

WATER AND ENVIRONMENTAL SANITATION IN SCHOOLS



'UNICEF is today calling on national leaders to ensure that in the course of this decade every primary school in the world be equipped with separate facilities for boys and girls - and every school without exception, have a source of clean and safe drinking water.'

Carol Bellamy, UNICEF Executive Director at the World Summit on Sustainable Development, Johannesburg 2002

**Report of a workshop held at the Stanley Hotel, Nairobi
19th to 20th August, 2003**

November 2003



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FOREWORD

A healthy environment would promote basic education of all school children, by greatly reducing the key hindrances: low enrolment, absenteeism, poor performance, and early dropout. Provision of safe water and adequate sanitation in **schools** take on an added significance to the realization of education for all.

In line with the International Targets for School Sanitation and Hygiene Education, endorsed by participants at the Second World Water Forum 2000 (Vision 21) and The United Nations Millennium Development Goals (MDG), UNICEF-Kenya Country Office and The Government of Kenya initiated a two-day workshop to address Water and Environmental Sanitation in primary schools in Kenya in an effort to consolidate all on-going activities and existing challenges regarding WES in Kenyan Schools.

The Government has recognized that while a number of organisations have a stakes in school WASH activities, there is no structured and sustained national programme to specifically address the question of water, environmental sanitation and hygiene promotion in schools. The Government has now put in place a vision for providing quality education for sustainable development and has recognized that inadequate water and sanitation facilities and poor hygiene pose a serious setback to the implementation of the free primary school education policy.

The two-day workshop brought together representatives of the key stakeholders in water, environmental sanitation and hygiene in schools, including UN agencies, bilateral donors, Embassies, NGO's, and the Government of Kenya. The workshop addressed the challenges in mobilising and strengthening health-promoting activities in schools in light of the new policy on free and compulsory primary school education in which an estimated 1.3 million new children have enrolled in schools.

This report contains the outcome of the two-day workshop by experts, field practitioners, policy makers, donors, teachers and representatives of school children. This report should provide a collaborative form for joint action by all stakeholders as we endeavour to address the Herculean task of providing a child-friendly environment for sustainable health and learning for all schools and school children.

David Mwangi
Permanent Secretary
Office of the President

Wellington P. Godo
Permanent Secretary
Ministry of Health

Prof. George O. Krhoda
Permanent Secretary
Ministry of Water Resources
Management and Development

Prof. Karega Mutahi
Permanent Secretary,
Ministry of Education, Science
and Technology

SUMMARY

The International Targets for School Sanitation and Hygiene Education, endorsed by participants at the Second World Water Forum 2000 (Vision 21) was to *educate*:

- ◆ 80% of primary school children about hygiene and to equip all schools with facilities for sanitation and hand washing by 2015, *and*
- ◆ All children about hygiene by 2015.

The United Nations Millennium Development Goals (MDG) called for:

- ◆ Halving the proportion of people living without sustainable access to safe drinking water (which is 1.1 billion), by 2015, *and*
- ◆ Halving the proportion of people living without adequate sanitation (which is 2.4 billion), by 2015.

UNICEF-Kenya Country Office and The Government of Kenya initiated a two-day workshop to address Water and Environmental Sanitation in primary schools in Kenya. The workshop was held on 19th and 20th, August 2003, at the Stanley Hotel in Nairobi, in an effort to consolidate all on-going activities and existing challenges regarding WES in Kenyan Schools

As good health, nutrition, and a healthy [and child-friendly] environment continue to be the key requirements for ensuring *Education for All*, safe water and adequate sanitation provisions *in schools* take on an added significance and focus. A healthy environment would promote basic education of all school children, by greatly reducing the key hindrances: low enrolment, absenteeism, poor performance, and early dropout.

UNICEF and WSSCC launched the WASH in Schools campaign on 18 March 2003 at the Third World Water Forum in Kyoto, Japan, where UNICEF took the lead agency for implementing the campaign, and working closely with the WSSCC and its national and regional co-ordinators in developing countries.

Also, the Water Supply and Sanitation Collaborative Council (WSSCC) launched the Water, Sanitation and Hygiene for All (WASH) campaign in Bonn Germany in December 2001, at the International Conference on Fresh Water. Since then, several national campaigns have been launched in developing countries, which are being actively supported and realized by UNICEF, an original member of the Council.

Elsewhere, WHO, UNICEF, UNESCO and the World Bank developed a partnership for *Focusing Resources on Effective School Health* (FRESH) – an approach that was launched at the World Education Forum in Senegal, in April 2000. This FRESH start is founded in positive experiences (by the partner agencies) that suggest that there is a core group of cost-effective activities that could form the basis for intensified joint action towards child-friendly schools.

With a recent rise in global advocacy campaigns on water, sanitation and hygiene services on the political map – such as WASH, FRESH and SSHE – the world community is witnessing an emphasis on the need for adequate water, sanitation and hygiene provisions in the poorest countries and in schools.

BACKGROUND

School creates an excellent opportunity to create lifelong change in behaviour. Additionally, improved hygiene and sanitation are critical to health of school children. Traditional school curricula are weak in addressing WASH issues. Most schools have no hand washing facilities or running water. Where there is running water, its quality is of concern.

While a number of organisations have a stake in school WASH activities, including government, UN agencies, development partners, school communities, CBOs and NGOs, there is no structured and sustained national programme to specifically address the question of water, environmental sanitation and hygiene promotion in schools.

Linkages exist between availability of adequate and safe water, environmental sanitation and human behaviour on one hand and good health on the other. Clinical records show that the top diseases reported in Kenya such as malaria, upper respiratory tract infection, skin diseases and diarrhoea — are sanitation related. National coverage of water and sanitation averages 48% and 42%, respectively (WHO). This low coverage predisposes a large percentage of population to preventable diseases that emanate from unsanitary environment.

Latrine coverage averaged 55 schoolchildren per toilet in 1999. The situation was worst in the semi-arid North Eastern Province where an average of 95 children shared one toilet. Central Province had the best coverage with 31 children sharing a toilet. However, a survey conducted by the Ministry of Education, Science and Technology (MOEST) in 2003 shows that the situation had become considerably worse over the 4-year period to 2003, with an average of 64 schoolchildren sharing one toilet. Some schools in the rural districts such as Kwale, Turkana, Wajir and Mandera have no pit latrines in the school premises at all.

Whereas school enrolment has risen countrywide due to the implementation of the free primary school education programme, adequate attention has not been given to the improvement of water supply, sanitation facilities and hygiene education in schools. Even where latrines exist and coverage is fairly good, their sanitary condition varies from fair to poor. Most schools do not have even the simplest hand washing facility and in a significant number of schools toilets are either not separate or are constructed close together. Experience shows that when girls reach puberty, they drop out of school in part due to the embarrassment of sharing latrines with boys. Girls require sanitary facilities that give them privacy and dignity.

UNICEF and WSSCC believe that providing safe water, clean and separate sanitation facilities and hygiene education will keep girls in school. Gender concerns mean a lot in provision of quality education. **The Executive Director of UNICEF, Carol Bellamy summarises the philosophy: "Every primary school in the world should be equipped with separate sanitary facilities for boys and girls and have a source of clean and safe drinking water."**

The Ministry of Education has recognised that inadequate water and sanitation facilities and poor hygiene pose a serious setback to smooth implementation of the free primary school education policy. Consequently, it has produced a booklet that spells out the responsibilities of each stakeholder in the programme, and has recently done a survey to find out the situation of water, sanitation and hygiene in schools.

Furthermore, The International Targets for School Sanitation and Hygiene Education, endorsed by participants at the Second World Water Forum 2000 (Vision 21) *has recommended that we educate:*

- ◆ 80% of primary school children about hygiene and equip all schools with facilities for sanitation and hand washing by 2015, *and*
- ◆ All children about hygiene by 2015. Additionally, UNICEF and WSSCC launched the WASH in Schools campaign on 18 March 2003 at the Third World Water Forum in Kyoto, Japan and launched the Water, Sanitation and Hygiene for All (WASH) campaign in Bonn Germany in December 2001, at the International Conference on Fresh Water subsequent to which national campaigns have been launched in several developing countries. UNICEF has supported these campaigns in many sub Saharan African countries already.

In line with these International protocols, UNICEF in collaboration with Ministries of Education and Water Resources carried out a survey of water and sanitation facilities in schools in the third quarter of 2003.

SURVEY OF WATER AND SANITATION FACILITIES IN SCHOOLS

UNICEF and the Ministry of Water Resources personnel conducted a survey in 12 Arid and semi arid districts in August of 2003, while the Ministry of Education sent a set of questionnaires for self administration by schools using school heads around the middle of the year. The survey and self administered questionnaires used interviews with teachers, pupils and inspection of physical facilities in schools to collect the information.

Detailed questionnaires covering questions on number of pupils by sex in school, teachers by sex, number of latrines or other sanitary facilities and allocation by sexes, cleanliness of latrines, type of water source, methods of abstraction and availability of hand washing facilities were administered. The qualitative and Quantitative data were analysed.

