



Académie de l'Eau



CROIX-ROUGE FRANÇAISE

**METHOD GUIDE**

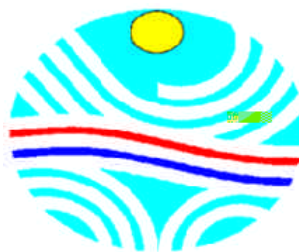
To

**INFORM, AWARENESS-RAISING**

**& TRAIN**

**THE PUBLIC**

**RESPECT TO WATER PROBLEMS**



*French National Committee*  
for the  
**International Hydrological Programme**  
**UNESCO**

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The requirements of modern water management and the implementation of a governing body at the local level are numerous. The progress that has been made in the water sector could not have come about without the public. In order for the public to be able to participate efficiently and effectively in decisions concerning water services, it is vital that they receive training in the various problems associated with water. At the same time, ensuring that not only the public at large, but also the various socio-professional categories, are made aware of the problems is indispensable for preserving fresh water resources, which are increasingly under threat.

Based on a study of 81 field actions that were considered positive, the present document proposes 6 vital recommendations that cover all of the requirements in terms of making the public aware, informing them and training them about the problems of water. A certain number of procedures have also been described that will allow the decision makers to undertake actions in this sense. The 81 actions are more fully described in a second report, which is also available from the Académie de l'Eau.

The Académie de l'Eau has been responsible for the preparation of this work, under the presidency of Mr. Pierre HUBERT, President of the French Committee of UNESCO's International Hydrological Programme, and Professor of the École des Mines in Paris.

In collaboration with the following organisations:

- French Red-Cross
- Seine-Normandie Watershed Agency
- Adour-Garonne Watershed Agency
- Rhône-Méditerranée-Corse Watershed Agency
- The International Hydrological Programme
- UNESCO

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# INTRODUCTION

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The aim of this method guide is to propose the steps to be taken by the people in charge of water management and their authorised agents in order to associate the citizens with the reflections.

The citizens are the users and beneficiaries of the works, permitting access to drinking water that is necessary for their well being, for their activities and their own needs, as well as the evacuation of wastewater.

These methods apply to the users and beneficiaries of the works and executions of hydraulic works.

This close association of the citizens with water management is essential to take advantage of the efficiency of the investments to be made for a modern management of the water resource, respect to quality and quantity. This has become obvious in the many international conferences from Rio and Dublin in 1992, Paris in 1998 and after the first World Water Forum in Marrakech in 1997. The second Forum of March 2000 in The Hague has also affirmed the need for this integration of the citizens in the water management with the Social Water Chart, presented by the Water academy and with the training of the public with the « Water, Education and Training », (the WET) prepared by the Unesco.

This guide has been prepared by the Water Academy with the collaboration of the Unesco by a taskforce chaired by Mr. Pierre Hubert, the president of the French PHI (International Hydraulic Programme).

It has been established based on specific experiments from 81 field cases, which the group had compiled and analysed after seven meetings. They have been compiled in a work document dated May 2001.

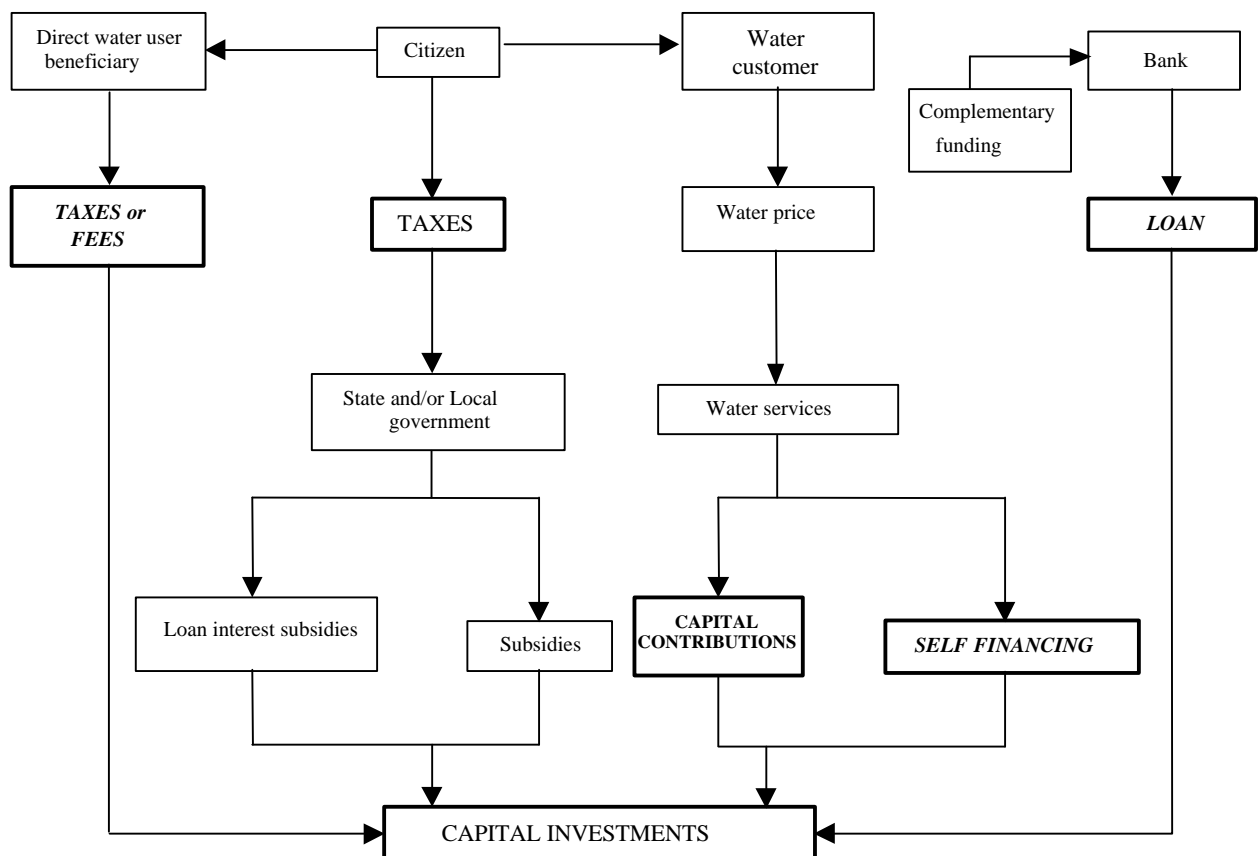
This guide includes recommendations taken from these experiments and a series of tools that enable them to be started up. It is going to be submitted to the examination of a workshop organised in 2002 by the Unesco and the Water Academy.

It must be considered as a solid starting point to guide the coming actions although it deserves being enriched and amended.

That is why a skeleton survey on paper and on the Internet must be submitted to the workshop mentioned above. This will enable any modifications to be made to the recommendations to be taken into account, incorporating additional tools that arise from the analysis of this survey.

# 1 WHY INCLUDE CITIZENS AMONG THE WATER EDUCATION TARGETS?

The first reason is that citizens are beneficiaries or users of water. They use it for their daily life and activities. They suffer the consequences of the variability of the quantity of the water resource, with floods and droughts, and the quality, with the consequences on their health. Their quality of life is also affected by the impact of water management on the environment. Finally the citizens are the users and beneficiaries of the executions, carried out to reduce or eliminate disagreements and to provide them with the convenience associated with taking the water to their homes and evacuating wastewater. Finally, they also from the preservation and reconquest of a nature in good conditions respecting the principles of durable development, and they play a key role in its financing.



**Figure 1:** *Financing lines*

Associating them with the water management, through adapted awareness-raising and information, will enable this management to be more efficient: due to reduction of waste, due to respecting the basic sanitary rules, the effective and correct use of the works carried out...

Listening to them would also permit having a better knowledge of their needs and wishes as well as their consent to their financial participation to carry out these works.

The importance for the citizen of knowing the organisation of the responsibilities in water management must also be noted, so that he can become fully involved in it.

The following four issues show this need perfectly well.

## ➤ **The citizen financially supports the water policy**

It is finally the citizen who finances the works that must be undertaken to mobilise the resource, share and distribute it, as well as to correct its variations in quantity and in quality, in order to preserve the environment. This is done either by the taxes and rates that he pays to the public powers in all the forms or from the taxes supported by the activities he participates in, or receiving the service price of the water which is supplied to him, as shown by the diagram in figure 1 above.

Outside contributions from other countries or international solidarity help the developing countries.

## ➤ **The citizen has an influence on the water management due to his decisions**

For sure, the direct influence of each individual on the use of water for his vital needs and for his activity is weak. However, he is the one with his hand on the tap (or on the pulley of the well winch) and who decides on the way to use the water for his activities or even the steps to be taken to evacuate refuse and to preserve his nearby environment (with for example the rubbish). He is free to make his decisions, respecting the law, but a similar behaviour to his own by his neighbours, placed under identical conditions, is probable.

In addition, the civic pressure plays a considerable role in water management; it must then be as constructive as possible. Therefore, it seems necessary to inform the citizens, especially about the roles and means of the people in charge of the water

To help him to act and to use the works carried out in the best possible way, it is essential to inform him about them and give him action means.

## ➤ **The water manager needs to know the citizen's wishes as well as his agreement to pay the price for it**

It is obvious therefore that the water management cannot be conducted by the decision-makers and their experts without bearing in mind the reactions of the citizens and without associating with them more or less closely. This need is reinforced by the modern water management policy, which is no longer based just on the development of the supply, but also on a moderation of the demand. The latter is obviously not possible without the support of the user and without asking him about his wishes related to the water that he needs. Parallel to this, it is advisable to know his willingness to pay, which may greatly reduce the nature itself of the works effectively executable.

The information to be given to the citizen must lead to a close link between the service level and the sum to be paid appear

## ➤ **Know what the citizen thinks about the water**

Understanding the deep motivations of the citizens concerning water goes further than just having a knowledge of their immediate wishes. Therefore, it is advisable to be able to evaluate the possible variations of their choices. These can be guided not only by the cost problems but also by their perception of subjective elements such as, for example, the fears, which may come from incorrect information about health-related questions.

The information to be provided must be preceded by heedful listening, creating a relationship of trust between the decision-maker and the citizen.

## 2 PRESENTATION OF THE EXECUTIONS AND EXPERIMENTS USED

As indicated in the introduction, this guide is based on the executions and experiments from 81 cases compiled in a work document.

