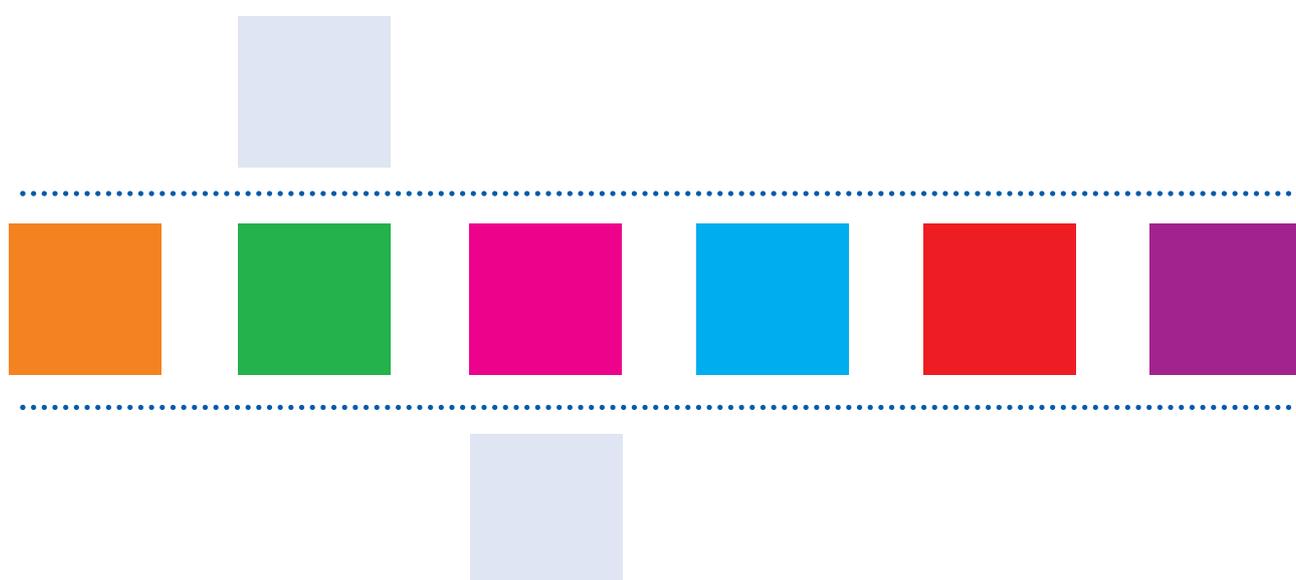


Global Mapping of Initiatives in School Health and Nutrition, with Emphasis on Health Education



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Executive Summary

The educational and nutritional benefits of school feeding programmes can be greatly enhanced by complementary activities to improve the health and nutrition of schoolchildren.

This mapping of global initiatives in school health and nutrition, together with the available programme guidance on health, hygiene and nutrition education, is intended as a source of technical support for WFP programme officers and professionals from other organizations who, in partnership with governments, other agencies and the private sector, engage in skills based health education to promote the effectiveness of school health and nutrition policies and programmes.

A series of initiatives are described in the document using the Focusing Resources on Effective School Health (FRESH) framework, which is adopted by all major agencies involved in school health and nutrition. The following wide-ranging initiatives are included:

- Global School Health Initiative;
- The Essential Package; and
- Child-friendly schools model.

Attention is also given to activities related to skills based health education, particularly in personal hygiene and nutrition, which are most relevant to WFP's needs and opportunities.

The main global initiatives to improve water and sanitation infrastructure in schools and communities that are described in the report are:

- Water Supply and Sanitation Collaborative Council;
- Global Water, Sanitation and Hygiene for All (WASH) Campaign; and
- Water and Sanitation Program.

Two further areas of intervention that are particularly important to school feeding programmes – deworming and micronutrient supplementation – are also examined.

The chapter devoted to skills based health education provides information about the following:

- The Child-to-Child Trust;
- behaviour change communication through social marketing;
- *Facts for Life*, a UNICEF publication; and
- International Union for Health Promotion and Education

A separate description is given of initiatives related to the topics of personal hygiene and food and nutrition, including:

- Global Public–Private Partnership for Handwashing with Soap;
- private-sector initiatives;
- Feeding Minds, Fighting Hunger;
- *Nutrition Education in Primary Schools*, a FAO planning guide;
- school gardens;
- food-based dietary guidelines;
- nutrition-friendly schools; and
- Five Keys to Safer Food.

Introduction

School feeding programmes are increasingly recognized as a social safety net that can translate into long term investment in human capital through improved nutrition and education, value transfer, gender equality and other wider socio-economic benefits.

In order to enhance the educational and nutritional benefits of school feeding, other interventions such as educational and curricular reforms are needed, in addition to the education and training of teachers and provision of school materials. School-based interventions to improve the health and nutrition of schoolchildren are also required.

For a variety of reasons, including population growth, reduced infant and child mortality, and the success of efforts to improve access to schooling, more children than ever before are now enrolled in basic education programmes. This is a situation of great potential for governments endeavouring to enhance the productive capacity of their population through efforts to provide education for all.

But when health and nutrition problems among school age children prevent them from attending school regularly, impair their ability to learn or cause them to leave school early, this potential is threatened.

The main health problems in school age children are malaria, worm infections, diarrhoea, acute respiratory infections and the direct and indirect effects of HIV/AIDS. Stunting, anaemia, iodine deficiency disorders and vitamin A deficiency are among the predominant nutritional problems. In countries undergoing a process of nutritional transition, overweight and obesity are also significant issues, especially in urban areas (Drake et al., 2002).

Ensuring that children are healthy and able to learn is an essential component of an effective education system. This is especially relevant to efforts to achieve education for all in the most deprived areas. Good health increases enrolment, reduces absenteeism and brings more of the poorest and most disadvantaged children, many of whom are girls, to school. It is these children who are often the least healthy and most malnourished, who have the most to gain from improved health and who need health related school policies that, when effectively endorsed, can lead to better educational outcomes.¹

This mapping of global initiatives in school health and nutrition has been conducted in the context of the WFP/Unilever Together for Child Vitality partnership, which aimed to improve the nutrition and health of poor school-age children through WFP school feeding programmes. Between 2007 and 2010 the two partners worked together through three initiatives:

- Cause-related marketing activities. The Family Goodness brand group (including Blue Band and Rama) increased awareness of child hunger and raised funds for WFP through promotional activities.
- Nutrition/School feeding support. Unilever made a financial donation to feed poor schoolchildren, donated fortified products and, with WFP, developed a nutrition, hygiene and health education campaign that was implemented in schools.

¹ <http://www.freshschools.org/Pages/HealthRelatedSchoolPolicies.aspx>. Accessed 17 August 2010.

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- Employee programme. Unilever employees were engaged through a global event, *End Hunger: Walk the World*, local fundraising activities and an employee exchange programme.

Objectives

The mapping exercise starts with a description in chapter 2 of initiatives that deal with all components of school health and nutrition promotion. Throughout the rest of the document, the framework developed by the Focusing Resources on Effective School Health (FRESH) initiative is used to report on other interventions that focus on the following:

- health related school policies;
- provision of safe water and sanitation;
- school-based health and nutrition services; and
- skills based health education.

Attention is concentrated primarily on initiatives related to skills based health education, particularly in personal hygiene and nutrition, which are most relevant to WFP's needs and opportunities.

This document, together with the available programme guidance on health, hygiene and nutrition education, is intended as a source of technical support for WFP programme officers or professionals from other organizations who, in partnership with governments, other agencies and the private sector, engage in skills based health education to promote the effectiveness of school health and nutrition policies and programmes.

2 Global Initiatives in School Health²

Different agencies and development organizations support various school based health and nutrition initiatives and programmes. This chapter describes the main global level initiatives currently under way in school health and nutrition.

The FRESH initiative has been adopted as a common framework by all major agencies and is described below. Other global initiatives discussed in this chapter include the WHO Global School Health Initiative, the Essential Package promoted by WFP and UNICEF, and the UNICEF Child-Friendly School model.

2.1. FRESH Initiative

The FRESH initiative builds on existing school health and nutrition programmes implemented by United Nations agencies and NGOs. By providing a common framework it facilitates interagency coordination, allows concerted action, ensures consistent advice to country programmes and projects, increases the number of countries able to implement school health components of school reforms and ensures that these programmes go to scale.

FRESH stands for Focusing Resources on Effective School Health and is an interagency initiative developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Fund (UNICEF), World Bank and World Health Organization (WHO), together with the Education Development Center, Education International and the Partnership for Child Development. It was launched at the World Education Forum in Dakar, Senegal, held in April 2000 (UNESCO et al., 2000).

“Education for All” means ensuring that all children have access to basic education of good quality. This implies creating an environment in schools and in basic education programmes in which children are both able and enabled to learn. Such an environment must be friendly and welcoming to children, healthy for children, effective with children and protective of children.

Good health and nutrition are not only essential inputs but also important outcomes of basic education of good quality. First, children must be healthy and well-nourished in order to fully participate in education and gain its maximum benefits. Early childhood care programmes and primary schools that improve children's health and nutrition can enhance the learning and educational outcomes of schoolchildren. Second, education of good quality can lead to better health and nutrition outcomes for children, especially girls, and thus for the next generation of children as well. In addition, a healthy, safe and secure school environment can help protect children from health hazards, abuse and exclusion.

² Based on <http://www.freshschools.org>.

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A child's ability to attain her or his full potential is directly related to the synergistic effect of good health, good nutrition and appropriate education. An effective school health, hygiene and nutrition programme offers many benefits in that it:

- **Responds to a new need.** The success of child survival programmes and the greater efforts by many governments and communities to expand basic education coverage have resulted both in a greater number of school-age children and in a greater proportion of these children attending school.
- **Increases the efficacy of other investments in child development.** School health programmes are the essential sequel and complement to early childcare and development programmes. Increasing numbers of countries have programmes that ensure that a child enters a school fit, well and ready to learn. But the school age child continues to be at risk of ill health throughout the years of schooling. Continuing good health at school age is essential if children are to sustain the advantages of a healthy early childhood and take full advantage of what may be their only opportunity for formal learning.
- **Ensures better educational outcomes.** Although schoolchildren have a lower mortality rate than infants, they suffer from highly prevalent conditions that can adversely affect their development. Micronutrient deficiencies, common parasitic infections, poor vision and hearing, and disability can have a detrimental effect on school enrolment and attendance, and on cognition and educational achievement. In older children, avoidance of risky behaviours can reduce dropping out, for example, as a result of early pregnancy. Ensuring good health at school age can boost school enrolment and attendance, reduce the need for repetition and increase educational attainment.
- **Achieves greater social equity.** As a result of universal basic education strategies, some of the most disadvantaged children – girls, the rural poor, children with disabilities – for the first time now have access to school. But their ability to attend school and to learn is compromised by poor health. These are the children who will benefit most from health interventions, since they are likely to show the greatest improvements in attendance and learning achievement. School health programmes can thus help modify the effects of socio economic and gender-related inequities.
- **Is a highly cost effective strategy.** School health programmes help link the resources of the health, education, nutrition and sanitation sectors in an infrastructure that is already in place, far-reaching and supported. While the school system is rarely universal, its coverage is often superior to that of health systems and it has an extensive skilled workforce already engaging with the community. The accessibility of school health programmes to a large proportion of each nation's population – school staff as well as students – helps to keep the cost of programmes low. The high rate of effectiveness of these programmes is a consequence of the synergy between the health benefit and the educational benefit. The effectiveness is measurable in terms of not only improved health and nutrition, but also improved educational outcomes, reduced wastage, less repetition and generally enhanced returns on educational investments.

The basic framework for an effective school health and nutrition programme

The framework described here has four mutually reinforcing elements that should be implemented simultaneously in order to form a coherent and effective school health component within broader efforts to achieve more child friendly schools and improve education.

(i) Health-related school policies

Health policies in schools, including skills-based health education and the provision of some health services, can help promote the overall health, hygiene and nutrition of children. But good health policies should go beyond this to ensure a safe and secure physical environment and a positive psycho social environment, and should address issues such as abuse of students, sexual harassment, school violence and bullying. By guaranteeing the further education of pregnant schoolgirls and young mothers, school health policies will help promote inclusion and equity in the school environment. Policies that help to prevent and reduce harassment by other students, and even by teachers, also help to address the reasons why girls withdraw or are withdrawn from schools.

Policies regarding the health-related practices of teachers and students can reinforce health education: teachers can act as positive role models for their students, for example, by not smoking in school. The process of developing and agreeing upon policies draws attention to these issues. The policies are best developed by securing involvement at many levels, including representatives at the national level, and teachers, children and parents at the school level.

