

Ideas for Water Awareness Campaigns



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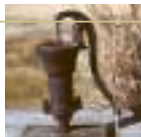
**Ideas for
Water Awareness
Campaigns**

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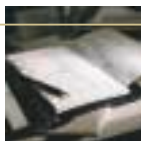
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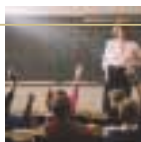
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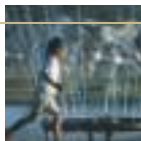
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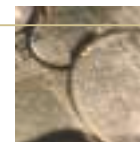
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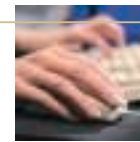
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Introduction



"None of this will happen without public awareness and mobilization campaigns, to bring home to people the extent and the causes of the current and impending water crisis."

Kofi Annan on the occasion of the UN Millennium Forum

There is growing recognition of the importance of social norms and attitudes in the management of water. Recent main policy documents recognize the importance of awareness raising to influence these norms and values towards a more sustainable use of water resources. All over the world new initiatives have been launched in the last decade. Large international agencies, governments, local citizens' groups, drinking-water providers, international and local non-governmental organizations (NGOs) and educational networks all have unique and interesting experiences. Their ideas are often innovative, attractive and have a potential to appeal to large audiences.

This book attempts to bring together many of these ideas, from a variety of organizations working in a diverse range of countries. Hopefully, it will be useful as a resource for a variety of people such as:

- Professionals in the water sector who have realized the importance of public awareness.
- People working on water publicity campaigns and educational programs who want to know both what is going on in other initiatives and what material and resources are already available.
- Small and large NGO groups trying to find ways to expand their reach and incorporate new ideas.
- Organizations looking for partners to start new initiatives with.
- Policy makers who want to glance into the public awareness side of the water sector.

One of the problems with existing information is its fragmentation. Usually, it is only available as project documentation, offering general overviews of projects and focusing on various topics besides awareness raising. Systematic exchange of awareness raising ideas is difficult. Documentation, with experiences from more than one initiative is often limited to one part of the water sector, for example, only basic education on water conservation or promotion of education on hygiene. Much can be learnt by exchanging and comparing the experiences of very different initiatives within the water sector. There are several main reasons why systematic awareness raising on water is needed:

Water conservation

Evidence from several campaigns shows that awareness-building can effectively reduce water demand. For example, in Zaragoza, Spain, a large water conservation awareness-campaign made it unnecessary to raise the level of a reservoir, as had been planned earlier.

Promoting education on hygiene

Similarly, in the sanitation and hygiene sector, awareness of hygiene is now considered a necessary complement to the construction of latrines. Without an understanding of hygiene-related health issues, the use of safe sanitary facilities is likely to be suboptimal.

Preservation of wet ecosystems

The number of volunteers involved in the preservation of rivers, lakes, marshes and estuaries is remarkable. The large amount of public attention for environmental conservation and the large number of NGOs campaigning on this topic have been a great support for this movement. Volunteer-lobbying networks, river-monitoring and clean-up programs have been created, often with the help of community groups, schools and religious organizations.

Supporting participatory interventions

Awareness and being motivated to change are essential in participatory interventions. Participation is based on the idea that people have the right to be involved in issues concerning them. Awareness raising and education can help stimulate active and informed involvement.

Developing self-regulating water institutions

Having seen groundwater disasters elsewhere, the acute understanding of the dangers of overpumping caused farmers in the arid Panjgur District in Pakistan to impose a ban on the use of tube wells, thus salvaging the group-owned horizontal well systems. Awareness can be a very important drive for communities to establish and improve local institutions for the management of water resources.

Pushing for policy changes

Awareness raising can also help create social pressure on governments and other water users. It can support a drive for policy changes in favor of better water management and build political will.

Building a more water-aware new generation

The school children of today will be the leaders and doers of tomorrow. This is all the more reason to make wise water use part of the school curricula.

Summarizing...

All in all, the number of unique awareness raising initiatives in the water sector is surprisingly large. This book attempts to bring together the many ideas developed in these initiatives. Sometimes, they will be combined with suggestions from communications theory and commercial marketing but the emphasis will remain on practical suggestions and clues. This book does not intend to be a comprehensive how-to-do book but, hopefully, it will be a source of inspiration and a starting point for many new ideas and initiatives.

HOW TO USE THIS BOOK

- Do not feel you have to read everything. The book has been set up in such a way that you can browse through it easily.
- Most chapters consist of an introduction to the topic, followed by ideas from different initiatives. Usually, these ideas have been arranged under three or four different headings per chapter. These headings can be found in the tabs along the side of each page.
- Along with each idea, the campaign from which it originates is mentioned, unless it is an idea not particular to one specific campaign.
- In appendix 1, you will find a short description of each initiative, along with information on its website, address, and e-mail (if available). So, if you are interested in a certain idea and would like to know from what kind of campaign it has originated, you will find the relevant information here, arranged per country.
- Remember that ideas can be very culture-specific. Some ideas are not necessarily useful in another cultural context, whereas others need rigorous adaptation to local values and institutions.

HOW THE BOOK IS SET UP

Figure 1 has been prepared to help you navigate through the text. The first two chapters give the background that may help in setting up a water awareness campaign, discussing, first, brief basic concepts in awareness-building (chapter 1) and, next, suggestions on how to plan a campaign (chapter 2).

Chapters 3 to 7, and 9 give practical examples on how to involve major partners, decision-makers and leaders, corporate and nonprofit organizations, educational institutes, youth groups, and communities and the media. Chapters 8, 10 and 11 discuss the preparation of awareness tools: the preparation of material, and the organization of events and the use of the internet. Appendix 2 contains information on educational resources, material and other sources while appendix 3 gives a list of literature cited.

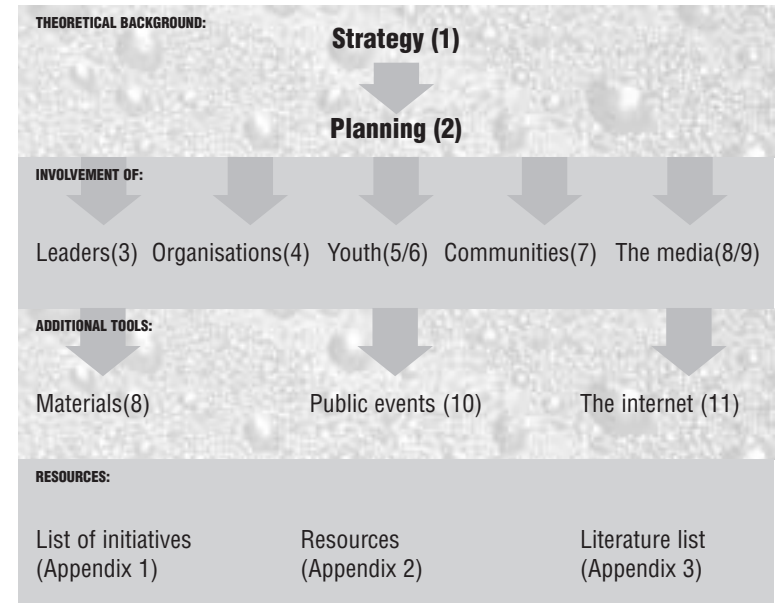


Figure 1. Content map of the "Ideas Book:" Topic and chapter.

The ideas have been adopted from various sources: project documentation, information on the internet, brochures and personal communication. We have tried to stay as close to the original initiatives as possible; however, ideas have been simplified and sometimes certain aspects of these ideas are emphasized more than others. Please keep in mind that they remain *our* interpretation of the ideas.

The fact that an example is mentioned does not imply the project was successful; only that the idea from that project is of interest. Please note that ideas or the way they should be executed may be very much culture- or context-specific. Critical reflection on this issue is required before an idea from another initiative can be adopted or adapted.



1

Strategies for awareness raising

1.1 AWARENESS, KNOWLEDGE, ATTITUDES AND BEHAVIOR

Awareness raising as a policy tool

Water resources management is becoming an increasingly important issue for policy makers. However, without changes in the way consumers use water, safe, wise and ecologically sustainable water resources management is impossible. In some situations, decreasing the volume of water used is important while in other situations increasing sanitary hygiene or preserving wet ecosystems or reducing contamination are priority concerns.

Several policy tools can help influence water use. Regulation, pricing, investments, institution building are such tools. In awareness campaigns, policy makers and other interested groups aim for behavioral changes based on new social norms and attitudes towards water use.

Awareness as an interactive movement

However, a narrow focus on awareness raising as a way to achieve specific goals, set by politicians or researchers, would be presumptuous. This would totally ignore the many existing initiatives by citizen groups. There is a widespread recognition of the need for community involvement in government or NGO-initiated programs. Awareness raising should be seen as an interactive movement in which different parties are engaged, each with

their own roles, responsibilities and ways, to make their voices heard and create social pressure.

Awareness raising on water issues is: influencing attitudes and social norms of communities in such a way that behavior compliant with an efficient, environment-friendly and safe use of water resources is promoted and social pressure towards sound and sustainable policies is stimulated.



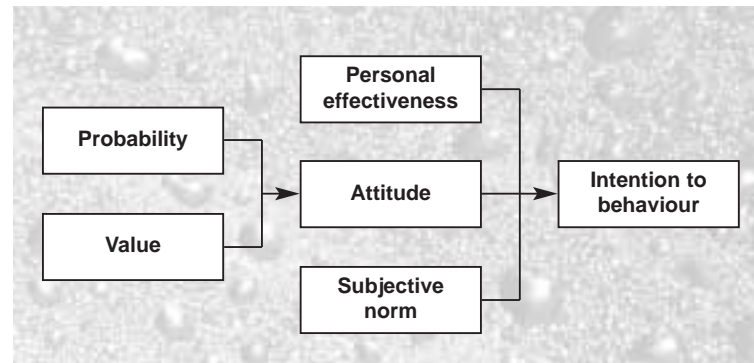
THEORY OF REASONED ACTION

Awareness is a somewhat broad and vague term, yet one that is intuitively widely understood. It might be useful, though, to explore some of the conceptual notions behind awareness raising and its relation with knowledge, attitudes and behavior. All awareness-campaigns aim to influence behavior and, hence, they are useful to understand how communication influences behavior. Why does somebody start conserving water when noticing water conservation campaign activities? And why does another person not do anything at all?

In communication literature, several models are available to describe these processes. In 1980, Fishbein and Ajzen published their “theory of reasoned action,” one of the most basic models in communication theory (van Woerkum 1995). They stated that behavior can best be predicted from the “intention to execute behavior.”

According to Fishbein and Ajzen, the intention is determined both by a

person's "attitude" and the "subjective norm towards that behavior. In 1986, Ajzen and Madden added the “expected effectiveness” to the model.



Attitude

A person's attitude describes the way he or she thinks about the proposed behavior and its usefulness. The attitude can be predicted by answering these questions:

What is the *probability* that this behavior will have a certain result? What value do I attribute to this result? How would the balance between costs and benefits turn out? Costs and benefits in this context are not necessarily monetary or economic but can also be related to psychological, social or religious values. So, if the total value of the most probable results of this proposed behavior is positive, the attitude towards this behavior will also be positive.

Subjective norm

The subjective norm describes the influence of people, organizations and institutions around us. It includes the norms and values of our society as a whole, and of the social group we belong to. Note that it is not necessary



to talk to these people before including them in the decision making. Even unconsciously we ask ourselves: What would that person think? A sense of belonging (to the group) is important in many cultures. Decisions will then often be highly dependent on this social value.

To find out the content and importance of the subjective norm, the following questions could be used: What, according to that person, is the opinion of that person's/social group? How much value does he or she attribute to the opinion of the other person/group in this matter?

Own effectiveness

Own effectiveness is the personal, subjective estimate of the *ease of or difficulty in actually carrying out the behavior*.

THEORY AND PRACTICE

Traditionally, campaigns focus on providing information and knowledge to influence the individual attitudes. Knowing the *results* of his or her behavior and realizing the importance of these *results* might convince that person to change a certain behavioral pattern.

There are also initiatives that strongly focus on influencing social norms. Here the goal is not to make a person aware of a certain problem but to influence the subjective norm of a community. This could even be without deliberate ideas of *why* such behavior is “appropriate.”

In the sanitation sector, some initiatives promote the use of latrines and hygiene as status symbols and norms of good conduct. In the *UNICEF, Saniya Project (Burkina Faso)*, a focus group study was conducted as part of preprogram research. It turned out that existing misperceptions of causes of diarrhea were very well grounded. Trying to change these seemed fruitless; so, the campaign decided not to emphasize the “*attitude*” side of the story. Hygiene did appear to be an important social virtue, so the emphasis shifted

to the “*subjective norm*.” Therefore, the messages are now focused on social desirability, combined with the reduction of nuisances of new practices. This last issue brings us to the point of the estimated personal effectiveness. Campaigns should focus on increased understanding of the problems and their solutions. It is important to make sure that the proposed changes are feasible and easy to carry out. This can be checked through behavior trials with volunteers (see also 2.2). Designing the whole campaign in a participatory manner can also help stay closer to the ideas, constraints and opportunities of the target audience.

FOOTNOTES TO THE THEORY OF REASONED ACTION

In the last decade, several communication theorists have elaborated on the theory of reasoned action and have sometimes criticized parts of this and other, similar, models. According to de Mooij (1998) “the fundamental assumption in decision-making theory is that decisions do not ‘happen’, someone ‘makes them.’” She calls this a Western view. Other cultures are more likely to prefer events to shape whatever actions are required, to stand back from an event rather than attempt to control it by decision making (Stewart 1985 in M. de Mooij 1998). A fundamental difference between individualistic and collectivistic cultures is between decision making by the individual and by the group, or the relative importance of personal attitude and of subjective social norms.

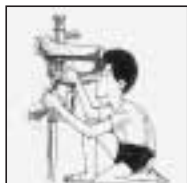
In fact, the importance of working on social norms is increasingly taking center stage in a broad range of initiatives. It is realized one should be careful with the assumption that consumers base their decisions solely on reasoning. Within commercial advertising today greater emphasis on the use of emotions, symbols, humor, and appeal in commercials to create a positive bond with consumers is becoming a decisive factor in changing behavior. As this is based on culturally determined values, one should be careful with attempting to apply one model to all countries, rural and urban situations and to rich and poor target audiences.

Propaganda?

The possibility that awareness campaigns turn into pure propaganda should, of course, be avoided, as it would be harmful to the campaign's credibility. However, every awareness-campaign has a certain amount of propaganda involved. There seems nothing wrong with this as long as there is a common consensus in society about the content of the campaign. Problems could arise, though, when this is not the case, for example, when the campaign is on a controversial topic (van den Heuvel 1998).



Turning off the tap while washing vegetables.



Repairing leaks.



Turning the shower off while soaping in.



Start the machine only when it is full, in order to save water.

Changing people's habits in using water

There seem to be different paths to reach our goal of using water wisely. A lot depends on the starting point, the current practices, norms and values. Preprogram research is, therefore, extremely important. Changing existing habits is difficult and social norms and values influence our actions much more than we would like to think. That is why it is so important to raise the next generation with healthy norms, values and habits in using water.

Is awareness raising prescriptive?

The term awareness raising may be misunderstood as implying that one party is going to teach another party, so that this second party "becomes aware." This is not the approach advocated here. Awareness raising should be seen as an interactive

movement in which as many parties as possible are involved. This should not exclude mass media approaches, though. An optimal combination between different communication channels is required. Campaign planning is always the art of finding a balance between maximum reach and maximum involvement. Participatory approaches can help enhance involvement while mass media can help expand the campaign reach.

Public participation in campaigns ensures an exchange of ideas and knowledge of priorities to and from the initiating organization. Further, public participation also helps broaden the initiated awareness movement by involving more people in an active manner. There is a great variety of ways to involve the public: personal visits, group discussions, active involvement of volunteers, questionnaires, networking, festivals and seminars.

In the last two decades, both "typical" development projects in the developing world and governmental policy makers in the west have passionately advocated public participation. Although public participation is widely adopted by now, the vision on its function varies from a goal in itself to a means of achieving certain technical objectives.

Most participatory projects advocated by development agencies aim to involve communities in the design, implementation and operation of new technology. However, the need for public awareness of a certain problem prior to participation in the design phase is not always recognized. Several examples of sanitation projects have come to the conclusion that constructing latrines in a participatory manner is difficult when people do not recognize the need for latrines. The use of latrines after construction can be low because of the lack of education on hygiene. The need for awareness raising and education then becomes very clear.

1.2 DIFFERENT STRATEGIES AND MODES OF CAMPAIGNING

Any model for campaign planning should be a tool to stimulate discussions and innovations in the design of a campaign and not a rigid how-to-do recipe. The campaign-planning model presented here will focus mainly on finding optimal combinations of different approaches. Examples of such approaches are public relations (PR), advocacy, personal communication or educational programs in schools.

Approaches used in campaigns can be characterized and analyzed by looking at the following issues:

- Reach of the campaign: how many persons does the campaign reach?
- The complexity or simplicity of the content: how much "information" is supplied to the public with this approach?
- The extent to which the public is personally involved in activities.
- The amount of influence the "target audience" has on the campaign content.

When campaign approaches are categorized by means of these four criteria, three basic modes of campaigning emerge:

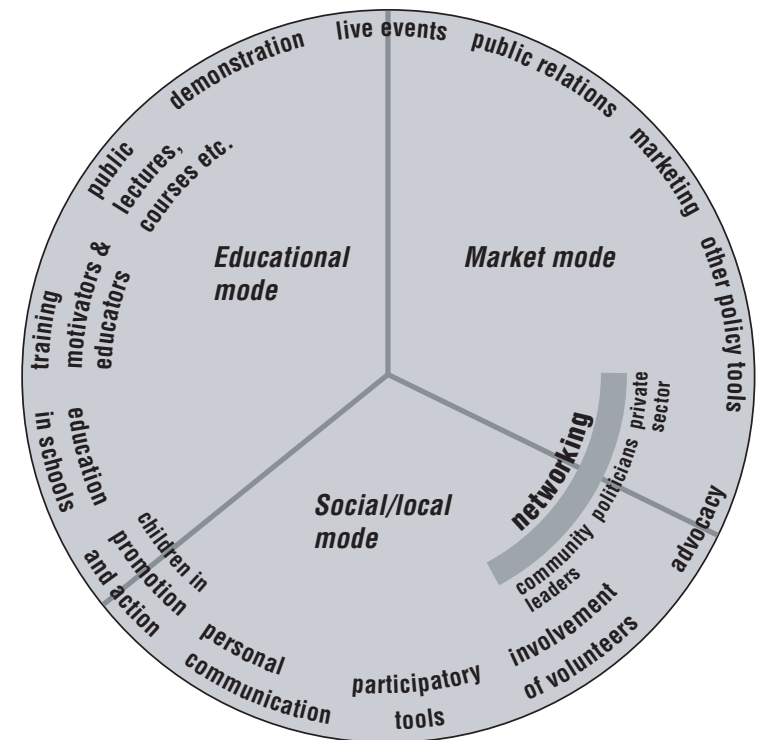
Market mode: large-reach, simple-content, low level of active public investment and low level of audience influence.

Educational mode: medium-reach, relatively complex content, high level of public activity, and low to medium level of audience influence on the content.

Social/local mode: low-reach, medium level of content, high level of active public involvement, and high level of audience influence on the content.

Every campaign methodology can fit into one of these modes. This is illustrated in figure 2.

Figure 2. Campaign methodology.



The approaches in the center of a mode are most characteristic of this mode, for example, "participatory tools," found in the middle of the social/local mode. Comparing this to "advocacy" shows that the latter has elements of both a social/local mode and a supra-local/market mode. It includes involvement in social relationships but attempts to gain influence above the local level.

A characteristic of a good campaign is an optimal combination of elements from the different modes. Each mode has its advantages and opportunities that can be a unique contribution to the total mix of campaign strategies. A

marketing approach enables a wide reach, but does not have the in-depth coverage of issues the way training of educators/motivators (educational mode) has. In the same way, PR techniques are relatively cheap and have a wide reach which participatory tools do not have. Their advantage is direct contact with the target audience, not available in most PR techniques. So this model can be used to create a balanced campaign strategy.

However, some programs will deliberately choose to focus only on one mode because of the organizations' specific skills, target audiences or goals. For example, educational programs focusing on children are not likely to involve "market mode" approaches, unless the program also aims at the involvement of a wider community.

The model can be applied to enhance the effectiveness of separate campaign elements. An example: suppose our starting point is an educational program in a school. Combining this with an approach from the market mode could result in trying to get more public attention for the program by sending press releases to the media (PR) or, by adding advocacy elements, trying to get the program on regular school curricula (for example, the approach of the Japan Nature Conservation Society). Infinite possibilities for combinations are available. Because of the different qualities of each mode, strategies from different modes supplement one another very well.

In the following paragraphs, the separate modes and approaches will be further explored.

MARKET MODE |

Marketing approaches

Marketing-related approaches in a nonprofit setting aimed at awareness raising are, often, referred to as "social marketing." Basically, social marketing is a combination of methodologies and media similar to those in

commercial marketing initiatives. It borrows much of its knowledge from this commercial sector. Two main characteristics can be distinguished in social marketing:

- The use of certain types of media, mostly media that can be planned well ahead of time and incorporated into an overall media strategy. Social marketing campaigns can include a wide range of broadcasting methods such as announcements, brochures and handouts, public displays, slogans, bill inserts, advertising, internet sites, door-to-door campaigns, newspaper articles and radio/television programs.
- Social marketing techniques emphasize the need for knowledge of consumer-behavior: why do people do things the way they do? Market research and targeting specific consumer groups are important elements of a social-marketing initiative (Water Conservation Strategy Working Group, Canada 1998).

The widespread use of the internet in the western world has added another opportunity to the market mode. As was mentioned earlier, the market-mode approaches can usually only "deliver" short, simple messages. Using the internet along with conventional media now enables consumers to look up additional information themselves. All the conventional media have to do is to get public attention on the campaign and people can check out the website if they want to know more.

Public Relation approaches

PR approaches aim to gain attention of the media in a way similar to PR techniques used in the commercial sector. Contrary to marketing approaches, PR do not primarily emphasize the creation and distribution of extension material (commercials, posters, flyers) but focus on creating "news" of interest to news agencies, newspapers, TV shows and so on. The primary target is the media, and through the media, the general public. PR approaches include press conferences, press releases, strategic releases of research data to the media involving celebrities, and the provision of background information to the media.

Public events

Organizing public events is an activity which contains elements of both the market mode and the educational mode. For most large events, media coverage and publicity constitute the main objective. However, public events also provide a good opportunity to directly involve the public and receive feedback from them. Public events usually have an educational element in them, made possible by this direct contact with the target audience. It is an opportunity to provide the public with more detailed information, whereas in the case of PR or marketing approaches one has to be content with simple, short, messages. Examples of public events are festivals, conferences, theater and musical events.

EDUCATIONAL MODE**Education and involving children in promotion and action**

Education and so-called 'child-to-child' methodologies have become popular in many campaign approaches: in water conservation projects, in hygiene campaigns and in environmental-awareness initiatives. It is realized that education is needed to raise the next generation with healthy attitudes towards the use of water. But experience has also shown that children are enthusiastic communicators and can be effective in reaching a wider community (chapter 6). Involving the educational sector provides great opportunities, because it is an existing system already focused on learning. Training teachers in water issues and incorporating water issues in regular curricula may be very effective and sustainable ways to raise awareness.

Training motivators and educators

The availability of skilled motivators or educators is highly important in most campaigns. Participatory tools are absolutely useless without skilled facilitators. Educational settings require teachers with good didactic and facilitative skills and with a knowledge of locally important water issues.

Training can be done through seminars, workshops or specific on-the-job training.

Public lectures and educational courses

Involving people in courses, workshops and lectures on topics relevant to them can be useful additions to other campaign activities. However, it requires quite some public interest and dedication. It is only useful in those cases where the relevance of the topic is already clear to the public or is being made clear through other campaign activities.

Demonstration

It can be useful to demonstrate (new) hardware such as latrines and water-saving equipment, and so on, to show how to use them and what their benefits are. This demonstration can take place in the form of a public event or by introducing demonstration sites, helping people to get acquainted with the new technology.

LOCAL OR SOCIAL MODE**Participatory approaches**

Participatory approaches cover a wide range of tools and methodologies which all have one common feature: they all attempt to actually involve "the public," and give them both a stake in the outcome of the process and power to determine its direction. Most participatory approaches work with groups of people, for example, existing community groups, school classes, groups of teachers or other groups. An example of a program which is now applied in several African countries, is *Participatory Hygiene and Sanitation Transformation (PHAST)*. PHAST emphasizes empowerment of members to assess their own knowledge base, investigate the local environment and visualize a future scenario for their own community. In many wetland- or river-conservation projects in the USA, Canada and Australia, volunteers,



schools and communities are also actively involved in monitoring, research and action. Today the internet is used in participatory processes and it helps to link participants from different regions or countries, share information or distribute educational material.

Networking

Networking is the creation of strategic relations of like-minded individuals, social groups and institutions. Through these networks information is exchanged, advocacy efforts are strengthened and involvement is stimulated. A lot of networking today is done through the internet. In particular, the education sector is rapidly discovering these opportunities. Other forms of networking include the formation of platforms of interested parties for campaign planning. Networking efforts aim at finding partners with similar interests.

Advocacy

Basically, advocacy aims to involve and influence politicians and other decision-makers. Advocacy can be quite informal, through lobbying and personal contacts. But advocacy can also be combined with PR techniques to apply public pressure. Advocacy can aim to reach not only politicians and officials but also managers in the private sector and NGOs or local community leaders.

2 Planning awareness campaigns



The different modes and strategies to increase awareness on improved water management were discussed in the previous chapter. Most campaigns will consist of a package of activities according to local needs and organizational capabilities. A good strategy depends on a sound knowledge of physical, social and cultural circumstances of the different target groups. This is especially useful when developing educational and training curricula, brochures, commercials and other material. It helps considerably to understand which water practices are common and why, what the general opinion (if any) on this topic is and how much contact people have with various media and institutions.

The design of an awareness program may typically consist of the following steps:

- Preprogram research
- Message positioning
- Selection, design and pre-testing
- Preparing an integrated program

Table 1 gives a checklist for developing an awareness campaign. It is adapted from “The dangers of dirt” by Curtis (1998). The original publication focuses on hygiene promotion, but similar research has been conducted in other water campaigns.

Table 1. Checklist for developing an awareness campaign.

Objective	Questions to answer	Research methods
1. Preprogram research		
A. Identify unwanted practices	<ul style="list-style-type: none"> Specify the problem. Which practices cause the problem? 	<ul style="list-style-type: none"> Unstructured observations. Literature search/knowledge from prior experience. Composing a problem tree.
B. Select practices for intervention	<ul style="list-style-type: none"> Which unwanted practices are most widespread? Which practices are alterable? 	<ul style="list-style-type: none"> Structured observation in a representative sample of households. Formal interviews. Focus group discussions.
C. Select the target audience	<ul style="list-style-type: none"> Who employs these practices? Who influences the people that employ these practices? 	<ul style="list-style-type: none"> Structured observations. Focus group discussions.
2. Message positioning		
	<ul style="list-style-type: none"> Do target groups perceive a link between unwanted practices and the problem? What motivates those who employ "good" practices? What advantages do they perceive? 	<ul style="list-style-type: none"> Focus group discussions. In-depth interviews with current users of good practices. Behavior trials with volunteers, practices.interviews with volunteers/adopters.
3. Selection, design and pre-testing		
A. Select communication channels	<ul style="list-style-type: none"> What channels are currently used for communication? What channels are trusted for such messages? 	<ul style="list-style-type: none"> Interview a representative sample of the target audiences. Focus group discussions.
B. Design and pre-testing of communication material	<ul style="list-style-type: none"> What types of material and events are likely to be attractive, understood, believed and remembered? 	<ul style="list-style-type: none"> Focus group discussions, trials in pilot program. Revision and re-test of material. Further focus groups, if needed.
4. Preparing an integrated program		
	<ul style="list-style-type: none"> What is the likely reach and cost of each channel? What combination of channels is likely to be most cost-effective? 	<ul style="list-style-type: none"> Combine results of the above. Consultation with community groups and collaborating agencies. Cost estimates. Review of pilot program.

