

# The *EDUCATION* Millennium Development Goal

What water, sanitation and hygiene can do  
in Kenya

## The Millennium Development Goals

In September 2000, the United Nations Millennium Summit agreed a set of time-bound and measurable goals aimed at combating poverty, hunger, illiteracy, environmental degradation and discrimination against women.

The second Millennium Development Goal (MDG) is to ensure that all boys and girls complete primary education by the year 2015.

### Headline facts

#### ■ *Children and Health*

Children are very susceptible to environmental health-related diseases such as diarrhoea and worm infestations, due to their underdeveloped immune systems.

Children bear almost seventy per cent of the diarrhoea disease burden in Kenya and this is largely attributed to unsafe water and poor sanitation.

#### ■ *School Attendance*

In rural Kenya, a significant amount of childrens' time is spent fetching water for cooking and washing or taking animals long distances to drink water. This has an impact on school attendance.

#### ■ *Girls and Education*

Lack of or inadequate sanitation in schools, especially toilets, affects girls more than boys due to their special hygiene needs. This is especially so for those who have attained the age of puberty.

#### ■ *Performance at School*

Improved water supply and sanitation in schools reduces incidences of water-related diseases among pupils. This translates into regular school attendance and consequently higher academic performance.

#### ■ *Teachers*

Teachers may not be willing to accept postings in areas where there is inadequate water and sanitation.



## Children and Health

### The facts

- In Kenya, the primary causes of many childhood illnesses and poor health (diarrhoea, schistosomiasis, trachoma and scabies), are water- and sanitation-related.
- Children have the right to be as healthy and happy as possible. Being clean and having access to safe water and proper sanitation facilities contributes to a happy and healthy childhood.
- Worm infection, which is one of the main causes of disease in children between five to fourteen years in Kenya, is mainly spread through inadequate water and sanitation e.g. skin and eye infections.
- In families and villages without improved water sources, children have to fetch water from rivers, dams and open wells. This exposes them to the risk of drowning and injuries.
- The spread of malaria, the leading cause of death among children under five years in Kenya, is accelerated by poor sanitary conditions such as existence of open pools of water around homes, which act as breeding sites for mosquitoes.
- Where sanitation and hygiene facilities are absent in schools or they are poorly maintained, schools become health hazards and impede effective learning.

### Why water, sanitation and hygiene?

- Improving sanitary conditions in schools, in the community and around the home, together with improvements in hygiene, drastically reduces the incidence of diarrhoea and helminthic infections among school children.
- A study conducted to quantify the effects of various water and sanitation interventions on health has demonstrated that the simple act of washing hands at critical times can reduce the incidence of diarrhoea by up to 35%.
- Access to improved water and sanitation, especially in poor peri-urban areas, is a crucial element in reducing morbidity and mortality among the under-fives and school age children.
- Health improvements in children resulting from improved water, sanitation and hygiene education lead to increased school attendance and eventually better performance.



## School Attendance

### The facts

- Over 50% of the population in rural areas particularly in arid and semi-arid regions of Kenya have no access to water. As a result many children are regularly forced to miss school to look for water for domestic and animal use.
- The incidence of common illness such as diarrhoea and intestinal worm infections in informal settlements related to inadequate water, poor sanitation and hygiene are the causes of frequent absenteeism by pupils.
- Children with worm infestation experience higher rates of absenteeism from school than non-infected children. Consequently, they spend less time in school and are disadvantaged in the learning process.
- Teachers often have to turn children away from school if they are not clean or their clothes are dirty. In crowded places where there is not enough clean water, skin diseases like scabies spread quickly.



### Why water, sanitation and hygiene?

- The provision of safe water and sanitation in schools is key to realizing national commitments on “basic education for all” by the year 2015.
- The availability of water and sanitation reduces the time spent fetching water, especially by girls. This allows them to concentrate on schoolwork.
- In nomadic communities in Kenya, the provision of a safe and reliable water supply would facilitate a sedentary lifestyle, hence making it easier for the authorities to set up long-term educational facilities like classrooms for the children.

## Performance at School

### The facts

- Children who suffer severe early childhood diarrhoea enter school later than their classmates, and perform worse in non-verbal intelligence tests.
- Water and hygiene are contributing factors to malnutrition especially helminthic infection. This has an adverse effect on a child's school performance.
- Arsenic exposure in unsafe drinking water has been shown to retard childrens' intelligence.
- Lack of safe water and adequate sanitation facilities means children, especially from arid and semi-arid lands (ASALs), sacrifice part of their school time to look for water and hence have less time for studies.

### Why water, sanitation and hygiene?

- The provision of safe water and sanitation facilities reduces the incidence of childhood diarrhoea, allowing uninterrupted attendance at school.
- A reduction in helminthic infections through the provision of safe water, improved sanitation and hygiene promotion, reduces malnutrition among children, giving them the opportunity to perform better at school.
- The provision of an improved water supply ensures that water for drinking is safe from potential chemical pollutants that could easily interfere with the development of children's brains and eventually affect academic performance.



Providing access to water and sanitation in households and in schools is the first step towards eliminating inequalities in educational opportunities between girls and boys in Kenya.

