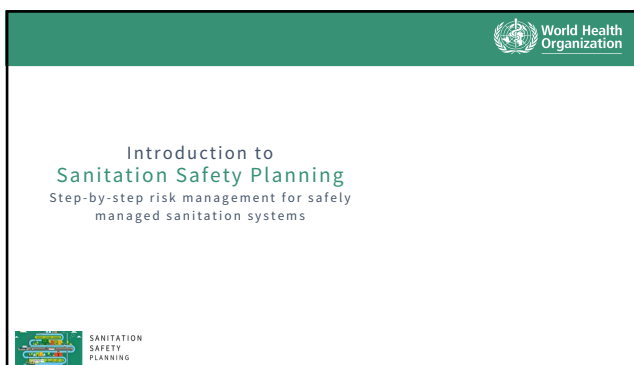
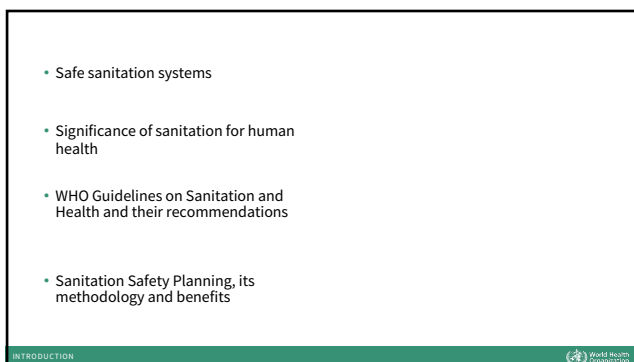




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Safe Sanitation Systems

Arrangements of technologies and practices that:

- separate human excreta from human contact at all steps of the sanitation chain

```
graph LR; A[Toilet] --> B[Containment-storage/treatment]; B --> C[Conveyance]; C --> D[Treatment]; D --> E[End use/disposal]
```

- fulfil minimum requirements of design, construction and O&M at each step of the chain;
- are embedded in an implementation framework for safe service delivery.

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Safe sanitation is essential for health- that includes preventing infection diseases and also improving and maintaining mental and social well-being.

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Health impact of unsafe sanitation

| Direct impact (infections) | Sequelae (conditions caused by repeated infections) | Broader well-being |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Faecal-oral infections <ul style="list-style-type: none"> • Diarrhoeas (incl. cholera) • Dysenteries • Poliomyelitis • Typhoid | <ul style="list-style-type: none"> • Stunting growth • Malnutrition • Impaired cognitive function • Pneumonia <ul style="list-style-type: none"> - related to repeated diarrhoea in undernourished children • Anaemia <ul style="list-style-type: none"> - related to hookworm infections | Immediate: <ul style="list-style-type: none"> • Fear • Anxiety • Shame associated with open defecation or shared sanitation |
| Helminth or intestinal worm infections <ul style="list-style-type: none"> • Ascariasis • Trichuriasis • Hookworm infection • Cysticercosis • Schistosomiasis | | Long-term <ul style="list-style-type: none"> • School absence • Poverty • Decreased economic productivity • Anti-microbial resistance |
| Insect vector diseases <ul style="list-style-type: none"> • Lymphatic filariasis • West Nile Fever • Trachoma | | |

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Sanitation impact on health

Pathways through which sanitation influences health

CONTEXT (geographical, epidemiological, socio-economic, socio-cultural, political, legal, ethical)

IMPLEMENTATION (policy and regulation, financing, organization)

SANITATION INTERVENTION (behavior, technology)

faecal load in the environment

Human exposure

HEALTH IMPACT

- Infections:** Faecal-oral infections, Helminth infections, Insect vector diseases
- Sequelae:** Stunting and consequences of stunting, Impaired cognitive function, Anaemia
- Well-being (consequences and long-term):** Anxiety, School absence, Poverty, Decreased economic productivity, Sexual assault, Anaemia birth outcomes, Anti-microbial resistance

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WHO commissioned studies that reviewed existing evidence

Evidence:

Positive impact on infection diseases and well being

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How effective are sanitation interventions?


Overall, greater access to sanitation is associated with significant lower risks of diarrhea and other infections

However, many sanitation interventions have shown lower than expected health outcomes

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Sanitation interventions are not succeeding to fully interrupt transmission pathways

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Reasons for low health impact

- Many interventions do not reach levels of toilet access and use in the community that are high enough to remove pathogens from the environment.
- Many sanitation systems are of low quality and do not effectively contain excreta.