The checklist gives both questions to be answered and research methods to be used in the different steps of designing the campaign. In the following four sections of this chapter you will find examples that illustrate the use of this checklist. The focus remains on examples and is not a complete guide of the design process.

2.1 PREPROGRAM RESEARCH

CURRENT PRACTICES AND POSSIBLE IMPROVEMENTS

Research on current water use

City of Winnipeg Waterfront, "Slow the Flow" Campaign (Canada) has conducted surveys on residential consumption trends in water use. The data are used to choose strategies that effectively intervene with the trends. The subsequent campaign attempts to discourage harmful trends and encourage positive ones.

Assessing existing "healthy behavior"

Sanitation and Hygiene Promotion (Tanzania) includes an assessment of traditional health-seeking behaviors in their campaign strategy. They attempt to incorporate the best current practices within their hygiene-promotion campaign. The campaign is centered on school-based communities and also involves Traditional Birth Attendants and traditional healers.

Conducting a water conservation baseline study

A campaign that has conducted elaborate preprogram research is the *EBMUD Water Conservation Program (East Bay Municipal Utilities District, USA)*. EBMUD conducted a survey to assess conservation attitudes and behaviors. Table 2 describes the objectives of the survey and the information needed.

Table 2. Objectives of the survey and the information needed.

Information	Examples of parameters	Goal
1. Current water-using behaviors	<ul style="list-style-type: none"> Percentage of people using low-flow shower-heads. Percentage of people watering lawns during off-peak hours. 	<ul style="list-style-type: none"> To assess the impact of previous campaigns.
2. Consumers' perception of water conservation	<ul style="list-style-type: none"> Consumers' concern for the environment. Consumers' desire to save money. 	<ul style="list-style-type: none"> To create more effective signals in the design of new campaigns.
3. Rating of potential conservation programs	<ul style="list-style-type: none"> Opinion on, for example, future ultra- low-flush toilets program. 	<ul style="list-style-type: none"> To assess likely acceptance rates.
4. Current water-using hardware	<ul style="list-style-type: none"> Flush rates of toilets. Flow rates of shower-heads. Existence of automatic sprinklers. 	<ul style="list-style-type: none"> To design conservation programs that target less-efficient types of water uses.
5. Quantities of specific water-using hardware	<ul style="list-style-type: none"> Detailed count of all the types of water-using hardware used. 	<ul style="list-style-type: none"> To allow accurate estimation of target markets, costs of program implementation and potential water savings.

A professional research company conducted 500 telephone interviews of a random sample of residential customers in the EBMUD service area. Each survey which took approximately 12 minutes, questioned respondents about their attitudes towards conservation, current specific water use and conservation, and their interest and potential participation in additional conservation programs.

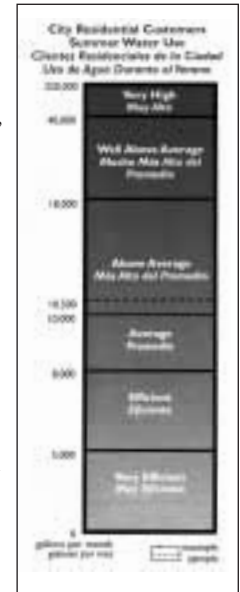
To determine the types of water-using hardware currently used in the EBMUD water service area, on-site measurements were made in the selected customer groups. For the site surveys, EBMUD selected three different types of customer groups that a) together represented about 70 percent of water use in the service area, b) represented a potential for additional water savings,

and c) were fairly similar in their water-using hardware. Collected data included:

- Site characteristics such as type of residence/business, the year the structure was built, the number of persons per residence and the number of persons employed at business.
- Existence, type, and flow rates of water-using appliances such as toilets, shower-heads, faucets, washing machines, dishwashers, pools and irrigation systems.

Participatory setting of targets and indicators

Village Education Resource Centre-Program, WaterAid (Bangladesh) recommends in its evaluation report that any future baseline surveys would benefit from using participatory approaches both to assess the aspirations of beneficiaries and to identify problems. It is also helpful to set targets and indicators that beneficiaries consider realistic and achievable.



A comparison graph; am I using water above average?

Finding locally appropriate solutions

Espacio de Salud, Morelos (Mexico) is promoting dry sanitation or septic tanks, instead of conventional toilets which cause high levels of pollution and use large quantities of water that is scarce. This Mexican NGO aims to make communities more autonomous by giving them a domestic waste treatment alternative that is less harmful to the environment.

Testing and demonstrating solutions

Water Supply, Sanitation and Health Project, UNDP and World Bank (Uzbekistan) has constructed latrines for demonstration purposes. At the same time the latrines are tested and the most suitable types for local conditions selected. The demonstration sites also serve as eye-catchers for health-promoting activities.

IDENTIFYING TARGET AUDIENCES

Apart from identifying current practices and acceptable improvements, preprogram research can help to identify the target audiences of awareness programs.

Specific targeting

UNICEF, Saniya Project (Burkina Faso) divided their target audience into three specific groups: primary, secondary and tertiary audiences, each with their own characteristics.

Primary. Those who will employ new practices (mothers, caretakers, and children at primary schools).

Secondary. Those who can influence the primary audience (family, older women, neighbors, health workers, pharmacists, traditional healers and opinion leaders).

Tertiary. Those people whose support is critical to the success of the program (decision-makers, authorities, agencies, collaborators and funders).

UNICEF's past experience shows that communication is best targeted at a carefully segmented audience at different levels. In *UNICEF's Arsenic Mitigation Program (Bangladesh)* the approach consists of a combination of interpersonal communication and the mass media.

Attitude testing of target groups through statements

Wetland/Lake Conservation (Greece). Fishermen of three different lakes were asked to respond to statements related to natural resources and ecosystems, and wetland birds and pelicans. The survey was conducted among 30 percent of the fishermen and the answers were given in terms of “agree,” “undecided,” “disagree,” “positive,” “neutral,” or “negative.”

The results showed that fishermen of one of the three lakes had significantly more negative attitudes towards conservation of natural resources. They were also the ones fishing full-time and using more modern equipment than the

other groups. Consequently, the educational campaign was focused mainly on fishermen from this lake. As it was difficult to persuade older, professional fisherman to come to the educational program, the younger fishermen in the 8–28 year age group were invited.

Targeting those who can make a difference

Water Conservation Program (Mexico City) planned an educational campaign directed towards the larger users of water. Little emphasis was placed on those without in-house or on-site access to water as they do not use much water and have little control over its use.

Organizing a small poll to check interest

Water Awareness Campaign, UNDP/Palestinian Water Authorities (Palestine territories). A small poll showed that youth were most interested in the campaign; 85 percent of the respondents were under 18 years of age. Consequently, further campaign activities were focused mainly on children and youth.

Investigating the knowledge level of the key target group

Gaia, environmental NGO (Georgia) investigated the environmental knowledge of teachers. A specially designed questionnaire, covering 40 schools, revealed lack of knowledge and poor training, especially in environmental issues.

Thames Water (UK) has focused part of their campaign on children, with a special website and a contest with water-wise T-shirts as rewards.



What is motivation for action?

“Communication and education often assume that action is influenced by awareness and understanding, while this does not always have to be the case. So it requires a good understanding of what influences people in a certain society to behave in a certain manner” (Water Conservation Strategy Working Group [Canada]).

2.2 MESSAGE POSITIONING

In developing an awareness program it is important that the message is “positioned” well and in a manner that is appealing and convincing.

Use arguments of status and convenience

UNICEF, Saniya Project (Burkina Faso). The notion of hygiene was investigated in women focus groups. This showed that women recognize about ten types of childhood illnesses which have diarrhea as a symptom. Only one non-serious illness was recognized as being related to hygiene. Existing (wrong) perceptions of causes of diarrhea were so well grounded that trying to change them appeared fruitless. Hygiene though, did appear to be an important social virtue. Consequently, the messages are now focused on social desirability and the reduction of difficulties of the new practices.

Similarly, the *National Rural Water Supply Program, India (Government of India)* planned its latrine promotion campaign emphasizing “Prestige,” “Status,” “Privacy,” and “Convenience,” and targeted principally at women.

Consider links to religious messages

The Jumat Bersih “Clean Friday” Movement (Indonesia) promotes the use of rainwater collectors, dug wells, family latrines, latrines at mosques and schools, and other communal latrines. Their goal is to promote healthy living behavior and improved standards of community health through religious and

social activities. The emphasis is on personal, domestic and community hygiene starting on Thursday evenings, in preparation for Friday (the Holy Day).

Carefully account for cultural values

There is a close link between locally important cultural values and the required message-positioning in the campaign. A campaign which emphasizes individual achievements will not work in a culture in which family values are more important than individuality.

A campaign needs to investigate locally important values and link its message- positioning with these values. This also counts for the visualization in the campaign. There are examples of commercial marketers who have depicted single persons in commercials for very collectivistic cultures. The people promoting the product in the commercials were then seen by the public as pathetic loners without friends or family. As a result, the personages were not seen as credible or likeable and the advertisement was not a great success (M. de Mooij 1998).

Use behavior trials

WaterAid’s Water, Sanitation and Hygiene Program (Tanzania) advocates the use of behavior trials with volunteers to investigate the acceptability of new practices. In a behavior trial, volunteers are asked to try out the behavioral changes suggested in the campaign (for example, using a new type of toilet). The volunteers are asked to review the changes, whether they are feasible in the long term or need some adaptations. Volunteers might also have some suggestions on how these changes can be promoted successfully.

Making it easy to implement the water conservation message

City of Houston Water Conservation (USA) distributes approximately 20,000 conservation kits to citizens each year. The kits contain a displacement bag (0.5 gallon) for the toilet tank, dye tablets to test for leaks, a flow restrictor and an instruction sheet. A large majority of these are distributed to

apartment complex owners and managers. Kits are also mailed to customers who complain of high water bills.

City of Winnipeg Waterfront: “Slow the Flow” Campaign (Canada) has delivered brochures to all households. The brochures describe basic ways to conserve water and include order forms for water conservation kits.

2.3 SELECTION, DESIGN AND PRE-TESTING

SELECTING EFFECTIVE COMMUNICATION CHANNELS

There are several considerations in selecting an effective communication channel in a water awareness program. A first decision relates to the overall strategy in the campaign (see section 1.2) — a wide coverage or an intense focus? Other considerations are costs, timing and effectiveness of a specific communication channel to reach the target audiences. Often, a combination of different communication channels may work best.

Combining personal communication with mass media

UNICEF’s Arsenic Mitigation Program (Bangladesh). Front-line engineers, tube-well mechanics and NGO field staff use flip charts and brochures at the household level. These communication channels are used to provide basic information about arsenic. TV programs, radio commercials and outdoor media reinforce the messages of front-line workers. They emphasize the need to drink water that is safe from both arsenic and pathogens. The campaign promotes a social norm to share water from tested and safe tube wells.

Intensified campaigning during a short period

Water-Wise Council (Florida) decided to campaign during the last month of the dry season, when needs are most acute. Consequently, they have designated April as their “Water Conservation Month.”

Public Utilities Board (Singapore) organizes yearly campaigns which last for a month and emphasize different target groups each week. The activities of the first two weeks are centered on students and teachers, the third week on community participation and the final week is directed at the nondomestic sector. Industries are encouraged to participate and organize activities during this week.

Make effective use of brochures

The use of brochures can only be successful when they are distributed to the right places. Some suggestions for using brochures:

- Display racks at nurseries, libraries, community centers, municipalities, schools, hospitals, clinics and plumbers’ associations, depending on the topic of a brochure.
- Outreach events (festivals, shopping malls).
- Along with personal communication.
- Randomly mailed to houses.
- Selling them at a token price, so they are not discarded.
- In water bills (City of Houston water conservation produces at least 4 water- conservation bill inserts each year).



Investigating and using traditional means of communication

PSU (India) has prepared a sociocultural inventory of local traditions, customs, fairs and festivals. Locally accepted and popular means of communication are used to ensure better information dissemination and community involvement.

Using water bills

City of Albuquerque, Water Conservation Office (USA) has combined printing water conservation tips on water bills with increased water prices.

This almost guarantees that most citizens will see the tips and that they have a good chance of being taken seriously.

Use personal canvassing

Experience from UNICEF's *Intensive Sanitation Project, (Government of Vietnam)* showed that relying only on demonstration latrines and educational material did not make a large enough impact in the project area.

Consequently, more than 1,200 motivators were trained by the project. These motivators have actively promoted water and sanitation awareness through different channels such as meetings, home visits and mass media.

Involving a marketing agency

As the communication messages themselves often have to be able to compete with commercial messages, it can be important to include a marketing agency or a local commercial communications-bureau in the planning process of the campaign (for example, UNICEF's *Social Mobilization Program [Bangladesh]*).

TESTING MATERIAL



Pre-testing

Testing of prepared rough material is extremely important. Ensure there is enough time and available resources to make significant changes to the material after testing.

Why is this so important? First of all, pre-testing tries to find out whether the content

Check out the source of regular commercials

Try finding out where the TV commercials on your local stations are produced. Usually, there will be a significant difference between international commercials of multinational brands which are often American in style and origin (Coca Cola, Mars, Twix, Pepsi, Nike) and nationally produced ones. Try to find out what is significant for the style and values propagated in the commercials produced in your own country or region. However, keep in mind that some large brands involve the use of local productions instead of a standard international commercial.

Try watching commercials together with a selection of your target audience and let them choose which ones they like best and why. The same exercise is also useful with commercial advertisements or posters.

In The Netherlands, for example, the most appreciated commercials are usually from Dutch producers, with typical Dutch style, humor and values. Winning commercials in Dutch contests, based on public preference, are usually of Dutch origin (see de Mooij 1998).

of the material is clearly understood; does it get the message across? Second, the pre-testing is a good opportunity to find out what people think about the chosen style and design, pictures or artwork used, commercials, and so on. Other important issues that should be considered when designing and pre-testing material are the clothing, housing and utensils shown on pictures versus those in real life among the public. Usually, good suggestions for changes will emerge during the pre-testing phase.

Most of the material used in large campaigns are designed by people with cultural and social backgrounds different from those of the target audience such as when an artist from a large city designs posters for an audience of village communities and farmers. In some situations it can be useful to

2.4 PREPARING AN INTEGRATED PROGRAM

SETTING INDICATORS FOR EVALUATION

The use of clearly measurable indicators is needed to be able to determine whether the campaign as a whole was successful or not and which parts of the campaign require improvement. The indicators should be set during the planning stage of a program. Quantitative indicators can help enable a more objective evaluation. The indicators are usually measured before and after the program (or during a certain phase of the program), to enable comparison.

Quantitative evaluation

UNICEF's Saniya Project (Burkina Faso) uses the following indicators:

- Number of women having at least one contact with the program.
- Number of women able to site two principal campaign messages.
- Coverage of primary-school children and caretakers.
- Measurement of faecal contamination on hands (of, for example, school children).
- Visible contamination, found by on-site investigations.

The WaterAid "Water, Sanitation and Hygiene Program" (Tanzania) has used the following indicators:

- Number of small children whose stools are found around the household area.
- Frequency of hand-washing before meals.
- Household cleanliness, the safe storage of drinking water, dish racks and soakaways.
- Frequency and regularity of washing of children and their clothes.
- Number of households visited that had a bathing area.

The impact of this WaterAid campaign is measured by looking at the difference between project villages and villages where the campaign has only

recently started working. The indicators supported the conclusion of their evaluation that there had been a significant behavioral change in project areas.

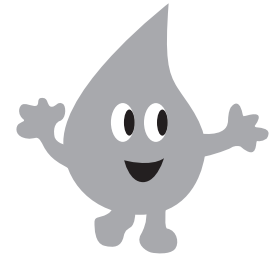
Participatory evaluation

Participatory evaluation is also an interesting way to evaluate programs but will yield quite different results from quantitative methods. Participatory evaluation will be more qualitative, less "objective," but more likely to provide in-depth information.

INTEGRATING CAMPAIGN ELEMENTS

Give a single identity to the campaign

An overall campaign identity using a cartoon figure or logo helps create a visual linkage between various campaign items. Visuals are part of the identity or image of a campaign and it is important that people have positive associations when seeing campaign material.



This is ZamZam, a water figure involved in the PWA campaign in Palestine territories.

Using phased messages

The Water Conservation Strategy Working Group (Canada) suggests phasing messages related to water conservation in the following order of objectives:

1. Creation of awareness and interest.
2. Persuasion and motivation.
3. Education and provision of skills or other tools to enable people to conserve water.
4. Stimulating actions.
5. Maintaining behavioral changes.

Regular, frequent communication is important to reach both early and late adopters.

involve local artists in such initiatives at an early stage or adapt existing material to local circumstances with local artists. Pre-testing however, remains important.

Concept-testing through focus groups

This can be applied in the early stages of the material development by presenting the concept (for example, rough sketches) to a sample of the target group. A focus-group discussion can work quite well although the discussion is likely to supply mostly qualitative, rather than quantitative, data.

Consumer juries

A “jury of consumers,” representative of the target market, is asked to rank which of the series of rough ideas they would choose.

Post-testing

Post-testing focuses on the evaluation of material after it has first been printed, broadcast or used in another manner. It may be useful to print or broadcast on a small-scale, pilot basis, first to test its impact before publishing on a large scale. Several methods from commercial marketing can be applied to campaign material in the water sector — based on Marketing Communications by Chris Fill (1995).

Recall tests

This method tests the impression and perceptions of the target audience and their ability to recall the advertisement, poster or commercial. An example is the “Day-after-Recall Test.” In this test, the respondents are asked on the day after an advertisement is broadcast/printed:

- Whether they remember any advertisement (or any other used medium) on the topic in question (for example, water conservation).
- Whether they remember a specific organization or slogan (for example, “Water conservation institute” or “repair the leaks”).
- What did it say, for example, about water conservation/repairing leaks?

- What did the advertisement/commercial look like?
- What did it remind you of?

Answers are recorded word by word. Keep in mind that this is an elaborate and relatively expensive method.

Recognition tests

Recognition tests are usually held in the homes of approximately 200 respondents. They are asked whether they have seen certain advertisements. A magazine that has been read by the respondent is opened at a predetermined page and the respondent is asked which parts of the advertisements and text layout he or she has seen. The danger with this test, though, is that responses are not based on recognition, but on approval. This might distort the test. Four types of data are recorded:

- Percent of readers who remember seeing the advertisement.
- Percent of readers who recall seeing or reading any part of the advertisement identifying the topic.
- Percent of readers who read more than 50 percent of the advertisement.
- Percent of readers who remember seeing the logo, message or name of the organization.

Making sure that the educational material works

When a water testing kit (as part of the ‘catchment action starter pack’) was used in various schools in Gauteng, South Africa, it was found that a number of schools had problems with it. It was discovered that the problems had to do with the quality of water in the area. The Rand Water Company that was supporting the water awareness campaign asked its scientific department to adapt the test kits.

Clarity on the status of your organization

It is important that the public knows which organization is responsible for the campaign. Trustworthiness of information is often established by looking at the trustworthiness of the source. Providing information on your companies' activities and why it is involved in this campaign is quite important.

A good example is the *Public Utilities Board (PUB) (Singapore)* which published a booklet with basic information on the organization itself. Topics included the location of reservoirs and waterworks, the history of PUB, how water is treated and distributed and why it should be conserved.

TRAINING OF FACILITATORS |**Teachers' training**

Water Education for Teachers (Canada/USA) supplies curricula to teachers who have attended their 6-hour preparatory workshop. The workshop focuses on experiencing the activities in the curriculum and how to plan these activities for use with students and youth groups. A water-resource professional and an educator conduct each workshop.

Training facilitators and motivators

PHAST Programs (World Bank, UNDP, national governments) conduct regional and district training workshops after which trainers further adapt the prepared tools and material to local situations. They conduct local field-testing in different conditions. Programs have been conducted in at least 30 districts in 4 countries. After they attended the workshops, trainers have taught the PHAST approaches to more than 25,000 community members.

Updating teachers through a workshop

Pinellas County, USA organizes annual workshops to help educators bring

the latest conservation information, techniques and educational approaches into the classroom.

Artists' development workshop

The Government of Pakistan and the Regional Water Supply Group/South Asia organized an Artists' Development Workshop to train artists in the field of development communications. In this way a "pool of artists" is formed that can be employed by water sector agencies whenever required. During the training, artists learn about understanding the purpose of different types of participatory material and the development of sample material. Participants included artists from NGOs, the government and freelance artists.

Tool package for motivators

NEWAH, WaterAid (Nepal). Upon completion of basic training, health motivators received a number of tools that they could use. These tools come in a tin trunk which contains educational material such as posters and so on, cloth charts and flannel boards with flannel figures they have prepared themselves. They also received two "uniform" saris.

A NEWAH refresher training course aims to enhance motivators' teaching skills. The training consists of a variety of useful techniques, including monitoring and Participatory Rural Appraisal techniques, puppets for education, role plays and the use of drama in education.

COMBINATION WITH OTHER POLICY TOOLS |**Meter installation**

Water Conservation Program (Mexico City) is planning meter installation and maintenance programs along with pricing measures. The higher prices and the use of meters will stimulate consumers to cut down their water use.

It will also help bring user costs more in line with supply costs. These measures are combined with an awareness campaign.

Pricing

City of Albuquerque, Water Conservation Office (USA) has introduced a summer surcharge for water usage above 200 percent of the winter average.

Water conservation in gardening

City of Austin, Water Wise Programs (USA) stimulate owners of homes to conserve water used for gardening. Owners of both new and existing homes who meet specific guidelines for water-wise garden design receive rebates of US\$50 to 500. Planting native and adaptive water-conserving species is also rewarded.



Low-Flush Toilet Rebate Program offers US\$100 rebates on consumer water bills if old toilets are replaced with new, efficient models.

Mandatory nondomestic water-saving devices

The Public Utilities Board (Singapore) has issued regulations that make the installation of water-saving devices in all nondomestic premises mandatory.

Regulations reinforced by financial arrangements

UNICEF's Environmental Sanitation and Hygiene Education (Government of China). In many project counties, local governments have adopted the rule

that a sanitary latrine must be built in every new house. A deposit of RMB 200 (US\$24) has to be paid to the county government when applying for the construction of a new house. The cash is returned immediately after the latrine is built and inspected.

COMBINATION WITH SPECIFIC SERVICES

Many organizations offer a variety of services to their customers such as general information, advisory services, background information, leak check-ups, information phone numbers and other contacts. This serves two goals: first it helps the customers with their specific questions and, second, the provision of good services stimulates a positive image of the company.

Free water survey

East Bay Municipal Utilities District (EBMUD, USA) offers free water surveys to help residential customers increase water-use efficiency. This will also help lower customers' water bills. Free water-conserving devices such as low-flow shower-heads are offered during the survey. A water survey can also include the evaluation of irrigation system performance or the review of landscape plans, both for public- and private-sector customers.

Speakers' bureau

The East Bay Municipal Utilities District (USA) also makes speakers available for presentations to community groups and professional organizations. They also provide a newsletter for interested customers and professionals.

Practical guides: Lawn watering

The City of Tempe Water Conservation, Arizona (USA) offers a Lawn Watering Guide that demonstrates how to measure the amount of water coming from irrigation systems and ways to improve the efficiency.



3 Advocacy -Influencing leaders

Political support together with support from community leaders and religious leaders can give a campaign a powerful boost. Strategic networks and involvement of political, religious and local leaders are basic requirements for a successful campaign.

Contacting politicians or community leaders during campaigns can stimulate their personal involvement. Leaders can play a role by openly supporting the campaign in the media, by changing certain water-management policies, by emphasizing the topic in meetings with other leaders, or by addressing communities directly.

The involvement of leaders will increase public attention to the water topic and it will also influence social norms directly. Community norms and values towards the use of latrines can change through the support of leading community figures for certain measures. There is a need to involve those leaders who are especially regarded as credible, trustworthy and popular among the public.

3.1 POLITICAL ADVOCACY

Commercial enterprises and large environmental groups are increasingly mastering the art of lobbying or, to use a more positive term, advocacy. It is true the world is becoming an increasingly busy marketplace of information and communication. To promote the wise use of water it is important that your voice is heard in this busy marketplace.

To help policy makers take water related problems seriously and to ensure sound policies, a wise and strategic use of the advocacy instrument is needed. It is worth considering the combining of lobbying with PR techniques such as press conferences, press releases and media campaigning.

We should not forget the direct influence that politicians have on their constituencies. They are well known, have all the media coverage they want and are often taken quite seriously because of the status of their position. There is a need to get politicians personally involved in the resolution of serious water related problems.

Advocacy at a broad range of political levels

UNICEF's Environmental Sanitation and Hygiene Education (China) emphasizes advocacy at different political levels to gain commitment of the government, from central to township levels. This includes advocacy meetings with national and provincial leaders. Linkages within development initiatives of other sectors like water, agriculture and education, and women in development, poverty alleviation and environment are also encouraged.

Local political leaders

The National Rural Water Supply Program (India) attempts to sensitize Presidents of District Panchayats, members of Legislative Assemblies and Members of Parliament (from certain districts) on water issues. This should help strengthen political will to implement the strategy. A schedule with a variable syllabus has been prepared to involve and educate functionaries,



implementers, administrators, political leaders, media professionals, religious leaders and opinion leaders on water issues. The syllabus will be used in the whole country.

Moroccan politicians view an exhibition of children's drawings.

Target group differentiation for advocacy purposes

Rennies Wetlands Project (South Africa) promotes the wise use and rehabilitation of South Africa's freshwater wetlands on a national scale. It is mainly directed at wetland owners/managers, conservation/agricultural extension officers and key governmental decision-makers.

Stimulating local lobby groups

"Water Is Ours" Campaign, PWA/UNDP (Palestine territories) is encouraging the creation of pressure groups which can help lobby long-term solutions such as building recycling plants.

Networks for advocacy

The International Rivers Network (IRN) works with environmental and Human Rights groups around the world in cooperative campaigns. For example, IRN campaigns against the construction of large dams and aims to promote "community-based river development." They have adopted a two-pronged approach, combining work on changing global policies with campaigning on specific key projects around the world. Their involvement depends on requests from like-minded NGOs or individuals from project-affected communities. They mobilize international support from their network of activists and experts, raise funds and generate publicity through the media. IRN also undertakes research and provides project critiques, analysis of alternatives and activist briefings, to support advocacy and public efforts.

Newsletter for politicians

City of Houston Water Conservation (USA) publishes "Conservation cents," a quarterly newsletter distributed to City Department Directors, Council Members, environmental groups, and State and other government agencies that have an interest in water conservation.

Involving political leaders in a practical way

The Gauteng Integrated Schools Sanitation Improvement Program (South Africa) tries to commit politicians to visit the schools' toilets whenever they visit schools in the project area. There are two reasons for this strategy:

- Schools are encouraged to keep their toilets clean.
- Politicians can see for themselves what these schools need and their commitment is stimulated.

Government as a good example of water saving

City of Albuquerque, Water Conservation Office (USA) has launched an internal water conservation campaign to reduce City Government use by 30 percent.

