OVERVIEW OF DEVELOPMENT OF CLIMATE RESILENT WATER SAFETY PLAN (CR-WSPs)

PRESENTATION SHARED DURING

LAUNCHING OF WSSAs REPORT FOR FY 2017/18

AT ST. GASPER-DODOMA

BY

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MINISTRY OF WATER

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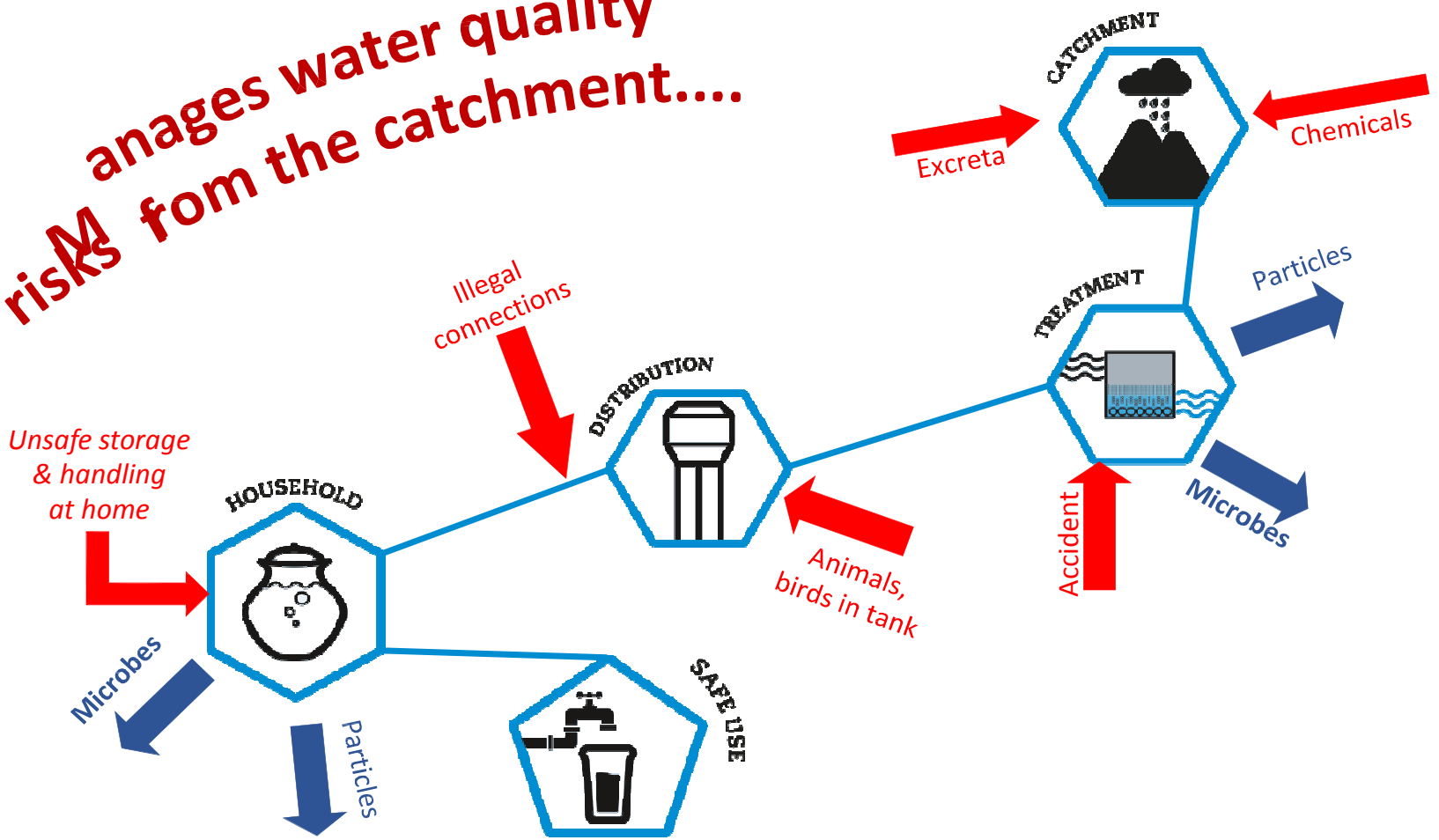
What is a Water Safety Plan (CR-WSP)?

A comprehensive
risk assessment & risk management *approach that includes*
all steps *in the water supply*

"Most effective means of consistently ensuring the safety of drinking-water supply"

Water Safety Plans



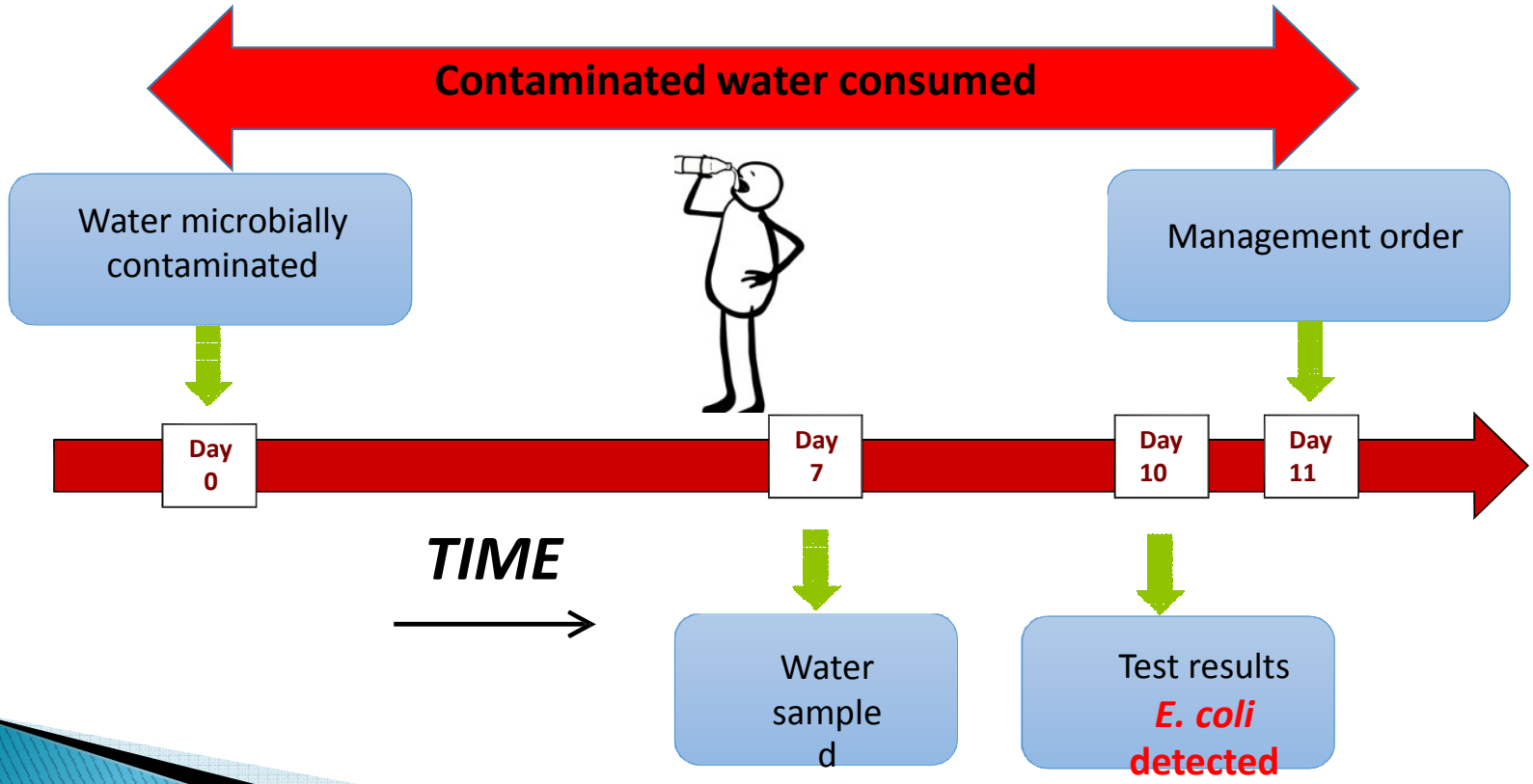
Why do we need WSPs?