WATER IN SCHOOLS

Access to water in schools mirrors the situation in the country with about 56 % of the primary schools reporting access to safe water¹

Table 1: Source of Water for primary schools as reported in self administered questionnaire in 2003

	Piped %	River %	Borehole %	Spring %	None %	Total Safe %	Total Unsafe %
Nyanza	9	36	29	17	9	38	53
Rift Valley	19	35	25	15	5	44	51
Nairobi	88	5	5	1	2	92	5
Central	42	36	7	9	6	49	45
Coast	36	21	31	5	7	67	26
Western	11	16	39	28	6	50	44
North Eastern	8	16	53	4	18	61	21
Eastern	21	43	21	10	4	42	53

Source: Ministry of Education Science and Technology. 2003.

Other results arising from the field assessments as well as the WFP's School Feeding Programme include:

- ◆ Distance from water to school in some arid and semi arid districts averages 10 km. Both school children and teachers are affected by this situation
- ◆ Some water points are unreliable and prone to break downs. In the arid areas this becomes a crisis in the drought seasons and schools have been forced to close down.
- ◆ In urban areas, schools are often unable to pay for water, usually piped, and the children have been required to source the water elsewhere.
- ◆ Monitoring reports by WFP show that during the drought periods, some schools especially those in the arid districts are unable to prepare school lunches due to lack of water².

Other related concerns are:

- ◆ The water systems in many schools are broken down particularly bore holes fitted with hand pumps in many places including West Pokot District. The story is the same with leaking storage tanks, rusted iron-roof catchments, etc

¹ Regarded as borehole and piped water. River and spring (unless protected) are not regarded as safe.

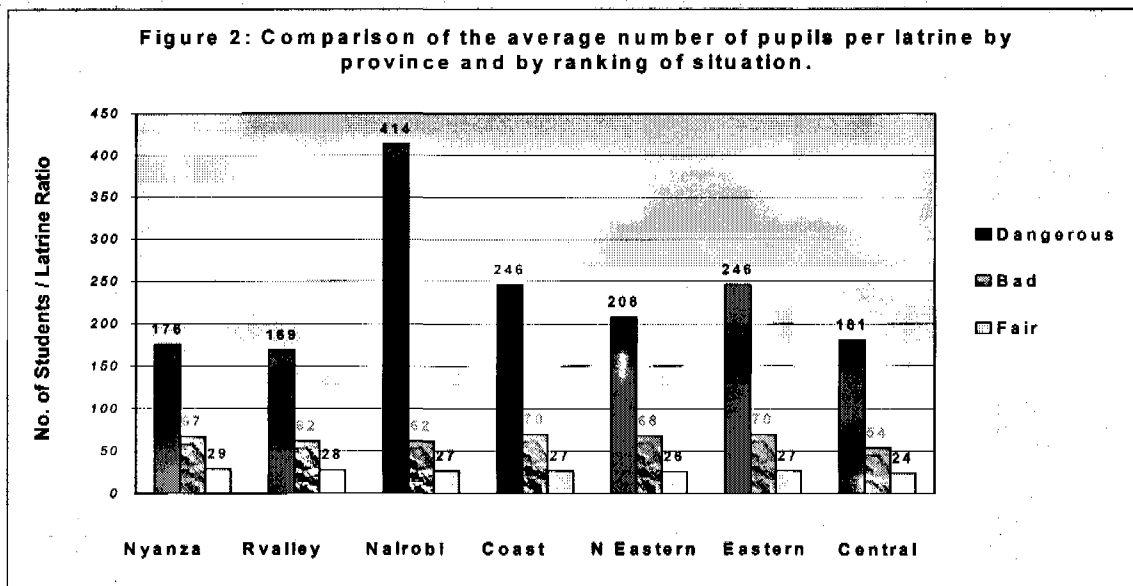
² World Food Programme Report

- ◆ Water conservation measures are generally not practised in most schools as evidenced by bare school compounds. Other schools do not have appropriate roofs to collect rainwater.
- ◆ In some schools, pupils ferry drinking water as well as water for washing classrooms and toilets to school. This water is of doubtful quality.
- ◆ Stress among some pupils has been observed because of travelling long distances in search of water and this has direct implications on school attendance and performance.

SANITATION IN SCHOOLS

In the sanitation, the Ministry of Water Resources survey results for August 2003, shows most schools in Kenya have poor sanitation and hygiene practices while others have no toilets at all. Where some forms of toilets do exist, they do not meet the recommended ratios of 25 girls or 35 boys per toilet.

Figure 2 below ranks situation of sanitation by comparing the average number of pupils per latrine by province. The rankings, **Fair** refers to the average of the class of schools which have a ratio of less than 40 pupils per latrine, **bad** are the average in the class of schools that have between 40 -100 and **dangerous** are the average of the class of school that have beyond 100 pupils per latrine.



Source: Ministry of water Resources survey of August 2003

Figure 2 shows the majority of schools lie in the category termed as dangerous with Nairobi the worst affected with an average 414 pupils per latrine in the worst schools.

Additional findings include:

- ◆ Even the provinces with relatively better pupil/latrine averages have schools with over 100 pupils per latrine.
- ◆ Even in schools with latrines, their condition varies from fair to poor to even dangerous.
- ◆ Most schools do not have even the simplest hand washing facilities.
- ◆ In a significant number of schools, the toilets are not separate and are constructed close together.

In its School Feeding Program (SFP), WFP has reported that:

- ◆ A good number of schools have pit latrines in the school premises. A few rural schools and those in Nairobi slums such as Mukuru and Kariobangi have water toilets. These types of toilets need cleaning daily but in most cases this is not possible because water is either rationed or cut-off. The levels of hygiene are therefore very low in some schools.
- ◆ Some schools in rural districts such as Kwale, Turkana, Wajir and Mandera have no pit latrines in the school premises in some schools. Nearby bushes are used as toilets.
- ◆ The issue of lack of latrines or availability of only two in some schools, (one for the teachers and the other for the pupils shared by both boys and girls) has frustrated WFP's efforts on promotion of girl-child education in ASALs.
- ◆ The collaboration with stakeholders in addressing the water and sanitation issues in schools is therefore timely in order to improve quality and to have better impact of the WFP and UNICEF support services to education.

The results reflected the situation prevailing in the country, where a large part of the population does not have access to safe water and adequate sanitation. This predisposes a large part of the population to preventable diseases that emanate from unsanitary environments, particularly children. It also explains why diarrhoea is the leading cause of death among children less than five years of age and accounts for 4 % of all outpatient cases and over 60% of child admissions to Kenyatta National Hospital, the largest referral hospital.

Other diseases that affect children in Kenya due to unsafe water and poor sanitary conditions also include typhoid, intestinal parasites, T.B and meningitis. Parasitic infections such as hookworms, tapeworms, and bilharzia are major causes of illness impeding growth and development of children. Malaria and respiratory diseases account for almost 50% of all reported diagnosis in government health facilities and intestinal parasite infections and diarrhoea increase this figure to over 60% of all reported cases.

Schools thus can provide an excellent, interactive avenue for establishing the basic requirements in adequate water, sanitation and good hygiene practices. They can help to promote the health of staff's families and community members as well as the health of pupils. Much is known today of the relationship between health and education. People almost everywhere can use this knowledge to help create health-promoting schools.

THE SITUATION FOR GIRLS IN SCHOOL

Lack of, or inadequate toilets in schools affect girls more than boys due to their special hygienic needs, especially those who have attained puberty age. Findings during the focal group discussion held with girls during the Mid Term Review of 2001 highlighted the girl's reluctance to continue school in the absence of adequate sanitation facilities.

In ASAL areas, for instance, where there is hardly any natural vegetation, girls find themselves in very difficult situations when they need to answer the call of nature. Many girls do not attend school during their menstrual periods. Poor water quality in schools has been associated with children bearing heavy disease burden. Girls are particularly affected during the menstruation period by lack of water and sanitation facilities in school.

Inadequacy of the necessary sanitary facilities may have negative implications on enrolment and retention, particularly for the girl child. This problem is more pronounced in the Arid and Semi Arid lands/areas (ASAL) and in the urban slums.

IMPLICATIONS IN THE ARID LANDS (ASAL)

ASAL regions are generally prone to problems of access to water and environmental sanitation due to general scarcity of water. For instance, more than 70% of the households in West Pokot, Turkana, Marsabit, Wajir, Mandera and Garissa do not have access to any kind of sanitary facility. The only option available is the bush.

Furthermore, the recent floods in the flood prone areas of Nyanza, Western and the Tana River delta worsened the sanitation situation in those areas. Most of the sanitation and water facilities were destroyed. This poses health hazards to the children in those affected areas

WORKSHOP ORGANIZATION AND PARTICIPATION

The two-day workshop brought together representatives of the key stakeholders in water, environmental sanitation and hygiene in schools. It was organised to disseminate the finding of the surveys and to address the challenges of mobilising and strengthening health promoting activities in schools in light of a new policy on free and compulsory primary school education. This policy has resulted in a sudden influx of an estimated 1.3 million children back to school. The workshop also addressed key issues and came up with practical recommendations and a way forward.

Among the keynote speakers were the Permanent Secretaries for Water Resources Development and management, Prof. George Krhoda and Education's Prof. Karega Mutahi. Representatives of the Permanent Secretary, Office of the President, Mr. Dave Mwangi and the Permanent Secretary, Ministry for Health, Mr. Wellington Godo too attended the workshop. Other representatives from the UN agencies including UNDP, UNICEF, WFP, WHO, UNESCO, HABITAT, UNEP and UNCHR were also present. A speech by the Country Director of the World Bank was delivered by his representative.

Among the diplomats were the Belgian Ambassador, H.E F. Renard and representative of the Ambassador of France Mr. Frank Humbert, Cooperation and Cultural Counsellor.

