SANITATION SAFETY PLANNING
MANUAL FOR SAFE USE AND DISPOSAL OF WASTEWATER, GREYWATER AND EXCRETA
40% of people live in water stressed areas. 10% of produce is WW irrigated.

Real and perceived health risks are a barrier to scaling Safe RRR.

Health is the underlying purpose of sanitation – but actual health risk play a small role in planning.

Exposure though unintentional use is high (SaniPath).

Sanitation Safety Planning Manual for Safe Use and Disposal of Wastewater, Greywater and Excreta

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What is Sanitation Safety Planning?

• SSP is a step-by-step health risk based approach for managing monitoring and improving sanitation systems

• SSP also assists to implement the 2006 WHO Guidelines for Safe Use of Wastewater, Excreta and Greywater
Who is SSP for?

- health authorities and regulators
- local authorities
- sanitation enterprises and farmers
- wastewater utility managers
- community based organizations, farmers associations and NGOs
1. Prepare for SSP

2. Describe the sanitation system

3. Identify hazardous events, assess existing control measures and exposure risks

4. Develop and implement an incremental improvement plan

5. Monitor control measures and verify performance

6. Develop supporting programmes and review plans

SANITATION SAFETY PLANNING
Output: Who’s involved?

SSP team representing the sanitation

<table>
<thead>
<tr>
<th>Representatives of</th>
<th>Main role in SSP Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation system operator – Senior Manager</td>
<td>Team leader</td>
</tr>
<tr>
<td>Sanitation system operator – Operational Manager</td>
<td>Sewage collection treatment plant process and data management</td>
</tr>
<tr>
<td>Vacuum tanker operators</td>
<td>Faecal sludge collection and disposal</td>
</tr>
<tr>
<td>Farmers’ Cooperative</td>
<td>Hazard management of in-farm practices and produce handling to farm gate</td>
</tr>
<tr>
<td>Regional Health Department Officer</td>
<td>Public health/food hygiene</td>
</tr>
<tr>
<td>Public health/food hygiene</td>
<td>Expert input into the risk assessment</td>
</tr>
<tr>
<td>Epidemiologist – Sanitola School of Public Health</td>
<td>Education/communication</td>
</tr>
<tr>
<td>NGO working with farmers and local communities</td>
<td>Implications on local water supplies</td>
</tr>
<tr>
<td>Water system operator</td>
<td>Implications on local water supplies</td>
</tr>
</tbody>
</table>
Output: What is the system? Who is at risk?

Faecal Sludge management system, Philippines
Faecal Sludge management system, Philippines
## Risk Assessment

### Sanitation step | Hazard identified | Hazardous event | Likelihood | Severity (S) | Score (S) | Risk level | L | S | Score | R | Comments justifying risk assessment or effectiveness of the control
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
T1: Sewer system | Exposure to raw sewage in open drains during maintenance activities | A | Personal protective equipment not used | Ingestion | W1 | Boots worn, no gloves | Visual inspection and survey | 3 | 2 | 6 | M | Adult hookworm infection usually results in minor health effects
T1: Sewer system | Exposure to raw sewage during pump and pipe repair procedures | A | Personal protective equipment not used | Ingestion | W1 | Boots worn, no gloves | Visual inspection and survey | 2 | 2 | 4 | L | 75% wear boots. Adult hookworm infection usually results in minor health effects
T1: Sewer system | Exposure to raw sewage in open drains when playing | A | Personal protective equipment not used | Ingestion | L1 | Nil | Visual inspection and survey | 4 | 4 | 16 | H | Some children observed to play in the drains
T1: Sewer system | Falling into open drain resulting in injury | A | Personal protective equipment not used | Injury to the body | L1 | Nil | Visual inspection and survey | 2 | 8 | 16 | H | A child injured in the drain has been reported

**Output: How significant is the risk?**
Output: What needs to be improved?

Prioritized, risk based improvement plan with responsibilities and timelines

<table>
<thead>
<tr>
<th>Sanitation step</th>
<th>Hazardous event</th>
<th>Improvement action(s) * (new/improved control measures)</th>
<th>Priority (high, medium, low)</th>
<th>Responsible agency/person</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1: Sewer system</td>
<td>Falling into open drains during flood periods</td>
<td>Programme in schools highlighting dangers of drains during flood periods. Accompanying children near drains during flood periods</td>
<td>High</td>
<td>Newtown Education Dept.</td>
</tr>
<tr>
<td>P4: Farmer irrigation</td>
<td>Spray irrigation resulting in exposure to irrigation water</td>
<td>Improved spray irrigation techniques – use low throw, micro sprinklers, part circle sprinklers</td>
<td>High – immediate term implementation</td>
<td>Farmer cooperative</td>
</tr>
<tr>
<td>and produce production</td>
<td>Exposure to raw sewage in irrigation water or in-field farming practices causes illness</td>
<td>Partial treatment: Reinstall maturation pond as part of normal process train</td>
<td>High – immediate term implementation</td>
<td>Sewerage Board – Manager</td>
</tr>
</tbody>
</table>
Output: Is the system operating as planned?

What to monitor, a limit and what to do if the limit is exceeded.

<table>
<thead>
<tr>
<th>Operational limits (see note below)</th>
<th>Operational monitoring of the control measure/control measure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>80% of the farmers use standardized labour protection when exposed to wastewater</td>
<td><strong>What is monitored</strong></td>
</tr>
<tr>
<td></td>
<td><strong>How it is monitored</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Where it is monitored</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Who monitors it</strong></td>
</tr>
<tr>
<td></td>
<td><strong>When it is monitored</strong></td>
</tr>
</tbody>
</table>
Output: What’s changed?

Regular review, supporting programmes
What’s next? Scaling

• Use it
• Adapt it
• Tell us about your experiences
What’s next? Scaling

• Direct support to get users started
• Provided by WHO with technical partners
• Contact us
Download:

www.who.int/entity/water_sanitation_health

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Portuguese
Spanish