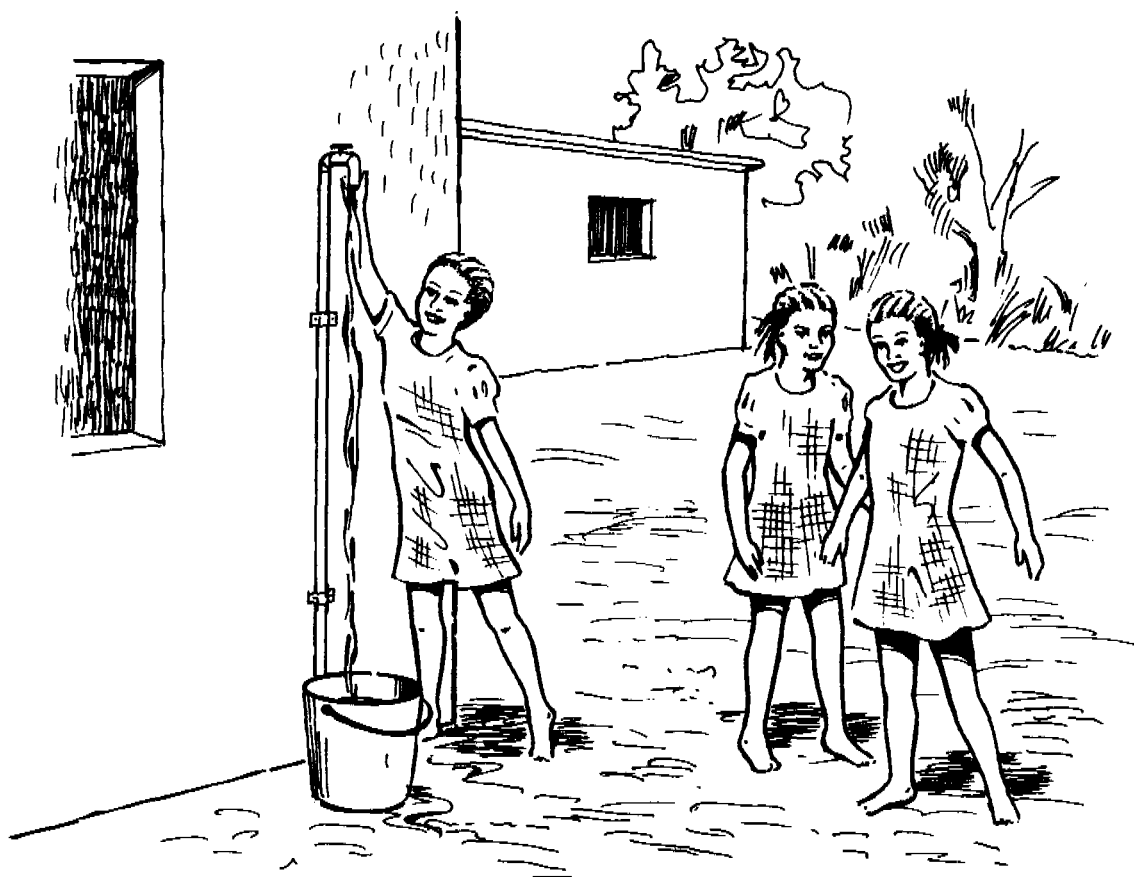


# HYGIENE EDUCATION AND ENVIRONMENTAL SANITATION IN SCHOOLS IN FRANCOPHONE WEST AFRICA

The report of an inter-country workshop to identify problems and options for improvement

EIER, Ouagadougou 19-21 April 1994



World Health Organization (WHO)  
United Nations Children's Fund (UNICEF)  
Ecole Inter-Etats des Ingénieurs de l'Équipement Rural (EIER)  
Swedish International Development Authority (SIDA)

January 1995



## **Summary**

Schools in many parts of the world lack basic sanitation, drinking water facilities and hygiene education. The school environment can have considerable influence on children's behaviour and provides an opportunity to teach children at an early age behaviours that can lower their risk of disease.

In April 1994 a workshop was held in Ouagadougou, Burkina Faso to assess the current environmental situation in schools in eight Francophone West African countries, foster improvements and promote the role that improved school environments and more effective hygiene education can play in encouraging change in the environment of the community as a whole.

Case studies were conducted in each country to provide background information on the regional situation. From the case studies, a set of common problems were identified: absence of water points and latrines in schools, lack of personnel qualified in hygiene education, lack of national policies on health education and inadequacy of resources for schools. Among the reasons identified for this state of affairs are lack of importance placed on school sanitation facilities by national ministries and a lack of harmony between what is taught at school and the realities of life in the home and community. When sanitation structures are available at school, they are often far removed from anything families could afford to build. A lack of teaching aids and appropriate teaching methods for hygiene is another problem.

The workshop noted that increasingly communities are taking responsibility for the improvement and maintenance of the school environment. This is partly in response to the financial constraints experienced by Ministries of Education and of Health which mean that they can no longer fulfil this role. It is also because of communities' belief in the importance of education and of a healthy learning environment.

The participants identified several possibilities for action that would improve sanitation and hygiene education in schools. They stressed the need for political will and appropriate policies. Better coordination between schools, communities, NGOs and government partners in education, health, public works and external donors were essential. School curricula needs to be focussed more closely on the norms and values of local societies, teachers need to understand the realities of families from which the children come and the teaching and facilities should reflect a harmony between school and community. The most effective role of government and concerned NGOs and inter-governmental agencies is to support schools and communities in their efforts to improve the school environment and the teaching of hygiene.

The workshop recommended that each country create a plan of action to improve school environments and teaching of hygiene and seek national and international partners to help them implement change.

The workshop was hosted by the Ecole Inter-Etats d'Ingénieurs de l'Équipement Rural and financed with funds provided by the Swedish International Development Agency (SIDA) to the Rural Environmental Health Unit of WHO, Geneva.

This report was prepared by Fatoumata Sokona Maiga WHO/Mali and Lucy Clarke and Mayling Simpson-Hébert WHO/HQ/REH, with the help of Mr David Daou, Mr Salissou Kané, Bernadette Kankl, Christelle Loupforest and Issiya Souley. Most of the photographs in this report formed part of the eight country case studies prepared for the workshop. Others were taken by Lucy Clarke.

# CONTENTS

---

## A. Workshop Proceedings

- |    |  |    |
|----|--|----|
| 1. | Purpose of the workshop  | 1  |
| 2. | Water, sanitation and hygiene education<br>in West African schools today | 2  |
| 3. | Key findings of the workshop   | 8  |
| 4. | Key recommendations of the workshop                                      | 12 |
- 

## B. Country case studies

- |    |               |    |
|----|---------------|----|
| 1. | Benin         | 17 |
| 2. | Burkina Faso  | 19 |
| 3. | Côte d'Ivoire | 21 |
| 4. | Guinea        | 23 |
| 5. | Mali          | 25 |
| 6. | Niger         | 26 |
| 7. | Senegal       | 28 |
| 8. | Togo          | 29 |
- 

## C. Innovative experiences in the region

- |    |                    |    |
|----|--------------------|----|
| 1. | UNICEF             | 33 |
| 2. | EAST               | 34 |
| 3. | CREPA              | 36 |
| 4. | The Saniya Project | 37 |
- 

Annex 1 Programme of the workshop

Annex 2 Case study guidelines

Annex 3 Resource documents

Annex 4 Participants at the workshop

---

ISBN 12526  
203.2 95HY

This document is not issued to the general public, and all rights are reserved by the World Health Organization (WHO). The document may not be reviewed, abstracted, quoted, reproduced or translated, in part or in whole, without the prior written permission of WHO. No part of this document may be stored in a retrieval system or transmitted in any form or by any means – electronic, mechanical or other – without the prior written permission of WHO.

The views expressed in documents by named authors are solely the responsibility of those authors.

## **A. WORKSHOP PROCEEDINGS**

### **Water, sanitation, hygiene and health: why schools can make a difference**

Many of the diseases which affect children in West Africa, and throughout the world, are attributable to a lack of clean water supply and sanitation and accompanying poor hygiene.

These diseases include diarrhoeal disease, intestinal helminths and schistosomiasis. An unhealthy school environment can actively prevent enrollment or attendance, when children fall sick, or, for example, girls are prevented from attending a school which has no latrines.

It would be over-simplistic to suggest that a healthier school environment will directly, immediately improve the health of school-aged children. We know that in many of the countries of West Africa less than half of children attend primary school and those that do may return to homes without safe water or sanitation. Evidence suggests, however, that an improved school environment, combined with health education and efforts to reach the wider community, can have a long-term effect on the health of the population.

Childhood is the best time to learn hygiene behaviours. But an effective school environmental health programme does not simply offer children the opportunity to learn new personal behaviours: it can also help children to see themselves as important members of the community who can play a role in caring for their environment, their health and the health of others. School based health interventions can affect not only the next generation, our children's children, but also the wider community. Their involvement in the school's health promotion work and their pride in a healthy school environment can lead to lasting behavioural change and infrastructure improvements.

### **This workshop**

The workshop, which was held at the Ecole Inter-Etats des Ingénieurs de l'Équipement Rural in Ouagadougou, Burkina Faso from 19 to 21 April 1994, was a collaborative effort of WHO, EIER, and UNICEF. Additional technical support came from UNESCO and from the Government of Burkina Faso/London School of Hygiene and Tropical Medicine Projet Diarrhées. The workshop was funded principally by the Swedish International Development Agency (SIDA). Additional financial support was provided by UNICEF.

### **Objectives**

The workshop had three objectives:

- To highlight and explain the causes of the current situation of environmental sanitation and hygiene education in schools in francophone West Africa;
- To foster improvements in school environments and hygiene education in schools in the region;
- To promote the role that improved school environments and more effective hygiene education can play in fostering change in the environment of the community as a whole.

### **Preparatory work**

Each participating country prepared a national case study which reviewed the existing conditions and hygiene education in a number of the country's schools and provided data on the general health, water and sanitation situation. The preparation of these country cases allowed the participants to focus on the issue and permitted an exchange of information between countries. From the case studies the participants developed a regional overview which was the starting point for their discussions.

### **Key Conclusion**

Increasingly, examples can be found of communities taking responsibility for the improvement and maintenance of the school environment. This is partly in response to the financial constraints experienced by Ministries of Education and of Health which mean that they can no longer fulfil this role. It is also because of communities' belief in the importance of education and of a healthy learning environment.

**The most effective role of government and concerned NGOs and inter-governmental agencies is to support schools and communities in their efforts to improve the school environment and the teaching of hygiene. Government and its partners can provide this support through revised teacher-training, the development of action-oriented curriculum, the dissemination of materials and through a commitment to ensuring that all teaching and infrastructure in schools are culturally and economically appropriate.**

## **A2. WATER, SANITATION AND HYGIENE EDUCATION IN WEST AFRICAN SCHOOLS TODAY**

*This section of the report describes water supply, environmental sanitation and hygiene education in schools, based on the country case studies presented to the workshop and the ensuing discussions.*

### **The school environment**

The eight participating countries were asked to undertake case studies which would provide a picture of the current situation in schools in their country and of the different actors who intervene. Because each country chose to survey different numbers of schools (from four in Côte d'Ivoire to 240 in Mali), it is difficult to compare their findings on a statistical basis and it should be recognized that the data they offer on latrine coverage in schools, for example, cannot always be assumed to be perfectly representative of the national picture. However, despite their specificities, the studies revealed considerable similarity between the environmental situation of schools in different francophone West African countries. The key points held in common by the studies are presented in this section and summarized in the box below. They provide a vivid picture of the problems, needs and potential of schools in the region. This picture was confirmed by discussion at the seminar. A resume of each case study can be found in Section B of this report.

The percentage of children enrolling in schools in West Africa is low, ranging from 23% in Mali to 92% in Togo, but is generally increasing. Table 1 on page 3 presents figures for each of the participating countries. Population growth compounds these figures; schools face real problems even to provide

enough classroom space for children. The provision of sanitary facilities was seen to represent a lower priority than classrooms, teachers and teaching materials.

The following paragraphs outline the situation as revealed in the case studies.

It is worth noting that the problems encountered in day schools are even more acute in boarding schools. Boarding schools are provided in some of the areas of the region which have particularly low population density or nomadic populations, such as the north of Niger. The Niger case study suggests that the majority of boarding schools have no dining halls, showers or latrines.

### **Drinking water**

The provision of safe water in schools echoes that in communities as a whole, but is generally more severe. **Most schools, particularly in rural areas, have no reliable source of safe drinking water.** In Benin, for example, only one in ten schools visited had a piped water supply, whilst three in ten had a traditional well. All others used surface water sometimes supplemented by water from a spring. During the dry months the lack of drinking water becomes an acute problem throughout the region. Teachers and pupils frequently expressed a strong desire to have access to a permanent adequate supply of safe water.