(ii) Provision of safe water and sanitation – the essential first steps towards a healthy physical learning environment

The school environment can damage the health and nutritional status of schoolchildren, particularly if it increases their exposure to hazards such as infectious disease carried by the water supply. Hygiene education is meaningless without clean water and adequate sanitation facilities. It is a realistic goal in most countries to ensure that all schools have access to clean water and sanitation. By providing these facilities, schools can reinforce the health and hygiene messages, and act as an example to students and to the wider community. This in turn can lead to a demand for similar facilities from the community. Sound construction policies will help ensure that facilities address issues such as gender access and privacy. Separate facilities for girls, particularly adolescent girls, are an important contributing factor in reducing drop out at menses and even before.

(iii) School based health and nutrition services

Schools can effectively deliver some health and nutritional services provided the services are simple, safe and familiar, and address problems that are prevalent and recognized as important within the community. If these criteria are met then the community sees the teacher and school more positively, and teachers perceive themselves as playing important roles. For example, micronutrient deficiencies and worm infections can be effectively dealt with through oral treatment; changing the timing of meals or providing a snack to address short term hunger during school improves concentration and can contribute to school performance; and providing spectacles will allow some children to fully participate in class for the first time.

(iv) Skills based health education

The skills based approach to health, hygiene and nutrition education focuses upon developing the knowledge, attitudes, values and life skills needed to make and act on the most appropriate and positive health-related decisions. Health in this context extends beyond physical health to include psycho social and environmental health issues. Changes in social and behavioural factors have resulted in more prominence being given to such health-related issues as HIV/AIDS, early pregnancy, injuries, violence, and tobacco and substance use. Unhealthy social and behavioural factors not only influence lifestyles, health and nutrition, but also hinder education opportunities for a growing number of school-age children and adolescents. The development of attitudes related to gender equity and respect between girls and boys, and the development of specific skills, such as dealing with peer pressure, are central to effective skills based health education and positive psycho social environments. When individuals have such skills they are more likely to adopt and sustain a healthy lifestyle during schooling and for the rest of their lives.

Supporting activities

These activities provide the context in which school based interventions can be implemented.

(i) Effective partnerships between teachers and health workers, and between the education and health sectors

The success of school health programmes demands an effective partnership between ministries of education and health, and between teachers and health workers. The health sector retains responsibility for the health of children, but the education sector is responsible for implementing, and often funding, school based programmes. These sectors need to identify responsibilities and follow a coordinated plan of action to improve the health and learning outcomes achieved by children.

(ii) Effective community partnerships

Promoting positive interaction between the school and the community is fundamental to the success and sustainability of any school improvement process. Community partnerships engender a sense of collaboration, commitment and communal ownership. Such partnerships also build public awareness and strengthen demand. Within the school health component of such improvement processes, parental support and cooperation allow health education to be shared and reinforced at home.

(iii) Pupil awareness and participation

Children must be important participants in all aspects of school health programmes and not simply the beneficiaries. Children who participate learn about health by doing. This is an effective way to help young people acquire the knowledge, attitudes, values and skills needed to adopt healthy lifestyles.

Implementation

Since its introduction, FRESH has gained recognition from other agencies and initiatives such as the Child-to-Child Trust, the Food and Agriculture Organization of the United Nations (FAO), Roll Back Malaria, the United Nations Office on Drugs and Crime, as well as WFP. In partnership with other agencies, NGOs and donors, WFP implements the FRESH initiative through the Essential Package, described in section 2.3.

The Partnership for Child Development conducted two surveys, in 2000 and 2006, to existing support for school based health and nutrition programmes in low income countries. It was concluded that a marked increase had occurred in support for all four key elements of the FRESH framework and for a greater emphasis on the development of integrated school based policies to support programming. In 2006, 29 out of 38 organizations were implementing an integrated intervention and 14 were using the FRESH framework to structure school based health and nutrition programmes (Drake, Maier & De Lind van Wijngaarden, 2007).

The Partnership for Child Development is based at the Imperial College School of Medicine, London, United Kingdom, and administers the school health and FRESH websites (www.schoolsandhealth.org; <http://www.freshschools.org/Pages/default.aspx>), which are supported by the Child to Child Trust, UNESCO, UNICEF, United States Agency for International Development (USAID), WHO, World Bank and WFP.

2.2. Global School Health Initiative and Health-Promoting Schools (WHO)

In 1995, WHO launched the Global School Health Initiative, which seeks to mobilize and strengthen health promotion and education activities at the local, national, regional and global levels. The Initiative is designed to improve the health of students, school personnel, families and other members of the community through schools.

The goal of the Global School Health Initiative is to increase the number of schools that can truly be called "health-promoting schools". Although definitions will vary according to need and circumstance, a health-promoting school can be characterized as a school that is constantly strengthening its capacity as a healthy setting for living, learning and working.

The general direction of the Global School Health Initiative is that indicated by the Ottawa Charter for Health Promotion (WHO, 1986) and the WHO Expert Committee Recommendation on Comprehensive School Health Education and Promotion (WHO, 1997a).

The Ottawa Charter (WHO, 1986) states that "health promotion is the process of enabling people to increase control over, and to improve, their health". To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities. Therefore, health promotion is not just the responsibility of the health sector, but goes beyond healthy life-styles to well-being".

According to the Charter, health promotion should pursue the following five lines of action:

- Build healthy public policy.
- Create supportive environments.
- Strengthen community actions.
- Develop personal skills.
- Reorient health services.

The main strategies of the Global School Health Initiative are:

- **Research to improve school health programmes.** Evaluation research and expert opinion is analysed and consolidated to describe the nature and effectiveness of school health programmes;
- **Building capacity to advocate for improved school health programmes.** Technical documents are generated that consolidate research and expert opinion about the nature, scope and effectiveness of school health programmes;
- **Strengthening national capacities.** Collaboration between health and education agencies is fostered and countries are assisted in developing strategies and programmes to improve health through schools; and
- **Creating networks and alliances for the development of health-promoting schools.** Regional networks have been set up in Europe, Western Pacific and Latin America to support the development of health promoting schools and sharing of experience among countries.³

In 1995, the Pacific Network of Health-Promoting Schools was established in Suva, Fiji. The Latin American Network of Health Promoting Schools was established in Costa Rica in 1996 and held meetings in Mexico in 1998 and 2000, Ecuador in 2002 (Ippolito-Shepherd et al., 2003b) and Puerto Rico in 2004 (Ippolito-Shepherd et al., 2004). The Caribbean Health Promoting Schools Network was launched in Barbados in 2001 (Ippolito-Shepherd, 2002).

Since 1997, the WHO regional office for Africa has supported the implementation of the health-promoting schools initiative, which has now been introduced in over 30 countries of the region. Representatives of these countries have taken part in training workshops and pledged to foster networks aimed at facilitating the exchange of information about programme activities. WHO supports such networking and has sponsored eight networking meetings in the region.

WHO Information Series on School Health

WHO has produced set of publications, the Information Series on School Health, designed to build capacity in advocating for school health programmes. The documents also illustrate how selected health issues can serve as entry points in planning, implementing and evaluating health interventions as part of the development of a health-promoting school.

Available in several languages, the documents are listed below and can be accessed at: http://www.who.int/school_youth_health/resources/information_series/en/index.html.

³ http://www.who.int/school_youth_health/gshi/en/. Accessed 18 August 2010.

- Creating an environment for emotional and social well-being: an important responsibility of a health-promoting and child friendly school
- Family life, reproductive health, and population education: key elements of a health-promoting school
- Healthy nutrition: an essential element of a health-promoting school
- Improving health through schools: national and international strategies
- Local action: creating health-promoting schools
- Malaria prevention and control: an important responsibility of a health-promoting school
- Oral health promotion through schools
- Preventing HIV/AIDS/STDs and related discrimination: an important responsibility of health-promoting schools
- Skills-based health education and life skills
- Strengthening interventions to reduce helminth infections: an entry point for the development of health-promoting schools
- Sun protection: an essential element of a health promoting school
- Teacher's exercise book for HIV prevention
- The physical school environment: an essential component of a health-promoting school
- Tobacco use prevention: an important entry point for the development of a health-promoting school
- Violence prevention: an important element of a health-promoting school
- WHO's Global School Health Initiative: health-promoting schools

Expert Committee reports

To encourage educational and health institutions and agencies to coordinate their efforts to promote health through schools, WHO convened an Expert Committee on Comprehensive School Health in September 1995. The overall objective was to make recommendations for policy measures and actions that WHO (including its regional offices), United Nations agencies, national governments and NGOs could apply to enable schools to use their full potential to improve the health of children and young people, school staff, family and community members (http://www.who.int/school_youth_health/resources/expert_reports/en/index.html):

Documents produced by the Expert Committee include:

- Promoting health through schools: a summary and recommendations of WHO's Expert Committee on Comprehensive School Health Education and Promotion
- Research to improve implementation and effectiveness of school health programmes
- Improving school health programmes: barriers and strategies
- The status of school health

The global school-based student health survey

The global school based student health survey (GSHS) is a collaborative surveillance project designed to help countries measure and assess the behavioural risk factors and protective factors in 10 key areas among young people aged 13 to 15. The GSHS is a relatively low-cost school-based survey that uses a

self-administered questionnaire to obtain data on young people's health behaviour and protective factors related to the leading causes of morbidity and mortality among children and adults worldwide. The survey is repeated over time to allow countries to monitor trends in health behaviour among young people and to plan, develop and implement appropriate policy and programme responses to address their critical health needs. To date, almost 100 countries have either implemented the GSHS or are in the process of doing so (<http://www.who.int/chp/gshs/en/index.html>, accessed 17 August 2010).

Other resources

The Pan American Health Organization (PAHO) has drawn up a regional action plan to develop the health promoting schools initiative (Ippolito-Shepherd at al., 2003a). The plan includes the following components:

- advocacy for school health programmes;
- institutionalization of the health promoting schools strategy;
- formulation of health policies in educational institutions and communities;
- key stakeholder participation in the management of school health programmes;
- country capacity building research; and
- fundraising.

Other technical documents produced by PAHO and WHO are available at: http://www.paho.org/Project.asp?SEL=TP&LNG=ENG&CD=PROMO&PRGRP=docs_gen and from the sustainable development and environmental health “virtual library”, which includes educational materials produced by countries of the Latin America and the Caribbean Region (<http://www.bvsde.ops-oms.org/sde/ops-sde/ingles/bv-escuelas.shtml>).

The website run by the Schools for Health in Europe network also provides useful documents: <http://www.schoolsforhealth.eu/>.

2.3. The Essential Package (WFP/UNICEF)

The concept of the Essential Package is based on the FRESH initiative launched at the World Education Forum in April 2000 by UNESCO, UNICEF, WHO and World Bank. For many years, UNICEF and WFP have worked together in emergency relief, rehabilitation and development programmes. In recognition of the importance of a healthy school setting in improving access to education for all, WFP initially entered into partnership with UNICEF in 2002 to implement an integrated package of cost-effective interventions to improve the nutritional status and health of schoolchildren (WFP and UNICEF, 2002).

The Essential Package includes the following:

- support to basic education;
- food for education, which includes on-site school meals and take-home rations;
- promotion of girls' education;
- potable water and sanitary latrines;
- health, nutrition and hygiene education;
- systematic deworming;

- micronutrient supplementation;
- HIV and AIDS education and life-skills training;
- psycho-social support;
- malaria prevention;
- school gardens; and
- improved stoves.

At the country level the elements of the Essential Package can be modified according to the context and the main causes of ill health and poor nutritional status among schoolchildren. The Essential Package has been instrumental in encouraging WFP and UNICEF to work together to maximize synergies. In some countries collaboration takes place on ad hoc basis. Thirty-five countries have signed a Memorandum of Understanding defining roles and tasks, while partnerships have been established in other countries through the United Nations Development Assistance Framework.

Although all 12 elements of the Essential Package help reinforce the benefits of school feeding programmes and should be promoted, because of the direct link between food assistance and food preparation, WFP considers the following to be priority interventions.⁴

a) Deworming

When the prevalence of parasitic diseases (soil transmitted helminths (STH)) in targeted areas is moderate or high (>20 percent), systematic treatment should be administered alongside school feeding for all pupils in all targeted schools. Teachers and cooks and, as far as possible, all school-age children (including those not enrolled in school) should also be treated.

b) Micronutrient fortification

All school feeding rations should contain a multi-fortified food commodity or a multi micronutrient powder, except for take-home rations.

c) Improved kitchen stoves (fuel efficient stoves) and safe water supply

WFP endeavours to ensure that fuel-efficient stoves and safe water solutions are available at schools and, at the request of governments and as a last resort, intends to provide these items as part of its school feeding programme.

d) Health, nutrition and hygiene education in schools

Education in health, nutrition and hygiene should accompany school health and nutrition policies and is an intrinsic element of core and non-core interventions such as deworming, micronutrient fortification, water and sanitation, school gardens and malaria prevention.

In order to implement the core components of the Essential Package, the WFP country offices seek strategic partners to mobilize the required technical support and financial resources. If cooperating partners are not available or able to implement those components, then WFP is the provider of last resort.

⁴ WFP Programme Guidance Manual: http://pgm.wfp.org/index.php/Project_activities:School_feeding#Complementary_interventions_and_partnerships. Accessed 10 November 2010.