Research to support advocacy efforts

Several campaigns have conducted or supported research on specific water related topics, to strengthen advocacy efforts. Trustworthy research, using sufficient, reliable data and with clear conclusions can be a useful tool to influence policy makers and public opinion. Examples of campaigns that conducted research and used it for PR and advocacy purposes are IRN (international) and MAMA-86 (Ukraine).

Combining political presence and media attention

Alarmed by the deteriorating water availability in Indore (India), the city's leading newspapers, Dainik Bhaskar and Nai Duniya joined hands in campaigning for water conservation. During the religious festival of Holi, the newspapers went on a campaign and urged the citizens to observe a 'dry' Holi - a Holi without the popular water pistol that everyone uses to lavishly

spray others with coloured water. As part of its Save Water Movement, the Dainik Bhaskar newspaper organised three big public meetings that had the chief minister, and environmentalists attending. Filmstars and models were also invited, to draw the crowds. The first day nearly 8,000 children were brought together for a painting competition on the theme of water. On the second day there was a women's meeting with activists and models. The third day was a public meeting with the chief minister, filmstars and environmentalists, discussing why there should be water shortage in the state, if it has 800-900 mm rainfall a year. The papers have also been taking out advertisements urging people to take up water conservation. As a side-effect the campaigns helped to increase readership.

3.2 RELIGIOUS LEADERS

"All the major religions of the world consider water as the precious good that is the essence of creation and the source of cleansing. Religion has brought some of the oldest and time-tested rules on water management—such as the "harim," the Islamic rule on groundwater abstraction. A recent powerful example of the potency of religion on water behavior is the groundwater recharge movement in Saurashtra in Gujarat, India which reversed a seemingly irreversible trend of groundwater depletion. This movement was inspired religiously, with the Swami...encouraging action by his message that a thirsty earth cannot quench. Religion has the capacity to appeal to large numbers of believers—many of whom are otherwise not easily reached..." (Framework for Action, Second World Water Forum, 2000)

Using religious values and norms to handle safe water

The Jamat Bersih, "Clean Friday" Movement (Indonesia) concluded that a highly bureaucratic (and not always trusted) government can be successful, as long as religious channels are used to approach the community. The West Lombok administration formed a district Water and Environmental Sanitation

team including the Bupati (head of the district) with seven involved agencies in the sector. This team visited villages to pray and listen to sermons together, after which they sat with the villagers and encouraged the local Tuan Gurus (religious leaders) to teach the people about the importance of hygienic behavior and the need of a family latrine. There was previous experience of the Gurus' involvement in family planning.

The Jamat Bersih Movement promotes healthy behavior through religious and social activities towards improved standards of community health. Water supply and waste-disposal facilities were constructed in houses of worship and other public buildings.

- The project emphasizes personal, domestic and community hygiene starting from Thursday evenings, in preparation for Friday (their Holy Day). The Bupati has also issued instructions with a legal status.
- All prospective Haj pilgrims are required to show letters from the village heads to testify that they have built toilets for either their own families or as a contribution to a poorer family, before they depart.
- Bridal couples are required to demonstrate they have a latrine.
- A building permit is issued only if the building will include a toilet.
- Village cooperatives are required to have a latrine; loans can be applied for if needed to construct one.
- Government assistance for income-generating activities of community groups is provided only if latrines are present.
- Each subdistrict is required to have at least one (model) village with a 100 percent latrine coverage and other villages within the subdistrict are required to have at least one hamlet with a 100 percent coverage.

Booklet on water and sanitation in Islam

WHO Regional Office for the Eastern Mediterranean has published a booklet on Islam and water and sanitation, in “the right path to health” series. It can be a useful aid when involving religious leaders in awareness raising on water issues. It has been published in several languages, including Arabic and English, and offers an Islamic perspective on water and sanitation.

"Islam makes the protection of the environment and the censure of its corruption a duty of a righteous society. God says, Why were there not among the generations before you some upright men preaching against corruption on earth? (11:116)"

Dr. M.H. Khayat in “Environmental health, an Islamic perspective” (WHO series).

Involving imams and priests as volunteers and change agents

The Village Education Resource Centre (VERC) Program (WaterAid) (Bangladesh) trains imams and schoolteachers to promote hygiene education within their communities on an informal basis. After prayers, imams organize and chair sessions on personal hygiene and health-related problems. Their participation gives credibility to the project in villages where people are deeply religious. However, imams usually have limited access to women beneficiaries.

VERC also involves schoolteachers from both government and nongovernment schools. The program anticipates that they will hold one 45-minute hygiene-education session per week on diverse aspects of hygiene education.

Involvement of church-clergymen

EOC/DICAC Projects in Ethiopia (WaterAid) (Ethiopia). In this initiative, clergymen are vital points of entry into communities for communicating the importance of water and sanitation. In several places, the projects have provided **taps for churches and mosques**. These taps are useful means of linking personal hygiene to wider social values. Church services usually provide the time and place for meetings of Village Steering Committees or Water User Committees. These meetings are good opportunities for health education. Teaching sessions mainly take place before and after church services, during coffee ceremonies, at public meetings and as part of immunization campaigns.

However, involving clergymen as community health agents has some disadvantages as well because of other demands placed upon them and the fact that many of them are elderly. The high regard in which the community holds them may also be an obstacle to their development of participatory teaching techniques.

3.3 INVOLVING OTHER PERSONS OF INFLUENCE

Demonstration sites at houses of influentials

UNICEF's Social Mobilization Program (Bangladesh) constructs demonstration latrines in the households of influential community members. They are part of an advocacy effort involving influential community members to convey the need for sanitation and hygienic measures as a civic responsibility. Water and sanitation facilities are also provided at health centers.

The program has developed **communication packages** for those who come into the closest contact with the family, including 60,000 front-line health workers, religious leaders such as imams, and Bangladesh's extensive network of NGO workers.

Union cadres and youth leagues as "early adopters"

UNESCO's Environmental Sanitation and Hygiene Education Project (Government of China) encourages party cadres and leaders, teachers, women federation union cadres, youth league cadres and members to take the lead to build sanitary latrines close to, or integrated with, their houses. Thus many good model "points" are spread across the local community as live educational tools. It has proven to be effective in accelerating sanitation coverage in many areas. The program has established village water and sanitation committees which include village leaders/party secretary, women cadres, schoolteachers, village doctors, and others. The committee is directly involved in the implementation and follow-up of water and sanitation initiatives. The committees **are trained in mobilizing and motivating communities** for sanitation improvements. The emphasis of the initiative is on involving

communities and mobilizing family pride. Technical training is provided for village masons.

The involvement of Chinese village cadres is given in the following example. In one township, village leaders regularly followed up with families to check on the proper use and maintenance of sanitary latrines. Small prizes such as soap or towels, were awarded to the three most hygienic families. Names of dirty families are announced through the village loudspeakers.

Wetland training for real-estate agents

Adopt-A-Stream Foundation (USA/Canada/Colombia) organizes a "stream and wetland ecology basic training for real-estate agents and other stream-side property owners." The training aims for participants to gain insight into watershed terminology used by the scientific community, to understand the function and values of wetlands, how they are defined by agencies, and the distinction between different types of wetlands. The training helps trainees to discover how streams function and their relationship with forests, wetlands, underwater insects, fish, wildlife and people. The training helps participants to become familiar with the latest federal state laws, and also to explore local government streams and wetland protection regulations.

Demonstration toilets in houses of extension workers

Espacios de Salud (Mexico) promotes the use of "dry" toilets, instead of those using huge amounts of water. They suggest not to build the first demonstration toilet for public use, because public toilets are notoriously dirty, and dry toilets (septic) are no exception. This is especially the case in Mexico where regular toilets which use large quantities of water, are gaining popularity. Seeing a public, dirty, dry toilet might make visitors assume dry toilets are dirtier than "wet" ones. Here, visits to regular houses with dry toilets, preferably integrated with the house rather than as part of a separate structure, help convince potential users. Extension workers (who already have a high status in Mexico) are taken quite seriously when they themselves have dry toilets in their houses.



4 Involving the corporate and nonprofit sectors

4.1 WORKING WITH THE CORPORATE SECTOR

There are various ways in which the corporate sector can be involved in awareness raising. Examples are changing water-use practices in the private sector itself, initiating publicity initiatives with a positive environmental side-effect and sponsoring campaigns. There is a tendency in many countries towards emphasizing the ethical responsibilities of the commercial sector. Companies benefit from a positive image related to environmental issues and they cannot afford to disregard the effects of publicity.

In the midst of an overload of commercial marketing efforts, it is important to create a strategic and efficient network of corporate partners such as those organizations that make a difference in reaching a larger audience and whose objectives are served by improved water management.

Positive media attention for efficient companies

Water Alliance for Voluntary Efficiency (WAVE) (USA) supports companies in using water efficiently, through technical advice and through media attention to the companies' environment-friendly practices. New members sign a Memorandum of Understanding, agreeing to survey water-using equipment and (where profitable) install water-efficient upgrades within a prearranged time frame. Members also agree to design all their new facilities with water-

efficient equipment. Progress results are reported to the Environment Protection Agency (EPA) which initiated WAVE.

According to the EPA, savings in sewerage and water bills can amount to 30 percent, with a typical payback period of less than 3 years. The EPA helps all WAVE members publicize their water-efficient programs. Support includes nationwide public service advertising, in-room promotional material, and press releases and public appearances. Members also receive free water-use analysis software and technical support and have access to a nationwide help line.

Collaborative agreements with large users

Zaragoza, the Water-Saving City Project (Spain) has approached large-scale domestic water users such as hotels, restaurants, bars and high schools to inform them of the environmental and financial advantages to be gained from saving water. Collaborative agreements have been set up with 143 concerns. The project supplies them with publicity material (stickers) and has set up a water-saving help line for these concerns.

Water Conservation Strategy Working Group (Canada) meets one-on-one with major water users to discuss how to use water efficiently. This group has organized special project committees, seminars and workshops with specific water users.

City of Albuquerque, Water Conservation Office (USA) provides collaborative assistance to large users such as public schools and an Airforce Base.

Organizing “roundtables”

The Terrene Institute (USA) organizes interactive roundtables on wetland conservation in which different participants such as community leaders, businesses, farmers, government officials, conservationists and citizens share

ideas on topics such as:

- building partnerships and coalitions,
- funding wetland protection,
- working with corporate partners, and
- land use planning and wetland creation.

The institute also organizes half-day workshops on topics related to wetlands: what are wetlands, how do they function and why are they valuable? A second workshop is called “working with your corporate partner” and is meant to connect communities with local businesses to collaborate on wetland conservation.

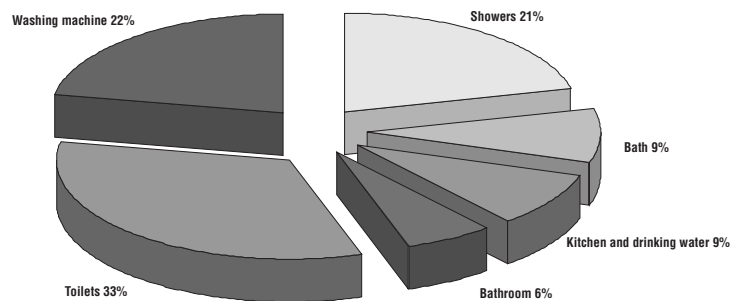
Housing companies

In the City of Winnipeg, Water Conservation cooperates with housing companies to include water-saving appliances in their properties.

Clean water farmer guide

The Water Education Foundation (California, USA) developed a Clean Water Farmer Guide for farmers who are the major land and water users. The Guide

How much water do Albuquerque Families Use Indoors?



Albuquerque's average residential account. Based on a typical family's indoor water use of 8,300 gallons (11units) per month.

consists of a simple pull-down leaflet which poses and answers the most important do's and don'ts with respect to fertilizer application, the location of livestock facilities, pesticide storage and well development.

Promoting the production of appliances

UNICEF's Sanitation and Hygiene Promotion (Tanzania) trains local artisans in the production of latrine slabs to enhance private production and promotion of the construction and use of latrines.

City of Winnipeg, Water Conservation (Canada) promotes the use of efficient appliances through contacts with retailers and plumbers' associations.

Establishing fora

Water Wise (South Africa) has efficiently established several fora on water use with different interest groups like the plumbing industry, local authorities and the horticultural industry.

Water Information Program (Colorado, USA) is a collaborative program of water conservation districts, irrigation districts, companies of water utilities, water commissions and the US Bureau of Reclamation. The program helps provide material for public information on general water issues. It is the responsibility of each organization to provide an educational source of information to the public regarding its respective entities and to make it available to the other participating organizations.

During the formulation of strategies of the *National Public Scheme for the Conservation of Drinking Water (Egypt)*, various meetings and workshops were conducted with government agencies, NGOs, public and private sectors, the industrial sector and high-level decision-makers as well as national and international consultants.

There are many campaigns working with similar types of cooperation. Often, there is one that initiates bringing parties from different sectors together but

campaign planning and execution are carried out together. Using each party's specialties helps to create a larger and stronger movement.

Initiative of clothes washers

In several regions in the USA, combined efforts are made to promote water and energy efficiency. Utilities serving roughly 15 percent of US households are participating in a consortium promoting the purchase of water- and energy-efficient clothes washers. Water and energy providers, public works departments and manufacturers of washing machines are involved. Their campaigns include a rebate program; people get money back from either the manufacturer or the water/energy utility provider if they buy an efficient washing machine. This is combined with advertisements for the rebate program and a promotional campaign including demonstrations, teacher's workshops, brochures and a newsletter.

Targeting special occupational groups

ENDA Tiers Monde (Senegal) has targeted several occupational groups, whose activities have a large bearing on the quality of urban water supply. It has provided technical training and arranged focus group discussions among informal water sellers, the farmers who supply water to the water trucks and the micro enterprises that supply building materials for houses.

Conservation awards for builders and developers

Pinellas County Utilities, Water Conservation (USA) sponsors annual awards activities, including a xeriscape and water conservative development contest, open to builders and developers. Xeriscape means designing gardens in such a way that water is used efficiently, for example, by using plants native to the area rather than exotic plants requiring large quantities of water.

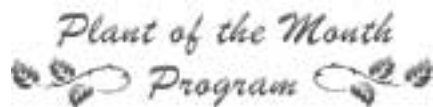
Companies sponsor publicity events on conservation

Throughout the year, various public events organized by the *AMWUA Conservation Publicity Program (Phoenix, USA)* are sponsored by organizations such as Valley Forward, Salt River Project, the Phoenix Zoo,

the Desert Botanical Garden, Phoenix Home and Garden, TV 12 News Earthwatch, the Arizona Nursery Association and Del Webb Communities.

Nurseries to promote low water-use plants

Over the past few years, the Arizona Nursery Association (ANA) and AMWUA have been working together to create educational tools for retail nurseries to market and sell low water-use plants. In 1994, ANA and AMWUA began a partnership to produce eight full-color flyers on various desert plants for distribution at local nurseries and to conduct training workshops for retail nursery personnel on the featured plants.



Water Wise (South Africa) also works together with local nurseries. Water Wise kiosks promoting opportunities to save water outdoors have been installed in the nurseries.

Sponsoring — Unilever, Sri Lanka

Unilever has singled out freshwater management as one of the priority areas in its environmental stewardship program. Unilever, Sri Lanka has sponsored the production of a calendar for primary schools. Through its network of sales agents it has also taken care to distribute the calendar throughout the country. The calendar which is printed on laminated paper, shows Bindu, a young boy, engaged in safe handling of water.

Companies help provide material and teacher training

Illinois Middle School Groundwater Project (Illinois, USA). A unique aspect of this project is the cooperation between the state agencies, local commercial organizations and schools in providing groundwater information and hands-on water-quality testing experiences. Teaching material such as the 300 groundwater flow models presently in the schools of Illinois were primarily donated by local companies, agencies and organizations.

Teacher training is coordinated and implemented by the project staff with the help of the Illinois Department of Natural Resources, Illinois Geological Survey, county health departments, and local well drillers and water providers. Corporate and state sponsors, including Ameritech, Illinois-American Water Company, Olin, the Illinois Farm Bureau and the Illinois EPA have joined together to provide financial and material support.

Public utilities offer resource library

Pinellas County Utilities, Water Conservation (USA) has set up a resource library open to the public and students researching water and sewer issues. It offers videos, journals, magazines, periodicals, books and reports on water issues.

Plan review

East Bay Municipal Utilities District Water Conservation (USA) reviews plans of new commercial and industrial construction at the time of application for water service and tries to find conservation opportunities. They also offer cash rebates for those companies that implement (cost-effective) water conservation measures. Prior to acceptance into the rebate program, customers submit a proposal documenting how much water would be saved. Rebates are paid upon implementation of the conservation measures.

Greece — training school children

The Athens Water Supply and Sewerage Company (EYDAP) (Greece) has a one-day educational program in the company's premises. Every year, 12,000 students from schools in the Attica region are received. The program includes the ancient history of Athens, its water supply problems during droughts and solutions. Pamphlets and brochures figure the "water droplet man."

Sweden — employing school information officers

The Stockholm Water Company (Sweden) employs three school information officers and a part-time school co-ordinator. The school project of the

Stockholm Water Company is well-known and the school information officers are booked in advance. They provide lessons in primary schools in the city, reaching about 5000 students yearly. In addition, one day teacher training programs are organised.

Water-Efficiency Awards

Water UK and the Environment Agency organize water efficiency awards to promote creative approaches to water conservation and efficiency. Initiatives that can be submitted include (among others) water recycling and reuse projects, water management in buildings, public spaces, housing, business and industry, and educational and information campaigns. The awards are divided into different categories for different types of initiatives. Information and ideas from the different activities and projects are published for contestants and other interested organizations.

A step-by-step plan for water economy for companies

Thames Water (UK) has produced a leaflet offering practical guidance to their commercial customers on how to save water. The four steps for saving water discussed systematically in the leaflet are:

- Step 1. calculating water consumption.
- Step 2. finding and fixing leaks.
- Step 3. reducing consumption.
- Step 4. promoting water efficiency within the organization.

Stimulating manufacturers of water-saving appliances

Zaragoza, the Water-Saving City Project (Spain) stimulates the water-saving technology market by introducing changes in regulations and tariffs. Training and information are provided for sector professionals. **Direct marketing activities** have been realized together with manufacturers, distributors, retailers and plumbers. One of these has been the “Mystery Shopper” campaign which consists of giving prizes to professionals who use water-saving criteria as part of their sales pitch.

4.2 WORKING WITH THE NONPROFIT SECTOR

Working with the nonprofit sector is another important aspect in the planning of public awareness campaigns. There are a large number of different NGOs active today at local, national and international levels. Some are independent while others are closely linked with government institutions or international bodies (UN, World Bank, and others). Some are community-based or have

strong links with communities and community leaders while others might have less contact with communities but good access to large networks of people and organizations at national or international level.

NGOs can be involved after the planning stage of the campaign but it may be more productive if they are involved at an earlier stage. This will help fully utilize the potential of the different partners. Creating this type of platform or network of groups is a successfully employed strategy in the planning of several campaigns.



Project-leading groups

UNICEF's Environmental Sanitation and Hygiene Education (China). Project-leading groups have been established at provincial, county and township levels to oversee project implementation. Members of these groups are Governors or Vice-Governors, as chairpersons, and directors of related agencies as members, for example, water resources and health-education professionals, Women Federation Unions, media, youth leagues and the land management bureau. They coordinate between member sectors and ensure the campaign is carried out by a wide range of sectors.

Links with community-based organizations

Mono Lake Committee (MLC) is an organization offering educational programs and working to promote water conservation and an understanding of the Mono Lake, a lake near Los Angeles, USA. They have set up the Los Angeles Water Conservation Council (LAWCC), an informal platform with local community organizations and other interested groups. Members work on conservation within their own groups. These community groups are involved in the free distribution of ultra-low-flush toilets. These toilets can be picked up at one of the community centers. The community organizations also visit Mono Lake as part of an outdoor experiences program. New groups are welcome to join.

Examples of groups involved are a community development corporation include the Asian American Drug Abuse Program, Calvary Baptist Homes organization, Iglesias Poder de Dios (small community church with powerful community ties), Korean Youth & Community Centre, Adventure Camp, USA and Watts Labour Community Action Committee.

Working together on public events

San Francisco Water Department (USA) has combined the promotion and sales of water-efficient appliances with events such as a Halloween costume contest. This was organized together with the San Francisco Food Bank. Everyone who brought one can of food could vote on who had the best costume in the categories “scariest,” “most beautiful,” “best impression of celebrities” and “best water theme.” An environmental Health Fair was organized in which various environmental and health organizations presented themselves in several booths.

Science center

Public Utilities Board (Singapore) worked together with the Singapore Science Centre to organize a Save Water Contest.

Creating an international network

Rivers Alive! is an initiative focusing on youth environmental awareness and stewardship. It connects the Vancouver Aquarium Youth Volunteer Team with groups in the United States (Seattle Aquarium), New Brunswick (Huntsman Marine Science Centre) and China (The Zhejiang Environmental Project and the Shenzhen Environmental Protection Bureau Project).

4.3 COMBINING CAMPAIGNING EFFORTS

Sometimes, it may be useful to team up with other campaigns. Of course, a basic requirement is that campaign objectives should be compatible. Literacy programs offer interesting opportunities for integration with water or hygiene campaigns. The advantages of working together are obvious — reduction of costs, increased capacities and a larger reach of the campaign. Increasing the size of a campaign in this way can help gain the critical mass required to get generate interest from the media.

Water preservation and reading campaign combined

The Water Awareness Campaign, UNDP/Palestinian Water Authorities (Palestine territories) joined efforts with a reading campaign of the Tamer Institute for Community Education. The reading campaign aimed to promote literacy and reading skills among young Palestinians. The following activities were planned and executed together:

- **Combined presentations** by the theatrical character of Nakhleh Al-Shiber (Tamer) with the Zam-Zam character (Water Awareness Campaign), attended by more than 3,000 pupils.
- **School workshops** were held in three schools. At these workshops students simulated "neighborhood committees" to assess the need for water and explain these needs to the municipal authorities. The information was made to look as real as possible, to enhance the ability to work as a group and using reading skills in a practical setting. The next exercise was to find

extra amounts of water, or ways to redistribute the existing amounts in case of failure to find enough extra water.

- **A summer camp** was organized by the two campaigns together with various activities such as making crafts related to water supply.
- **A press communiqué** was released in six local papers and broadcast by the Voice of Palestine, explaining the philosophy of both campaigns.
- **Slogans of both campaigns** were printed on posters, leaflets, flags, T-shirts and bookmarks which were distributed during campaign activities.

Water, literacy and local languages

The *Summer Institute of Linguistics* has started "literacy and awareness publication centers" in Papua, New Guinea. The centers aim to strengthen local cultures by documenting oral languages with their accompanying regional histories, sounds, and tales, as an entry point to develop literacy material. They produce and exchange awareness raising material on several topics. Material is shared through a computer network (see also chapter 11).

Environmental directory

The Austin Environmental Directory (several organizations are involved) (USA) is a booklet with background information on tree cover and vegetation loss, recycling, urban density, green building, water conservation, transportation, hazardous waste and air quality in Austin. It combines information from several environmental awareness campaigns and includes a list of environmental groups, their addresses and activities.

Linkage to the healthy city campaign

UNICEF has linked their Chinese Environmental Sanitation and Hygiene Education-Project (China) with the Healthy City/Town Campaign (Henan Province). The Healthy City Campaign has successful experiences in turning one municipality into a provincial model city where a sewerage system is available for at least one-third of the city and good public latrines are available in many locations. The province plans to use these campaigns to

promote rural sanitation in the whole province. Every town can earn the title of "healthy city/town" by reaching the target coverage of 80 percent.

Water and indigenous languages

Water Is My Friend Project (Colombia) has produced three children's stories about myths, legends and water use in Colombia's aboriginal communities. These were translated into the three largest indigenous languages in the country: Wayunaiki, Embera and Paez. The project aims to enhance the oral and written development of the three languages and to rediscover ancestral traditions relating to water, through the eyes of a child.

The stories are distributed through existing **Water Defence Clubs** which involve school children and teachers in water conservation. The clubs are set up in 200 schools and have 12,500 members.

5

Education and awareness



Increasing attention is being given these days to the education of children and youth on water related topics. Today's children will, sooner or later, decide the future use of our world's water resources. Education can help raise the next generation with knowledge and attitudes that promote the wise use of water.

Educational establishments provide unique opportunities for awareness raising as they bring large groups of people together for learning purposes and usually have systems for production and dissemination of educational material. When this is not the case, or when teachers are not skilled, educational programs on water or hygiene-related topics can be combined with youth literacy programs and/or teacher training.

Schools can also provide an entry point to the community as a whole, for example, the introduction of latrines and hygiene-education at schools may trigger the development of improved hygiene norms in the household.

Objectives for programs

Most water related educational programs focus on increasing knowledge, changing attitudes and/or encouraging action. Increasing children's knowledge can help create a greater awareness of the importance of water or



Students testing water quality.

the relevance of certain aspects of water. This could be the importance of wetlands and drinking water quality or of the hydrological cycle. Other programs emphasize the need for behavioral changes such as washing hands with soap or keeping paint and chemicals away from streams. Several programs go a step further and involve children or youth in action on a wider scale.

Examples are the promotion of water-saving devices, cleaning-up of streams, building of latrines and so on. More attention to this promotional aspect will be given in chapter 6.

A good program will find an optimal combination of different objectives and a balance between educational, behavioral and promotional aspects.

However, within an educational setting, the emphasis on basic knowledge will always remain important. This should provide the basis and motivation for behavioral changes or action.

Choosing suitable activities and material for a water curriculum depends on several factors:

- Age of the children.
- Relevant water topics in the school's city/region (teaching children about conservation of drinking water in an area with plenty of clean drinking water is, of course, not as useful as teaching the subject in an arid region).
- Cultural background of teachers and children.
- Time, skills and facilities available.
- Possible linkages with existing campaigns, educational programs or school networks.

In this chapter no distinctions have been made between activities for young children and activities for teenagers. The ideas presented should be seen as a starting point; often they can (and should) be adapted for different ages.

5.1 SETTING UP SCHOOL PROGRAMS

Active involvement of schools in preparation for a campaign

The Water Awareness Campaign, UNDP/PWA (Palestine territories) organized its school campaign through workshops with teachers from six schools. Each school then formed a water and sanitation committee which included students themselves. Experience showed that follow-up and visits to the participating schools were important. A final meeting organized by students concluded the program.

Workshops for school administrators

Gaia, environmental NGO (Georgia) wants to introduce ideas of sustainable development into English language and other subjects, in elementary and secondary classes. To achieve this, they have organized workshops for school administrators.

Making teachers' training an essential and central element of water education

Water Education for Teachers (Project WET) is an interesting example of a program that prepares curricula and materials on various water topics and devotes much attention to training teachers how to use them. The Project WET Curriculum and Activity Guide is available to all formal and informal educators. They receive a minimum of 6 hours of training through workshops for classroom teachers, park naturalists, museum educators, environmental education specialists and others. The program started in the USA but now there are internationally sponsored Project WET programs together with other organizations.



An example from the Project WET educational package showing food originating from wetlands.

water. Examples of current initiatives are poems or drawing contests and include projects aimed at solving local water related problems. The schools then involve the media to publish the results of their initiatives. The schools' results are sent back to the project in the form of a (local) newspaper article. The prize for the winning school or class is an educational water related field trip.

Quality circles

Initiated by the Faculty of the Technical University in Bandung, (Indonesia) “creativity circles for the quality of life and environment” were started. These quality circles encourage and enable school teachers and principals to create a learning process which stimulates creativity and takes care of the immediate environment. Over 5 years of operation 300 schools have joined the movement and are united in a common self-organizing forum.