Without a risk management approach, water suppliers must rely on water testing to confirm water safety.

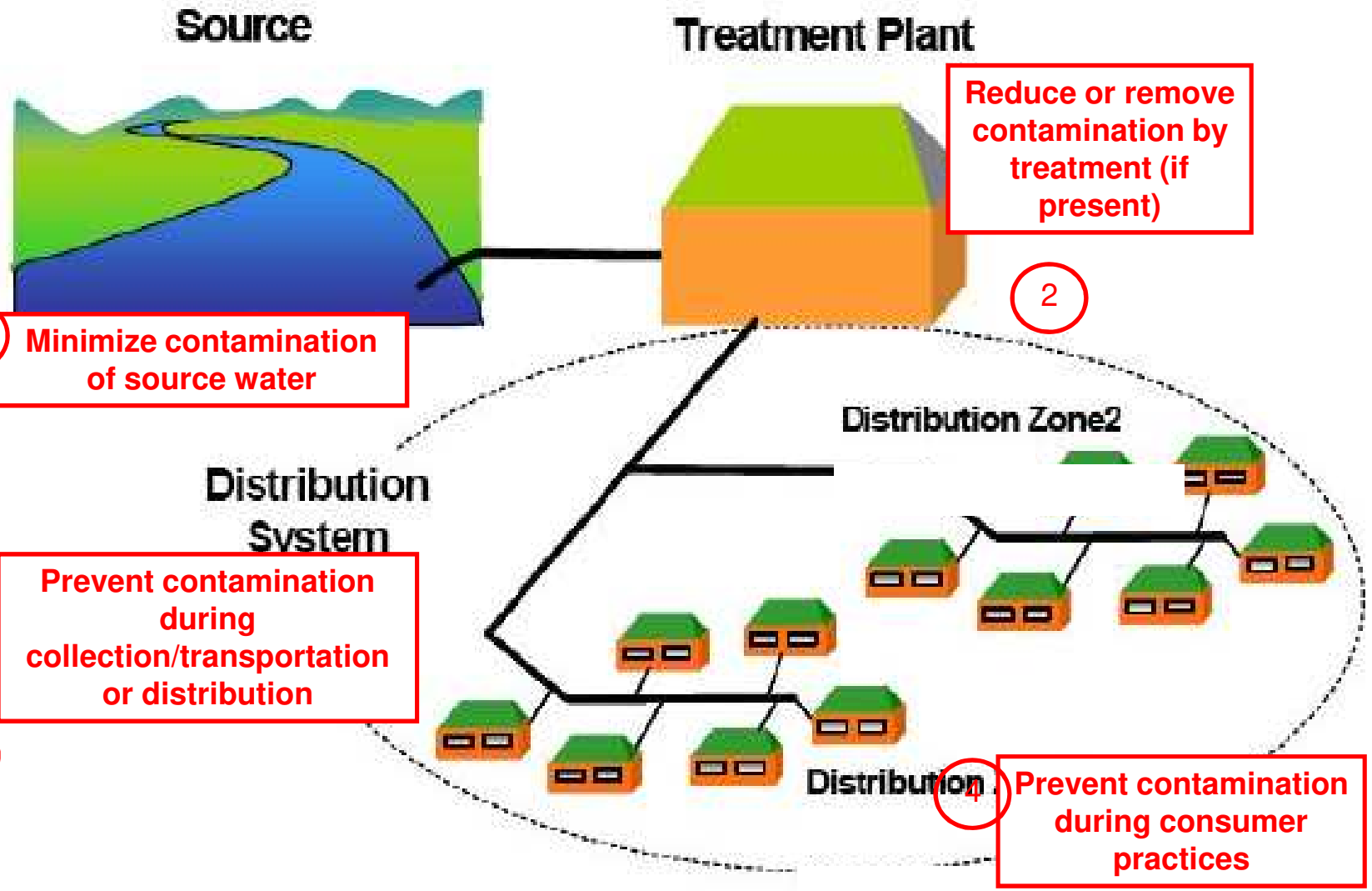
What are the problems with relying on water testing to confirm water safety?

Why do we need a Water Safety Plan?

