

“Leaving No One Behind: Sustainable WASH Services in Rapidly Changing Context”

Climate Resilience Framework: UNICEF Perspective

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Session Objectives:



By the end of this session, you will:

- Understand the impact of climate change in the WASH sector
- Understand climate resilient WASH framework of UNICEF and its applicability



WASH Climate Resilience Programming: A UNICEF Perspective



Global Trends: Rising Temperatures



- Over the past 50 years, the average global temperature has increased at the fastest rate in recorded history.
- All but 1 of the 16 hottest years have occurred since 2000. The hottest year on record was 2016.
- It is estimated that without additional mitigation efforts, by 2100 the world could be 3.7° to 4.8° C warmer than in pre-industrial times.
- Rising temperatures can lead to deadly pathogens in freshwater sources, making the water dangerous for children to drink.
- For every 1° C increase in temperature there is an 8% rise in E. coli-related diarrhoea.

Water Scarcity and Drought

- Evidence shows that since 1970, climate change has led to increased water scarcity and drought. Globally, droughts are becoming longer and more intense, and they are covering wider areas.
- During times of drought children risk dying of thirst – they also often have less food, need to walk long distances to collect water, leaving them with less time to go to school, study and play.



Flooding

- Destroys or damages latrines and toilets, which can contaminate water supplies.
- Can cause communities to abandon important sanitation and hygiene practices.
- Peaks in diarrhoeal mortality and morbidity are commonly
- The risk of vector-borne diseases rises