For WFP, the importance of the other interventions depends on actual needs, national policies, available funding resources and relevant partnerships on the ground, and on the comparative advantage WFP is able to call into play at a particular time and place in collaboration with relevant partners.

More information about the Essential Package can be found in the “Essential Package Implementation Guide”: http://docustore.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp226731.pdf.

2.4. Child-Friendly Schools Model (UNICEF)

A child-friendly school is active in identifying excluded children and gets them enrolled in school. It regards education as every child’s right and helps to monitor the rights and well being of every child in the community. A child friendly school acts in the interests of the “whole” child, which includes his or her health, nutrition and overall well-being. It cares about what happens to children in their families and communities before they enter school and after they leave it.

The characteristics of a child-friendly school are outlined below.⁵

(i) It reflects a quality environment and:

- does not exclude, discriminate or stereotype on the basis of difference;
- provides education that is free and compulsory, affordable and accessible, especially to families and children at risk;
- respects diversity and ensures equality of learning for all children, including working children, children of ethnic minorities and those living with or affected by HIV/AIDS, children with disabilities, and child victims of exploitation and violence; and
- responds to diversity by accommodating the differing circumstances and needs of children based on gender, social class, ethnicity and level of ability.

(ii) It is an environment that is effective for learning and:

- promotes good quality teaching and learning processes, including individualized instruction appropriate to each child and active, cooperative and democratic learning methods;
- provides structured content and good quality materials and resources;
- enhances a teacher’s capacity, morale, commitment, status and income, and his/her recognition of a child’s rights; and
- promotes quality learning outcomes by defining and helping children learn what they need to know and teaching them how to learn.

(iii) It is a healthy environment that is protective of children and:

- is hygienic and safe from drugs, corporal punishment and harassment;
- is equipped with adequate water and sanitation, and provides health services such as nutritional supplementation and counselling;

⁵ http://www.unicef.org/girlseducation/index_focus_schools.html Accessed 18 August 2010.

- provides life skills-based education;
- promotes both the physical and the psycho-socio-emotional health of teachers and students;
- helps defend and protect all children from abuse and harm; and
- provides a positive experience for children.

(iv) It is gender-sensitive and:

- promotes gender equality in enrolment and achievement;
- eliminates gender stereotypes;
- guarantees facilities, curricula, textbooks and teaching and learning processes that are friendly to girls;
- socializes girls and boys in a non-violent environment; and
- encourages respect for others' rights, dignity and equality.

(v) It is involved with children, families and communities, and:

- is child-centred, promoting child participation in all aspects of school life;
- is family-focused, working to strengthen families as the child's primary caregivers and educators and to help children, parents, and teachers establish harmonious relationships; and
- is community-based, encouraging local partnership in education, acting in the community for the sake of children and working with other actors to ensure the fulfilment of children's rights.

In December 2004, the Nelson Mandela Foundation, the Hamburg Society for the Promotion of Democracy and International Law, and UNICEF launched a joint international initiative "Schools for Africa". This global initiative attempts to accelerate access to quality basic education for all children, and especially for girls, orphans and other vulnerable children, in six countries of eastern and southern Africa: Angola, Malawi, Mozambique, Rwanda, South Africa and Zimbabwe (UNGEI Forum, 2006).



Health-related School Policies⁶

There are no separate initiatives focusing on health related school policies, which are nevertheless essential to sustain all other initiatives in school health and nutrition.

In general, school health practices are only as good as the policies that guide them. Sound policies, conscientiously enforced, are the foundation for child-friendly learning environments that promote health. They ensure that health education outcomes are in line with health education goals and objectives, and that schools' limited resources are used to their best advantage to reduce the most significant health problems that interfere with a specific school population's learning. Getting good policies in place is time well spent.

In 1997, an Expert Committee on Comprehensive School Health Education and Promotion convened by WHO stated that "successful school health programmes must be founded on organized and mutually reinforcing components", and that policies and community action are as important to the development, implementation and success of school health programming as are activities to improve the school environment and provide health education and health services (WHO, 1997a).

Policies add purpose, coherence, credibility and commitment to all other activities undertaken to improve student health and educational outcomes. When they are lacking, it is often the case that the consensus and the resources needed to design, implement and maintain an effective school health programme are also lacking.

School health and nutrition policies must be developed and supported by key stakeholders at the national, regional district and school levels, including teachers, children, parents and the wider community.

National level

At the national level, the development of school health policies requires a framework of responsibilities, policies and action that is agreed upon by the key government ministries (such as health and education ministries) and other institutions and organizations that provide input and have responsibility for school health programming.

Strong intersectoral cooperation is required to plan, implement and monitor a sustainable school health programme. It should be clearly defined and inscribed in a common statement that indicates who is responsible for the interventions planned and who will be implementing those interventions. This cooperation and communication strategy should be written down in a memorandum of understanding between the education and health sectors.

⁶ Based on: http://portal.unesco.org/education/admin/ev.php?URL_ID=35164&URL_DO=DO_TOPIC&URL_SECTION=201.

In most countries, the health ministry is responsible for the health of school age children, but this age group is rarely a priority for the health sector. The delivery of health services to children under 5 and pregnant women frequently leaves few resources for schoolchildren. Educating schoolchildren is the priority of ministries of education, but if they adopt the “improved learning and education achievement by improving health and nutrition” approach, then it also becomes their priority to ensure the health of the school-age child. Any memorandum of understanding drawn up needs to clearly state the tasks to be shared between these two ministries. This is the first step towards a successful school health programme.

District and school levels

At the district and school levels, policies should be clearly understood, implemented and supported by all those responsible for the education, health and well being of the children. School policies should be clearly communicated to the school population and actively monitored by the parents and teachers associations and the community.

Policies provide an essential framework for achieving the goals and objectives of a school’s overall school health programme. They should be based on a careful assessment of community health problems (physical and psycho social), resources, and laws and policies that affect health. If a good mix of individuals work together to determine the content of policies – including school personnel, students, parents and community leaders – the process itself helps to build consensus and support for the school’s health programme activities. Input is also required from education, health and other acknowledged experts, so that the standards agreed upon are those that have been shown by research and experience to produce the best results.

A central school health team of teachers, parents, pupils and representatives from the health sector and the broader community should take the lead in planning this type of school. A students’ health committee, with guidance from a teacher or knowledgeable community member, can assume many day-to-day responsibilities of the health team and raise awareness that children themselves have the power to improve their own health and spread ideas and practices to their families and communities (WHO, 1997b).

Policies should cover a broad spectrum of areas critical for the health and development of school age children. Schools are also workplaces, and studies have shown that health promotion for teachers and other school staff improves their attendance and their work. Broadly construed, school policies should aim to create a healthy physical and psycho social environment for all students and staff, and to make the school a model of best practice for the whole community.

Examples of topics in school health policies include: prevention of early pregnancy and exclusion from school; tobacco free schools; sanitation in the school environment; HIV and reproductive health education; prevention of sexual harassment and abuse of students; the role that teachers can play in delivering simple health services through schools; and the public–private partnerships for delivery of school food services.

Resources

This link provides access to several school health policy tools:

http://portal.unesco.org/education/admin/ev.php?URL_ID=35166&URL_DO=DO_TOPIC&URL_SECTION=201.

4 Safe Water and Sanitation⁷

In countries throughout the world, school attendance and completion are affected by problems associated with unsafe water and inadequate sanitation. Though the problem is not new, and despite progress in recent decades, some 1.1 billion people still do not have access to safe water. Almost 2.5 billion lack sanitation facilities and are unable to practise such basic hygiene as washing their hands with soap and water.

The following global initiatives to improve water and sanitation infrastructure in schools and communities are described in this chapter:

- the Water Supply and Sanitation Collaborative Council
- the Global Water, Sanitation and Hygiene for All (WASH) Campaign
- the Water and Sanitation Program.

Diseases related to poor sanitation and water availability cause many people to become ill or even to die. Children are the most vulnerable to health hazards and thus are the most affected. In 1998, there were 2.2 million deaths due to diarrhoeal diseases, of which the vast majority were children. In addition, poor sanitation has led to nearly 1 billion people, mostly children, suffering from a variety of worm infections. These parasites consume nutrients from the children they infect, causing or aggravating malnutrition and retarding children's physical and cognitive development, preventing children from attending school regularly and affecting their learning potential.

Lack of facilities and poor hygiene affect all children, although poor sanitation conditions at schools have a stronger negative impact on girls. If there are no latrines and handwashing facilities at school or if they are in a poor state of repair, then many children would rather not attend than use the alternatives.

An effective sanitation and hygiene programme at school needs to look at the hardware (availability of appropriate facilities) and the software (predisposing and reinforcing factors). To improve the sanitation environment of schools and secure the benefits of safe and clean facilities, behavioural change is needed, leading to proper use and organized maintenance of the facilities on site and improved sanitation-related behaviours such as handwashing.

Schools are an integral part of a community. Involvement of the local community in school sanitation and hygiene activities increases the effectiveness of the programmes. It also promotes the sense of ownership within communities that is needed to sustain the school systems for operation and maintenance, particularly important in the absence of effective local government to provide such services.

The FRESH framework calls upon schools to address water and sanitation issues as a first step towards the creation of school environments that maximize student participation and, to the fullest extent

⁷ Based on: http://portal.unesco.org/education/admin/ev.php?URL_ID=35167&URL_DO=DO_TOPIC&URL_SECTION=201 and <http://www.freshschools.org/Pages/SafeWaterandSanitation.aspx>

possible, tap young people's potential for learning. Where resources permit, improvements to the school's water and sanitation programmes should be complemented by other improvements to the school's physical and psycho social environment.

A core intervention for school feeding programmes is the installation of fuel efficient stoves. These stoves consume less fuel and emit less harmful smoke, reducing the environmental impact while improving the immediate school environment and the health of cooks.

It is to be hoped that children will spend a good deal of time at school. Given its physical and psycho social characteristics, the school environment can affect student health and student learning in obvious and subtle ways. Every school should strive to provide an environment that is physically safe, emotionally secure and psychologically enabling. This is made easier when the school staff, parents and other members of the community, and students themselves, all participate.

Resources

The following link provides access to general tools for water, sanitation and the environment: http://portal.unesco.org/education/admin/ev.php?URL_ID=35167&URL_DO=DO_TOPIC&URL_SECTION=201.

The IRC International Water and Sanitation Centre hosts the website "WASH in Schools", which serves as a discussion platform, a place for information exchange, questions to experts and event announcements related to water, sanitation and hygiene in schools: <http://www.schools.watsan.net/>.

The World Bank has produced a toolkit for hygiene, sanitation and water in schools: http://globalhandwashing.org/resources/multimedia-pdf/17.%20Toolkit_Hygiene_Sanitation_Water_Schools_Booklet.pdf (Mooijman et al.).

Another important resource centre for water, sanitation and environmental health and related issues in developing and transitional countries is the WELL website: <http://www.lboro.ac.uk/well/index.htm>.

The USAID supported Hygiene Improvement Project produced a publication to provide guidance to implementers of WASH programmes on what indicators to use to measure the achievements of their programmes: <http://www.hip.watsan.net/page/4148> (USAID, 2010).

The publication *Cooking with less fuel: Breathing less smoke* teaches people how to design and develop better cooking stoves, and trains local stove producers and cooks to use and maintain improved stoves. Teachers can use this manual to educate their students about the importance of reducing indoor air pollution and alleviating the negative social and environmental impacts of fuel wood consumption; they can also teach students how to apply these recommendations in their everyday lives (Aprovecho Research Center et al.)

4.1. Water Supply and Sanitation Collaborative Council

The Water Supply and Sanitation Collaborative Council (WSSCC) is a global multi stakeholder partnership organization that works to improve the lives of poor people. WSSCC enhances collaboration among sector agencies and professionals around sanitation and water supply, and contributes to the broader goals of poverty eradication, health and environmental improvement, gender equality and long-term social and economic development.⁸

WSSCC was formally created in 1990 in line with a United Nations General Assembly resolution (A/RES/45/181) to continue the work of the International Drinking Water Supply and Sanitation Decade (1981–1990). The Collaborative Council exists under a mandate from the United Nations. It is governed by a multi stakeholder steering committee elected by the Council's members, combining the authority of the United Nations with the flexibility of an NGO and the legitimacy of a membership organization. Through networking and knowledge management, advocacy and communications, together with the Global Sanitation Fund, WSSCC is at the forefront of knowledge, debate and influence on water, sanitation and hygiene (WASH) for all.

WSSCC's mission is to achieve sustainable water supply and sanitation for all and to uphold the core principles listed below, according to which WSSCC:

- exists only to serve poor people;
- places people at the centre of planning and action to achieve sustainable water and sanitation;
- works by enhancing collaboration among sector agencies and professionals rather than implementing its own projects;
- considers water and sanitation to be essential for social and economic development;
- aims to be at the forefront of global knowledge, debate and influence in its field;
- dedicates most of its effort to sanitation and hygiene. This is because there are far more people without sanitation than there are without water, while there are fewer agencies working in sanitation; and
- focuses exclusively on those people around the world who currently lack water and sanitation.

