



# Policy Brief

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Swiss TPH



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Schweizerisches Tropen- und Public Health-Institut  
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Associated Institute of the University of Basel



Bhutan



Burkina Faso



Indonesia



Nepal



Philippines

## Vegetables Go to School

*The “Vegetables Go to School: improving nutrition through agricultural diversification” is a multidisciplinary school garden project implemented in 5 countries in Africa and Asia (Bhutan, Burkina Faso, Indonesia, Nepal and The Philippines), by three international partners: The World Vegetable Centre in Taiwan, Swiss Tropical and Public Health Institute in Switzerland, and Albert-Ludwigs- University in Germany, in partnerships with national institutions in the countries (mainly Ministries of Education, Agriculture, Health, Universities and Research Centres). It is funded by the Swiss Agency for Development and Cooperation*

## Water, Sanitation and Hygiene Integration in School Garden Programs for Nutrition - A Must for Better Child Health

### What is at stake?

This policy brief focuses on the integration of water, sanitation and hygiene (WASH) interventions in a school garden programme with the objective to sustainably enhance the impact on malnutrition among schoolchildren.

The purpose of this brief is to increase awareness on the importance of WASH and call for pursuing the efforts at all levels towards effective cross-sectoral collaboration. This includes high political will and ensuring that the interventions cover schools, households and communities to sustain and maximize the contribution of WASH to long term improvement of nutrition outcomes.

Recommendations to this end are to: 1) expand school based programmes to the households and communities. 2) increase multi sectoral collaboration at all levels. 3) recognize the importance of WASH in nutrition guidelines, strategies and priority setting and vice versa.

## Background

### Malnutrition

Malnutrition refers to all forms of nutrition disorders and includes under-nutrition, over-nutrition and diet-related non-communicable diseases. In developing countries (particularly in Africa and Asia) under-nutrition is one of the major public health problems among children. Under-nutrition in all its forms is estimated to contribute to 3.1 million child deaths each year, accounting for 45% of all deaths of children younger than 5 years of age.

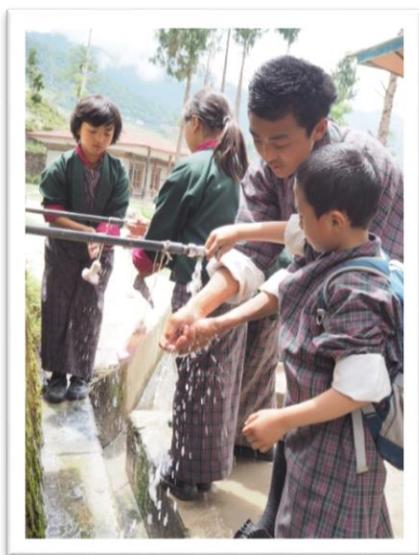
### Intestinal parasitic infections

Intestinal parasitic infections are very importantly affecting several regions in the world. More than 5 billion people are at the risk of helminthiases and an estimated 2 billion are infected. Intestinal amoebiasis caused by *Entamoeba histolytica* led to 11,300 deaths worldwide and was ranked fourth in the most fatal parasite-related diseases in 2013. The prevalence of *Giardia intestinalis* was estimated at 2–3 % in the industrialized world and 20–30 % in low- and middle-income countries.

### Water sanitation and hygiene (WASH)

In 2015, 663 million people worldwide were still lacking access to adequate drinking water sources and 2.4 billion to improved sanitation facilities. In low- and middle- income countries, 49 % and 55% of schools did not have access to adequate water and sanitation facilities, respectively, in 2012.

The World Health Organization 2015 data showed that 8% of the world population had no access to improved drinking water sources (3% in urban and 24% in rural areas); 20% lacked access to improved sanitation, whilst 55% practised open defecation (9% in urban and 75% in rural areas). In 2010, 90% of the population did not have a hand-washing facility with water and soap at home.



### School Gardens and other Nutrition-Sensitive Interventions

There are two main categories of interventions to address under-nutrition in children: (i) **nutrition-specific** interventions, and (ii) **nutrition-sensitive** interventions. Nutrition-specific interventions alone (e.g. micronutrient supplementation, school feeding) cannot sufficiently address wasting and stunting, as they do not affect the other conditions that contribute to child under-nutrition (e.g. inadequate WASH conditions).

