

project is being carried out within existing rural water supply programmes implemented or supported by governmental or non-governmental organizations in their countries.

In the four years allocated for the project (1994-1998) it will aim to establish better insight into key bottlenecks in community-managed rural water supplies, and the development of problem-solving methodologies and tools. It is based on participatory action research to assess water supply management problems with local men and women in selected communities as well as with agency staff, and to try out solutions. This will facilitate the development of participatory strategies and management tools to enhance the capacity of rural communities for the management of their own water supply systems with appropriate back-up support and guidance. At the same time, human capacity will be developed in the partner organizations to implement a participatory methodology to water supply system management.

Water supply management problems and potentials are being assessed and addressed in a participatory manner with local men and women in 24 selected communities, in which water supply systems of various types are already functioning and self-managed. The research design allows increased understanding of how different types of communities can effectively manage different types of rural water supplies and enhance the capability of the participating organizations to effectively support communities in establishing and performing their management responsibilities. It applies participatory approaches, methods and tools to address the weaknesses encountered.

The four communities in each of the six countries have been selected based on their interest in taking part in the research project and their representativeness of the usual water management situations, in terms of geohydrology, mix of water supply technologies and socio-economic conditions. They represent a range of environmental, socio-economic and cultural conditions as well as variations in managerial performance.

National Reference groups have been established to create a platform for acceptance and discussion and to ensure that problems by national organizations are also addressed.

The main phases and activities of the project will be as follows:

- Preparatory phase (1994), in which the partner organizations form project teams, collect existing information on other community-managed rural water systems in their country and visit selected communities for an orientation on key issues;
- **Training and field preparation** (1994, 1995), starting with a joint workshop, in which the project teams review the first findings, plan the research design and prepare participatory assessment proposals, workplans and budgets. In regional workshops further preparation on plans and methods is done. At this stage also a dissemination strategy will be developed. Review by international and national group;
- **Participatory field investigations** on problem identification and diagnosis (1995), in which the research agenda is developed for further experimentation. It consists of in-depth understanding of local conditions and actual demand for managerial

improvement through participatory research. This includes the assessment of water-related environmental aspects and general sanitary conditions in the communities as well as gender aspects of the establishment and management of the water service; appraisal of possible solutions, and

- Joint **development and field testing of problem-solving strategies, methods and tools** (1996, 1997). The research teams, in close cooperation with men and women in the communities concerned, will develop strategies, methods and tools to address managerial problems and monitor the effect on service performance. They will document the initial results, which will be reviewed by the international and national support group;
- **Evaluation, follow-up and sustaining the process** (1997) comprise the final phase, in which reporting and dissemination of findings through international and national groups will take place.

The research project has a rural focus because community management of water supplies is more widespread in these areas and the water systems installed (handpumps, piped gravity systems) are more suitable for local management. Moreover, although urbanization is increasing, a greater number of people in the South still live in rural areas. Sanitation is included as far as disposal of waste water and protection of water resources is concerned. The findings of the research project will also be relevant for those peri-urban communities which still resemble rural settlements in their physical conditions and socio-economic characteristics.

The project can have a national impact in each of the six countries, as the national reference groups form a link with many sector organizations. Project results will be shared with members of these groups.

A wide dissemination of experiences and results is envisaged, with the purpose to help shape the emerging trend towards decentralized management and implementation of water supply systems. Training water sector staff and sharing findings and experiences on the approach, the activities, process and results of the project with organizations in the countries concerned and with a wider international audience will very much contribute to the general development of effective community management in rural water supply. This will foster the design and implementation of more sustainable projects. It will support the mobilization of people for communal action and will promote inter-agency collaboration and coordination. Making an organized information base on community management available at country level will help people to improve their strategies and will facilitate information sharing between rural people and technicians, grassroots and planners.

This needs to be developed both at national level in the six countries and at international level to ensure that results can be accessed. In this context the recommendation coming out of the NGO Consultation meeting to the Collaborative Council (August 1995) to create a working group for the next biennial cycle to highlight effective operationalization of community-based participatory approaches to water supply and sanitation is also strongly supported. For the same reason DGIS, IRC and the partner organizations have envisaged an active dissemination of the process and

results both at national level in the six countries and at international level to governmental and non-governmental organizations in developing countries and United Nations agencies, bilateral donors and development banks.

