

# Creative Commons License



**Sandec**  
Sanitation, Water and  
Solid Waste for Development

This document is open content and licensed under the Creative Commons Attribution Works 4.0 International License.

To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0>



You are free to:



**Share** – Copy and redistribute the material in any medium or format

**Remix** – Remix, transform, and build upon the material for any purpose, even commercially

Under the following conditions:

**Attribution** – You must give appropriate credit to CAWST and Eawag-Sandec, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests that CAWST and Eawag-Sandec endorses you or your use. Please include our website: [www.cawst.org](http://www.cawst.org) and [www.sandec.ch](http://www.sandec.ch).

CAWST and Eawag-Sandec will produce updated versions of this document periodically. For this reason, we do not recommend hosting this document to download from your website.

CAWST and Eawag-Sandec its directors, employees, contractors, and volunteers do not assume any responsibility for, and make no warranty with respect to, the results that may be obtained from the use of the information provided.



This presentation is used with Lesson Plan  
Improvement Plan in the  
Introduction to Faecal Sludge Management Trainer  
Manual

Available at [www.cawst.org/resources](http://www.cawst.org/resources) and [www.sandec.ch](http://www.sandec.ch)

# Improvement Plan

2016 | JULY



**Sandec**  
Sanitation, Water and  
Solid Waste for Development

# Learning Outcomes

- Analyze risks and barriers to improve fecal sludge management within a community.
- Develop an incremental improvement plan, including first and later steps.

# Example of an Improvement Plan

**Hazard:** helminth eggs

**Hazardous events:** Exposure to partially treated wastewater in the field by farmers or children (under 15 years) causes helminth infections

## **Control measure options and considerations:**

1. Wearing shoes or boots can reduce the likelihood of exposure to the hazard. However, because this control measure is often not practical or used by the farmers or children in the field, it cannot be relied upon.
2. Providing some simple wastewater treatment upstream of the irrigation area (e.g., properly sized simple detention pond to reduce the concentration of helminth eggs to less than 0.1egg/litre) can reliably reduce the number of helminth eggs to desirable concentrations (see 2006 Guidelines Vol. 2, 84-86)
3. Regularly providing de-worming medicines to waste handlers ( e.g., workers exposed to faecal sludge) can reduce the duration and intensity of infection. In settings where helminth infections are very common, de-worming medicines may also be regularly distributed at community level (e.g., in school children) for reducing the prevalence.

# Example of an Improvement Plan

## Short-term plans:

- Targeted education to farmers and workers aimed at improving the use of appropriate and practical personal protective equipment, and in personal hand and feet washing with clean water during and after the day's work.
- Increased regular mosquito spraying to reduce vector-borne risks.
- Targeted education about the dangers of children playing in and near the wastewater irrigation sites, especially with bare feet.
- De-worming of target populations every 6 months.
- Consider improved pre-harvest food protection (e.g., stop irrigation with poor quality water as early as possible before harvest to ensure pathogen reduction.)
- Targeted education on safe handling of crops (e.g., vigorous washing or washing with disinfected water especially for those crops eaten raw.)

## Medium / Long-term plans:

- Reduce chemical contaminants in wastewater used for irrigation (e.g., improved enforcement of regulations).
- Phased increase in treatment in the upstream system to improve the quality of water discharged to the canal.

# How we can support you!

Contact CAWST and Eawag-Sandec for support on using and adapting our education and training resources for your work.



Upper 424 Aviation Rd NE,  
Calgary AB T2E 8H6, Canada



+ 1 403 243 3285



[support@cawst.org](mailto:support@cawst.org)



[www.cawst.org](http://www.cawst.org)

Visit [www.cawst.org/resources](http://www.cawst.org/resources) and [www.sandec.ch](http://www.sandec.ch) for:

- Latest updates to this document
- Other workshop & training related resources



Überlandstrasse 133  
CH-8600 Dübendorf, Switzerland



+41 (0)58 765 55 11



[info@sandec.ch](mailto:info@sandec.ch)



[www.sandec.ch](http://www.sandec.ch)



**Sandec**  
Sanitation, Water and  
Solid Waste for Development