These 81 cases, whose title and authors the read can find in the appendix come from:

- 49 of them are communications to the recent debates and from the Social Water Chart (41) and different publications (8);
- 32 from surveys launched by the taskforce at the end of 1999 and during 2000 based on two questionnaires adapted to the broad vocation organisation and to agents operating in a specific market niche.

They concern 30 countries from four continents:

- **Europe** (45):

Germany (1), Belgium (3), Spain (2), France (30), Italy (1), Turkey (1), U.K (7).

- **Africa** (19):

Algeria (1), Benin (1), Burkina Faso (3), Cameroon (2), Comores (1), Ivory Coast (2), Guinea (1), Liberia (1), Mali (1), Morocco (1), Niger (1), Nigeria (1), Senegal (1), Tunis (2).

- **Asia** (12):

India (3), Indonesia (2), Japan (2), Laos (3), Uzbekistan (1), Vietnam (1).

- **America** (5):

Brazil (3), Mexico (1), USA (1).

These 81 cases come from:

- 58 from field water operators in charge of specific projects, 20 of which are specialists in surveys or information sent by them;
- 23 from very broad mission organisations, of which 8 are universities or high schools that are directly interested in water or fields linked to it.

Depending on the nature of the operation conducted in each of the 81 cases considered, three main fields of intervention can be considered:

- a wide intervention spectrum (large organisations); due to the extension of the geographic target, and due to the fact that the operation concerns all the water management sectors.
- focalised on specific water management objectives
- specialised in surveys, contact and information.

		France	Abroad	Countries concerned
<b>Large organisations with broad spectrum (23)</b>	Broad mission or related to a vast territory (7)	6	1	2
	Town and PHI (11)	4	7	7
	Universities & specialised organisation (5)	2	3	4
<b>Focalised objective organisation (38)</b>	Towns and villages (7)	2	5	5
	Rivers and basins (7)	4	3	3
	Integrated management (6)	3	3	4
	Irrigation (4)		4	4
	Pisciculture (1)		1	1
	Industry (1)		1	1
	Pleasure port (1)	1		1
	Health (9)		9	7
Social and water price (2)	1	1	2	
<b>Specialists in surveys sent by water management organisations (20)</b>		7	13	8
<b>TOTAL</b>		30	51	30

**Table 1:** *Classification of the cases studied depending on the nature of the mission to be carried out*

### 3 RECOMMENDATIONS TO BE IMPLEMENTED

These are the action axes proposed to the people in charge of water management and to the elected members who wish to develop the information, awareness-raising and education of the different people to make them participate in the water management in order to make this as efficient as possible.

The different recommendations that arise from the cases studied, if these are correctly conducted, cover all the necessary actions.

**The six recommendations proposed below deal with all the questions, issues to be approached as well as with the partnerships to be foreseen. They may, on the initiative of each of the operators, be cut down or regrouped under the condition that all the points to be raised are effectively raised.**

**The following chapter (no. 4) develops the methods permitting their application, some of them also dealing with several of these recommendations.**

## 1<sup>st</sup> Recommendation:

### **Foresee the financing of information awareness-raising and education actions for the people in water problems**

These actions are an essential complement for water management works and investments for the users, beneficiaries and the people as a whole. In effect, they permit ensuring the efficiency of the works at the best cost, if these correspond to the needs expressed and to their evolution, and profiting from them if the explanations provided allow them to be correctly used.

**The financing of these actions must be linked to the costs of the executions themselves by a percentage and must be at the disposal of the managers by way of a sum on account, usable during and after the work.**

This percentage is relatively small with respect to the investments to be made and to the results, which may be obtained. This varies from 2 to 10% according to the nature of the works and their cost. It is less important for executions concerning a global and costly objective such as dams or large water supplies and greater for local works. It also depends on the importance of the awareness-raising and training action to be conducted, more especially for the creation of new water professions. **As these enter within economic activities, this financing must not be considered as a brake on the action,** but on the contrary, as a promotion and profit earning tool of the execution envisaged.

## 2<sup>nd</sup> Recommendation:

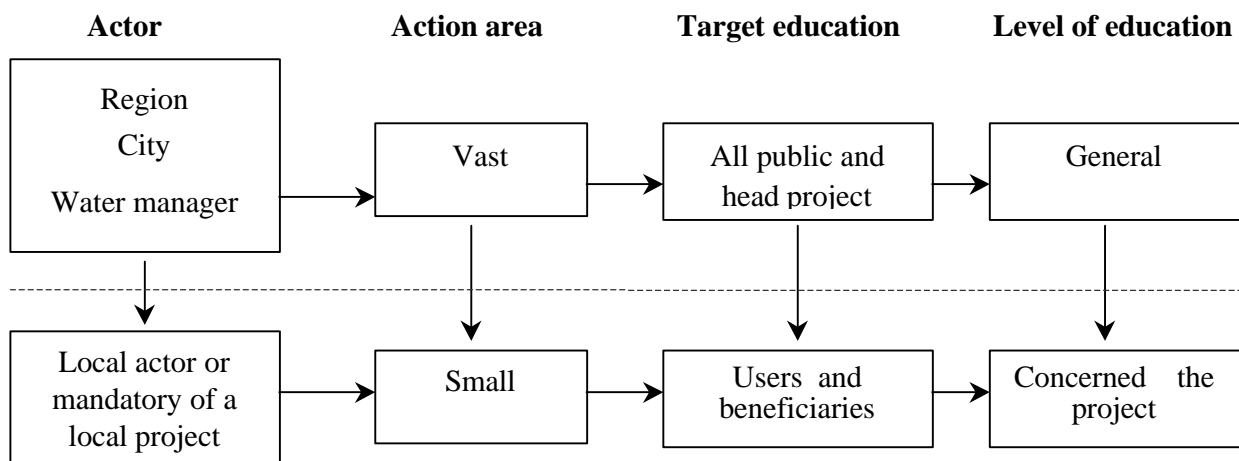
### Define and reach the target public

**Define the public in question depending on the mission of the informer, adapt messages and information to each of them according to their own sphere of interest.**

**Address them directly or thanks to the relays of the chosen interlocutor, whenever this is possible, or a group of them, associated by neighbourhood links or common interest.**

Depending on the territory where the intervening parties (public powers or organisations that depend on them) have the responsibility and the level of their mission (concerning water and environment), their actions may be aimed at the general public or the users and beneficiaries of a given project.

The information and education actions may then be, either general data or data linked to the project itself, as synthesised in the diagram of figure 2. In this diagram, the horizontal arrows indicate the continuity of the action of each actor, and the vertical arrows the links to be respected between the action levels, territories, people and information.

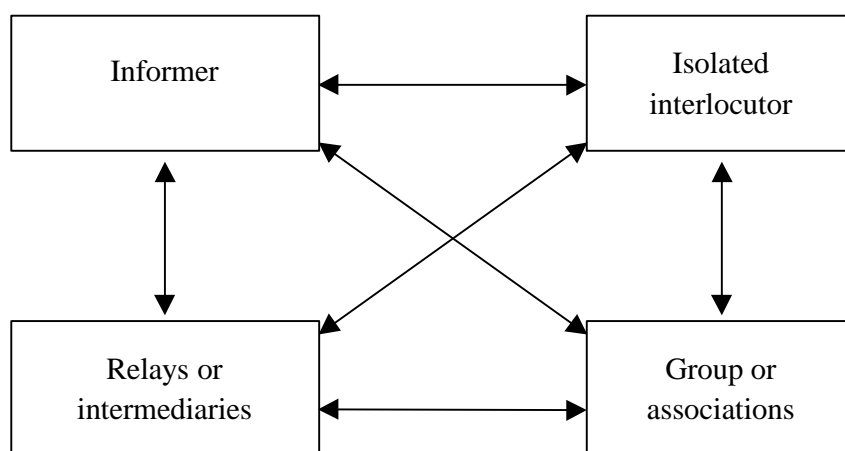


**Figure 2:** *The dependence of the information and education actions related to the actor and his mission*

**In the first case, the actions deal with the understanding of the *water cycle* and its impact on every day life and on the *health*, which depends on it; messages and information will have a different form and pedagogy if it is a question of women, children or even political decision-makers.**

**In the second case, it is a question of explaining the project, its interest for the users and beneficiaries and the way to use it efficiently, as well as the importance of maintaining the designed development in a good working state.**

The informer acts, more often than not, through relays or intermediaries, as shown by the diagram below (figure no. 3). The success of the project depends mainly on the quality of the work carried out by the informer or by the person authorised by him.



**Figure 3:** *The means to reach, directly or indirectly, the target public*

These groups may be:

- **Groups and Associations**, comprised of citizens, associated around a given issue in a more or less vast territory. We can mention environmental defence associations, interested in a given place, such as a river, a lake or the lack of water in a district, or thematic associations such as leisure fishing or nature protection. Bearing in mind the difficulty to reconcile the interests of each one, it is advisable to give priority to the action in progress.

- **Relays and intermediaries**: these are essentially the ones that normally relay the messages to the children, such as teachers or educators, educational workers or associations of educational workers, specialists in a given subject, such as doctors with respect to health messages, engineers, specialists in a particular discipline, or even certain associations grouping them together, or specialised associations in this role of disseminating messages.

These relays or intermediaries need developed information as well as specific training, adapted to the different intermediaries that they are going to use, as indicated in the 5th recommendation.

### 3<sup>rd</sup> Recommendation:

#### **Know how to listen, understand to act more readily by consultation and participation**

**The informer, in action situation, must listen to the target public in order to discover their needs and demands and finally, evaluate their agreement to provide their financial and/or material participation.**

**In a more general way, the informer must be familiar with the living habits of the target public and their links with the water, and use the knowledge that he has of the terrain, to be more efficient.**

**Therefore, it is advisable to establish a permanent dialogue with the target public, during participation and consultation meetings organised with the public, the user sand the beneficiaries, in order to have a better knowledge of their wishes and their evolution and, finally, to adapt as best as possible to the works carried out on request and obtain substantial economies.**

This listening/monitoring is based on proximity surveys or opinion polls, based on questionnaires or even interviews, during which a contact may be established between informer and informed; the aim of this contact is to explain questions, but it does not try to establish a dialogue. These surveys can be organised by the informer himself with the aim of getting to know the reactions of the target public; they may also be compulsory surveys, launched by the public powers on the occasion of the works and executions. The results of this latter type of survey are worth special attention by the project actor; they may in effect lead him to orientate future surveys that he would like to launch to complete his own knowledge of the users' needs and wishes.