This report contains the outcome of the two-day workshop by experts, field practitioners, policy makers, donors, teachers and representatives of school children. Appendixes comprising of presentations by the Permanent Secretaries Ministries of Education, Water Resource and a donor statement on sector support are attached.

WORKSHOP OBJECTIVES

The overall objective of the workshop was to disseminate survey findings and create awareness on the status of water and sanitation in schools and to determine a strategy for resource mobilisation and planning of appropriate interventions.

The **specific objectives** of the workshop were:

- ◆ To create awareness on the current situation in schools in relation to water, hygiene and sanitation especially in light of the new Government policy on Free primary education.
- ◆ To raise the profile of Water, sanitation and Hygiene needs in schools in the national agenda.
- ◆ To provide a platform for dialogue and sharing of experiences between partners/stakeholders.
- ◆ Strategize on resource mobilisation.
- ◆ To identify the way forward towards improving water sanitation and hygiene in schools.

FINDING AND CONCLUSIONS

IMPLICATIONS FOR FREE PRIMARY EDUCATION

The sudden increase in primary school population has tremendously increased the demand for water and stretched sanitation facilities in schools. The existing physical facilities (which include classrooms), toilets and other utilities/provisions have been seriously out-stretched. Even where some of these facilities are adequate [in number], they are in unsatisfactory state/condition and require urgent rehabilitation.

Implementation of the Free Primary Education (FPE) has tended to concentrate solely on learning and teaching materials, and has not adequately addressed the wider range of services needed by schools. For instance, the institutional responsibilities for planning, implementing and managing Water, Sanitation and Hygiene at the National, Provincial, District and lower levels may not have been adequately addressed with stakeholders³.

Consequently, the maximisation of the benefits of FPE will not be realised without a corresponding development of a child-friendly environment which includes not only the

³ Speech by Acting Country Director, World Bank (Speech read by Mrs. Wamboi Gichuru)

provision of adequate teaching and learning materials, but also the provision of adequate water, sanitation and hygiene services.

ACCESS TO SAFE WATER AS A RIGHTS ISSUE

Access to safe drinking water and environmental sanitation is universally recognised as a human right, which have special significance to school going children. These rights are guaranteed by the Convention on the Rights of the Child (CRC) and in the African Charter on the Rights and Welfare of the Child (ACRWC) which considers the provision of adequate sanitation a basic right for survival, development and protection of the child.

Although the international consensus on what constitutes access to safe water and adequate sanitation is generally applicable to all countries, the exact definition and criteria for determining what constitutes "access to adequate sanitation and safe water" is the responsibility of each country.

In Kenya access to safe water is defined as the population with safe water supply that includes treated surface water, piped water, roof catchments, bore hole water, protected springs and wells. Similarly access to adequate sanitation is defined as the population with sanitary means of human waste disposal including outdoor latrines. Only about 48 and 42% of Kenya's population respectively have access to safe water and adequate sanitation.

INNOVATIONS AND STRATEGIES IN USE

The workshop has revealed a number of strategies and technical innovations that are currently being employed or developed by various agencies/stakeholders, to address the challenges regarding WASH in schools. This range from interactive environmental learning programmes to more ecological sanitation oriented solutions. These innovations include Child to Child, Ecological Sanitation (ECOSAN), hygiene promotion and even water as an income generating activity for schools among others. Both Governmental and NGOs are actively involved in the use of these techniques.

POLICY AND LAWS

The Ministry of Education has recognised that inadequate water and sanitation facilities and poor hygiene pose a serious setback to smooth implementation of the free primary school education policy. It has developed a booklet to guide on stakeholder responsibility in FPE. At the same time, other arms of Government too have policies and laws in place which can further these cause. For example,

- The Ministry of Health (MoH) is currently developing an Environmental Health and Hygiene Policy and a school health programme to address health issues at school.
- The water policy has provisions for institutional water supply and control of water-borne, sanitation-related diseases. This policy is under the Ministry of Water Resources Management and Development
- There is a policy on the environment—the Environment Management and Co-ordination Act of 1999.
- Other laws and regulations on water and sanitation include the Water Act 2002, the Public Health Act (CAP 242) and the Building Code.

Linkages to other global initiatives such as the Millennium Development Goals, FRESH and WASH should be used to guide targets for achievement.

COORDINATION FOR SYNERGY

A large number of organizations including Government, donors, multilateral and bilateral agencies and NGOs are already involved in the provision of water and sanitation facilities in schools. However, there is no coordination and synergy between these actors. There is need to take inventory of actors and resources available through a central coordinating body to bring together actors so that experiences can be shared, success documented and coverage better monitored.

The Workshop highlighted many ongoing activities or programmes that various agencies and stakeholders are already implementing to address various concerns regarding WES in Schools. These activities range from World Food Programme's School Feeding Programme to special participatory/promotional school events on hygiene and sanitation.

More specific interventions/ways forward are described at the end of this report under group work.

INNOVATIONS & STRATEGIES

WASH IN SCHOOLS

This workshop was significant since the core interest was to provide quality learning environment to our children.

"UNICEF is today calling on national leaders to ensure that in the course of this decade every primary school in the world be equipped with separate facilities for boys and girls - and every school without exception, have a source of clean and safe drinking water."

Carol at the World Summit on Sustainable Development, Johannesburg 2002

The Millennium Development Goal (MDG) is to halve the proportion of people without safe drinking water & sanitation halved by 2015. Dakar Framework for Action, EFA 2000 was safe, healthy, inclusive environment. In order to foster partnership, an initiative was started on FRESH- Focus Resources on Effective School Health (FRESH): UNICEF, UNESCO, WHO, WB, Education International. This involves collaboration with private sector to:

- ◆ Provide WES
- ◆ Skill-based health education
- ◆ Health and nutrition services
- ◆ Health related school policies

The Water Supply and Sanitation Collaborative Council (WSSCC) has adopted WASH: Water, Sanitation and Hygiene for all, as a Communication and mobilisation acronym.

The global situation is such that over 2 billion people world-wide are without access to sanitation facilities: they do not practice good hygiene. Do not have access to safe water; there are no sanitation facilities for children and especially separate facilities for girls.

The poor sanitation in schools has an impact on health due to sickness that results in a lower learning capacity and school attendance. At the same time where water is scarce it implies the children have to fetch water first for the household, which has an impact in school attendance and learning capacity. The poor water and sanitation facility in schools is a manifestation of poverty in homes and communities.

The available data on Water and sanitation shows that over 9 million people are without access to appropriate sanitation facilities. About 1 million children die every year due to WES related diseases, mainly diarrhoea and malaria with children most affected. This implies that the policy of 40 per toilet/latrine in schools should be enforced to reduce the mortality levels. The data in schools indicate that the pupil per toilet ratio has worsened from 98: 1 in 1999 to 104:1 in 2003. The ASAL areas are the worst affected both in water and sanitation and is depicted in its low enrolment and poor school performance.

The anaemia situation is also a manifestation of poor water and sanitation. Anaemia among school children ranges from 4% to 61 % with higher prevalence associated with hookworm and schistomiasis infection along the coast and lake basins.

UNICEF has participated in provision of emergency water between 1998 – 2002 to 452 critical water supply systems rehabilitated or replaced that benefited about 500,000 people. It is important that a common strategy is developed by carrying out a Causality and Role Analysis for duty bearers to address the situation for schools. Also, the capacity gap analysis involves; Responsibility, Authority, Access & control of human, economic and organisational resources; Communication capability; Capacity for rational decision making and learning

Examples of Water Environment and Sanitation (WES) package Includes:

- ◆ Talks on nutrition and WASH
- ◆ Life skills cur. in use
- ◆ Drug control
- ◆ Training to assist children with special needs
- ◆ Malaria prevention
- ◆ Sports
- ◆ Water
- ◆ De-worming and Vitamin A Sup
- ◆ Immunisation; 5 dose TT
- ◆ Soap, chlorine, and latrines

- ◆ Sanitary napkins
- ◆ End corporal punishment and bullying campaign.

CHILD TO CHILD APPROACH (CTC)

(An innovative approach towards water and sanitation in schools – by ITDG)

Child to Child is an innovative approach to health education used world-wide. The approach works directly with children in the process of health education and health promotion. Children acquire knowledge on relevant issues, analyse them, plan and act on these ideas. They acquire and share the information from a learning place for instance school to home, community then back to school etc.

The key CTC concepts are:

Health is a very important part of every child's education.

Health is everybody's concern not just that of doctors and other health workers.

To remain healthy one has to prevent illness from taking place.

Health does not mean being well in body, it also means having a bright and active mind and a happy and healthy life.

Good health is based upon sound knowledge.

CTC uses six steps which are:

What is the health issue?

Find out more about the health issue,

Planning action on the issue,

Undertaking action to resolve the health issue,

Evaluating the action taken and doing it better.

Through child to child which are a child centred approach, 32 teachers were trained, and six CTC clubs set up in six schools. These clubs are forums for children to meet regularly, identify their health issues, analyse them and develop school health plans and rules, health festivals, competitions, educational trips, dissemination of health messages at class and household levels.

The impact is children improved considerably on basic cleanliness expressed in better latrine use; body hygiene and cleaner compounds; children are working together in addressing and discussing school water and sanitation issues. At the community level children have been instrumental in disseminating health messages such as boiling of drinking water, setting up of tippy taps and environmental sanitation.