**Even where a water point has been provided, it is frequently no longer in working order.** Design is an important issue: pumps may be out of use for

### **Key points**

1. **Functional water points providing adequate supplies of safe water are rarely found in schools in the region.**
2. **Adequate numbers of clean functional latrines were not observed at any of the schools surveyed. At least half of the schools surveyed had no latrine. Where latrines exist they are often out of order and may be inappropriately designed or dirty.**
3. **Hand washing facilities are very rarely observed in schools.**
4. **Although hygiene education forms part of all eight national curricula, teachers have usually not received adequate training to conduct classes effectively and schools very rarely have any appropriate educational materials.**
5. **Other environmental issues weigh heavily on the school community, such as the disposal of solid waste and repairs to school buildings.**

**Table 1. Selected data on water, sanitation and education in eight West African countries**

Figures extracted from *Human Development Report 1993*. UNDP. New York. Oxford University Press, 1993

Country	Human Development Index (HDI) rank (173 countries in total) 1990	Primary enrollment rate (%)		Pupils completing primary schooling (as % of entrants) 1988	Secondary enrollment ratio (gross) 1988-1990	Population with access to services:	
		Total 1988	Girls 1988			Safe water (%) 1987-90	Sanitation (%) 1988-90
Benin	162	71	49	40	11	50	41
Burkina Faso	168	36	28	63	8	67	10
Côte d'Ivoire	136	61	53	73	20	83	36
Guinea	173	32	21	48	9	33	—
Mali	168	23	17	40	6	49	23
Niger	169	32	24	75	7	59	9
Senegal	150	52	46	81	16	53	—
Togo	145	92	83	46	22	71	23

long periods because a spare part is unobtainable or financially out of reach. Fragile standpipes do not withstand constant use. Water is often lost through broken installations, leaving puddles around the water point which provide an ideal environment for vector breeding.

**A water source in working order can not itself ensure water hygiene.** A standpipe or pump is difficult to drink from hygienically. Children need water fountains or receptacles from which to drink. But both water points and cups or pots must themselves be kept clean.

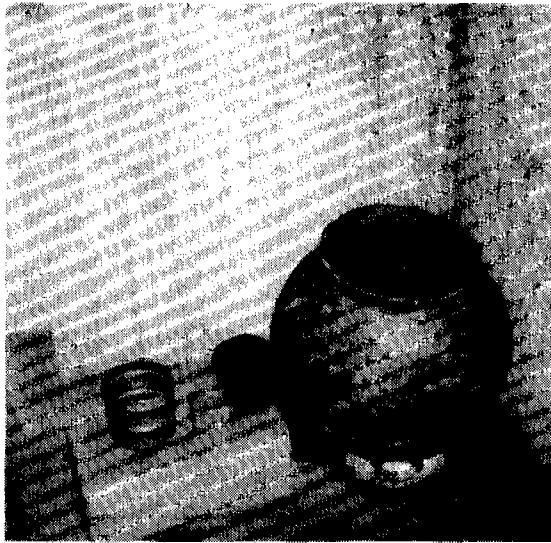
*What do children do when no water or insufficient water is available?* When a school is located in a village or urban area children and staff will often use the local water source, whether or not the water is safe. This may

mean buying water from vendors as in Côte d'Ivoire, or taking water from the local pump or spring, a practice which may cause disputes, as was noted in Burkina Faso. Additionally, within the school there is evidently no means to boil water to ensure its safety. In isolated schools without an adequate water supply, the school community brings its own



**Children and teachers may be forced to use the local water source, whether or not the water is safe. (Togo)**





Where it is not readily available, teachers may store water in the classroom, which may quickly become insanitary. (Burkina Faso)

supply of water in gourds or jars. Where water is not always readily available, teachers may store water in the classroom in the same way that families store water in the home. If water storage vessels are not covered they may become insanitary.

### Sanitation

The case studies indicate that between one quarter and one half of schools in the region have functional latrines. In Côte d'Ivoire none of the schools visited had latrines in working order. And the existence of a functional latrine does not ensure access for children to sanitary facilities: any functional latrines are often reserved for teachers.

One reason why latrines are often out of order is that they are frequently *inappropriately designed* for use by children. Latrines in the region vary in design from communal four to six hole latrines ob-



Many schools have latrines that have fallen into disrepair. (Togo)

served in Togo, to simple pit latrines with superstructures made of branches in some schools in Côte d'Ivoire. Where latrines are built to a Western model, spare parts can be difficult to obtain or prohibitively expensive. Additionally, repairs may be difficult because local craftsmen are not accustomed to the design. The superstructure of latrines may be very rudimentary and they are not always roofed. Fragile latrines may prove a disincentive to children.

The number of latrines available was without exception insufficient to meet the needs of children, particularly at times of peak usage such as recreation. In Mali, for example, in Koulikoro, the region surveyed by the case study, one latrine was available for every 417 children and the study considered that the situation in other regions of the country was even less favourable. In Niger only seven functional latrines were observed in the six schools surveyed.

*This situation contrasts with the standards generally accepted within the health and education sectors which are shown in the box below:*

### How many latrines does a school need?

The provision of one latrine for approximately thirty pupils is generally recommended, if urinals are also available. This represents one latrine for every twenty girls and one for every forty boys.

When planning the number of latrines for a school, certain issues should be considered:

- Are separate urinals available for boys? If so, fewer latrines will be needed.

What is the proportion of boys to girls? If urinals are available, boys need fewer latrines.

- Are children allowed to leave the classroom during classes to use the latrine? If not, the pressure on latrines at recreation time will be great and more latrines will be required.

Do all children have breaks from classes at the same time? If so, more latrines will be required.

Could breaks be staggered?

*When a school has no latrines, where do children defecate?* Children have no choice but to defecate in the area around the school. In rural areas this may mean in the bush, but in urban areas children may have difficulty in finding privacy and the likelihood of others coming into contact with children's faeces is increased.

### **Hand-washing**

Hand washing facilities were very rarely observed, and those available did not allow for hand-washing with clean water. Soap was almost never observed.

### **Solid waste disposal**

Solid waste disposal is a major problem for school authorities. Schools have difficulty finding appropriate ways to deal with their own waste and must also in many cases contend with waste dumped on the school grounds by the neighbouring community because of the lack of enclosure of the school compound. Sometimes waste is burned, but this itself may be a cause of further environmental pollution. In Guinea a solution to the disposal of solid waste has been found: the case study noted that all schools visited deposited their rubbish in pits.



**Makeshift classrooms may be wooden frameworks covered with woven matting.**

### **Cleaning and building maintenance**

Brooms are usually available and classrooms are generally kept clean – a sign that teachers and children are willing to take responsibility for their environment within the limit of available materials. Monitoring classroom cleanliness often falls within the mandate of school inspectors and teachers may be reprimanded if the classroom is not clean and tidy.

Building maintenance is a perennial problem. The structure of school buildings differs greatly, depending on who constructed the school and what materials were available to them. Whilst the majority of classrooms are solid structures built of brick or concrete, increasingly schools are erecting makeshift classrooms, in order to respond to increased

enrollment in the face of reduced budgets. In many cases these classrooms are wooden frameworks covered with woven matting or corrugated iron panels. Whilst such classrooms may have a positive effect in reducing chronic overcrowding, they are not ideal. They are hot in the warm months, cold in the cooler season and generally have little or no ventilation. A serious problem is the poor light, which may ultimately have a detrimental effect on the eyesight of children and teachers. Repairing these and more permanent classrooms is difficult for schools with no maintenance budget. Government bodies are unlikely to be able to maintain the buildings of individual schools, particularly in rural areas, so the school must look, with varying success, for support from the community.

One problem which affects many schools in the region is that of bat infestation of the roof area. As well as being malodorous, bat faeces are highly corrosive and can cause ceiling panels to rot and fall off.

### **Hygiene education**

The amount of hygiene education offered was felt to be inadequate in almost all of the eight countries which had prepared case studies. Health education rarely had a real place in the curriculum and the efforts of teachers were not often supplemented by visits by health personnel because of a lack of staff.

The hygiene education given was generally considered to be of little relevance to the community con-

---

cerned and to be rooted in theory not in practice. The methods used were generally didactic rather than participatory, partly because of lack of adequate training and dissemination of materials and methodologies, and partly because of the lack of sanitary facilities which makes practical teaching difficult. In Benin it was reported that of the 151 teachers surveyed by the case study, only two had received any training in health education and communication. One country which has begun to tackle these two problems is Togo where teachers attend a three day seminar on effective hygiene education and where hygiene education is firmly inscribed in the curriculum.

Although the case studies did not undertake comprehensive studies of the hygiene behaviours of pupils, some did report that pupils did not seem to display many of the behaviours advocated by their teachers or have a firm grasp of the link between hygiene and health. A study in Benin suggested that whilst 51% of junior school children knew that drinking water could transmit disease, 44.5% believed that water was not a source of disease, and 4.5% were not able to answer.

The picture is not all gloomy, however. Examples of positive experiences in hygiene education do exist. In 1988, Burkina Faso organized a "cleanest school competition" which led to considerable efforts amongst children and teachers to improve their environment. In Guinea UNICEF and the government publish a popular school hygiene education magazine *Ecole propre, Ecole verte* ("Clean School, Green School").

### **The different actors influencing the quality of school environments**

It is often assumed that national and local government take primary responsibility for the quality of school environments. In practical terms, this is rarely the case. Because of limited resources, both human and material, they are unable to create or maintain healthy school environments. This is a situation we cannot hope to improve immediately. Today the burden of responsibility and any hope for change lies with children, teachers, parents and communities, supported whenever possible by NGOs or inter-governmental organizations. In Section C, beginning on page 33, specific information can be found on the experiences of an NGO, a UN agency, a regional inter-governmental institution and a re-

search group, all working to support schools and their communities.

### **Children and teachers**

Children and teachers are at the forefront of the creation of healthy school environments and teachers bear almost sole responsibility for the implementation of hygiene education. The degree of responsibility given to school children varies from country to country and even from school to school.

Children, under their teachers' supervision, are generally responsible for sweeping classrooms and the schoolyard. They may also be expected to clean the latrines, either on a voluntary basis or as a punishment. The Senegal and Togo case studies describe how school children organize School Health Committees to promote healthy behaviours and a healthier, safer school. In order to supplement their income and to provide environmental education, some schools in the region have created a market garden, tended by the children.

School inspectors can play an important role in evaluation of the achievements of teachers and in monitoring cleanliness. They can also interact between government and communities, disseminating information and supporting community action.

### **Parents and the local community**

**Parents and the wider local community bear much of the burden of keeping schools functioning, and several case studies noted that this role is increasing.** The responsibility undertaken by parents and the community depends in part on their income, but also on the nature of the community: its cohesiveness, and its degree of acceptance of formal education structures.

Whilst in Côte d'Ivoire government policy has demanded that communities construct all schools, even within countries the pattern of community involvement may differ markedly. **Current trends suggest that national and international financial cutbacks are leading to increasing community involvement in school construction and even community management of school infrastructure.** In Benin, for example, as only very few schools are built by national government, the responsibility for building, maintaining and equipping schools falls primarily on the local community. In each school a Parents

---

Association meets about twice a year to manage the budget raised from school fees of 500 CFA per child per year. Problems arise whenever the budget is depleted. Since 1993 in Benin, in an effort to increase female enrollment, the government has exonerated girls from school fees, reducing the school's budget considerably.

If local communities are playing a significant role in the construction and maintenance of school infrastructure, then health education must reach out of the school to the community, allowing them to develop an understanding of the need for a healthier school environment.

### **NGOs and inter-governmental organizations**

NGOs and inter-governmental agencies are major players in school hygiene education and environmental sanitation and are often seen by schools as the greatest hope for the construction of latrines and the provision of educational materials. Their interventions differ, but are often multi-faceted, offering support to hygiene education and to the improvement of school environments. The case studies particularly highlight the work of Aide et Action, East, the Association Française des Volontaires pour le Progrès (AFVP) and UNICEF. UNICEF is active in all of the countries of the region, providing school latrines, stocked medicine cabinets, pumps and support in the development of hygiene education materials and in teacher training.

The case studies clearly show that, despite their dynamism, NGOs and UN agencies cannot hope to provide support to improve the environmental sanitation of all schools. NGOs and inter-governmental organizations can, however, have national impact through their work in teacher training or in educational materials development.

### **Health personnel**

The case studies do not suggest that health personnel play a major role in ensuring healthy school environments or in promoting healthy behaviours. This is chiefly because of the lack of health personnel. In several countries efforts to provide school health services have been curtailed because of insufficient resources and may only be available in certain regions and at a limited level.

### **Local and national government**

National and local government departments would be more important players if they had greater resources available, but in developing countries, even when the state can build sanitary facilities in schools, lack of human and financial resources means that the maintenance of facilities by government agencies is rarely feasible. Structural adjustment has hit Ministries of Education and Health particularly hard. Consequently they have reduced expenditure on anything not perceived as essential to the functioning of the school.