Current and future activities focus on maintaining the commitment of WSSCC to sector knowledge and networking, expanding its advocacy and conducting a grants management programme designed to facilitate the implementation of practical and sustainable sanitation and hygiene initiatives throughout the world.

Resources

WSSCC publications can be found at: <http://www.wsscc.org/resources/publication>.

The Compendium of Sanitation Systems and Technologies is intended for use by professionals who are familiar with sanitation technologies and describes the advantages and disadvantages of different innovative and appropriate technologies for sanitation systems: <http://www.wsscc.org/resources/resource-publications/compendium-sanitation-systems-and-technologies>.

⁸ <http://www.wsscc.org/>. Accessed 11 November 2010.

4.2. WASH Campaign (WSSCC)

The Global Water, Sanitation and Hygiene for All (WASH) campaign is a high-profile global advocacy initiative launched in 2001 by WSSCC. When first introduced, the campaign's primary aim was to mobilize support for bringing sanitation and hygiene to the global agenda. A significant step forward was accomplished with the addition of sanitation to the Millennium Development Goals at the World Summit on Sustainable Development in 2002.⁹

Today, the campaign has grown into a worldwide movement with the support of many governments, NGOs and other partners. Individual and local WASH campaign activities have been set up in more than 30 countries through WSSCC national coordinators, with WASH now embodying a global concept that is understood and promoted by all sector stakeholders. Indeed, the Collaborative Council encourages other organizations to endorse the WASH concept through periodic global and national level WASH campaigns and events that are designed to take the WASH message from sector professionals to policymakers.

Advocacy on the water supply side is directed towards the important role of water in ensuring improved health and poverty alleviation, securing better water quality at the domestic level and highlighting the key role it plays in the water-sanitation-hygiene trinity. Advocacy for hygiene and sanitation focuses on changes in behaviour at the household level and on waste management in the immediate environment and at the community level.

WSSCC promotes radio campaigns to carry water supply, sanitation and hygiene messages to a broader audience. A WASH radio campaign aims at supporting and accelerating the advocacy and communication efforts of national WASH coalitions. It creates new ways to disseminate and discuss WASH issues through innovative programming and the involvement of public figures, government officials, civil society activists and other actors.

The last Global WASH Forum held in Dakar, Senegal, in 2004 saw the launch of the Sanitation and Hygiene Week. This week, from 15 to 21 March, precedes World Water Day (22 March) and aims to highlight sanitation and hygiene as important components of WASH. Sanitation and Hygiene Week is a unique opportunity to embark on a comprehensive advocacy campaign for safe sanitation and good hygiene practices.

Materials designed to support WASH advocacy initiatives at the global and country levels are available at: <http://www.wsscc.org/resources/advocacy-materials>

4.3. Water and Sanitation Program (WSP)

The Water and Sanitation Program (WSP) is an international partnership to help the poor gain sustained access to water supply and sanitation services. Administered by the World Bank with financial support from several bilateral and multilateral and private donors, WSP is a decentralized partnership and operates through offices in Africa, East Asia, Latin America and South Asia.¹⁰

The WSP supported "Global Public-Private Partnership for Handwashing with Soap" is described in chapter 6.

⁹ <http://www.wsscc.org/>. Accessed 11 November 2010.

¹⁰ www.wsp.org. Accessed 18 August 2010.



School-based Health and Nutrition Services¹¹

There is increasing recognition that the common conditions of ill health among schoolchildren can be dealt with effectively, simply and cheaply through school health and nutrition programmes. Two initiatives particularly relevant for school feeding programmes are described in this chapter: deworming and micronutrient supplementation.

School health programmes and services help link the resources of the health, education, nutrition and sanitation sectors in an existing infrastructure – the school. While the school system in most developing countries is rarely universal, coverage is generally superior to that of health systems and there is an extensive skilled workforce (teachers and administrators) that already engages with the local community.

Clearly, schools should not duplicate services that health professionals in the community are adequately providing. But when many students need the same service, and diagnostic and treatment procedures are relatively simple, better coverage at reduced cost can often be achieved by bringing community providers into the school.

Experience in recent years has shown how school health and nutrition programmes can be accomplished in safe and cost-effective ways. First of all, schools must address problems that are prevalent and recognized as important in the community. Second, they must engage other sectors (such as health and sanitation) and community partners (such as businesses and civil society organizations) with expertise and resources to contribute. Finally, they must adopt and follow standard protocols to ensure that services have the desired effects.

School health services should be part of a school's overall plan for school health programming, which means they should be based on the results of an up to date community needs assessment. Depending on the range and accessibility of health services offered within the local community, schools may find it necessary to address, in some way, any of the significant health problems of school-age children in the world today, including:

- micronutrient deficiencies (in particular, iron, iodine and vitamin A deficiencies);
- protein energy malnutrition;
- parasite infections (in particular, helminth infections and schistosomiasis);
- respiratory infections;
- malaria;
- immunizable diseases;
- HIV/AIDS and other sexually transmitted infections;
- vision and hearing problems;
- oral health problems;

¹¹ Based on: http://portal.unesco.org/education/admin/ev.php?URL_ID=35169&URL_DO=DO_TOPIC&URL_SECTION=201 and <http://www.freshschools.org/Pages/default.aspx>.

- violence and injury (including sexual harassment and abuse);
- early pregnancies;
- overweight and obesity;
- tobacco use;
- abuse of alcohol and other substances; and
- mental health issues (including such stresses as living in a war zone or being homeless, overworked, hungry, or a victim of abuse or molestation).

In addition, because many people do not seek medical attention for themselves or their children until a problem has already taken root, schools can have a significant impact on student health by providing preventive health services. For example, schools could provide prophylactic treatment for malaria during epidemic outbreaks or condoms to sexually active students.

At the very least, schools must be prepared to respond to emergencies and administer basic first aid. Beyond this, to meet the need for health services not provided by the school, a system should be established to effectively link students, school staff and families to community-based providers. This involves:

- **Detection.** With a minimum of training, all school personnel can learn to recognize basic symptoms, establish student health records and bring health problems to the attention of a health professional or other designated authority at the school.
- **Referral.** When a health problem is suspected or identified, schools should provide parents, or the young person him/herself, with practical information about appropriate local providers.
- **Follow-up.** All referrals should be followed up.

The real potential of school-based health services is their unique ability to promote health on several fronts at once, supported by strategies such as school health policies, provision of safe water and sanitation, and skills based health education.

The benefits of improving children's health are immediately apparent to parents and other community members. As students become healthier, they participate more fully in education opportunities; the whole community starts to see the school and school personnel in a more positive light and is inspired to collaborate with schools.

This positive reaction to school-based health services is well documented. In particular, micronutrient supplementation, deworming, malaria treatments and school feeding programmes have been perceived as a substantial added benefit of schooling and have thus improved enrolment and attendance.

Resources

School-based health services tools are listed according to general school-based health services issues and health themes at:

http://portal.unesco.org/education/admin/ev.php?URL_ID=35173&URL_DO=DO_TOPIC&URL_SECTION=201

5.1. Deworming

WHO estimates that more than 1 billion people in the world are chronically infected with STH and 200 million are infected with schistosomes. Global prevalence and the number of cases of intestinal helminth infection in school-age children are estimated at: roundworm 35 percent (320 million); whipworm 25 percent (233 million); hookworm 26 percent (239 million).

It is the school age child who is most at risk of intense infections. For girls aged 5 to 14 years in developing countries these worm infections account for an estimated 12 percent of the total disease burden and for boys in the same age group they account for an estimated 11 percent. Such infections represent the single largest contributor to the disease burden of this age group. Parasitic helminth infection may cause or aggravate malnutrition and retard child development. Physical ill health caused by parasitic helminth infection negatively impacts on a child's mental function. There is a proven link between iron deficiency anaemia, stunting and cognitive development.¹²

The high prevalence of infections and the development of effective and safe single dose treatments for worms have led WHO to recommend mass treatment through schools where surveys show that the prevalence of intestinal helminth or schistosoma infections exceeds 50 percent (WHO, 1998): albendazole or mebendazole for treating roundworm (*Ascaris lumbricoides*), whipworm (*Trichuris trichiura*) and hookworm (*Necator americanus*, *Ancylostoma duodenale*), and praziquantel for treating schistosomes are the recommended drugs. In addition, population dynamics theory predicts that focusing treatment on this age group would significantly reduce transmission in the population as a whole.

These services are also highly cost-effective: the cost of drugs to treat parasitic worms in the Partnership for Child Development's school health programmes in Ghana and the United Republic of Tanzania was typically about US\$0.40 per year per child treated with albendazole given annually, plus praziquantel (for schistosomiasis) given every two years.

Multiple coordinated strategies produce a greater effect than individual strategies. While treatment of parasitic infections may have an immediate short term impact, a programme will only show sustainable results when combined with training of teachers and administrators, classroom education and the provision of sanitary facilities, all included in the FRESH framework of action.¹³

The emphasis should be on these crucial interventions to break the transmission of these diseases:

- safe, efficient and hygienic disposal of faeces, particularly child faeces;
- safe, efficient and hygienic management of water from extraction, through transport and storage to use (particularly for drinking and handwashing); and
- regular and effective use of water (with a scouring agent such as soap or ash) for handwashing after contact with stools (Curtis, 1998).

¹² <http://www.freshschools.org/Pages/AccessToHealthandNutritionServices.aspx>. Accessed 18 August 2010.

¹³ <http://www.freshschools.org/Pages/SafeWaterandSanitation.aspx>. Accessed 18 August 2010.

Partners for Parasite Control

The Partners for Parasite Control (PPC) group was launched after the World Health Assembly in 2001. WHO acts as the secretariat for the group and as the lead technical agency. The group is composed of agencies of the United Nations, WHO Member States, research institutes and a multitude of NGOs. Each one brings unique and different skills to the table: Some excel at providing training, others are better positioned to fundraise or create advocacy materials. Drug provision falls under the remit of some agencies and outreach is one of the most valuable resources of the NGOs.

The Global Target – against which each country's progress will be measured – is that at least 75 percent of all school age children who are at risk of morbidity from schistosomiasis and STH should be regularly reached and treated by the year 2010. In order to achieve that goal, another “subgoal” was set, which states that all health services in endemic areas should be stocked with the drugs to treat schistosomiasis and STH.¹⁴

Deworm the World

Deworm the World is a Young Global Leaders initiative that brings together partner organizations and individuals around the world who are committed to improving children's health and education by massively expanding deworming programmes. Deworm the World links education groups to funders and provides the information they need to implement deworming and to raise the profile of this neglected issue.¹⁵

Deworm the World is working to implement school-based deworming wherever it is needed worldwide with the participation and support of many different organizations. In 2009 20 million school-age children were dewormed in 26 countries.

Since 2008, Deworm the World has worked in cooperation with WFP, and targeted interventions that now take place alongside WFP's school feeding programmes. Deworming operations are currently under way in 39 countries, 29 of which are in Africa.

Children Without Worms

Children Without Worms is a partnership between Johnson & Johnson and The Task Force for Global Health. It supports global efforts to reduce the burden of STH infections in children who are most severely infected or at high risk of infection and have limited access to safe and effective treatment. Children Without Worms achieves its goal by working with national programmes to leverage the donation of mebendazole from Johnson & Johnson to promote comprehensive and sustainable control of STH, combining mass treatment with the promotion of health behaviour change and improvements in sanitation and safe water supplies. To date Children Without Worms has worked to treat more than 20 million children per year with mebendazole and to address the root causes of STH in eight countries: Bangladesh, Cambodia, Cameroon, Cape Verde, Lao People's Democratic Republic, Nicaragua, Uganda and Zambia.¹⁶

¹⁴ http://www.who.int/wormcontrol/about_us/en/. Accessed 18 August 2010.

¹⁵ <http://www.dewormtheworld.org/>. Accessed 12 November 2010.

¹⁶ <http://www.childrenwithoutworms.org/>. Accessed 18 August 2010.

Schistosomiasis Control Initiative

The Schistosomiasis Control Initiative, established in 2002 at Imperial College, London, aims to control or eliminate the most prevalent neglected tropical diseases (STH, lymphatic filariasis, onchocerciasis, schistosomiasis and trachoma) in sub-Saharan Africa. In order to realize this aim the Schistosomiasis Control Initiative assists health ministries in sub-Saharan African countries in developing and expanding their existing neglected tropical disease control programmes.

With the support of the Global Health Program run by the Bill & Melinda Gates Foundation, treatment for schistosomiasis and intestinal worms has been delivered to millions of people in sub-Saharan Africa facing a high risk of serious disease, particularly in Burkina Faso, Burundi, Mali, Niger, Rwanda, the United Republic of Tanzania, Uganda and Zambia.¹⁷

Resources

Further information is available at:

- <http://www.schoolsandhealth.org/Pages/Worms.aspx>
- http://www.who.int/topics/intestinal_diseases_parasitic/en/
- <http://www.dewormtheworld.org/>.