WATER AS AN INCOME GENERATING ACTIVITY

(By Living Water International)

The basic premise/objective of Living Water International was to empower schools (with respect to finance and program) by commissioning boreholes under their ownership, so that it provides:

1. Access to safe water in sufficient supply;
2. Benefits from the overall [Kenya Government / UNICEF] objectives:
 - ◆ **Sanitation**
 - ◆ **Lower rate of student dropout**
 - ◆ **Better student health**
 - ◆ **Improved school performance**
 - ◆ **Providing adequate finances for improving school facility/supplies provisions**
 - ◆ **To clear school debts**
 - ◆ **Facilitate school scholarship programs.**
3. Water to neighbouring communities, and thereby creating job / employment opportunities to sustain the economic and [thus] sanitary conditions of the county / school / community.

In a case study at Ololaiser High School, an average investment [with Living Water] of about 2 million KSh enabled the school to generate an average net profit of approximately 700,000 KSh per year.

HYGIENE PROMOTION (WITH SCHOOL AS A CENTRAL PLAYER)

Basis and Definition: *Hygiene promotion* includes strategies that encourage or facilitate a process whereby people assess, make considered choices, demand, and effect and sustain hygienic and healthy behaviours. This would encompass personal, domestic and environmental hygiene practices and any action or initiative taken to erect barriers to disease.

Summary: In light of the internationally increasing attention to the importance of sanitation, and the known impact of health and sanitation on national and household economies, vigorous hygiene promotion may well be the need of the hour.

Strategy: This presentation provided several strategic options for such aggressive hygiene promotion, mostly entailing an emphasis on effective partnerships between:

1. Teachers and health workers and relevant organisations,
2. Schools and community groups,
3. Pupils and implementers, *and*
4. The health sector and education sector and other stakeholders.

Actions Required: *Since schools provide an optimally interactive environment for life-long changes in behaviour, they provide the most effective venue and communication channel for targeting behavioural practices (/ habits / skills) and for establishing sustainable hygiene promotion.*

ECOLOGICAL SANITATION (ECOSAN)

(An innovative technology in sanitation – by MWRMD)

The sewerage toilet is expensive, uses large amount of clean water to flush away a small amount of excreta. Seepage from sewers, septic tanks and pit toilets pollute groundwater and surface water. Human excreta are flushed out into water bodies resulting into growth of algae, water hyacinth, etc. Water bodies have also been polluted with pathogenic micro-organisms and other compounds to the extent that many rivers have become eutrophied. Flush toilets, sewers, treatment and discharge cannot solve these problems in urban areas lacking the necessary resources such as water, money and institutional capacity. The options in sanitation are keeping our surroundings (the environment) clean, safe and preventing pollution. It includes wastewater treatment, wastewater disposal, and other diseases- prevention activities.

With Ecosan water, human excreta (urine, faeces) and other compostable organic material are not mixed. Ecosan is structured on recycling material that are not mixed. Ecosan is structured on recycling principles and means keeping the ecological cycle closed. It is a low energy system and uses natural processes. The nutrients in excreta (Nitrogen, Phosphorus and potassium) are mostly found in urine. The excreta is processed on site in Ecosan toilets, until it is free of pathogenic organisms then used for purposes such as agriculture. Waste is minimised because what comes out of the system goes back in again (Otterpohl, 2000). Thus the concept of "closing the loop", which involves containment, sanitation and recycling of human excreta.

Ecosan toilets are designed in such way that the end products (faeces and urine) can be stored and sanitised then recycled. In this case the result from faeces is humus and in the case of urine, a diluted liquid plant feed (Esrey et al, 2001). There are different types of Ecosan toilets currently in use in Africa. Some use a shallow pit container as for storage for faeces and urine (the Fossa Alterna or alternating pit latrine in Zimbabwe and the Arbor Loo in Zimbabwe and Kenya). Others use a special pedestal, which separates faeces from urine (the Skyloo in Zimbabwe and the Sudea Ecosan toilet in Ethiopia). In Eastern Africa, Ecosan toilets are found in Kisoro I Uganda, Majumbasita (this area has a high water table) I Tanzania and Kusa (Nyanza) in Kenya.

Ecosan toilets are especially useful for area that have a high water table or a hard structure and also for overcrowded areas. They are also suitable for schools especially in slums and in the rural areas because they are decentralised systems and thus allow management at the lowest level. The real significance of the Ecosan approach to sanitation lies in its implications for health, ecology and municipal economy, less environmental pollution, reduced water consumption, considerable savings on sewers

and treatment plants and increased employment. Farmers would also require less commercial fertilisers, much of which washes out of the soil into water, thereby contributing to environmental degradation.

ENVIRONMENTAL ACTION LEARNING / ECO SCHOOL STRATEGY

(A strategy for enhancing safe water and sanitation – by the Kenya Organisation for Environmental Education (KOE))

Dr. Otieno elaborated a strategic plan (the Environmental Action Learning (EAL)) adopted by KOEE to solve water and sanitation problems in schools.

She went further to explain how the Environmental Action Learning program is meant to:

- ◆ Promote school and community based policies in safe water and sanitation
- ◆ Promote a healthy, safe and secure school environment
- ◆ Equip learners with skills to enable them to address water, sanitation and health related problems

The Plan comprises of (among other things):

- ◆ **Health-related school policies;**
- ◆ **Provision of safe water and sanitation;**
- ◆ **Skills-based health education; and**
- ◆ **Participatory methods of managing water resources (by all stakeholders).**

The *solutions* offered by EAL include:

- ◆ Developing awareness on water and sanitation;
- ◆ Developing knowledge and skills necessary to analyse and understand why people view and use water in particular ways;
- ◆ Refocusing on combating specific menace such as typhoid, diarrhoea and dysentery.

EAL *strategies* revolve around:

- ◆ The promotion of school-community partnerships in EAL micro-planning and micro-projects which serve as learning aids as well as income generating innovations; *and*
- ◆ Developing national/local/culturally –oriented curricula (by using/utilising local resources) to solve environmental problems, and to provide basic knowledge/skills for optimising learning environments in order to mobilise resources and to meet the needs of the learners.

The *benefits/outputs* of the Eco-School are:

- ◆ Cleaner and aesthetic environment;
- ◆ School-community co-operation in addressing water and sanitation issues;
- ◆ Learner empowerment to actively resolve local water and sanitation related problems;

- ◆ Financial savings (hospital bills, water bills, etc.);
- ◆ Improved quality of life; *and*
- ◆ Increased water and sanitation awareness.

PARTNERSHIPS & ON-GOING ACTIVITIES

The Workshop highlighted many ongoing activities/programmes that various agencies and stakeholders are already implementing to address various concerns regarding WES in Schools. These activities range from the likes of *WFP's School Feeding Programme* to *special participatory/promotional school events on hygiene and sanitation*.

Since one of the objectives of the WES in Schools workshop was to consolidate various such activities towards creating more collaborative partnerships among agencies, the following matrix/log-frame provides a snapshot of *who is doing what* on the issue of WES in Schools:

Furthermore, the log-frame provides / lists [various] recommendations from various agencies/stakeholders on various issues related to WES in Schools – which may sum up to a comprehensive list of future actions in a Way Forward.

ANNEXES

RESOLUTIONS LOG-FRAME

CUMULATIVE RECOMMENDATIONS & THE WAY FORWARD MATRIX

(An Analysis of the Inputs and Recommendations from the Participants at the "WES in Schools"-Workshop)

Agency	Ongoing Activities (Re: WES in Schools)	Recommendations
<p>French Embassy</p>	<p>At the Grass-roots Level: Direct intervention with Primary Schools with <i>mainly</i> a donation to build schools, with some emphasis on sanitation such as digging boreholes and building some latrines.</p> <p>[All this is funded by the <u>Social Fund for Development</u> (established in 2001, to provide basic services to the Poorest).]</p>	<p><i>International Targets by 2015</i> <i>80% primary school pupils educated</i> <i>Schools equipped with Sanitation & Hand-washing Facilities.</i></p> <p>Recommendations: Informing, Training and Capacity Building; Investing in Water Supply and Sanitation Infrastructures in schools; Mobilisation of Goodwill: Parents-Teachers' Associations Community-based Organisations Local Authorities, etc. (... All supported by National Policies)</p>
<p>Belgian Embassy</p>	<p>(Active participation in WESCOORD).</p>	<p>[No quantified recommendation.] Only suggestion: invitation to open further dialogues & detailed discussions on WES in schools.</p>
<p>Agency</p>	<p>Ongoing Activities (Re: WES in Schools)</p>	<p>Recommendations</p>

<p>WHO</p>	<p>The WHO Global School Health Initiative (launched in 1995, aimed at mobilising & strengthening Health Promotion Activities at local, regional and global levels, to improve the health pupils, schools personnel, families and other members).</p>	<p>Call for collaborative effort from: Individuals Families School teachers Communities NGOs & Government.</p>
<p>HABITAT</p>	<p>The Managing Water for African Cities Programme (has been systematically developing a water-education component within the programme. <i>Value-Based Water Education</i> is an innovative approach to Water Education that inspires and motivates learners towards <i>behavioural change and adopting of attitudes & practices ...</i> besides simply creating awareness. The project is initiating: Curriculum Development Introducing Water-education in Pilot Schools Establishing "Water-Classrooms" Conducting Water Audits in Schools Water Quality Education Non-Formal Water-education through Community Initiatives & Twinning of Schools The Ministerial Advisory Group Meeting of March 2000 was a key step for WES in Africa. (<i>Following this...</i>) The Experts Group Meeting (EGM) in Johannesburg in 2001, led to the development of a Regional Strategy for introducing Water-education in Africa.</p>	<p>Teachers are expected to involve Learners in school & community activities – using a combination of different Methods, namely: Didactic, Promotional, <i>and</i> Participatory.</p> <p>(This is an ongoing project approach for UN-HABITAT. However, this may be adopted/adapted as a recommendation towards the Way Forward).</p>
<p>Agency</p>	<p>Ongoing Activities (Re: WES in Schools)</p>	<p>Recommendations</p>