Moving further forward on the results of the research project will require work on several fronts. From the project experience lessons will be drawn on improved strategies, innovative methods and tools for building management capacity in communities, which adjust easily to the varying local conditions. These need to be shared, and agencies need to be assisted and staff trained to help them to make the necessary adjustments to provide effective support to community management. Particularly effective will be the development of the training capacity of the project implementing organizations for national and possibly regional water sector staff training. Backstopping capacity for training courses, as well as a 'training for trainers' course at IRC for capacity building at international level must also be developed. In this way the dissemination strategy will contribute to the ongoing operationalization of the policies concerning community-managed water supplies for rural areas.

3. Approach and Methodology

Some of the elements of the approach are as follows:

- The balance of cooperation should swing to partner organizations and enhance their capacity to support community management.
- Research methodology should enable communities and supporting agencies to share, analyse and enhance understanding of conditions and allow planning and implementation of problem-solving actions.

- Participatory action research (PAR) relates research, training and action and will thus strengthen problem-solving capacities.

- Learning process is for all involved and is linked to identification, development and testing of problem-solving strategies, methods and tools.

- For the research a combination of various methods and tools will be used, which are consistent with the methodology chosen, such as semi-structured interviews; participatory mapping and sanitary surveys; community walks and transects; seasonal and diagrams of flows, causality, quantities and trends; Venn diagramming of local organizational relationship; scoring and ranking; brainstorming; portraits or case studies.

4. Direct Results to be Expected

- Improved management of rural water supply systems in 24 communities in six developing countries.

- An enhanced capacity of partner organizations in six countries for participatory research and problem solving.

- Eighteen staff members of partner organizations fully trained in implementing participatory action research.

- Five project documents:
  (1) a guideline document describing methods and tools for the participatory assessment of the performance of community managed rural water supply systems;
  (2) a set of management tools and monitoring instruments for use by the communities to strengthen their capacity for water and water-related environmental management;
  (3) a description of approaches and methods for improving and supporting the efficient, sustainable, gender-conscious and cost-effective management by the user communities of improved water supply systems;
  (4) a research report describing and analysing the performance of 30 community-managed water supply systems in six countries;
  (5) a final document describing the process and results of the participatory action research on the management performance of the communities.

- A system to learn from each other's experiences at community, organization, country and international level.

- A project proposal for a strategy for wider dissemination of the project results.

5. Results and Experiences in 1994 - 1995

Some examples of project results from the first year are:

State-of-the art study on community-managed rural water supply

All teams prepared state-of-the art country reports which contain very interesting data on the rural water supply situation and the role of community management in keeping these systems functioning and covering their running costs. Each team investigated to what extent the various water agencies in their respective countries promote community management of improved rural water supply systems. Using staff interviews and document reviews, the teams assessed how these agencies involve the communities in the preceding processes and work with them as the future managers of the local water supply. They also found out if data were available on the management performance of the communities and did an in-depth case study in six of them - one per team - which had managed their improved water supply for, in most cases, several years.

Each team planned, implemented and reported on the work in their own way, with as common element a general checklist prepared on the basis of an international workshop on community management of rural water supplies held The Hague in December 1994. The checklist, included such elements as the overall situation of the rural water supply sector, the various governmental and non-governmental actors involved in the sector,

the administrative and legal frameworks for community water management, the type of systems introduced by the various agencies, the participation procedures used for establishing the systems, the attention paid to a gender balance in work and decision making, the preparation for future management tasks and the monitoring of and results with community management.

Their reports show that in each country community management of completed rural water supply is the accepted national policy, but implementation is not universal and each agency has developed its own procedures - some very limited, others more comprehensive and in line with the greater authority and more extensive knowhow needed to locally manage a water system. None so far treat communities as future managers in the sense that the latter can make their own choices from a range of options, each with their own pro's and con's, and none train communities for all community management aspects. Implementing agencies also have no structured exchange of experiences on how to work with rural communities and organizations as the managers-to-be of their own water supply, and no lead agency that ensures that the lessons learned get translated into a more general operational policy. Some papers express the hope and intention that the above-mentioned national reference groups will come to play this leadership role.