5.2. Micronutrient Supplementation

The three main forms of micronutrient deficiency are: iron deficiency anaemia, vitamin A deficiency and iodine deficiency disorders. Micronutrient deficiencies can negatively affect the mental development and learning ability of children, and their susceptibility to infection.¹⁸

It is estimated that 210 million or 53 percent of school-age children suffer from iron deficiency anaemia, 85 million suffer from vitamin A deficiency and 60 million children worldwide are affected by iodine deficiency (Drake et al., 2002).

Global initiatives in micronutrient supplementation and the related guidance provided normally target pregnant and lactating women, infants and young children, although supplementation or fortification can also be relevant for school-age children.

Food-based approaches represent the most desirable and sustainable method of preventing micronutrient malnutrition. Such approaches are designed to increase micronutrient intake through the diet.

Iron deficiency results from a variety of causes such as inadequate iron intake, high physiological demands in early childhood and pregnancy, and iron losses through parasitic infections. Iron deficiency anaemia in infants and young children is associated with significantly lower scores in psychological tests and leads to long-term deficits in cognitive functioning.

¹⁷ <http://www3.imperial.ac.uk/schisto>. Accessed 18 August 2010.

¹⁸ <http://www.freshschools.org/Pages/AccessToHealthandNutritionServices.aspx>. Accessed 18 August 2010.

Supplementation through schools can constitute a preventive public health measure to control iron deficiency, especially in adolescent girls but also in boys, if prevalence of anaemia is severe (>40 percent) (UNICEF, United Nations University, WHO, 2001).

The consequences of iodine deficiency, collectively referred to as iodine deficiency disorders (IDD), include severe mental retardation, goitre, abortion, stillbirths and low birth weight, and mild forms of motor and cognitive deficits. Adolescent girls are an important target group for IDD control because of the adverse consequences on foetal development of iodine deficiency during pregnancy and because they generally have a higher prevalence of goitre than boys. Iodine deficiency is the single most common preventable cause of mental retardation and brain damage in children.

Universal salt iodization is seen as the permanent and sustainable solution to the global IDD problem. In areas where iodized salt is not available and where the prompt correction of IDD is urgent, iodized oil can be administered to schoolchildren inexpensively and simply, maintaining iodine levels for a period of 12 months (Drake et al., 2002).

Vitamin A deficiency is widely recognized as an important cause of blindness in children. Mild or sub-clinical vitamin A deficiency causes impaired immune function and an increased risk of mortality from infectious diseases that can have an effect on school attendance and consequently academic performance. Vitamin A deficiency also affects iron metabolism in such a way that when any iron supplements are taken, subsequent improvement in iron status may be limited if vitamin A status is low.

Given the frequent overlap and clustering of micronutrient deficiencies, multiple micronutrient supplementation or fortified foods may be a cost-effective strategy to address nutrient deficiencies in school-age children (Drake et al., 2002).

6 Skills-based Health Education¹⁹

This chapter focuses on global initiatives in skills based health education and begins with a description of the following:

- Child-to-Child Trust;
- approaches to behaviour change communication through social marketing;
- Facts for Life, a UNICEF publication; and
- International Union for Health Promotion and Education.

A number of initiatives are then addressed that relate to the topics of personal hygiene and food and nutrition, including:

- Global Public–Private Partnership for Handwashing with Soap;
- private-sector initiatives;
- Feeding Minds, Fighting Hunger;
- *Nutrition Education in Primary Schools*, a FAO planning guide;
- school gardens;
- food-based dietary guidelines;
- nutrition-friendly schools; and
- Five Keys to Safer Food.

Children spend long hours in school. The school itself will partly determine the health and well being of children by providing a healthy or unhealthy environment. Compared with adults, children are often more receptive to new ideas and can more easily change their behaviour and/or develop new long-term behaviours as a result of increased knowledge and facilitated practices. Children are future role models and parents. What they learn at school is likely to be passed on to their peers and to their own children.

Depending on the culture, children and young people may question existing practices in the household and become agents of change within their families and communities. Teachers, as professionals and influential individuals supported by the school management, can play an important role in the development of pupils through training and provide a role model in the communities.

Health and well being are influenced to a large extent by social and behavioural factors, in addition to environmental determinants, genetic factors and access to quality health services. Knowledge is necessary but not sufficient to guarantee the adoption and maintenance of health-promoting behaviour.

Skills-based health education is education that helps individuals develop the knowledge, attitudes and especially skills needed to make and carry out positive health decisions. Skills-based health education

¹⁹ Based on: http://portal.unesco.org/education/admin/ev.php?URL_ID=35168&URL_DO=DO_TOPIC&URL_SECTION=201 and <http://www.freshschools.org/Pages/SkillsBasedHealthEducation.aspx>.

goes beyond ensuring that people *know* things to ensuring that people *do* things. There is increasing evidence that the skills-based approach to health education works and that it is more effective than approaches that focus on increasing knowledge alone. Young people who receive quality skills-based health education are more likely to adopt and sustain a healthy lifestyle not only during their school years but throughout their lives.

Practical skills and life skills

Skills-based health education teaches manual skills associated with specific health behaviours and psycho-social life skills.

As children grow from infancy to adolescence and young adulthood, they need to learn many kinds of skills. Language, reading, writing and mathematics are considered the most basic of the skills children must master. In addition, they must learn a variety of practical skills, such as tooth brushing, how to use public transportation, food preparation, and basic safety and survival skills. They also need to learn skills associated with work, income generation and money management. Last but not least, experience in the field of health education has demonstrated that children need another group of skills that are now generally referred to as life skills.

WHO defines life skills as “abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life.” In particular, life skills are a group of cognitive, personal and interpersonal abilities that help people make informed decisions, solve problems, think critically and creatively, communicate and negotiate effectively, build healthy relationships, empathize with others and cope with and manage their lives in a healthy and productive manner.

The skills referred to in the skills-based approach to health education include the practical skills associated with specific health behaviours and life skills. A suggested framework for skills-based programmes could therefore aim at developing competencies in the four following areas:

- knowledge and critical thinking skills (learning to know);
- practical skills (learning to do);
- personal skills (learning to be), and
- social skills (learning to live together).

The application of skills based health education, in particular life skills, to areas such as HIV/AIDS prevention, reproductive health, early pregnancy, violence, tobacco and substance abuse is becoming increasingly widespread. In areas such as these, individual behaviour, social and peer pressure, cultural norms and abusive relationships can all contribute to the health and lifestyle problems of children and adolescents. For other health, hygiene and nutrition problems skills based health education can also play a vital role in sustainable prevention and management.

Participatory teaching methods

Skills are best acquired through learner-centred, participatory, experimental programmes. Interactive or participatory teaching and learning methods replicate the natural processes by which children learn behaviour. These include observation, exploration, modelling and social interaction.

Effective programmes balance these participatory and active methods with information and attitudes related to the health issue addressed. Research has shown that programmes are most effective when they focus explicitly on the specific health choices and behaviours to which the skills are to be applied.

The FRESH framework provides the context for effective implementation of skills based health education programmes. Skills based health education, delivered through schools, is most effective where it is supported by other reinforcing strategies such as policies to provide a non-discriminatory safe and secure environment, provision of safe water and sanitation, provision of health and other services, effective referral to external health service providers and links with the community.

Resources

Skills-based health education tools, addressing such topics as food and nutrition, hygiene, HIV/AIDS, responsible sex behaviour, violence, drugs, alcohol and tobacco use and malaria, are available at:

- http://portal.unesco.org/education/admin/ev.php?URL_ID=36857&URL_DO=DO_TOPIC&URL_SECTION=201.
- http://www.unicef.org/lifeskills/index_resources.html

6.1. Child-to-Child Trust

The Child-to-Child Trust is an international network promoting children's participation in health and development, based at the University of London's Institute of Education.²⁰

Since 1979, the Child-to-Child Trust has acted as the central core of an international movement of health and education workers and programmes. Active in over 70 countries worldwide, the movement is estimated to impact over 1 million children annually.

The Child-to-Child approach is an educational process that links children's learning with taking action to promote the health, well being and development of themselves, their families and their communities. Through participating in Child-to-Child activities the personal, physical, social, emotional, moral and intellectual development of children is enhanced.

The Child-to-Child approach also links children's learning (in or out of school) with their lives (home and community) so that knowledge translates into behaviour and action.

Using a series of linked activities, or six steps, children think about health issues, make decisions, develop their life skills and take action to promote health in their communities, with the support of adults:

- **Choose and understand.** Children identify and assess their health problems and priorities.
- **Find out more.** Children undertake research activities to improve their understanding of how a particular health issue affects them and their communities.
- **Discuss findings and plan action.** Based on their findings, children plan action that they can take individually or together to address the identified problems.

²⁰ <http://www.child-to-child.org/>. Accessed 18 August 2010.

- **Take action.** Children take action with the adult support they themselves have identified as needed.
- **Evaluate.** Children evaluate the action they took: What went well? What was difficult? Has any change been achieved?
- **Do it better.** Based on their evaluation, children think of ways to keep the action going and/or improve it.

Evaluations of the Child-to-Child approach can be found in the literature reviews, although quantitative and ethnographic studies on the impact of Child-to-Child approaches remain few in number (Landsdown, 1995; Babul, 2007).

The main activities of the Child-to-Child Trust are:

- Produce and disseminate appropriate and up-to-date health education materials and support national materials development.
- Provide training, implementation and evaluation support to projects in Africa, the Arab world, Latin America and Asia.
- Hold short courses in London and elsewhere.
- Manage and present the wealth of information held by the Child-to-Child Trust in accessible and useful ways, such as up-to-date and accurate documentation, production and dissemination of the annual review and newsletter, maintenance and updating of the website.

School health clubs

One way of applying the Child-to-Child approach is through the formation of school health clubs (e.g. health action, child survival, Red Cross or health scouts clubs) (Hawes, 1997).

Participation in such clubs should be open to all children who are interested and not only to children from privileged families or those who perform well at school. Children should be involved in helping to plan and organize their meetings, although they will need substantial support. They also need the assistance of a health advisor who can provide up-to-date health information and make sure that children pass it on correctly.

Health clubs can participate in health education using the six steps approach. They also can be involved in the day-to-day management of school health activities, such as supervising school cleanliness, overseeing safety in the school and surroundings, looking after food safety and safe water. A list of “dos and don’ts” for the running of school health clubs is provided below.

Do:

- involve children in planning and organization;
- encourage a programme with plenty of activity;
- organize activities in a sequence so that children have plenty of time to understand about the health problem they are looking at and can then move to action;
- make sure that the activities are fun to do;
- use the club members to mobilize other children;
- make sure that children are given some kind of recognition (badges or certificates); and
- remember that health information given to and by children must be accurate and up-to-date.

Don't:

- underestimate the children and do all the organization for them;
- organize too many talks without practical follow-up;
- organize too many activities which are not connected with each other, and which children never really follow up well;
- make children do activities they do not want to do (or which no one else wants to do);
- let club members believe that these activities are “just for them”; and
- take what the children are doing for granted and forget to praise and encourage them.

A school sanitation project implemented by Sustainable Aid in Africa International in seven schools and communities in Nyanza Province, Kenya, made use of school health clubs for sanitation and hygiene education. School health clubs can be very useful in stimulating safe hygiene behaviour among children, helping children make proper use of and maintain facilities, and reaching out into the community (Rop, 2004).

A school health club was set up in each of the seven schools, with the participation of 25 children selected from class 4 to class 7 and a club patron, followed by a seven day training course in Child-to-Child methodology, focusing on the dissemination of messages about personal, food and domestic hygiene.

Resources

The Child-to-Child-Trust has a wide selection of resources and online publications. The main publications are in English, but some are also available in other languages. Publications can be bought online (<http://www.talcuk.org/featured-publishers/child-to-child.htm>) and some can be downloaded for free from the Child-to-Child website (<http://www.child-to-child.org/resources/index.html>).

Selected publications include:

- Stories for Children (9 readers)
- Monitoring and Evaluating Children's Participation in Health and Development
- Child-to-Child, A Resource Book (3rd Edition)
- Children for Health (includes the key messages and supporting information in the latest edition of Facts for Life)
- Child-to-Child Approaches to HIV and AIDS
- Curriculum for Health Education: Primary School Planning and Practice
- Small is Healthy – A guide to promoting health in small schools
- Early Years Children Promote Health
- Case Studies on Child-to-Child and Early Childhood Development
- Child-to-Child Primary Health Readers (16 storybooks graded for age and reading ability, containing simple but powerful health messages)
- Stories for Health Education and Skills Development (26 stories).

