

# Onsite Training Programme on “Planning and Designing of Faecal Sludge Management Systems” (September 16-18, 2025)



## PROMOTING SUSTAINABLE FSSM IN SOUTH AFRICA

A PARTNERSHIP PROGRAMME ON SANITATION  
AND WASTEWATER MANAGEMENT

September 13-25, 2025. South Africa

TRAININGS • FIELD ASSESSMENTS • MEETINGS • ACTION PLANNING

**Session Title: Basics of environmental sanitation and its importance for improved public health and pollution abatement**

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**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA



# Key Points of the Session

- Environmental Health and Sanitation
- Liquid Waste products
- Integrated Wastewater and Septage Management (IWSM)
- Citywide Inclusive Sanitation (CWIS)
- Sustainable Development Goals (SDGs)

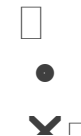
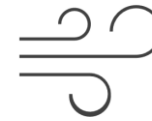
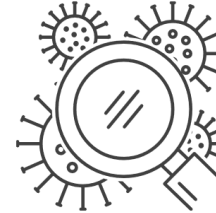


# Environmental Health

It is the field of science that studies how **environment** influences **human health** and disease.

Environment consists of

The physical, chemical, biological and social features of our surroundings



# Components of Environmental Health

- **Good environmental health presupposes:**
  - Water, air and food free of contamination; and
  - Facilities, services and hygienic behavior provide for clean environment.
- **Individual health:**
  - Adequate, clean and safe drinking water; and
  - Clean water sources or reliable water treatment processes.
- **Community health**
  - Waste is collected, recycled, treated or disposed off in a safe manner.



# Contents of Environmental Health

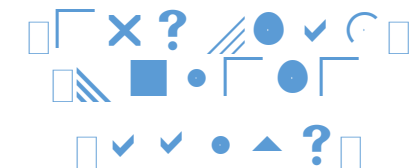
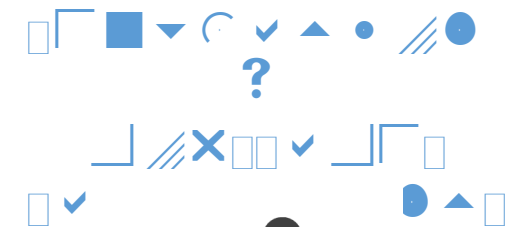
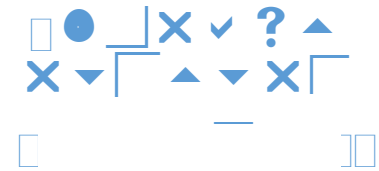


# Sanitation

Sanitation refers to the **maintenance of hygienic conditions**, through services such as collection and **safe management of human excreta & wastewater** and proper drainage.

Includes both the 'hardware' (e.g. latrines and sewers) and the 'software' (regulation, hygiene promotion) needed to reduce faecal-oral disease transmission.