Some highlights of these studies are:
In Pakistan, five programmes for community-managed rural water supply systems are under way in Baluchistan, Punjab, Azad Jammu and Kashmir and the Northern Frontier Areas, with support from UNICEF, DGIS, World Bank and IDA. Each programme sets up a different form of community management. Existing community-managed water systems do not function well, partly for technical and ecological reasons (landslides), partly because of poor administration and particularly lack of management training. The first four schemes built with community involvement in Jammu and Kashmir have just become operational. The present project is expected to give much practical knowledge on where and how to strengthen community management and how to best support it.

In Nepal, the Nepalese Government and UNICEF carry out the largest number of rural water supply projects. In addition, ESAs support participatory projects on a smaller scale. Community participation is part of the projects, but community management is still in its initial stages. In general, focus has been on technical capacity building. Payment is not universally introduced and where existing is often limited to operational costs only. Managerial capacity is beginning to be built up in some cases.

In Kenya, a large number of participatory water supply programmes exist, executed through the District Water Engineers and through donor and NGO-supported programmes (DGIS, FINNIDA, SIDA, CARE, SIMAVI, CRs, KWAHO, CPK/Catholic Dioceses and Water Aid). All focus on community-managed systems, but little collaboration and harmonization of approaches exist and capacity building for local management is underdeveloped. Performance of community-managed schemes is not monitored systematically. Within the agencies interest in exchange of experiences and action research is high.

In Cameroon, two national and four external agencies are, or have been building rural water supply systems. Since independence they have established 4709 out of circa 7000 rural water supplies (point sources and piped schemes). Another 45 are under construction. Of the 4754 schemes, 438 or 9% have been implemented to be community managed. Their reported breakdown is 39 or 9%. Most of the systems built without community involvement are no longer operational. In a significant number of cases even their location is no longer known. Systems built for community management have a much better performance record, but nevertheless face a number of maintenance and management problems. Interest in action research is therefore high.

In Colombia, a new national law lays the responsibility for construction and management of rural water systems on the municipalities. Elected water committees are now compulsory and have a legal status. This has created a new situation, with communities free to seek assistance from either special sector agencies, of whom some have experience with establishing community-managed water supplies and some do not, or from the private sector, which has no experience with community-managed systems. The report gives an overview of what the present sector agencies do, what type of community management they promote and what the results are in qualitative terms. A survey covering six sector agencies, assisting a total of 1128 communities with self-managed water supplies, showed major problems in monitoring and support (very limited), environmental aspects (not addressed, except for one agency), continuity, access and quality of service and cost coverage. Gender-wise, women are especially involved in financial management.

In Guatemala, the Ministry of Health and Social Assistance is legally responsible for construction and control of functioning of WS systems. The Government has five programmes and three finance funds. An Institute for Water Resources was created in 1992. More than 200 NGOs also construct water systems. Every institute has its own norms, including whether or not water and/or maintenance is paid for. However, the National Plan stresses participation in construction, charges communities with operation and maintenance and entitles them to set own tariffs. Though all agencies stress participation, a minority gives communities a say in decision making. Training for management focuses on operation and bookkeeping and is given to men. Women get hygiene education. Elected committees manage the systems. Mainly men take part in elections. Monitoring and support after construction if done, is carried out by the agencies. A lack of water exists due to environmental, technical and managerial problems and inefficient water use. Committees and operators are not trained to deal with these issues. Water quality is influenced negatively by insufficient source protection and lack of sanitation. Capacities must be developed for managing water resources and water supply.

Assessment of a community-managed rural water supply system

Each team also carried out a gender-specific assessment of one community-managed rural water supply system. The case studies give insight into how the various agencies analyse community management and what some of the problems are. Small community-managed rural water supply systems, while not yet working as well as is

hoped for, nevertheless seem to be a workable solution to getting better water more reliably in the circumstances studied, as many of these systems do at least provide water to a substantial part of rural population. The case studies show, however, that the supply does not always serve all sections of the villages and that the administrative and managerial aspects of the work give more problems than the management of the technical repairs. Very few agencies also promote a more balanced division of physical work, decisions, functions and training between men and women, although all agree that women should be involved, as water is an women's issue. The protection of catchment areas and the preservation of water quantity and quality are increasing problems.

The findings can be summarized as follows:

Technology. Five of the six cases are villages with piped water supply, with pumping (in Cameroon) or by gravity. In one case (in Nepal) the village has both handpumps and a piped system. One village (in Colombia) also has a treatment plant (slow sand filter). The villages have been managing the systems for between one and eight years. All villages also have traditional sources. These are now not included in the management system.