Agency	Ongoing Activities (<i>Re: WES in Schools</i>)	Recommendations
UNEP	<p>The Nairobi River Basin Project (the focal point in Africa). The objective of the project was to clean up the Nairobi River water, so that there'd be no need for using expensive chlorinated water for such uses as fire fighting and for boilers. A study was conducted using/on 18 schools to know how they interact with water systems. A workshop was held in February 2003. [UNEP provides expertise only, while communities themselves run the project.]</p>	[No specific recommendation.]
UNIFEM	<p>The results and follow up of the International Drinking Water Supply and Sanitation Decade discussed in <u>New Delhi</u> (1990) called for an increase in women's decision making and management of water resources. The Dublin Statement (1992) endorsed by over 100 countries recognised that women play a central role in providing, managing and safeguarding water resources. →</p>	<p>In the context of water and sanitation, and through the Office of the President and UNICEF, UNIFEM will empower women to realise their security and rights in water and sanitation management in primary schools. UNIFEM calls upon the Office of the President, the Arid Lands Resource Management Project to act to promote the inclusion of gender considerations in the formulation of policies. →</p>

<p>UNIFEM (Continued)</p>	<p>Principle 20 of the Rio Declaration (1992) states that “women have vital role in environmental management and development”. Agenda 21 (1992) contains an entire chapter on women and sustainable development (chapter 24). The importance of gender was reaffirmed by the World Summit on Sustainable Development (WSSD) in 2002.</p> <p>The Beijing Platform for Action (1995) highlighted environmental issues as one critical area of concern “gender inequalities in the management and safeguarding of natural resources and in the safeguarding of the environment.</p> <p>At the Millennium Summit in 2000, World leaders agreed on Millennium Development Goals. A specific gender target sets out to eliminate gender disparities in primary and secondary education preferably by year 2005.</p>	<p>Engendering governance and promoting transformational leadership to enhance women’s political participation and decision making at all levels.</p> <p>Promoting the enjoyment by women and girls of all human rights, including supporting rights based approach to water, environmental sanitation and hygiene in schools.</p>
<p>Ministry of Health (MoH)</p>	<p>MoH provides for Preventive Measures & School Health in its agenda.</p> <p>There’s an existing school-competition programme of Solid Waste Collection in the districts of Malindi & Trans Nzoia.</p> <p>MoH has set up a full-fledged School Health Programme, which will work closely with the sector players and stakeholders.</p> <p>MoH is working on developing an Environmental Sanitation & Hygiene Policy (with the support of UNICEF, WHO and the World Bank’s Water & Sanitation Program) which will incorporate a chapter on School Sanitation & Hygiene.</p> <p>Requirements for ideal school sanitation are stipulated in various statutes such as the Public Health Act, the Education Act & the Building Code.</p> <p>However, the statutes are not being complied with/to due to financial constraints.</p>	<p>Health Campaigns (in schools is a good entry-point / start).</p> <p>Adopting New Technologies in Water & Sanitation such as <u>high-density plastic mobile toilet superstructures, complete with hand- washing facilities</u>, which will last longer than 20 years, and which are locally manufactured.</p>
<p>Agency</p>	<p>Ongoing Activities (Re: WES in Schools)</p>	<p>Recommendations</p>

<p>Ministry of Water Resource Management and Development (MWRMD)</p>	<p>The MWRMD has new mandates in policy formulation, including wastewater treatment & disposal, urban country water supplies, and sanitation & irrigation. (In 2003-2004, MWRMD's total expenditure = KSh 200 / person.) Ongoing Reforms of the MWRMD emphasize on:- Creation of awareness on available technological options, community participation in water resources management and development as well as maintenance of water facilities. Capacity building for communities on safe water, sanitation and hygiene practices. The role of the Ministry as technical advisor in all water development activities, policy formulation and regulation.</p>	<p>Call for a co-ordinated effort by parents-teachers' associations, the government, NGO's & the private sector. Do not emphasize water provisions in schools in exclusion of the community's involvement/ benefit, as it may lead to hostility towards the school community and alienation.</p>
<p>Ministry of Education, Science & Technology (MOEST)</p>	<p>Promotion of Hygiene in Schools as a priority in the provision of Free Primary Education (FPE)</p>	<p>Sanitation facilities to place a great emphasis on gender, be responsive to special needs, and be environmentally sensitive. Pit latrines should be conducted where there is no regular water supply. Renovation of physical facilities like toilets and water facilities will/should be done through partnerships. [Other partners should supplement (these) government efforts to fill in the gaps.]</p>
<p>The Arid Lands Resource Management Project (ALRMP)</p>	<p>ALRMP is a GoK – World Bank Community Project (est. 1996). Having completed its first phase on 11 districts (on June 31, 2003), it's commencing the second phase on another 11 districts (in September 2003). The highest budgetary allocation for the project will go towards development of water facilities (followed by education).</p>	<p>[No quantified recommendation.]</p>
<p>Agency</p>	<p>Ongoing Activities <i>(Re: WES in Schools)</i></p>	<p>Recommendations</p>

<p>World Bank (WB)</p>	<p>GoK is implementing a strategy (for Water & Sanitation services to Kenyans) whereby the main sector reform will be to transfer the responsibility (of providing W & S services) from the Central Govt. to Lower Level Institutions such as local authorities, self-help groups, and private sector. (In Urban areas, services to communities, including schools). The WB is currently providing US \$50 million for financing the FPE project (with focus on provision of books and other materials, as well as capacity building). WB is also supporting Kenya with US \$60 million to finance Phase II of the AIRMP, with community driven initiatives including water as a component, which is an entry point for water in schools. WB is discussing possible support to WES projects in big cities, which will include significant provision of services to low-income areas, support to finance a project in Water Resources Management to the tune of US \$40 million is also under discussion. The Water & Sanitation Program for Africa (housed at the WB) has a lot of experience in water supply, sanitation & hygiene in the region. It is available to support government efforts in WES in Schools.</p>	<p>For achieving the International Targets, the following are required / recommendation:</p> <ul style="list-style-type: none"> Clarifying the institutional arrangements for policy development, planning, implementation, management, and monitoring of water, sanitation and hygiene in schools; Agreeing on definitions and establishing a baseline that is consistent with the agreed definitions; Developing sector programs that integrate water, sanitation and hygiene education and facilitate resource mobilisation, including from the private sector Refining and clarifying national target and preparing an action plan to meet them while ensuring alignment with international target; Development of monitoring and evaluating mechanism progress and achievement of targets.
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Agency	Ongoing Activities (Re: WES in Schools)	Recommendations
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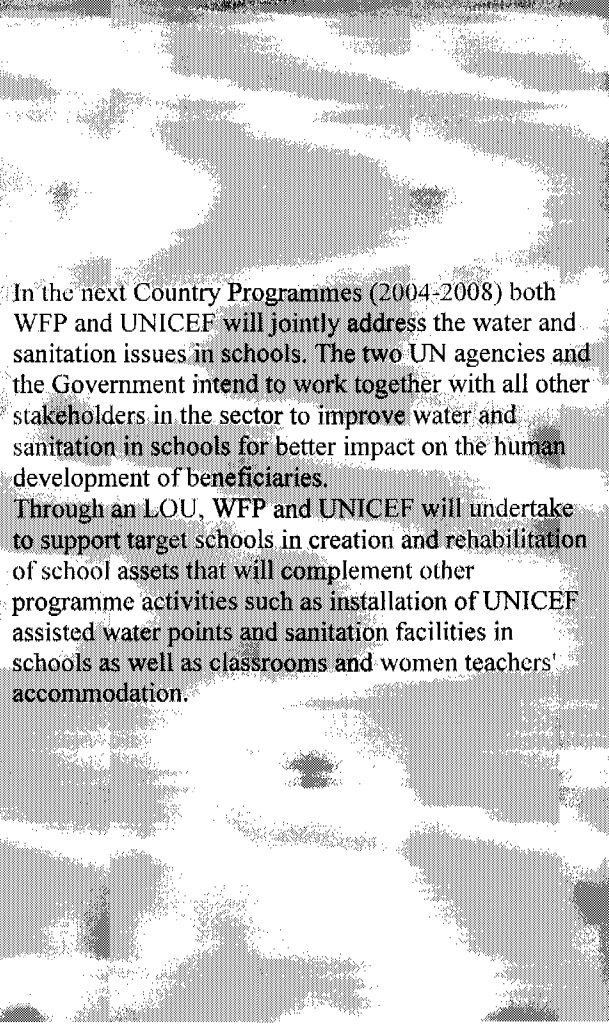
WFP

WFP is assisting pre-primary and primary schools with a **feeding programme** in food insecure arid and semi-arid districts in North Eastern, Eastern, Rift Valley, Coast and Nairobi provinces.