Some of the countries surveyed have made a policy commitment to the provision of latrines and safe water points in schools. In Burkina Faso for example the new *Education II* plan stresses that every new school must have sufficient sanitary facilities. But the transition from policy to implementation can be difficult. Since independence in 1960, the government of Côte d'Ivoire has supported rural schools by equipping and providing staff for any new school buildings the community could build. Population increase coupled with a percentage increase in enrollment has meant that in recent years the government has been unable to keep its side of the bargain.

*This section of the report asks why the problems detailed in section A2 exist and suggests ways by which they might be resolved.*

Based on the country case studies and of the experience of different development partners, the participants attempted to identify the causes of the problems they had found. Next they proposed solutions to these problems. They found that the fundamental causes for the insanitary school environments and inadequate hygiene education in schools in the region fell into four categories:

- Political and policy causes
- Cultural causes
- Educational causes
- Institutional and financial causes

### **Political and policy causes**

Severe resources constraints oblige governments to prioritize their responsibilities. This in turn has meant that, in most of the eight countries, little attention has been paid to the development of national policy on the issues of school environmental sanitation or the improvement of hygiene education. Equally, responsibility for different aspects of the school setting, and their attached resources, may be divided between different ministries, leading to difficulty in communicating, or acting coherently. The school environment and health must be linked in decision-makers minds before this situation will change.

Any effective environmental action in the school setting requires real commitment from several different ministries and close collaboration between these ministries, particularly between the Ministries of Education and Health. Such broad commitment and inter-sectoral collaboration are difficult to achieve. Moreover, cooperation is necessary not just between different government bodies, but also between all the different development partners. As shown in Section A2, this means the school itself, the community, NGOs and inter-governmental organizations, local health personnel and local and national government.

### **How can these issues be resolved?**

The first step towards improvement would be the adoption of a coherent national policy on school environmental sanitation and hygiene education. Such a policy should clearly demand that all new schools constructed should provide adequate num-

bers of safe water points, latrines and hand washing installations. It should also make a commitment to the improvement of water supply and environmental sanitation in existing schools and map out how these improvements are to take place. Policy commitment is more likely to be forthcoming if there is a real understanding by all concerned of the long-term potential for public health impact and of the possibility to take some action even if no increased resources can be proposed by government.

Policy would include an acceptance of the need to define minimum acceptable standards. Flexible guidelines should be prepared and distributed providing simple guidance on:

- approximately how many latrines, water points and hand washing installations should be available for any given number of boys or girls;
- how to make sure that these, and the accompanying hygiene education, are culturally appropriate.

A method must be developed to ensure greater co-ordination between all the different groups concerned, including government ministries, NGOs, inter-governmental organizations and external support agencies who assist the sector. Improved coordination could be achieved through a national coordinating committee on school environments and hygiene education or through a less formal system of collaboration, through better sharing of information and planning of joint activities. Coordination would be facilitated by a data bank with up-to-date information on the facilities in schools, on training possibilities and on educational materials. The data would help in planning future work, attracting increased resources and monitoring improvement.

### **Cultural causes**

Beliefs and practices related to water and sanitation vary considerably, not just from country to country, but also from region to region, even from village to village.

The case studies noted that there is little harmony between the infrastructure provided in school and that which is available in the community. Latrines, for example, may not look like those available in the community and be built of materials unavailable in the community. The placement of the latrines may also be culturally alien to the local community, if, for example, boys' and girls' latrines are

---

placed side by side in a community where women traditionally defecate on the other side of the village to men. This not only means that the hygiene taught at school seems irrelevant to the home environment, but also inhibits replication of school infrastructure by families in their own homes.

It was felt that the hygiene messages transmitted through schools could have a much more significant effect on the wider community, if they were more relevant to the reality of the community's everyday life. Participants suggested that some current educational approaches seem to advocate that the child, his or her family and his or her community should immediately take giant strides forward, both in terms of facilities and in terms of behaviours. Because such advances may be inconceivable, the lessons can be discouraging.

#### **How can these issues be resolved?**

There are many factors to be considered when trying to create culturally appropriate infrastructure and education programmes. Although, for example, government can help by providing guidelines on the number of latrines or the distance of water points from latrines, facilities, messages and educational methodologies will have to be designed at least at local level.

Perhaps the easiest way that governments can encourage harmony with the local community is to involve the community in infrastructure and message design. Schools are integral parts of the communities: school and community are interdependent and must support one another. An increased role for communities in the management of school infrastructure is logical. This is not only because many governments lack resources to undertake this role, but also because the greater the role of the community in designing, building or managing the facilities, the more chance there will be that the facilities are culturally appropriate. Ways in which governments can encourage and support community involvement in school infrastructure management and hygiene education are described below in *Institutional and financial*.

The role of teachers in the promotion of infrastructure improvement and in the design of appropriate hygiene education should be emphasized. Teacher training should stress that each community has different beliefs and practices related to water and sanitation and should equip teachers with the ability to adapt their lessons to local circumstances. Teacher

training should equally underline the importance of simple appropriate technologies that the community can readily attain.

#### **Educational causes**

From the case studies, four major problems emerge as severely affecting the quality of hygiene education offered by schools in the region. First, teachers almost never receive adequate training in hygiene education. Second, most case studies state that health education has no specific slot in the curriculum and is not adequately addressed through other classes. A third problem which hampers effective hygiene education is the lack of appropriate teaching methodologies and materials at teachers' disposal. It is felt that in many countries materials and documented methodologies do exist, but they rarely reach schools and almost never in sufficient numbers to be used directly by children themselves. Lastly, teachers encounter difficulties teaching hygiene behaviours which cannot be applied within the school, because of a lack of sanitary facilities. A handwashing lesson has little impact when no handwashing facilities are available at school.

#### **How can these issues be resolved?**

It was felt that much could be done immediately and at little cost to improve the quantity and quality of hygiene education offered at schools in the region. One key measure would be to ensure that hygiene education was firmly rooted in the curriculum. It was not considered necessary to create a slot exclusively for hygiene education. In fact it was considered that hygiene education would be most effective if it was integrated into various parts of the curriculum, such as natural science and civic education.

A curriculum commitment to hygiene education must be accompanied by support to teachers to provide the highest quality of education possible. An important early step would be to improve the training of teachers by developing and introducing more relevant courses into their pre-service training and by ensuring that all teachers can attend in-service courses on hygiene education and improvement of the school environment. Teachers need to have a real understanding of the links between a hygienic environment, hygienic behaviours and good health before they can be expected to teach hygiene effectively or promote improvements to the physical environment of the school.

A real understanding of the issues and commitment to change by teachers was felt to be the foremost element of improved hygiene education. Nevertheless, teachers can offer more effective and inspiring classes if they are familiar with the most appropriate educational methodologies. Active health education which aims for practical behaviour change should be the goal. Educational methodologies and materials which have proved effective in promoting behaviour change should be documented and shared within countries and between countries. Certain simple materials, such as soap, can help to make hygiene education relevant and should be made available whenever possible.

Evaluation of programme effectiveness is clearly necessary, but the evaluation of educational programmes for their impact on behaviours or on health is costly and time-consuming. The link between hygiene and health is firmly established. Instead of undertaking difficult evaluation, countries could choose simple indicators which tell them whether the programme is functioning. Examples of appropriate indicators are the availability of soap at hand-washing installations or the functioning and cleanliness of latrines.



**Active health education which aims for practical behavioural change should be the goal. (Benin)**

### **Institutional and financial causes**

In almost all developing countries, the water supply and sanitation sector is seriously under-funded. This situation has been exacerbated in recent years in schools, because of the severe restrictions on public

expenditure and of the financial pressures caused by population growth and increased enrollment. Ministries cannot solely bear the burden of school environments and hygiene education.

Insufficient monitoring and evaluation of activities undertaken means that it is difficult to plan effective future programmes and to attract funding.

### **How can these issues be resolved?**

The case for additional funding for the water supply and sanitation and educational sectors is strong. However, when additional funding seems unrealistic or will only ever be minimal, low- or no-cost solutions must be sought. Technologies promoted should not only be culturally appropriate, but also economically appropriate. **The promotion of the role of the schoolchildren and their community in the management of the school is perhaps the most important step toward change.** But not all communities can participate equally: some are wealthier than others; those in rural areas may be more permanent and cohesive than those in urban areas. How can communities be encouraged to promote change and be supported in their activities?

A bottom-up approach would see the state encouraging children to improve their own environment and requesting support when they could not act alone. Such an approach could be promoted through magazines which speak directly to children and their teachers, through curriculum which stresses responsibility and through educational methodologies which stress action. Competitions for the most hygienic school may prove an effective motivator. Teachers will become agents for change through effective and continued training. Communities will be prepared to act when they themselves

are included in hygiene education initiatives. Where Parents Associations are not in place, their creation should be fostered. Where they are already functional, their work should be validated and encouraged and they should, wherever possible, be

---

allowed to take greater responsibility for the management of the school.

Various options exist for providing concrete support to schools and communities who are ready to act. Countries might decide to make available, upon request, latrine slabs or other materials, to communities that have already shown a significant commitment to the school by repairing the buildings or digging a well. Countries may decide to offer technical advice on latrine construction or making water safer. One interesting option would be to assist schools in developing income generating activities such as market gardens. Additional income generated could be spent by the Parents Association to improve the school setting.

In all the above cases the government bodies concerned must be accessible to schools and communities: one way to achieve this accessibility would be to brief school headmasters or mistresses or school inspectors and give them documentation with ideas for action and contact addresses. Practical support may be best offered through NGOs or a mix of NGOs and government. NGOs may be able to spend the time necessary to follow a school through a period of change.

As described under the previous heading *Educational causes*, monitoring is essential if programmes are to continue and to function effectively. Monitoring also allows communities to evaluate their own progress.



## **A4. KEY CONCLUSION AND RECOMMENDATIONS OF THE WORKSHOP**

---

*This section of the report takes the problems and possible solutions discussed in the previous two sections and defines an agenda for immediate feasible action.*

### **Key Conclusion**

Increasingly, examples can be found of communities taking responsibility for the improvement and maintenance of the school environment. This is partly in response to the financial constraints experienced by Ministries of Education and of Health which mean that they can no longer fulfil this role. It is also because of communities' belief in the importance of education and of a healthy learning environment.

The most effective role of government and concerned NGOs and inter-governmental agencies is to support schools and communities in their efforts to improve the school environment and the teaching of hygiene. Government and its partners can provide this support through revised teacher-training, the development of action oriented curriculum, the dissemination of materials and through a commitment to ensuring that all teaching and infrastructure in schools are culturally and economically appropriate.

It was felt that, despite financial and human constraints, much could be done immediately to help children and communities to create and maintain healthier learning environments and to benefit from appropriate, effective hygiene education.

### **Recommendations at national level**

The participants agreed that certain actions could be undertaken immediately at national level to begin improving school environments and hygiene education. These priority actions fall into the same four categories which emerged from discussions of the fundamental problems:

- Political commitment and appropriate policy
- Cultural harmony between school and home
- Improved hygiene education
- Institutional and financial mobilization

### **Political commitment and appropriate policy**

#### **1. Ensuring coherent action**

A new national coordinating committee should be created, made up of responsible officers of all ministries concerned and representatives of teachers, community leaders and any NGOs or agencies involved, such as WHO, UNICEF and UNESCO. The committee would supervise and review implementation of all future programmes and ensure that all future actions are culturally relevant and community-driven.

#### **2. Gathering information**

The case studies prepared for this workshop provide insights into the current environmental situation and hygiene education provision in schools, but they also revealed the lack of national statistics on school facilities. Detailed information is necessary for the planning of programmes by government, NGOs and agencies. A nation-wide survey should be undertaken in each country and results published as a document of the national coordinating committee.

#### **3. Sharing information**

The findings of the workshop and of the national survey should be shared with decision makers in each of the eight countries. This means the Ministries of Education and Health, and also NGOs and agencies which support government in programme development and implementation. These different groups must share the information with schools and communities, who will be the ultimate agents of change.

#### **4. Development policy**

Governments should adopt a national policy on water supply, environmental sanitation and hygiene education in schools. This policy should include:

- A commitment to the involvement of local communities in the design, construction, maintenance and management of the school environment, as well as guidance on how this can be supported by government;
- Legislation to ensure that every new school building has adequate, appropriate sanitary

---

facilities and water points and that, progressively, existing schools without water supply and sanitation are provided with this infrastructure;

- Curriculum change to ensure adequate attention to hygiene education, coupled with teacher training and the development and dissemination of educational methodologies and materials for hygiene education.

### **Cultural harmony between home and school**

#### **5. *A voice for the community***

Parents associations, or any other group which brings school and community together, should be encouraged and supported. Their role in school infrastructure management should be increased and they should be involved in the design of hygiene education programmes. The parents association should have an active voice in wider community development.

#### **6. *The school's role in the community***

Teachers and pupils should play an important role in spreading hygiene education to the community. They could also become involved in community activities such as environmental improvements. Teacher training and curriculum should reflect this role of the school.