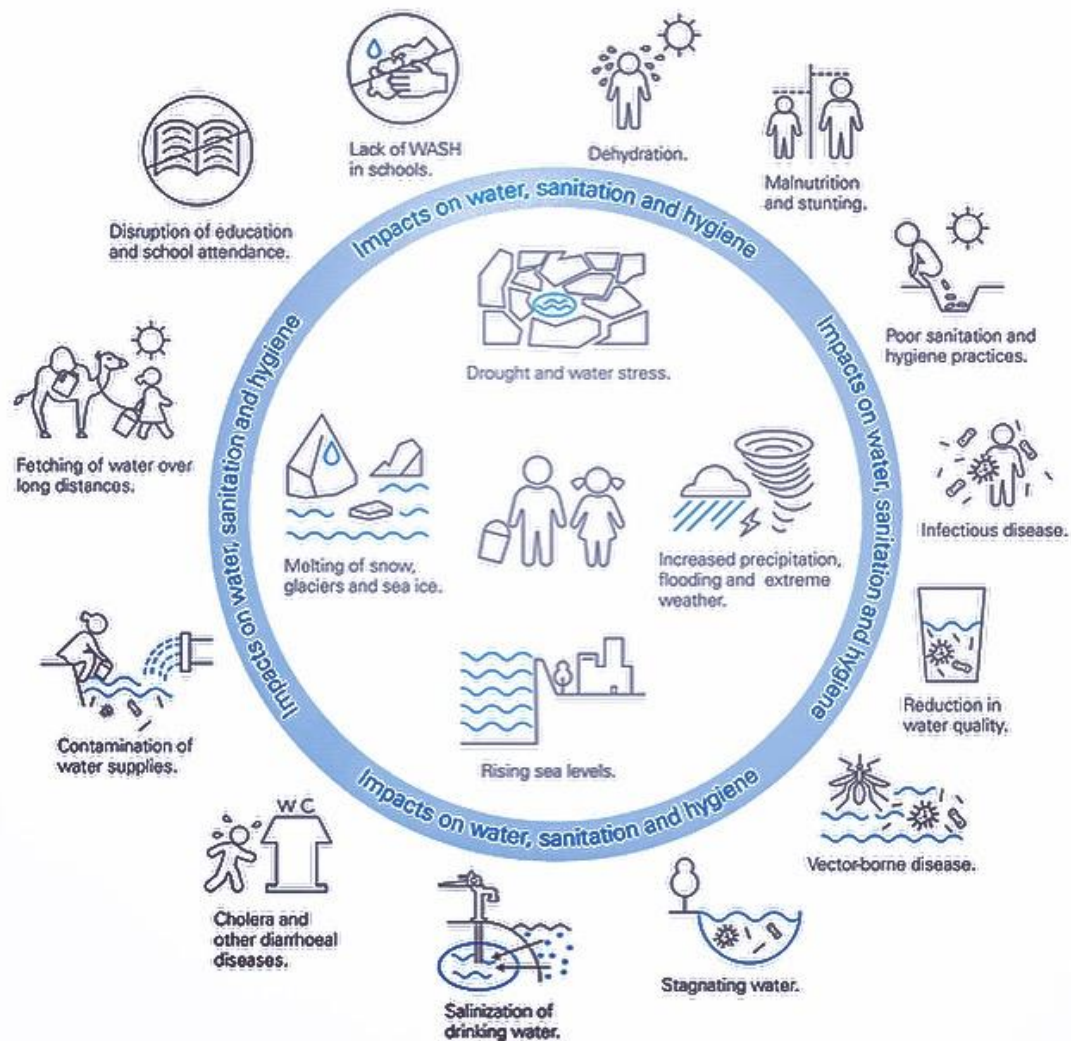


Sea Level Rise

- When sea-levels rise salt water can infiltrate water supplies and cause irreversible damage
- Between 1993 and 2010, sea levels rose by 3.2 millimeters per year .
- A global temperature rise of 2° C is estimated to leave 130 million more people per year affected by coastal flooding



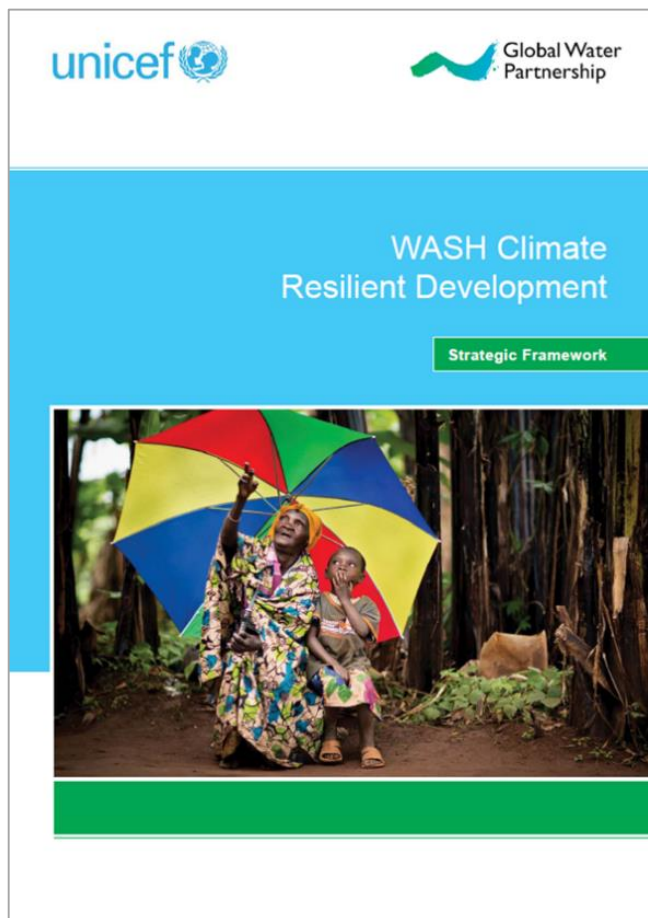
The Impact of Climate Change on Children