School-based water-quality monitoring

Global Rivers Environmental Education Network (GREEN) (South Africa) suggests the following procedure for school-based water quality monitoring projects (see appendix 2 for resources and guides).

1. Observation of the catchment (using several checklists; catchment, river and health-risk checklist).
2. Sampling and testing water quality (using simple experiments and tests).
3. Talking, thinking and planning together.
4. Reporting and action.

Action could include conducting litter clean-ups, improving waste management, removing “alien” plants, replanting river banks, planting gardens, wetland rehabilitation, protection of springs, improvement of health education or building better toilets (see chapter 6 for more on youth action and promotion).

Drawing-contests during fairs and at schools

Water Conservation Campaign, UNDP/ONEP (Office National de l'eau Potable) (Morocco) has organized arts and drawing contests during festivals and at schools. This campaign attracted a good level of media coverage and several celebrities were present.

Stimulating local school projects and contacts with the media

Water Detective Program, ICRO (Slovenia) supplies material to schools through the postal system of the Ministry of Education. ICRO stimulates schools to develop their own initiatives which can be any project related to



Environmental poetry and art contest

Thousands of American school children from the kindergarten through Grade 12 have participated in *River of Words*, an international poetry and art contest in which children explore and interpret their local watersheds through arts. Started in the US is now open to children around the world and is organized by the International Rivers Network.

Linking schools through the internet

Several educational projects use the internet to link participating schools, distribute information and share ideas. Examples are the Global Rivers Environmental Education Network, the Rivers Project and Aquatox. See also chapters 6 and 11.

Speakers available for schools

Aurora, USA is the utilities provider and has various presentations available for schools. Topics include the water treatment process, learn about your watershed, history of Aurora's water and Aurora's water supply. Schools can call Aurora to schedule a presentation for their classrooms.

Summer camp

Pinellas County Utilities, Water Conservation (USA) organizes a water conservation summer camp for students of elementary and middle schools in which they are exposed to a variety of water resources and conservation lessons, tours and hands-on activities.

School packages and curricula

UNICEF's Social Mobilization Program (Bangladesh) focused primarily on children in Grades 1–3. They used a package of activities such as games, songs and rhymes. Simple drawings, comic books and demonstrations explain how germs are spread.

Institutionalizing water in school programs

Nature Conservation Society of Japan lobbies with the national government to get water issues included in regular school curricula. Institutionalizing water in school programs is important in order to have a lasting and sustainable effect, rather than (only) short campaigns that disappear after a while.

The Water Conservation Strategy Working Group (Canada) suggests that school programs include material such as activity books, games, videos, and CDs, poster contests, in-class visits and demonstrations, “teach-the-teacher” guides and curriculum guides.

More information on where to find existing curricula, school packages and other material has been included in Appendix 2.

Reading package for children

Umgeni Water (South Africa) has produced a reading package for children titled, “Is a drink of water worth a crown of gold?” According to Umgeni it is an “illustrated, magical story with a dramatic climax.” It consists of a Big Book for shared reading, a set of six little books for independent reading, and a Teacher's Guide offering cross-curricular lesson ideas in the theme of water, ranging from language to geography and environment science, mathematics and art.



Thames Water (UK) uses a mobile “water-home” for their education program.

Tours of water treatment plants

Pinellas County Utilities (USA) organizes tours of the county well-fields, Utilities Laboratory, operations facility and wastewater treatment plants. These tours are popular with both adults and students.

Poster contest

Aurora, Water Conservation (USA). Students participate in the annual National Drinking Water Poster contest and are awarded prizes at a reception at the City Hall.

Water-related topics in the Ethiopian School Curriculum

Water-related topics have been introduced throughout the grade 1-12 school curriculum in Ethiopia. In biology the topics water use, the water cycle, water use in agriculture and fishery, methods of conservation and the impact of pollution are addressed. The basic science curriculum covers community hygiene, sanitation and water-borne diseases. In environmental sciences the sources and quality of water are explained.

5.2 IN-CLASS IDEAS**INTEGRATING WATER ISSUES INTO REGULAR SCHOOL SUBJECTS**

Water related issues can easily be integrated into most regular subjects taught in schools. Water related topics are great opportunities to integrate practical real-life situations rather than focussing on more abstract topics. It involves children thinking about the relevant water issues in their city or region. By using a topic like water, students can practice skills such as researching issues, debating, studying the economics of decision making and developing marketing material.

Literature research by students

Students could conduct research themselves on water related topics as a part of

their arts, history or geographic classes. It is of course, essential to have access to relevant published information and, if possible, to information contained on the internet as today this is a big source of information. Hands-on research by interviewing professionals, community members or politicians is also possible.

In the following section, we will have a look at relevant questions that students could answer during their research projects and that integrate water topics into regular school subjects (mostly for those over 10 years of age).

Water and History

- Create a report/timeline of historical developments related to water in your region (consider industries, residential areas, agriculture, transportation, recreation or other relevant aspects for each period).
- Identify historical/present uses of water which have affected water quality/quantity.
- Investigate future use/development along the river, lake, or watershed.
- Compare and contrast how the use of the river has been changed over the years.
- How are the local watershed's rivers and lakes used by people today? What values and attitudes towards water do local people hold? How are these values expressed in music, literature and art?

Water and Legislation

- Prepare a summary of the local water legislation.
- Who is responsible for the legislation?

Water resources: Geography

- Discuss the water resources problems from around the world. Include topics such as the following: What happens when there is too much water or not enough? What can be done to reduce these problems? What have humans done in the past that have prolonged these issues?

- What are the major sources of water in the local community? Who are the biggest consumers of water? What percentages of water do agriculture, industry, the utilities, and the public use?

Water and chemistry

- How is the health of a waterway determined? What types of tests are typically performed? What are good test results? What can be determined through visible means? Perform tests on a waterway.
- What environmental problems do watersheds face and what is being done to address these problems?
- Where do pollutants come from?
- How does a water tower work? Where does the school water come from?

Water and language/art

- Create a health brochure on a water related topic.
- Create a campaign calendar that includes photos, graphics and information on relevant topics.
- Read newspapers and find articles on local environmental issues.
- Create a song or poem on a water issue.
- Design a logo for a water campaign.

Water and geography

- Map your watershed or make a model of it (clay, papier-mâché). To what watershed does your school belong? What are the boundaries of the watershed? How are they defined?
- Where does the water come from, from which streams, and where does it drain?
- Invite city planners to discuss the major changes planned in the local watershed during the coming year. What impact will these changes have on the streams and rivers in the area?
- Invite someone to explain Geographic Information Systems (GIS). How does this change the way the environment is monitored?

Water and mathematics

- Compare pollutants in the waterway over time.
- Graph population growth along the waterway.
- Track periods of flooding.
- Analyze maintenance, clean-up and development costs.
- Map how much water a family uses at home.

(Based on Watersheds Curriculum Enhancers, www.beesinc.org)

INCLASS DEMONSTRATION

Demonstrate the water cycle

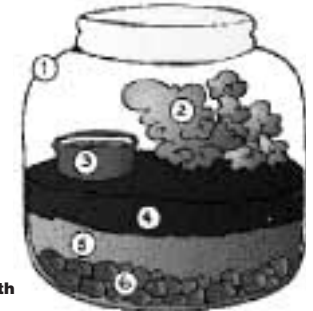
Simple examples can be useful for very young children to demonstrate the nature of water. This knowledge can serve as a building block for future lessons.

Show the class an ice cube in a cup (or give each of them one) and ask what it is made of. When it is melted discuss the differences between the liquid and the solid form. Leave it for some days and discuss what will happen. Once it has evaporated observe the sides of the cup and discuss where the "film" has come from and what it is made of. Heat water in a kettle, hold a mirror over the spout, and observe. Discuss how water becomes steam and is able to move through the air (*Cindy Miller Prescott High School, USA, Curriculum Explorer*).

Water cycle model

Environmental Protection Agency (USA) suggests preparing a simple model to show children how the water cycle works.

This water cycle model consists of the following elements: 1. Jar, 2. Plants, 3. Bottlecap or shell with water, 4. Soil, 5. Sand, 6. Small rocks.



Aquifer model

The *Environmental Protection Agency (USA)* suggests building a model aquifer. It can be used for class discussions on potential sources of pollution to drinking water supplies.

To prepare the model:

- Use a clear container with at least the following dimensions: 50 cm long, 20 cm broad and 15 cm deep.
- Tape a regular drinking straw along one side, 1 cm from the bottom: a “well.”
- Pour a layer of white sand to cover the bottom, make it approximately 3 cm deep: an “aquifer.”
- The next layer should be a flat layer of modeling clay; a “confining layer” (don’t cover all the sand though).
- Show the students that water poured on to the clay can only flow into the sandy layer where there is no clay.
- Aquarium rocks (a fine gravel) constitute the next layer and cover the entire container.
- Make a small hill covered with green felt, use some clay to fasten it to the side of the container.

This model can demonstrate the effect of agricultural or lawn chemicals on the groundwater. Sprinkle some cocoa or food color on the hill (or any other colored substance that dissolves easily). See what happens when you spray water on it.

Contaminate the “well” with food coloring and see the effects on the “aquifer.”

Demonstrate noncompressibility of water

Partially fill an eyedropper (available at most drug stores) so that it will barely float in water. Fill a two-liter bottle and place the eyedropper inside, screw on the lid. Squeeze the bottle, and ask the students to explain why the

eyedropper will go down. Water is noncompressible, but the air above is compressible which will cause a higher air pressure, forcing the eyedropper down (*Michael Burgoyne, Rosamond, UT, Curriculum Explorer*).

Effect of thermal pollution on freshwater organisms

Cooling-water from (nuclear) power plants can cause an increase in temperature in waterways. The purpose of this exercise is to demonstrate the effect of increased water temperature on the amount of dissolved oxygen in water and, in turn, upon the gill beat rate of fish. Slowly warm water from a cold aerated pond containing a small fish. Stir the water and keep a thermometer in the water while doing so. At every 2 degrees Celsius take water off the heating source and measure the gill-beat of the fish, using a stopwatch. Make a graph of the results. Take care the fish doesn’t begin to float or wildly thrash; then it needs to return to cold water.

EXPERIMENTS AND WATER-QUALITY TESTS**Testing water quality: Germination of onion bulb (Aquatox 2000)**

This test relies on germinating bulbs of the common onion, *Allium cepa*. A series of six small bulbs (the size of small pearl onions) are placed over the mouths of test tubes containing the water sample to be tested. One series is prepared with pure bottled water as a control. The bulbs are withdrawn from the test tube mouth after 72 hours and the length of their roots is measured with a ruler. The average root length from the test sample is compared with that of the control sample. A change in the normal growth of the roots is used as an index of toxicity.

Testing water quality: Germination of lettuce seeds (Aquatox 2000)

The bottoms of petri dishes are covered with absorbent paper (such as paper towels or filter paper) and moistened with the water sample to be tested or with pure bottled water as a control. Twenty lettuce seeds are deposited into each dish. The seeds will have germinated at the end of 48 to 72 hours. The dishes are opened, and the root growing from each seed is measured using a

ruler. The average length of the roots is calculated and compared to that of the control seeds. A change in the normal growth of the roots is used as an index of toxicity. This test is similar to the onion bulb test, but the two tests will produce different results for several toxic compounds.

Testing water quality: Toxic effect on freshwater hydra (Aquatox 2000)

This bioassay uses the reaction of the freshwater hydra (*Hydra* sp) to toxic compounds as an index of water pollution. Hydra cultures are easy to maintain, making them an especially useful microorganism. The hydras are placed in groups of three in small plastic containers containing the water to be tested, and are observed every day for 4 days. The hydra takes on highly specific shapes in the presence of toxic substances, providing an easy-to-assess index of toxicity.

Microbiological contamination of faecal origin (Aquatox 2000)

Microbiological contamination can be assessed by looking for the “sentinel bacteria” (also called “indicator bacteria”) that are normally present in the intestines of humans and animals. These bacteria produce hydrogen sulphide (H₂S), the gas that smells like rotten eggs, as a byproduct of their digestive process. To check for the presence of the sentinel bacteria in water put them into contact with a strip of absorbent paper impregnated with a nutritive substance plus an indicator. The indicator turns black upon contact with hydrogen sulphide (contact Aquatox to see where you can get this indicator, see appendix 2).

5.3 OTHER ACTIVITIES

Interview a professional

Ask someone from a research institute, a sewer-plant or a drinking-water company to come to the class for a presentation and discussion on their water business. Alternatively, arrange to visit their institute.

Conduct community interviews on water related topics

Ask students to compile a questionnaire to answer questions on how the community deals with a water issue in practice.

Invite a government representative to discuss water laws

Invite a legislator into the classroom to discuss how ideas are made into laws. As citizens, what are our responsibilities? (source: www.beesinc.org).

Students run a virtual "water resources department" curriculum

Pinellas County Utilities, Water Conservation (USA) offers an annual in-school curriculum of 8 weeks coupled with a single day field trip. In the program, students find out about the operations of a Utility Department by running a water resources department and learn to read meters, produce bills, and send water conservation messages via various media sources.

Community planning meeting

Students could attend a community planning meeting discussing local water issues and then recreate the meeting for the class (drama) www.beesinc.org.

Big book of water — let children use their imagination

Zaragoza, the Water-Saving City Project (Spain) uses a book with blank pages on which the city school children write their ideas for saving water. They also use Water Cards on which each student thinks up an image and slogan to convince everyone of the need to use this natural resource correctly. The project also involves children in accounting for water savings obtained through water conservation. They keep and compare monthly water bills and enter savings into a Water Savings Book.

Flip chart: Teachers make up the story with the pictures

SAWA (Cambodia) provides a curriculum containing 11 lessons focusing on latrines, protection of clean water, and school and community hygiene. Accompanying the curriculum are 27 large posters, a hygiene story and

hand-washing flip charts. The hygiene flip chart consists of a series of pictures and the teachers have to make up the stories to accompany the pictures. Following pre-testing, the teachers received training on how to use the chart. It transpired that teachers were enthusiastic in using the curriculum and children started to pass on the messages about hygiene that they learnt in school to their families and neighbors.

Creating environmental posters

STREAMS (USA) suggests involving students in the creation of environmental posters. Other activities could include writing an article for the school paper, giving a speech to the class, or making a presentation to an environmental organization.

A collection of student writing about rivers

In Rivers Project (USA) schools have “adopted” certain rivers. Children have used their “adopted” rivers as the subjects of poems, short stories, social and natural history investigations, and scientific research papers. The collection of student writings is called “Meanderings” and is published twice yearly.

Marking water-saving habits with stickers

Public Utilities Board's (Singapore) school packages include brochures with stickers in their materials package. The brochures show different water-saving habits with spaces for star stickers. Every time another saving habit has been applied, a sticker can be added.

Jigsaw puzzle

Umgeni Water (South Africa) has produced several jigsaws, for example, with the picture of an aerial view of a water catchment.

Teenage newspaper

Gaia, environmental NGO (Georgia) publishes a monthly teenage newspaper with an environmental page in each issue.

Writing political action letters

The Rivers' Project has prepared a curriculum for several school subjects, including language. Activities in this curriculum include interviews, research, technical writing, expressive writing, journalistic writing, oral presentations and literature. In political action letter writing activities children learnt the importance of the role of citizens and the value of taking action on important issues.

In Appendix 1, contact-addresses and websites of most of these organizations can be found.

The Water Detective Program is an initiative in Slovenia that involves schools in small scale projects that generate publicity in local media.





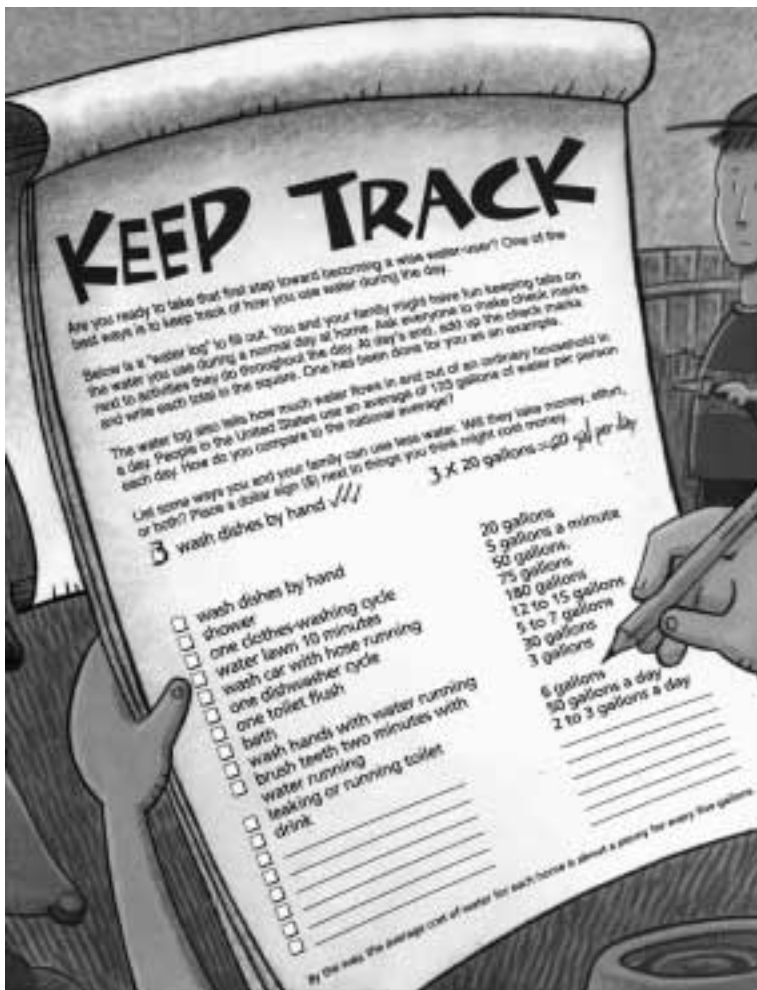
6 Young people as promoters and activists

The important role of children and youth in the water sector is beginning to be recognized. Children are capable of much more than just being lectured about the need for the wise use of water. Several programs all over the world are taking the involvement of children seriously and involving them in promotion and action, in improvement of watershed quality, distribution of low-flush toilets, promotion of latrines and so on. The impact of many of these campaigns has helped to resolve local water problems and changed the attitudes and values of the communities in which the children live.

Success and efficiency are not the only reasons for involving children in campaigns. Children are eager to learn and put into practice the knowledge they have obtained and they should be given the opportunity and freedom to do so.

6.1 YOUTH AND WATER CONSERVATION

Although children and youth have been major target groups in education on water conservation their active involvement in these types of campaigns has not been as common as in hygiene promotion or ecological conservation campaigns.



Keeping track of water usage in your own house.

Efficient toilet distribution by schools

Mono Lake Committee, Los Angeles (USA) works together with students and schools to organize one-day ultra-low-flush toilet distribution at their school. The schools receive US\$5–10 from the Mono Lake Committee for each toilet distributed. These events raise funds for the school's ecology clubs.

Students install water-efficient appliances

Water-Wise and Energy Efficient Program, National Energy Foundation (USA) provides classroom packages including educational material. They also receive home check-up forms to audit water use at home and an instruction video on how to install low water use appliances at home. The package also includes a letter to the parents, a flow-rate test bag and toilet-leak detector tablets (color tablets, to see whether the water does not flow continuously).

Students teach elementary school children on water issues

Mono Lake Committee, LA (USA) trains high school and middle school students on the Mono Basin ecosystem, the watershed, water resources, water conservation and actions they can take to make a difference. The students then prepare and conduct presentations in teams of three for nearby elementary school classes, where they are often popular teachers. After these sessions, they often stay actively involved, organize Ultra-Low-Flush Toilet distributions and conduct water audits at their own school, and so on.

Children's water police

Water Conservation Program (Mexico City) involves children in finding and reporting water leaks in their residential areas.

6.2 YOUTH AND ECOLOGICAL VALUE OF WATER

Combining environmental action with the regular curriculum

STREAMS Curriculum Activities (USA) suggest students should write letters to the local authorities after studying a particular environmental problem.

This activity combines environmental action with regular subjects such as social studies, language and science.

During the STREAMS project the students:

- conducted **water quality monitoring tests** of a local waterway and helped resolve a local raw sewage problem there. They provided data for a countywide water-quality-monitoring program.
- **wrote letters and petitioned** local authorities a) to resolve the infiltration and overloading of a community sewage line with groundwater, resulting in a US\$250,000 grant for the community, and b) to construct a wetland on school property. They helped create partnerships to plan, design, finance and build the wetland.
- became involved in **educating the public** about land management practices to prevent storm-water runoff. They planted trees to prevent storm-water runoff.
- prepared and carried out **public presentations** about their environmental work and findings. They sent letters to the daily newspaper and wrote to political leaders about their concerns for the environment. They also created and disseminated a booklet about the effects of household pollutants on the environment.

Children in the media

Kids for Saving Earth (KSE) (USA) encourages children to write articles on environmental issues to the local media or school newspapers. If they send a copy of the article to KSE, they get a “Defender of the Planet” award. Other activities could include producing a video and getting it on a TV show or a local news program. KSE provides a standard press release form on the internet for children to use in reaching the media.

Catchment learning cycles

Waterwatch Victoria (Australia). Students and teachers from schools throughout Victoria have been taking part in the Catchment Learning Circles (CLSs). Students investigate their local waterways and collect data to share

with other schools throughout Victoria. Students conduct physical and chemical tests, macro-invertebrate surveys, and habitat surveys of their monitoring sites. Community attitudes towards their local creek, river or lake are also investigated.

The student use this information to build an action plan for the conservation of their monitoring site. Several schools have planned re-vegetation days, developed Young Landcare Groups as well as providing displays to the community during the National Water Week (Waterwatch Victoria is part of a larger initiative, Waterwatch Australia.)

Award for extraordinary environmental efforts

The Sun Foundation and the Rivers Project (USA) organize the “Making Waves” award, as part of a festival. The awards recognize extraordinary efforts towards the protection and restoration of the water environment. Recipients of the rewards include high schools that have implemented environmental and energy-saving programs at their schools or started a lake-monitoring program.

Ecological expeditions

Jaik Ural, Youth Environmental Awareness Project (Kazakhstan) has organized ecological expeditions. Groups of youth study and monitor the effects of human impact on the Ural river and carry out projects to improve the environment. Gathered data are conveyed to the regional agency for environmental management. Other activities included clearing of small rivers and lakes and removal of garbage dumps. As a result of this project significant portions of coast and channels have been cleared of litter.

There has been considerable media attention on the expeditions and participants have made more than 250 statements in the mass media. Regional ecological meetings were organized in which local progress was discussed and information shared.

River clean-up programs

In the *Cintailah Sungai Kita (Love Our Rivers) Campaign (Malaysia)*, River Brigades consisting of high school students undertook river clean-up programs. The brigades removed debris, stabilized the bank of the small rivers and replanted them. A competition was organized to select the most "beautiful" river.

Developing a support network

Global Rivers Environmental Education Network (GREEN) provides opportunities for young people to understand, improve and sustain watersheds in their community. GREEN aims to teach young people about water quality within their watershed and to use their findings to create solutions. The program also aims to enhance the academic skills of high school-aged youth, including critical thinking, teamwork, problem-solving and decision making.

GREEN provides its participants with water-monitoring equipment, resource and action guides and a network of support. As part of this network of

An example from GREEN

In the spring of 1984, a group of concerned students at a high school located along the Huron river in Ann Arbor, Michigan, decided to investigate cases of individuals contracting hepatitis from the Huron river. Their teacher contacted Dr. William Stapp (founder of GREEN) and other educators at the University of Michigan and started a water-quality-monitoring program.

After a few weeks it became clear there were large amounts of fecal coliform bacteria in the river and raw sewage was being released into the environment. The students discovered the cause of the problem and worked with the local government to find a solution. Their success sparked a global network of educators and students to work on improving their watersheds through education and action.

support, they now have an online internet "Hands-on Centre" where findings can be reported and more can be learned about the background behind the chemical water monitoring tests. It also contains additional advice on how to start taking action.

Youth involves the community

The Schools Water Action Program (SWAP) was established at the University of Stellenbosch in South Africa in 1992 as a local chapter of GREEN. Its original objective was to help teachers develop appropriate and relevant learning programs, focusing on local environmental issues. SWAP helps children to investigate and monitor the quality of water in streams and rivers and involves communities in identifying and addressing sources of mismanagement.

SWAP has now extended into a large environmental educational network in South Africa involving hundreds of schools in a variety of catchments. Through the network expertise and material are shared in a continuous, collaborative process of development and research.

Student investigations: Estuaries and marshes

Rivers Alive (Canada, USA and China) is another initiative aiming to involve students in both research and action. Data of water quality sampling, invertebrate analysis, vegetation surveys and site mapping are collected and compared, for example, in rivers and estuaries. Marsh restoration was completed in several areas. Youth learned more about wetlands in a series of workshops.

Rivers Alive '96 helped youth to gain first-hand experience in environmental analysis, work together to compare and exchange ideas, and most importantly, develop a sense of stewardship for estuarine environments. In the future, research results and general information will be shared globally with other youth groups.

Students help collect water quality data

Rivers Curriculum Project (USA). Students collect and analyze water samples from various test sites. The data are used by various state agencies. Rivers studies also include historical, social and/or economic aspects of rivers. A formal curriculum applicable to any river in the world has been developed with units on biology, chemistry, arts, science, geography, language arts and mathematics. Over 400 schools from the US and Canada are involved and teachers from all over the country come to training sessions on the rivers curriculum. Training sessions are organized in July and August every year.



School groundwater project

The Illinois Middle School Groundwater Project (USA) brings groundwater education to Illinois schools and attempts to increase overall community awareness. The project is a cooperation of state agencies, local organizations and schools. Local companies and agencies have donated the groundwater models used in this initiative. Overall coordination is performed by the rivers curriculum project.

Students conduct water-quality tests on water from wells. They measure alkalinity, nitrates, pH, the presence of chlorides, iron and hardness. Activity kits and tests kits can be ordered at the Rivers Project. Over 200 schools from three Illinois regions are involved.

Aquatox school network: Simple tests on water quality

In the *Aquatox 2000 Initiative*, groups of students use simple and inexpensive tests to measure chemical toxicity and microbiological pollution in water samples from their local environment. An internet network helps exchange information among participants. Alternative communication methods allow schools without access to the internet to participate.

Goals of the Aquatox network are:

- To help school children understand, through practical scientific experiments, how important it is to protect water resources.
- To involve students in thinking about environmental protection, sustainable development, health and social issues in their communities and the world.
- To develop an electronic network of young researchers and an international forum for dialogue about environmental issues and priorities.
- To give science teachers an opportunity to carry out projects with their students which is practical, crosses scientific disciplines, and relates to the health of humans and ecosystems.

6.3 YOUTH AND SANITATION AND HYGIENE

Several sanitation and hygiene projects are emphasizing the role of school children in reaching a wider community. UNICEF, WaterAid, several governments and various other organizations now initiate programs that involve school children and youth in the promotion of latrines and hygiene education. The following section will discuss several examples of these and other initiatives.

School children and teachers as major promoters

The Government of Bangladesh launched an integrated water, sanitation and hygiene project in rural areas of Barisal region. This was the first attempt by the government to mobilize various social and public groups for sanitation. A rapid assessment showed that school children and teachers carried out the major promotional activities in the project.

Prompting parents to build latrines

Experiments in the *UNICEF's Social Mobilization Program (Bangladesh)* have shown that school children can be effective in prompting parents to build, use and keep family latrines clean. This process was greatly helped by the active involvement of district officials to promote sanitation and hygiene.

Enthusiasm

The UNDP and World Bank Water Supply, Sanitation and Health Project (Uzbekistan) emphasizes child-to-child learning, as children learn more easily from other children than from adults. Their enthusiasm when reporting at home can serve as important links with family and community. The project also involves local children's theater.