There is a growing understanding that in order to achieve a sustained reduction of under-nutrition in children, it is crucial to add combined multi-sectorial nutrition-sensitive interventions. WASH and agriculture (e.g. school and home gardens) are among the key nutrition-sensitive interventions. School gardens are small-scale agricultural interventions, which in combination with educational and awareness raising activities, increase knowledge on healthy foods and promote increased vegetable and fruit consumption.

### The triple links between WASH, Intestinal Parasitic Infections and Nutrition

- Inadequate WASH may lead to intestinal parasitic infections
- Intestinal parasitic infections may hamper nutritional benefits
- Adequate WASH will therefore contribute to improving nutrition outcomes

## Framework for Action

### WASH interventions

- Establishment/ rehabilitation of latrines at schools for girls and boys (Nepal, Burkina Faso)
- Establishment of hand-washing facilities in front of latrines with all-time provision of soap (Nepal, Burkina Faso, Indonesia)
- Establishment of safe drinking water storage in every classroom (Nepal, Burkina Faso, Indonesia)
- Education and promotion of hygiene behaviour and water treatment options for school children, teachers and caregivers (all countries)
- Development of WASH manual and training teachers (Nepal and Burkina Faso)

### Nutrition interventions

- Education and promotion of nutritional knowledge and dietary diversity for school children (all countries)
- Cooking activities and recipe development with children's caregivers and school staff (Burkina Faso)

### Health interventions

- Parasitic treatments and/or iron supplementation of infected and anaemic school children (Nepal, Burkina Faso, Bhutan)

### Health promotion

- Health and nutrition promotion booklets for school-children were elaborated covering both nutrition and WASH aspects (Nepal, Burkina Faso)

The Vegetables Go to School project implemented an integrated school garden program including the following major components: (i) functional vegetable gardens at schools, (ii) agriculture, nutrition and health/WASH education and practice lessons at school level and, (iii) community health promotion.

The project encourages the linkage of the school garden programs with other school nutrition and health initiatives, such as feeding program and mass deworming activities. Depending on the country conditions the following interventions were implemented:

### Effects of the Intervention and Further Actions for Progress

In 2015 and 2016, baseline and end-line cross sectional surveys have been conducted by Swiss TPH and partners in Burkina Faso and Nepal. The integrated interventions had an effect on the reduction of intestinal parasitic infection and furthermore yielded the following three major recommendations:

#### 1. Expand school based programmes to the households and communities

The efforts for WASH and nutrition interventions complementary to a school garden program should not be limited to school compounds only, but extended to households and communities as much as possible.

The health and nutritional outcomes of the complementary interventions in children will have higher impact if they are implemented both at school and household levels. This requires creating a strong link between activities at school and at community levels.

Hygiene messages cannot be followed by the children if a minimum of water and sanitation infrastructure is not available (e.g. latrines, safe and adequate water) at both school and household levels. Therefore, countries have to invest in sustainable safe water provision within school compounds and support efforts in the community and households.



## 2. Increase multi sectoral collaboration at all levels

The integration of a WASH component requires a cross sectoral collaboration and challenges the capacity to communicate with other specialists, to mobilize additional funds and to involve diverse institutional partners at all levels.

It is important to establish and build a good working relationship between WASH and nutrition relevant actors at all levels. This involves also training the nutrition staff to know more about the WASH multifaceted dimensions and how these can be appropriately integrated with nutrition activities.

## 3. Recognize the importance of WASH in nutrition guidelines, strategies and priority setting and vice versa

The nutrition policies should recognise and highlight the importance of WASH and similarly the WASH policies should express how much they can contribute to nutrition outcomes.

The WASH programmes could also target country areas facing high nutritional challenges and where nutrition projects are being implemented. The nutrition projects should explicitly give high priority to WASH at all levels (from the proposal development to the implementation) and reflect it in budgets, human resources and institutional partnerships



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### Editorial

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