Management. All systems are operational and in principle have enough water, but they suffer from various operation and maintenance problems, such as leaking pipes and taps and inadequate storage tanks. In two cases a large part of the population is not served. All are managed by elected committees, which meet regularly. In two cases (both Latin American), the water committees have grown into basic services organizations: a community enterprise for water supply, sewerage, solid waste collection and postal service in Colombia and a grassroots organization for education, water, women's development and health in Guatemala.

Human Capacities. Management committee members are not always clear about their roles. Accountability to the users for the performance of the system and for financial management, if present at all, is quite limited. Abolishing the existing committee and electing a new one is the usual step taken (three cases). The managerial system itself is not strengthened. Training, if given, is limited to technical training for the operator and bookkeeping. Other managerial aspects are not addressed, with the exception of water quality management (in Colombia).

Gender. Mixed committees were present in the cases in Colombia, Kenya and Cameroon. In the other cases, women do not take part in decision making and in the general assemblies, where water committees are elected and where feedback and authorization for important decisions take place. In the cases in Kenya and Colombia paid jobs are held by men, while women's work in caretaking, fee collection and replacing the operator is voluntary. In the Colombian case, female committee members were not trained, while males did.

Financing. In five of the six cases water tariffs have been set and people pay for water, which is registered through simple bookkeeping. A wide range of tariff systems exists.

In Nepal a *group of households* jointly shares a fixed amount per waterpoint, the exact amount for each household depending on the size of the group. In Cameroon, each *adult* in a user family pays a fixed amount, whereby females pay 3/5th of what males pay, and households which launder or have dry-season vegetable gardens or cattle at home pay extra. In Guatemala, each *household* pays a flat amount per month or year for daily operation and maintenance costs, while fundraisings are organized for large expenditures. In Kenya, *households* pay a fixed tariff for house connections, which is four times that for stand-post use. In the Colombian case each household pays *according to consumption* through metered house connections.

The money is used for day-to-day operation and maintenance costs; in general there is no long-term planning. Action against defaulting is not always taken, including in cases where those not paying get a regular service.

Environment. Some work is being done, especially fencing off the source and tree planting. Water quality preservation, excreta disposal and waste water disposal and drainage are not systematically addressed. Communities are not yet prepared for managing their environment.

Training and Planning Workshop in The Netherlands

The 1994 workshop at IRC aimed to exchange experiences and jointly develop a framework for participatory action research on community management of rural water supplies.
Participants acquired participatory tools that enabled them to strengthen the dialogue between their institution, resource persons and local communities.

The workshop used principles of experiential learning (or 'discovery learning'), which take the participants' own experience and working context as a starting point to develop new skills, attitudes and knowledge in a participatory manner.

As a picture emerges of what is actually being done and of what the teams believe should be done, additional knowledge and skills are introduced in order to close the gap. The skills needed to realize this bridging are discussed through case studies, role plays, didactic games and group assignments.

The workshop develops from analysing one's own context through theory-building and acquisition of participatory approaches, to a workplan suited for each country team for implementation by the partner organizations. In this specific workplan teams apply a participatory action research approach, participatory methods and participatory techniques to the practice of community management of rural water supply and sanitation in their country. The workshop included a self-reporting system whereby the participants monitored and evaluated the workshop's activities through a brief daily report.

During the workshop it was found that community management:
· goes beyond community participation, and equips communities to take charge of their own water supply improvements;

· involves a long-term and changing partnership between communities and supporting agencies. It strengthens the capacity of each partner and enables their combined resources to be used more effectively;
· can mean more widespread implementation of sustainable water supply systems;
· means a new role for support agencies as facilitators rather than providers, demanding new skills and offering greater opportunities.
· brings benefits which can extend beyond water into other development activities;
· extends its scope beyond rural water supplies to peri-urban supply; and
· can be monitored and evaluated using slightly adjusted conventional progress indicators, as capacity building is a major component.

Furthermore, in the course of the workshop, the participants:
· acquired a better understanding of the meaning of Participatory Action Research and knowledge about participatory tools;
· improved the original research sequence of phases;
· developed criteria for the formation of a National Reference Group in each country;
· developed criteria for the selection of the research communities;
· developed checklists to be used during diagnostic phase;
· prepared an overall workplan and budget for 1995;
· met with the International Advisory Group.

The material and the methodology developed for this workshop will be adapted in order to prepare for international - and regional workshops on participatory approaches to community management support.