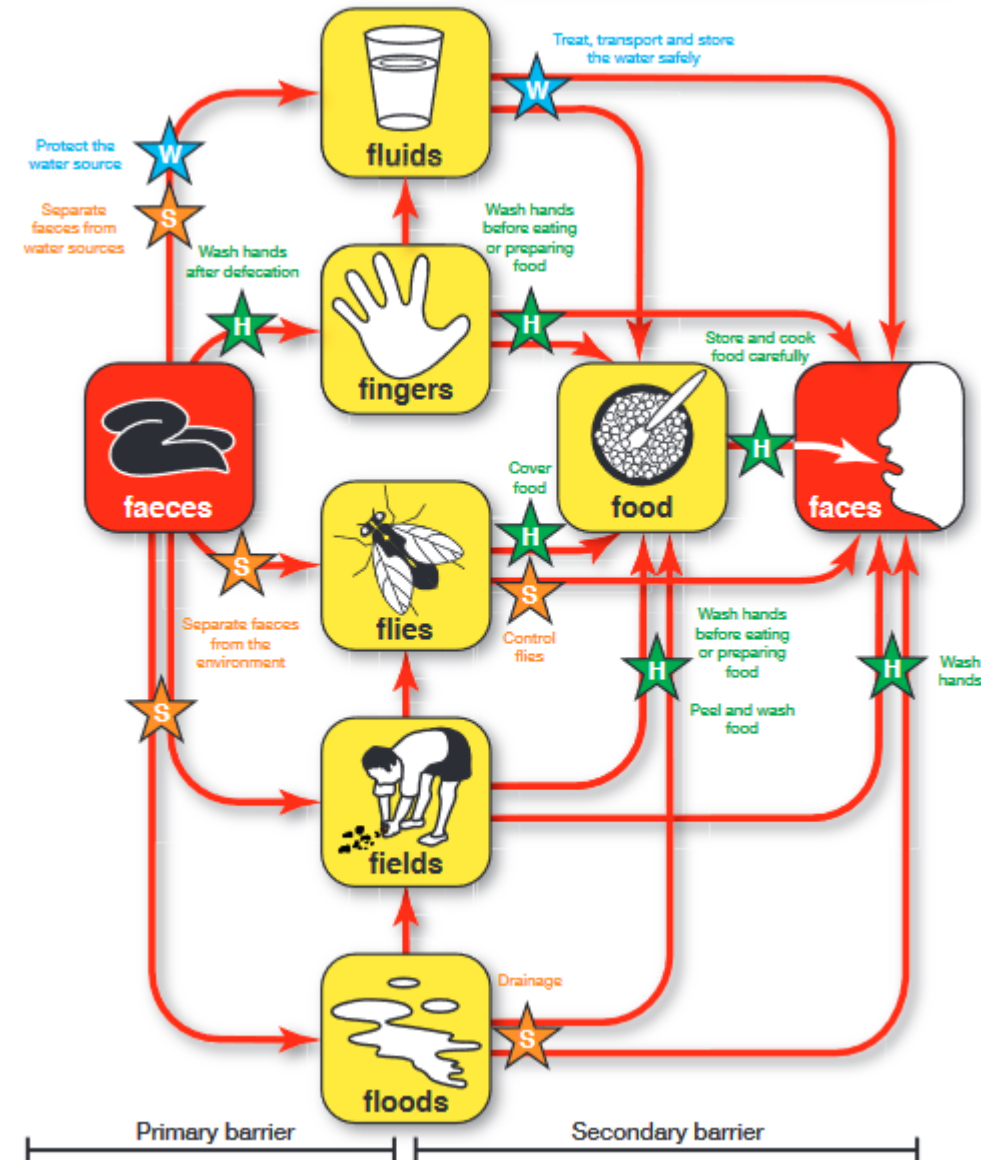
Encompasses potential reuse, ultimate disposal of human excreta or discharge of wastewater.