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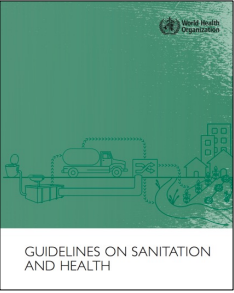
WHO Guidelines on Sanitation and Health


Authoritative health-based guidance on maximizing the health impact of sanitation investments.

Purpose:
Ensure that sanitation systems are designed and managed safely to protect human health.

Contents:

- ✓ Evidence
- ✓ Recommendations
- ✓ Guidance
- ✓ Tools
- ✓ Resources



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Based on the comprehensive evidence review, 4 main recommendations were derived for action by national and local authorities


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Recommendations

1. Ensure universal access and use of toilets that safely contain excreta

- To prioritize the elimination of open defecation and universal access to toilets.
- To strive to cover entire communities with a minimum standard of safe toilet and safe containment.
- To use demand side and supply side approaches concurrently.


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Recommendations

2. Ensure universal access to safe systems along the entire sanitation service chain

- Safety must be ensured along the entire sanitation service chain - toilet, containment, transport, treatment, end use/disposal.
- Technologies should be context specific.
- Incremental improvement based on local level risk assessment (e.g. Sanitation Safety Planning)


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Recommendations

3. Sanitation should be addressed as part of locally delivered services and broader development programmes and policies

- To increase efficiency and health impact, sanitation should be provided and managed as part of a package of locally delivered services.
- Broader development programs and policies such as housing, urban planning and coordination with water supply drainage, solid waste and management planning.


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Recommendations

4. The health sector should fulfil core functions to ensure safe sanitation to protect public health

- Key functions by the health sector to ensure safe sanitation to protect public health.

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What we can do as local practitioners to implement these recommendations?

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Implementing recommendations

We need to ensure that we maximize the health benefit of sanitation interventions

We need to ensure that:

- Systems and services are selected to respond to the local context.
- Investments and system management are based on local level risk assessments along the entire sanitation chain.
- Incremental improvements are based on local level risk assessment.
- Users, communities, sanitation workers, consumers and farmers are protected.

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Sanitation Safety Planning - SSP

WHO recommended approach for local level risk assessment and management for sanitation systems

- Step-by-step methodology
- to assist in the implementation of risk assessment and management
- for the entire sanitation service chain.



SANITATION SAFETY PLANNING

Step-by-step risk management for safely managed sanitation systems

Version 1.0



SSP ensures that the system is managed to meet the health objectives

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WHO 2006 Guidelines on safe use of wastewater, excreta and greywater

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SSP manual – Second Edition, 2022

- Principles of SSP have been adopted more widely
- Alignment with the Guidelines on Sanitation and Health
- SSP incorporates climate risks and adaptation of the sanitation system

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Benefits of Sanitation Safety Planning


- It helps maximizing health benefits of sanitation interventions
- It guides operators to prioritize risk management efforts
- It sets a plan for incremental improvements
- It targets investments to the highest health risks
- It coordinates efforts

“To protect health”

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SSP Modules

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SSP Products

- Prioritized, incremental improvement plan.
- Operational monitoring plan for regular monitoring and periodic verification.

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SSP in a nutshell

SANITATION SAFETY PLANNING
Step-by-step risk management for safely managed sanitation systems


SSP:

- is the WHO recommended approach for local risk assessment and management for sanitation systems;
- helps maximizing health benefits and minimizing health risks;
- guides efforts to where it will have the most impact;
- helps to coordinate efforts of the many stakeholders along the sanitation chain, and stimulates policy dialogue.

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- Safe sanitation systems
- Significance of sanitation for human health
- WHO Guidelines on Sanitation and Health and its recommendations
- Sanitation Safety Planning, its methodology and benefits



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WHO Guidelines
Chapters 1 and 2



SANITATION SAFETY PLANNING
Step-by-step risk management for safely managed sanitation systems



SSP Manual
Introduction

INTRODUCTION



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SANITATION SAFETY PLANNING
Step-by-step risk management for safely managed sanitation systems
Second Edition



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