In total, the programme is currently targeting 1.1 million pre-primary and primary school children who receive a hot lunch of maize, pulses and vegetable oil.

The long-term objective of the programme is to support GoK in Goal of universal education of socio-economically disadvantaged and nutritionally vulnerable children especially girls in the arid and semi-arid districts.

Since 1996 WHO and WFP have been collaborating at the global level in the field of helminth control in school children. WHO is providing technical support to the countries willing to add **deworming activities** to their school feeding programmes. These have been undertaken as pilot initiatives that illustrate the benefit of combining food aid, education -and health interventions.



In the next Country Programmes (2004-2008) both WFP and UNICEF will jointly address the water and sanitation issues in schools. The two UN agencies and the Government intend to work together with all other stakeholders in the sector to improve water and sanitation in schools for better impact on the human development of beneficiaries.

Through an LOU, WFP and UNICEF will undertake to support target schools in creation and rehabilitation of school assets that will complement other programme activities such as installation of UNICEF assisted water points and sanitation facilities in schools as well as classrooms and women teachers' accommodation.

GROUP WORK

The work shop drew to close with the participants teaming up in four distinct groups, in order to consolidate ideas, identify challenges and recommend a way forward on the following four major issues/areas:

Water and Sanitation Activity Framework

Policy and Legal Framework

Institutional Framework/Partners

Resource Mobilisation

The outcome of the groups' recommendations may be summarised as follows:

Group-1: Water and Sanitation Activity Framework

Activity	Target Group	Whom	How
AWARENESS CREATION	School Community Teachers Parents Pupils Policy Makers Development Partner/Donor Media Research Institutions	MEDIA as a channel of communication Development partners Line Ministries(Education/health) NGOs/CBO's Private sector c.g. Kcontainers Individuals	Media Conference Workshops Seminars
PROVISION OF FACILITIES. Water Sanitation Facilities	School community Surrounding community	As above except MEDIA	Demonstration Implementation Capacity Building provide knowledge/skills
Management of facilities Water Sanitation Preventive maintenance	Water users Institutions PTA's. School community surrounding	Management Committee Teachers BOG's/PTA Students	Management of resources Resources Training and capacity building
Research	Universities Institutions Line Ministries Private Sectors NGO's/CBO'S Individuals	Line Ministries Research Institutions private Sectors	Pilot Projects Survey/Data Collection
Education	School Community Teachers Parents Pupils	Policy Makers Line Ministries NGO's	Media Curriculum Development IEC Materials
Quality Control	Providers Implementers	Line Ministries Providers	Checking Students Check lists Design guidelines
M and E	School Community	Line Ministries Individual Management Committees Development Partners	Participatory Evaluation

Group-2: Policy and Legal Framework

Current Status

a. Locally

The Ministry of Health (MoH) is currently developing an Environmental Health and Hygiene Policy

MoH is also developing a school health programme to address health issues at school.

The water policy has provisions for institutional water supply and water-borne, sanitation-related diseases

There is a policy on the environment—the Environment Management and Co-ordination Act of 1999

The education policy exists but does not adequately address water and sanitation issues in school

There exist other laws and regulations on water and sanitation (Water Act 2002, Public Health Act (CAP 242) and the Building Code

b. Globally

There are global charters and conventions on:

Rights of the child

Education for all

The Millennium Development Goals

UN charter for human rights

Recommendations/Way Forward

Enforcement and implementation of the existing laws and regulations

Communities, including schools, should be sensitised on the policies and regulations

There is need to hasten the formulation and finalisation of the Environmental Sanitation and Health (ESH) policy document

There is need to harmonise the existing water, sanitation and hygiene related policies and regulations affecting schools.

Address cultural beliefs

Be gender sensitive when providing sanitation facilities in school

Develop self-sustaining programmes on water and sanitation for schools

Develop a policy on early childhood education development

Develop joint action plans to address water, environmental sanitation and hygiene in schools nation-wide.

Group-3: Institutional Framework/Partners

The issues and challenges faced on water and sanitation in schools were identified as follows:

Uncoordinated approach in solving the gaps in water and sanitation

Priority needs at both community and schools are conflicting. Addressing of other requirements such as food is given priority and water and sanitation is given emphasis.

Inadequate resources is a limitation to provision of quality standards in water and sanitation

The actors in water and sanitation independently handle the issues resulting in ineffective operational strategy.

To resolve the identified issues it was felt that the best approach is formation of a national framework whose responsibility is to provide co-ordination role in policy formulation, project and implementation plans guidelines. The national framework is to operate within the concept of the Water, sanitation and Hygiene for all (WASH) principles.

To be broad based with membership drawn from various actors in both public and private sector at national level and replicated into all levels from province to the village or school community as follows:

Relevant Government ministries that include; Ministry of Education, Science and Technology (MoEST), Ministry of Water, Ministry of Health, Ministry of Local Government, Ministry of Planning and National Development, Office of the President (ASAL programme) among others.

The private actor actors in water and sanitation representatives.
Non Governmental and Community Based Organisations.
The community, parents, school management committees and willing individuals.
The teachers, pupils/students

Resources for What?

Toilets, Water Supply, Hygiene promotion and Education , Community Advocacy/Lobbying and training and policy development and implementation.

Recommendations:

Resources Mobilisation: Through advocacy supported by networking, surveys, analysis and dissemination forums including case studies and success stories.

Materials/equipment : Should be sustainable simple, affordable, good quality control, Village Level Operation and Maintenance Technology.

Training tools: Interactive relevant, simple, affordable with local context, sustainable and replicable

Land: Identification, preparation of MOU with relevant agencies and community groups and security of tenure.

Skills: Building local capacity and on local expertise.

SPEECHES

Speech by the Permanent Secretary, Ministry of Water Resources Management and Development, Prof. George Krhoda

I join you this morning as you endeavour to address the important issue of water, Environmental Sanitation and Hygiene in schools. I am aware this is a big challenge not only to schools but also to our nation. Any attempt at increasing the access to safe water and improved sanitation is not only desirable but also very welcome.

As many of you are aware primary and has been mentioned by previous speakers primary school education lays the foundation of the country's literacy level and it is a stage where pupils gain skills and acquire knowledge to be responsible citizens in their own communities. It is also a stage where a lot of physical and biological changes, as well as brain development take place. This bio-physical development will depend on the environment in which each pupil is brought up and this will also determines quality of education of each school for both boys and girls.

Ladies and Gentlemen: in order to have a child friendly environment, a co-ordinated effort by parent- teachers associations, the government, NGO's and the private sector must be ensured. It is in this light therefore, that the Ministry in collaboration with UNICEF decided to assess the status of water and environmental sanitation facilities in schools in selected areas of the Country with view to determine that the quality of education is not compromised by enhanced enrolment due to free primary education. We are aware and for the sake of laying further emphasis, that the lack of these facilities increase the risk of transmission of water, and water-related diseases. We are also aware that the girl-child participation, enrolment and educational achievements are dependent upon these facilities.

Data collected from the field by my officers indicate the following

The water systems in many schools are broken down particularly bore holes fitted with hand pumps in many places including West Pokot District. The story is the same with leaking storage tanks, rusted iron-roof catchments, etc

Most schools have poor sanitation and hygiene practice while others have no toilets at all. Where some form of toilets do exist, they do not meet the recommended ratios of 25 girls or 35 boys per toilet.

Water conservation measures are generally not practices in most schools as evidenced by bare school compounds. Other compounds do not have appropriate roofs to start with.

In some schools, pupils ferry water to school for drinking, washing classrooms and toilets. Water being brought from all forms of sources which besides being a burden to pupils is of compromised quality.

Stresses have been observed to some pupils because of travelling long distances in search of water and this has direct implications on school attendance and performance.

Ladies and Gentlemen: As I had pointed out earlier in my speech, the above problems cannot be solved by the Government alone. All of us as community leaders, NGOs, Parent-Teachers Associations (PTA), the Private Sector and Development partners have a role to play in meeting both national and international goals of providing adequate Water of good quality, appropriate sanitation and hygiene. It is our humble duty to provide clean environment as the children's right to health and health services.

I am aware that the Ministry has been playing its role in water provision in schools and other related institutions and will continue to do so. However, as the cost of water schemes increase, the burden must be shared by various actors. As you are aware, the Ministry of Water Resources Management and Development has new mandates in policy formulation including wastewater treatment and disposal, urban and community water supplies, sanitation and irrigation. However, the year 2003-2004 the Ministry's total expenditure in water is 200/= per person. In this regard therefore, initiatives to improve water supply in schools must be co-ordinated to create synergy and add value for schools. In this connection, I wish to inform you that the Ministry of Health has already approached the Ministry to drill 40 boreholes for selected hospitals in the country. The Ministry of Education therefore, and individual school management teams should feel free to approach the Ministry to co-ordinate all issues pertaining to water services in schools.

As many of you are aware, schools are part of the community and economies of scale dictate that proposals for water provision in schools should include the local participation of community. Mr. Chairman, I would like to avoid a situation in which local communities feel that the going-ons in the schools does not concern them. If anything they feel alienated, and sometimes hostile to school community, thus causing insecurity to the pupils. The Ministry will not only assist the Ministry of Education to provide water to these institutions at a lower cost but additionally provide for the local communities to reduce such tensions.