Regional workshops on methods and tools

In the three different regions an active interchange is established between the participating research teams in order to create opportunities for mutual learning and support. Regional workshop held in this respect provide excellent material for training on participatory tools to enhance local initiatives.

The teams reported a better understanding of the Participatory Action Research (PAR) approach. They designed a format for the PRA tools, constructed an activity-tools matrix, adapted the community selection criteria, made a final ranking of the preselected communities, developed guidelines for holding community meetings, did fieldwork to test the already developed tools and start problem identification, updated the overall workplan, adapted checklists prepared in the Netherlands and, finally, drafted a report on proceedings and outcomes of the workshop.

Formation of national reference groups (NRGs)

Reference groups in each of the countries have been established to actively share information and experiences to maximize the outputs. This will also strengthen the links in each participating country between non-governmental organizations, research organizations and national governments, and contribute to the further development of community-based approaches in the water sector at both operational and policy levels. This provides a possibility to integrate research results in the policy in those countries.

During the workshop in the Netherlands, criteria were defined for the selection of potential members of these so-called NRGs. However, it was also clear from the discussion with the International Advisory Group, that each country team needed to adapt the defined criteria to the possibilities and political context of their respective countries. No one strategy can be followed. Accordingly, although common Terms of Reference and criteria for selection were defined, tactical differences could be noticed in the application.

All six country teams were active on this aspect in the first months of 1995.
In Kenya, discussions were held with individual institutions and agencies who expressed their interest to participate. A combination of NRG members from institutions, NGOs, church and government agencies like water, health and community development and a few from donor agencies have been selected.

In Cameroon, pre-selection was made of potential NRG members and contacts were made with organizations promoting rural water supplies. A total of 12 agencies were contacted including the National Water Cooperation (SNEC), Helvetas, CDD, CIACC, Care International, Ministry of Mines, Water and Energy and Ministry of Social and Women's Affairs. Only SNEC showed little enthusiasm. At the end of January, a workshop was held with potential Reference Group members. Here the project was presented, and each institution presented a brief summary of its activities detailing achievements, methodology and constraints, particularly in aspects of community management of water supplies. Results of this workshop will be compiled in a booklet. A second NRG meeting was held for discussion on the selection of action research communities. During the meetings potential members showed a lot of interest in the project and in meeting each other, and they would actually like to meet more frequently. A country secretary for coordination is to be studied which will need some external funding.

In Pakistan, letters were sent to a dozen government departments and agencies who are involved in the rural drinking water sector in order to inform them about the project. Yet no mention was made of an NRG in order to avoid raising expectations. The Pakistan team decided to postpone the official start of an NRG to a later stage, to allow more time for the team to get better established and gain more confidence. In Guatemala, a second meeting was held with reference organizations. These are: UNEPAR, PAYSA, CARE, UNICEF, SECRETARIA, SERJUS, HELVETAS, ECOTEC and CECI. Three other organizations that were invited did not show interest. Three organizations have shown interest to be part of the team, which resulted in two formal arrangements for the integration of team members from PAYSA and UNEPAR.

In Colombia, the reference group is based on regional organizations: Programa AGUA PURA of Secretary of Health of Valle, Committee of Coffee Growers in Valle, FINDETER, Departmental Planning Department, EMCALI, the water authority in Cali. National entities like the Ministry of Development and its Water Entity will only participate on a partial basis. However, these organizations will be fully informed.

In Nepal, a first meeting was attended by representatives from six different organizations: UNICEF, Nepal Red Cross, HELVETAS, FINNIDA, Water Aid and Department of Water Supply and Sewage. They were briefed about the set-up of the project, its objectives, and methodology. The representatives shared their experience in community water management and came to a common understanding about the concept. A discussion was held on what the project could offer and vice versa.

Selection of action research communities

The field work is being carried out in four communities in each country. For this reason communities are selected which have various types of water supply systems and service levels and represent a range of environmental, socio-economic and cultural conditions as well as variations in managerial performance. Detailed determination of selection criteria took place in the Planning and Training Workshop in the Netherlands.

Based on these criteria actual selection of communities by the project partners took place during the first phase of the project, with an emphasis on selecting water systems and communities which are representative for general conditions in the project countries. During the Regional Workshops in Guatemala, Nepal and Cameroon, inter-team presentations of the process and final selection took place and a critical analysis was made of the proposed communities.