#### **7. *Ensuring culturally relevant hygiene education***

To ensure that hygiene education through schools is relevant to the realities of community life, the parents association should be involved in the development of lessons and teachers should be trained to be sensitive to the local situation and advocate progressive, realistic change. Whenever possible, teachers should learn about local beliefs and practices, but help children to discover which are beneficial and which might be harmful to their health.

#### **8. *Ensuring culturally relevant infrastructure***

Design, building and maintenance must take place at a local level, in order to ensure that water, sanitation and handwashing infrastructure at school is culturally appropriate, will be regularly maintained and could feasibly be replicated by the community. School staff should be familiar with the community's preferred designs. Chil-

dren, the parents association and local craftsmen should be involved in design selection.

### **Improved hygiene education**

#### **9. *Strengthening curriculum***

- Existing hygiene education programmes should be reviewed by the national coordinating committee, both for their harmony between schools and homes and for specific theoretical and practical objectives. The place of hygiene education in the curriculum should be firmly established, not necessarily as a separate subject, but as an integral part of other classes;
- The new curriculum should not provide fixed messages, but rather should stress the role of the teacher in adapting messages to fit local beliefs and practices;
- A strengthened curriculum must include indicators for evaluation and information about who should undertake such evaluation. Simple evaluation should be conducted by teachers to allow them to monitor their performance and to help their motivation.

#### **10. *Strengthening teacher training***

A new approach to hygiene education will require different training for new teachers and additional training for those already in service. Health education should become a significant component of teacher training. The national coordinating committee should review teacher training courses and the skills and training of their trainers. Efforts should be made to involve health personnel and members of NGOs or concerned agencies in teacher training.

#### **11. *Improving the availability of educational methodologies and materials***

Those teaching and learning materials already available should be gathered, catalogued and disseminated as widely as possible. At the same time useful teaching materials produced by international agencies such as WHO, UNICEF, UNESCO and IRC should be collected, reviewed and made available where needed.

Equally, active educational methodologies which have proved effective should be evaluated, documented and shared.

---

## **Institutional and financial aspects**

### **12. *Creating a national plan of action***

Based on the nationwide survey, a *plan of action* should be made by the national coordinating committee, working as closely as possible with community leaders. The plan should set out the environmental and hygiene education needs of schools, prioritize these needs, propose a logical and feasible long-term plan for change and set out which problems the country wishes to tackle first. The plan should clearly define responsibilities for all aspects of the school environment and hygiene education. The plan should be a formal joint document of all the ministries concerned and should address issues including:

- How communities might be encouraged to take greater responsibility for the management of school infrastructure, including how communities can be assisted in managing a fund for school maintenance;
- How action undertaken will be monitored and evaluated for efficiency and effectiveness.

### **13. *Seeking financial and technical support***

Ministries and their partners should examine their current management of financial, material

and human resources and decide whether these cannot be better allocated to improve school environments and facilitate effective hygiene education.

Based on the plan of action, a *project document* should be prepared by all the ministries concerned for submission to development partners, explaining where financial or technical support to the action plan would be welcome. Responsibility for the co-ordination of external support should be defined and an adequate reporting procedure instigated.

## **Recommendations at regional level**

1. **In order to promote the exchange of materials and educational approaches, one regional institution should be designated as a clearing house. The clearing house should gather and review materials and methodologies and share those which are shown to be effective.**
2. **WHO, UNICEF and UNESCO are requested to support the countries in their efforts to improve school environments and hygiene education and to play an advocacy role, highlighting the importance of the issue at a regional level.**

## **B. RESUMES OF COUNTRY CASE STUDIES**



The Republic of Benin has a surface area of 112 622 km<sup>2</sup> and is bordered by Togo, Burkina Faso, Niger and Nigeria. In 1991, the population of Benin was estimated at about 4.86 million.

### **The case study**

In 1993, at the request of the government of Benin, the NGO EAST, with financial support from WHO, conducted a study on school environments and school environmental health education in the Mono department in south-west Benin. Of the 427 schools in the department, 163 were visited. This study was used as one case study for the workshop. Another survey was carried out by staff members of the Ministries of Health and Education in 38 of the 382 schools of the Department of Borgou, in the north-east of Benin. The findings of these two studies will be considered together.

**Most of the schools visited highlighted the following issues: the need for rehabilitation or construction of school buildings; the need for the creation of canteens; inadequate provision of safe water points; insufficient school furniture; inadequate teaching materials and essential drugs; and an urgent need for the installation of latrines.**

### **Sanitation**

Environmental sanitation is a major problem for schools in Benin: only 23.6% of the schools visited in the Bourguou department have latrines. These are used by the majority of pupils but are generally poorly maintained. The remaining 76.4% schools have no latrines and children defecate in the open near the school. In the Mono department 33% of schools surveyed have latrines. 13% of schools had a dry single pit latrine and 20% had a VIP latrine, generally built during a project undertaken by an NGO or external support agency in collaboration with the Department of Hygiene and Sanitation (DHA). 80% of existing latrines in Mono are used and 60% were considered well maintained.

### **Water supply**

The studies show that less than one third of schools in Benin have a permanent source of safe water. Particularly in rural areas, the demand for a permanent water point near schools is very strong. Only 10.52% of the schools visited in Bourguou have a piped water supply, whilst 29% draw water from a traditional well, 26.3% make do with surface water and 34.4% use both surface water and water from a

bore hole. A similar picture was observed in Mono. Availability of water is a problem: apart from the few schools in the urban areas which have piped water, most schools suffer acutely from water shortage during the dry season, which lasts from six to eight months in this area. In Mono it was considered that only 40% of schools have a permanent source of water and only 28% have a source of safe water. In order to ensure a regular supply of drinking water, 22% of schools surveyed in Mono keep jars of water in classrooms. These were usually covered and well maintained, however the water was almost never treated to make it safer to drink.

### **Buildings, maintenance and cleanliness**

Three complaints about infrastructure in schools were heard repeatedly during the survey: existing premises are not maintained and are in poor condition; new classrooms and sanitary facilities are needed; school canteens to provide a mid-day meal should be created in order to encourage more children to come to school.

The structure of school buildings in Benin varies: 34% of the schools visited in Bourguou are built of hard materials, 55.3% of prefabricated materials and 10.52% of apatam. All three types of construction can be found within the same building. Building standards laid down by government are not always respected. In some classrooms there is no door, only an open doorway and in many schools windows do not let enough air or light into the classrooms.

Schools take responsibility for classroom cleanliness: all the classes visited are regularly swept and are kept tidy. 74% of the schools surveyed in Mono have a hygiene committee made up of teachers and pupils that supervises the maintenance of the school premises by the pupils (sweeping, garbage collection, cleaning of latrines, etc.), as well encouraging the children to look after their personal hygiene and clothing.

### **Hygiene education**

Health education became an integral part of the curriculum in the school year 1993–1994. However it may be some time before the effects of the new programme are fully felt, as few teachers have so far been trained in health education or given access to appropriate health education materials. Only two teachers out of 151 surveyed had received any training in hygiene education. Many of the teachers in-

interviewed were hoping to obtain the teaching guides and supporting illustrative materials for IEC published by UNICEF.

As part of the survey a test of children's knowledge of hygiene was carried out among 703 pupils in the final class of primary school in Bourgou and gave the following results: 51% knew that the water they drank can transmit diseases, 44.5% felt that water could not be a source of disease, and 4.5% did not reply.

### Health services

Health services are not widely available in schools in Benin. Only 17% of schools in Bourgou have a store of essential drugs and only 10% stated that they were visited for medical examinations once a year. In Mono, only 14% of schools have a teacher who has been trained in primary health care. It was noted that health services were more likely to be provided in schools situated in the chief towns of sub-districts.



Real attempts are being made to increase school attendance by girls. (Benin)

### The school and the community

Apart from a few schools built at the initiative of the national authorities, *responsibility for most of the work of building, and all the maintenance and equipment of schools lies with the local community.* In each school, a parents association meets, on average, twice a year to manage the meager budget of between 500 and 1000 CFA per pupil per year, derived from school fees paid by parents.

Since the beginning of the 1993-1994 school year, concern to increase school attendance by girls has led the state to exempt girls from school fees. This reform has caused difficulties for parents associations which find themselves with insufficient funds to run their schools properly (already, in Mono, it was considered that only between 50 and 70% of parents pay their children's fees). 2105 of the 6164 pupils attending the schools surveyed are girls, which means that the number of fee-paying pupils is only 4059. In practice, each school can count on an income of only about 50 000 CFA. Much depends on the income level of the village: in Bourgou,

it was noted that the development of cotton growing is reducing relative poverty and enabling the villagers to contribute fairly regularly to parents associations.

About one-third of the schools covered by the survey have a garden or a field where they can grow produce, however, in general it is felt that local agriculture is well organized and effective, and can readily meet the nutritional needs of school children without any nutritional supplementation from the school.

Burkina Faso is a landlocked country situated at the heart of western Africa, in the great bend of the Niger River. It has an area of 274 122 km<sup>2</sup> and its population is estimated at about 9 million. Approximately 24.6% of children aged 7–12 attend the country's 2587 schools, making a total of 530 011 schoolchildren. Schools are not evenly spread throughout the country's 30 provinces and the northern provinces in particular are not well served.

### The case study

The study was carried out in the province of Gourma, in the east of the country. This province has 61 schools with 184 classes and a total enrollment of 11 314 pupils, of whom 63.9% are boys and 36.1% girls. The study covered 10 schools located partly in the provincial capital and the departmental capital, but predominantly in the province's villages.

### Sanitation

Sanitary facilities vary considerably from one province to another, both in terms of design and coverage. Both traditional latrines and ventilated pit latrines can be found in schools. Four of the 10 schools visited had latrines in working order, but their design was considered to be inappropriate for use by the smaller pupils. In rural areas in particular, facilities are rudimentary or rare in schools, *echoing the situation in the wider community in these areas*. Even when functional latrines are available



Even when hand washing facilities are available, they may not be ideal. (Burkina Faso)

they may not be used: in Kompienga children say that they don't use the latrines because the ineffective ventpipes mean that they are very smelly.

Only two schools of the 10 surveyed were observed to have hand washing facilities next to the latrines and only one had soap available for use by pupils.

### Water supply

Half of the schools surveyed have access to drinking water, generally from bore holes equipped with manual pumps. These are usually shared with the neighbouring community, which can be a source of disputes into which the headmaster or mistress may be forced to intervene. Some of the schools which have their own water and sanitation facilities, must share these with the local community, which can lead to maintenance problems.

### Hygiene education

Until now, progress in health education has mainly been achieved through the hygiene education component of the national programme to promote water infrastructure in the rural areas. The latest government plan for the development of the education sector, *Education II*, offers hope both for greater attention to health education and for improvements to the school sanitary infrastructure. In future every school built must provide infrastructure such as water points and latrines.

In 1988, a hygiene competition was organized in the schools of Burkina Faso. Each school could enter and was evaluated on the cleanliness of their environment. The competition was highly successful, motivating schools to undertake major efforts in environmental sanitation and hygiene.

### School health services

In theory, local health personnel working through schools provide school primary health care services, including: the correction of certain nutritional deficiencies; immunization; monitoring of environmental hygiene in schools; and the promotion of healthy behaviours. But in reality, in many parts of Burkina Faso school health services are paralysed by lack of resources and are unable to function effectively. Those provinces that have effective health services are the provinces which are supported by non-governmental organizations and which have succeeded in bringing together different sectors in a multi-sectorial effort to promote the health of children.



---

### **The school and the community**

Increasingly, the people of Gourma are coming to realize the benefits both of hygiene and of education for children.

**More and more communities are helping with the construction of school buildings, generally through parents associations some of which now play an important role in the management of schools.**

It was noted, however, that whilst all the schools visited officially have a parents association, in some cases the association exists in name only and undertakes no activities to support the school. Not all communities express the same interest in the school environment: in the school in Pama, when a teacher

requested a mother to come into school after her son had defecated in a classroom, the mother cleaned up the faeces, but insulted the teacher, telling him that his own home was not as clean as the school.

### **The work of NGOs and intergovernmental agencies**

Catholic Relief Services (Cathwel) are the most active group in supporting schools in this region, providing food for canteens at many of the schools. One interesting partnership has evolved between the school of La Clusaz in France and the school in Pama. The La Clusaz school has sent educational materials and equipment and helped Pama school with the repair of the village pump used by the school.

Côte d'Ivoire has a surface area of 322 463 km<sup>2</sup> and a population estimated at 12.46 million in 1991. In the school year 1989–1990, Côte d'Ivoire had 6691 primary schools (both public and private) for a total of 1 405 187 pupils. The greater Abidjan area alone had 281 386 pupils, or 20% of the overall number of schoolchildren.

### **The case study**

Four schools were surveyed in the outskirts of the capital city, Abidjan. It was felt that, contrary to what might be expected, schools in Abidjan encounter the same problems as those in rural areas. Official statistics suggest that 27% of all schools in Abidjan have no latrines.