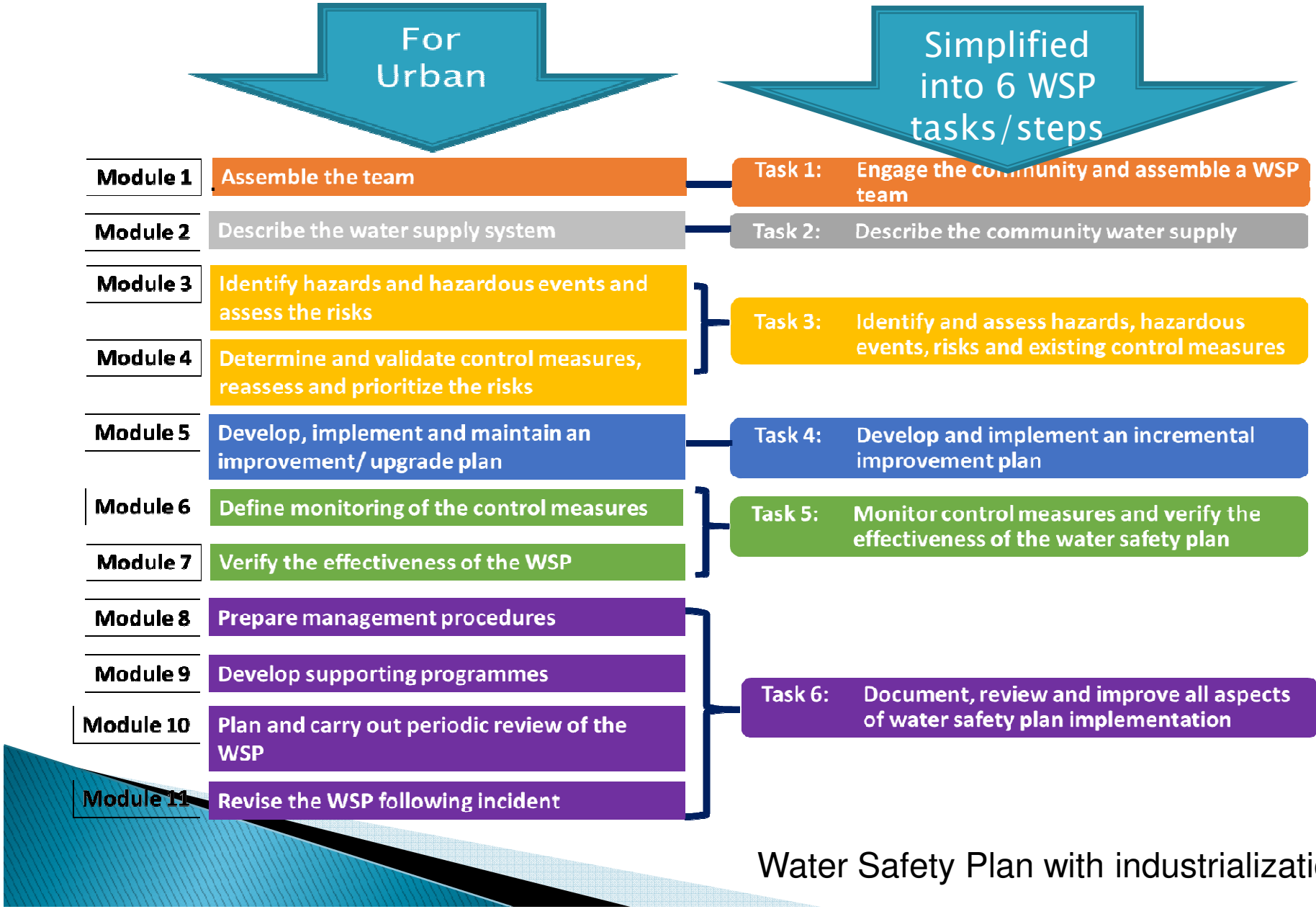
Traditional ways of ensuring water quality through water testing *alone* are problematic:



How does it work?