## Girls Education

### The facts

- Girls require sanitary facilities that give them privacy and dignity. Lack of sanitation facilities causes girls to drop out of schools, due to the embarrassment of sharing toilets with boys, especially when they reach puberty.
- Absenteeism is one of the causes of poor academic performance and girls are more likely to be regularly absent from school due to a lack of, or poor, sanitary facilities in schools.
- Culturally, children and particularly girls are supposed to help their mothers with water collection and other domestic chores. This means they are not able to attend school and are denied an opportunity to enjoy their right to education.
- Inequalities in access to safe water, especially in rural areas, forces young girls to spend hours each day fetching water, causing an enormous drain on their energy, productive potential and health. This disrupts their academic activities.

### Why water, sanitation and hygiene?

- Installing separate toilets for girls and boys at school can help bring teenage girls into the classroom and ensure regular attendance.
- Providing water and sanitation at school is one of the best ways of bringing equal opportunity to children born into a world of disparities, particularly girls.
- Making water and sanitation facilities accessible means girls have more time for their studies and as a result concentrate on improving their academic performance.
- Improving water and sanitation in schools enables girls at puberty stage, who have special sanitary needs, practice proper personal hygiene thus reducing the incidence of water-related diseases.



## Teachers

### The facts

- Retention and recruitment of teachers is problematic where schools lack adequate water and sanitation facilities especially in arid and semi-arid regions.
- When teachers fall sick from water- and sanitation-related diseases, they are more likely to be absent from school, and this will consequently affect performance of students.
- Water- and sanitation-related diseases are some of the major opportunistic infections common among People Living with HIV/AIDS (PLWA), which has resulted in the deaths of many teachers, thereby leaving many schools with a shortage of teachers.

### Why water, sanitation and hygiene?

- Improved water and sanitation facilities reduces water- and sanitation-related morbidity hence teachers are less likely to be absent from school and therefore are able to devote more time and concentration to teaching.
- The majority of female teachers have to set aside time for domestic duties including water collection. Providing safe water and sanitation facilities to households leaves teachers with time to concentrate on their work.

### What can be done to improve water, sanitation and hygiene in schools?

- The government should strengthen the implementation of school health activities with emphasis on water, sanitation and hygiene through appropriate policy support.
- The government should prioritize resource allocation for water, sanitation and hygiene in the health sector in general and school health in particular.
- The government should incorporate basic training and refresher courses related to sanitation and hygiene into the teachers' training curriculum.
- There is a need to develop and implement cost effective and sustainable models for promoting hygiene and sanitation in schools and in informal settings.

This Country Note presents evidence on the linkages between educational outcomes, water supply, sanitation and improved hygiene.

### Key references

- Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. (2004). *Kenya Demographic and Health Survey 2003*. Calverton, Maryland: CBS, MOH, and ORC Macro.
- Ministry of Education, Science and Technology (MOEST) & Ministry of Health (MoH), (2000): *School Health Policy*, Government of Kenya.
- Water and Sanitation Program – Africa (WSP - AF) [2002]: *Assessment of Local Service Delivery within Informal and Peri – Urban Settlements in Kenya, Nairobi – Kenya*.
- Abagi, O. (1997). *Status of Education in Kenya: Indicators for Planning and Policy Formulation*, Institute of Policy Analysis and Research, Nairobi – Kenya.

This Country Note is based on the WELL Millennium Development Goal Global Briefing Note series. These and other Country Notes are available at:  
<http://www.Lboro.ac.uk/well/>

DFID Resource Centre in Water, Sanitation & Environmental Health  
[www.Lboro.ac.uk/well](http://www.Lboro.ac.uk/well)

Country Note compiled by Gerald Rukunga, David Mutethia and Titus Kioko, AMREF Kenya

Photographs by David Mutethia

Editor: Frank Odhiambo, WEDC

For further information, contact:

Gerald Rukunga  
African Medical and Research Foundation (AMREF) Kenya, P.O. Box 30125 – 00100 GPO

Langata Road, Wilson Airport, Nairobi, Kenya

Phone: +254 20 601593  
Fax: +254 20 602531  
Email: [rukungag@amrefke.org](mailto:rukungag@amrefke.org)

WELL  
Water, Engineering and Development Centre (WEDC)

Loughborough University  
Leicestershire LE11 3TU UK

Email: [WELL@Lboro.ac.uk](mailto:WELL@Lboro.ac.uk)  
Phone: 0 (44) 1509 228304  
Fax: 0 (44) 1509 211079

Website: <http://www.Lboro.ac.uk/well/>



WELL is a network of resource centres:

WEDC at Loughborough University UK  
IRC at Delft, The Netherlands  
AMREF, Nairobi, Kenya  
IWSD, Harare, Zimbabwe  
LSHTM at University of London, UK

TREND, Kumasi, Ghana  
SEUF, Kerala, India  
ICDDR, B, Dhaka, Bangladesh  
NETWAS, Nairobi, Kenya

This note was funded by the  
UK Department for International Development (DFID).  
The views expressed, however, are not necessarily those of DFID.

Published by WEDC on behalf of WELL