### **Sanitation**

In towns, as in rural areas, sanitary facilities have never been a priority in the design of school infrastructure and it is quite common for a school to be opened without any latrines being planned. Sometimes, where the school authorities are aware of the risks inherent in poor hygiene, improvised latrines, often made of branches, have been constructed. When there are no latrines or they are not properly maintained, the children go outside to defecate. Modern latrines are mainly found in the urban areas and are soon abandoned for lack of maintenance. Schools may thus be without latrines for several years.

Two of the four schools visited had no latrines, while the other two had only rudimentary latrines that were not in good working order. These were traditional pit latrines with walls, but without roofs. The majority of the children at all these schools defecate directly out of doors in the vicinity of the school.

Leaves or pages of old notebooks are used for anal cleansing and these, as well as the protection used by girls during their menstrual periods, are thrown on the ground around the school. In fact, the disposal of solid waste represents an important problem for schools: in general rubbish is dumped on an open-air pile near the classrooms, exactly where the children go to defecate.

### **Water supply**

In those villages which have a piped water system installed by the national water distribution company

(Société de Distribution d'Eau en Côte d'Ivoire (SODECI)), the schools have their own metered water supply with several taps available to the pupils. In villages where there is a village water supply system, the school either has its own standpipe or there is a standpipe in the village from which the school can draw supplies. Villages with neither of these systems continue to draw their water from rivers, ditches or wells.

Even if water is available in sufficient quantity, its quality can be problematic: if there is no free water point in the school or the community, the children buy water sold by vendors, even when its quality leaves much to be desired. Poor hygiene can cause problems: the water points are not always properly maintained and drinking from a common cup or from the tap itself carries risks of infection.

### **Hygiene education and behaviours**

Health education is not currently part of the primary school programme. The subject is very briefly addressed in a course entitled "Civic and moral education and environmental studies". The time spent on this subject varies from 15 to 30 minutes a week depending on the interest of the teacher.

Because no specific training in health education is given to primary-school teachers and as teachers do not have any appropriate teaching aids, the quality of the hygiene education is variable. A soap company has produced a brochure on hygiene, which naturally places considerable emphasis on the use of soap, and this is used by many teachers as a teaching aid.

In the four schools surveyed there is a substantial gap between teaching and local practice.

**The case study expressed the view that if rural communities are to take responsibility for the environment of schools and devote attention to improving sanitary facilities, they should be included in any environmental hygiene education that is given through the school.**

### **The school and the community**

Since independence in 1960, the State has pursued a policy promoting the construction of public schools. In rural areas, policy stated that if any community constructed school buildings and accommo-

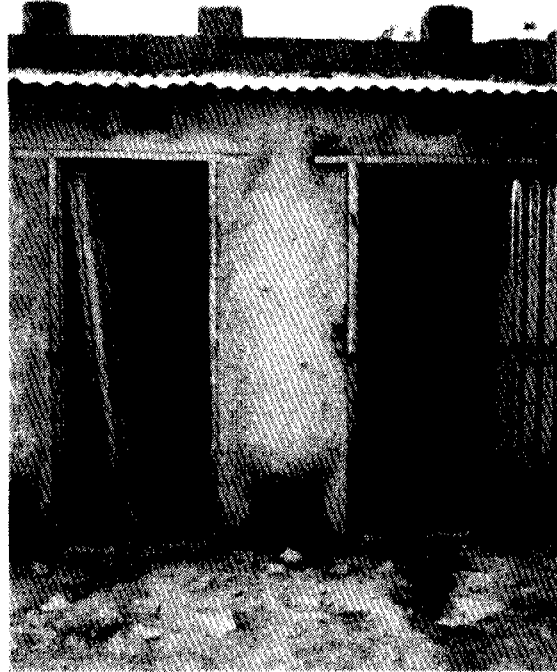
---

dition for the same number of teachers as there were classes, the State would provide teaching staff and the necessary furniture and equipment. This system functioned well until the extraordinary growth in demand for primary education of recent years. For some time now, the State has no longer been able to meet its commitments and schools are no longer systematically equipped.

In urban areas, the State was responsible for the building of primary schools until 1980 when a system of municipal authorities was created, amongst whose responsibilities are the construction and maintenance of school buildings.

### **The work of NGOs and Intergovernmental agencies**

The case study noted that very few organizations support schools regularly or systematically. Only the World Food Programme is a regular supporter, providing assistance to agricultural activities and school canteens. Occasionally clubs, such as Rotary or Lions Club, intervene in schools supplying materials or supporting repairs.



**Most latrines are no longer functional. (Burkina Faso)**

Guinea has an area of 245 857 km<sup>2</sup> and its population is estimated at about 7 million. Forty-two per cent of the population is under the age of 18. Approximately 36% of children attend primary school, although for girls this figure is closer to 24%. The number of pupils enrolled in primary schools is 421 869, of which 338 601 are in the urban areas and 83 268 in the rural areas.

### **The case study**

The survey was carried out in seven schools in the coastal region. Six of these are in rural areas and one in an urban area. They are situated between 50 and 200 km from the capital, Conakry. In total the seven schools have 2 593 pupils, of which 921, or 35.5%, are girls. It was noted that the schools situated close to urban areas have a considerably higher percentage of children of school-age children attending school than those in more rural areas. It was also observed that in rural areas no female teachers are employed.

### **Sanitation**

Only three of the seven schools surveyed have working latrines. Two have latrines which are no longer functional and two others have no latrine at all. One school which currently has no sanitation facilities was in the process of building latrines when the case study was conducted. The case study noted that it is increasingly rare to see pupils defecate out of doors, so it must be assumed that children hide themselves or make use of facilities in neighbouring households.

Of the three schools with functional latrines, all had been supplied through external support, one set of facilities by the French NGO *Aide et Action* and two by the Red Cross. The sets of latrines supplied by the Red Cross consist of three latrines: one each for teachers, girls and boys. No material is provided for anal cleansing, however a basin is located next to the latrines for handwashing. The case study reports that at one of the schools cleaning and maintenance of the latrines is undertaken twice a week by the pupils. Since their installation in 1989, no problems have been reported in the functioning of the latrines. This may be in part due to the fact that the majority of the children have latrines in their homes.

### **Water supply**

Drinking-water is not available in all seven schools and provision depends largely on the availability of a water point near the school. Four of the schools surveyed were located near a pump, but one of these pumps is not currently functional. The National Water Service (Service national d'aménagement des points d'eau (SNAPE)) has only been able to improve approximately 50 bore holes for use specifically by schools.

### **Building maintenance and cleanliness**

All the schools are clean and make efforts to dispose of their solid waste, either placing it in garbage pits or burning it in the corner of the school yard. It was noted that several schools are considerably cleaner than the surrounding area and that consequently children are happy to spend time at school. Pupils are responsible for sweeping of the classrooms and cleaning of the latrines. These activities generally take place on Saturday morning. *Interestingly, it was noted in one school that the burden of latrine cleaning falls most heavily on girl pupils who take turns at cleaning under the supervision of a female school teacher.*

### **Hygiene education and behaviours**

**In all the schools visited, curricula officially include courses on hygiene and health education, however the quality of teaching was felt to be limited. A marked discrepancy was observed between the behaviors pupils are taught and their actual behaviours.**

Three issues were raised to explain this situation: teachers have not always received adequate training; in many cases no teaching aids are available; lack of harmony between the behaviours taught in schools and everyday life in the community. Some support, in the form of appropriate materials, has come from the Child-to-Child project and from NGOs, but these are not widely disseminated.

### **Health services**

A lack of medical personnel and of financial resources means that few school health services can be offered and the case study revealed that **local health personnel do not intervene in any of the seven schools surveyed.** Few of the schools have a staff member trained in primary health care or first aid.

### The school and the community

Although each school theoretically is requested to have an *Association of Parents and Friends of the School*, these are not always functional and parents do not generally play a significant role in the management of the school.

### The work of NGOs and Intergovernmental agencies

Three years ago, UNICEF carried out a project in collaboration with local populations to improve environmental hygiene. In an area about 100 km from the capital, nine rural schools were equipped with about 30 double-pit latrines and 10 reservoir tanks

for water. To facilitate the transport of water and promote hygiene, UNICEF also supplied trolleys, cans, water bottles and soap. Additionally, since 1991, UNICEF has contributed to the training of teachers and the installation of latrines in schools in two neighbourhoods of Conakry. This project is entitled *Ecole propre, école verte* (clean school, green school), and includes publication of a health education magazine for schoolchildren.

Other organizations which support schools in this area include the NGO Aide et Action and the Red Cross which have been active in the construction of latrines and the Canadian NGO CECI which has provided educational materials to schools.

PROJET SOINS PRIMAIRES ENVIRONNEMENT  
SPN • GUINEE • UNICEF

**ECOLE PROPRE  
ECOLE VERTE**

BULLETIN D'EDUCATION ENVIRONNEMENTALE  
DESTINE AUX ELEVES DU PRIMAIRE

N° 2  
Septembre - Octobre 93

SOURCE UNICEF - GUINEE  
"Je vais à l'école  
et je souris à la vie".

Ce numéro contient :

- . Une lettre pour toi
- . Ton coin santé
- . Respectons les règles d'hygiène
- . Billet aux parents d'élèves
- . Poème : Protégeons notre environnement
- . Les règles d'or de l'hygiène
- . Une bonne mère
- . Jeux - Réponses
- . Comptine
- . Concours
- . Une bande dessinée : Soyons propres

La propreté est le secret de ma santé!

SAVON

A children's magazine used in Guinea.

Mali has an area of 1 240 190 km<sup>2</sup> and a population estimated at about 8.29 million. Approximately 28% of children enroll in primary school. 340 573 children attend state schools in Mali, of which 145 087 are girls and 252 061 boys. An additional 56 575 children (including 20 680 girls) attend the country's 280 koranic schools. 81% of Mali's school pupils and students are in primary schools, however only 35% of the national education budget is devoted to primary education. 98% of the total sum given to primary education is spent on personnel.

### **The case study**

240 primary schools in the region of Koulikoro were studied. This region has the highest level of school enrollment in the country at 24.2% of all school aged children.

### **Sanitation**

The case study revealed that 53% of schools studied have at least one latrine. This means an average for the region of one latrine for every 417 pupils. It is very difficult to determine a national average for school sanitation, but the rare studies which have been undertaken suggest that about one school in five has a latrine.

### **Water supply**

The case study showed that 39% of the schools surveyed have a water point for use by pupils. This figure is probably the highest in the country. Unfortunately, these collective water points are rarely maintained and often unhygienic.

### **Hygiene education and behaviours**

**Health education, with particular attention to personal and collective hygiene, has formed part of the primary school curriculum since independence. The case study team felt that teachers make considerable efforts to include hygiene education in their everyday teaching, but that their efforts are hampered by a lack of teaching aids and by the absence of sanitary infrastructure in schools which makes any practical teaching difficult.**

In recent years attempts have been made to improve this situation. In 1992 the Ministry of Education, in collaboration with the University of Liège, published a health education manual for primary schools, prepared with financial support from UNICEF.

### **The school and the community**

The case study noted a dynamism amongst local

communities and a willingness to contribute financially to the construction of school buildings and the improvement of school sanitation. This is in part a result of a change in government policy which favours decentralization and increased responsibility for local authorities in rural areas. **Rural communities increasingly wholly or partly finance and maintain primary schools and health centres.** Additional support sometimes comes from national or international NGOs.

### **The work of NGOs and intergovernmental agencies**

The support fund for primary education financed by the World Bank and USAID is intended to finance the improvement of school infrastructure and includes provision for the improvement of school sanitation.

A number of NGOs and intergovernmental organizations have supported the improvement of water and sanitation facilities in schools in Mali. UNICEF plays a significant role and its 1994–97 programme of cooperation with the Government of Mali places a particular accent on the development of primary schools, including the construction of latrines.

### **Health services**

Until 1989 the Ministry of Health had a specific division dealing with school and sport medicine, with an attached centre for school and sports health. Through these structures a system of school health services was administered, offering preventative and curative care through school nurses and stores of essential drugs located in schools. Where no health personnel were able to intervene in schools and their was no school medicine cabinet, children received free health care in local health centres.

Since the advent of the national structural adjustment programme, financial constraints have forced cutbacks and, in 1990, both the department and the centre of school and sport medicine were closed, effectively halting all provision of health services through schools. Additionally, although health centres officially provide services to school pupils without charge, financial pressure on the centres mean that children can no longer realistically expect to receive free care.

In 1992 the national action plan for child survival, protection and development attempted to find a way forward and a programme for the improvement of school environmental sanitation is currently under review.

Niger is a landlocked country situated in the east of western Africa in the Saharo-Sahelian belt. It has an area of 1 267 000 km<sup>2</sup> and its population is estimated at about 7.9 million. The population is very unevenly distributed, with three-quarters of the citizens of Niger in one-quarter of the national territory in the southern strip of the country, where the environment is better suited to agriculture.

The traditional school system comprises 2383 schools (franco-arab and experimental) with 377 502 pupils attending public schools and 8561 in private primary schools. The lack of any reliable map of the country's schools and the anarchical establishment of schools result in considerable disparity between urban and rural areas and hamper the harmonious development of the school system. Poor management of the grounds and facilities of the schools create additional problems.