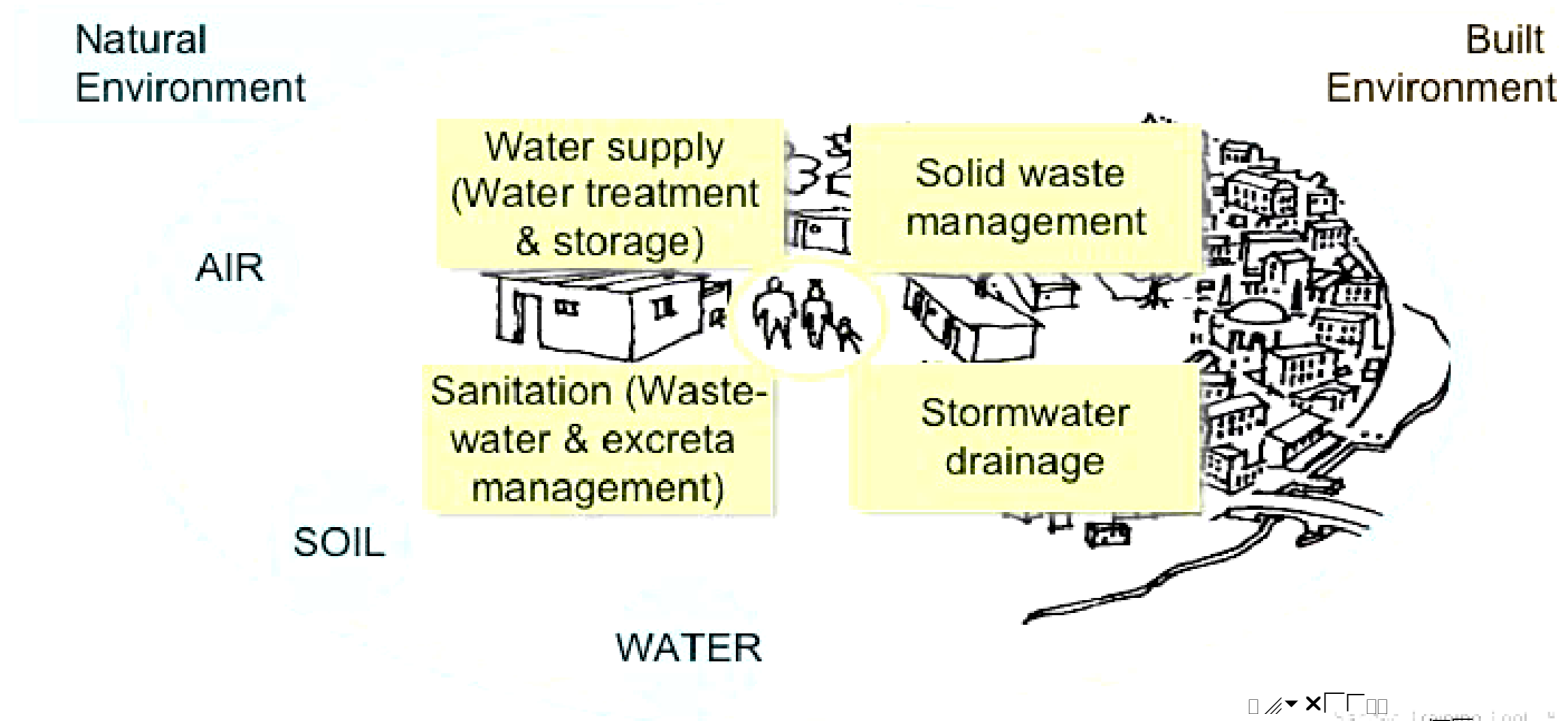


## The Key Message

Sanitation is the first line of defense against disease.

Without toilets and safe waste management, we cannot break these transmission pathways.







# Waste products

Water Supply at 135 LPCD

Faeces



Anal  