6.2. Behaviour Change Communication through Social Marketing

Social marketing is a consumer-oriented approach to defining, promoting and making accessible socially useful practices and/or products. Social marketing has been implemented worldwide since 1970 and uses a systematic, analytical methodology for strategic planning of activities that leads to real and sustainable behaviour change. Communications, training, policy change and product development and marketing can all be part of the overall strategy. Social marketing managers, taking their cue from commercial marketing experience, manage the integration of behaviour-change communications with service delivery and other components of programmes.

The approach places an exceptional emphasis on formative planning research, with beneficiaries, major influencers of beneficiary behaviour, and programme implementers and supporters, in order to devise and implement an effective behaviour-change strategy that will promote new or modified practices that will have the desired nutrition and health impact, and are acceptable and feasible for most people (Favin and Griffiths, 1999).

The premise of social marketing is that consumers weigh the perceived benefits of alternative behaviours against the costs in terms of economic assets, time, energy or psycho-social value. The challenge to programme planners is to develop the best product, behaviour or idea at the lowest cost and to promote it in such a way that it clearly stands out from the competition. A successful product offers a benefit that is perceptible to and valued by the consumer (Parlato et al., 1992).

A critical aspect of a social marketing strategy is the communication component. Behaviour change communication overlaps, but is distinct from, several other methods of information, education and communication, project communications, nutrition or health education and social mobilization, mainly because of its consumer orientation and its requirement that all communication, education or training be “on strategy”, in other words, be carried out only because it supports the programme’s behaviour-change strategy. While communication alone may not produce and sustain behaviour change, as an integral part of a broad behaviour-change strategy, behaviour change communication is a powerful tool (Favin and Griffiths, 1999).

Successful health communication programmes include the following stages (Parlato et al., 1992; AED, 1995; Aliaga, 2007):

- Assessment
- Strategic planning
- Drafting, pre-testing and production of materials
- Intervention
- Monitoring and evaluation

The Manoff Group

The Manoff Group provides assistance in communications and behaviour-centred programming to health, family planning, nutrition, environment, water and HIV/AIDS programmes. The firm has been at the forefront of social marketing development since it first applied commercial marketing techniques to social programmes in India in 1967.²¹

The Manoff Group uses behaviour-centred programming to design locally appropriate and effective behaviour change strategies to extend coverage of services and promote key practices that improve educational and health outcomes. These strategies build on formative research with students, their families and communities.

Trials of Improved Practices (TIPs) are often used to define and test new practices. As a result, activities are tailored to the needs of the community. The Manoff Group helps to develop, pre test and implement behaviour-centred communication activities, ranging from interpersonal communication to mass media, and a school curriculum to promote key practices in schools and in homes and communities. The Manoff Group has provided technical assistance to Save the Children's school health and nutrition programmes in Bangladesh, Malawi and the Philippines, and managed an anaemia reduction school health and nutrition project in Egypt and a school hygiene improvement project in the Dominican Republic.

Population Services International

Population Services International (PSI) is a leading global health organization whose mission is to measurably improve the health of poor and vulnerable people in the developing world, principally through social marketing of family planning and health products and services, and health communications.

PSI was founded in 1970 to improve reproductive health using commercial marketing strategies. For its first 15 years, PSI worked mostly in family planning (hence the name Population Services International), but currently the organization has implemented programmes targeting malaria, child survival, HIV and reproductive health. Working in partnership within the public and private sectors, and harnessing the power of the markets, PSI provides life-saving products, clinical services and behaviour change communications that empower the world's most vulnerable populations to lead healthier lives. Currently PSI has a field presence in 67 countries.²²

Resources

Further social marketing information and tools can be found on the website of the AED Center for Social Marketing and Behavior Change: <http://csmbc.aed.org/>.

²¹ <http://www.manoffgroup.com>. Accessed 18 August 2010.

²² <http://www.psi.org/>. Accessed 18 August 2010.

6.3. *Facts for Life* (UNICEF)

The handbook *Facts for Life* (UNICEF et al., 2010) provides vital messages and information for mothers, fathers, other family members, caregivers and communities to use in changing behaviours and practices that can save and protect the lives of children and help them grow and develop to their full potential. It has been translated into 215 languages, with over 15 million copies of the previous editions in circulation worldwide.

The messages contained in *Facts for Life* are based on the latest scientific findings by medical and child development experts around the world. These facts are presented in simple language so they can be understood and acted upon easily by people without a scientific background.

Facts for Life consists of 14 chapters filled with practical information about how to ensure children's rights to survival, growth, development and well-being. The topics addressed are: timing births; safe motherhood and newborn health; diarrhoea; coughs, colds and more serious illnesses; hygiene; malaria; child development and early learning; breastfeeding; nutrition and growth; immunization; HIV; child protection; injury prevention; emergencies: preparedness and response.

Each chapter has three parts: an introduction, key messages and supporting information:

- The introduction is a brief “call to action”. It summarizes the extent of the problem and the importance of taking action. The introduction aims to inspire people to get involved and share this information widely. It can be used to motivate political leaders and the mass media.
- The key messages, addressed to parents and other caregivers, are the essence of *Facts for Life*.
- The supporting information elaborates on each key message, providing additional details and advice. This information is particularly useful for community-based workers, health workers, social workers, teachers and families. It can be used to answer questions from parents and other caregivers.

Everyone can help communicate the *Facts for Life* messages — health workers, teachers, social workers, government officials, broadcasters, journalists, community workers, religious and political leaders, mothers, fathers, grandparents, other family members, friends, neighbours, students and people from all walks of life — young and old, men and women, girls and boys.

Facts for Life also provides useful information on the process of behavioural and social change and on using formative research and assessment to measure behaviour change, together with practical guidance on how to use *Facts for Life* to promote behaviour and social change that favours children's right to survive, grow, learn, develop and achieve their full potential in life.

6.4. International Union for Health Promotion and Education

The International Union for Health Promotion and Education (IUHPE) is a leading global network devoted to advancing public health through health promotion and health education, and working to promote health worldwide and contribute to the achievement of equity in health between and within countries.

The IUHPE fulfils its mission by building and operating an independent global professional network of people and institutions to encourage the free exchange of ideas, knowledge, know-how, experiences, and the development of relevant collaborative projects, at the global and regional levels. It draws its strength and authority from the qualities and commitment of its diverse network of members, and it has an established track record in advancing the knowledge base and improving the quality and effectiveness of health promotion and health education practice. Members range from government bodies to universities and institutes, and NGOs and individuals across all continents.

The IUHPE has four goals:

- Advocate for health
- Build knowledge of effective health promotion and health education
- Improve effectiveness of policy and practice
- Build capacity for health promotion and health education.

The IUHPE decentralizes its activity through regional offices and works in close cooperation with UNESCO, UNICEF, WHO and other major intergovernmental and non-governmental organizations to influence and facilitate the development of health promotion strategies and projects.²³

Initiatives in school health include:²⁴

- Schools project developed with support from the Centers of Disease Control, Division of Adolescent and School Health;
- International Collaboration on Teacher Training/Education in Health Promotion and Health Education;
- International School Health Network; and
- World School Health Encyclopedia.

Resources

The IUHPE is responsible for several publications available in different languages:

- About school health: <http://www.iuhpe.org/index.html?page=516&lang=en>
- *Global Health Promotion* is a multilingual journal that publishes authoritative peer-reviewed articles and practical information (<http://www.iuhpe.org/?page=19&lang=en>. Accessed 18 August 2010).

²³ <http://www.iuhpe.org/?page=7&lang=en>, Accessed 18 August 2010.

²⁴ http://www.iuhpe.org/index.html?page=487&lang=en#SA_areas, Accessed 12 November 2010.

- *Health Promotion International*, published in association with WHO, contains refereed original articles, reviews and debate articles on major themes and innovations from various sectors including education, health services, employment, government, the media, industry, environmental agencies and community networks (<http://heapro.oxfordjournals.org>. Accessed 18 August 2010).
- *Health Education Research* deals with all the vital issues involved in health education and promotion worldwide (<http://her.oxfordjournals.org>. Accessed 18 August 2010).

6.5. Personal Hygiene

According to WHO the hygiene behaviours that are most important in preventing illness are (IRC, 2004):

- handwashing
- having and using latrines
- safe disposal of infant excreta
- storing drinking water safely

Washing hands with soap has been shown to be one of the most effective ways to prevent diarrhoea. Washing hands with soap at critical times – after contact with faeces and before handling food – could reduce diarrhoeal rates by up to 47 percent. However, rates of handwashing with soap remain low throughout the developing world and large-scale promotion of handwashing behaviour change is a challenge.²⁵

Resources

The document “Hygiene and sanitation software: An overview of approaches” describes the approaches deployed to enable behaviour change or create a demand in services over the last 40 years by NGOs, development agencies and national and local governments in urban and rural settings:

<http://www.wsscc.org/resources/resource-publications/hygiene-and-sanitation-software-overview-approaches?rck=b6b2de39debc1a19e79db256b3b7be90>

Helminth and hygiene skills-based health education tools are available at:

http://portal.unesco.org/education/admin/ev.php?URL_ID=36182&URL_DO=DO_TOPIC&URL_SECTION=201.

Examples of health education materials that have been produced by different countries on the subject of worms are available at: http://www.who.int/wormcontrol/education_materials/en/.

More information about hygiene promotion is available from the IRC International Water and Sanitation Centre: <http://www.irc.nl/page/115>. A review of different handwashing programmes is also available at: <http://www.irc.nl/page/31717>.

Further useful information is available from the USAID funded Hygiene Improvement Project: <http://www.hip.watsan.net/>

²⁵ <http://www.wsp.org/wsp/node/243>. Accessed 18 August 2010.

6.5.1. Global Public–Private Partnership for Handwashing with Soap

The Global Public–Private Partnership for Handwashing with Soap is a worldwide initiative to reduce diarrhoea. The initiative was developed by the Academy for Educational Development, the London School of Hygiene and Tropical Medicine, WSP, World Bank and the private sector (Colgate-Palmolive, Procter & Gamble and Unilever), in collaboration with the Bank-Netherlands Water Partnership, the Centers for Disease Control and Prevention, UNICEF and USAID. Partnerships have been established in Ghana, Nepal, Peru and Senegal.²⁶

This initiative combines the expertise and resources of the soap industry with the facilities and resources of governments to promote handwashing with soap. While governments and development agencies want to combat disease and poverty, industry is interested in expanding its market. Handwashing can play an important part in the efforts to reach the Millennium Development Goals that are related to health improvements and access to health facilities (through demand creation), and to effective use of water supply and sanitation services, which are also among the major objectives set by United Nations Member States at the World Summit on Sustainable Development in Johannesburg, South Africa, in September 2002.

The overarching aims of the initiative are to:

- Reduce the incidence of diarrhoeal diseases in poor communities through public–private partnerships that promote handwashing with soap; and
- Implement large scale handwashing interventions and use lessons to promote the approach at the global level.

The idea is to invite private industry and the public sector to work with other partners to develop programmes that promote handwashing. Non-branded programmes are open to all interested parties, both public and private, targeting those most at risk (mothers, children, the poor) across the whole population. Based on detailed consumer studies, these programmes reach out to target audiences through the media, direct consumer contact and government channels of communication. The programmes also gather knowledge through detailed monitoring and evaluation.

The Global Public–Private Partnership for Handwashing with Soap is built around the following elements:

(i) The philosophy of the initiative

- In each country, the lead is taken by the public sector, with technical assistance and support from outside agencies.
- Political commitment is required.
- Interventions are built on existing water and sanitation, infrastructure and school programmes.
- Programmes should be wide reaching.
- Public–private partnerships are only a tool.
- Partnerships are inclusive.
- Information is shared by all partners in a transparent manner.
- Emphasis is given to measuring impact.

²⁶ <http://www.globalhandwashing.org/>. Accessed 18 August 2010.

(ii) The transparency and equality of partners

- All research information and knowledge generated by the initiative is placed in the public domain in a timely manner through the programme website and other dissemination tools.
- All research information and knowledge arising out of the new initiative is available to other soap manufacturers.
- No branded soap products are used in the communication campaigns.

(iii) The involvement of local soap firms

- The focus is placed on the act of washing hands at critical times using whatever soap people prefer.
- The small scale sector is involved in the consultative process at every stage (which has been the case since the initiative began in January 2001).
- The participation of all local manufacturers in the programme is welcome.
- The shift in consumption pattern, with the overall increase in the size of the soap market for private manufacturers, will have no detrimental impact on the small scale sector.

Global Handwashing Day is an initiative developed by the Partnership and adopted by the United Nations. It was held for the first time in 2008 as part of the International Year of Sanitation to raise awareness about the importance of handwashing.²⁷

6.5.2. Private-sector initiatives

Unilever: Handwashing

Unilever works with governments, health agencies and non-profit groups to promote the importance and practice of handwashing with soap at the right times during the day.²⁸

Unilever has been running the Swasthya Chetna (“health awakening”) programme in India since 2002. Schools are encouraged to put on a show for parents and the community, acting out sketches on the importance of handwashing with soap. Mothers of young children are invited to attend a health education session, and schoolchildren, parents and other villagers are recruited as volunteers to start up health clubs that organize community events. Similar hygiene promotion activities are run in Bangladesh, Indonesia, Pakistan, Sri Lanka, South Africa and Viet Nam. Along with Swasthya Chetna, these campaigns have reached more than 133 million people to date.