**Listening to / monitoring the target public may also be carried out during participation or consultation meetings, as recommended in the second part of this recommendation.**

There are multiple results from listening to / monitoring the target public and they deal with three fields explained in table 2 below:

<b>1</b>	The knowledge of the water needs, the willingness to pay for the service requested and possibility becoming involved in the action or the project
<b>2</b>	A knowledge of the living habits that condition the project itself, as well as the social, cultural, religious and local context.
<b>3</b>	Valuable information about the local particularities of the links between the water and the land, known by the inhabitants themselves and which they have often used in their relationship with water, mainly thanks to ancestral techniques

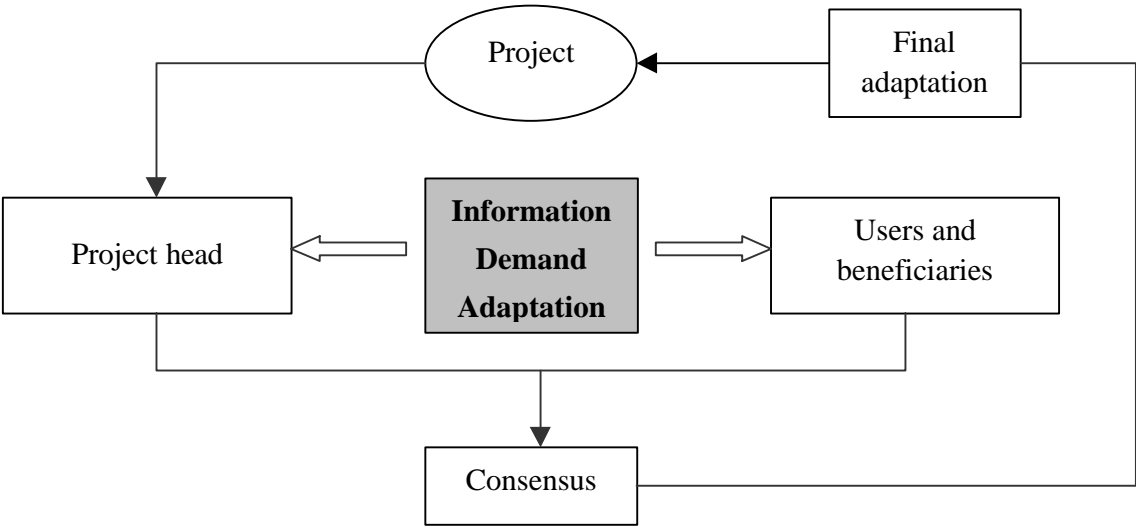
*Table 2: Results of listening to / monitoring the public*

The information drawn from points 2 and 3 is very valuable, even for the best experts; very often young specialists are seen to have a tendency to ignore them, fortified from their recent acquisitions of knowledge.

The previous knowledge of the cultural context of the public, for an actor operating abroad, is essential to enter into contact with those he wants to listen to / monitor, as this enables him to ask good questions and earn the trust of the interlocutors, a basic condition for efficient planning.

Finally, the renewal in time of this listening / monitoring can be valuable to make it more optimal and follow the evolution of the knowledge and behaviour of the citizens with respect to the water in general or a particular project.

The diagram below outlines the processes between the project manager and the users and the beneficiaries:



**Figure 4:** *Process to be established between a project manager and the users and beneficiaries of said project*

The organisation and development of these consultation meetings must take into account the people invited to them, depending on the interest they may have in the execution of the project. If it is a question of water points in a peripheral district, the users have, in principle, the same reaction with respect to it. On the other hand, for an integrated management project, there may be antagonism, for example, between irrigators, workers or household users. It is necessary then to avoid the appearance of latent conflicts, by organising for example separate meetings to begin. In other contexts, it may be useful to previously collect the viewpoint of women, and then organise special meetings for them.

## 4<sup>th</sup> Recommendation:

### **Awareness-raising to encourage the citizens**

**Select information which is useful to raise the awareness of the users and the beneficiaries, in order to obtain their care for projects which concern them directly. The information must adapt to each of these projects.**

**It must also be specifically orientated according to different users and their normal behaviours, already known thanks to a previous listening/monitoring, and give rise to an adapted pedagogy.**

This awareness-raising action is essential as its aim is to adapt or modify the behaviour of the users with respect to the works carried out for them, so that they can profit from them entirely. It must be prepared with care, possibly based on the opinion of specialists. The duration of these actions often surpasses that necessary to carry out the work, the modification of the behaviour being directly linked to their correct use. For example, the efficiency of the implementation of street fountains, or latrines requires training in hygiene and in the good use of the new services, training which may be long. It is also necessary for the users to correctly use the tap water without wasting it or the sewers without dumping anything into it.

## 5<sup>th</sup> Recommendation:

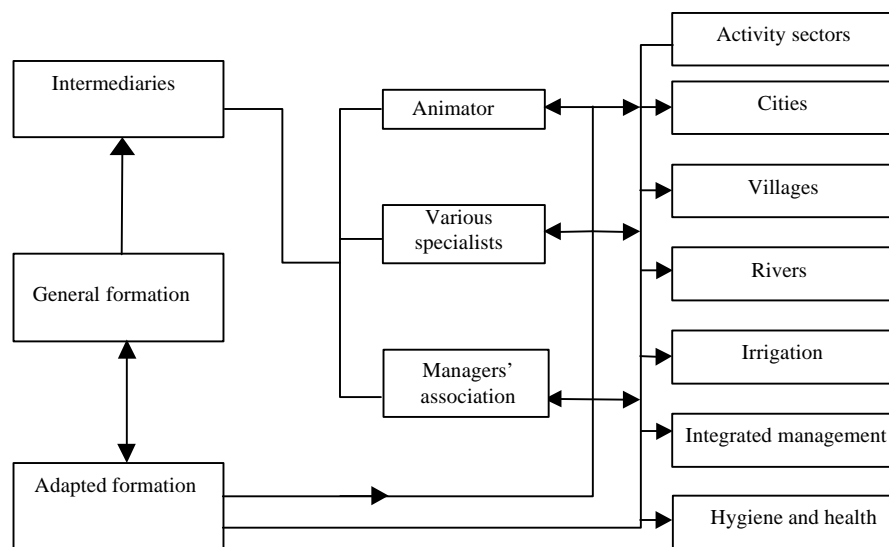
### **Train the message-bearers and create new professions basing them on the specialists**

**This training firstly entails common psychological training for all the intermediaries : a good technique of contact and trust-raising, an essential rule for success, as well as the control of the different means to be used.**

**Finally, the objective is to disseminate specific training for each one, depending on their action sector and their mission (educational worker or specialist in servicing and maintenance services).**

**Therefore it is necessary to develop contacts with specialists in communication, teaching and National Education, in order to inform them of the actions taken by each actor and search with them for the best pedagogies.**

The training lines to be created are very different for the educational workers or the framework associations that are in charge of disseminating information about water and raising the awareness of the users and the beneficiaries, training which must be foreseen for the different specialists in the servicing and maintenance services. Common training to initiate them in the water cycle and in the operation of the works must lead, for the specialists, to the necessary technical apprenticeship in order to exercise their professional (servicing of hand pumps, repair of wells...).



**Figure 5:** *The necessary specific training of « message-bearer intermediaries » aimed at the public*

**Specific training may also be foreseen to train certain users in professions or new specialities necessary for the servicing and maintenance of the works.**

That is why it is advisable to create all the synergies possible between, on the one hand, the person responsible for teaching and general education in the water and environment, in their missions aimed at young people, and, on the other hand, the water actors, on the subject of practical information and operational education towards the public. The objective is finally to build a network of exchanges on the pedagogies that best adapt to each of their own missions concerning the water.

## 6<sup>th</sup> Recommendation:

### **Proceed to the evaluation of the results of these actions**

**Strictly carry out the follow-up and control of the results, obtained based on indicators as characteristic as possible of the impacts of the different information, awareness-raising and training measures carried out.**

Follow-up and control are linked mainly in time; the evolution of the indicator supplies a confirmation of the results even if the indicators used are mediocre, as is the case especially for actions of general application.

One must look for indicators, susceptible only to the effect to be measured, and mistrust indicators reacting also to other actions. For example, if one wishes to evaluate the impact of training on hygiene, measuring the reduction of diarrhoeas does not just reflect the results due to improved hygiene but also those linked to the quality of the water, to food...

**It is preferable to measure the changes in behaviour of the users with respect to hygiene or the use of the work thanks to a private survey.**

## 4 METHODS AND RELEVANT « TOOLS »

These concern the different action means used in the field to act upon the public following the recommendation axes proposed previously. They can take on different forms varying from key methods or proposals taken from experience, well-formulated tools ready to be applied or even approach methods to adapt to the context of the action.

**A good number of methods and tools described based on the seven following subjects permit the simultaneous application of several recommendations.**

- 1. Identification of the people to be trained and made aware.**
- 2. Awareness-raising, information, education and action means**
- 3. Listening to / monitoring the people**
- 4. The necessary pedagogy, participation and planning**
- 5. Specific training**
- 6. Monitoring of results and indicators**
- 7. The financing means to be foreseen**

For each method (or tool) proposed, one or several associated references permit going back to the case(s) studied where it comes from. The documents corresponding to the references are in appendix « Documents used ».

### 4.1 Identify the people to be trained and/or made aware

All the communication authors agree, the target people must be specific. The choice of this target varies, as has been indicated in the 2<sup>nd</sup> recommendation, with the level of responsibility and scope of the mission.

All the communications distinguish the users using the works (citizens, farmers...), decision-makers and responsible people (elected, agents...). They also identify the real or potential partners (associations, teachers, doctors...) of these decision-makers to help them in their actions.

**The great majority of the large organisations [that is 25 % of the cases studied], give priority among their targets to children and women**

However, certain of them are also interested in the decision-makers, opinion leaders and public partners, such as the Rhône-Méditerranée-Corse Water Agency (ref 64) or the Rhin-Meuse Water Agency (ref 63).

The ONEP in Morocco (ref 40) distinguishes among the people those who must be trained, such as all the water actors, those to be made aware, young people and women.