### The case study

The two departments selected for the study are drawn from different geographical areas and were chosen to present, as far as possible, the different cultures of the country. The 21 schools chosen were primary schools, situated exclusively in rural areas, with the exception of three schools in the commune of Dosso, regarded as a periurban area, but lacking in any sanitation and water supply infrastructure. A total of 2 952 children attend the schools surveyed, of which 928, or 31.4%, are girls.

All the problems experienced in Niger's schools are particularly acutely felt in the schools that have a canteen and where the children live together in a boarding house. These schools generally have no refectories, showers or latrines.

### Sanitation

In Niger, environmental hygiene is often neglected when school infrastructure is designed. Of the 21 schools visited, only six had latrines. Of the total of 16 latrines observed, nine were so dilapidated that they were no longer used. Often the reason for abandoning the latrine was the collapse of the superstructure rather than a full pit. When adequate numbers of functional latrines are not available, the children defecate in the bush or

around the classrooms. Positive experiences do however exist: in the Gatawani school, teachers helped children to build a latrine during their lesson time on *Practical and productive activities*. Although this single latrine cannot serve all the 102 children at the school, and the lack of a system to pump out the waste matter means that the superstructure must be moved each time the pit is full, the example of independent action by the school is encouraging.



The disposal of solid waste can be a problem for schools. (Niger)

### Water supply

Very few of the schools surveyed had a water point within the school grounds. In general children had to collect water from the village pump or well, but in many cases this is not currently functional or is situated at too great a distance from the school for regular water collection to be feasible. Often children bring their drink in water bottles or cans. The

---

problem of availability of water is especially drastic in the regions where the traditional wells do not reach the water table and where for long periods no water can be obtained.

### **Hygiene education**

All the schools surveyed made an effort to provide hygiene education through lessons such as civic instruction and natural science. The only educational materials available were standard textbooks in these subjects. The quality of the teaching depends largely on the motivation of the teachers, who are free to convey hygiene messages as they wish. It was noted that many try to integrate practical instruction into classes, teaching children about cleaning of the school area and hand washing after defecation and before eating. **The case study noted, however, the difficulties encountered by children in applying these messages within the school and at home, when in both of these environments latrines and handwashing facilities may not be available.**

### **Building maintenance and cleanliness**

**The case study repeatedly highlighted the problems posed by the lack an enclosure for the school grounds: members of the local community deposit their solid waste, defecate or allow their animals to roam around the school buildings. Solid wastes are generally burnt or dumped near the school buildings.**

### **The school and the community**

Attitude towards the school differs from community to community. In a few villages there was hostility towards the school, and particularly towards the education of girls. However, many communities were ready to support the school within the limits of their meager revenue. Schools in entirely agricultural areas received very little material support from parents because of their low income. The role of the community is all the more important when it is considered that, apart from the efforts of UNICEF, the World Food Programme and the European Fund for Development, little assistance is made available to Niger's schools through external support agencies.



In 1992, there were 725 496 children in primary education in Senegal, attending 2434 schools, of which 2321 were public and 113 private.

### **The case study**

The study covered 21 rural schools in the three departments of the Tambacounda region in south-east Senegal. This region covers approximately one third of the national territory and has 21 661 children enrolled in primary schools.

### **Sanitation**

The study highlighted a number of key points regarding the state of sanitation in schools. Where sanitary facilities have been built, they are often no longer functional. The case study suggested that two of the reasons for the poor rate of functioning of the latrines were the poor hygiene practices of the children and the lack of attention to basic maintenance. Care for the latrines falls considerably behind that accorded to water points. The case study suggests that many of the latrines are very simply constructed from local materials: this should make basic repairs by the school community possible, however a change of attitude by pupils would be necessary if they were to take greater responsibility for the school's sanitation.

### **Water supply**

Although some schools have very good access to water through a piped supply, many schools have no piped supply, pump or well, and share the water point of the local community. Where pumps do exist, they are often no longer functional due to a lack of parts or because no fuel can be purchased, either through lack of availability of fuel or lack of funds. The case study stresses that children and their teach-

ers are willing to take responsibility for the cleaning and maintenance of water points and most were reported to be reasonably clean. Where a piped water system is in operation, the supply may only function between certain hours, in which case children collect water early in the morning in large traditional jars which are stored in the classroom to provide a ready supply of drinking water.

### **Health education and behaviours**

Although a health education programme was launched in the region surveyed in 1979, the case study suggests that in practice there is currently no real commitment to the teaching of hygiene in schools.

Since 1982, the health education programme has been extended with the help of the French volunteer organization, Association Française des Volontaires pour le Progrès (AFVP). The programme seeks to develop deeply-rooted healthy behaviours among schoolchildren by training teachers and providing them with teaching materials in the form of fact sheets or a manual. At the same time, health committees, managed and led by the children themselves, are beginning to appear in schools and a child-to-child teaching approach is being encouraged.

### **The school and the community**

In addition to the external financing they receive, the schools raise funds through a variety of activities, such as market gardens, providing services during harvesting, collecting wood, working in collective fields, theatre, and poultry rearing. Despite their enterprise, schools are still short of funds and this proves to be an obstacle to any major improvement to the school environment.

Togo has an area of 56 000 km<sup>2</sup> a population estimated at about 3.37 million. Approximately 64% of children aged 6 to 11 years were enrolled in schools during the school year 1989–1990. Togo has about 2500 schools.

Togo has not defined any specific policy for social and sanitary infrastructure in schools. The needs of schools are theoretically addressed in the overall policy for drinking-water supply and sanitation. The results of the survey of sanitary facilities carried out in December 1989 by the Department of Primary Education (Direction de l'Enseignement du Premier Degré (DEPD)) revealed that 37.7% of the 1164 schools surveyed had access to a water point within a radius of 600 m, while 35.7% had latrines and 12% had urinals.

The public sector has been paralysed for several years by the economic crisis. Nevertheless, with the support of NGOs and international organizations, the situation has somewhat improved, with approximately 40% of schools having access to water and 37% having latrines. Significant school absenteeism on account of infectious diseases such as gastroenteritis, intestinal parasitoses, diarrhoea, dracunculiasis, etc., is an indirect result of drinking polluted water.

### The case study

In Togo, the study was carried out in 10 rural schools in the areas covered by two school inspectorates in the maritime region, about 40 km from Lomé, the capital. In the 10 schools visited there were 70 teachers, of whom five were women, and a total of 4744 pupils.

### Sanitation

Eight schools have latrines with four to six holes, installed on the initiative of the Department of Sanitation, NGOs or international organizations. Most of the latrines are functional, but in poor condition. Some schools have constructed urinals using local materials.

### Building maintenance and cleanliness

School yards are swept regularly, but it was noted that maintenance of sanitary infrastructures in schools is poor.

### Water supply

There is a general lack of appropriate facilities for drinking-water supply in schools. Seven of the 10 schools visited are supplied with drinking-water from a water point set up by the inhabitants and situated within a radius of 1.5 km from the school. The water points are usually wide diameter wells, mostly without covers. Schools must share these water points with the local community and, in general, no one takes care of their maintenance.

Containers with drinking-water were observed in the classrooms of some of the schools. Some schools also have guttering on their roofs to collect rainwater in their cisterns. These rainwater collection reservoirs (impluviums) are created by schools themselves, with some outside assistance. Whilst helpful, they can rarely satisfy the school's water needs throughout the year.

### Hygiene education and behaviours

School health education is included in the official curriculum within a class entitled "Scientific education and initiation into practical life". This class lasts 30 minutes a week in the elementary classes (third and fourth years at primary school) and 45 to



A urinal constructed using local materials.

---

60 minutes in the middle classes (fifth and sixth years). Most of the teachers have received three days of training on the content, objectives and teaching approaches of health education, aimed at improving the impact of the programme.

**The case study noted a lack of interest in health education activities on the part of certain inspectors and teachers. This may in part be a result of a lack of suitable teaching materials and the difficulty in providing action-oriented hygiene education without adequate sanitary facilities.**

Each inspectorate has a supervisory committee composed of teachers who have familiarized themselves

with the problems of hygiene. In the school, a children's school health committee is organized to encourage hygienic behaviours and the improvement of the school environment.

### **The work of NGOs**

Certain organizations have been particularly active in the school setting. In Togo, UNICEF has constructed 55 latrines, seven wells and four standpipes, and supplied 816 schools with essential drugs. The NGO *Aide et Action* has built 27 wells and seven standpipes in schools.

## **C. INNOVATIVE EXPERIENCES IN THE REGION**



The principal objectives of UNICEF, defined by the World Summit for Children, are to reduce mortality among children under five by one-third; to reduce maternal mortality by 50%; to reduce malnutrition by half; to ensure access to drinking-water and hygienic systems of excreta disposal; to ensure that 50% of children complete primary school; and to reduce the rate of illiteracy among adults. If these objectives are to be attained, progress in hygiene, sanitation and drinking-water supply are an absolute necessity.

**UNICEF is active in all of the countries which attended the workshop, working in collaboration with various national institutions and NGOs. School hygiene and environmental sanitation is a priority for UNICEF in all of these countries.**

The programmes established by UNICEF vary from one country to another, but most include the construction of latrines, the improvement of drinking-water supply, and the creation of teaching materials for hygiene education. Additionally, UNICEF has extended its action to the establishment of school supplies of essential drugs, to market gardening projects, to the improvement of school buildings and to teacher training in health education.

Over the years, UNICEF has adapted and redefined its programmes in the region, developing experience and learning of the difficulties of the sector. Whilst experiences have been different in each country, certain obstacles to the development of environmental hygiene have been frequently encountered, these include: insufficient support to the development of a policy for environmental hygiene in schools; difficulties in coordination between the different partners involved; and poor programme follow-up.

The sustainability of programmes has been found to be impaired for the following reasons: emphasis was too often placed on construction; the technologies selected were often costly and not sufficiently adapted to the needs of the children and the cultural and physical environment; arrangements were not always made for maintenance.

On the basis of their substantial experience in health education, behavioural change, follow-up of projects and strengthening of national capacities, UNICEF has been able to develop multi-sectoral programmes now based on demand rather than supply. Today UNICEF is concentrating its efforts on the sustainability of projects and on a stronger relationship between schools and communities.

## 2.

## EAST: THE ROLE AND APPROACH OF AN NGO

The medical NGO EAST (Eau, Agriculture, Santé en Milieu Tropical) has been working in Burkina Faso since 1983. Initially, EAST's work was focused on the improvement and monitoring of water quality in rural areas. The organization sought to highlight the fact that contamination often occurs during the transport and storage of water.

**EAST's attempts to find a simple means to disinfect water drunk in the home led to the creation of a drinking-water post (*poste d'eau potable (PEP)*). This water post, made of a traditional water pot fitted with a tap, filter and cover and placed on a simple tripod, allows water to be disinfected according to simple guidelines for chlorination prepared by EAST. The tap and cover prevent contamination of the water.**

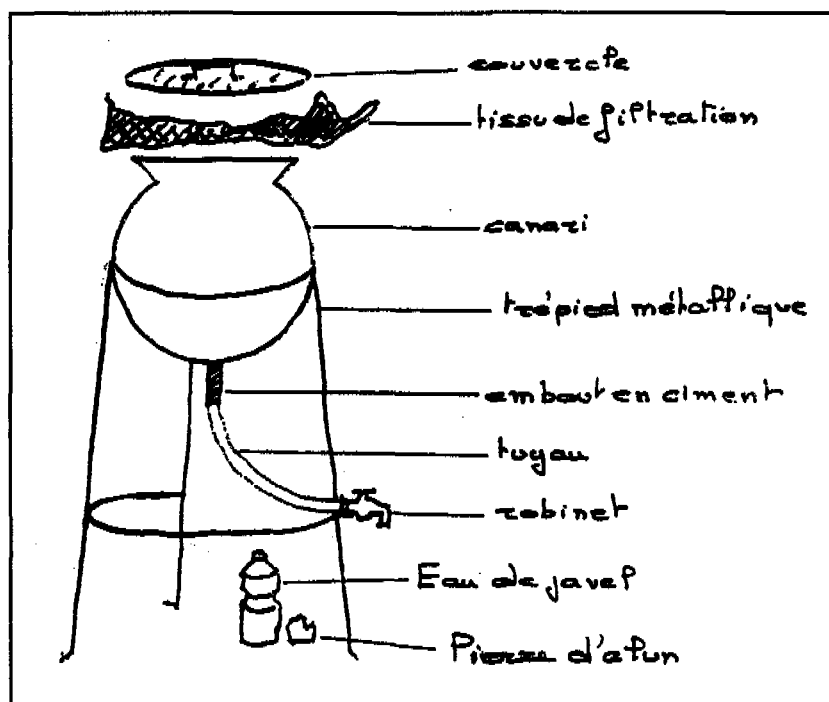
In 1988 a project was launched to disseminate this technology, initially by introducing the drinking-water posts into schools. Since 1989, this project has developed into an intersectoral development programme for schools. The programme includes health education, drinking-water supply (the construction of school drinking-water posts), sanitation (the construction of latrines), school health services (the creation of school stores of essential drugs) and an income-generating activity (the creation of gardens). EAST has contributed to projects of this type in 100 schools in the province of Bazega in Burkina Faso.