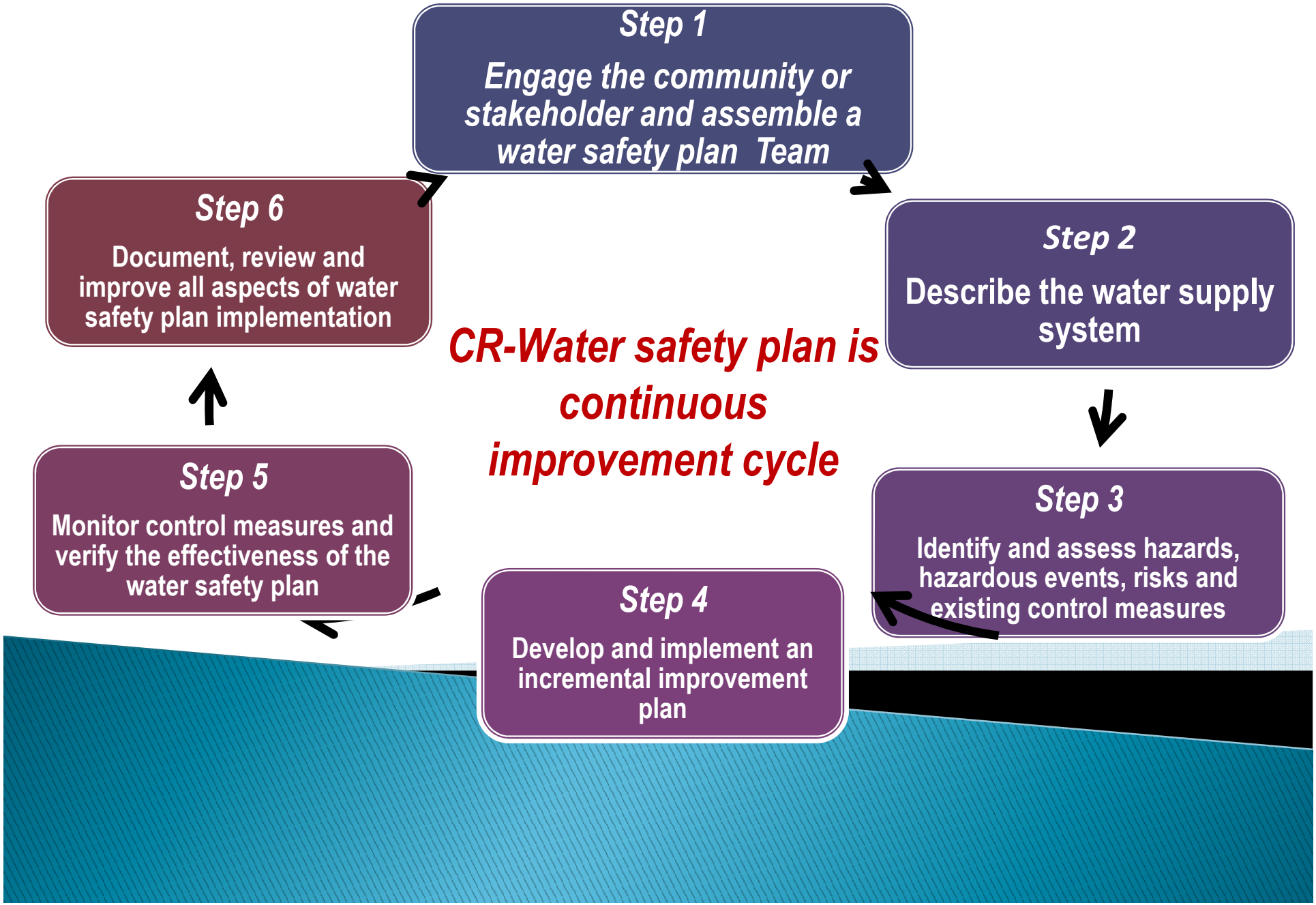


Steps in developing WSP

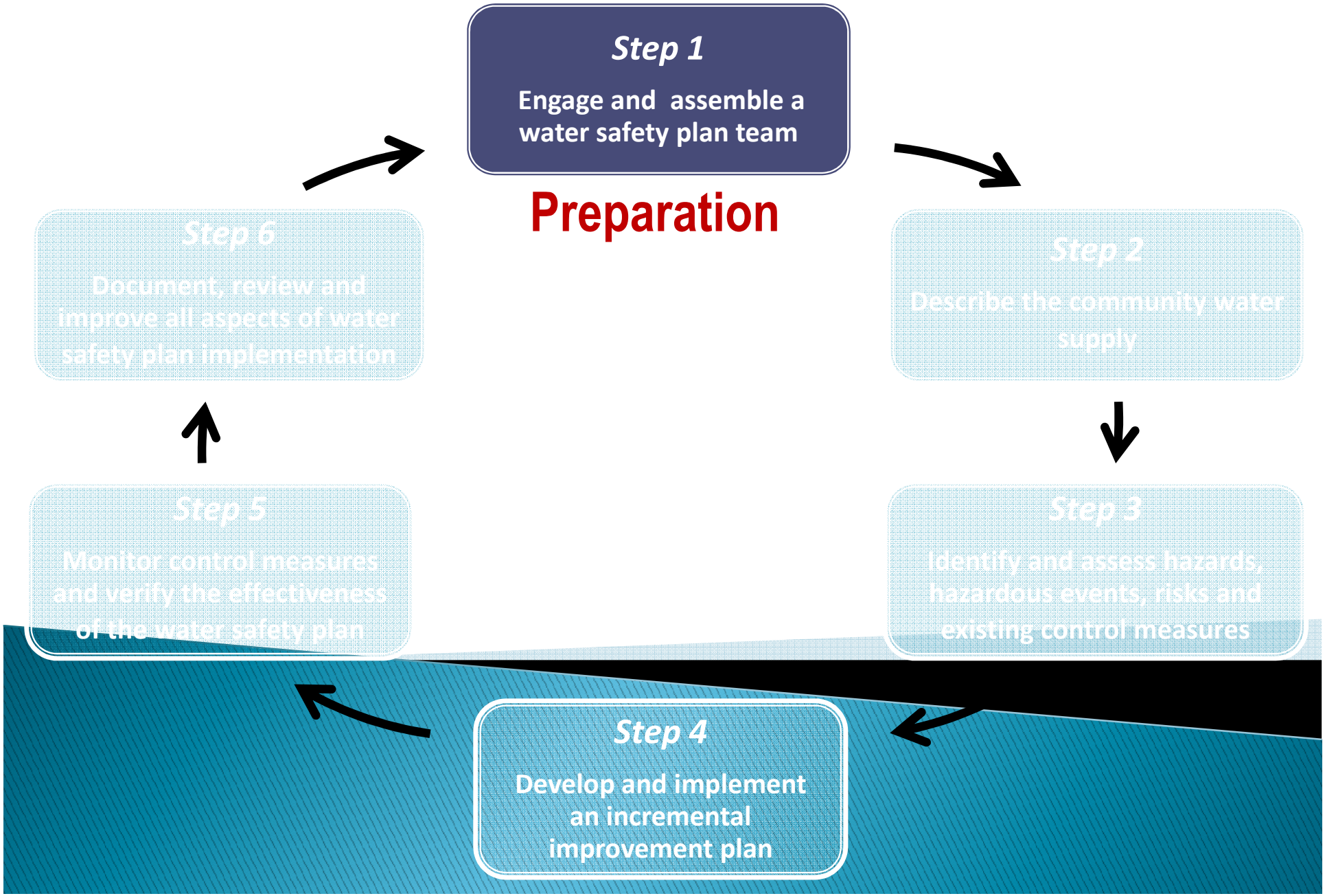


Water Safety Plan with industrialization

CR-WSPs Streamlined in any water supply systems(6 Steps)



WSPs Step 1

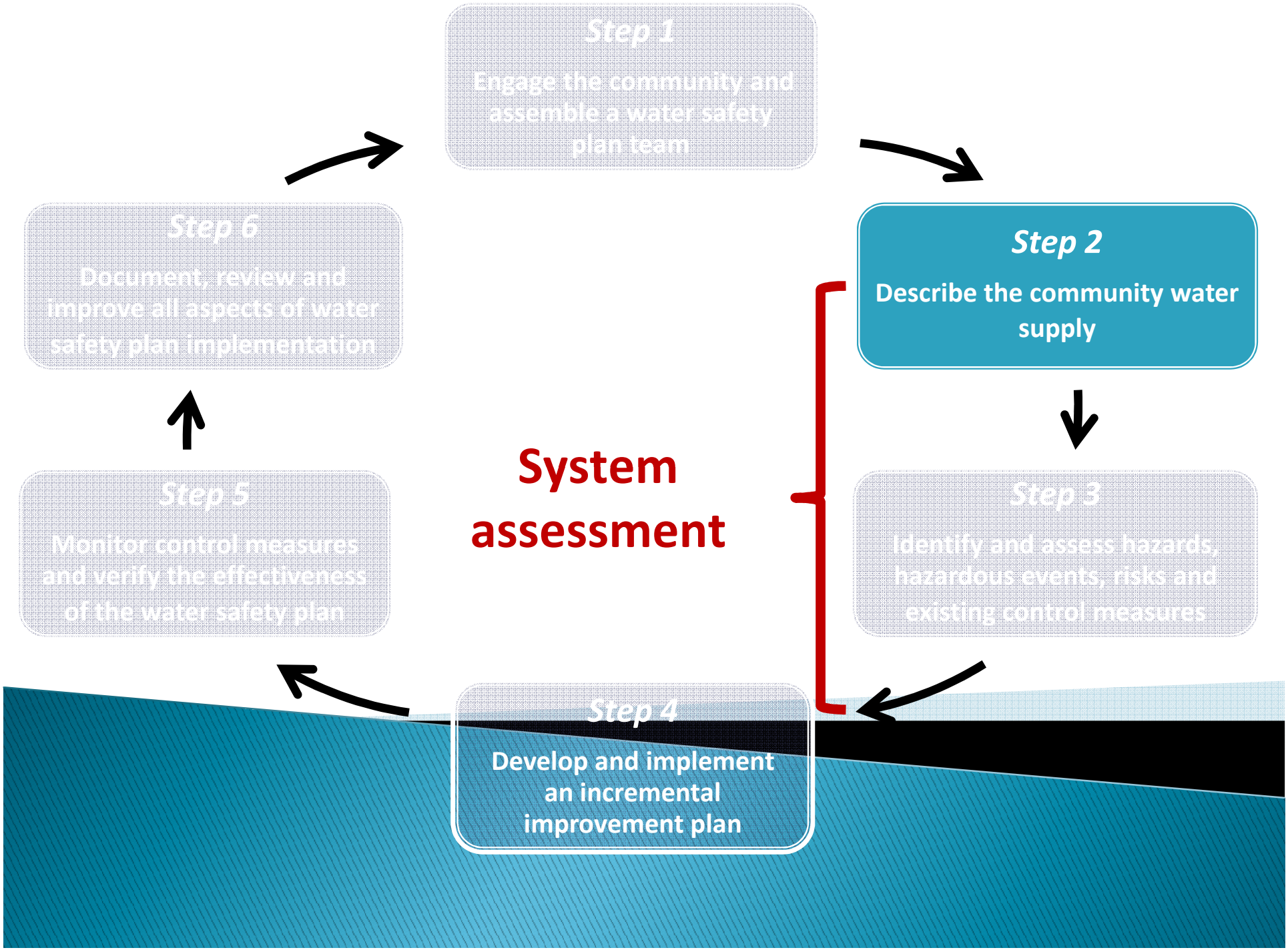

Step 1
Engage and assemble a water safety plan team
Preparation
Step 2
Describe the community water supply
Step 3
Identify and assess hazards, hazardous events, risks and existing control measures
Step 4
Develop and implement an incremental improvement plan
Step 5
Monitor control measures and verify the effectiveness of the water safety plan
Step 6
Document, review and improve all aspects of water safety plan implementation

Step 1 overview

- **Objective:** To engage relevant government units and NGOs, and assemble a team to develop, implement and maintain the WSP.