Cleansing Water



Flush Water



Urine



Shower



Kitchen



Hand Wash



BROWNWATER

YELLOW-WATER

GREYWATER  
~(65% / 75 LPCD)

BLACKWATER ~(35%  
/ 38 LPCD)

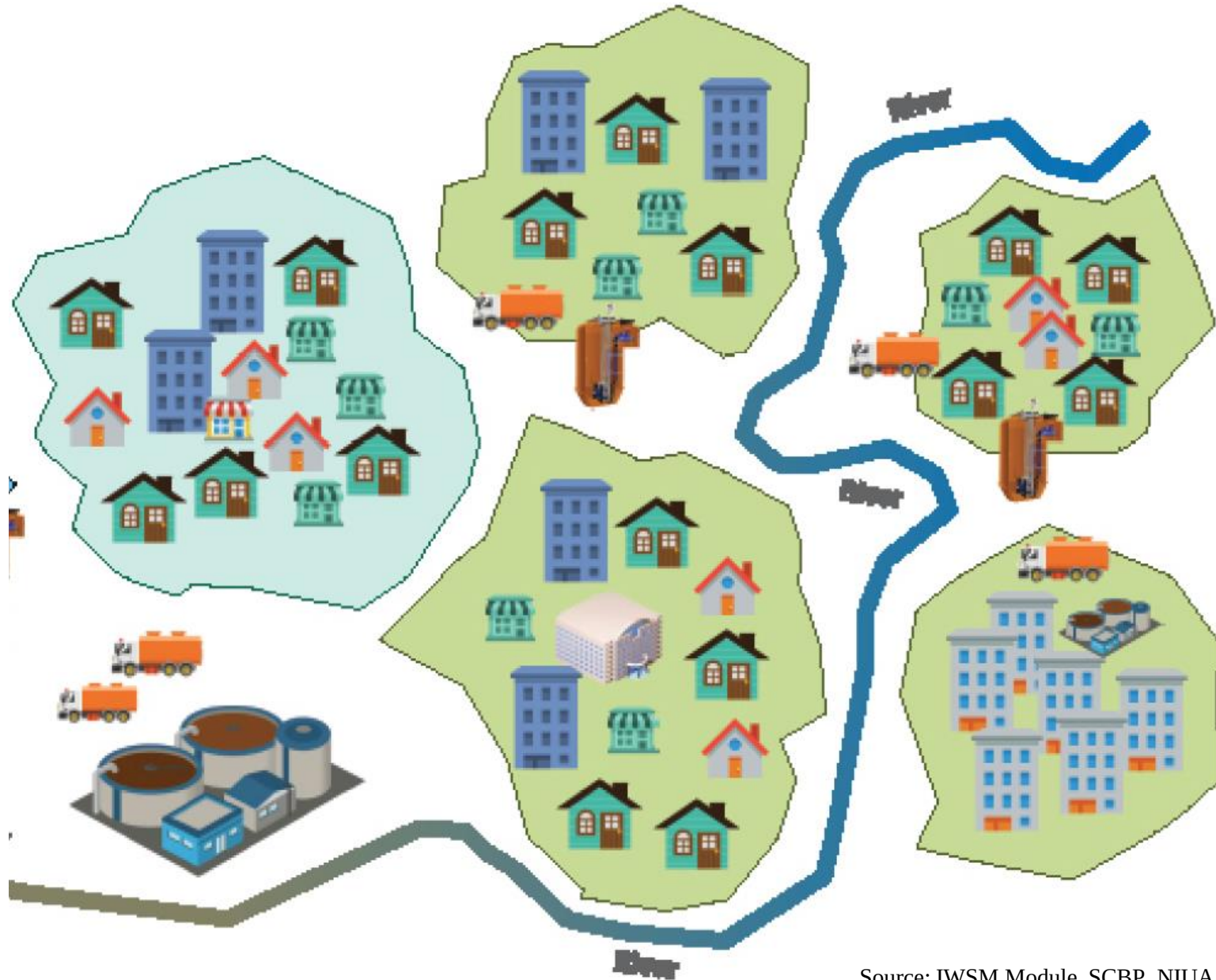
DOMESTIC SEWAGE / WASTEWATER / USED-WATER  
(80% of water supply ~108 LPCD)