This resulted in some changes of the selections made.

All in all, the procedure to come to this selection was seen as participatory, objective and thus useful. National reference group members were in many cases involved in the selection procedures and accepted the criteria as realistic. Fear for political or institutional bias could be abandoned.

In Nepal, eight pre-selected communities were ranked. Based on the priority ranking exercise, three communities were selected, and one was decided on after another visit was made. The group did not only select the communities based on the highest score, since variety of technology, performance and implementing agency was also considered by the group as important.

In Pakistan, a long list of potential organizations/projects and communities was elaborated. Through informal dialogues, some of the organizations and communities were contacted. Organizations were visited in order to come to a short list of eight communities, and these communities were visited in order to get socio-economic data. Through a ranking exercise, four communities were then selected.

In Kenya, two communities from Western Kenya were selected in collaboration with the Rural Domestic Water Supply and Sanitation Programme under auspices of the Lake Basin Development Authority (LBDA). Both communities were visited. One community has a gravity-fed water system and the other has shallow wells. In both communities, the projects have been completed and handed over to the communities. Two other communities have been selected in Eastern Kenya, in Machakos and initiated by

women's groups. Here, they use water harvesting e.g., roof catchment, rock catchment, pans and shallow wells.

In Cameroon, during the preliminary NRG workshop, zones were identified where selection of communities should be concentrated: North West Province (English) and West Province (French speaking), giving emphasis to the bi-cultural structure in Cameroon. Provincial chiefs of services were then requested to propose four communities in each zone using the criteria developed in the Netherlands. Preliminary visits to these eight communities and detailed study by the team resulted in the selection of five communities: two in Fombot area; one in Mwengwi Central sub-division and two in N.W. Province. The five communities were presented in the second NRG meeting. Based on the comments of this meeting and the ranking exercise during the regional workshop, it was decided to actually select two gravitational community water schemes and still explore for other systems such as wells and handpumps.

In Guatemala, based on the criteria defined in the Netherlands, twelve communities were selected. In each of the communities a meeting was held with the water committee, interviews were held with local leaders and observations were made. Then, based on the information gathered, field visit notes were made and discussed to come to a final selection of four communities. In Colombia, ten pre-selected communities were visited, and the final selection was discussed in the Regional Workshop in Guatemala.

Starting up of problem identification and appraisal

The problem identification started after the regional workshops and will continue the rest of the year. Research methodology places strong emphasis on participatory and gender-sensitive appraisal and needs assessment approaches.

Village Walk: Start of Joint Problem Identification

A village walk in the village of Nyen and Mbemi, about 30 kilometres from Bamenda, Cameroon, turned out to be an excellent start of the actual participatory problem identification phase in the research project.

The regional workshop in Cameroon, of which the village walk formed part, brought together the project teams from Cameroon and Kenya. It contributed to further development of skills for using participatory tools in community diagnosis, for problem and potentials identification, and identification of available resources. It also contributed to mutual learning, not only between the project teams of both countries, but also between the communities involved, the project teams and the outside officials.

The village walk in Nyen and Mbemi, in which village water committee members as well as officials from in- and outside the villages took part, was an excellent tool to get more acquainted with the community members, the different areas, and problems and potentialities in different zones of the two neighbouring villages. During the village walk in Nyen the group was directed through all the quarters of the village while noting the important features. While walking the members of the group discussed among themselves and occasionally stopped at a household to talk with the people of the compound. The walk gave a good overview of the water situation, and also the uses of the palm and raffia trees, which are the main sources of income for the villagers. The processing of the palm and raffia demand a sizeable amount of the communities' water. The three-hour walk in the villages which depended on the water scheme aroused much interest among the population and the officials and it facilitated a good understanding with the villagers.

This made it a good starting point for the planned village mapping. "When in the afternoon we were making the two maps the group of participants was considerably bigger. This continued the next day. Some 30 community members were participating during the Venn-diagram. During the household sketches the group of researchers was tripled with the participation of village researchers," said one project team member. The Venn diagram shows the key institutions and individuals in a community and their relationships and importance for decision-making. It is developed by first identifying key institutions in a community and representing them by different-sized circles. In discussion with participants the size and arrangement, overlapping or not with other circles, is made until the representation is accurate.