WSP team should include those with:

- ✓ Knowledge of the complete water supply system (catchment to consumer)
- ✓ Authority to make decisions (e.g. allocating human and financial resources, approving system changes)
- ✓ Responsibility for, and capacity to, help manage and prevent risks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System assessment

Step 2 overview

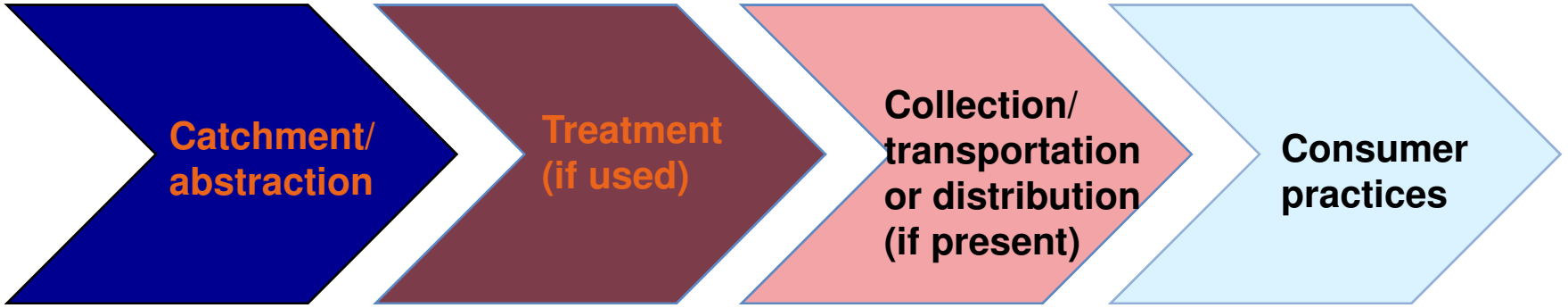
Objective:

To thoroughly describe and map the complete water supply system, from catchment to consumer.

Key actions:

- Draw a map
- Gather supporting information (including climate considerations)
- Check the map and water supply description
- Discuss and identify community water supply objectives