# Integrated Wastewater and Septage Management

Integrated Wastewater and Septage Management (IWSM) is a holistic approach that addresses the **entire sanitation service chain**, including both wastewater and septage.

It recognizes that **sanitation for all** cannot be achieved by managing either septage or wastewater alone.



# Citywide Inclusive Sanitation: Promoting a public service approach







Image source: <http://www.campaign.exchange/campaigns/sustainable-development-goals/>



Image source: <https://www.ice.org.uk/eventarchive/achieving-sdg-6-the-water-goal>



Image source: <https://textilesforsdgs.org/sdgs/goals/6-clean-water-and-sanitation/>

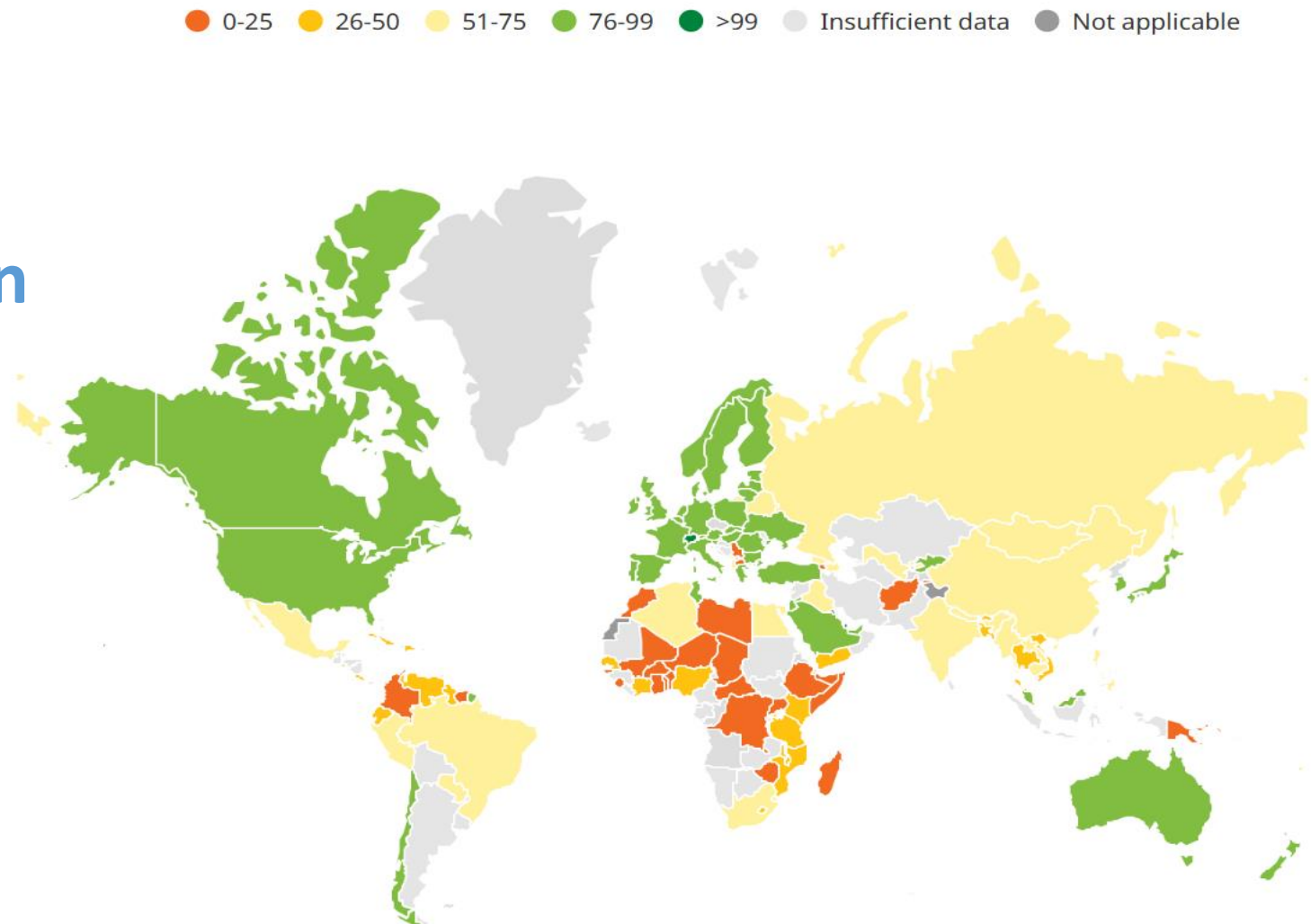
# **The current scenario of Wastewater and Faecal Sludge** **Across the Globe & South Africa**

**Highlighting the issues, challenges and gaps**



# Wastewater & FSM scenario across the globe

Between 2015-2024  
access to **safely  
managed sanitation**  
services, with global  
coverage increased  
from  
**48% to  
58%.**



Still, **3.4 billion people** worldwide  
**lack safely managed sanitation**;  
**1.9 billion** have basic services, and  
**354 million** still practice open defecation.