The whole exercise aroused a lot of enthusiasm and confidence on the side of the villagers, as well as on the side of the project team. This became clear during the feedback at the end of the two-day visit, the concluding remarks, and the meal the villages offered to the project team at the end of the visit. The villages were now ready for problem identification.

Both qualitative and quantitative data collection on system performance and service are used, such as distribution problems, breakdown rates, costs, demographics, local organization, socio-economic characteristics of served and unserved households. For the research, a combination of various methods and tools are used, such as semi-structured interviews; observation; participatory mapping for social, demographic and water resources maps and sanitary surveys; community walks and transects; seasonal and other diagrams of flows, causality, quantities and trends; Venn diagramming of local organizational relationship; scoring and ranking; estimates and quantifications; brainstorming; key probes, and portraits or case studies.

The assessment includes issues such as the roles of men and women in local management, the effects of gender factors on the efficiency and use of the water supply, environmental concerns such as water source protection and watershed management, and issues of cost recovery and community-based financial management.

6. The Next Steps: 1995 - 1997

The next part of the process involves a series of activities which can be summarized as developing the agenda for experimentation: gathering of information for detailed analysis of the identified priority problems, and identification of promising solutions. This may include: the screening of indigenous technical knowledge and past experimentation in the community as well as gathering promising ideas from outside the community as options for further testing.

In this process data analysis will be carried out by partner organizations with backstopping from IRC. Results will be reviewed with participating communities in a series of return visits to field sites. During these visits the objectives will be to establish criteria for priority setting, to critically review potential solutions and to reach agreement on the agenda for experimentation.

At the level of supporting agencies interviews will be held to review their support approach and make comparisons possible with the findings from the communities.

After finalizing this phase results and process followed will be reported back to the country reference groups. IRC will assist in compiling the review reports into a suitable form for national and international dissemination.

Outcome of this phase should be an improved overview of the community water supply system, improved skills of communities and project teams to identify problems, understanding of root causes or effects, and detection of promising "solutions" (based on indigenous knowledge as well as technical knowledge from outside). Also consensus should be reached on priority problems and a general agreement on possible solutions to be tested (an agreed "research agenda"). An increased awareness, self-confidence, trust and appreciation can also be one of the outcomes, as well as an improved community participation and organizational basis for experimenting.

Development and testing of problem-solving action strategies, methods and tools, and documentation of initial results

Action needs and problem-solving strategies, methods and tools will be discussed in regional participatory workshops facilitated by IRC team members. Participants in these regional workshops are again the team members of two partner organizations from each region. The workshops will build on the performance review findings and subsequent consultations with involved communities. During the workshop, strategies, methods and tools will be outlined or reviewed for further refinement by the teams and in the field. The teams will be trained to develop experimental designs in the participating communities in order to test the chosen strategies, methods or tools. These designs should be reliable and manageable and afford the communities and project team an opportunity to monitor and evaluate their influence together. Detailed development and design work will be undertaken by the partner organizations. The international advisory team will be asked about their experiences and comments.

In their respective countries the partner organizations will review the draft strategies, methods and tools together with the project communities and make revisions if required. They will draw up and implement a programme for testing with the communities concerned and prepare necessary training in order to strengthen local capacity to implement and monitor experiments (skill development, group building, self-confidence, organization and supportive linkages with other communities or organizations). As part of the project a small budget will be available for some technical improvements in the community water supply system, if needed.

Monitoring and evaluation criteria and procedures will be established for this phase. Close monitoring will facilitate adjustments of the strategies, methods and tools according to local findings and requirements in close consultation with IRC. Monitoring during this phase may also lead to additional research activities. Development of the monitoring approach will be done with the partner organizations and the communities to ensure that it provides for the best possible learning opportunity for all involved. Evaluation objectives will also be set jointly at this stage to help focusing the research.

The outcome of this phase should be improved management capacities and enhanced understanding; improved skills to design and implement experiments; accessible monitoring and evaluation methods and a well-organized process of experimentation; intensified sharing and cooperation between participating entities and a growing understanding of the supportive task of outside institutions; and different tested strategies, methods and tools for community management of water supply systems. Furthermore, confidence in problem solving by the community will be reinforced.

Evaluation and follow-up

After a year of experimentation final evaluation of the process and achievements will be carried out. Findings from monitoring will be summarized and complemented with information on latest developments. These will be analysed in collaboration with the respective communities and agencies.