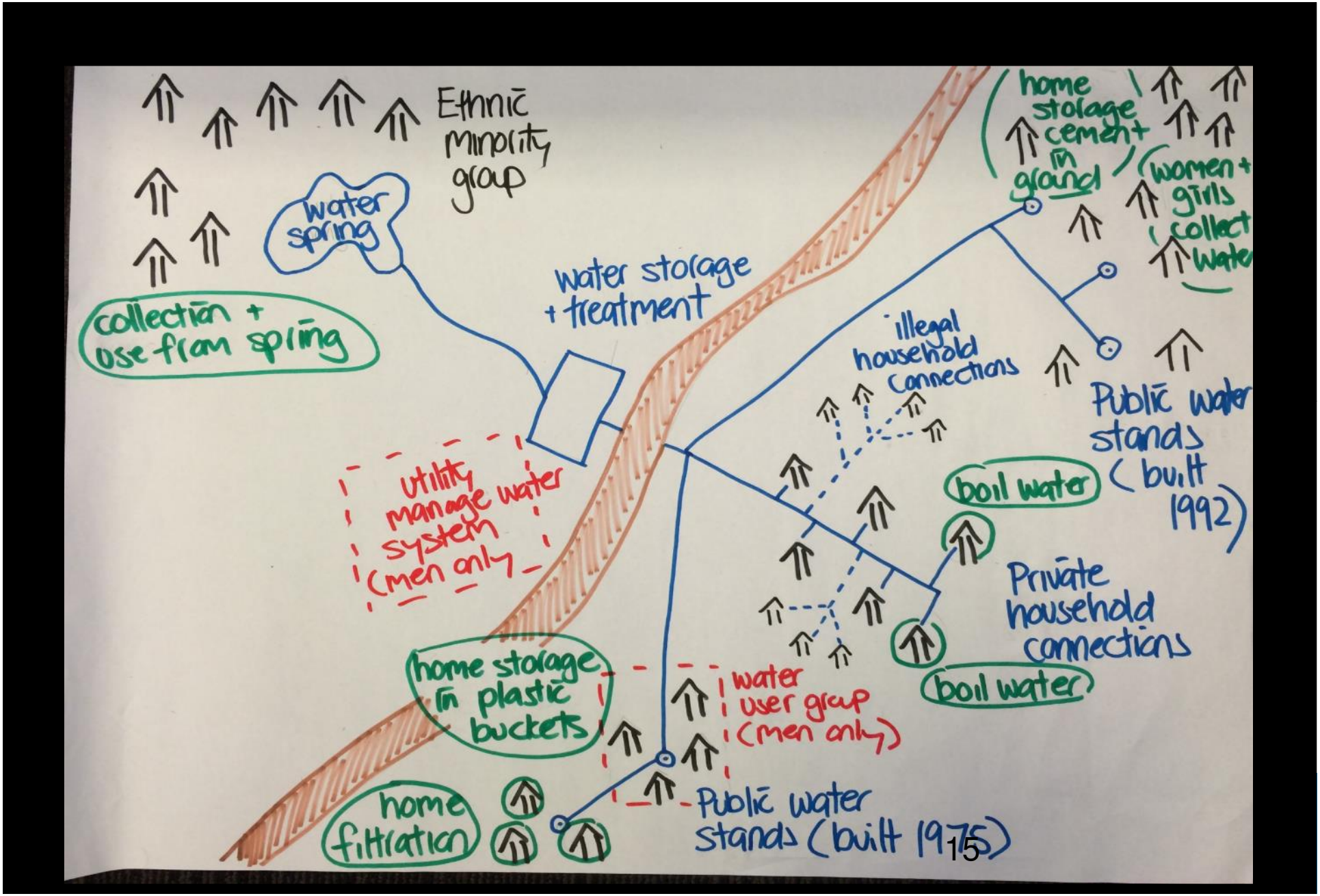
Key action 1: *Draw a map*

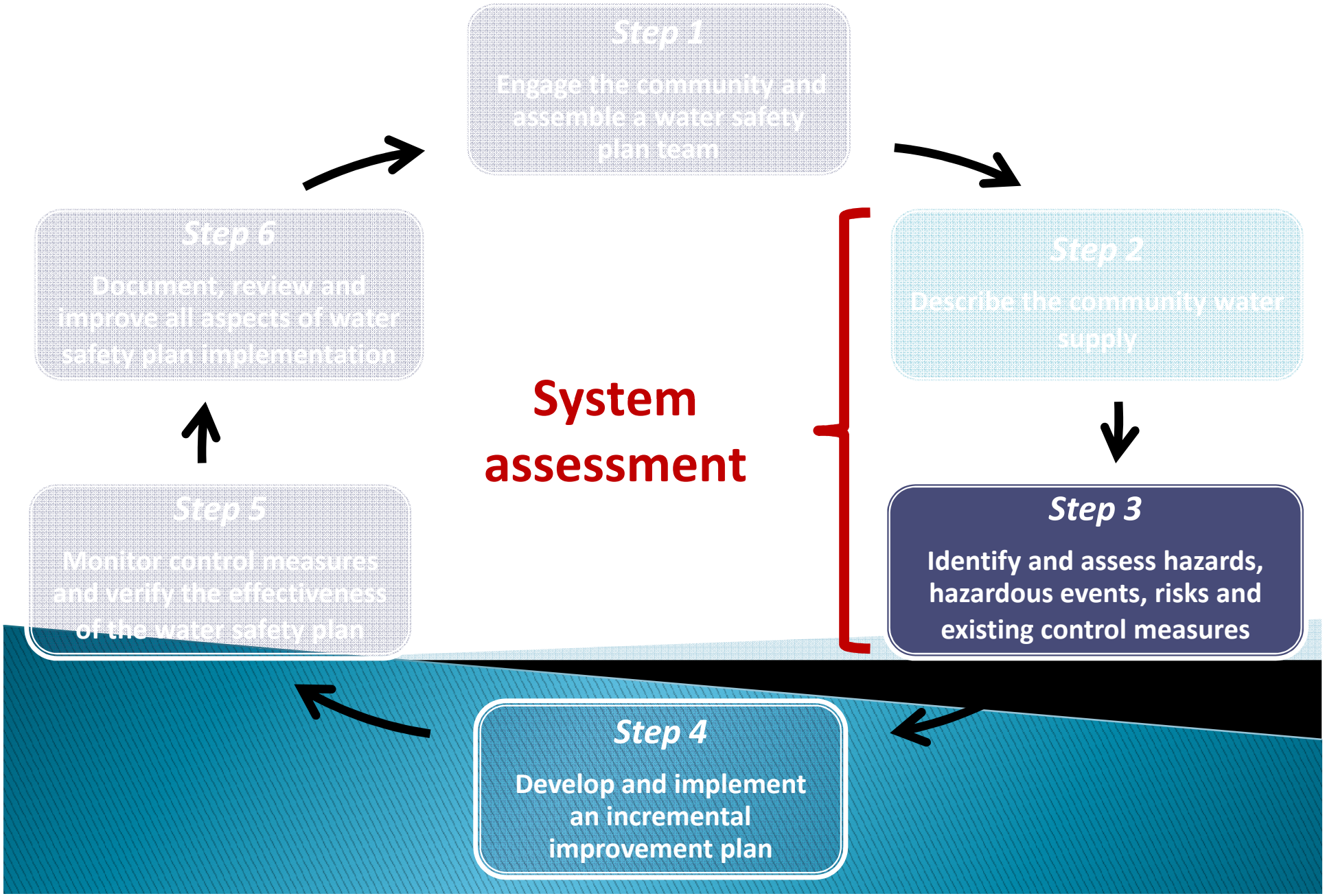


Catchment/ abstraction	Treatment (if used)	Collection/ transportation or distribution (if present)	Consumer practices
Water source(s), catchment area, land use in the catchment, etc.	Treatment processes and chemicals, etc.	Storage tanks and reservoirs (# and size), distribution system layout (pipeline length & materials), tap stand, kiosks, water carters, collection vessels etc.	Household storage tanks, storage vessels, transportation arrangements, treatment in the home etc.

A great deal of information can be recorded and presented on a drawing.

Flow diagrams may vary in complexity…

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System assessment

STEP 3: Identify and assess hazards, hazardous events, existing control measures & risks

Objective:

To identify situations that could threaten the safety of the water supply, evaluate the effectiveness of control measures already in place, and assess risk.

Key actions:

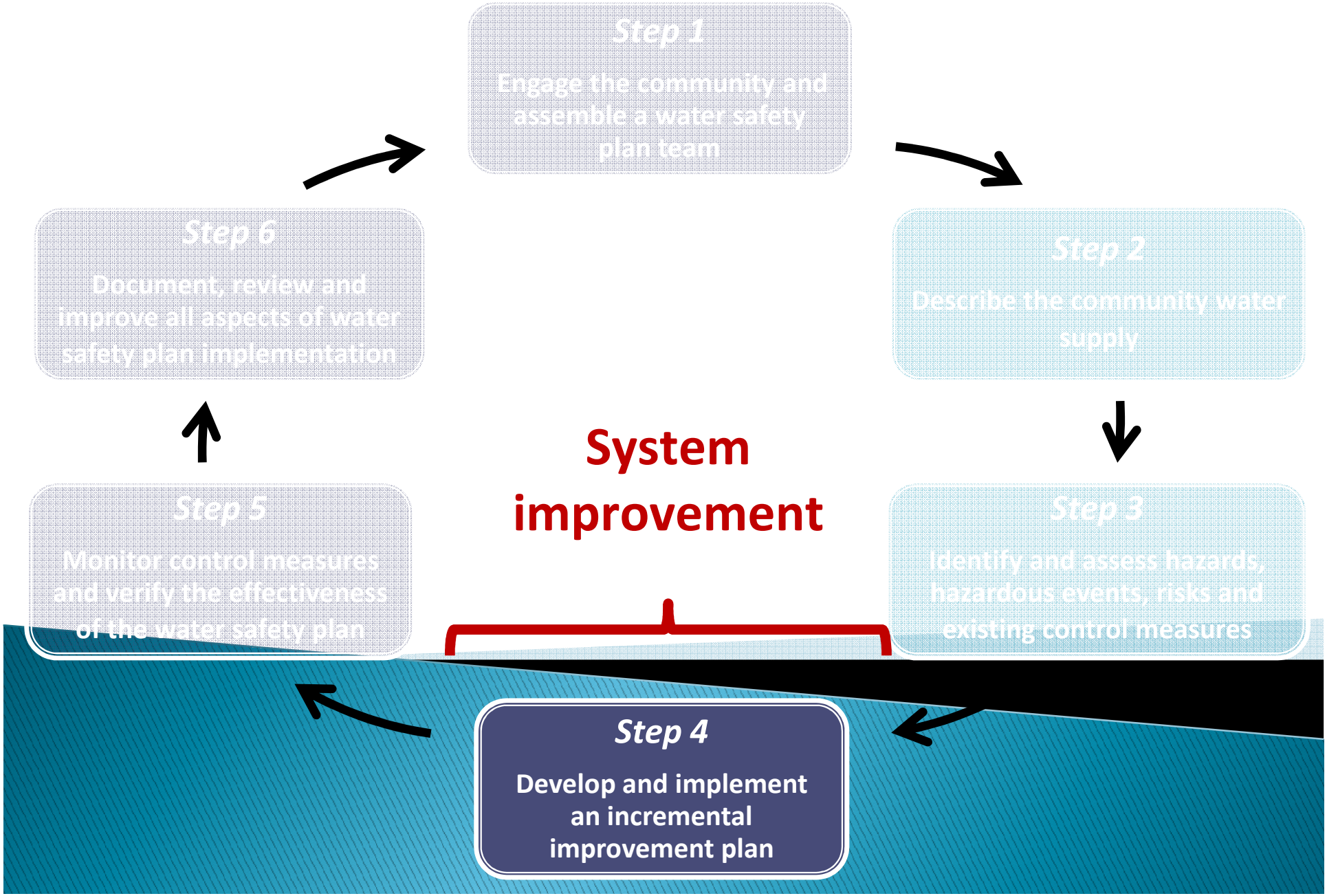
Look for signs of hazards and hazardous events