One of the key elements is the “glowgerm” demonstration. This counters the common misconception that “visibly clean” is “hygienically clean”. When held under ultraviolet light, glowgerm powder glows on the dirt left behind on hands washed only with water, acting as a powerful emotional reminder that handwashing with soap provides greater protection against germs than washing with water alone.

²⁷ <http://www.globalhandwashingday.org/>. Accessed 18 August 2010.

²⁸ <http://www.unilever.com/sustainability/wellbeing/hygiene/handwashing/index.aspx>. Accessed 18 August 2010.

Smart sensor technology is used for measuring handwashing behaviour. By placing a sensor inside a soap bar researchers can gather accurate data unobtrusively during handwashing trials and thereby monitor the extent to which different types of awareness-raising initiatives actually lead to changes in behaviour in people's homes.

More information on Unilever's handwashing initiatives can be found in the publication "Lifebuoy way of life. Towards universal handwashing with soap: Annual Review 2008/09": http://www.unilever.com/images/sd_WayofLifeJan2010_for_web1_tcm13-213741.pdf.

Unilever: Oral health

In 2005 Unilever entered into a three-year agreement with the FDI World Dental Federation to launch a global oral health programme. The FDI is a federation of national dental associations representing nearly a million dentists around the world. To date, the partnership between Unilever and the FDI World Dental Federation has supported over 40 oral care initiatives in 37 countries.²⁹

In 2009 the *Brush Day and Night* campaign was launched to encourage children and their parents to brush their teeth twice a day.³⁰

Unilever: Safe drinking water

In India, Unilever and UNICEF are working together to bring safe drinking water to schools and day-care centres in low-income communities in southern India.

Colgate-Palmolive: Oral health

Colgate's Bright Smiles, Bright Futures programme promotes oral health education and prevention to underserved children around the world. The primary focus of the programme is to reach children in schools through videos, storybooks, sing-along-songs, CD-ROMs and interactive computer activities designed for educators to use in the classroom and parents to use at home. Since 1991, this programme has reached more than 500 million children in 80 countries.³¹

Procter & Gamble: Handwashing

In China, Procter & Gamble, in partnership with the Red Cross and China's Ministry of Health, launched the *Safeguard Health Great Wall* campaign on 15 October 2008, Global Handwashing Day. The campaign uses the slogan "Clean hands save lives" to engage schoolchildren as effective agents for change. It broadens health and hygiene education in schools and supports the building of sanitation

²⁹ <http://www.unilever.com/sustainability/wellbeing/hygiene/Oral-health/index.aspx>. Accessed 18 August 2010.

³⁰ <http://www.brushdayandnight.com/> Accessed 18 August 2010.

³¹ <http://www.colgate.com/app/Colgate/US/Corp/CommunityPrograms/HomePage.cvsp>. Accessed 18 August 2010.

facilities in rural China to encourage handwashing. Similar outreach efforts have also been led by Procter & Gamble in other countries.³²

Procter & Gamble: Safe drinking water

The *Children's Safe Drinking Water* initiative provides Purifier of Water packets on a not-for-profit basis through more than 70 partners. Since the programme started, more than 1.5 billion litres of water in over 50 countries have been purified.

The programme responds to emergencies such as cholera outbreaks, providing safe drinking water in schools, outreach to mothers in health clinics and safe drinking water for malnourished children. The programme also helps people living with AIDS to live positively.

6.6. Food and nutrition

Education and food are fundamental conditions for health. Health, education and nutrition support enhance one another. Nutrition is an essential element of a health-promoting school that contributes to an increase in the health and learning potential of students, families and other community members (WHO, 1998).

Most initiatives and nutrition education programmes focus on mother and child health. This section focuses on initiatives that are particularly relevant for school age children.

Resources

An overview of food and nutrition tools is available at:

http://portal.unesco.org/education/admin/ev.php?URL_ID=36051&URL_DO=DO_TOPIC&URL_SECTION=201.

6.6.1. Feeding Minds, Fighting Hunger (FAO)

Feeding Minds, Fighting Hunger, launched on World Food Day in 2000, is a global education initiative to introduce young people to the issues of hunger, malnutrition and food security. Intended for use by teachers, it is designed to enable and encourage children and young people to become actively involved in helping to create a world free from hunger and malnutrition. Feeding Minds, Fighting Hunger was created by a group of 10 international partners and non-profit organizations, spearheaded by FAO and the United States National Committee for World Food Day.

Three easy to use teaching modules have been developed for each of the three levels of education – primary, intermediate and secondary. With varying degrees of complexity, the modules cover topics such as: “What are hunger and malnutrition and who are the hungry?”, “Why are people hungry and malnourished?” and “What can we do to help end hunger?”

³² http://www.pg.com/en_US/sustainability/social_responsibility/safeguard.shtml. Accessed 18 August 2010.

The materials have been designed as a starting point for teachers around the world to introduce these topics to their students. Teachers can adapt and refine the materials to meet local needs and conditions. In addition, a key component of the initiative is information sharing among teachers and students in such a way as to create an interactive forum for exchanging ideas and experiences around the world. The materials and the interactive online framework encourage teachers to contribute additional lessons and activities leading towards the creation of a world free from hunger.³³

The “Feeding Minds, Fighting Hunger” global initiative, FAO and the World Association of Girl Guides and Girl Scouts produced a cartoon book and activity guide, *The Right to Food: a Window on the World*, to encourage children and young people to work together in the global fight against hunger and malnutrition.³⁴

6.6.2. Nutrition Education in Primary Schools, a planning guide (FAO)

The FAO planning guide, *Nutrition Education in Primary Schools*, was developed in 2005. It is inspired by the idea of health promotion that sees health as being actively created by people and communities themselves (and not a condition obtained from health care services) and emphasizes the importance of healthy environments, public policies, community participation and acting on the social determinants of health. Applied in nutrition, health promotion principles result in school based nutrition education, where individual lifestyles and knowledge are complemented by the development of attitudes and skills through active learning, which is reinforced by a health-conducive school environment (FAO, 2005a; Muehlhoff, 2005; Glassauer, 2007).

The main constituents of the planning guide are:

- **The tripartite curriculum.** Building on the holistic principles of health promotion, the guide recognizes that eating habits are learned not only in class but also in the home, the community and the environment.
- **A wide idea of learning.** Taking a wide view of nutrition education as something that establishes and reinforces good dietary and lifestyle practices, the guide therefore aims at changing behaviour, attitudes and life skills, as well as increasing knowledge.
- **A cross-sectoral approach.** Recognizing that children’s nutrition and nutrition education can benefit from the expertise, support and commitment of sectors other than education, the guide recommends involving, for example, agriculture, health and community services.
- An emphasis on local environment and local issues. Highlighting and addressing local dietary needs, the guide looks at available foods and local food practices.

The purpose of the planning guide is to help plan or redesign action programmes for nutrition education and produce classroom curricula for nutrition education in primary schools. Use of the guide results in action plans covering a two or three year period that are in line with the wider vision of the “tripartite nutrition education curriculum”.

³³ <http://www.feedingminds.org>. Accessed 18 August 2010.

³⁴ http://www.fao.org/righttofood/publi_04_en.htm. Accessed 18 August 2010.

The planning guide is aimed at professionals in any country, region, district or school who are involved in planning nutrition education programmes for primary schools. The two main groups of users are expected to be:

- National level users, primarily from centralized educational institutions; and
- Local level users, more closely linked to particular schools or groups of schools.

Some tasks are organized at the national level, for example advocacy, government policy and coordination with major aid programmes. Others are largely the responsibility of individual schools, for example liaising with families and the local community.

The planning guide has three main components:

- A book explaining the key ideas and processes in nutrition, health and education (pedagogy);
- A set of worksheets taking participants through the entire curriculum planning exercise;
- The classroom curriculum chart, which is a poster providing learning objectives for nutrition education in primary schools in developing countries.

Usually a workshop is held for people who are concerned with the health and education of schoolchildren. The participants agree on a set of principles and identify needs. They then take decisions about the nutrition education curriculum based on these principles and needs.

The curriculum planning exercise can be carried out at different levels: (i) at the national, regional or district level; (ii) in individual schools or groups of schools; (iii) as an initial teacher training exercise. Depending on the level at which it is held, the workshop can aim to produce a policy document, a national curriculum or action plans for school classrooms and school environments.

6.6.3. School gardens (FAO)

School gardens can help to improve the nutrition and education of children and their families in both rural and urban areas. It is important to stress that school gardens are a platform for learning. They should not be regarded as bulk sources of food or income, but rather as a way to better nutrition and education.

Food-based educational strategies such as school gardens have the advantage of promoting sustainability: they create long-term dietary habits and put food choices into the hands of the consumer. A strong education component ensures that the effects go beyond the immediate time and place, to children's families and future families.

FAO encourages schools to create learning gardens of moderate size, which can be easily managed by students, teachers and parents, but include a variety of nutritious vegetables and fruits, and occasionally small-scale livestock such as chickens or rabbits. Production methods are kept simple so that they can be easily replicated by students and parents at home.

Learning should be promoted not only within the classroom but also through the wider curriculum. This can be done by: (a) creating a supportive school environment (school meals, healthy drinks and snacks, good sanitation and clean water); and (b) involving families and the community in supporting gardening for a healthy diet (Muehlhoff, 2007).

FAO has also produced *Setting up and running a school garden*, which is a manual to assist school teachers, parents and communities. It draws on experiences and best practices in running school gardens all over the world. Classroom lessons are linked with practical learning in the garden about nature and the environment, food production and marketing, food processing and preparation and making healthy food choices (FAO, 2005b).

School gardens can have many possible aims, but experience has shown that the following six are often the most important:

- Gardening for good nutrition and nutrition education;
- Applying academic subjects in practice - gardening for better learning;
- Enhancing and respecting the school environment;
- Supporting the insight that school gardens are good for the earth;
- Developing life skills;
- Building on basic business skills.

School gardens can serve as living classrooms or outdoor laboratories where children can apply academic subjects such as natural sciences, mathematics, languages and even fine arts. Children can practise their social and life skills and learn, hands-on, how to grow healthy food and eat well.

The produce from school gardens can make a direct and immediate improvement to the diet of children. The freshly harvested garden produce contributes to improving children's nutrition, particularly if it is integrated into regular school meals. Fruit and vegetables complement and add nutritional value to school meals, which generally do not provide fresh, perishable vegetables and fruits, but rather staple, dried and canned food. However, it is important to bear in mind that school gardens are first and foremost an educational tool. They should not be regarded as an exit strategy in the context of school feeding.

Additional information can be found on the FAO school garden website:

<http://www.fao.org/schoolgarden/>.

6.6.4. Food-based dietary guidelines (FAO/WHO)

The establishment of food-based dietary guidelines is a key strategy to reach the nutritional goals of a population. Such guidelines are an important tool in national food and nutrition policy development, and in nutrition education for the general public and for specific population groups. Food-based dietary guidelines aim to promote general nutritional well being while preventing and controlling both ends of the spectrum of malnutrition: undernutrition and overnutrition.

Food-based dietary guidelines provide dietary guidance and recommendations for the general public in terms that are understandable to most consumers. They are a practical means of helping people to reach appropriate nutritional goals.

They are based on sound scientific principles derived from studies in food science, behaviour, communication and agriculture, as well as nutrition. They take into account the nutritional status of the population, customary dietary patterns and lifestyles, and indicate modifications needed to address the particular health and nutritional concerns of each population group. To be effective,

food-based dietary guidelines must be communicated to the public through a variety of educational and motivational media.

Further information is available at:

<http://www.fao.org/ag/humannutrition/nutritioneducation/49741/en/>.

6.6.5. Nutrition-friendly schools (WHO)

Nutrition-related health problems in children are increasingly significant causes of disability and premature death worldwide. While underweight, stunting and micronutrient deficiencies continue to affect many people in developing countries, problems of overweight and obesity are emerging as significant public health problems among adults, and increasingly in children, in economically developed and developing countries alike.

The main aim of the Nutrition-Friendly Schools Initiative is to provide a framework for designing integrated school-based intervention programmes that address the double burden of nutrition-related ill-health, building on and interconnecting ongoing school-based programmes implemented by various agencies.

The Nutrition-Friendly Schools Initiative framework has five core components (SCN News, 2007):

- Developing a written school nutrition policy;
- Raising awareness and building the capacity of school staff;
- Developing nutrition, health and physical activity education;
- Creating a supportive school environment; and
- Providing school health and nutrition services.