The partner organizations, with support from IRC, will document the process and findings from the action research and present them to the communities. Results will be presented in a national meeting with the reference group and open to participants from other organizations.

At this stage other possibilities for national dissemination of the results will also be explored with the participating organizations in the countries, including options to mobilize the networks developed during earlier phases, as channels for communication and dissemination. This may include invitation of key persons to participate in planning/evaluation meetings in the communities.

The partner organizations will also set up a system to monitor the longer-term effects of the action research with technical support from IRC. They will document the main process and outputs of the project which will be brought together by IRC in a form suitable for publication, for international distribution.

The country-level project teams will meet in the Hague for an end-of-project review meeting to finalize the material, arrange for dissemination of immediate findings and agree on activities for monitoring of long-term effects and ongoing development of community management of water supply.

Outcome of the evaluation should be a clear picture of both the results of the experimentation and the process followed. Furthermore, information on the suitability of the tested management practices under local conditions will be available as well as clear guidelines of how to implement the tested idea. Other outcomes should be enhanced diffusion of strategies, methods and tools; improved development of institutional linkages; establishment of system of training and communication; documented and operationalized approach for participatory action research as well as resource materials, which can also be used for other areas of interest, and a more supportive environment for experimenting.

7. Recommendations

A general recommendation is that all those involved in water and sanitation sector programming and implementation should from now on recognize the importance of involving communities in all stages of a project. This means the acceptance that building the capacity of men, women and communities to solve local problems is a major step towards effective water and environmental management.

In addition, we have some more specific recommendations directed at the Collaborative Council itself and at Council members.

Recommendations to the Collaborative Council

· Create a working group for the next biennial cycle to highlight effective operationalization of community-based participatory approaches to water supply and sanitation.

· Start publishing and distribution world wide of the experiences already gained on community management and support strategies from the DGIS/IRC research project as well as other likewise projects.

· Recommend sector agencies and donors to recognize the importance of community management and community-based participatory approaches and act accordingly.

· Take steps to integrate findings on community management and the experiences resulting from its operationalization in other working groups and mandated activities of the Council, especially in the working groups on Operation & Maintenance, and Institutional & Management Options.

· Recommend to governments to change seriously their roles from 'provider and implementor' to 'facilitator'.

Recommendations to Council members

· Start participatory action research projects like the DGIS/IRC initiative in other countries in order to get a better understanding of the specific conditions in different contexts and to gain more experience.

· Adopt participatory learning and action approaches during planning and implementation in the water sector which are congruent with the objectives of community management both for ESA staff and for communities.

· Understand that participation does not simply imply the mechanical application of a tool or method, but instead is part of a process of dialogue, action, analysis and change.

· For a participatory and people-oriented approach to take off, capacity building in such approaches is necessary. Members at the Council can play an important role in and through their agencies by including components of participation and community management in any training activities and workshops conducted for the sector.

· A participatory support approach requires a very different attitude towards the communities and the timing, nature and extent of water and sanitation projects. Individual members of the Council can play a key role by experimenting with more participatory strategies in their agencies and in contacts with communities.

· Establish links in the countries between non-governmental organizations, research organizations and national governments in order to contribute to further development of community-based approaches in the water sector.

· Take the consequences serious of community management not only during the construction phase but more importantly after the construction has been finalized.

· The real success of a participatory support approach from the ESAs lies in operationalization at field level. Governments as well as NGOs will have important roles to play in such activities, but in the end, people solve problems not governments.

ANNEX 1

Participating Organizations

Country	*Organization*
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Guatemala	Asociación pro Agua del Pueblo (ADP) 7 Av.17-17, zona 5, Las Rosas, Quetzaltenango GUATEMALA Tel. (502) 061 6437 Fax. (502) 063 0005 Contact: Mr. Fabian Gonon Ortiz
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Nepal	Nepal Water for Health (NEWAH) P.O. Box 4231, Kathmandu, NEPAL Tel. (977) 1 227325/61 Fax. (977) 1 227730 Contact: Mr. Umesh Pandey, Mrs. Hari Subba
Netherlands	IRC International Water and Sanitation Centre P.O. Box 93190, 2509 AD The Hague, THE NETHERLANDS tel. (31) 070 3314128 fax. (31) 070 3814034 e-mail: IRCWATER @ ANTENNA.NL Contact: Mr. Marc P. Lammerink, Ms. E. Bolt, Ms. N. Espejo