In the *Community Water Supply Project (Sri Lanka)* government experience showed that the school hygiene educational program had positive effects and children acted as motivators of their peers.

Involvement of Youth League

UNICEF's Environmental Sanitation and Hygiene Education Project (Government of China) the Youth League works together with the Provincial Public Health Bureau to promote safe water and sanitation in the province of Anhui, as part of a civilization campaign. Youth League cadres and members were encouraged to take the lead to build a sanitary latrine at home.

Teachers encourage children to communicate hygiene messages

In the evaluation of the *Water, Sanitation and Hygiene Program, WaterAid (Tanzania)* support for the child-to-child program is seen as "perhaps the most successful approach." Teachers are trained in the PHAST approach. The teachers then encourage children to communicate hygiene and sanitation messages through a variety of media such as songs, drama and stories.

Award for largest coverage

The District Commissioner of Barisal Region (Bangladesh) announced an award for the school that achieved the highest sanitation coverage in its catchment area. This encouraged local schools and madrasas (religious schools) to arrange meetings with their pupils and communities to promote sanitation and demonstrate the construction of latrines. Teachers asked their pupils to build latrines for their homes. They also formed groups of pupils to

promote sanitation in their local communities. Almost all of the people that had built latrines in the program reported they were motivated to do so by school pupils. However, the evaluation also showed that more emphasis was needed on building adequate numbers of latrines in the schools themselves.



7

Awareness and public participation

7.1 SUPPORTING PUBLIC PARTICIPATION

As the general public have the right to be involved in issues that concern them most campaigns actively involve them in their activities. They do so to:

- find out about people's ideas and perceptions to ensure that campaigns communicate the content and form of messages in context of local cultural values.
- stimulate discussion by using communications approaches in a way that promotes discussion. Many current educational techniques focus on discussion as a vehicle for learning and similarly, having representatives of the general public actively involved in a campaign can be a good way to stimulate discussion.
- broaden the support basis of the campaign. Actively involved people usually talk about their activities to others which keeps "the ball rolling."

As expressed earlier awareness raising should be seen as an interactive movement in which different actors can push forward with their initiatives. Participation in awareness raising can give people the opportunity to be involved in the movement, to have some influence over the direction of the movement, and help push the movement forward with their own initiatives, activities and discussions. The first step is open to anybody, whether NGO, government organization or utilities provider.

Awareness raising however, should not be confused with participatory design of technical solutions even though they can be complementary. In some situations, awareness raising and education are required before the outset of participatory design, for example, when communities do not perceive a link between diarrhea and hygiene.

Besides the typical means of public involvement in such activities as group discussions using PRA tools, there are many other ways to involve the public. This could be through the educational sector, internet, youth involvement, large public events, advocacy, and so on. These techniques are discussed in various other chapters. In this chapter the emphasis will be on activities involving communities and volunteers in a direct and active way.

Involving communities and local artists to develop their own material

In *PHAST Programs (several African countries)* extension workers are trained, with the help of artists, to help local groups develop their own communication material on-site. By involving local groups tool kits are developed that reflect a community's cultural and physical characteristics.

Slogans on village walls

The *National Rural Water Supply Program (India)* proposed in their awareness campaign that at each level (village, block, district) people coined their own slogans on the village walls; these slogans can be related to rural water supply or sanitation. This was done with the help of youth clubs and women's groups.

Involving community members in education

In *PHAST Programs* communities are stimulated to undertake house-to-house hygiene education themselves. As a result, for example, in Kenya, communities began to operate independently of the extension agents but they also asked extension agents to come back again to talk about hygiene. They approached public health officers to learn more technical details about latrines, water source protection and housing, and began to view them as "resource people."

Traditional media

Teams of local volunteers in *PSU Projects (India)* incorporated water and sanitation messages into traditional art forms such as the theater, religious songs, dance and storytelling. The team goes through the following process together:

- 1.** Team members are identified and selected from the community on the basis of interest, ability and potential. Sometimes, local professionals such as storytellers take part, but most are volunteers: men, women and children.
- 2.** The team is put through physical exercises and games to enhance team-building.
- 3.** The team analyzes local problems in the context of water and sanitation and identifies possible relevant issues for scripts.
- 4.** Theatrical skills are developed.
- 5.** Scripts are written, issues are identified, the basic story line is framed, and characters and selection of the form of presentation are developed. Local materials are identified which can be used in the script: the set, costumes and instruments.
- 6.** Review of performance using video.

Making use of personal communication

Water Awareness Campaign, UNDP/PWA (Palestine territories) employed four women to do fieldwork. They visited homes and other places to inquire about water related problems and tried to provide answers. They held 11 discussion sessions in which 400 women took part, and visited 500 homes. During Ramadan 9 sessions were held in mosques which were attended by 430 women and 92 children.

Asking the “who benefits?” question

Gujarat (India). Several NGOs are involved in water related issues with an emphasis on the construction of lined ponds and/or groundwater recharge schemes. Several of the NGOs involved have included awareness raising activities related to water conservation and groundwater recharge in their programs, especially through personal contacts. One of the constraints is that farmers do not always feel sure about the benefits. They fear that others, who are not taking conservation measures, will capture the benefits and withdraw the unutilized water.

Supporting early-adopters

Espacios de Salud (Mexico) suggested in their “lessons learnt” that it may be useful to wait until a few “brave” families have adopted the new toilets advocated by an NGO. These families can be supported with frequent troubleshooting check-ups and they can be volunteers to keep other demonstration sites in perfect condition. It was shown that it is better to have several demonstration sites rather than one.

7.2 DEVELOPING VOLUNTEER NETWORKS**Creating a network of active people**

The Audubon Wetlands Campaign (USA) has created a network of volunteers who work together on the conservation of wetlands. Their goal is to empower the conservation of community-based wetlands. They lobby for support of state field offices, run wetland monitoring programs and have created a “citizen for action” notebook and newsletters. They also provide technical and policy advice upon request. Conservation of wetlands is enhanced through the activities of volunteers who start new preservation projects for local wetlands and through policy advocacy. Audubon mobilizes its constituency whenever it feels the need for advocacy a) for good water policies, or b) against harmful policies. Mobilization proceeds through its network of volunteers and through the internet (see chapter 10).

Involve “non-professional” promoters of health

The Water Supply, Sanitation and Health Project (Uzbekistan) suggests involving “non-professional” promoters of health including neighbors, children, colleagues, teachers, mullahs and traditional healers.

National nature survey

Nature Conservation Society of Japan organizes an annual National Nature Survey on the World Environment Day. Calls for participation go out through newspapers, television and the radio. The results of the survey are distributed in the form of posters to schools, museums and nature centers as well as to everyone who has participated. So far approximately 4,000 people have participated.

Volunteer workshops: Adopt-A-Stream

Adopt-A-Stream Foundation (USA/Canada/ Colombia) runs a program that involves volunteers in the protection, monitoring and restoration of watersheds. They have organized workshops which are free and open to the public and which focus on how to:

- investigate a watershed
- establish a stream-keeper group
- identify short and long term goals
- develop an action plan
- carry out the plan.

During the workshop, examples of successful stream protection, monitoring and restoration activities are provided.

Adopt-A-Stream also organizes field training where participants learn how to investigate and monitor the physical, biological and chemical aspects of streams. Activities include mapping and surveying a stream habitat, measuring flow and basic water-quality parameters and monitoring benthic macro-invertebrates. The training generally takes place at two sites so that participants can compare healthy and unhealthy streams.

Monitoring water quality by citizens' groups

Several NGOs (*Vision 21*) (*Gujarat, India*) promote active monitoring of water quality and quantity and hygiene behavior at block level by citizen groups.

WaterAid, Tanzania: Women more effective hygiene promoters

The Water, Sanitation and Hygiene Program, (*WaterAid*) (*Tanzania*) observed that the women hygiene promoters were more effective than the male promoters. The women most likely to be chosen as hygiene promoters (and keep up the work) tend to be unmarried, single, have come from outside the area, or have some other independent occupation.

Bringing together schools and community groups in monitoring watersheds

Waterwatch (*Victoria, Australia*) brings together schools and community groups, Landcare Groups and landowners, councils and water authorities to test the quality of their local stream or water source and take action to maintain and improve water quality.

In the *Waterwatch* monitoring program, macro-invertebrate and algae surveys and tests to monitor the physical and chemical conditions of the water are carried out. Results are monitored and recorded in central databases through catchment coordinators.

Volunteers are encouraged to do research, contact local authorities and draft an action plan to restore and maintain the water quality. Plans from several groups of volunteers throughout the catchment are discussed in **action-planning workshops**. A *Waterwatch* Coordinator in each region helps to coordinate these activities.

Volunteers present the plan at a forum

Waterwatch (*Victoria, Australia*). After a workshop groups can prepare a poster to describe their action plan. These posters are displayed at a forum, and several monitoring groups are usually requested to present their plans to the invited guests.

Mapping and monitoring by students and teachers

Social Mobilization Program (*Bangladesh*) involves students and teachers in mapping of latrine construction and hygiene behavior in the school catchment area.

Keeping up volunteer motivation

UNICEF's Saniya Project (*Burkina Faso*) found, in their evaluation, that a revision of the roles of volunteers was needed, as it was difficult to keep up their motivation. Integration with local health centers is being considered.

Training volunteer environmental educators

Nature Conservation Society of Japan organizes a program to train "nature conservation educators," volunteers who organize and lead outings to observe various kinds of natural ecosystems. Anyone interested in nature conservation can join the program.

Involvement of village health workers and Traditional Birth Attendants

WaterAid: Water Supply, Sanitation and Hygiene Education Projects (*Ethiopia*) have involved several groups of people from the community in different ways:

- Village health workers who are already involved to some extent in health and development activities are selected by their communities. These Community Health Agents (CHAs) are required to be literate and become part of the Ministry of Health's structure.
- In the North Gondar region, the concept of health communicators has been introduced. These are local women who have a less extensive role in health education and less geographical coverage than CHAs. They act as mobilizers and contact points for the project. The project has defined the criteria for their selection as young, energetic and literate women.
- Traditional Birth Attendants, who also fall under the responsibilities of the Ministry of Health.



8 Media and material

8.1 CHOOSING THE RIGHT MEDIA/MATERIALS PACKAGE

Most campaigns use promotional or educational material in their activities. The most important issue to consider when designing material is to decide what its role is in the total campaign strategy. In some situations it is used as a support tool in combination with other methodologies, for example, in education curricula, posters for group discussions and brochures to support personal contacts. In other campaigns the material is expected to speak for itself: billboards, posters in public buildings, mailed brochures, advertisements and so on.

Developing a varied media package

Zaragoza, the Water-Saving City Project (Spain) launched a publicity campaign with advertisements on television, radio, in the printed press and on leaflets. They also produced posters to be placed on advertising hoardings and used advertisements on buses and on municipal poster sites. A help line has been set up to inform people of all the technological devices available for water saving in the home, and where they can be acquired.

Choosing material for a specific target group

The Sanitation and Hygiene Promotion Program (Tanzania) found that promotional material most effective in Tanzania were posters, information

flyers, flags, comic strips and stickers. Promotional material was used mostly at the “points of sale.” As most of the latrine buyers are male the material for the points of sale (involving local producers of latrine slabs) are targeted at a male audience.

Ensuring uniformity in messages

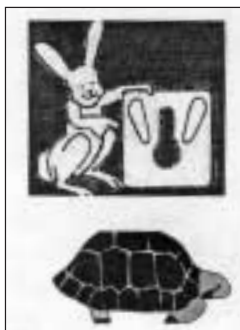
The *Government of Bangladesh* launched an integrated water, sanitation and hygiene project in rural areas of the Barisal region. It was realized that, in the past, that as a uniform communication strategy had been missing there was no standardization in messages and campaigns were limited to small areas. Since 1998 a comprehensive National Communication Strategy has been developed.

Choose the right media for the target group

During an evaluation of *UNICEF’s Saniya Project (Burkina Faso)* only 31 percent of the women reached by radio could site the correct message compared to 84 percent of those who had received a visit by a volunteer.

Consider building a “spirit of competition”

National Rural Water Supply Program (India) uses local newspapers to build an environment in favor of the local water and sanitation programs and to create a spirit of competitiveness among schools, localities, habitations, villages and blocks.



Develop a recognized identity through brand name

Sanitation and Hygiene Promotion (Tanzania) changed the name of latrine slabs from SanPlat to a more Tanzanian identity with the brand name of Sungura. Sungura means rabbit or hare in Swahili. Connotations of the hare in traditional Tanzanian folklore are very positive: the hare is clean, honest and clever. Promotional

The logo of this UNICEF campaign in Tanzania reminds people of the Tanzanian tale of the hare and the turtle.

messages were designed to urge people to get smart, like the hare, and buy a Sungura.

8.2 ORGANIZATIONAL ASPECTS OF PRODUCING MATERIAL |

The development of material for the media can be costly and requires careful thought on how to go about it. There are several things to consider:

Involving a professional designer or doing it yourself?

Water Awareness Campaign, UNDP/PWA (Palestine) involved a local designer to help give the campaign an artistic and professional touch.

Organizing an artist’s development workshop?

The Government of Pakistan and the Regional Water Supply Group/South Asia trains artists in the development of promotional and educational material. Development agencies can draw from this pool of skilled artists (see also 2.4.3).



Participants of a workshop on developing the extension materials compare their results.

Using networks to create and spread material?

Literacy and Awareness Publication Centres (LAMP) (Papua, New Guinea) produces literacy and awareness material and distributes it using computer networks. Today, little material exists that is published in the local languages and over 55 percent of the population aged over 10 years are illiterate.

LAMP has one center in each of the 20 provinces, each with a computer, a hand-held scanner with digital duplicator and one trainer. The trainer trains two operators for each center. The focus of the program is to prepare material based on local oral knowledge of local customs and culture. Useful material or ideas for material are shared with other operators throughout the network. Local people take part in the elaboration of documents, offering their opinion, taking part in meetings and deciding on issues of topical relevance. Committees are also involved in selecting members for their center and for organizing events in and around the center.

Set up center or production of audio-visual material?

FAO, UNDP and the Government of Mali have set up a national center specialized in the production and collection of audiovisual material. Since the outset the center has collected over thousand audiocassettes covering regional and local music, rural experiences, legends and traditional knowledge.

The center houses six video editing suites with three cutting and montage units, two recording studios and a training room for workshops and other sessions. Trainers or animators who are grounded in the use of video and other media travel to rural areas where they inform and train communities through multimedia. Topics include hygiene, income generation, agriculture, literacy, and so on. Once the villagers have gone through the training they can become trainers themselves and raise awareness in other rural areas.

Use existing packages?

Sanitation and Hygiene Promotion (WaterAid) (Tanzania) uses regular PHAST tools and has hired artists to adapt them to the local circumstances.

These artists film and sketch domestic environments to adapt the tools for local clothing traditions and utensils typical of the location.

8.3 IDEAS FOR TV OR RADIO BROADCASTS**Use of different types of messages on the national TV**

UNICEF's Saniya Project (Burkina Faso) uses 2-minute "infomercials," 30-second spots, and 5-second break-bumpers:

Infomercials

Two-minute animations that dramatize the issue of germs and show the audience a solution sequence.

Break-bumpers

Five-second messages that promote core-behavioral changes, for example, "Did you wash your hands today?"

Video clip

Water Awareness Campaign, UNDP/PWA (Palestine territories) produced a video clip showing a conversation, in the form of a song, about water between a peasant and a cloud.

Radio spots with traditional songs

UNICEF's Saniya Project (Burkina Faso) uses radio-spots which rely on traditional jari-songs as well as a composition of sanitation messages to the "namta," a mathematics table set to song.

Humor in water related commercials

A Dutch commercial prepared by *NUON*, a major water and energy provider in the Netherlands has the following story line:

A man visits several homes with a questionnaire (a parody on several serious Dutch commercials featuring irritating door-to-door interviews) to ask people

bluntly whether they ever drink water out of their toilet bowl. People respond, puzzled at this question. In the end the message turns out to be related to water conservation: why flush so much water down the drain which is actually of drinking water quality?

However, remember that jokes are subject to local taste. Differences between countries are clear, but there may be differences between regions, age groups, castes or occupational groups.

Commercials using cartoons

UNDP/ONEP Water Conservation Campaign (Morocco) created two commercials, designed as cartoons. The commercials focus on pollution and its consequences for human consumption.

Collaborating with new radio station

WaterAid Kabarole (Uganda). WaterAid is attempting to involve the newly opened "Voice of Toro" radio station to see whether it is open to the idea of broadcasting hygiene and sanitation messages as part of its programming.

Radio soap opera

"New Home, New Life" is a radio soap opera designed and produced for broadcasting in Afghanistan. It was first aired in April 1994 and has since been aired weekly by the BBC. The drama series has both entertainment and informative purposes. It covers a wide range of subjects from women's issues, income-generation activities, methods for conflict resolution, awareness of mines, community participation in development to livestock raising and agriculture. Personal and environmental hygiene is also an important issue in the soap opera.

The soap opera was initially chosen as a format because it allows for the repetition of educational messages. The opera is rooted in real-life situations and sounds real and authentic to both rural and urban communities. Characterization of problems, human conflict and dilemmas, and how to

overcome them through dialogue, are all part of the soap opera genre. New themes are progressively incorporated into the soap's scenario as listeners respond to the story or as the project's authors (in particular the evaluation team) identify new concerns or relevant topics. New problems and cases for discussion naturally arise as the drama unfolds. The drama is totally Afghan in context and content. It has drawn from the rich history of community action and customs to achieve its high degree of relevance. It has, therefore, played a significant role in reviving old traditions and customs. Oral legends and customs are being written into the drama.

Regular TV-slot

Water Wise (South Africa) has a regular slot every Saturday morning on KTV, children's television. It is called KTV Roundabout.

Cooperating radio stations

Several commercial and noncommercial radio stations in the US have formed the *Great Lakes Radio Consortium*. They aim to improve the quality of reporting on the environment of the Great Lakes. They also provide a regional outlet for local producers to air their material and enhance reporting skills. Through examining the environment in the context of related political, social and economic issues they want to address the media's tendency to report environmental topics in a brief and superficial manner. The consortium has developed a weekly news service which can be inserted into the news programming of local stations.

8.4 OTHER MEDIA/MATERIAL IDEAS

Apart from the radio and television there are other, sometimes less-conventional, media to communicate ideas on water use:

Billboards, transit shelter posters, T-shirts

AMWUA Conservation Publicity Program, Phoenix (USA) promotes Xeriscaping (low water use gardening) with billboards and posters. The same



Advertisements and billboards emphasize the beauty of a water-saving garden (xeriscape).

image has been reproduced on T-shirts and coffee mugs. It emphasizes the positive sides of choosing for xeriscaping and its natural beauty.

UNDP/PWA's *Water Awareness Campaign (Palestine territories)*. A color poster with the Arabic slogan "Your water tank is your safe deposit box, your water is dearer than gold" was distributed. Fifteen street billboards were erected in different places.

Water newspaper

The Green Movement (Lithuania) publishes a newspaper "Green Lithuania" that popularizes the different aspects of water management: protection of water bodies, waste water treatment, restoration of regulated rivers, establishment of vegetative protection zones near water bodies, water quality in wells, restriction of military training grounds and small hydropower projects.

Save Water Mailer

Public Utilities Board (Singapore) sends a "save water" mailer to each household. It incorporates a graph for households to track down their water consumption. The *City of Austin, Water Conservation (USA)* also provides customers with a graph to see how efficiently they use water. It can be compared to the amount on the water bill.

Gifts to children

Orange County Water District (USA) has a mascot, "Ginny Groundwater," a lady dressed up as a drop of groundwater. She participates in community-

based events and carries pencils, erasers and other gifts for children with messages encouraging water conservation and groundwater protection.

Durable posters

SAWA (Cambodia) has provided metal posters to schools, to be placed on latrine doors, with messages on the correct use of the latrines. As schools have a limited budget and there often isn't even money for chalk, it is necessary to provide schools with an adequate supply of *durable* educational material.

Environment overview report card

Austin Environmental Directory (Several Organizations Involved) (USA) has issued a report card with a summary of environmental developments. The evaluation is expressed in percentages of worse or better per issue.

Free public transport tickets

Public Utilities Board (PUB) (Singapore) provides free public transport tickets with a promotion message on one side. The ticket (bottom picture) is wrapped in a small envelope (top picture) which shows the ducks when you open it.



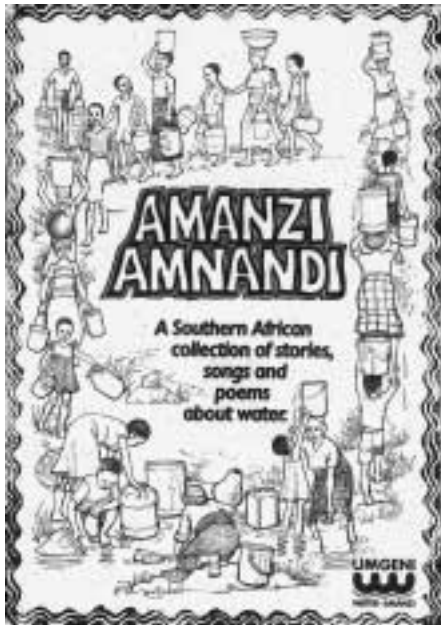
PUB also distributed **car bumper stickers** with the text "use water wisely."

Ceramic tiles

NEWAH, WaterAid (Nepal) uses stickers and ceramic tiles with hygiene messages, to be placed inside latrine doors, within schools and health posts and in other public places.

Lid covers

In some cities in USA the lids of the stormwater sewage were fitted with the following text “all you dispose in here ends up in the river.”



Collection of stories, songs and poems

Umgeni water (South Africa) has produced a booklet with a collection of southern African songs, stories and poems. The book also contains some creative ideas for children to use handicrafts related to water. Some tips on using water in a healthy way and bits of general information related to the South African water situation have been included as well.

Comic books

The Dutch Union of Water Boards had prepared several comic books. They dealt, among others, with the way that polders are operated and how to limit water contamination.

Games

The Water Education Foundation (California) published the “No-Know Game.” The players in this game race down the “Dirty Old River” and pick up action cards on the way. The action cards relate to do’s and don’ts with respect to nonpoint source pollution.

Home leak detection kit

The City of Austin, Water Conservation (USA) distributes leak detection kits; basically a brochure with a leak detection checklist, some leak detector tablets, and some technical information for repairing leaks. The leak detector tablets are thrown in the flush tank of the toilet, they color the water so you can see whether any water leaks out into the bowl when the toilet is not flushed.



Flexifans are flexible figures that can be used in stories dealing with local water issues for example on a flanelboard.

8.5 DESIGNING MATERIAL

In designing communication material there are a number of things to consider.

USING DIFFERENT TYPES OF POSTERS

Participatory setting, open interpretation posters

The Artists Development Workshop (Pakistan) argues that posters in a participatory setting should be open for interpretation, in order to invoke discussion and lead to creative thinking.

Educational posters

Often posters have a lot of information and interesting details. They are meant for a closer look.

Promotional posters

Promotional posters are clear to the viewer at a glance and they usually have one large slogan and few details.



Educational

Promotional

A certain degree of uniformity in layout, logos and cartoon-figures in campaign material can help achieve greater coherence in the campaign. Cartoon figures are often used, especially in those campaigns that primarily target children.

CARTOON FIGURES IN BOTH ACTIVITIES AND MATERIAL

UNDP/PWA's Water Awareness Campaign (Palestine territories) uses the cartoon figure Zamzam, a personified water drop. He appears in all their material. The name Zamzam was suggested by one of the children involved in the campaign. It has a religious connotation, meaning Holy Water, and water that is clean and pure. Cartoons have been prepared using Zamzam personifying wastage of water. A Zamzam character was also used in theater performances (see also chapter 7 on live events) and festivals.

Raindrop-character in educational program

Orange County Water District (USA) uses two characters: Ricki Raindrop and Ginny Groundwater in their educational program; they are two people dressed up in water-drop suits.

Cartoon personality development

UNICEF (Bangladesh) is developing a cartoon personality along with the development of the campaign—a friendly, funny character integral to the campaign. His appeal, based on the development of a personality rooted in the social and cultural norms of Bangladesh, should help ensure the popularity of the campaign.

SOME GUIDELINES FOR ARTISTS

Always pretest!

Most material uses drawings and symbols. The correct understanding of symbols and drawings depends on existing cultural conventions. For many people the symbol ☺ means a smiling face, but its comprehension is based on our culturally defined agreement to accept and use the symbol in such a way. If people are not aware of certain conventions or use conventions the designer does not know, recognition or relating to pictures becomes difficult. This can become a problem when producers of material are from a different cultural background than the target audience as, for example, when an artist from a large city draws pictures meant for farmers and villagers. Mistakes can be avoided by always pre-testing the material before using them on a large scale.



Create excitement out of a seemingly dull topic

An example from Thames Water (UK). Hippos are plastic bags that people can use to limit the volume of water used with each flush of their toilet.

Guidelines for poster design

The following guidelines are especially valid for posters used in a participatory setting, but most points are also applicable for promotional posters. They are adopted from the artists' development workshop (Pakistan).

1. Use a simple style.
2. Clean firm lines, not sketchy broken ones.
3. Avoid shading.
4. Avoid unnecessary details.
5. Make the size fairly large and visible from a distance.
6. Speed is important; do not be a perfectionist in drawing human figures.
7. Figures should be complete whenever it is possible.
8. The layout should be functional.
9. Concentrate on elements, remove background element that is not necessary to the message.
10. Use familiar, realistic imagery, not abstract symbols.
11. Use true to life colours.
12. Use multiple perspective rather than vanishing point perspective.
13. Maintain continuity in figures, clothes and other features.
14. Do not offend religious or cultural beliefs of people.
15. Does it fulfill the purpose? You are not producing works of art, but artwork for a particular purpose.

BLOOPERS

(Embrassing moments in the life of a water drinker)

Waiting a week to fix a leak.



Watering your lawn at high noon.



Tossing toxics in the trash.



Slipping used motor oil into a storm sewer or burying in the trash.



Find a good way to present do's and don'ts: Bloopers (Source: EPA, USA).

Use strong visualization

Visualizing the result of behavior change can help encourage the adoption of this behavior change. A good example is found on the Thames Water website where a pile of bathtubs is used to demonstrate how much water could be saved.



You could save this much water each week!

Grass clippings are 90 percent water. Please leave them on your lawn.



Find a good slogan

An example: “Turn it off. Don’t use water like there’s no tomorrow.”

(Public Utilities Board Singapore)





9

Public Relations

The past few decades have seen rapid development of new media initiatives and a significant increase in the level of information being communicated around the world. The importance of mass media — newspapers, magazines, radio, television, the internet — is rapidly increasing as sources of news, information and entertainment. The commercial sector lies at the forefront in taking up new opportunities presented by the new trends and this can be seen by improved marketing strategies and the rise in the number of advertising companies creating positive images of companies and their products.

Marketing techniques have focused mainly on paid broadcasting and using promotional material. Public techniques, though, aim to reach the headlines of regular programs, newspapers, or magazines. PR is relatively cheap and efficient. An annual PR campaign may cost far less than the production of most television commercials (Wilcox et al. 1998).

More and more NGOs and governmental organizations get involved in PR activities. The nonprofits organizations have an advantage in that their motives are not commercial so their messages are more easily accepted and broadcast by the media. Several of the water-related initiatives have included some form of PR in their campaign activities, but a lot can still be learnt from the methods advocated by commercial companies. There are several

methods used in PR to get the attention of the media include press releases, press conferences, video news releases and special events.