Others, such as the University of Constantine (ref. 39) give priority to those whose reactions will be the most efficient within the water field, more especially the large water users or the most important contaminators.

Generally, children and young people are all educated at different levels (primary, secondary or university). Practically all the evidence insists on the affects that the information given to these young people may have on their parents. Anyway, young people are interesting insofar as they are future citizens or future managers and specialists, but also insofar as relays towards the adults.

**The local operators (50% of the sample), who start up specific actions (water supply or drainage of towns and villages, river protection, integrated water management, irrigation or even health protection), mainly address the users and beneficiaries of their intervention. The public include all the components of society: young people, women, men, specialists, educators, health personnel and also elected members. They may be united by a same goal: to benefit from the water that arises from the same work.**

It is a matter then of dealing with all the inhabitants of the town or district, via the children but associating their parents with them (example of the kinds of water implemented by the **Intercommunal water distribution Union of the Corniche de Maures, ref. 529** or even the local leaders, the representatives of the village communities or those using the pumps as indicated in **Action Against Hunger (ref 43)** in Liberia.

➤ **To protect the rivers, the SICALA (ref. 60)**, the InterCommunal Development Union of the Loire and its Tributaries, target the different users of the river, private owners, fishermen, farmers, industrialists, whilst others such as the **Limousin Nature Environment Federation (ref. 50)** gives priority to the presidents and members of the intercommunal structures who they consider to be relays towards the direct users of the river.

They all use the young people, too, as a vector to reach all the people.

➤ **Mr. Khadpekar (ref 26)** goes further on describing how the young school-children are aware of the pollution of the rivers, thanks to field visits, to kits to simply and economically measure different parameters of the quality of the river course.

➤ **Within the framework of the implementation of an integrated management, the Economic Expansion Committee of Morenais (CEEM, ref 54)** addresses farmers, craftsmen and groups, directly and through school children. **EPIDOR (ref 68)** addresses as priority the elected members of the six departments concerned, as well as the media, young people acting as relays.

➤ **For irrigation programmes the CIRAD (ref 44)** directly addresses the cultivators as well as the cultivator organisations, the farming councillors acting as relays.

➤ **For water and health**, the targets retained are in any case all the people concerned with the project, but giving priority to women and children. **Enfants d’Ailleurs (ref 58)** addresses via relays such as Village committees, health agents, doctors and local associations.

**Finally, around 25% of the sample studied is comprised not of water managers or actors, but of organisations specialised in communication and information or even associations uniting or associating users or citizens with the same goal, for example, to protect nature, the environment or the medium itself.**

**These are the « relay groups », which this 2<sup>nd</sup> recommendation also distinguishes:**

- the relays or intermediaries of the water operators, who disseminate information, education and awareness-raising. These are by far the most numerous (20 %).
- the associations that unite citizens, users or beneficiaries, who are also targets to be informed and educated and at the same time pressure groups to demand to be better understood. These are around 5 %.

The former, specialists in communication, ordered by the field operators, address either the public at large, such as the **Water Information Centre (C.I. Eau, ref. 78)** aimed at all the water users, or more specific targets, such as the clients of a service (**Severn Trent, ref 35**) or users of a field operator (**Messrs Cottavoz, Stoupy and Leborgne, ref. 33**), or even doctors to make them additional relays with respect to the users to protect their health, as proposed by **Mrs Chotard (ref 27)** and **Mrs de Körner (ref 31)**

**The relay role of many of these targets, young people, doctors, has been clearly established. Figure 3 (page 11) includes this communication bias. It is necessary then to train them (see chapter 4.5).**

**Likewise, the individualised targets concern more often than not, not just individuals or isolated interlocutors but associations or groups unifying them, who are the interlocutors to be informed or made aware.**

## 4.2 Awareness-raising, information, education and action means

The objective that guides the water manager in his information, education and awareness-raising actions for the different people is practical and down to earth :

**« Develop a broad adhesion of the general public and of the users and beneficiaries of the execution, so that it becomes more efficient thanks to its correct use ».**

The objectives obviously depend on the context of the sector concerned. These are in particular very different for organisations interested in all the aspects of the water management and for those that are in charge of executing a given project.

**For large organisations**, several objectives can be mentioned :

- **Make the users aware of the fragility and rarity of the water resource, which would lead to a modification of the behaviour of « future) adults : reduction of wastage, development and maintenance of the source, special attention given to transport, storage, use, disinfecting means and water protection...**

This type of objective is a long-term vision and a long and exacting labour.

➤ This objective is the objective of the **ONEP of Morocco (ref 40)** : Urge a rational use of the water resource that has to be brought in from a distance, in order to delay new investments. This means involving the population in the projects and in the maintenance of the installations. The programmes developed are long and exacting and call to a pedagogy adapted to each of the different groups of people with the support of communication specialists. They are different in urban medium and in rural medium. Their target is **mainly women and young people, with the relays of journalists** and the media

➤ The objective of **the Adour-Garonne Water Agency (ref 67)** is to transmit the principles and reflections to be respected in the Adour-Garonne basin to help towards an efficient water management. All the domestic, industrial and agricultural users benefit from healthy water in sufficient quantity, preserving, at the same time, the environment and the quality of life. The targets are young people in education centres with the help of the professors and teachers, with the support of adapted pedagogy.

For example, a CD-Rom « Water actors » is aimed at 4th and 3rd year classes. Through six scenarios (mayor, minister, farmer, individual, industrialist, Water Agency), the pedagogic role game permits approaching the water management and places the student in the heart of a problem linked to the preservation of the resource.

On the other hand, a booklet entitled « Tell me, water » published on the occasion of *The world Water Day* and aimed at colleges, proposes through a deliberately civic approach, the discovery of water thanks to a pluri-disciplinary treatment of knowledge that covers the historical, scientific, cultural and economic plans...

➤ **The Seine-Normandie Water Agency (ref 65)** wishes to base itself on a better informed public opinion, in such a way that they play their role fully with regard to the people in charge, and so that decisions are taken more quickly. People still situate the distribution of responsibilities within the water field very badly, which is therefore very well organised in France. This is followed by confusion, misconceived ideas, that harm the adaptation of the necessary equipment and slow down decisions, even when the means exist.

All of these documents, prepared with teachers and specialists, are disseminated by the teachers, professors, previously trained thanks to the training days. Each year, two types of training are organised : for future teachers in IUFM (Teacher Training Institute) and for the current teachers in the basin, two training days in the agency.

- **Second objective : To explain the roles and responsibilities of the different water management actors (above all for paying the drinking water bills) thanks to clear and transparent messages ; which may generate the participation and care of the users of the decision process.**

The citizens must be informed of the role and means of the people responsible for the water, more especially of what they do to provide them with the water they require. This information is a basic education for citizenship and solidarity with respect to the water. In general, the more the population have the possibility to understand the mechanisms concerning the water management and the more they are associated with the decisions, the less conflicts there will be and the more efficient will the works executed be.

➤ After having used the whole panoply of traditional training or awareness-raising actions (conferences, campaigns relayed by the media, brochures and documents more or less targeted), the **Seine-Normandie Water Agency** has chosen to create what has been called « **water class** », a **training action lasting for one week**. They are deliberately registered in the long term as based on the voluntary aspect and motivation of the teachers who constitute the majority of the partners of the agency for this action.

On this model, more than 6000 water classes have been carried out, the rate today being 1000 per year. They are given in primary classes, in colleges and schools but more and more aimed at universities and specialist training institutions.

The pedagogy is prepared with the teachers and communication specialists.

The objective of the water class is to dismantle the water organisation in France to explain its logic. The part that has been chosen consists in making the different people in charge and actors take part in the class, so that they themselves can set out their role. Thus, the students, can successively see a mayor, farmer, a civil servant in charge of the water policy, a fishing representative, an industrialist, etc.

Workshops are then organised by the teachers to translate the aims of these people in charge, who are not necessarily used to speaking to students, into school and pedagogic language. But the exercise permits the teachers to use their professional talents, on demonstrating that they have identified themselves the distribution of the tasks.

Water classes also exist in **Boston (ref 4)**. They support the information disseminated on executions respect to local committees.

They also exist in **Madrid (ref 6)** by way of nature classes, where they are completed with the creation of a certain number of permanent exhibitions and awareness-raising shows.

**For the organisations in charge of field projects, different objectives can be mentioned illustrated by examples :**

- **Explanation and calculation of the usefulness of a work to obtain the adhesion and collaboration of the public.**

**In effect, the beneficiaries can only understand the good brought about by the actions through information and education, in order to obtain their adhesion, correct maintenance and use of the works, as well as behaviour adapted to the circumstances of the medium.**

➤ **The SYMIRA (ref 49)**, a mixed Union for the evaluation of the Renaison (Loire tributary) and its tributaries, has established communication and awareness-raising actions :

Informing the people of the basin about the nature and stakes of the actions taken within the framework of the coordinated water course restoration operation.

- Evaluate a natural medium to be rediscovered.
- Invite the children to discover their closest environment ;
- Involve the people in the protection of the water media ;
- Raise awareness about the notion of watershed ;
- Inform each one (user, riverbank owner, elected representative, etc.) of their rights and obligations.

These actions accompany the river restoration works, the information addressing the whole population, the training interesting the SYMIRA agents, and the awareness-raising the young people, riverbank owners and even the public at large on the occasion of the great spring cleaning.

The pedagogy is based on the discovery of the close environment :

- **Approach the essential principles of water management (water cycle, watershed notion, range of water uses...) thanks to adapted pedagogical supports (panels with sticker figures, “comptine”...)**

- **Carry out simple practical field work (chemical, physical, biological analyses), guided by an illustrated interpretation booklet**

- **Evaluate the field actions undertaken by photographic « before and after » comparisons or by establishing information panels in workshops Thus the public at large do not misunderstand the nature of the work.**

The partners of this communication/awareness-raising are the associations, groups and administrations.

• **In order for a project to be long-lasting and efficient, it is essential to respond to a demand, corresponding to needs, sent out by beneficiaries. Under these conditions, real dynamics set in and the effective participation of the population is possible.**

It is advisable to arouse the demand, because any action which has not been expressed as a need by the beneficiaries is vowed to failure. Therefore, it is necessary to emphasise the awareness-raising of the public at large, above all before a project, which may create the need to learn more and more at population level. In addition, proposing specific action means (maintenance of works, water management by local committees, economic irrigation techniques...) to the local population makes them responsible and more or less independent.