This year a similar type of project has been launched in the province of Oubritenga in Burkina Faso and a pilot project has been started in the province of Mono in Benin.

In each case the programme is proposed to all the schools in one educational administration district, and those in charge, whether directors or parents' associations, are free to accept it or not. The programme launched in January 1994 in Oubritenga builds on the basis of the previous project, with a number of interesting developments. Most importantly, a school can only participate in programme

if the majority of parents and all the teachers agree and make a formal commitment. The programme then begins with the training of teachers. This training combines theory, which aims to provide teachers with a strong understanding of the health education to be taught, with practice through the demonstration of the construction and use of sanitation facilities. The teachers also receive a handbook with all the key information provided during the training, including the concept of germs and communicable diseases, the importance of waterborne diseases and their transmission cycles, and the principal steps that can be taken to prevent these diseases.

Following the training, the project leaders make visits to the teachers and assist them by giving demonstration lessons. A series of educational materials,



The East-designed drinking-water post.

some of them visual, have been prepared for health education classes. In order to raise awareness amongst the community, parents are included in the information campaign as much as possible.

If the school is ready to participate, a number of improvements can be made to water and sanitation provision. A key activity is creation of a drinking-water post. For the creation of each post the community must provide a canari (the traditional water pot) and provide labour for the installation of the post. EAST will in turn provide the tripod and the

---

tap and with assist in the installation at a total cost of 10,000 CFA a post to the NGO. If the school wants to build a rainwater catchment system or improve an existing water point, East will provide cement, metal reinforcement for the concrete and skilled labour at a cost of 300 000 CFA to the NGO. The community must undertake to dig the pit, in the case of the rainwater catchment system, supply sand and gravel and lodge the mason during the building period. If a community wants to provide a new water point for the school, EAST will help them to make contact with another NGO, *Eau Vive*, who will require a 10% contribution from the school before undertaking the work.

Latrines can be built if the community is willing to dig the necessary pits, supply sand and gravel and house the mason. In rural areas EAST suggests the construction of single dry pit latrines. In urban areas VIP latrines are suggested. In both cases EAST provides cement, metal for reinforcement and skilled

labour. EAST estimates that three dry pit latrines cost the NGO 30 000 CFA, and three VIP latrines, 650 000.

If parents wish to see the creation of a primary health care post in the school, they can form a health committee to raise awareness among other parents, and collect funds. A volunteer teacher can be trained by the local health worker to administer basic first aid. An initial stock of medicaments can then be supplied if 75% of the necessary funds have been collected by the community.

Assistance with the creation of a vegetable garden may be given and the teacher may be trained if there is sufficient commitment from the school community. Additionally, if the community is prepared to contribute half the total cost of the renewal of materials, EAST will assist in the replacement of tables and benches and the repair of the doors and windows of classrooms.



The *Centre Régional pour l'Eau Potable et l'Assainissement à Faible Coût* (Regional Centre for Low-Cost Drinking Water and Sanitation (CREPA)), is a research and programme support institute, based in Ouagadougou, Burkina Faso. The centre works with 14 West African countries to promote appropriate technologies for drinking-water and sanitation and to support the adoption of a multidisciplinary approach to water and sanitation. CREPA provides support in the development of human resources, conducts applied research, and disseminates information and documentation for the exchange of experience within the network of countries.

**CREPA has experience in the institutional, technical and financial aspects of improving environmental sanitation in schools. Many countries encounter institutional difficulties when they attempt to improve school sanitary facilities. As well as giving technical support to sanitation and drinking-water supply projects in schools, CREPA provides assistance through the development of human resources.**

Information and training in building techniques, tools for community participation and hygiene education methods, are offered to the various actors involved, including technicians, engineers, labourers, development workers and teachers. CREPA can also provide guidance in the assignment of roles, such as promotion, construction and evaluation, to the different partners involved.

CREPA have undertaken a number of technical research programmes with direct relevance to schools in the region. In collaboration with the *Ecole Inter-Etats des Techniciens Supérieurs de l'Hydraulique et de l'Équipement Rural (ETSHER)*, CREPA have worked on a system for the continuous chlorination of wells in rural and peri-urban areas. The process aims to neutralize the chemical and biological tox-

ins found in water taken from traditional wells. Successful results have been obtained and will be published very shortly. The system, which allow one month of continuous chlorination, has been installed in the wells of a number of schools on the outskirts of Ouagadougou.

Excess iron in the water is a major problem in the sahelian region and causes many bore-holes across Africa to be abandoned. CREPA, working jointly with the trainee engineers of the EIER, has installed iron removal systems in many peri-urban and rural schools. These systems offer a low-cost means of improving water quality.

Research and promotion on the collection and storage of rainwater is given high priority by the CREPA. In collaboration with the *Comité Inter-Africain d'Études Hydrauliques (CIEH)*, rainwater catchment and collection systems have been built in schools in rural and peri-urban areas of Mali and Burkina Faso. The quality of water from these systems has been monitored and work has been done to refine their design and optimize their size when constructed with local materials. The conclusions and recommendations of this work are available from the CREPA and were published in the findings of the International Conference on Rainwater Catchment, Taiwan, August 1993.

CREPA has also undertaken activities in the field of sanitation, building ventilated pit latrines in several schools on the outskirts of Ouagadougou. The accompanying hygiene education is arranged through NGOs such as *Enfants du Monde*. The latrines are being monitored, in particular to determine the time they take to fill up. Additionally, CREPA designed latrines, made at a cost of 10 000 CFA, are currently being tested in rural areas of the region.

## 4.

# THE SANIYA PROJECT: PROMOTION OF TWO FORMS OF HYGIENIC PRACTICE FOR THE PREVENTION OF DIARRHOEA

---

The Saniya project is a joint research project of the Government of Burkina Faso and the London School of Hygiene and Tropical Medicine. Between 1989 and 1991, a *Diarrhoea Project* attempted to identify risk behaviours for diarrhoea. The *Saniya Project* was developed as a follow-up to encourage hygienic behaviours to replace these high-risk practices. Whilst these projects cover the entire community and not just schools, schools are a priority target.

The Diarrhoea Project used several approaches: a study of the environment; discussions with groups of women to understand how the populations perceive and explain diarrhoeal diseases; a case control study of about 3000 questionnaires; and a structured observation of the hygiene practices of mothers. This research resulted in the identification of two key high-risk practices:

- most of the stools of young children remain on the ground, in gutters or on excreta dumps, even though 89% of homes have latrines;
- people do not wash their hands systematically after contact with stools and only 5% of mothers use soap, although in almost all families, both children and adults follow defecation by washing the anal area with water using the left hand.

Two lessons have been learned from this experience: the usefulness of structured observations in the identification of risk behaviour; and the need for interventions to promote hygienic behaviours using appropriate methods. It was felt that in traditional

health education, there has been a discrepancy between the messages given and the beliefs of the community. The Saniya Project was launched to respond to the need to develop an effective hygiene education approach.

**The project is based on a participatory approach. The people questioned are asked to examine retroactively the results achieved. What behaviours need to be changed? What means of communication should be used? What strategy should the project adopt? In order to find out what could be an obstacle to the adoption of new behaviours, a trial campaign was carried out among 40 women. This raised a number of important issues: the difficulty in obtaining soap, breaks in supplies of soap, and the fact that it was impossible for schoolchildren to put the advice heard at school into practice.**

The project set out to tackle these problems. Meetings were organized to make contact with schools. Collaboration between all groups working in this area was encouraged. In order to adapt messages for children, an initiative was undertaken to find out what children knew about hygiene. Finally, a project was set up in a pilot school to test the messages, teaching aids and ability of schools and schoolchildren to disseminate the message within the community.

This process should lead to the implementation of a communication programme adapted to the needs of different populations and of which the impact can be easily measured.



## **ANNEXES**



**PROGRAMME OF THE WORKSHOP****Tuesday, 19 April 1994            The problems**

**Objective:** Identification and formulation of the obstacles to development and operational problems

- |             |   |
|-------------|---|
| 08:00–09:00 | Registration of participants  |
| 09:00–09:45 | Opening ceremony: <ul style="list-style-type: none"><li>• <i>Director of Studies, EIER</i></li><li>• <i>Minister of Health</i></li><li>• <i>WHO Representative</i></li></ul>        |
| 09:45–10:00 | Coffee break  |
| 10:00–10:05 | Adoption of the programme   |
| 10:05–10:10 | Words of welcome/explanation of arrangements <i>Mr Chéron (EIER)</i>  |
| 10:10–10:25 | Introduction of participants  |
| 10:25–10:40 | Objectives of the workshop <i>Miss Lucy Clarke (WHO, Geneva)</i>  |
| 10:40–11:00 | Water, sanitation, health education and public health <i>Mr Daou (WHO)</i>  |
| 11:00–12:30 | Presentation of key points from case studies <ul style="list-style-type: none"><li>• Benin</li><li>• Burkina Faso</li><li>• Côte d'Ivoire</li><li>• Guinea</li><li>• Mali</li></ul> |
| 12:30–15:00 | Lunch   |
| 15:00–15:45 | Presentation of key points from case studies <ul style="list-style-type: none"><li>• Niger</li><li>• Senegal</li><li>• Togo</li></ul>   |
| 15:45–16:00 | Explanation of the "Listeners" system; division into working groups   |
| 16:00–16:15 | Coffee break  |
| 16:15–17:15 | Group work<br>Topic: Definition of obstacles to development and operational problems  |
| 17:15–17:45 | Presentations of group work in plenary  |
| 17:45–18:00 | Report of the "Listeners" to the organizing committee   |

**Wednesday, 20 April 1994 Possibilities for action**

**Objective:** Identification of problems for which solutions already exist, and of problems for which no solution has yet been found

- 08:00–08:30 Summary of problems identified on the previous day and definition of the objective for the day
- 08:30–09:30 Presentation of innovative experiences
- *UNICEF* – Experiences in West Africa (Mrs Lisette Burgers)
  - *EAST* – Method of work and role of an NGO (Dr Yannick Pradelles)
  - *CREPA* – Appropriate technologies (Dr Cheik Touré)
  - *London School of Hygiene and Tropical Medicine* – The study of health behaviour (Mrs Bernadette Kanki and Mrs Valerie Curtis)
  - *Experiences in Zaire* (Mr Lokana Okitangongo)
- 10:00–12:30 Group work:
1. Political will and policy definition
  2. Cultural and technical questions
  3. Health education
  4. Institutions and finance
- 12:30–15:00 Lunch
- 15:00–16:00 Continuation of group work
- 16:15–18:00 Plenary session

**Thursday, 21 April 1994 Orientations**

**Objective:** Definition of priorities and formulation of a strategy

- 08:00–08:30 Summary of the types of action identified on the previous day definition of the objective of the day
- 08:40–12:30 Group work
1. Political will and policy definition
  2. Cultural and technical questions
  3. Health education
  4. Institutions and finance
- 12:30–15:00 Lunch
- 15:00–16:30 Plenary session – adoption of final report
- 16:30–17:00 Closing ceremony

## CASE STUDY GUIDELINES

### The structure of the case study

The study should only address primary schools in rural areas and should be structured according to the following plan:

- The introductory section of the case study should begin with a description, of approximately half a page, of the sanitary situation in schools at a national level and of the special characteristics of the region chosen for the study. Another half page should be given to a summary of the conclusions of the study. More information on this section of the report is provided below, under the heading *Information about the national situation*.
- A resume of the situation of each school should be provided, in up to half a page per school. The full report on each school, as well as any photographs or sketches, will form the last part of the case study.

The report on each school should begin with a presentation of the institution and of the number of pupils. Next, the school's water and sanitation provision should be described. Broad indications should then be given of the knowledge, attitude and practice of pupils, parents, teachers and health personnel. Current provision for health education should also be described. These different elements are explained in more detail below, under the heading *Information about the schools surveyed*.

### Information about the national situation

A description should be made of the national water and sanitation provision and of the number and distribution of schools. Specific reference should be made to school services in rural areas. The principal endemic diseases which affect the country should be presented. Efforts undertaken or planned in the field of hygiene education should be described.

In order to give a clear picture of the division of responsibilities, the roles of the principal institutions involved in education, public health and water supply and sanitation at school, district and provincial levels should be explained. The role of communities in these different sectors should also be described.

Finally, if at a national level schools suffer from poor environments, these problems, and their effects on health should be identified. Such problems may include an insufficient supply of drinking water, inadequate sanitation facilities or hygiene education, a high prevalence of certain diseases or the continual risk of certain epidemics. Any institutional shortcomings, areas of insufficient resources or other difficulties should be noted.