9.1 IMAGE AND VALUES

Public relations are all about image: the image you want the public to have of your organization or campaign. Commercial initiatives try to establish the image, for example, that a company is trustworthy, modern, true to traditional values, high-tech, honest, customer-friendly and so on. It should be kept in mind that values among target audiences are locally defined.

Being honest and open is important. Some of the biggest PR mistakes made recently concerned situations where organizations could not live up to their promises or values.

Public image is a very relevant issue, not only in the commercial sector but also in water awareness initiatives so conserving water should carry interesting and relevant associations.

9.2 ATTRACTING ATTENTION

Creating news value

One of the most important things to keep in mind in attracting the attention of the media is the news-value of the message. Even if the issue is very important but has no news value it might not be broadcast or printed.

Consequently, a water conservation campaign saying the public uses too much water will not get attention, whereas a campaign publishing a report saying the public is using 20 percent more water than 5 years ago and that the trend is unsustainable will get attention. This sort of approach has been used in several water awareness initiatives where they have used several innovated ways to create news-value.

Using the inauguration of a campaign as a news event

UNDP/ONEP's Water Conservation Campaign (Morocco) invited several well-known people such as Cabinet Ministers and other officials to inaugurate the campaign at a large water-processing plant in Rabat. Children contributed with essays and poems, there were exhibitions of hoardings and drawings by children, and a show including a large air balloon shaped like a water drop, called The Drop of Hope.

Umgeni Water (South Africa) organized a special launch for a new video during a water conservation festival where they invited workshop delegates, special guests and representatives of the media. Such activities can help to get the campaign off to a good start with good media coverage. This particular video was on the history of the Dusi canoe race, and also reflects on the changes in water quality over time.



Using research publications to generate publicity

MAMA-86, a Women's Environmental NGO (Ukraine) initiated a study on public attitudes and habits regarding drinking water. The study combined the efforts of several local independent organizations. Within the first week of publication of the results they received enormous public interest which set

Special water days/weeks/months create news-value

Organizing all activities within a specific period including, for example, advertising, educational programs and lobbying, helps focus the attention of the media and the public on the issue and gives the campaign extra news-value. World Water Day (22 March) is a good example of a day around which to center activities.

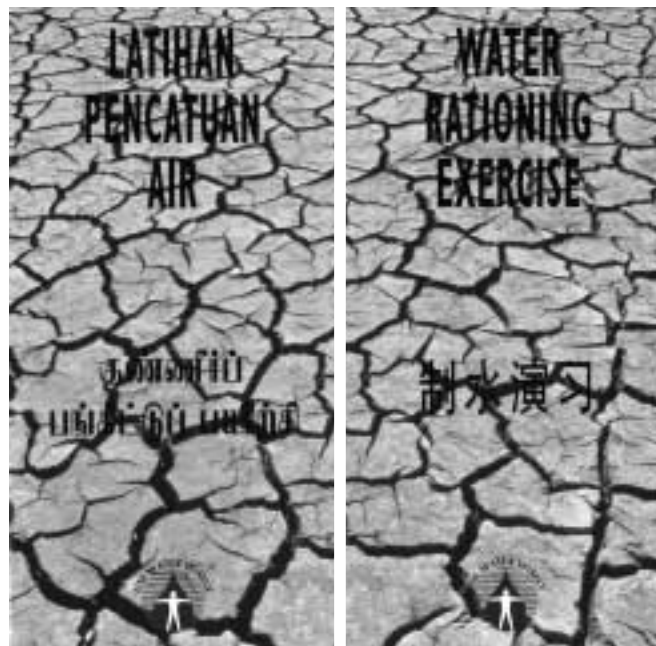
the scene for a more open and informed debate on drinking water between the different sectors, the government and the public.

Youth expeditions attract media attention

In the *Jaik Ural, Youth Environmental Awareness Project (Kazakhstan)* youth ecological expeditions have gained the attention of the mass media and participants have managed to publish more than 250 statements in the media. Schools, colleges and other educational institutes cooperate with the media to raise awareness of the purpose and results of the expeditions.

Rationing exercise

Public Utilities Board (Singapore) organizes a Turn It Off exercise. During the exercise the water supply to 20 constituencies is turned off for 14 hours. Prior to the exercise an informative campaign is held to notify everyone and



enable preparation. This water-rationing exercise highlights the need for water saving.

Using international events

MAMA-86, a Women's Environmental NGO (Ukraine) uses international events such as WHO and United Nations Commission on Sustainable Development conferences to highlight the Ukrainian situation, both at the conference and in the Ukrainian media.

Involving important personalities

The Crown Prince of the Netherlands presided over the Second World Water Forum held in The Hague in March 2000 attracted a lot of attention in the Dutch media. This raised media attention to the Forum and to the issues of water. Another example is the ONEP campaign in Morocco where, during its inauguration, a Moroccan princess and several prominent politicians were present.

National Public Scheme for the Conservation of Drinking Water (Egypt). The President of Egypt addressed the nation on the subject of water conservation in November 1996. Involving such well-known politicians is, of course, a great opportunity for a campaign to gain media attention.

Choosing the right moment to campaign

In Florida, April is chosen as the water conservation month because this is at the end of the dry period, the month when water needs are most acute. Experience has shown that water conservation is highest immediately after the campaign.

9.3 CONTACTS WITH THE MEDIA

Press releases

Most campaigns use press releases to reach the media, for example, when

they organize a large event, have new research results available, can link up with water related topics in the news, organize a water week, celebrate their anniversary, open an important waterway, launch a new campaign or end the campaign. There are many possibilities for using press releases as long as they contain news-value.

Providing slides and other reference material to the media

AMWUA Conservation Publicity Program, Phoenix (USA) has used press releases to generate publicity in the form of news articles, radio programs and television interviews highlighting the city's conservation efforts. They provide reference material to the media such as slides. Providing readily available material can help to promote accurate reporting of information by the media.

Regular reporting of campaign results

Regular reporting of results of, for instance, water-use efficiency measures will help maintain interest in water issues and increase public support. Keep people informed on successes, failures and subsequent improvements (Source: Strategy Working Group, Canada).

Press dossier

Many campaigns collect media publications (newspaper clippings, video footage etc) to form a press dossier which can be useful for future PR activities and evaluation purposes. Often, references to the publications or copies of short articles are included in brochures or reports on the campaign.

Press conferences organized by target groups

UNDP/PWA Water Awareness Campaign (Palestine territories). Students of participating schools organized a large conference and a press conference to conclude their water awareness campaigns. The event included musical shows, plays, painting exhibitions, video films and presentations of students' papers on water and environment.

Combining public relations and advocacy: copies to the press

The International Rivers Network sends copies of letters to the press, for example, of letters to governments or the World Bank. This can help bring the issue to the attention of a large audience and put more pressure on the advocacy process.

Press contact persons

In a press release it is important to mention the name of a contact person who is knowledgeable on the topic and who can be contacted for an interview.

For the media it is useful to have a resume ready of someone who can give interviews to the press. This should not be a lengthy document but a single page overview of name, title and affiliations, addresses, all phone numbers, (office, home, fax, e-mail), accomplishments, areas of specialization, major publications, experience with television, radio and newspapers (Source: Fox and Levin 1993).

Video News Releases

Since the 1990s the use of Video News Releases (VNR) in PR activities has increased dramatically. VNRs are typically 30-second to 5-minute videotapes that a television station can show or that reporters can use as parts in their own story. Campaigns themselves prepare these VNRs, for example, to be used along with press releases. A large percentage of VNRs are actually used by producers.

Public information services

Several broadcasting organizations have public information services; free airtime for socially relevant messages. At the time of the Second World Water Forum, for example, the organizers of the forum had the opportunity to use the public information facility of CNN to draw attention to the water crisis.



10 Organizing public events

Many campaigns put considerable effort into organizing both large and small events. The publicity generated and the direct contact with the public are good reasons to do so.

Live events are ways the public can be involved more than by just reading a brochure or seeing a poster or commercial. Communications literature emphasizes that message are more easily remembered if they reach us through as many of our senses as possible. This can be done most effectively through participation in an event. By being involved and using creativity and problem-solving skills in an activity, the problem and its solutions become part of the participant. That is the ultimate goal of awareness-campaigns: making people aware that the problem is their problem, and they are part of the solution.

One of the basic rules in education is to make sure learning is fun. Entertainment is also important in awareness campaigns: to attract attention, enable recall and to positively influence attitudes and behavior. Well-organized and entertaining events will have this impact.

The feedback received at events can also be used to further improve form, style and message of the campaign in general.

Often the visitors to events are not the only target audiences but also the media. Media attention can boost participation in the event itself, and improve the importance attributed to the topic among the general public. This can enhance the effectiveness of other campaign activities. If someone remembers an item on the news about a large water conservation festival while seeing a water-campaign commercial, more attention will be paid to the commercial. Reliability of sources of information plays crucial role; in many countries the news is more trusted as a source of information than commercials. Many companies also acknowledge this and try, through press conferences, news releases, sponsored events and so on to get their company in the headlines.

Chapter 9 on Public Relations has more information on how awareness campaigns employ different strategies to get media attention. The current chapter focuses on the events themselves and provides ideas on several types of events such as festivals and exhibits, awards and contests, cultural events and outdoor exhibits.

10.1 FESTIVALS AND EXHIBITS |

Museum exhibits

The *Papalote-Museo del Niño (Children's Museum) (Mexico City)* has opened a highly interactive exhibit that shows the importance of water management and distribution, sanitation, pollution control and the sharing of responsibilities and burdens. The exhibit is expected to draw 250,000 visitors from Mexico City. After some time it is scheduled to tour the Mexican states. The exhibit was jointly sponsored by the National Water Commission.

Exhibits at special fairs

AMWUA Water Conservation Publicity Program, Phoenix (USA) is a regular exhibitor at home and garden shows and fairs. The conservation committee designs and constructs the exhibit. People manning the stand distribute

literature, answer questions and explain water conservation measures. During the City Fair of Casablanca (*Morocco*), *ONEP* had information pavilions on both health and the environment. The stands included many activities designed for and organized by children. There was an exhibition of drawings and there were competitions in literature, music, drawing and painting all related to water. Prizes were awarded to the best presentations and games.

Exhibits at shopping malls

Public Utilities Board (Singapore) stages exhibitions on water conservation at popular shopping centers during weekends.

Festivals

The *Clean Water Celebration (Rivers Project, USA)* is an annual event honoring the rivers of Illinois. Students, teachers and water-resources personnel from Illinois and neighboring states have come together for this festival since 1990. Participants attend workshops, make presentations on local rivers and water projects, network with other river stewards, learn about current water issues, and generally share common interests in water. Other activities in the event include exhibits, school booths, demonstrations, hands-on science activities, theater, arts and music. More than 5,000 people attended the 1999 Clean Water Celebration.



The 1999 Clean Water Celebration featured:

- A youth leadership activist speaking on youth leadership and environmental stewardship.
- African drum and storytelling.
- "Run River Run:" A ballet medley of river dances.
- "pHun Chemistry:" A magic show featuring chemistry students.
- Singer and folktale teller with stories of ecology and American heritage.
- A "Wildlife Prairie Park" and "Forest Park Nature Center" arranged a "Discovery Room."
- Wetland drama

Wetlands month

The Terrene Institute (USA) organizes the American Wetlands Month. During this month, communities, schools and other organizations throughout the country explore nearby wetlands, join field trips and organize other related activities. Terrene publishes a magazine each year to report on the activities of the previous wetland month and to link up local groups throughout the year.

Conferences — making the most of it

Many conferences, expert meetings and symposia are organized but they are sometimes closed shops. Yet, organizing events and press conferences around them can greatly help draw attention to better water management issues.

Jaik Ural, Youth Environmental Awareness Project (Kazakhstan) has held scientific/practical conferences with the following activities:

- Discussions on environmental protection projects.
- Competitions for the Best Student Project on Environment-friendly Farming.
- Preparation of posters and figures on ecological topics.
- Ecological olympiads.
- Youth ecological meetings and discussions.

Funfairs

Every year the *Orange County Water District (OCWD) (USA)* organizes an active water educational program. Each spring, OCWD and Disneyland Resorts host a children's Drinking Water Festival for 5,000 grade 3 and 4 children and their teachers.

City of Houston Water Conservation (USA) sponsors a celebration at the Houston Zoo which includes sketches, face painting and booths, sponsored by local plant and landscape merchants and environmental organizations. The festival is usually held on the first Saturday in May.

Adult education classes

City of Aurora Utilities Department (USA) organizes educational sessions for adults on saving water in gardening. This includes explanation on how to use native plants adapted to drought. A landscape architect shows how to design gardens that are water-use friendly.

Sanitation marts and demonstration of new hardware

UNDP and the World Bank's Water Supply, Sanitation and Health Project (WSSHP), (Uzbekistan) uses the construction of a new type of latrine, a drinking water supply scheme or bathrooms as demonstration events. Men will not usually come for a hygiene-education meeting, but they will come to see a new kind of toilet. So, as a starting point, latrines were built for display in semi-public or easily accessible places. Public events were organized around them.



UNICEF's Social Mobilization Program (Bangladesh) sees sanitation marts as a means to enhance the marketing ability of local masons (for latrines). Sanitary marts serve as sales points, a means for promotion and the place to organize public events. Marketing aids used include flyers, posters, miniature latrine models and buntings (decorative strips of cloth or other material, usually in the colors of the national flag).

The Environment House (The Netherlands) combines expertise on how to live environmental-friendly — environment-friendly construction, furniture, water-saving devices and so on all put assembled and displayed in a single house.

Eco-tourism

The Sungai Sumber Rekreasi (Rivers — the Source of Recreation) Campaign (Malaysia) emphasized the value of water resources and the need to conserve and improve rivers to attract nature lovers.

10.2 CULTURE AND ARTS

Traditional water celebrations

In many cultures there are events that celebrate water related phenomena such as the beginning of the rainy season, the migration of fish or the rice harvest. These events provide the occasion to organize water events.

Popular music

UNDP/the World Bank's Water Supply, Sanitation and Health Project (Uzbekistan) hired a popular music group to tour the villages and perform funny sketches on correct hygienic behavior.

Storyteller

The *Adopt-A-Stream Foundation (USA)* hosts a storyteller who is a tribal member and tells old winter legends, for example, related to several wild animals living in wetlands. The activity is aimed at children and families.



This funny toilet figure draws attention to the need for water-saving toilets at festivals and other events.

Using popular music

Under the *North Bengal Terai Development Project (India)* a popular local singer was commissioned to compose ten songs on improving field-irrigation management. The songs were recorded on tape and distributed to all local government and agricultural staff. The songs were also broadcast on the local radio station.

UNDP/World Bank's Water Supply, Sanitation and Health Project (Uzbekistan) hired a popular music group to tour the villages and perform funny sketches on correct hygienic behavior.

Drama and forum theater

WaterAid, Kabarole (Uganda) works with the Ntuuha Drama performers. The actors have been trained in participatory approaches and relevant topics such as hygiene, sanitation and operation and maintenance of wells. After initial training sessions, a pilot project, comprising several hygiene- and sanitation-related drama performances, was started. The performers have had a strong localized impact on hygienic knowledge and practices in the communities they have visited.

Recently the project has become aware of the need to include fewer messages in each show, provide more practical demonstrations on, for example, pump repair and the use of ash in pit latrines. The program plans to have more on-the-spot evaluations after each show with a wider sample of the community, and community involvement in finding new topics and developing new sketches.

UNICEF's Saniya Project (Burkina Faso) concludes from their evaluation that forum theater is a strong mobilization tool but is limited in transferring the correct messages. It has the potential to reach groups that are hard to reach, such as child caretakers (the planned secondary target group). However, it is not as explicit in its messages as personal visits.

In the Saniya project, young local actors play *My Bad Neighbor* which is about a family in difficult circumstances and not being able to manage health expenditures but having frequent bouts of ill-health.

Using traditional arts

PSU (India) identifies local art forms and uses them in the communication of water and sanitation topics. A communication professional and a district social scientist interact with the community, especially the women, in order to understand the prevalent art forms and to generate a picture of the communities' cultural perceptions. Village leaders help discover rare art forms of the region.

Performances include drama, storytelling, puppetry, songs, mime, poems, romantic plays, heroic epics, dances, religious songs and other traditional forms of popular art. They include local story lines, idioms, legends and characters which form the core of the scripts.

Sunset Proms

Umgeni Water (South Africa) organized Sunset Proms at a village green in Durban. The Natal Philharmonic Orchestra played several water related musical pieces such as excerpts from Handel's *Water Music*, Tchaikovsky's *Swan Lake*, Strauss's *Blue Danube* and Richardson's *Irish Waterwomen*.

10.3 OUTDOOR MANIFESTATIONS

Parades

The Los Angeles Water Conservation Council (USA) took part in the Doo Dah Parade in Los Angeles with a gigantic water-efficient toilet. This was such a success that they were invited to participate in a Christmas parade.

Weekend field seminars

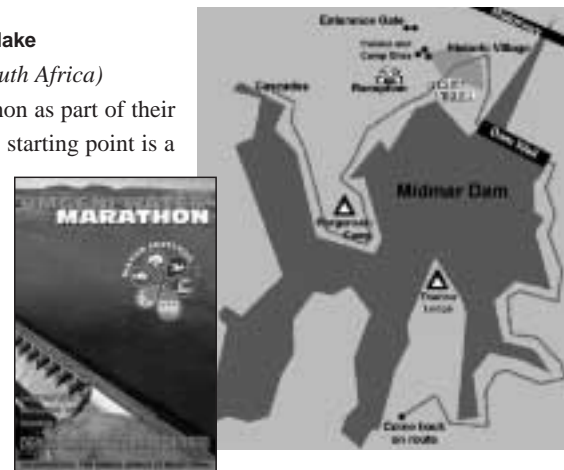
Mono Lake Committee, LA (USA) offers a summer field-seminar series. The seminars include topics on birds, geology, wild flowers, kayaking, native American culture, basket weaving and Californian gull research. All the programs are geared towards active involvement of the public and providing an in-depth understanding of the natural history of the Mono Basin.

Foot marches (Padyatras)

National Rural Water Supply Program (India) organizes marches on foot to make their Intensive Awareness Campaigns memorable and visible at village, block and district level.

Marathon around lake

Umgeni Water (South Africa) organizes a marathon as part of their water festival. The starting point is a dam and the marathon is run around a scenic lake.



Announcement of the water marathon, around a large lake.

Walks and hikes

Mono Lake Committee, LA (USA) organizes a program in the summer which includes walks, hikes and evening programs. These include visiting hot springs, catching brine shrimp, storytelling and information on creek restoration.

“Feeling nature” event with the disabled

Nature Conservation Society (Japan) organizes annual Feeling Nature events with the disabled where participants learn to use all of their senses to discover the natural world around them. It also organizes events to replant river flora that have previously been destroyed.

Demonstration garden

City of Houston Water Conservation (USA) designed and installed a xeriscape demonstration garden — gardens containing plants that require little water — at a water plant. This garden is included in official tours of the water plants to educate the public about xeriscape gardening.

Water expeditions

Mono Lake Committee, LA (USA). In the summer, daily naturalist-guided canoe tours are available to the public. Guides provide information on the lake’s ecology, natural history and efforts to protect it.

The Cintalah Sungai Kita (Love Our Rivers) Campaign (Malaysia) organized a number of river expeditions. The expeditions lasted 3–4 days when river ecology, culture and the possibilities of ecological tourism were studied.

Water plant tours

Several utilities departments often open up their facilities to the public, for example, water plants, sewage plants and pumping stations. Visits can be planned group visits, open visiting days, or they can be planned through contacts with schools or other community-based groups.



11

The Internet

The internet is a relatively new technology that is being rapidly exploited by marketing agencies, public relation firms and others. Several organizations run nonprofit awareness campaigns on the internet. It is difficult to compare the effectiveness of the internet versus conventional approaches. The internet can be of significant use in campaigns, but even if it is not for running the campaign itself, it can be used for networking and dissemination of information about the campaign. The following examples show several ways of how to use the internet in campaigns.

Advertisements on the web

Consumers can be directly reached through advertisements on the web, on web pages of information providers, newspapers, newsgroups, search engines, bookstores and government homepages. The internet has not been used for many campaigns so the challenge in the future is to find the right sites to advertise in order to reach the intended target audience.

Source of public information

Through the internet, campaigns can provide an additional source of accessible information to the public such as information on how to save water or which toxic substances should not be flushed down the toilet. Several campaigns mention their web addresses in their conventional

campaign material. It is a handy tool to use together with commercials, posters or PR activities.

Networking

The internet can be a great tool for networks of volunteer activists, teachers or students involved in river-monitoring programs, wetland-conservation networks or other initiatives. Through the internet plans, data and results can be shared among participants. The internet can also help mobilize members of a network for certain public action at the right time. There are now several organizations using the internet to create such networks. Specially in the education sector it is a well utilized tool and new initiatives continue to arise.

Resources for the water sector

The internet is helpful in providing professionals in the water sector with relevant and up-to-date information. This includes fora for online discussions, ordering services for literature and promotional material, database access and documented experiences from other initiatives

11.1 CAMPAIGNING ON THE NET

The internet seems to be the antithesis of mass marketing media because many of its key services (mailing lists, news groups and forums) involve narrow niche interests. The challenge is to find where specific audiences are and identify ways to communicate with them directly (Marlow, 1996). In the future this could also be applicable in awareness campaigns. Most campaigns that are currently on the internet focus on water conservation or on conservation of natural wet habitats.

In the commercial sector in western countries web campaigning is developing rapidly. Consequently, the opportunities for awareness raising through the internet are increasing. In the developing world there are also opportunities for the use of the internet for networking and sharing of

information, extension material and experience but less so in direct campaigning as internet access is more restricted.

Accessibility

Many water and awareness initiatives have information located on the web. The challenge is to create websites that are accessible and attractive to a wide range of people while, at the same time, contain enough information for those who are really interested.

The internet is a relatively new technology and many of the opportunities to use the web for the water sector have yet to be discovered. Some of the water sector websites have good content and a significant amount of information but are not easily found by the general public. Often they can best be accessed through the links found on other professional water related organizations or from government information pages.

Most people visiting the sites will be those already interested in the topic. In order to expand the reach of campaigns, links need to be added to websites that have large numbers of visitors from the campaign's target audience.

Water awareness programs, especially water conservation campaigns, are often city or regionally based and do not have the money or the interest in reaching people on a national or global scale. In these cases, use of the internet to conduct campaigns is invaluable as the message reaches beyond regional or state boundaries. To conduct effective regional or global campaigns it may be necessary to involve international multilateral organizations, international environmentalist groups and NGOs.

Many campaigns already cooperate with such organizations as zoos, museums, science institutes, educational institutes, and others.

Public Relations on the web

Another way of utilizing the internet might be by combining PR efforts of interested national or international organizations to reach the headlines of large international news agencies such as Associate Press and Reuters, or others at a national level.

Good examples of PR events are the Second World Water Forum and other initiatives held on World Water Day (22nd March each year). News on these events invariably reach the headlines of several major international news agencies. The advantage of such large news stories is that the headlines appear on the first pages in search engines and portals which are seen by many people. Of course, links with search engines or advertisements on their pages can also be purchased directly by campaigns.

Commercial campaigns

The use of internet is going to increase rapidly and marketing agencies are at the forefront of the tactics of commercial advertisement on the web. Awareness campaigns should keep an eye on commercial developments and learn from their techniques and methodologies, as has been done in marketing strategies in the conventional media.

11.2 IDEAS FOR USING THE INTERNET IN CAMPAIGNS

Conventional media refer to the website

Several awareness campaigns have used the internet in their campaigns as an additional source of public information by referring to the website in their other campaigning activities.

Booklet

Thames Water mentions their water conservation website and on the reverse side of an ideas booklet on how to save water, www.thames-water.com/waterwise

Mouse pad

Public Utilities Board (Singapore) produced a mouse pad with their campaign slogan: Don't use water like there's no tomorrow, www.pub.gov.sg.



Signpost

The Malaysian Ministry of Agriculture uses a signpost to show the way to the Ministry and to advertise their website, www.agrolink.moa.my/

Brochures

The City of Austin Conservation Program (USA), for example, advertise their website in a brochure. In the commercial sector and in the campaigns of some large nonprofit organizations the internet is utilized extensively. Short, easy to remember web addresses are used in both radio and television campaigns, not as an addition to, but as a major part of the commercial. In the water sector these approaches, using both conventional and new media in an integrated manner, are not common as yet.

Pictures speak on homepages

An example of a campaign with very attractive websites is *Waterwatch Australia*. They have elegant clickable images for the different topics and links, www.waterwatch.org.au/.

Including creative kids pages on the web

Thames Water (UK) has an interactive kids' page with games and information, www.thames-water.com/waterwise.

Online ordering

Thames Water offers online ordering of brochures, other information and “hippos.” Hippos are plastic bags which can be fitted into a toilet cistern to save water, www.thames-water.com/waterwise.

Online appointment for water conservation check-up

The Albuquerque Water Conservation Office (USA) homepage opens with a story on the urgent need for water conservation and a link for a free water conservation check-up of people's homes.

This check-up includes installation of free water-saving appliances. The site contains an online form in which the customer can fill in name, address and a preferred day/date for the check-up. A representative then contacts the client within 2 days to confirm the appointment.

www.cabq.gov/waterconservation

Educational programs on the internet

Environmental Protection Agency (USA) has several educational software programs available on the internet, for example, on groundwater protection or the need to protect wetlands. Programs can be downloaded from their site,

www.epa.gov/grtlakes/seahome/titles.html

Online discussions

Campaigns could provide sites with online discussions or message boards on water conservation, preservation and monitoring of rivers and wetlands. Participants might post their reactions to an ongoing discussion, or preplanned “netdays” could be organized. GREEN is planning to develop an online forum in which catchment monitoring results can be discussed.

Netdays

An example is the “*Netdays Europe*” initiative. Although it did not focus specifically on a water topic it did attract a lot of attention. Around 35,000

schools participated and vocational training centers, museums, cultural organizations, youth centers, hospitals, local authorities, enterprises, the press, were involved. Partnerships between schools, and other participating organizations together prepared projects to familiarize with the possibilities of new media in education. These projects had to focus on one of the netdays themes (including environmental themes) and were presented during the netdays week.

Online questionnaires

Questionnaires can be used to check interest in campaign activities or campaign objectives. *Tempe Water Management Division (USA)* uses a questionnaire on the web on water quality with questions related to taste and smell of drinking water.

Use of videoclips, computer games and videos on the internet

As computers continue to increase in speed and capacity more possibilities arise. An existing example is the *Public Utilities Board (Singapore)* which has issued a CD-ROM with games, slide shows and other educational programs, and the winning programs of their “Water Conservation Software Competition.” In the future, more of these programs are expected on the internet itself.

E-mail quiz

Global Rivers Environmental Education Network (GREEN) has been testing the knowledge of children taking part in water monitoring. Every week the children are asked questions (and told jokes) through e-mail. The child/student or class who answers the most questions correctly wins water-monitoring equipment. Subscribing to the contest is easy, through a message to a clickable e-mail address on GREEN’s website. www.earthforce.org/green/

Women's network

Women's Net (South Africa) is a networking support program designed to enable South African women to use the internet to find the people, information, resources and tools needed for women's social action. One of the first steps is to build women's capacity to use information and communication technology. A practical framework was set up to organize and make information available centrally from a website in a friendly and accessible way. A workshop was organized for this purpose. The curriculum for this workshop can be found on the internet at:

www.womensnet.org.za/about/curric.htm

School networks on water quality

In the *Aquatox 2000* initiative, groups of students have used simple and inexpensive tests to measure water quality in their local environment. Information is exchanged among participants through an internet network. It has helped the water-quality campaign of Aquatox 2000 to reach and involve very large numbers. Alternative communication methods allow schools without access to the internet to participate. www.aquatox.com

Involving schools from all continents

Environment Online is a network in which several schools from all continents participate in discussions and real-time lessons/meetings once a week. Topics include development, environment, climate and culture. An initiative from Finland. www.pp.eno.fi/eno2000/

Water pollution surveys

A network in which schools measure water pollution in their environment. The site is an initiative of a Finnish school. Presently, four schools have participated from Finland, Croatia and Poland. www.valkeala.fi/water/

Rivers project

The Rivers Project uses the internet to link participating schools, support sites and the project headquarters and to provide a technological framework for the various activities.

www.siue.edu/OSME/river/index.html

11.3 SOME TIPS FOR DESIGNING WEBSITES

There are a variety of resources available on the internet to help you construct your web page. These resources can easily be found through any of the large search engines available on the internet (for example,

www.altavista.com or www.yahoo.com).