➤ A good example is that of the **Integrated Development Foundation (IDF, ref 55)** in Bamenda, Cameroon, whose objective is:

- To permit a coherent management of the development initiatives on town level.
- Facilitate exchanges and the expression of all the actors concerned.
- Encourage a group that has divided stakes.
- Lead to the implementation of a planning request.

To reach the public targeted, IDF has made several field visits, has carried out educational work in the districts or in the popular theatres, advertisements on the radio and in the written media, household surveys, field surveys, semi-executive interviews, meeting with the associations, administrative and traditional authorities, debate-lunches and results restitution seminars.

The pedagogy used is mainly based on listening to / monitoring the inhabitants thanks to the Participative Encouragement Process (DAP) described below in chapter 4.3.

The mobilisation of the actors is carried out around the development of risk districts with the support of the associations, village chiefs, traditional authority and administration.

• **Another objective is the support by the educational action, an essential complement to the execution of a work for its success (sanitary education, advice on use / on maintenance of work), permitting the improvement of the efficiency of the investments,**

For example, ignorance is the main cause of infection of illnesses due to the unhealthiness of the food or the medium. In effect, the behaviour of users is not adapted to the main infection factors (above all, during the transportation or storage of drinking water), and this is due partly to a lack of awareness. Then, making up for this lack needs relatively little money with respect to the result that can be obtained and the investment costs.

➤ Another good example is that of **Action against Hunger (ACF, ref 43)** in Laos, whose objective is the following :

- Reduction of diarrhoeic illnesses and malaria in the target villages through the implementation of drinking water systems and (combined with) through health education of the villagers. A distribution of hygiene kits (two per village one of which is for the Water Committee and one for the school) has also been carried out.

- Capacity building in technical subjects in favour of institutions (Nam Saat District and Village water committees) that are responsible for the maintenance and repairs of the water systems implemented by the project.

To do this, ACF has developed training and education actions

- Technical training for the technicians of Nam Saat (see IV.5).

- Training of the Village Water Committees (see IV.5).

- Training of school teachers of the target villages and nurses of the Health department of the district in sanitary education. The training aims at familiarising them with the pedagogic tools used by ACF. These school teachers and these nurses are actively associated with the work carried out by the educators of our health team to execute the « sanitary education » discipline.

- Sanitary education in the villages where ACF has installed water systems. This discipline consists of 8 intensive sanitary education sessions (spread out over 7 months). There are 6 sessions in the water and drainage field and 2 on the subject of malaria.

**All these examples develop the means that permit the 3rd recommendation to be applied to the different contexts found and to lead to good listening. Certain of these elements also concern the 4th recommendation, related to the awareness-raising of the public. They also emphasise the adaptation of the messages to the target retained, as indicated by the 2<sup>nd</sup> recommendation.**

As a conclusion, two points that result from the different means used in the cases studied stand out :

- **A need to adapt the messages depending on the characteristics (age, culture, environmental and socio-economic life style, knowledge, attitudes, practices) of the public concerned. The information will for example be developed more if it addresses a particular sector of the public interested in a more reduced field**
- **The distinction to be made between information and awareness-raising (4th recommendation)**

**Information consists in providing useful knowledge and it must be neutral. On the contrary, awareness-raising provides selected information to act upon the aspect one wishes to influence and reflect about, and with which one wishes to collaborate. For example, information concerning pollution describes deeds and illustrates them with figures, whilst the information used to raise the user's awareness will describe the consequences of the pollution on mankind, their quality of life, and on himself in particular.**

### 4.3 Listening to/ monitoring of the public

Monitoring the people concerns mainly the **3<sup>rd</sup> Recommendation**.

This is, according to the majority of the communication authors, a decisive element in the success of a project. In effect, a project is more profitable when people's adhesion to it is great. This adhesion permits organising the implementation of the work concerned (place, economical local human and material means ...) better and also ensuring the everlastingness of the installation.

But listening to the people's needs and expectations permits establishing a dialogue with the interlocutors and thus creating a relationship of trust and collaboration.

This listening / monitoring must permit specifying the knowledge, behaviour, needs and expectations of the public with respect to the field studied (general hygiene, water supply...), in order to adapt the project to the demand and the training and education actions that are going to follow. A rigorous socio-economic diagnosis (and possibly a sanitary one) must take place then, with the participation of the citizens, even before the work is implemented.

This monitoring of the public can be shown in different ways to adapt to the local context : surveys, polls, conversations, participation and consultation meetings. There are two main types of monitoring

- « general » monitoring;
- monitoring linked to a field action ».

**The « general » monitoring is translated by way of surveys and polls dealing with several subjects, independently of a given execution. Different examples are developed below :**

- **The survey of the water society of Versailles and Saint-Cloud in 1980 (ref 36)** dealt with the improvements requested by the users in the water field. The replies obtained have been valuable for the society and certified this globally in the majority of the channels that it envisaged adopting.

- **The poll launched by the French ministry of Agriculture in 1988 (ref 37)** has permitted analysing the opinion of the French people on drinking water, the quality of the service given, its price and the distribution deficiencies. A comparison of the reactions of rural people and urban people has also been possible.

➤ **Mrs de Vanssay and others (ref 14)**, from the psychology laboratory of the environment of the University of Paris V, conducted a survey in 1997 on the citizens' perception of water in 11 towns all over the globe. The objective was to understand what the inhabitants of the towns base themselves upon to establish the image they have of the natural water of their living environment, of the water they use as well as the institutions and services that manage it. It was anticipated to be able to take account of the deficiencies that they denounced and to act as best as possible to satisfy them. It was shown for example that the technical solutions to treat the water are often judged as a way out and not a long-lasting development model: One deals downstream with the consequences of all sorts of aberrant practices instead of dealing with the causes of degradation of the water upstream. The importance of this degradation thus appears linked to the economic system and to globally incoherent policies and the individual efforts of the water economy often seem ridiculous.

➤ **Mrs de Körner (ref 31)**, of the SAGEP has developed in her communication to the Symposium of Rennes the role of offering doctors as intermediaries to transmit to their patients the advice of an expert accepted by them. Within this framework the DREDOC has launched a survey related to 281 Parisian doctors in 1999 in order to:

- more readily understand the attitudes of the health professionals related to tap water, their perception of the water quality and their information needs.
- identify the information modes that priority must be given to in order to lead to an improvement of their recommendations in water consumption matters, as well as the exact type of information to give them so that they can pass it on to their patients.

**The listening / monitoring « linked to a field action » concerns a particular execution. Different examples illustrating it are developed below :**

➤ **ACF (ref 43)**, in collaboration with the district health Department and with the Nam Saat, is aimed at reducing diarrhoeic illnesses and malaria in certain villages of Laos, through the implementation of drinking water systems and combined with a sanitary education of the villagers; parallel to this, hygiene kits are distributed.

The content of the sanitary education activity programme depends partly on the results of a CAP (Knowledge, Attitude Practices) survey, by way of a questionnaire, addressed to the villagers before the start of the project. This sought to identify the knowledge of the villagers in hygiene matters, as well as their practices and attitudes in this field. A second CAP survey, conducted at the end of the project, has also permitted measuring the positive changes in the behaviour of the beneficiaries.

In addition to the « CAP surveys, « focus group » discussions can be conducted before the onset of the project to have a better idea of the sanitary situation in the village, or of its achievement in order to measure its impact. The sanitary educator then conducts a discussion about the « focus » themes with a group of 15 to 25 villagers. He seeks to acquire valuable information about their perception of the sanitary problems and their knowledge, attitude and practices with respect to clean water, hygiene, illnesses, etc. A report is then written about the points that have appeared during the discussion. It is not then a question of a closed questionnaire but a global evaluation of the remarks made and the response given by the group. It is then more a qualitative evaluation and not a quantitative one. This method also permits having a more participative discussion with the villagers.

➤ One operation has been conducted by **EAST (ref 29 and 69)** from 1996 to 2001 on three districts of Ouagadougou (200000 inhabitants, Burkina Faso) to attain a 100% coverage of the elementary water and drainage needs as well as an advisable evaluation of the household waste.

The evaluation of the demand is based on information meetings with the support of local associations and Young Educational Worker Committees (CJA), recruited with young people at the end of their schooling days or even unemployed inhabitants, members of associations. These have been trained (see IV.5) in dialogue, in hygiene methods and in following up executions (surveillance of the quality of the water and hygiene practices, maintenance of the foot pumps, construction of latrines, evacuation and dumping of waste...).

Their role in this project is very important as the educational workers are in permanent contact with the beneficiary populations of the works executed as well as with the people in charge of the project and the administrations in question. They may also compile the needs extracted, verify the good working of the installations, evaluate the degree of application by the inhabitants of the hygiene rules that they have been taught or even the acceptance of the project by the different people concerned...

Thus they can have an important and positive influence on the involvement of the different partners in the project : a good knowledge of the medium (historic, geographic, human...), of the partners and the demanders, obtained by individual listening / monitoring (surveys, polls, interviews), involves at the same time a good identification of the problems and a close awareness-raising in the people.

**P.Revault (ref 28)**, an EAST consultant and advisor to the GRDR, denounces the fact that the majority of the large projects still operate on the basis of a more or less autonomous outside logic that provides its technical competences based on a badly adapted hygienist ideal (there are no relevant socio anthropological studies).

Faced with this problem, P. Revault recommends carrying out a rigorous social and sanitary diagnosis even before making a bore-hole, which enables not only analysing the environmental risks and specifying the interest groups, the potential conflicts and alliances but also going into specific and limited objectives to maintain the water point and reduce the risks of illnesses linked with the water.

In the same way, the follow-up and evaluation of the hydraulic programmes must further be applied to characterise the causal chains between socio-economic and health determinants, in order to optimise the socio-sanitary process rather than being content with considering an average sanitary level.

In all these actions, the participation of the local population (and thus their monitoring) seems essential as they are the ones who are going to profit from the work (of which it is going to partly ensure its everlastingness), but also because it is the population who withhold information elements not to be omitted.

**K.Ogoussan (ref 32)**, programme head of **EAST Benin**, has established a communication entitled « **Promotion of the hygiene code in a rural school medium** » in the international Symposium of Rennes dealing with water, health and environment (23-24 February 2000). The latter evokes among others a programme of **Information Education and communication (IEC)** on health, conducted since 1997 by l'ONG EAST in the department of Mono in the Republic of Benin, following the government's request with respect to the precarious sanitary situation.