1. Identify hazards and hazardous events
2. Identify and assess existing control measures
3. Assess risk associated with hazards and hazardous events

Hazards versus hazardous events

HAZARD:
Microbial contamination (faecal material)

HAZARDOUS EVENT:
Microbial contamination of drinking-water due to cattle accessing the reservoir compound and defecating in the water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System improvement

Step 4 overview

Objective:

To identify additional control measures needed to improve water safety and develop an incremental improvement plan.

Key actions:

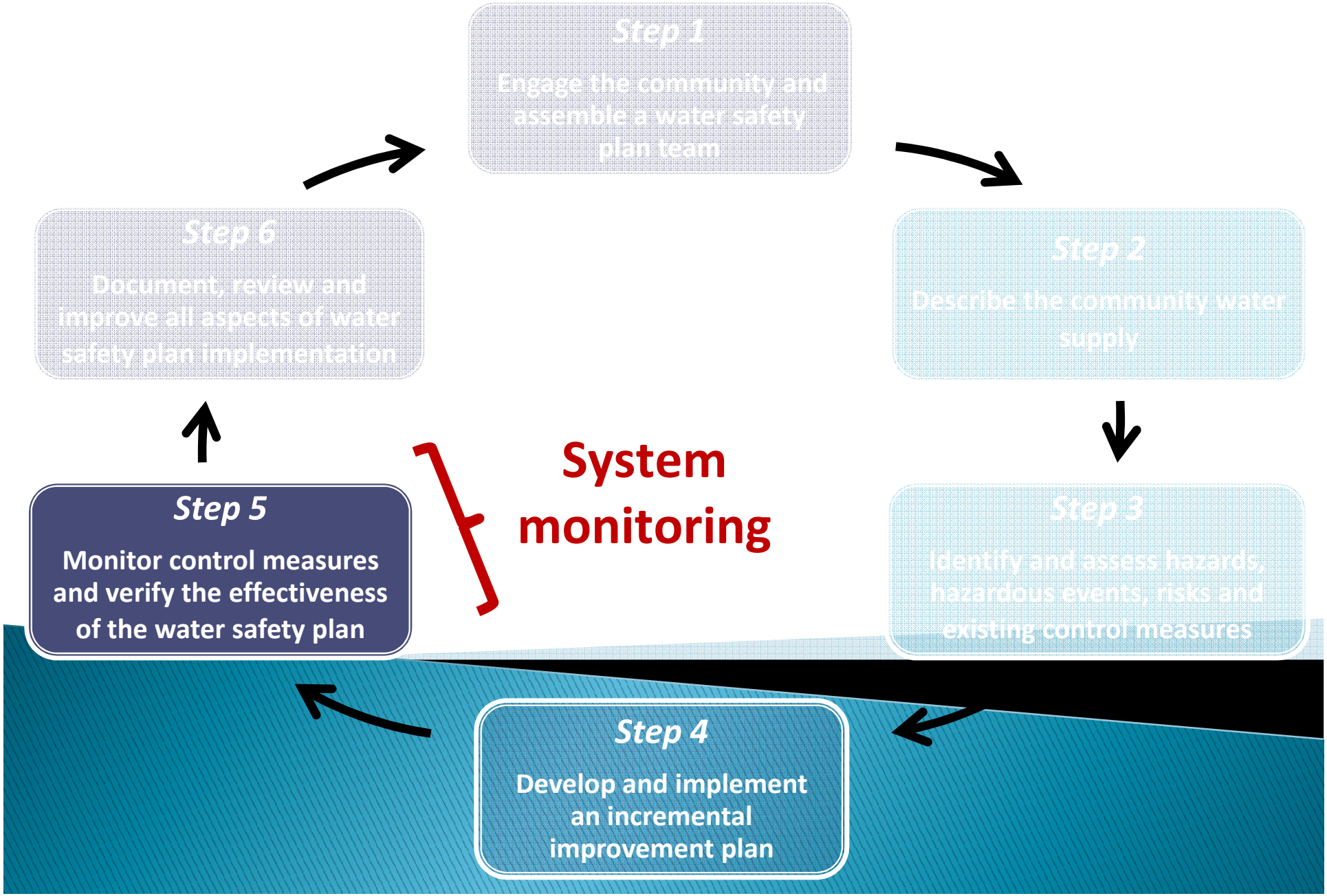
Review options to control significant risks

Develop an incremental improvement plan

Step 3 *What are the significant risks to water safety?*

Step 4 *What needs to be done to address those risks?*

Develop and implement an **improvement plan** to address ***significant*** risks.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System monitoring

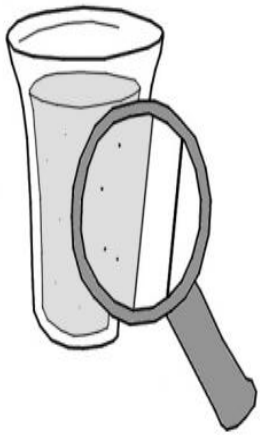
Step 5: Monitor control measures and verify the effectiveness of the WSP

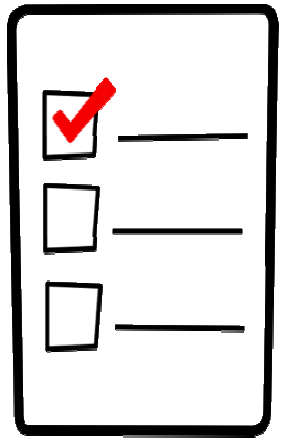
Objective:

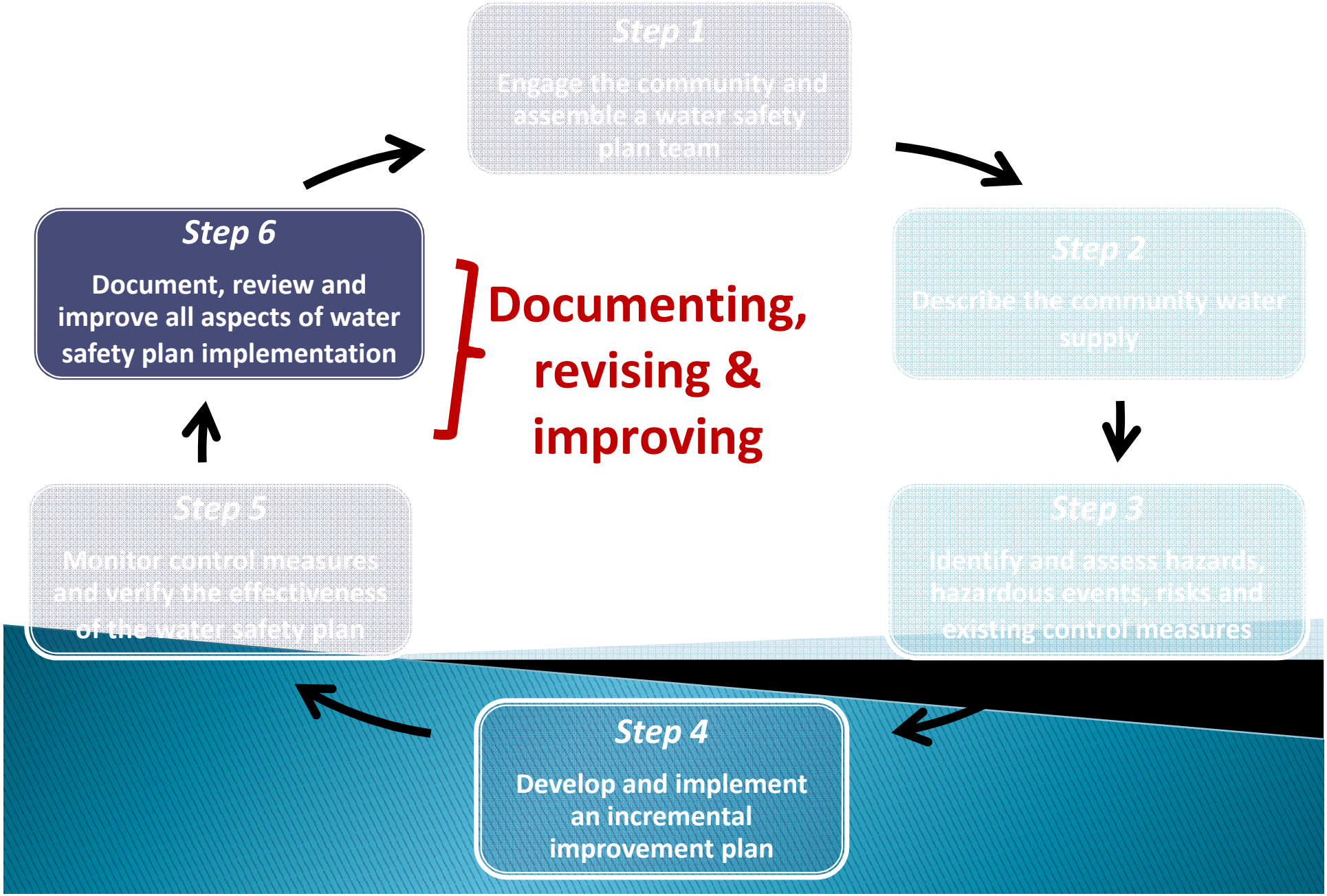
To confirm that control measures are operating as expected and that the WSP is protecting water safety and public health.

Key actions:

- Establish a monitoring programme
- Record and share results
- Frequently assess results



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Documenting, revising & improving

Step 6: Document and review the WSP and revise as necessary

Objective:

To ensure that the WSP is well documented and integrated with day-to-day system operations and management and that the WSP remains up to date and effective.

Key actions:

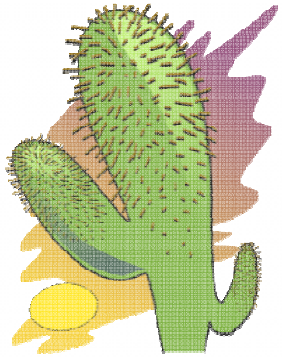
- Document management procedures
- Participate in supporting activities
- Regularly review the WSP

How climate change information integrated into system description?

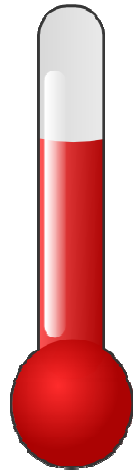
- Describe current/predicted climate impacts on the water supply system; and
- Include key climate considerations on your system description map

Impacts from climate change & variability include:

Precipitation/flooding



Drought



Increased temperatur e

Ways of Introducing CR-WSPs in the Country According to the WHO

WPs can be introduced into a country by various means, including through:

- A decision by governments to encourage or require WSP implementation by water suppliers as a means to improve public health;
- Pro-active implementation of WSPs by water suppliers to improve performance, drinking-water quality, compliance or due diligence;
- Donor-driven requirements for project administrators to comply with international good practice; and/or
- Promotion or support from professional and/or any form of associations to encourage implementation at the individual water supplier and sector levels.

WSPs are most effectively implemented through the concerted actions of all stakeholders involved in the supply of drinking-water. WHO Guidelines recommend that:

- Local and state governments establish appropriate policies, regulations and tools to encourage and support WSP implementation;
- Organizations or companies responsible for supplying drinking-water implement WSPs; and
- Institutions or regulatory agencies responsible for drinking-water quality surveillance support and audit WSPs.

Conclusions

- Clearly drinking water is too fundamental and seriously is not an issue to be left to one institution alone;
- It needs the combined initiative and action of all, if at all we are serious in socioeconomic development under industrialization slogan;
- Thus **Safe drinking water** can be assured **if we set our mind to address it**;
- Expertise on development of CR-WSPs do exist within the Ministry and some utilities like Mwanza, Moshi and Kigoma

Way Forward

- In order to assure the safety of drinking water UWSAs should start to implement CR-WSPs;
- To achieve SDGs 2030 Goal 6: (*Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all*) and Target 6.3 which focus on Improvement of Water quality by reducing pollution, implementation of CR-WSPs is inevitable;
- Mwanza and Moshi Water supply and Sanitation authorities which are currently implementing CR-WSPs or previously implemented CR-WSPs should do the assessment/evaluation and document the lesson learnt;

END OF THE PRESENTATION
Asanteni kwa Kunisikiliza

Community Water Defluoridation Plant at Mwedo Secondary School-Arusha