### Information about the schools surveyed

#### Information about the institution and its location

- Sketches**
- Type of school, for example, primary school open all day or in the mornings only.
  - Location of the school, for example, in a rural area. The distance from the villages where the school children live should be specified.
  - Total number of pupils and numbers of girls and boys.
  - Number of teachers (male and female).
- Photographs**
- Description of the school: walls (wooden, plastered etc.); roof (metal or other); perimeter fence (maintained or not); maximum and minimum sizes of classrooms; accommodation for teachers; recreation spaces; immediate environment (forest, bush, ponds, rivers etc.).
  - Any difficulties of access to the school for pupils, teachers or others.
  - Average time for pupils to walk from home to school.
  - Information on the neighbouring communities surrounding the school: their population; their role in the life of the school; their socio-economic status of the parents; their occupations.



## Information on water supply

- Photographs**
- Description of the water resources within and around the school: springs, traditional wells, rivers, public pumps, private water points (at mission stations or farms, for example), others (please specify).
  - Quantity and regularity of the water flow (is the average supply sufficient? can the flow be dangerously high in during flooding? how long does the dry season last?).
  - Access to water sources (journey time from school to water point, any difficulties posed by the design of the water point, for example danger for children using a deep well without a sufficiently high surrounding wall).
  - Water quality:
    - The following should be determined by observation: turbidity, odour, colour
    - The following should be determined according to the results of any existing studies: chemical or bacteriological pollution
    - The following should be determined through discussion with users: taste, any other characteristics.
  - General impressions of the cleanliness of the water point: the presence of rubbish, stagnant water, animals, faeces, waste water; the efficiency of drainage; any improvements which have been made to protect the water point.
  - Information on the construction and maintenance of the water point, including: who built it; under whose supervision; to which, if any, norms does it correspond; who maintains it; who finances construction and maintenance.
  - Usage of the different water points around the school and water disposal.
  - Any problems in the design, construction or functioning of the water point, for example, broken parts, a filter which can not be cleaned, bad odours, insect infestation.

## Description of the sanitation facilities

Sanitation facilities include any system for the collection and disposal of waste water, excreta, rain-water or solid waste. At the school level it is particularly important to identify which facilities are used for excreta collection and disposal by children, which by teachers and which by the local community. Nevertheless, the problems posed by the need for solid waste disposal and waste water evacuation should not be ignored. Mention may also need to be made of provision for rain-water drainage to avoid flooding or the build up of stagnant water. The following information is fundamental:

- Photographs**
- Description of the installations: the type of latrines; communal or separate latrines; separate girls and boys latrines or not; latrine ventilation; drainage pipes; arrangements for the deposit of solid waste.
  - Number of latrines already in existence or under construction.
  - Do the installations correspond to norms? By whom were they built? By whom are they maintained? By whom are they cleaned?
  - *Construction materials:* are these local products or purchased at a distance from the school?
  - State of the latrines: cleanliness (those areas which are dirty should be described); odours; any damaged, broken or missing parts; appearance from the outside; appearance from the inside; contents of the pit; presence of any insects; ventilation.
  - Is there daylight within the latrine.
  - Adaptation of the latrine for the needs of children: height; size of the slab and hole; adequate lighting.
  - Any handwashing facilities inside, outside or near the latrines.
  - Description of any latrine flushing system, of its daily water consumption and of any receptacles used. Are there any daily or seasonal water shortages?
  - Description of any system for the evacuation of waste water and any stagnant water, ponds, running water and wells in the vicinity of the school.

## **Usage of the water supply and sanitation facilities**

### **Description of the use of water points**

Describe the usage of the water points, for drinking water, for hygiene practices such as hand washing, for cleaning purposes, for small scale agriculture and any other usage:

- Photographs**
- Are there queues at the water points?
  - Do the children pay attention to the cleanliness of the water point?
  - Who monitors the cleanliness of the water point?
  - Who cleans the water point and how many times a day, week or month?
  - Does every child have access to a water point?
  - Is there any possibility of conflict with other users, for example the neighbouring community?
  - What receptacles are used for the transport of water and over what distance? Are they clean?
  - Note any handwashing done by children before or after using the latrines, or under any other circumstances. An estimate should be provided of the proportion of children who use water for handwashing.
  - What percentage of children have easy access to water at school, but not at home.

### **Description of the use of sanitation facilities**

- Photographs**
- Where do children defecate? Do they use latrines? If not, why not? Does each child have access to a latrine during breaks between class?
  - Are there children who have access to a latrine at school, but not at home?
  - Are the same latrines used by the children, the teachers and the neighbouring community?
  - Are any of the latrines locked and used only by the teachers?
  - Who cleans the latrines? Is it ever an enforced duty? Are there class monitors responsible for latrine cleanliness?
  - Is there any toilet paper, other material, or water available for anal cleansing?
  - How is the faecal matter removed when the pit of a latrine is full?
  - Ask the female teachers where women and girls dispose of the protection they use during their menstrual period.
  - Who maintains the latrines? Are there any particular latrine maintenance problems frequently encountered such as collapse of the pit, the need for repairs to the superstructure, the need for the pit to be emptied.
  - Who is responsible for the purchase of soap, brushes, brooms, disinfectant, etc.?
  - Are there any latrines specially designed or located to prevent the embarrassment of users, notably women or girls? Is there adequate separation between the latrines to prevent sound and odour?
  - Does the school have any urinals? If so, have these an adequate drainage system?

### **Education and attitudes**

- Is health education a subject officially taught at the school? If so how much time is given to this curriculum item? If not how much time is given in which other lessons to health education (prevention of diseases of all kinds) and hygiene education (prevention of water- and sanitation-related diseases)?
- Are health education activities managed by teachers themselves, or are they to be based upon prescribed models?
- Is the hygiene education based upon practical activities such as the construction or maintenance of a latrine, the cleaning of a water point surround or handwashing?

- Are the messages conveyed realistic? For example, if the importance of handwashing is emphasized, is it certain the water and soap or another cleaning materials are available?
- Have the teachers received any training in hygiene education?
- What materials are available for hygiene education?
- What equipment is available?
- Are the children proud of the school for its cleanliness? Is the school more clean or less clean than its surrounding environment and the children's homes?
- Are the children interested in hygiene and water issues? Do they enjoy their health education lessons? Are the teachers convinced of the importance of health education? Are parents interested in health education? Is it felt that the health education provided at school can have an impact on the wider community, particularly through parents?
- What facilities are available to the teachers and other personnel? Are these facilities satisfactory?
- What facilities are available to the children at home? Are these facilities satisfactory?
- Describe the system of solid waste collection and disposal and any problems encountered.
- Describe any health services or economic support the school receives from external sources such as UNICEF, the World Food Programme or any NGOs.

---

## RESOURCE DOCUMENTS

Some of the documents listed below can be obtained from WHO:

- \* Documents that can be obtained from the Information and Documentation Service of the Office of Global and Integrated Environmental Health, WHO, 1211 Geneva.
- \*\* Documents that can be obtained from the Distribution and Sales Service of WHO.

### Key documents

- \* *Education sanitaire, Eau et Assainissement à l'Ecole en Afrique et dans le Monde*. Basic document for the inter-country workshop, Ouagadougou, Burkina Faso, 19–21 April 1994. **Laugeri L.** WHO. Geneva: February 1994.
- \* *Case studies for Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Niger, Senegal and Togo*. Prepared for inter-country workshop on *Hygiene Education and Environmental Sanitation in Schools in Francophone West Africa*, Ouagadougou, 19–21 April 1994, WHO. Geneva: 1994.

*Projet Eau-Assainissement-Santé en milieu scolaire rural dans le Département du Mono, Bénin*. Etude de milieu et recommandations. **Pradelles Y.** EAST/WHO. Benin: July 1993.

### Other documents

- \*\* *Food, environment and health*. A guide for primary school teachers. **Williams T., Moon A. and Williams M.** WHO. Geneva: 1990.
  - \* *Improving water and sanitation hygiene behaviours for the reduction of diarrhoeal disease*. The report of an informal consultation, Geneva, 18–20 May 1992. WHO. Geneva: June 1993.
- Community based workshops for the evaluation and planning of sanitation programmes: a case study of sanitation in primary schools in Lesotho*. **Piers Cross.** Technical note No. 7 of the Technical Advisory Group (TAG). UNDP/World Bank. Washington: July 1986.
- \* *Hygiene education and environmental sanitation in schools in Viet Nam*. The report of a project identification and formulation workshop, Hanoi, June 1993. WHO Geneva/WHO Regional Office for Western Pacific (WPRO)/Environmental Health Centre (EHC), Kuala Lumpur. Geneva: May 1994.
  - \* *New directions for sanitation and hygiene promotion*. The findings of a regional informal consultation, New Delhi, May 1993. WHO Regional Office for South-East Asia. New Delhi: September 1993.
  - \* *School Sanitation and Hygiene Education in Latin America*. Summary report of a workshop on problems and options for improvement, Cali, Colombia, March 1993. Pan American Health Organization. PAHO/WHO/IRC: March 1993.

## PARTICIPANTS AT THE WORKSHOP

### *National participants responsible for the preparation of case studies:*

BALDE, Mamadou Mocktar	National Water and Sanitation Officer, UNICEF, Conakry, <b>Guinée</b>
BARRY, Lamine	Chercheur en Education, Coordonnateur Education Environnementale, Conakry, <b>Guinée</b>
CAMARA, Balla	Chef de la Section Santé Scolaire et Universitaire, Ministère de la Santé Publique et Affaires Sociales, Conakry, <b>Guinée</b>
CHABI AGBA, B. Atagara	Inspecteur de l'Enseignement, Bembereke, <b>Bénin</b>
DRABO, Daniel	Ministère de l'Enseignement de Base et de l'Alphabétisation de Masse, Ouagadougou, <b>Burkina Faso</b>
GANOUE, Yaya	Ministère de la Santé, Direction de la Médecine Préventive/ Génie Sanitaire, Ouagadougou, <b>Burkina Faso</b>
IBO-BAINGUIE, Emmanuel	Consultant sociologist, WHO, Abidjan, <b>Côte d'Ivoire</b>
KARE, Massiré	Chef du Service d'Hygiène de la Région de Tambacounda, <b>Sénégal</b>
PATAMOOUSSI, Hermann Marcelin	Sociologue, Direction de l'Hygiène et de l'Assainissement, Ministère de la Santé, Cotonou, <b>Bénin</b>
PRADELLE, Yannick	Physician, Technical Advisor to NGO EAST, Ouagadougou, <b>Burkina Faso</b>
SIMBOU, Babozou	Coordonnateur National des Activités d'Education pour la Santé à l'Ecole, Lomé, <b>Togo</b>
SOULEY, Issiya	Technicien sanitaire, DPSA, Niamey, <b>Niger</b>
TOURE, Ousmane	Chef, Division de l'Hygiène et de l'Assainissement Direction Nationale de la Santé Publique, Bamako, <b>Mali</b>

### *Other participants:*

ALOUSSENI, Malick	UNDP, Water and Regional Development, Ouagadougou, <b>Burkina Faso</b>
BURGERS, Lizette	Acting Chief, Water and Sanitation, UNICEF, <b>Burkina Faso</b>
CURTIS, Valerie	SANIYA Project Manager, London School of Hygiene and Tropical Medicine/Centre Muraz, Bobo Dioulasso, <b>Burkina Faso</b>
DE ROOY, Carel	Planning advisor, UNICEF Regional Office, Abidjan, <b>Côte d'Ivoire</b>
GOCKOUZOU, Adolphe	Chef de Service, Construction et Entretien Scolaire, Ministère des Enseignements, de la Coordination des Recherches et de la Technologie, Bangui, <b>Centrafrique</b>
GOMEZ MEDINA, Maria Franisca	Directrice à l'Ecole Normale de Formation des Professeurs, Bissau, <b>Guinea Bissau</b>
JEPPENSEN, Kristine Zenthen	JPO, Water and Sanitation, UNICEF, <b>Guinea Bissau</b>
MARINETTO, Marina	NGO C.I.S.C.N.E, Ouagadougou, <b>Burkina Faso</b>
OKITANGONGO, Lokana	Ministère de l'Education Nationale, <b>Zaïre</b>
OUAYORO, Eustache	Water and Sanitation, UNDP/World Bank, Ouagadougou, <b>Burkina Faso</b>

### *Secretariat:*

CLARKE, Lucy	Division of Operational Support in Environmental Health, WHO, Geneva, <b>Switzerland</b>
DAOU, David M'pe	Professor of Sanitary Engineering (WHO/EIER), EIER, Ouagadougou, <b>Burkina Faso</b>
KANE, Mohammed Salissou	Programme administrator, Water, Sanitation and Environmental Health, WHO, <b>Niger</b>
KANKI, Bernadette	Sociologist, SANIYA Project, Centre Muraz, Bobo Dioulasso, <b>Burkina Faso</b>
MAÏGA, Fatoumata Sokona	Water, Sanitation and Environmental Health, WHO, Bamako, <b>Mali</b>
SIMPSON-HEBERT, Mayling	Division of Operational Support in Environmental Health, WHO, Geneva, <b>Switzerland</b>