6.6.6. Five Keys to Safer Food (WHO)

Proper food preparation can prevent many food borne diseases. In 2001 WHO introduced the Five Keys to Safer Food, which are five simple food hygiene messages to promote safer food handling and preparation practices:

- Keep clean
- Separate raw and cooked
- Cook thoroughly
- Keep food at safe temperatures
- Use safe water and raw materials

³⁵ http://www.who.int/nutrition/topics/nut_school_aged/en/index.html. Accessed 18 August 2010.

The materials produced include a poster displaying the five keys to safer food and explaining the reasons behind the suggested measures. The poster is available in more than 40 languages.³⁶

The *Five Keys to Safer Food Manual* (WHO, 2006), available in eight languages, provides background information about the Five Keys to Safer Food and suggests ways to communicate the message. The manual also offers tips on how to adapt the training programme for different target groups, such as professional food handlers, consumers, children and women.

WHO actively promotes the adaptation of the five keys food hygiene messages at the local level in various countries through the implementation of educational projects for high-risk groups, such as children, women and others involved in food preparation and handling (e.g. street food vendors).

³⁶ <http://www.who.int/foodsafety/consumer/5keys/en/index.html>. Accessed 18 August 2010.

References

AED (1995) *A Tool Box for Building Health Communication Capacity*. Washington D.C., Academy for Educational Development. 18 August 2010 available online:
<http://www.globalhealthcommunication.org/tools/29>.

Aliaga E (2007) *Promoción de Prácticas Saludables con Metodología PECE: Planeamiento Estratégico de Comunicación Educativa*. Lima: Proyecto AMARES.

Aprovecho Research Center, World Food Programme, Partnership for Clean Indoor Air, Shell Foundation. *Cooking with Less Fuel: Breathing Less Smoke*. Creswell, OR (USA): Aprovecho Research Center.

Babul F (2007) *Child-to-Child: A review of the literature (1995-2007)*. London: The Child-to-Child Trust. 18 August 2010 available online:
<http://www.child-to-child.org/about/index.html>.

Drake, L, Maier C, Jukes M, Patrikios A, Bundy D, Gardner A, Dolan M (2002) School-Age Children: Their Nutrition and Health. United Nations Standing Committee on Nutrition, *SCN News* No. 25, pp. 2-30. 18 August 2010 available online: <http://www.unscn.org/layout/modules/resources/files/scnnews25.pdf>.

FAO (2005a) *Nutrition Education in Primary Schools: A Planning Guide for Curriculum Development*. Rome: FAO. 18 August 2010 available online:
<http://www.fao.org/docrep/009/a0333e/a0333e00.htm>.

FAO (2005b) *Setting up and running a school garden: A manual for teachers, parents and communities to assist school teachers, parents and communities*. Rome: FAO. 18 August 2010 available online:
<http://www.fao.org/docrep/009/a0218e/a0218e00.htm>.

Favin M, Griffiths M (1999) *Communication for Behaviour Change in Nutrition Projects. A Guide for World Bank Task Managers*. Washington, D.C.: Human Development Network. Washington D.C.: The World Bank. 18 August 2010 available online:
<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTHEALTHNUTRITIONANDPOPULATION/EXTNUTRITION/0,,contentMDK:20205536~menuPK:282594~pagePK:210058~piPK:210062~theSitePK:282575~isCURL:Y~isCURL:Y,00.html>.

Glasauer P (2007). *FAO's Planning Guide for Nutrition Education in Primary Schools*. In: FAO (2007). *Report of the Technical Meeting of the Asia Pacific Network for Food and Nutrition on School Based Nutrition*. Bangkok. Thailand, 17-20 July 2007. RAP Publication 2007/14. Bangkok: FAO Regional Office for Asia and the Pacific. 18 August 2010 available online:
<ftp://ftp.fao.org/docrep/fao/010/ai004e/ai004e00.pdf>.

Hawes H (ed.) (1997) *Health promotion in our schools*. London: The Child-to-Child Trust.

.....

Ippolito-Shepherd, J (2002) *Proceedings - First Meeting and Creation of the Caribbean Network of Health-Promoting Schools*. Washington, D.C.: PAHO/WHO.

18 August 2010 available online:

<http://www.paho.org/English/AD/SDE/HS/CNHPS.pdf>.

Ippolito-Shepherd J, Mantilla L, Cerqueira MT (2003a) *Health Promoting Schools: Strengthening of the Regional Initiative. Strategies and Lines of Action 20032012*. Health Promotion Series No. 4. Washington, DC: PAHO/WHO.

18 August 2010 available online in Spanish:

<http://www.paho.org/Spanish/AD/SDE/HS/IREPS.pdf>.

Ippolito-Shepherd J, Nederveen L, Cerqueira MT (2003b) *Informe de la Tercera Reunión de la Red Latinoamericana de Escuelas Promotoras de la Salud* (Proceedings of the Third Meeting of the Latin American Health Promoting Schools Network). Washington, D.C.: PAHO/WHO. 18 August 2010 available online:

http://www.paho.org/Spanish/AD/SDE/HS/EPS_Red.htm.

Ippolito-Shepherd J, Nederveen L, Nizama E, Cerqueira MT (2005) *Memoria Cuarta Reunión de la Red Latinoamericana de Escuelas Promotoras de la Salud (RLEPS)*, San Juan, Puerto Rico, 11-16 de Julio de 2004 (Proceedings of the Fourth Meeting of the Latin American Health Promoting Schools Network). Washington, D.C.: OPS/OMS.

IRC International Water and Sanitation Centre (2004) *Sustainability of hygiene behaviour and the effectiveness of change interventions: Lessons learned on research methodologies and research implementation from a multi-country research study*. Delft (The Netherlands): IRC International Water and Sanitation Centre.

18 August 2010 available online:

<http://www.irc.nl/page/15266>.

Landsdown R (1995). *Child-to-Child: A review of the literature*. London: The Child-to-Child Trust. 18 August 2010 available online:

<http://www.child-to-child.org/about/index.html>.

Mooijman A, Van den Berg C, Jensen LO, Bundy D. *Toolkit on Hygiene, Sanitation and Water in Schools*. Washington D.C.: The World Bank. 19 August 2010 available online:

http://globalhandwashing.org/resources/multimedia-pdf/17.%20Toolkit_Hygiene_Sanitation_Water_Schools_Booklet.pdf.

Muehlhoff E (2005). *Can Nutrition education make a difference? Paper presented at the 18th International Congress on Nutrition. Durban, South Africa, 19-23 September 2005*. 18 August 2010 available online:

ftp://ftp.fao.org/ag/agn/nutrition/muehlhoff_fao.pdf.

Muehlhoff E (2007). *Garden-based learning for Improved Livelihoods and Nutrition Security of School Children in High HIV-Prevalence Areas in Southern Africa. Workshop Report. Harare, Zimbabwe. 12 – 14 June 2007.* FAO.

18 August 2010 available online:
<ftp://ftp.fao.org/docrep/fao/010/a1432e/a1432e00.pdf>.

Parlato MB, Fishman C, Green C (2007) *Improving nutrition behaviour through social marketing.* 18 August 2010 available online:
<http://www.fao.org/DOCREP/T2860T/T2860T02.HTM>.

Drake L, Maier C, De Lind van Wijngaarden JW (2007). *Directory of Support to School Based Health and Nutrition Programmes.* Updated Survey 2006. London: Partnership for Child Development.
18 August 2010 available online:
<http://www.schoolsandhealth.org/Documents/Directory%20of%20Support%20to%20School-Based%20Health%20and%20Nutrition%20Programmes.pdf>.

Peal A, Evans B, Van der Voorden C (2010) *Hygiene and sanitation software: An overview of approaches.* Geneva: Water Supply & Sanitation Collaborative Council.
18 August 2010 available online:
<http://www.wsscc.org/resources/resource-publications/hygiene-and-sanitation-software-overview-approaches>.

Rop R. (2004) *Kenya-School Health Clubs. Can they change hygiene behaviours? A case study of seven schools in Kochieng' East Location in Nyanza Province, Kenya.* Maji na Ufanisi (Water and Development). In: Snel M (2004) *The Worth of School Sanitation and Hygiene Education (SSHE): Case studies.* Delft: IRC International Water and Sanitation Centre.

SCN News (2007) No. 34, p. 63 *Nutrition-Friendly Schools Initiative (NFSI)-Collaboration with Partners.* 18 August 2010 available online:
<http://www.unscn.org/layout/modules/resources/files/scnnews34.pdf>.

Tilley E, Lüthy C, Morel A, Zurbrügg C, Schertenleib R (2008) *Compendium of Sanitation Systems and Technologies.* Dübendorf: Swiss Federal Institute of Aquatic Science and Technology. 18 August 2010 available online:
<http://www.wsscc.org/resources/resource-publications/compendium-sanitation-systems-and-technologies>.

UNESCO, UNICEF, WHO, World Bank (2000) *Focusing Resources on Effective School Health: A FRESH Start to Enhancing the Quality and Equity of Education.* Paris: UNESCO. 19 August 2010 available online:
<http://www.freshschools.org/Pages/default.aspx>.

UNGEI Forum (2006) Vol. 6, No. 1, p.2 Editorial. 19 August 2010 online:
http://www.ungei.org/resources/files/res_UngeiMarch06.pdf.

UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP, World Bank (2010) *Facts for Life. Fourth Edition.* New York: UNICEF. 19 August 2010 online:
<http://www.factsforlifeglobal.org/resources/factsforlife-en-full.pdf>.

USAID (2010) *Access and behavioural outcome indicators for water, sanitation and hygiene*. Washington D.C.: USAID Hygiene Improvement Project. 19 August 2010 online:
<http://www.hip.watsan.net/page/4148>.

WFP, UNICEF (2002) *The Essential Package: Twelve interventions to improve the health and nutrition of school-age children*. Rome: WFP. 19 August 2010 online:
<http://www.schoolsandhealth.org/sites/ffe/Key%20Information/The%20Essential%20Package.pdf>.

WHO (1986) *The Ottawa Charter for Health Promotion: First International Conference on Health Promotion, Ottawa, 21 November 1986*. Geneva: WHO. 19 August 2010 available online:
<http://www.who.int/healthpromotion/conferences/previous/ottawa/en/index.html>.

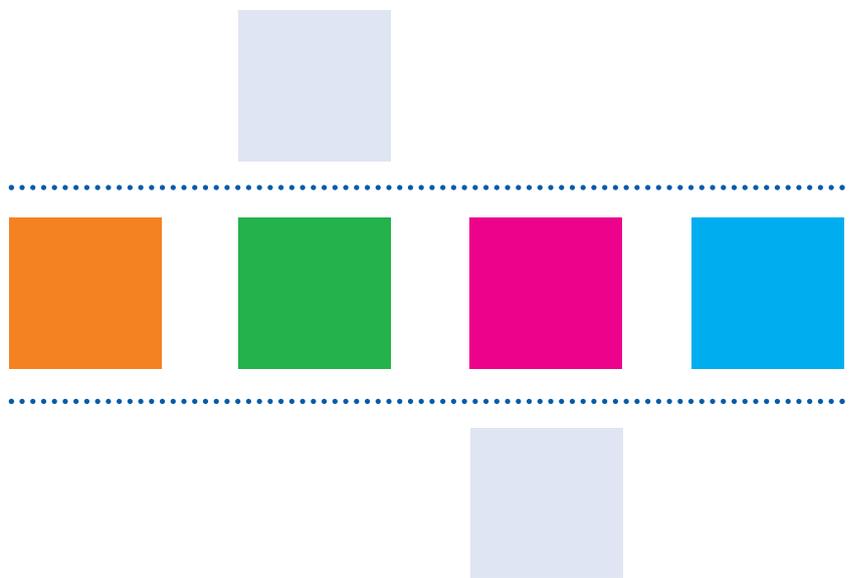
WHO (2006) *Five Keys to Safer Food Manual*. Geneva: WHO. 19 August 2010 available online:
<http://www.who.int/foodsafety/consumer/5keysmanual/en/index.html>.

WHO (1997a) *Promoting health through schools: a summary and recommendations of WHO's Expert Committee on Comprehensive School Health Education and Promotion. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion. WHO Technical Report Series 870*. Geneva: WHO. 19 August 2010 available online:
http://whqlibdoc.who.int/trs/WHO_TRS_870.pdf.

WHO (1997b) *Local Action: Creating Health Promoting Schools. Information Series on School Health. WHO/NMH/HPS/00.3; WHO/SCHOOL/00.2*. Geneva: WHO.
19 August 2010 available online:
http://www.who.int/school_youth_health/media/en/sch_local_action_en.pdf.

WHO (1998) *Healthy Nutrition: An Essential Element of a Health-Promoting School. WHO Information Series on School Health*. Geneva: WHO. 19 August 2010 available online:
http://www.who.int/school_youth_health/media/en/428.pdf.

WHO, UNICEF, UNU (2001) *Iron Deficiency Anaemia Assessment, Prevention, and Control A guide for programme managers*. Geneva: World Health Organization.
19 August 2010 available online:
http://whqlibdoc.who.int/hq/2001/WHO_NHD_01.3.pdf.



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