Mr. Chairman, we need to be reminded that in the PRSP reports 61 districts out of 71 ranked water as their priority

The reforms in the water sector are geared towards the definition of roles in order to meet the water demand in all areas of the Country. The policy emphasis is on:-

Creation of awareness on available technological options, community participation in water resources management and development as well as maintenance of water facilities.

Capacity building for communities on safe water, sanitation and hygiene practices.

The role of the Ministry as technical advisor in all water development activities, policy formulation and regulation.

Your deliberations in this two day workshop will provide the recommendations and they way forward and our Ministry is willing to assist where it can

Ladies and Gentlemen: Let me take this opportunity to thank you individually for having shown interest to take part in this important workshop. I also thank UNICEF for having a keen interest in the welfare of children and funding the workshop.

**Speech by the Permanent Secretary, Ministry of Education, Science and Technology (MoEST)
(Professor Karega Mutahi)**

The permanent secretary in the ministry of education said that his ministry had an obligation to fulfil and implement the NARC government's pledge to provide free primary education for all starting in January 2003. As a consequence, there was an upsurge in the enrolment of pupils into primary schools from 5.9m in 2002 to 7.2 m in 2003. He said for example that the national gross enrolment rate had increased from 93% in 2002 to 104 % in 2003. This led to outstretching of facilities in the schools. Where facilities existed, they were of unsatisfactory condition.

The PS said that water and sanitation facilities were no exception. They were inadequate and had an immediate impact on the enrolment and retention of pupils in primary schools and in particular among female students with the problem being more pronounced in arid areas and in urban slums. 70% of female children do not have access to sanitary facilities and this therefore inhibits increased enrolment of girls into school. He did not rule out the effect of poverty on enrolment rates.

He gave the water and sanitation coverage situation in the country where water coverage in rural areas is 48% and urban is 70% while sanitation coverage is 42% in urban areas. Sanitation coverage in arid areas is less than 40%.

This has led to promotion of hygiene in schools as a priority in the provision of free primary education.

Way Forward

The government is committed to providing good, clean drinking water to all schools

Sanitation facilities in schools should put a great emphasis on gender and be responsive to special needs and should be environmentally sensitive

Where there is no regular supply of water, pit latrines should be constructed

Renovation of physical facilities like toilets and water facilities will be done through partnerships

To supplement government efforts other partners should come in and fill the gap.

DONOR STATEMENT

JOINT DONOR STATEMENT FROM THE TECHNICAL GROUP ON WATER SUPPLY AND SANITATION AND WATER RESOURCES MANAGEMENT

Water is a scarce and vulnerable resource whose use and development underpins the social and economic fabric of the Kenyan economy. The Government is committed to improving the management and protection of water resources to ensure that water is available for equitable distribution for all demands including water for domestic use, industry, agriculture, energy, livestock, wildlife, tourism and other uses. Inadequate and inefficient water supply and sanitation services contribute to poverty through: (a) unreasonably high prices of water which affect household incomes; (b) high economic costs for those who fall ill and associated costs of treatment and income forgone; (c) the physical effort and time spent to fetch and carry water for long hours. Poor governance of water resources impacts poor people most; it is the poor who bear the brunt of inequitable allocation decisions, floods and droughts and are also the ones forced to live with poor quality water for household use. To ensure efficient management of water resources and provision of sustainable water supply and sanitation services to Kenyans, the Government has started a process of reforming the sector based on the Water Act 2002 which provides for the establishment of: (a) a Water Resources Management Authority, responsible for managing water resources; (b) the Water Services Regulatory Board to regulate provision of water services; and; (c) Water Services Boards, responsible for WSS service provision. In a reformed sector, the role of the Ministry of Water Resources Management and Development (MOWR) will be limited to policy and strategy development. A trust fund is to be set up that will ensure that the reform process will not have extreme impact on the vulnerable groups. Donors are committed to providing the support needed to implement

the reforms and an investment programme that will ensure efficient management of water resources and provision of sustainable WSS services and in particular, to address the issues and challenges outlined below.

Water Supply and Sanitation

Background:

Government efforts in the water and sanitation sub-sector have led to significant investments and to improved water supply service for 60 – 65% of the population overall (40% and 65% in urban and rural areas respectively). Approximately 19million people have access to improved services through about 1000 urban and rural piped water supply systems and an additional 2.5million people in rural areas from 10,000 water points. About 2m people in urban areas are connected to 35 sewerage systems; the remainder of the urban population relies mostly on pit latrines and a limited number, on septic tanks. Small towns and trading centers are considered as rural and are often serviced by large rural piped water schemes.

In the urban areas, low income households account for 30-70% of the population, depending on the city or town, mostly living in informal settlements where WSS utilities are playing a very minor role in providing services; consequently, more than 60% rely on informal kiosks, vendors or natural sources while more than 85% use pit latrines. Informal settlements comprise the fastest growing segment of the urban population, at an estimated 12% per annum compared to an average of 4% for urban areas; low income settlements will therefore comprise the majority of potential new customers in the future.

Out of an estimated rural population of 24million people, about 10million have access to improved water supply through piped and point source systems operated by the MOWRMD, NWCPD and self help groups. About 40% of the rural population has access to sanitation mainly through ordinary pit latrines. The WSS service coverage is particularly low in arid and semi-arid lands (ASAL), where ground water resources are scarce, surface sources are not perennial and population often nomadic. Concern has however been raised regarding the variety of sources of data within the sector which are in most cases not in harmony with each other. For example, water coverage needs to be reviewed because it is known to vary from 52% to about 68% depending on the data source.

The Main Issues:

Despite significant investments in the sub-sector, many services are largely inadequate and not responsive to consumer needs. As a result, many households depend on costly alternative water sources, many of them of questionable quality; a large number of Kenyans continue to depend on unimproved sources for their regular supply. Inadequate WSS service provision can be attributed to the following factors, among others:

- focusing investments on production capacities* that have not been matched by adequate distribution infrastructure;
- widespread collapse of infrastructure due to *lack of investment in maintenance*;
- limited expansion* of existing infrastructure and inadequate investment in development of new schemes to match a rapidly growing population;
- inadequate demand assessment* to help provide the type of service that corresponds to what people want and are willing to pay for;
- poor demand management;
- inadequate control, accountability and transparency;
- poor pricing, tariff and commercial policies*, partly due to the lack of autonomy of urban WSS systems from local political decision-making;
- the existence of a *complex institutional framework* that is not adapted to the challenge of delivering sustainable services, with fragmented and unclear roles and responsibilities for services provision by the main players;
- giving *low priority to sanitation and hygiene*;

insufficient investment in and use of **low cost technology solutions for the poor**; and; the relatively **marginalized position of women** in investment and management decision making. Lack of running water in most of the countries' health facilities.

Limited information and awareness among stakeholders on the new water act and the reform process.

Inadequate preparedness among stakeholders in dealing with emergencies such as cholera, floods and drought. The new challenges facing schools in light of the recently declared free education policy and the inadequate water and environmental sanitation facilities within the institutions

There is virtually no formal private sector participation in service delivery – there is however a very active and unregulated informal water market that has developed where the public services have failed. This failure comes at a high cost to the Kenyan economy through unnecessary expenditure on costly complementary supplies, storage and lost production and time.

The Challenge:

The Government has set the target of providing 100% of the population with access to clean water by 2010. The MDGs for the WSS sector is to halve the proportion of people without access to safe water and sanitation by 2015. Achievement of these targets from the current 60 – 65% coverage is a formidable task that entails implementation of an ambitious reform program that will ensure the provision of reliable, sustainable and affordable water and sanitation services to all categories of consumers. The proposed reform is complex and requires support and consensus from all key stakeholders. The following elements are critical for achieving the targets set:

a **clear and well supported water and sanitation services strategy and investment plan** that sets out a clear vision on how the reform process will be undertaken, the resources required, the investments to be implemented, and timetable involved;

implementation of an institutional framework that will lead to a **clear separation of functions** and ensure: (i) effective policy making by the MOWR, (ii) independent sub-sector regulation by the Water Services Regulatory Board, (iii) effective business planning and asset development/expansion by the Water Services Boards, (iv) accountability and efficient performance by the Water Services Providers;

clarifying the **criteria for setting up the Water Services Boards**, the number of boards to be set up, their boundaries, and timetable for their operationalization and capacity building to ensure efficiency in carrying out their mandate;

clarifying the **mechanism for spearheading the reforms** and in particular, the roles of the Water Sector Reform Steering Committee and the Water Sector Reform Secretariat in steering the reform process, ensuring their autonomy and dedicating the resources needed;

Implementing the Act, including the establishment of new authorities, in a process that **promotes a democratic culture and respect for human rights and gender equality**;

developing **specific intervention strategies to address the WSS problems for particular groups such as the urban informal settlements and slums and the ASAL areas**, and integrating other sector programmes and activities (roads, solid waste management in informal settlements and slums; agriculture and livestock development in the ASAL areas)

clarifying the **roles of local level actors** such as community based organizations, how they relate to higher level institutions and their possible role in services regulation;

establishing a **sustainable mechanism for financing the sector** (WSS and WRM) that attracts funding from key financing agencies, government budget, users of services as well as the private sector;

developing **pricing and tariff policies** that ensure generation of adequate resources for O&M, depreciation and a reasonable return on assets, while ensuring equity and access to low income populations at affordable cost;

establishment of an **M & E system** for monitoring progress towards achievement of the national and international targets, based on commonly defined and established baseline and targets to be achieved;

increasing the role of the private sector to improve efficiency, strengthen commercial discipline through competition and autonomy of management, and to gradually raise equity financing; and;

improved coordination between the various actors in the sector, including donors. This should include strengthening and expanding the scope of existing coordination mechanisms both at the District and National level. e.g WESCOORD and The donor coordination group among others

Promoting integrated programming with other sectors especially health, education, Nutrition and HIV/AIDS just to mention a few.