Educational workers have therefore been recruited, in order to raise the awareness of the users (villagers, students' parents, teacher, students) by Information Education and Communication (IEC) / Health of the executions carried out to educe the water illnesses. They have developed two main themes in the schools: water and body hygiene.

The objective is to permit the communities to analyse for themselves the situations which pose them problems and which they are made to suffer.

This passes firstly through the freedom of speech of all the classes of people in the community, in order to have a representative and authentic vision of the situation. The educational workers must thus know the target area in order to easily understand the problems, the actual experiences and the behaviour, and to prepare the awareness-raising sessions well, where the supports used are designs representing the situations or reproducing the actions foreseen.

Reflections are immediately started to look for the consequences and the causes of the problems ; **itis based on the knowledge of the communities, completed with the necessary scientific data, that an action must be organised and carried out.**

➤ **WaterAid (ref 79)** underlines the need to adapt the interventions in hygiene matters in the practices of the beneficiary community, which requires a prior monitoring of this community.

➤ The objective of **Integrated Development Foundation (IDF, ref 55)**, a small local NGO is to permit a coherent management of the development initiatives on the level of the town of Barmenda in the Cameroun.

**The Participative Encouragement Process (DAP)** has been upheld by IDF throughout the research as an accompaniment tool susceptible to making the inhabitants and the other actors participate in depth responsabilising each one of them. It is a proximity process based on the conviction that they themselves have the capacity to get to know their environment and find the solutions for their well-being. This process has permitted collecting and analysing information about specific problems, as well as planning actions to cope with them. It has also be recorded that thee inhabitants are the ones who conduct the research.

The DAP respects the customs, values and culture of the inhabitants. In the Cameroon, where there are a multitude of customs, this adapts very well. Rich and poor have had the chance to express themselves and to be heard. Apart from being used to evaluate the demands of the populations, the DAP is used during meetings, work sessions, workshops or seminars to identify problems, their hierarchisation, the choice of solution, planning, execution and evaluation.

A home survey has for example permitted collecting data until then unavailable about water and drainage, such as the structures of the homes, their drinking water supply mode, the drainage of wastewater and rainwater, the production and collection of household water. This survey has also permitting finding and sensitising the women and children, who were able to express themselves freely and thus contribute to solving the water and drainage problems in the town.

**Finally, the renewal in time of this listening / monitoring has been valuable to make it more optimal and continue the evolution of the knowledge and behaviour of the citizens with respect to water in general or to a particular project (6<sup>th</sup> recommendation).**

➤ For example, **the C.I.Eau (ref 78)** has established through the SOFRES a barometer of the French opinion of the water from 1996 to 2000. A sample of about 2000 people aged 15 or more, representative of the French population, has thus responded each year to nine questions about the water management, and for five consecutive years.

➤ Another interesting example, mentioned above, is that of the renewal of the CAP survey conducted by **ACF (ref 43)** in Laos at the end of the sanitary education project. This process has permitted evaluating the progresses carried out by the villagers in terms of hygiene, and thus optimising the education action (in order more especially to know the necessary time for education for the villages to have acquired a sufficient level of knowledge and practices) through a particular monitoring.

**It seems obvious then that the follow-up and the control of the results of a given action (see 4.6) are provided mainly by the monitoring of the population and by its renewal in time.**

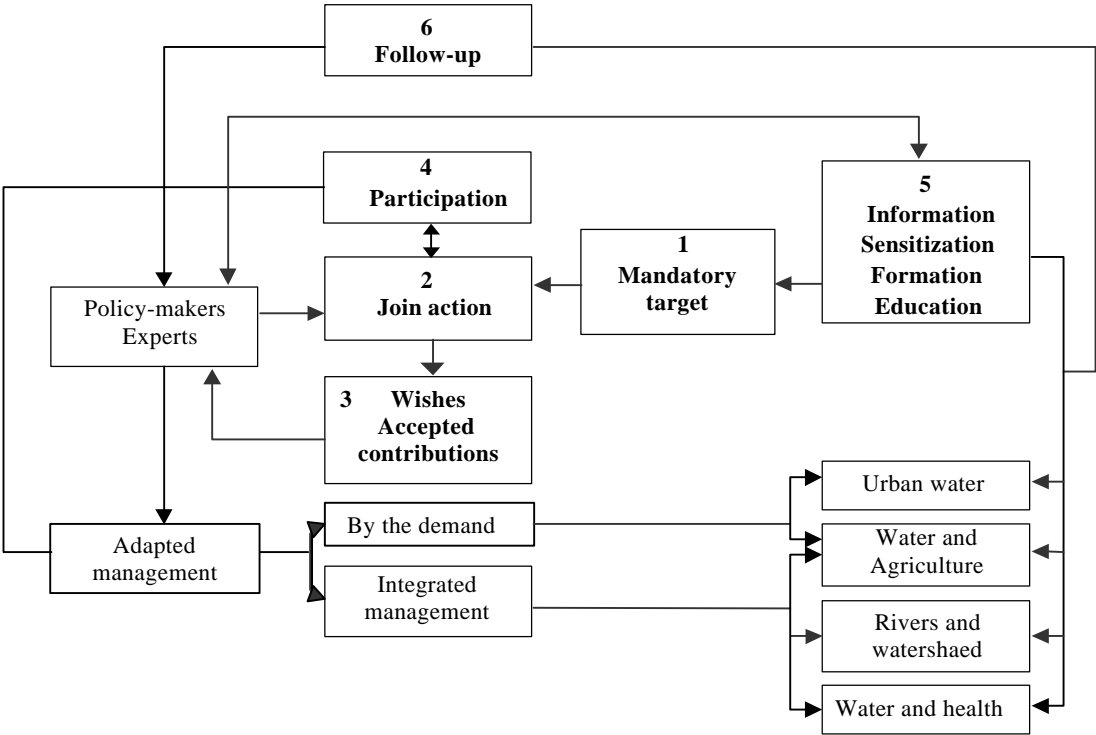
### 4.4 Consultation, participation and pedagogy necessary

The dialogue with the target public, recommended in the 3rd recommendation, is the heart of the new water management policy, once the target has been well defined.

It permits in effect the monitoring of the request and is a means to pass the information about the project and finally to adapt this to the request during the consultation, and then passing to the participation which will permit the users to make a better use of the work carried out.

**One of the difficulties of the process resides in the fact that it is not possible to individually address the entire target, but groups or associations unifying them, or even people (mayors, village chiefs...) who have authority over them who may act as a relay or intermediary.**

**The quality and efficiency of the consultation depend obviously on the representativeness of the group or the association with respect to the target. In the case of a relay, the consultation becomes long-term and random. The participation, the second stage of the process, depends more on the narrowness of the links between the target addressed and the group, and finally on the representativeness of the people with whom the dialogue is established.**



**Figure 6:** *The process to be implemented for an efficient water management policy*

The diagram of figure 6, taken from the Social Water Chart, shows the whole process, the numbers corresponding to the order of development based on the target and on its mandatories. The arrows indicate the necessary movements to adapt the project based on the wishes of the target and the information.

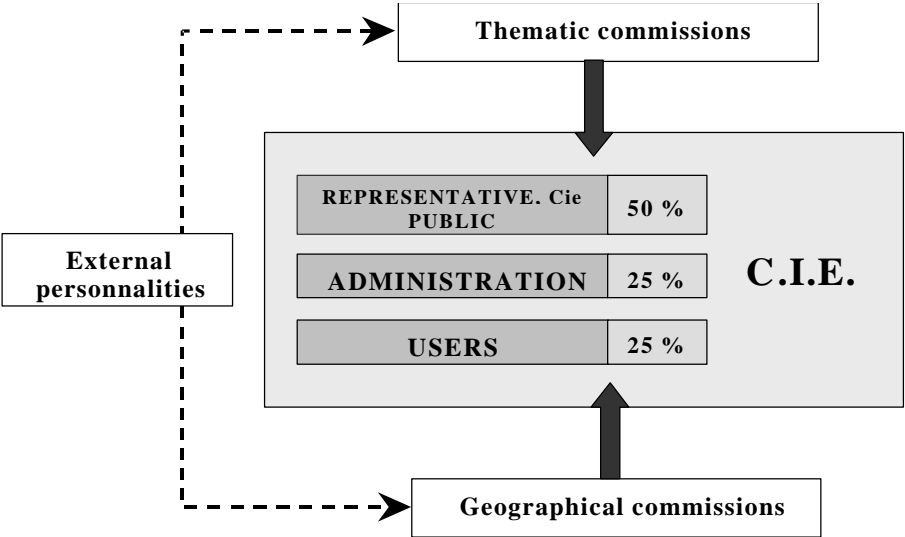
It makes it seem that the success of the process depends on a power given by the population of the target to its representatives.

**In the examples mentioned below, insistence is placed on the importance of the quality of the power, which must, if possible, be explicit, on the means of ensuring the real representativeness of the authorised people or the relays.**

One of the first applications to the water management of the consultation and participation of the users was the reaction of the French water agencies in 1968 with their basin Committee, which the projects to be carried out are submitted to. These are comprised both of representatives of the administration, representatives of the territorial groups empowered for this purpose, as well as representatives of the water users (farmers, industrialists, fishermen, tourism...), environmental defence associations and experts.

The consultation has permitted a good association of the population of each basin through their representatives in the intervention programmes of these organisations. In the large basins such as Seine-Normandie or Loire-Bretagne, a decentralised consultation of these smaller sub-basins provides an even stronger consensus to the very important action programmes (several hundreds of million euros per year).