- Make it easy to read, no large blocks of text. Including pictures and illustrations makes websites much more attractive. However, be careful to keep the loading speed of the page fast.
- Make sure the layout is first of all functional. A clear set-up is needed, not a complicated structure where you get lost.
- Ask yourself the question: why should anybody want to read this? Having an interesting and useful content is more important than a flashy site.
- Update regularly. Including an activities calendar of 1995 just doesn't impress.
- Always provide an easily seen e-mail contact-address, not hidden somewhere in an obscure corner of the last page.
- Be clear on the status of your organization.
- Make sure the page loads quickly, otherwise people leave before it has loaded.

11.4 INTERNET AS AN INFORMATION SOURCE FOR THE WATER SECTOR

There are a large number of sites available on the internet devoted to water. At least 75 percent of the information contained in this book has been collected using the internet in some way. In particular, educational resources are easily obtained through the internet: curricula, classroom educational kits, student-research networks, lesson plans and so on. In the USA, many organizations have made information available through the internet, often with readily downloadable material or with simple order forms. There are also several sites with an overview of interesting web pages related to water. Examples of such websites are mentioned in appendix 2. Because there is a formidably large amount of information on the internet, the best way of starting to look for what you want is to find several good pages with a lot of “links” to the topics in which you are interested and start looking from there.



Appendixes

APPENDIX 1 - LIST OF INITIATIVES

APPENDIX 2 - RESOURCES

- 2.1 Educational resources and material
- 2.2 Other resources

APPENDIX 3 - ADDITIONAL TOOLS

- 3.1 Literature cited
- 3.2 List of acronyms
- 3.3 List of illustrations
- 3.4 Acknowledgements

APPENDIX 1 **List of initiatives**

Note:

The information presented here comes from secondary sources and only provides a tentative indication of the activities in these campaigns. For more detailed, up-to-date information you should contact the organizations themselves.

INTERNATIONAL

INITIATIVE: Aquatox 2000

International school network on water toxicity.

Initiated by:

International Development Research Center (Canada)

- ACTIVITIES:**
- Education.
 - Simple methods for testing water pollution.
 - Involvement of students in water quality testing.
 - Sharing information through the internet.
 - Opportunities for students to ask questions and share data with scientists of a network of laboratories: WaterTox.

ADDRESS: E-mail: Scaicedo@idrc.ca(Silvia Caicedo)

Website: www.idrc.ca/aquatox

Fax: 1 613 567-7748

Aquatox 2000

Ecosystem approaches to human health program initiative

International Development Research Center

P.O. Box 8500, Ottawa

Canada, K1G 3H9

INITIATIVE: Consultation on Islamic lifestyles

WHO and the Islamic Organization for Medical and the Royal Academy for Research in Islamic Civilization

- ACTIVITIES:**
- Preparation of a declaration regarding Islamic lifestyles and health development and human development in general.
 - Dissemination of material on this topic in Arabic, English and French.
 - This material is especially useful for Islamic religious leaders.

ADDRESS: Website; www.who.int/water_sanitation_health

INITIATIVE: GREEN-Global Rivers Environmental Educational Network

International network; since 1999 part of Earth Force

- ACTIVITIES:**
- Helping children to investigate/monitor water quality in streams and rivers.
 - Network of various programs involving schools and youth.
 - Monitoring of rivers and catchment.
 - Sharing of experience and material among participants.
 - Resources available, in association with GREEN International.

ADDRESS: e-mail: green@earthforce.org

Website: www.green.org

* All fax numbers include the country code, for example, 20 2 3041634, in which 20 is the country code for Egypt

INITIATIVE: International Rivers Network

Advocacy to protect river ecosystems.

International network

International NGO

ACTIVITIES: • Campaigning and lobbying for policy change.

ADDRESS: E-mail: irn@irn.org

Website: www.irn.org

Chinese website: www.sanxia.uhome.net/

Fax: 1 510 848-1008

International Rivers Network

1847 Berkeley Way

Berkeley, CA 94703 USA

INITIATIVE: Participatory Hygiene And Sanitation Transformation (PHAST)

A participatory program used by various organizations, mainly in East Africa

Initiated by:

World Bank Regional Water and Sanitation Group–East and Southern

Africa NETWAS and IWSD (two resource centers in the region) UNICEF-

ESARO, bilateral donors, international NGOs (CARE, KWAHO,

WaterAid)

ACTIVITIES: • Training of extension workers per country/region.
• Regional and district training workshops, after which trainers further adapt the prepared tools and material to local situations, using field-testing in different conditions.
• Working with trained artists to help groups develop material on-site. Material and techniques from the general PHAST toolbox can be adapted to local, cultural and physical characteristics.

ADDRESS: Website www.wsp.org

Fax: 254 2 260386/260881

Regional Water and Sanitation Group–East and Southern Africa

Hill Park Building, Upper Hill

P.O. Box 30577, Nairobi, Kenya

INITIATIVE: UNICEF

Water, Environment and Sanitation Section, Program Division

ACTIVITIES: • Publications and resources.
• Information on UNICEF programs.
• UNICEF WES journal.

ADDRESS: E-mail: wesinfo@unicef.org

Website: www.unicef.org/program/wes

Fax: 1 212 824-6480

WES Section, Program Division, UNICEF

3 UN Plaza

New York, NY 10017, USA

INITIATIVE: Water Education for Teachers (WET) Project

International educational program.

ACTIVITIES: • Development and dissemination of classroom- ready teaching aids.
• Establishment of internationally sponsored Project WET programs.
• Workshops for teachers facilitated by water resources professionals and educators.
• Curriculum, activity guide and teaching aids available.

ADDRESS: E-mail: ProjectWET@montana.edu
 Fax: 1 406 994-1919

Project WET
 201 Culbertson Hall
 Montana State University
 P.O. Box 170575
 Bozeman, MT 59717-0057, USA

AUSTRALIA

INITIATIVE: **Gippsland water**
 Utilities Provider

ACTIVITIES: • School educational program with school excursions.
 • Publicity campaign.
 • Water conservation.

ADDRESS: E-mail: info@gippswater.com.au
 Website: www.gippswater.com.au

INITIATIVE: **Waterwatch Victoria**
 Water quality monitoring and improvement network
 Part of Waterwatch Australia

ACTIVITIES: • Water quality monitoring by community groups.
 • Networking.
 • Public awareness campaigns, workshops, and so on, organized by participants.
 • Education, involvement of schools in monitoring.
 • Internet: links to community websites.

ADDRESS: E-mail: Info@vic.waterwatch.org.au
 Website: www.vic.waterwatch.org.au
 Fax: (03) 9412 4039

Department of Natural Resources & Environment
 1/240 Victoria Pde, East Melbourne 3002, Australia

BANGLADESH

INITIATIVE: **Facts For Life Program**

Arsenic warning communication strategy
 Directorate of Public Health Engineering, UNICEF

ACTIVITIES: • Targeting of carefully segmented audience at different levels.
 • Combination of interpersonal communication and mass media.
 • Frontline engineers, tube well mechanics, health workers and NGO field staff use charts and brochures at household level.
 • Promoting a social norm to share safe drinking water.

ADDRESS: Website: www.unicef.org/arsenic

INITIATIVE: **Water, Sanitation and Hygiene Project**

Directorate of Public Health Engineering, assisted by UNICEF

ACTIVITIES: • School children and teachers carried out the major promotional activities.
 • Reward for the school achieving the higher sanitation coverage in its catchment area.

ADDRESS: E-mail: wesinfo@unicef.org
 Website: www.unicef.org/program/wes
 Fax: 880 212 824-6480

WES Section, Program Division, UNICEF
 3 UN Plaza, New York, NY 10017, USA

INITIATIVE: VERC

Village Educational Resource Centre
Hygiene education
WaterAid (UK-based international NGO)

- ACTIVITIES:
- Local health motivators
 - Volunteer schoolteachers and imams, trained to promote hygiene education.
 - Imams deliver sessions after prayers in mosque.
 - Video sessions.

ADDRESS: E-mail: information@WaterAid.org.uk

Website: www.WaterAid.org.uk

WaterAid evaluations:

www.lboro.ac.uk/departments/cv/wedc/garnet/allcaseWaterAid.html

Fax: 44 020 7 793 4545

WaterAid

Prince Consort House, 27-29 Albert Embankment
London, SE1 7UB, UK

BURKINA FASO**INITIATIVE: UNICEF**

Sanitation and hygiene education

- ACTIVITIES:
- Research on perception and causes of diseases.
 - Behavior trials with volunteers.
 - Neighborhood hygiene committees of female volunteers, hygiene promotion in health centers, promotion through radio and local forum theater.

- School sanitation promotion; construction of school latrines, teaching pack, soap and buckets for each class.
- Personal communication.
- Radio (growing importance).
- Video and local theater.

ADDRESS: E-mail: wesinfo@unicef.org

Dbajracharya@unicef.org

Website: www.unicef.org/program/wes

Fax: 1 212 824-6480

WES Section, Program Division, UNICEF

3 UN Plaza, New York,

NY 10017, USA

CANADA**INITIATIVE: The City of Winnipeg Waterfront**

Utilities Department

- ACTIVITIES:
- Brochures to all households.
 - Water conservation retrofit program.
 - Relationship with retailers, plumbing associations and property management organizations.
 - Survey on consumption trends.
 - Exhibits.
 - School program, promotion of school program, available on-line.
 - Internet.

ADDRESS: Website: www.mbnet.mb.ca/

INITIATIVE: **Water Conservation Strategy Working Group**
Platform of both government (ministerial) groups and private companies

ACTIVITIES: • Strategy Working Group.
 • Regulations.
 • Financial tools.
 • Physical improvements in delivery system.
 • Competitions, awards, recognition programs, demonstration sites.
 • Social marketing campaigns.
 • One-on-one meetings with major water users.
 • School programs.

ADDRESS: Website: www.gov.bc.ca/elp/
 Fax: 250 356-0605

BC Ministry of Environment, Lands and Parks
 Water Management Branch,
 PO Box 9340 STN Prov Govt
 Victoria, B.C. V8W 9M1
 Canada

CAMBODIA

INITIATIVE: **Hygiene education in Cambodian primary schools**
 SAWA, World Bank

ACTIVITIES: • School hygiene committees.
 • Hygiene educational curriculum with visual aids.
 • Children pass on messages to their families.

ADDRESS: Website: www.wsp.org

COLOMBIA

INITIATIVE: **“The Culture of Water” program**
 Ministry of Economic Development and UNICEF
 Exploration of indigenous history, languages and cultures related to water.

ACTIVITIES: • Children's story books on water in 3 indigenous communities.
 • Water Defence Clubs: organize primary school children and teachers to help conserving water.
 • Other activities are organized as a part of Water Month.

ADDRESS: E-mail: wesinfo@unicef.org
 Website: www.unicef.org/program/wes
 Fax: 1 212 824-6480

WES Section, Program Division, UNICEF
 3 UN Plaza
 New York, NY 10017, USA

EGYPT

INITIATIVE: **National Public Scheme for the Conservation of Drinking Water, Egypt**

Combined effort of several partners; government, NGOs, private sector and international institutions

ACTIVITIES: • Reducing water losses, training of local plumbers
 • Contribution to manufacturing of efficient sanitary and plumbing fixtures.
 • Advocacy to decrease water losses in public buildings.
 • Involvement of media to influence public opinion.
 • Personal communication with target audience.

ADDRESS: Fax: 20 2 3041635
 Dr. Emad El-Deen Adli Nada
 The Arab Office for Youth and Environment (NGO)
 14 Abu al-Mahasin Al-Shazli Street,
 Al Mohandesen, Giza
 Egypt
 PO Box 2 - Majlis Al sha'ab – Cairo – Egypt

ETHIOPIA

INITIATIVE: **WaterAid: Adwa and North Gondar region**

Water Supply and Sanitation Project
 WaterAid (UK-based NGO) and the Ministry of Health

ACTIVITIES: • Involvement of village health workers and Traditional Birth Attendants.
 • Involvement of local young and literate women as mobilizers and contact points.
 • Involvement of clergymen of churches and mosques.
 • Meetings after church services, as part of immunization campaign.

ADDRESS: For address: see WaterAid Bangladesh

INITIATIVE: **WaterAid: Hetosa region**

Water Supply and Sanitation
 WaterAid (UK-based NGO) and local NGOs

ACTIVITIES: • Previously mostly technical, Hygiene education to be included in future plans.

ADDRESS: For address: see WaterAid Bangladesh

GEORGIA

INITIATIVE: **Gaia**

NGO

General environmental issues, water quality

ACTIVITIES: • Environmental education.
 • Training of teachers and school administrators.

ADDRESS: E-mail: gaia@itic.ge

Dr Zaal Kikvidze
 President of Gaia
 4 Sulkhan-Saba Str.
 Tbilisi 380007
 Georgia

INITIATIVE: Several NGOs, WWF, ISAR, UNICEF, Gaia are active on environmental issues in Georgia

ADDRESS: Website: www.grida.no/enrin/htmls/georgia

GHANA

INITIATIVE: **WaterAid Water Supply and Sanitation**

WaterAid and partner organizations (NGOs)

ACTIVITIES: • Water supply, sanitation, hygiene education.

ADDRESS: For address: see WaterAid Bangladesh

GREECE

INITIATIVE: **Mediterranean Information Office for Environment, Culture and Sustainable Development**

ACTIVITIES: • Educational material on water in the Mediterranean

ADDRESS: MIO-ECSDE
Tripodon 28, 10558 Athens, Greece
Website: www.mio-ecsde.org

INDONESIA

INITIATIVE: **Jumat Bersih “Clean Friday” Movement**
Water Supply, Sanitation and Hygiene
Indonesian Government and Indonesian Council of Moslim leaders,
UNICEF

ACTIVITIES: • Emphasis on hygiene, in preparation for Friday (the holy day).
• Teams visit villages for religious meetings, hygiene education and to stimulate local religious leaders in hygiene education.
• District motivating team of family welfare movement (women).
• Technical training for toilet construction.
• Regulations with religious connotation (for example, Prospective Haj pilgrim required to build a toilet for either his own family or for a poorer family first).
• Loans and financial support for latrine building.

ADDRESS: E-mail: wesinfo@unicef.org
Website: www.unicef.org/program/wes
Fax: 1 212 824-6480

WES Section, Program Division, UNICEF
UN Plaza
New York, NY 10017, USA

JAPAN

INITIATIVE: **Nature Conservation Society of Japan**
General environmental issues; wetlands, forest, sea, wildlife, rivers

ACTIVITIES: • Policy advocacy.
• Advocating environmental education in national curricula.
• National nature survey.
• Nature conservation seminars.

ADDRESS: E-mail: Nature@nacsj.or.jp
Website (Japanese): www.nacsj.or.jp
Fax: 81 332 65-05 27

Nature Conservation Society of Japan
Yamaji-sambancho Bldg. 3F
5-24 Sambancho, Chiyoda-ku Tokyo 102 Japan

MEXICO

INITIATIVE: **Mexico City Metropolitan Area**
Water conservation
Public utilities provider

ACTIVITIES: • Meter installation, maintenance.
• Economic measures to reduce demand.
• Retrofitting program.
• Public information campaigns, mass media, Education.

(Source: unknown)

INITIATIVE: **Dry sanitation in Morelos**
Espacio de Salud, small NGO
Promotion of dry toilets, to save (scarce) water
Paper at the community water supply and sanitation conference, May 5-8, 1998, the World Bank, Washington DC.

- ACTIVITIES:
- Assisting local community groups.
 - Advocacy to obtain subsidies from municipal government.
 - Demonstration models of dry toilets.
 - Volunteer efforts in local promotion.

ADDRESS: Source: www.wsp.org

MOROCCO

INITIATIVE: **Awareness campaign on the importance of water saving**
Office National de l'Eau Potable and UNDP
Water conservation

- ACTIVITIES:
- Educational campaign.
 - Series of events around a water shaped balloon, aimed at young people, with drawing exhibitions, competitions, and music.
 - Television and radio commercials.
 - Involvement of the written press.

ADDRESS: Website: www.onep.org/
Other sources of information: IRC www.irc.nl

NEPAL

INITIATIVE: **WaterAid**
Water Supply and Sanitation
WaterAid (UK-based NGO)

- ACTIVITIES:
- Training of local Health Motivators,
 - Educational packages.
 - Puppets, role plays, drama.
 - Health education directed at women and children.

ADDRESS: For address: see WaterAid Bangladesh

NETHERLANDS

INITIATIVE: **Het Milieuhuis**
(the environment house)
Environmental conservation, including water-saving practices

- ACTIVITIES:
- Information service (telephone).
 - Databank on internet.
 - Internet site, mainly information on environment- friendly products.
 - Example house, environment- friendly products, water- saving.

ADDRESS: Website (Dutch): www.milieuhuis.nl/

PALESTINE TERRITORIES

INITIATIVE: **"Preserve and protect water resources" campaign**
UNDP and Palestinian Water Authorities, Tamer Reading Campaign

- ACTIVITIES:
- Education, workshops with teachers.
 - Festivals.
 - Small poll research to test the results of advertisements.
 - Theater, social marketing, TV messages, video clip, newspaper supplements, posters and billboards.
 - Press communiqués.
 - Vocational training.
 - Maintenance services.
 - Personal communication.

ADDRESS: Source: www.wsscc.org/
Fax: 972 2 6280089

UNDP, Program of Assistance to the Palestinian People
PO Box 51359, Jerusalem, Israel

PAPUA, NEW GUINEA

INITIATIVE: **Literacy and Awareness Publication Centres (LAMP)**
Summer Institute of Linguistics

ACTIVITIES: • Production of literacy and awareness material on several topics.
• Resource centers with computers and scanners.
• Computer networks spread ideas and material among the different centers in 20 different provinces.

ADDRESS: E-mail: lit-dev.uk@sil.org
Website: www.unesco.org/education
Fax: 44 1494 483297

Dr. Clinton D.W. Robinson, SIL, Literacy and Development Liaison Unit
Horleys Green, High Wycombe
Buckinghamshire, HP 14 3XL
UK

PHILIPPINES

INITIATIVE: **Pasig River Rehabilitation Program**
Sagip Pasig Movement, coalition involving thirty NGOs and government agencies. Initiated by The Green Coalition Inc. (NGO)

ACTIVITIES: • Establishment of fifty clean river zones.
• Community-based waste- management programs.
• Advocacy and information campaigns addressing policy makers and the general public.
• Studies and research, and their dissemination.
• Training.
• Networking.

ADDRESS: E-mail: spm@pacific.net.ph
Fax: 63 527 4349

Sagip Pasig Movement
2nd flr. East Bank Bldg.3
Muralla St. Find next

SINGAPORE

INITIATIVE: **Public Utilities Board (Singapore)**
Utilities Provider

ACTIVITIES: • School educational program.
• Art competitions for schools.
• Seminars, visits to waterworks.
• Publicity campaigns.
• “Turn it off–exercise”: temporary (symbolic) rationing.

ADDRESS: Website: www.pub.gov.sg

Public Utilities Board Singapore
111 Somerset Road #15-01
Singapore 238164
Republic of Singapore

SOUTH AFRICA

INITIATIVE: Gauteng Integrated Schools Sanitation Improvement Program
Sanitation and Hygiene
Cooperative Program of NGOs, Educational System, Public Utilities,
Mvula Trust and NGOs

ACTIVITIES:

- Research on attitudes and perceptions on sanitation in schools.
- Lobbying and seminars to involve politicians and officials.
- Educational program, including surveys by pupils.
- Sanitation week.
- Material and curriculum development.

ADDRESS: Website: www.mvula.co.za/documents/wedc/doc1.html

INITIATIVE: GREEN South Africa
Water quality and wetland conservation programs
SHARE-NET, SWAP, Umgeni Water, Project WATER, and others.

ACTIVITIES:

- Helping children to investigate/monitor water quality in streams and rivers.
- Network of various programs involving schools and the youth.
- Monitoring of rivers and catchment.
- Sharing of experience and material among participants.
- Resources available in association with GREEN international.

ADDRESS: Fax: 27 331-471037

GREEN Support
R. O'Donoghue
Natal Parks Board
P.O. Box 662
Pietermaritzburg 3200
South Africa

INITIATIVE: School Water Action Program
Local chapter of GREEN,
University of Stellenbosch

ADDRESS: Website: www.umgeni.co.za

INITIATIVE: Rand Water: WaterWise Campaign
Water utilities supplier
Water conservation, wetland rehabilitation

ACTIVITIES:

- Media campaigns, children's television.
- Leak fixing.
- Fora with interest groups (planning, local authorities, horticultural industry).
- Gardening program, kiosks at nursery.
- Educational center at nature park.
- Planting of native "water friendly" tree species.

ADDRESS: Website: www.waterwise.co.za

INITIATIVE: Rennie's Wetlands Project

ACTIVITIES:

- Advocacy at national and provincial level.
- Advocacy among wetland owners and public awareness.
- Workshops, farmers days and field guide for wetland owners and agriculture/nature conservation extension officers.

ADDRESS: Website: www.psybergate.com/wetfix/home.htm

INITIATIVE: Umgeni Water

Drinking Water Provider

- ACTIVITIES:**
- Educational resources and promotional material available through internet.
 - Water festival.

ADDRESS: Umgeni Water
External education Services
P.O. Box 9
Pietermaritzburg 3200
South Africa

SLOVENIA**INITIATIVE: Water Detective Program**

Institute for Integral Development and Environment

- ACTIVITIES:**
- Water education in schools.
 - Supplies material to schools.
 - Schools start their own activities and send results to the project in the form of a newspaper article published in (local) media, reward for best project.
 - Water and poems, drawings, and so on.

ADDRESS: E-mail: marta.vahtar@guest.arnes.si
Fax: 386 61 725 215

Marta Vahtar
Institute for Integral Development and environment
Savska 5
1230 Domzale
Slovenia

SPAIN**INITIATIVE: Proyecto Aguas Subterráneas**

Fundación Marcelino Botín, Instituto Tecnológico Geominero de España

- ACTIVITIES:**
- Educational material on groundwater (in Spanish)
 - Multimedia game on groundwater for schools (in Spanish)
 - Posters (in Spanish)

ADDRESS: Fundación Marcelino Botín, Proyecto Aguas Subterráneas
Plaza Manuel Gomez Moreno, 2. 28020 Madrid
Spain
pas@mfbotin.es
www.fundacionmbotin.org

INITIATIVE: Zaragoza, the Water-Saving City Project

NGO, government, EU LIFE Program

- ACTIVITIES:**
- Involvement of the business sector to promote manufacturing and marketing of efficient appliances.
 - Advertisements on the TV, the radio and the press, leaflets, posters, advertising hoardings, advertising on buses and on municipal poster sites.
 - Educational program, resource packs for schools.
 - Approaching large-scale consumers.

ADDRESS: website: www.agua.ecodes.org
Fax: 34-976 22 64 69

Victor Viuales Edo
San Miguel, 49, 2ªDcha
Fundación Ecología y Desarrollo
Zaragoza, Spain, 50001

SRI LANKA**INITIATIVE: Community Water Supply and Sanitation Project**

Ministry of Housing and Urban Development, World Bank
Water supply, sanitation and hygiene education

- ACTIVITIES:
- School hygiene education program.
 - Village participatory activities.
 - Promotion of latrines.

ADDRESS: Source: Website: www.irc.nl
E-mail: sshe@irc.nl

IRC, P.O. Box 2869, 2601 CW Delft, the Netherlands

TANZANIA**INITIATIVE: Water, Sanitation and Hygiene in Tabora Region**

WaterAid (UK-based NGO)

- ACTIVITIES:
- Training of hygiene promoters.
 - Using material derived from the PHAST initiative, for example, discussion-stimulating posters.
 - Training of teachers in PHAST approach, who then teach children to communicate hygiene messages through songs, drama and stories (Child-to-Child approach) .

ADDRESS: For address: see WaterAid Bangladesh

UGANDA**INITIATIVE: WaterAid: Kabarole region**

Water Supply and Sanitation
WaterAid, UK-based NGO, local NGOs

- ACTIVITIES:
- Involvement of drama performance group.
 - Training sessions for actors.
 - Involvement of radio station in campaign.

ADDRESS: For address: see WaterAid Bangladesh

UNITED KINGDOM**INITIATIVE: Thames Water**

Utilities Provider (UK and international)
Water efficiency

- ACTIVITIES:
- Press releases.
 - Direct mailing of leaflets and business guides.
 - Distribution of water efficient devices.
 - School programs.
 - The internet.

ADDRESS: Website: www.thames-water.com

Thames Water
PO Box 436 Swindon
SN38 1TU UK

UKRAINE**INITIATIVE: Drinking Water Project**

MAMA-86, environmental NGO &
UNED-UK

- ACTIVITIES:
- Research on drinking water quality.
 - Survey of public opinion on water problems.
 - Public awareness raising.
 - Building of a broad public platform to lobby on new legislation.
 - Promote communication and information exchange between different levels of policymakers.

ADDRESS: E-mail: mama86@gluk.org
 Mama86@mama-86.kiev.ua
 Website: www.mama-86.kiev.ua
 Fax: 380 44 2295514

MAMA-86, drinking water project
 22, Mikhailivaska str.
 01001, Kyiv
 Ukraine

USA

INITIATIVE: **Albuquerque Water Conservation Office**
 City Government
 Water Conservation

- ACTIVITIES:
- Education, the theater
 - Marketing.
 - Pricing, subsidies/free appliances.
 - Advocacy/legislation for industries.

ADDRESS: E-mail: jasw@cabq.gov
 Website: www.cabq.gov/resources/index.html

Jean Witherspoon
 City of Albuquerque
 Public Works Department, P.O. Box 1293
 Albuquerque, NM 87103, USA

INITIATIVE: **Arizona Municipal Water Users Association**
 Utilities association
 Water conservation

- ACTIVITIES:
- Education.
 - PR.
 - Posters, billboards, brochures.
 - Advocacy among industry.
 - Legislation.
 - Live events.
 - Xeriscape

ADDRESS: E-mail: webmaster@amwua.org
 Fax: 1 602 248-8423

Arizona Municipal Water Users Association
 4041 North Central Avenue, Suite 900
 Phoenix, Arizona 85012, USA

INITIATIVE: **Audubon Wetlands Campaign**
 Wetlands conservation and restoration
 National Audubon Society

- ACTIVITIES:
- Network of volunteers.
 - Policy advocacy.
 - Education on the value of wetlands (both for schools, civic groups, elected officials and members of the media).
 - Wetland tours for public officials and the media.
 - Also in various countries outside USA.

ADDRESS: Website: www.audubon.org
 Fax: 1-212 979 3188

National Audubon Society
 700 Broadway
 New York, NY 10003, USA

INITIATIVE: Aurora Water Conservation Office

Utilities association

- ACTIVITIES:
- Youth water festival.
 - Students' poster contest.
 - Presentations and Speakers.
 - Water related school curricula.