Promoting the development of an improved data base and information management system which will be sustainable and can help guide the sector

Water Resources Management

The Main Issues

Kenya faces a complex water resources crisis arising from three legacies: The first is a natural legacy: an extremely **limited per capita endowment of freshwater resources** (of less than 650m³ making it among the most water scarce countries in the world) and high hydrological variability, both spatially and temporally. Droughts are endemic and floods occur frequently, with huge regular direct and indirect impact on the economy.

Secondly, Kenya has a **management legacy**. This is characterized by a rapidly growing demand for water for many sectoral uses, on the one hand, and a diminution of natural storage capacity (wetlands, catchments, and aquifer recharge areas) and lack of development of artificial storage capacities (dams and reservoirs) to meet demand and to buffer against water shocks to provide water for irrigation, hydro-power generation, industrial production and urban and rural water supply and prevent heavy economic losses. Water resources have been poorly managed through unsustainable water and land use policies, laws and institutions, weak water allocation practices, growing pollution, and increasing degradation of rivers, lakes, wetlands, and aquifers and their catchments, and severe environmental degradation. The annual cost of poor water resources management is conservatively estimated at US\$50 – 120million.

Thirdly, **Kenya shares over half of its rivers, lakes, and aquifers with neighboring countries** which offers opportunities for co-operation and joint actions. At the same time, it complicates management of these water resources and has implications for regional security and development, particularly as the nation faces increasing pressure to develop and manage its water resources.

As demonstrated by the recent floods and droughts, **Kenya's economy has a pervasive dependence on sound water resources management** – many sectors of the economy were impacted - industry, hydro-power generation, manufacturing, agriculture, livestock, and tourism. The sustainability of investments in transport infrastructure depends directly on the ability to manage floodwaters. The impact of floods and droughts has been magnified by poor management of the land and water resources, poor preparation for these events and lack of investment in storage infrastructure. The poor, both rural and urban, are particularly vulnerable to floods and droughts; to water shortages from biased water allocation decisions; and to poor water quality from uncontrolled water pollution, catchment degradation, and invasive weeds. Given the strong linkage between water security and economic performance, achievement of the objectives of the *Economic Recovery Strategy for Wealth and Employment Creation* will be undermined if water resources management and development is not addressed as a priority.

Challenges ahead:

The strategy for making Kenya a water secure country will need to incorporate the following policies and approaches:

appropriate water resources policy, economic policy, and foreign policy to ensure that appropriate institutional, economic, and regulatory instruments are established for: (i) the management of watersheds and water quality, (ii) efficient yet equitable water allocation between uses, and; (iii) sound investments in water conservation and storage;

a cross-sectoral approach: Reforms and investments in the agriculture, livestock, manufacturing, energy, transport, and communications sectors must be simultaneously supported by purposeful management of the underlying water resource base. The MOWR needs to gain wider support, both within and outside government for water sector reforms because the decisions taken in other sectors impact on water resources and the extent of financial resources that will be needed. Community groups at both basin and local levels need to be involved in the decision-making.

a coordinated approach for effective, efficient and equitable water resources management, to develop and implement effective multi-purpose infrastructure investment plans, catchment and riverine management plans, capacity building for institutional staff and community groups, and pilot projects. This would allow the country to break out of the vicious cycle of risk-averse behavior—in the face of floods, droughts, and degradation; under-investment and limited storage capacity; degraded catchments, limited water storage, and unfair water allocation—and lead to effective, efficient, and fair management of water resources

improved planning to ensure sustainable investments, in new water resources infrastructure, including dams and reservoirs, pans, rainwater harvesting, boreholes, shallow wells, and inter-basin transfers to avoid environmental and social problems similar to those experienced in the past, particularly in hydropower and irrigation projects. In developing water resources infrastructure project in the water-rich parts of the country such as the Tana River and Rivers of the Lake basin, it will be crucial to address the social, environmental, economic, and transboundary aspects of such investments in a more timely, systematic, responsible and transparent manner than in the past;

advance the National Water Campaign which was launched last year to raise awareness on the water resources crisis facing the country and the need to manage water as a scarce resource that has a social and economic value.

Opportunities to build on:

The *Sessional Paper No. 1 of 1999 on National Policy on Water Resources Management and Development*; Water Act 2002, and the WRM and WSS strategies and Investment Plan currently under preparation, all provide a solid foundation to build upon in addressing the complex issues outlined above. Other important building blocks include:

wide and popular support for the new government and its commitment to improving governance and promoting the welfare of the poor women and men;

MOWR's commitment to implement the reforms as shown by the gazettment and recent launching of three key institutions – the Water Services Regulatory Board, the Nairobi Water Services Board, and the Water Services Trust Fund; and adoption of a flexible approach for reform implementation;

Availability of good capacity and professional skills in the country to tap into;

Water supply and sanitation and water resources identified as priority by Kenyans – over 60 districts identified water as a priority during the PRSP consultations;

Donor commitment to support the government's programmes for WSS and WRM; and;

improved co-ordination framework within GOK ministries and with development partners.

LIST OF PARTICIPANTS

	NAME	ORGANIZATION
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1.	Abdishakur Othowai	Nomad Life Foundation
2.	Abok Ager	NEMA
3.	Aggrey Chemonges	CEDS
4.	Alfred K. Langat	MOH
5.	AMK Gachanja	MWRM & Dev
6.	Aukeet Akimasia	Maji na Ufanisi
7.	Beth Nderitu	UNICEF-KCO
8.	Carren Omwenga	WFP
9.	Charles Lalu	Kenya red Cross
10.	Charles Obiero	MOEST
11.	Courtney Pugh	Living Waters
12.	D. K. Manns	MRMP
13.	Dennis O'Brien	CARE Kenya
14.	Elijah Kinyangi	JICA -- Kenya
15.	Elly Oduol	UNDP
16.	Eng. P. Muthuci Njiru	Prov. Water Office
17.	Eng. S. M. Wambua	NETWAS
18.	Esther Ouma	WFP
19.	Eunice Viatta	MPAP
20.	F. Renard	Ambassador of Belgium
21.	Fatuma S. Abdikadir	ALRMP/OP
22.	Fred Donde	UNICEF-KCO
23.	Fred Killy
24.	Gray Evans	Living Waters
25.	Henry Ndede	UNEP
26.	Humbert Franck	Ambasnde de France
27.	Humphrey Ndabagoye	Aga Khan Foundation
28.	Hussein Osman	MRLRM
29.	J. M. Kamaru	MWRM & Dev
30.	J. M. Omwenga	MWRMD
31.	J. Mutonga	MWRM & Dev.
32.	J. R. Nyaoro	Water
33.	James Dikir	MAAP
34.	Japheth Mbubi	WSP-AF
35.	John K. Gichane	Living Water Int.
36.	John Kere	CARE Kenya
37.	John N. Maina	COWAPA
38.	John R. Nyaoro	RWR
39.	Joseph Kenya	Ministry of Planning
40.	Julius M. Wanyonyi	Kenya Reinwater Ass.
41.	K. Z. Onyango	Ministry of Water
42.	Karubu	MOEST
43.	Keiko Sano	JICA
44.	Lionelle Fiosch	Oxfam Quebec
45.	M. Bashir	WASDA
46.	Margared Ndanyi	MOEST
47.	Martin Ngurianyng	TR Morpus

48.	Milcah Krop	DEO's West Pokot
49.	Misa Kemmiya	JICA
50.	Misheck Kirimi	NETWAS
51.	Mohamed Noor	Northern Aid
52.	Musyoka M. Muthoka	Coast Dev.
53.	Nazim Mitha	UNICEF-KCO
54.	Nginga E.W.K.	NEMA
55.	Nichola Muiah Paul	MCDA
56.	Nyawira Hiuhu	ALRMP
57.	Opail Emmanuel	Aga Khan Foundation
58.	Owcn Nyaga	Kenya Org. of Env'tal Edu
59.	Patrick Macharia	UNICEF-KCO
60.	Pireh Otieno	UN-Habitat
61.	Prof. G. O. Krhoda	Permanent Secretary, Ministry of water Resources Development and Management
62.	Prof. Karega Mutahi	Permanent Secretary, Ministry of Education, Science and Technology
63.	Rebecca Kabure	ITDG-EA
64.	Roger Pearson	UNICEF-KCO
65.	Rosalia Kalani	MOH
66.	Rosemary Rop	Maji na Ufanisi
67.	S. G. Maingi	MOH
68.	S. K. Kibe	JICA
69.	S. M. Kioni	Ministry of Water
70.	Said Omar Ali	MOH
71.	Sammy Makama	MOH
72.	Sara Price	Oxfam Quebec
73.	Simintei Ole Kooke	Ministry of Water
74.	Stephen Maina	World Vision
75.	T. Pakkala	WFP
76.	Tanveer M. Kamal	UNICEF-KCO
77.	Thomas Nyambane	UNRC/DPMCU
78.	Wambui Gichuri	World Bank
79.	Wilfred Ndegwa	WITO