**However, as this device is removed from the users and beneficiaries, certain agencies, more especially the Seine-Normandie Water Agency, have the intention of basing themselves on well-chosen associations, organised in a network, to encourage a close monitoring of several subjects of their action (town, rural world, industry, rivers). These networks, also in charge of making the information messages pass on to the population, will supply the Local Water Communities with valuable information (CLE, see the monograph of the Parisian central area, ref. 9), in charge of preparing and implementing the Water management development Diagrams (SAGE) in each of their action sub-basins (see figure 7 below).**



**Figure 7:** *Organisation of a SAGE management*

The actor or the decision-maker administer consultation and participation following two different methods:

- either through meetings organised by him or by the person authorised by him (**informer or intermediary**), grouping together as indicated above, associations, groups of users and beneficiaries or people in charge of administering them (groups...);
- **or entrusting to well-trained educational workers the task of travelling and contacting the users and the beneficiaries more directly.**

**Some examples corresponding to the first solution are given below :**

- **The Sémois (ref 59)**, in Belgium, as the other Wallonie river management organisations have done, has incorporated a River committee with representatives from the groups, industries, farmers, river-dwellers and different associations. These are the basis for the consultation and participation of the users to adopt a line of action of rehabilitation and safeguarding of the natural medium as well as of the environment of the watershed in question.
- **EPIDOR (ref 68)**, a public inter-departmental establishment in charge of the integrated management in the Dordogne basin (24,000 sq.dkm.), the main tributary of the Garonne, acts through debates and awareness-raising meetings aimed at the elected members, decision-makers, representatives, farmers, industry and tourism. As each of these meetings is adapted to the different subjects approached, the pedagogy is close to the problems to be solved and uses all the media at length. Its objective is to implement the global chart adopted at these meetings, unifying all the actions to be implemented and to be coordinated, after associating all the partners in the executions.
- **R.M. Mancini (ref 71)**, from the secretary of state's office of Sao Paulo (Brazil), has implemented a monitoring Committee to encourage the industrialists to control their toxic waste (thanks to suitable manufacturing procedures) in a basin that supplies an important river of the town with water. This action has been conducted with the participation of Canada, of the University and of the town council of Sao Paulo and specialised study offices.
- The Participative Encouragement Process (DAP) of **IDF (ref 55)** already mentioned and concerning the users and inhabitants, is the basis for a close consultation of the field, which uses a pedagogy based on specific problems to be settled.
- **ACF (ref 43)**, in Laos, is also based on surveys (Knowledge, Attitudes, Practices) in each village, translated into discussions in « focus groups » with limited groups, nucleus of the village water committees, with a pedagogy providing posters, sanitary education kits and games for the children.
- **the CIRAD (ref 44)**, in Nigeria, organises consultation workshops with the operators, the country organisations and the field technicians, to help people formulate their problems and solve them for themselves thanks to influences and contacts.

**Some examples of a consultation entrusted to previously trained itinerant educational workers are given below (see 4.5) in order to deal more directly with users and beneficiaries ; this type of consultation completes the contacts established also with associations.**

➤ **The CEEM (ref 54)**, a small structure that implements a rural contact in its action area (8 small basin with 5000 inhabitants), has chosen to entrust this task of contact, information and awareness-raising to an educational worker. She is in charge of establishing a close relationship with the farmers, artisans, groups, so that their different executions are well-coordinated and enter an integrated management. She uses field demonstrations, using relays from the medium and above all children's teachers, future citizens and relays with their parents.

➤ **EAST (ref 29 and 69)** organises information meetings in Ouagadougou to disseminate training in hygiene which completes their field actions (water supply, construction of latrines, market-gardening). The meetings, with the participation of young educational workers, are relayed by the daily action of Young Educational Worker Committees (CJA) related to inhabitants, above all women, as well as related to associations and teachers. This action is translated by a first phase of information related to problems concerning EAST, followed by the compilation of the needs expressed. The CJA also guarantees the follow-up of the work carried out.

These actions are based on encouragement for the public at large, salubrity days, and are relayed by radio and television. The educational workers help the people identify their problems helping them to see, to reflect in order to act.

All these actions are sustained by the people in charge of the district and broadly disseminated in the schools.

➤ **ACF (ref 33)**, in Liberia, organises and disseminates its messages to the representatives of the village communities, to the local leaders and to the people of the villages thanks to previously trained teams of educational workers. These are in charge of organising a Committee (more than 100 have been created) in each village ; which they inform, consult and of which they guarantee the follow-up.

They help them with the technical plan, controlling the maintenance of the pumps, and with the management plan by advice to collect the necessary funds and administer water points.

➤ **APDRA (ref 47)**, Pisciculture and Rural Development Association in humid tropical Africa, also acts through the educational workers that it has trained to disseminate the techniques to be used to the local pisciculturist groups. These educational workers help them and give them advice for the technical developments to be carried out within the framework of a support contact with the Ivory Coast State.

**Related to the above, the pedagogy to be employed, the key to success, uses interactive techniques based on games, mainly using videos, designs and different media. This obviously needs very close links with education specialists, recommended in the 5th recommendation.**

**It is also advisable to encompass the advice of sociologists to decode the deep motivations of the citizens respect to water and the perception they have of it, in order to act consequently.**

**Mrs. de Vanssay (ref 14)**, has analysed this perception of the citizens in depth, different from one country to another and even from one town to another inside one same country, for 11 towns thanks to surveys and interviews (see 4.3).

**C. Green (ref 12)** also describes the close links between water and culture, which condition the citizens of each of them.

**This knowledge permits, when one has it, gaining the trust of those we want to sensitise to change their behaviour and use the works carried out better.**

A good example of **interactive pedagogy** is given by **Infraconsult (ref 70)**, which shows how a good use of the latrines has been able to assimilated, broadly based on the mouth-to-mouth between inhabitants of Uzbekistan. Demonstration latrines (of four kinds) have been built in semi-public places or places of easy access, with adequate informative publicity and organisation of group discussions, more especially with the project heads. The users have then been involved in the construction of latrines of their choice with local materials (the ventilated system has become the most popular).

**Field education and in these demonstration latrines is the best school to disseminate the hygiene instructions with respect to the groups of inhabitants and children, organising them by way of games.**

Summing up, one must insist, for the success of this consultation and of this participation, on the importance of the training of the educational workers and the people in charge of small tasks to be developed with respect to the population in question, which is the subject of suc-chapter 4.5 below.

## 4.5 Specific training

### Specific training concerning the 5th recommendation.

Three very different types of specific training will be distinguished here :

- technical training ;
- training of the field educational workers/educators ;
- training listening to experts.

**Technical training** concerns the different maintenance service specialists, above all in the developing countries which, on still not having artisans or local technicians, are interested in training certain users in essential tasks, more specially the maintenance (servicing of pumps, wells...) of works carried out.

This also concerns the more developed countries to fill up lakes in classical training, for example, the maintenance of river banks, drip irrigation...

Table 3 below supplies a list of the most commonly demanded technical training :

	<b>Training module</b>	<b>Object</b>
<b>Developing country</b>	Foot pumps	Maintenance
	Wells	Excavation Maintenance
	Pipelines	Work
	Spring	Operation Maintenance
	Irrigation channels	Maintenance
	Aquaculture	Maintenance
<b>Developed country</b>	Riverbanks	Maintenance
	Drainage	Maintenance
	Pruner, landscaper	Work Maintenance

**Table3 :** Examples of technical training

• **Some interesting technical training examples are given below taken from the statements received by the Water Academy :**

➤ **ACF (ref 43)** has implemented technical training for technicians of Nam Saat in Laos. This capacity building should enable this government institution to guarantee the maintenance of the water systems and to envisage the construction of new networks. On a local level, village water committees have been created. They are responsible for the drinking water system implemented by ACF, as well as for monitoring the health situation in the village. Their technical training enables them to supervise the maintenance of the water system and to carry out simple repairs by themselves. For more complicated repairs, they resort to Nam Saat

➤ **The SYMIRA (ref 49)** has implemented several technical trainings for its different employees :

**Training modules are given more particularly to the employees of the maintenance team in order to guarantee these people, with a social difficulty, a solid knowledge to prepare their insertion.**

**Organisation of school-workshops (with the Forest Centre of Noirétable) managed by the technicians of SY.MI.R.A.**

Reception of probationers (Scientific General Certificate of Education or BTS « Development and Protection of Nature) for a time that varies from 1 to 5 weeks.

It is a matter of giving complete education (practical and methodological) to disseminate knowledge in the water course ecology fields, development and management of water spaces, treatment of vegetation and control of analysis and intervention techniques on the medium ; and of managing a good professional insertion in water professions.

➤ **The SICALA (ref 60)** has implemented a BPA technical training « River restoration » for people in the process of social insertion. 4 people in exclusion situation have been able to obtain this diploma. In the same insertion dynamics, 7 people have benefited from a specialisation in vegetable engineering techniques.

➤ **The CIRAD (ref 44 and 46)** participates in technical training actions, above all respect to country organisations, in order to increase the productivity of the irrigated perimeters of Niger and Nigeria. These actions respond to a growing and more or less specific demand from the producers. A prototype of conservation racks for counter-season market-gardening has been developed, for example, in Niger.

➤ **The APDRA (ref 47)**, in the Ivory Coast, has also developed within its action programme a « technical training » discipline consisting in learning the necessary techniques for the success of pisciculture. This discipline responds to a growing and justified demand from local people wishing to carry out pisciculture : many attempts have failed due to lack of techniques.

The development process in progress generates new questions, some of a technical kind but others of a social kind (producer organisations, real estate guarantee...) These questions arise from new training needs which one must now have to cope with.

**The training of the field educational workers / educators** is an important action, which involves :

- general water training ;
- specific training in local problems ;
- sociological type contact preparation, identical for all the trainers and educators.

It is a question of training more or less specifically (going from simple general information to individual training, for example on water illness propagation processes) people who are going to contribute to the information and awareness-raising of the people in certain problems linked to the local management of water and the environment. It is a question of the people in charge of the water management (village water committees, groups, technicians), health personnel (doctors, nurses) or even people with a mediator / educational role (teachers, educational workers).

Table 4 below supplies an abridged list of subjects approached by these field educational workers/educators and of their main tasks.

<b>Subject</b>	<b>Main task</b>
Village water supply	Reduction of losses Ownership of water points
Irrigation	Advice to the irrigator Monitoring of water towers
Stock-farming	Fight against predators Water supply
Pisciculture	Sanitary and supply advice
Water and health	Advice to parents in hygiene matters

**Table 4:** Training of field educational workers/educators

These subjects must be the object of specific training for field agents of different water fields.

For example, for the *Water and health* educators, notions of hygiene linked to water will be developed such as potabilisation, drainage and disposal of waste subject to contaminate surface water and groundwater. The specific training will deal mainly with the prevention and treatment of dehydration following diarrhoeas due to the heat and lack of water.