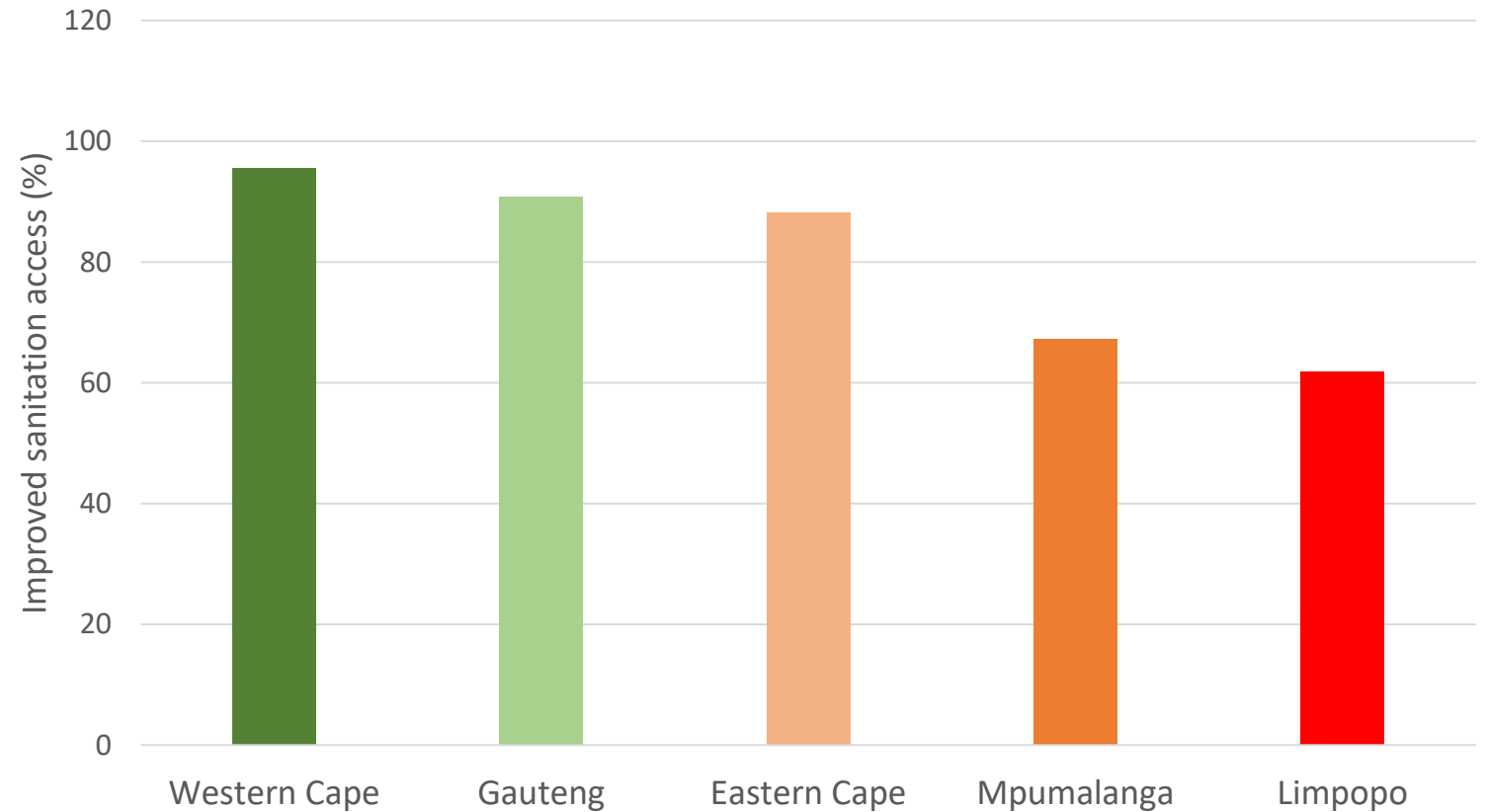


# Current State of Water and Sanitation in South Africa

## But Provincial Disparities Remain

Between 2002-2023  
access to **improved  
sanitation** services in  
**South Africa**,  
increased from  
**62% to  
83%.**

Improved Sanitation Access by Province in 2023



Source: General Household Survey 2023, Government of South Africa





Question on Menti: [menti.com](https://menti.com)

What % of South Africans had  
access to  
**safely managed sanitation**  
in 2024



# Current State of Water and Sanitation in South Africa

## Socio-economic Inequalities

| COUNTRIES,<br>AREAS AND<br>TERRITORIES | Year | Survey name | Inequalities by wealth quintile |         |                           |                  |         |                           |                 |         |                           |               |         |                           |             |         |                           |
|----------------------------------------|------|-------------|---------------------------------|---------|---------------------------|------------------|---------|---------------------------|-----------------|---------|---------------------------|---------------|---------|---------------------------|-------------|---------|---------------------------|
|                                        |      |             | Basic drinking water            |         |                           | Basic sanitation |         |                           | Open defecation |         |                           | Basic hygiene |         |                           | Basic WASH* |         |                           |
|                                        |      |             | Poorest                         | Richest | Ratio: richest to poorest | Poorest          | Richest | Ratio: richest to poorest | Poorest         | Richest | Ratio: richest to poorest | Poorest       | Richest | Ratio: richest to poorest | Poorest     | Richest | Ratio: richest to poorest |
| South Africa                           | 2016 | DHS         | 68                              | >99     | 1.5                       | 53               | 97      | 1.8                       | 8               | <1      | 8                         | 4             | 80      | 18.4                      | -           | -       | -                         |



- Environmental sanitation is a **public health intervention first, infrastructure second**
- Integrated approaches like **IWSM** and **CWIS** are essential to reach the SDGs
- Progress is happening, but **inequalities remain the biggest barrier**
- FSM planning must be done with an **environmental health lens** for inclusive, sustainable outcomes

# THANK YOU

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