ADDRESS: Website: www.ci.aurora.co.us
 Fax: 1 303-739-7491

1470 S. Havana Street
 Suite 400
 Aurora, CO 80012, USA

INITIATIVE: City of Tempe Water Conservation

Water Conservation

- ACTIVITIES:
- Irrigation efficiency.
 - Scheduling, lawn watering guide.

ADDRESS: Website: www.tempe.gov/water/water3.htm

INITIATIVE: East Bay Municipal Utilities District

Water Conservation

Utilities Provider

- ACTIVITIES:
- School program.
 - Workshops on irrigation scheduling.
 - Community events.
 - Awards.
 - Conservation advice for commercial and industrial companies.

ADDRESS: Website: www.ebmud.com

East Bay Municipal Utility District
 EBMUD Water Conservation Office
 375 Eleventh Street, Oakland CA 94607-4240
 or
 P.O. Box 24055 , CA 94623-1055, USA

INITIATIVE: Great Lakes Radio Consortium

Conservation of lakes

- ACTIVITIES:
- Radio.
 - Network of over thirty radio stations.
 - Provision of information to media.
 - Weekly news service.

ADDRESS: Website: www.glr.org

David Hammond, Managing Editor
 Great Lakes Radio Consortium
 University of Michigan Public Radio Stations
 5000 LS&A Building Ann Arbor,
 MI 48109-1382, USA

INITIATIVE: Illinois Middle School Groundwater Project

Ground water education

- ACTIVITIES:
- Part of the Rivers Project.
 - Training of teachers.
 - Production of curriculum on groundwater quality, groundwater and geology.
 - Testing program for students and parents to evaluate wells (water quality).
 - Preparation of models, test kits, and other material.

ADDRESS: E-mail: Mmondy@siue.edu

Website: www.siue.edu/OSME/river/GWHome.html

Coordinator Marvin Mondy
Southern Illinois University
Box 2222
Edwardsville, IL 62026, USA

INITIATIVE: Kids for Saving Earth

Environmental conservation

- ACTIVITIES:
- Public relations.
 - Involvement of children.
 - Children's press releases.

ADDRESS: E-mail: KSEWW@aol.com

Website: www.kidsforsavingearth.org

Fax: 1-763-559-6980

Kids for Saving Earth
PO Box 421118
Minneapolis, MN55442, USA

INITIATIVE: Mono Lake Committee, Los Angeles

NGO

Water conservation, conservation of lake

- ACTIVITIES:
- Parades.
 - Educational curricula
 - Events, excursions, canoe program.
 - Press releases.
 - involvement of volunteers.
 - Free appliances (ULFT).
 - Advocacy among politicians
 - Active involvement of community/religious groups in campaign.

ADDRESS: E-mail: info@monolake.org

Website: www.monolake.org

Fax: 1 760 647-6377

Lee Vining Office and Information Center
P.O. Box 29, Lee Vining, CA 93541, USA
Fax: 1 310 316-8509
Los Angeles Office, 322 Culver Blvd.
Playa Del Rey, CA 90293, USA

INITIATIVE: Pinellas County Utilities Education and Public Awareness

Florida. Water Conservation and groundwater

- ACTIVITIES:
- Education.
 - Events.
 - Free appliances.
 - Press releases.

ADDRESS: E-mail: ireinpol@co.pinellas.fl.us

County Courthouse Information Desk
315 Court St., Clearwater
Pinellas County Utilities
14 South Ft. Harrison, Clearwater, USA

INITIATIVE: Rivers Project

University and Board of Higher Education Illinois

- ACTIVITIES:**
- Scientific literacy of high-school students through water study.
 - Collecting and analyzing of water samples by students.
 - Internet-link schools and projects.
 - Rivers curriculum available.
 - Clean water celebration (festival).
 - Training sessions for teachers.
 - Student composed rivers magazine.
 - Groundwater project.

ADDRESS: Website: www.siu.edu/QSME/river
 Fax: 1 618 650 3359

Dr. Robert Williams
 Box 2222, Southern Illinois University
 Edwardsville. IL 62026, USA

INITIATIVE: Water Alliances for Voluntary Efficiency

Environmental Protection Agency
 Governmental water conservation

- ACTIVITIES:**
- Advocacy among companies.
 - Supporting companies in water-efficiency efforts.
 - Public relations

ADDRESS: WAVE Program Director
 U.S. EPA
 401 M St. SW
 Mail Stop 4204
 Washington, DC 20460

INITIATIVE: Water Conservation Program City of Houston

Water conservation
 Public Utilities provider (government)

- ACTIVITIES:**
- Festivals and events.
 - Speakers for schools.
 - Conservation kits.
 - Water bill inserts.
 - Water Plant tours.
 - Irrigation audits.
 - Contract customers.

ADDRESS: Website: www.ci.houston.tx.us/

City Of Houston Water Conservation Branch
 P.O. Box 1562, Houston TX 77251
 USA

INITIATIVE: Water Information Program Colorado

Providing general information on water issues; conservation, water rights, water-use history.
 Combined effort of several water organizations

- ACTIVITIES:**
- Development of background information brochures, bi-monthly press clippings, summary and other material.
 - Educational programs and curricula.
 - Participation in water festivals, conferences and meetings.

ADDRESS: E-mail: Water@waterfrontier.net
 Website: www.waterinfo.org
 Fax: 1 970 259-8423

Water Information Program
 P.O. Box 475, Durango, Colorado 81302
 USA

INITIATIVE: **Water Use Efficiency and Conservation Steering Group
Orange County**

Public utilities provider (government)

- ACTIVITIES:
- Marketing of hardware (low flow toilets, efficient shower heads, and so on).
 - Landscape irrigation efficiency program.
 - Education, “drop of groundwater” character as a mascot in campaign.
 - Children's Annual Drinking Water Festival.
 - Guest teachers for schools.

ADDRESS: Source: www.Uswaternews.com

INITIATIVE: **Water Wise and Energy Efficient Program**

Water and Energy Conservation

National Energy Foundation, nonprofit

- ACTIVITIES:
- Educational program; curriculum including efficient appliances.
 - Children are stimulated to check water and energy consumption at home.

ADDRESS: Website: www.getwise.org

UZBEKISTAN

INITIATIVE: **Water Supply, Sanitation and Health Project**

World Bank and UNDP

Sanitation and Hygiene

- ACTIVITIES:
- Latrine construction.
 - Hygiene promotion.
 - Combination of marketing and participatory approaches.
 - Popular music, sketches, local children's theater.

ADDRESS: Website: www.worldbank.org

VIETNAM

INITIATIVE: **Intensive Sanitation Project**

Sanitation Education and Demonstration

UNICEF and local government

- ACTIVITIES:
- Perception mapping.
 - Demonstration latrines.
 - Training of local motivators, home visits
 - Mass media.

ADDRESS: E-mail: wesinfo@unicef.org

Website: www.unicef.org/program/wes

Fax: 1 212 824-6480

WES Section, Program Division, UNICEF

3 UN Plaza

New York, NY 10017, USA

INITIATIVE: **Rehabilitation of Mangrove Forests Project**

Ministry of Agriculture and Rural Development, three different Provincial Authorities, Euroconsult, and others.

- ACTIVITIES:
- Reforestation and rehabilitation of mangrove forests.
 - Community development.
 - Conservation educational programs.
 - Public awareness campaigns.

ADDRESS: Fax: 84 8 8635245

Sub-FIPI, 245/5 Banh Van Tran Street

Tan Bihn District,

Ho Chi Minh City, Vietnam

ZAMBIAINITIATIVE: **WASHE**

Water Supply, Sanitation and Hygiene Education Program

- ACTIVITIES:
- Hygiene awareness as a motivation for water-using supply innovations.
 - Participatory community management.
 - Group activities with unserialized posters, story telling, and plays.
 - Manual including material available: full program for whole participatory process, including technical measures and maintenance issues.

ADDRESS: E-mail: cmmu1@zamnet.zm

Fax: 260 226905

N-Washe

P/Bag RW 124X

Ridgeway Lusaka

APPENDIX 2 Resources

2.1 EDUCATIONAL RESOURCES AND MATERIAL

2.2 OTHER RESOURCES

2.1 EDUCATIONAL RESOURCES AND MATERIAL

Mail order catalogue

Umgeni Water (South Africa) offers a significant amount of different material through an online ordering catalogue. Videos, teachers manuals, teaching aids, posters, newsprints, handbooks, and field guides can be ordered through the catalogue on the Internet, on a range of topics such as wetlands, water conservation, and hygiene.

Examples of interesting resources are:

- 101 Ideas for National Water Week and River Day, Steve Camp and Kerry Jenner
- GREEN Water Quality Monitoring in Southern Africa, a field guide, Jay O'Keefe and Jenny Day, 1993

The catalogue can be found on the following website:

www.umgeni.co.za/services/education/mailorder

e-mail: steve.camp@umgeni.co.za

or write to:

Umgeni Water

P.O. Box 9

Pietermaritzburg, 3200

South Africa

Umgeni also produces several resource kits for teachers.

Best practices CD-Rom

UNCHS (Habitat) and Together Foundation have published a CD-ROM called "Best practices in improving the living environment," which includes over 300 descriptions of initiatives from 75 countries, searchable by sector, country or ecosystem. Includes various initiatives in the water sector.
www.sustainabledevelopment.org/blp

Together Foundation

55 East 75th Street

New York, NY 11021, USA

Fax: (1 212) 6284265

E-mail: info@together.org

www.together.org

UNCHS (Habitat)

P.O. Box 30030

Nairobi, Kenya

Fax: (254 2) 623080

E-mail: bestpractices@unchs.org

www.sustainabledevelopment.org/blp

Overview of USA Programs—Educating Young People about Water

Overview of 100 different water related curricula in the USA can be downloaded or ordered from the address below. The overview includes summaries, checklists of contents and where the curricula can be ordered. Other available material are a video- exploring eight youth water educational programs, a guide for program planning and evaluation.

ERIC Clearinghouse
1929 Kenny Road
Columbus, OH 43210-1080
Tel: 800/276-0462
Fax: 614/292-0263
www.uwex.edu/erc/ywc/index.html
ericse@osu.edu

Environmental educational resources in Spanish

Internet site with a lot of interesting material available of which most are water related. Includes short descriptions and an address where the material can be ordered. Material includes activity guides, audiovisuals, children's books, and curricular material.

www.uswp.edu/acad/wcee/spanish.htm

Educational resources World Bank

Lesson plans

www.worldbank.org/depweb/english/resource/index.htm

Rivers Project curriculum guides

The Rivers Project has curriculum units available for six content areas. These units, written by high school teachers, can be used together to create an interdisciplinary program based on a river study or alone, as a supplement to an existing curriculum. The six units are biology, chemistry, earth science, geography, language art and mathematics. The curricula include field and classroom activities, background material, outlined objectives for every

chapter. Along with the curriculum the Rivers Project offers a 6-day training for secondary and middle-school teachers.

The Rivers Project has recently developed a groundwater curriculum also, including a groundwater flow model.

www.siue.edu/OSME/river/index.html

Watershed Curriculum Enhancers (Building Environmental Educational Solutions, Inc. BEES)

Resources and ideas related to rivers and watersheds available on the internet. Mainly for older children and teenagers.

www.beesinc.org/resource

e-mail; Kwyatt@TheWatershed.org

STREAMS (Science Teams in Rural Environments for Aquatic Management Studies)

Curricula and curricular activities available, on the internet. Topics include acid rain, air pollution, groundwater, mathematical applications, outdoor activities, wetlands, and so on.

www.ems.psu.edu/HAMS/overview.html

Experimental Kits

As a participant in Aquatox 2000, schools receive one experimental kit, free of charge. The kit contains instructions, an activity book, and the necessary reagents and supplies to carry out 20 sets of experiments with each of the four bioassays (hydrogen sulphide, lettuce-seed germination, onion-bulb germination, and toxic effect on freshwater hydra). The Activity Book contains all the necessary technical information to carry out each of the bioassays. The Activity Book takes students and teachers step-by-step through the bioassays. It also covers other topics, including water and your health, the scientific process, how to collect water samples, and how to use the internet to report your test results.

www.idrc.ca/aquatox/en/experiment/intro.html

Environmental Education Link (EELink)

Probably contains more links to environmental educational programs than any other links page.

www.nceet.snre.umich.edu

Environment online

Schools can join in this online web learning community. Real-time web discussions once a week, sharing ideas and opinions (e-mail) can be daily. It unites schools from western and developing countries. Started in August 2000.

www.pp.eno.fi/eno2000/welcome/welcome.htm

Mika Verhanen

Coordinator

Eno Elementary School

Finland

Fax: + 358 762 017

E-mail: Mika.Vanhanen@pp.eno.fi

School-based water quality monitoring-GREEN

Global Rivers Environmental Education Network (GREEN) (South Africa) has published (among other publications) a guide for school-based water-quality monitoring. It includes low cost/do it yourself tools for the monitoring and notes on computer referencing. The publication also lists regional support groups.

Ordering GREEN publications in general

The following site provides online ordering of books, multimedia and water-quality monitoring equipment.

www.earthforce.org/green/catalog/

European school net

Provides information on current initiatives in enhancing the use of multimedia and the internet in schools. Examples of projects mentioned are digital libraries and networks.

www.en.eun.org/front/actual/index.html

Habitat water education initiative

UNCHS (Habitat) has developed a water education initiative which aims to create a new water use ethic in African cities. Using a value-based approach water education is being introduced in seven demonstration countries - Cote d'Ivoire, Ethiopia, Ghana, Kenya, Senegal, South Africa and Zambia. The program intends to introduce water education in schools through national curricula; develop training material; provide training of trainers; establish water education classes in pilot cities and stimulate community water education.

www.un-urbanwater.net

2.2 OTHER RESOURCES**Teaching Aids at Low Cost (TALC)**

TALC offers teaching aid material and books in the field of health. They also have quite some material available related to hygiene, rural water supply, Child-to-Child methodologies and communication methodologies. Accessories such as charts, tapes and slides can also be ordered. Ask for a catalogue at the following address:

TALC

P.O. Box 49

St. Albans, Herts AL1 5TX

United Kingdom

Fax: 00 44 1727 846852

E-mail: talcul@btInternet.com

IRC International Water and Sanitation Center

Network for information dissemination, experience exchange and future corporation. Works together with UNICEF on school sanitation and hygiene education.

P.O. Box 2869
2601 CW Delft, the Netherlands
Fax: 31-15 219 09 55
E-mail: sshe@irc.nl
www.irc.nl/sshe

Resource Centers—Streams of Knowledge

A global coalition of resource centers, initiated by IRC. Involved in launching the coalition are the following nine organizations:

CINARA- Colombia
CREPA- Burkina Faso
IRC-Netherlands
IWEE-Finland
IWSD-Zimbabwe
NETWAS International- Kenya
PCWS-IT Foundation- Philippines
pS-Eau-France
SKAT- Switzerland

Contact address:

IRC International Water and Sanitation Center
P.O. Box 2896
2601 Delft
The Netherlands
Fax: 31-15 219 09 55
E-mail: bastemeyer@irc.nl
www.irc.nl/projects/stream

Water and Sanitation Program (World Bank)

International partnership with projects of the world. Publications available for Andean region, East Asia and the Pacific, South Asia, East and Southern Africa, and West and Central Africa. Material includes reports, guides and videos and are free of charge (at least at the time of publication of this book).

World Bank
1818 H Street, NW Washington
D.C. 20433 USA
Fax: 1 202 522 3228
E-mail: info@wsp.org
www.wsp.org

World Health Organization—water, sanitation and health resources

Offers various guides, training packages, technical guidelines. PHAST (Participatory Hygiene and Sanitation Transformation) guidelines also available.

SMI (distribution service) LTD
P.O. box 119
Stevenage
Hertfordshire SG1 4TP
England
Fax: + 44 1438 748844
E-mail: customerservices@earthprint.co.uk
www.earthprint.com
wwwun-water.net
www.who.int/water_sanitation_health/

Centre for production of audiovisual material

FAO, UNDP and the Government of Mali have set up a national center specialized in the production and collection of audiovisual material.

M. Checkna Diarra

CESPA

Fax: 223 22 11 09

More info: www.unesco.org/education/educprog/lwf/doc/portfolio/case4.htm

Material on water saving in gardens

City of Aurora Utilities Department (USA)

Brochures and publications on water conservation through Water Wise landscaping and use of drought-tolerant plants.

www.ci.aurora.co.us/utilities

Protection of wetlands—resources

Terrene Institute (USA) has produced material such as brochures, posters and videos which are available for ordering through the internet. Several demonstration models, for example, related to groundwater or pollution are also available.

www.terrene.org/home.htm

Environmental Videos (EETPC)

Videos on environmental issues in general, including water conservation.

Examples: “Harvest the rain” (Kenya), “Thirsty cities” (Latin America), “Hanging gardens of Arabia” (Yemen). Mostly English.

www.eetpc.org/filmlist.htm

EETPC News archive

www.eetpc.org/news.htm

Water magazine

Great site, is updated regularly and subscription for updates is possible.

Contains not only links but also short introductions of the topic and a lot on demand-management and drinking water campaigns.

www.watermagazine.com/

International office for water

Contains numerous links to water and environment pages. Not specifically on awareness campaigns or education.

www.oieau.fr/anglais/fpotes.htm

African water page

A bit slow, but contains interesting links, on mostly African water related pages.

www.africanwater.org/links.htm

Lanic-environment in South America

Offers a large amount of web addresses of environmental NGOs in South America, some of them related to water. Websites often in Spanish or Portuguese.

www.lanic.utexas.edu/la/region/environment/

Environmental organizations web directory

Topic-wise directory, with a lot of links per topic. Topics include, for example, water quality, groundwater, oceans, reefs, and rivers, mostly in the USA.

www.webdirectory.com/Water_Resources/

US Waternews

Page with news and archives on news from the USA water sector; often has information from water conservation campaigns.

www.uswaternews.com/news.html

UN Environment Program

www.grida.no/

Water Watch Australia

–links to a large amount of Australian and international initiatives

www.vic.waterwatch.org.au

Water supply and sanitation – articles

Proceedings of the 22nd WEDC Conference New Delhi India 1996

Contains several articles relevant to awareness raising, mainly on water supply and sanitation. www.lboro.ac.uk

WATER ASSOCIATIONS WORLDWIDE**Inter-American Association of Sanitary and Environmental Engineering, AIDIS**

Tel: + 55 11 3812 4080

Fax: + 55 11 3814 2441

E-mail: aidis@unisis.com.br

www.aidis.org.br

The American Society of Civil Engineers (ASCE)

Tel: + 1 703 295 6000

Fax: + 1 703 295 6222

E-mail: EWRI@asce.org

www.asce.org

www.ewrinstitute.org

Australian Water Association (AWA)

Tel: + 61 29 413 1288

Fax: + 61 29 413 1047

E-mail: info@awwa.asn.au

www.awwa.asn.au

American Water Works Association (AWWA)

Tel: + 1 303 794 7711

Fax: + 1 303 795 1440

E-mail: Public: smckenzie@awwa.org

Media: dmarsano@awwa.org

www.awwa.org

Chartered Institution of Water and Environmental Management (CIWEM)

Tel: + 44 171 8313110

Fax: + 44 171 4054967

E-mail: philip@ciwem.org.uk

www.ciwem.org.uk

European Water Association (EWA)

Tel: + 49 22 42 872 189

Fax: + 49 22 42 872 135

E-mail: ewa@atv.de

www.ewaonline.de

International Water Association (IWA)

Tel: + 44 (0) 20 7654 5500

Fax: + 44 (0) 20 7654 5555

E-mail: water@iwahq.org.uk

www.iwahq.org.uk

New Zealand Water and Wastes Association (NZWWA)

Tel: + 64 9 6363636

Fax: + 64 9 6361234

E-mail: water@nzwwa.org.nz

Water Environment Federation (WEF)

Tel: + 1 703 684 2452

Fax: + 1 703 684 2450

E-mail: csc@wef.org

www.wef.org

APPENDIX 3 **Additional tools**

3.1 LITERATURE CITED

3.2 LIST OF ACRONYMS

3.3 LIST OF ILLUSTRATIONS

3.4 ACKNOWLEDGEMENTS

3.1 LITERATURE CITED

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3.2 ACRONYMS USED

ANA	Arizona Nursery Association (USA)	STREAMS	"Streams of knowledge", a global coalition of resource centres
CLC	Catchment Learning Cycles	SWAP	School Water Action Program (South Africa)
CHA	Community Health Agents	UNDP	United Nations Development Program
EBMUD	East Bay Municipal Utilities District (USA)	UNICEF	United Nations Children's Fund
EOC/DICAC	NGOs in Ethiopia working with WaterAid	VERC	Village Education Resource Centre (Bangladesh)
EPA	Environmental Protection Agency (USA)	WAVE	Water Alliance for Voluntary Efficiency
EYDAP	Athens Water Supply and Sewerage Company (Greece)	WB	World Bank
FAO	Food and Agricultural Organisation	WES	Water and Environmental Sanitation
GREEN	Global Rivers Environmental Education Network	WET	Water Education for Teachers (program originating in USA/Canada)
ICRO	Institute for Integral Development and Environment (Slovenia)	WHO	World Health Organisation
IRN	International Rivers Network	Xeriscape	Designing gardens in such a way that they require little water
KSE	Kids for Saving Earth (USA)		
LAMP	Literacy and Awareness Publication Centres (Papua New Guinea)		
LAWCC	Los Angeles Water Conservation Council (USA)		
MAMA-86	Drinking water campaign in Ukraine, NGO		
MLC	Mono Lake Committee (USA)		
NEWAH	NGO in Nepal, working with WaterAid		
NGO	Non-governmental Organisation		
NUON	A utilities provider in the Netherlands		
ONEP	Office National de l'Eau Potable (Morocco)		
PR	Public Relations		
PRA	Participatory Rural Appraisal (participatory research tool used in many development programs)		
PHAST	Participatory Hygiene and Sanitation Transformation, a program originating in East Africa		
PWA	Palestinian Water Authority		
RWSG	Regional Water and Sanitation Group		

3.3 LIST OF ILLUSTRATIONS

The pictures included in this book are a sample of what is publicly available. They have been included to give a visual impression of the activities of these campaigns.

Page: Source of publication:

10	UNICEF, India	67	Public Utilities Board, Singapore
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64	Government of Pakistan and the RWSG South Asia		
67	Arizona Municipal Water User Association, USA		

All pictures on the cover, list of contents and first pages of chapters are Reprocentrum Westervoort stock photographs, except the pictures on the first pages of chapters 3, 7 and 8. The picture for chapter 3 originates with Arcadis Euroconsult. The pictures for chapters 7 and 8 are both FAO photo's, the photographers of these two pictures are respectively G. Bizzarri and I. Balderi (used with permission).

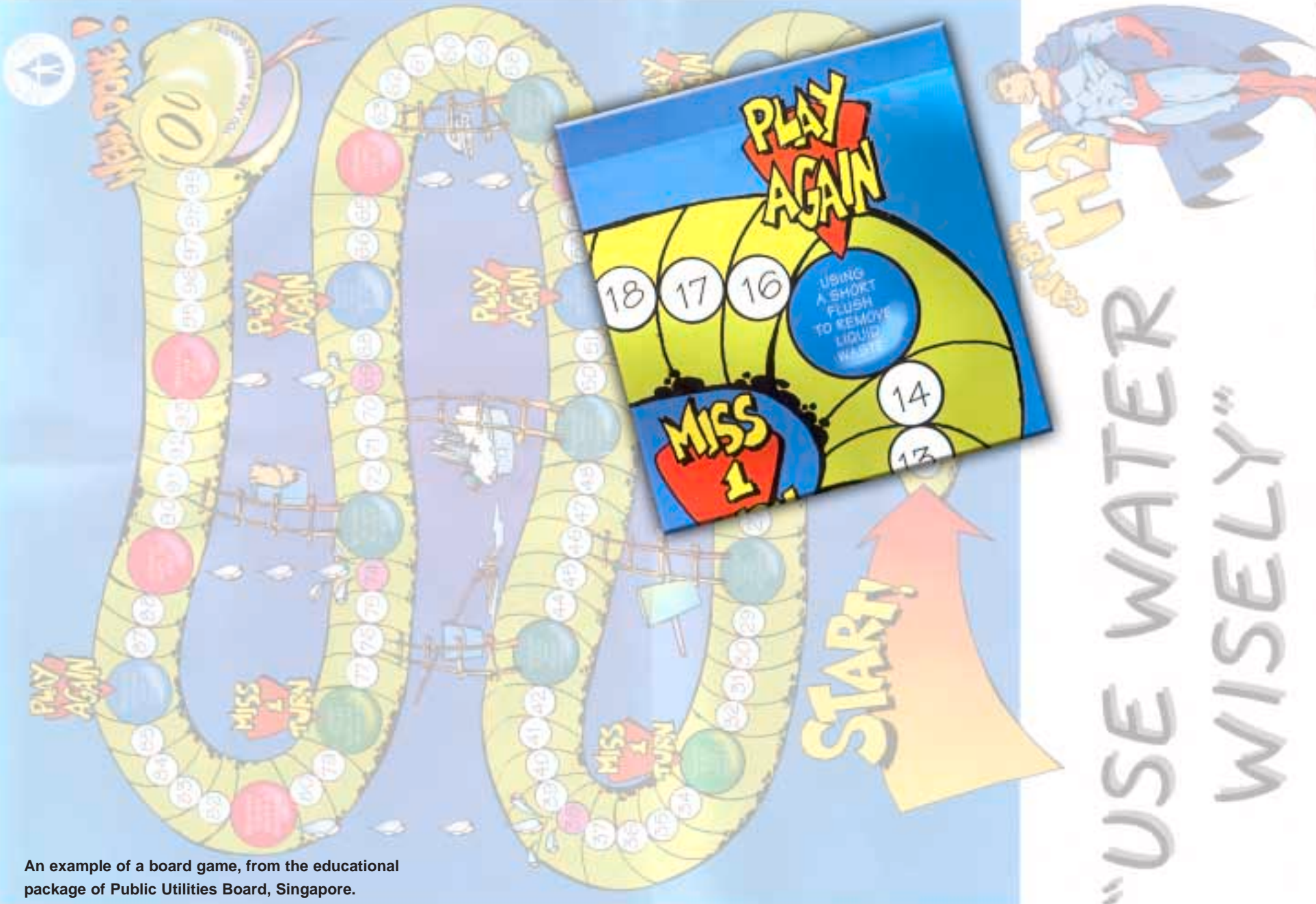
All pictures on the cover, list of contents and first pages of chapters are Reprocentrum Westervoort stock photographs, except the pictures on the first pages of chapters 7 and 8. The pictures for chapters 7 and 8 are FAO photo's, the photographers of these two pictures are respectively G. Bizzarri and I. Balderi (used with permission).

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H₂O

"USE WATER WISELY"

An example of a board game, from the educational package of Public Utilities Board, Singapore.

In one way or another, we are all involved in the management of water by what we choose to do, or choose not to do. Water is everybody's business: but, unless human behavior changes dramatically, the technological and management solutions that are being made today to overcome the present and future water problems will come to nothing. This volume is designed to help communication specialists, educators and water-sector professionals raise awareness about the need to use water wisely and to stimulate public action towards a better use and management of the world's most precious resource.

Ideas for Water Awareness Campaigns is a collection of ideas and practical examples of over 70 water awareness initiatives undertaken around the world. These campaigns address issues ranging from drinking water conservation and hygiene promotion to the preservation of lakes, rivers and wetlands. The examples provide ideas on how to develop strategies and implementation plans for water awareness campaigns targeted at politicians, water professionals, the public and private sector, youth, education, and communities.