• Some examples of training of field educational workers/educators, based on statements received by the Water Academy, are developed below:

➤ A team of educational workers has been trained by **ACF (ref 33)** in Liberia in order to come into contact again with the beneficiaries of the actions carried out. They are in charge of disseminating messages about the executions carried out, the instructions for use of manual pumps, the importance of drinking water, the current domestic and body hygiene practices, illnesses linked to water... They are also encouraged by discussions on a village level in order to mobilise the community to organise a Committee. They have then organised seminars (4 seminars of 2 days), uniting several committees (10 to 15) in order to more readily define the functions of the committee, the instructions for use of the manual pumps, and make the people aware of the importance of drinking water. They have then handed over this work to the communities directly in the villages.

One of the objectives of this action is to reinforce the feeling of citizenship by adapting the execution of the project and reconstituting the social fabrics within the village communities of one same region. In effect, the target populations were just back from the Ivory Coast (start of the project in January 98) where they have experienced the terror reigning in Liberia for 3 to 7 years. Today they are finding their villages of origin again and must reconstruct everything (house, land reclaiming, cleaning of plantations...). Dispersed in the reception areas of the Ivory Coast, the communities are reconstituted little by little with the return of the people. The people find each other again, the « leaders » (old, new, institutional, traditional) see their village societies start up again.

In the eyes of ACF this situation has justified a process based on a direct contact with the communities, the creation of meeting frameworks (seminars) and the satisfaction of basic needs such as access to drinking water.

One can then, through the intermediary of this statement, easily understand the preponderant and dynamising role of the field educational workers in the awareness-raising, information and education of the people in water problems.

➤ The example of **EAST (ref 29 and 69)** is also demonstrative : parallel to the operation consisting in reaching 100% coverage of the elementary water and drainage needs as well as a suitable evacuation of the household waste, EAST has developed sanitary education actions.

Therefore, the organisation has created Committees of Young Educational Workers (CJA), recruited on the spot from young people about to finish school or unemployed, members of associations, and previously trained in dialogue, in hygiene methods and in the monitoring of executions (surveillance of the water quality and hygiene practices, maintenance of foot pumps, construction of latrines, evacuation and dumping of waste, ...).

The efficiency of these CJA comes from the fact that the educational workers are in permanent contact with and listen to the population, but they also closely collaborate with the project heads and with the administrations concerned. They are then in the heart of the process and their training must be adapted consequently.

**Training experts in listening / monitoring** is necessary to adapt their technical knowledge to the field realities.

Listening / monitoring training is also worth being given, within the framework of their educational courses, to engineers and specialists to convince them that dialogues with the users can teach them to adapt their technical knowledge to the realities of the terrain.

## 4.6 Follow-up of the results and indicators

**This important subject concerns the 6th recommendation.**

**The follow-up of an action and the definition of a possible indicator are only made easy when the objective to be reached is very specific, such as for example the result of training in a job that can give rise to a diploma or be confirmed in time during maintenance.**

➤ For example, **the SICALA (ref 60)** trains « river restorers » recompensed with a diploma; in Liberia **ACF (ref 33)** trains local field agents in the maintenance of pumps their efficiency being measured by calculating the percentage of pumps out of order. This is the case also of the result of the implementation of the water point management committees, measured by the percentage of water points managed in this way.

➤ The annual control of the knowledge of the young educational workers trained by **EAST (ref 29 and 69)** can also be mentioned, to disseminate the hygiene advice with respect to the population.

On the contrary, the follow-up of an action is very delicate when it is a question of measuring the changes in behaviour respect to water after an awareness-raising campaign. The measurement means consist then in evaluating the behaviour on points specific before and after the action.

The CAP (Knowledge, Attitudes, Practices) surveys of **ACF (ref 43)** mentioned can be quoted. In a more precise fashion, **M Cottavoz, Stoupy and Leborgne (ref 33)** already mentioned, have obtained significant evolutions of behaviour in one year, measured with the CAP survey before and after project, more especially about drawing water:

- **pump collection passing from 40 to 58 %;**
- **well collection from 36 to 29 % ;**
- **supply to the “marigot” (hollow in ground to store water) from 25 to 14 %.**

**The progress in the maintenance of the water points (91% of the women clean them respect to 84% a year before) as well as in the storage of drinking water (75% of the people keep their drinking water separate from the water used for other purposes compared with 62% one year before) have also been measured.**

The C.I.Eau (ref 78), have been carrying out opinion polls related to the whole French population since 1996 concerning the way in which the French estimate they are informed about water. The evolution between 1996 and 2000 results in a slight increase of those who believe they are well informed from 19 to 25% and a reduction of 78 to 69% of those who think they are insufficiently informed, “do not answer” has doubled from 3 to 6%.

**Finally, several communications have insisted on the difficulty to correlate the evolution of the number of illnesses linked to water with a reliable indicator. For example, the reduction of the number of diarrhoeas is not only linked to the progresses made in the quality of water distributed, but also to a better use of the latrine, to the progresses made in the field of hygiene, to a change in eating habits...**

This difficulty to find reliable indicators and well correlated with the effects of the action undertaken certainly explains that more than half the questions about the follow-up of the results have not been answered (18) on the 32 returns of surveys. Moreover, from 14 replies, 6 propose basing themselves only on the good brand image of their action, measured for example by the progression of the number of classes of water or by the number of their members; which has nothing much to do with the results. Finally, only 8 propose a measurement method of the results.

## 4.7 The financing means to be foreseen

The concern the 1<sup>st</sup> recommendation.

They are percentages raising the cost of the investments in order to issue the means necessary for the education and awareness-raising of the public. They depend on the nature of the public to be reached and the informer.

- This percentage is very low for actions aimed at the general public by the large water managing organisations under all their forms. One can quote the means used by the French water agencies, around one to two francs per inhabitants for the whole communication, the highest for those grouping the least inhabitants such as **the Rhin-Meuse Water Agency (ref 63)**, the lowest for the large agencies such as the **Loire-Bretagne Water Agency (ref 62)**. Around a quarter of this budget is dedicated to the water classes in the **Sein-Normandie Water Agency (ref 65)**, where the cost of the whole communication amounts to one franc per inhabitant and year. Similar percentages are found in **Madrid (ref 6)**, **Boston (ref 4)** or the **ONEP in Morocco (ref 40)**.

- For the organisations in charge of management operations, the percentages used for these actions presented at the cost of the work go from 2 to 6% of the investments.

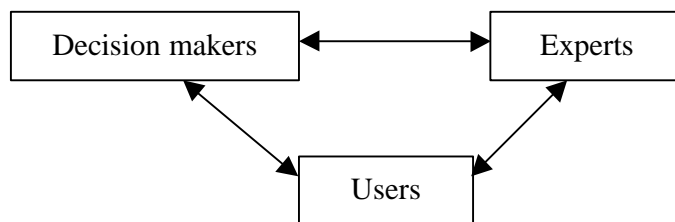
For training, including hygiene and health **l'Appel (ref 48)**, in Vietnam, talks of 4 %, **Enfants d'Ailleurs (ref 58)**, in Laos, 5 %, and **EAST (ref 29 and 69)**, in Ouagadougou, from 2 to 6% depending on the districts and importance of the work implemented.

**The CEEM (ref 54)**, in France, which manages a budget and important works, talks of 1%, whilst **SYMIRA (ref. 49)**, which only manages a modest river bank maintenance budget, uses 10% for training.

## CONCLUSION

The proposals of this “method guide draft” is a solid starting point for the “decision-makers” who wish to associate the citizens with their modern water management step, completing their process with the “experts ».

They must respect the following outline, which has been recommended above all in the Second World Water Forum in The Hague in March 2000:



**Figure 8:** *The three poles on which the water management must be based*

But if they are based on more than 80 cases from 30 countries and cover the whole water cycle, they have not included experiences from several parts of the world, more especially from Eastern Europe, China, Gulf countries and others such as the English-speaking countries of Africa and South America.

That is why this guide project will be translated into English and placed on the Internet in two versions. Thus, it can be consulted by organisations, which the Academy wishes to write to in order for them to answer two questionnaires:

The first to receive their opinion on the recommendations proposed.

The second about the relevant means developed and possibility of including new cases to be sent to the Water Academy.

## GLOSSARY

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**Actor**: organisation ordered by a decision-maker to implement in situ a set of works to permit a water management in benefit of the users or beneficiaries. This may be for example water supply, irrigation...

**Educational worker**: person ordered by an actor to contact the users, beneficiaries, to inform them and listen to them.

**Beneficiary**: person benefiting from the results of the work carried out by the public authorities for a group of people, as for example the improvement of the low water flow, or the water quality (...), which they contribute to through the rates and taxes.

**Social Water Chart**: group of texts and Recommendations to be respected in order for the water to be an accessible asset for everyone, rich or poor, illustrated by specific examples. This Chart has been presented and adopted in the 2<sup>nd</sup> Water Forum in The Hague.

**Decision-maker**: a person who has been given a power of decision to carry out works; for example the mayor of a community, the president of a general department council, the industrialist using water, the president of a union...

**Listening/Monitoring**: group of means implemented to know the wishes, willingness to pay, satisfaction of the citizens, with respect to the services provided or to be provided.

**Education**: any action to disseminate knowledge in the entire field, including water, conducted by schools, universities (...) or by institutions or private actors, with the aim of being assimilated by the auditors.

**Expert**: a specialist of a particular field concerning water; this may either be water or climate and sociology or pedagogy

**Informer**: person or organisation ordered by the actor to disseminate general information on water or uses and the benefits that the citizens may get from their execution as well as how to use it.

**Information**: message concerning the water cycle in general or execution carried out to more readily manage the water: its cost, its financing as well as the consequences for the user or the beneficiary (price of water, taxes, rates) and advice to use it better.

**Intermediary**: organisation ordered by a decision-maker or an actor to second them in the information, educational or awareness-raising tasks. This cuts out the educational worker and the informer.

**Public**: group of citizens water users, where different categories can be distinguished (age, sex, culture, environmental and socio-economic living environment, knowledge, attitudes, practices, wishes). One can mention above all children, women, beneficiaries, decision-makers, and journalists...

**Awareness raising**: information and education aimed at modifying the behaviour of the target public and to integrate them better in the execution and operation of the works concerning them.

**User**: person subscribed to a water supply service (in town for domestic or industrial uses, or for irrigation), evacuation of wastewater, that is anyone using water for their personal or collective use, or for their activities.

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