The Strategic Framework for WASH Climate Resilience



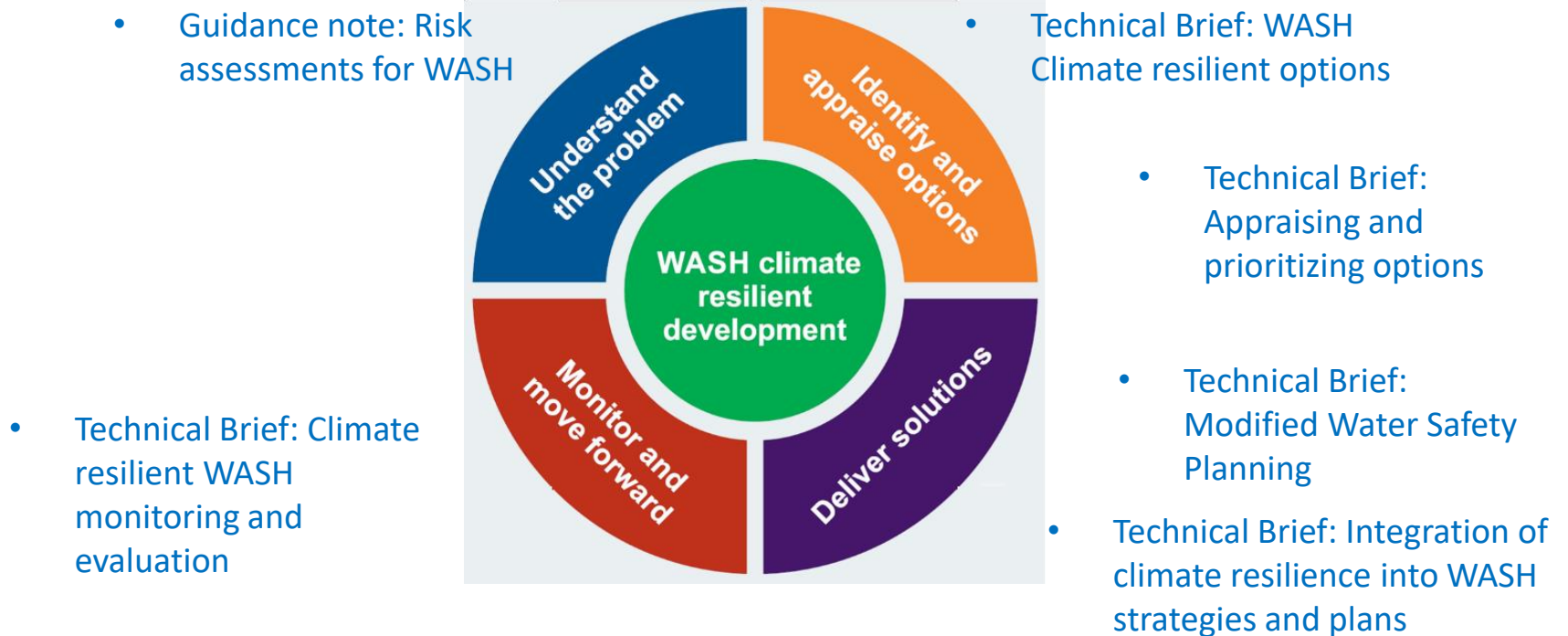
FRAMEWORK FOR WASH CLIMATE RESILIENCE



Focus on:

1. Rural WASH infrastructure and services are sustainable, safe and resilient to climate related risk
2. WASH contributes to build community resilience to climate change

AREAS OF WORK AND GUIDANCE DOCUMENTS



RESULTS FRAMEWORK

INTERMEDIATE OUTCOME	Rural WASH infrastructure and services are sustainable, safe and resilient to climate related risks; and WASH contributes to build community resilience to climate change			
	NATIONAL	SUB-NATIONAL LEVEL/ WATERSHED LEVEL	LOCAL AND PROJECT LEVEL	
OUTPUT	1. An ENABLING ENVIRONMENT conducive to climate resilient WASH services and communities	2. Water resources are MONITORED and MANAGED considering climate risks to WASH services and infrastructure	3. ACCESS to climate resilient WASH infrastructure and services	4. Climate resilient BEHAVIORAL CHANGE and GOVERNANCE at community and local level
	STRENGTHEN WASH SECTOR ENABLING ENVIRONMENT 1.1 Knowledge of climate risks generated and shared 1.2 Climate risk informed policies, strategies, plans and programmes developed 1.3 Adequate budget and resources allocated 1.4 Plans implemented and monitored 1.5 Inter-sectoral coordination strengthened with focus on health, food security and education sectors 1.6 Strengthened Early Warning Systems in place	BUILD WATER RESOURCE MONITORING AND MANAGEMENT CAPACITY 2.1 Water resource status and pressures understood 2.2 Long-term monitoring systems implemented and maintained 2.3 Guidelines/rules developed prioritising WASH services and accounting for hydrological change 2.4 Agreed rules implemented for resource development and adaptive management	SUPPORT CLIMATE SMART INFRASTRUCTURE AND TECHNOLOGIES 3.1 Project design and implementation of WASH standards strengthened 3.2 Water storage enhanced and protected 3.3 Water supplies diversified where possible 3.4 Climate smart technologies (low and no regret options) for WASH investigated and implemented	SUPPORT INSTITUTIONAL REFORM AND BEHAVIOUR CHANGE 4.1 Capacities and resources of local government and local private sector to implement and monitor WASH resilient programming strengthened 4.2 Awareness and capacity of communities to respond to shocks and stresses is enhanced 4.3 Local markets and supply chains extended and deepened to increase availability of climate resilient WASH products and services 4.4 Early warning and response systems strengthened
ACTIVITY	1.1.1 Improving understanding of climate risks 1.1.2 Understanding resilience of technology types 1.1.3 Understanding WASH contribution to build community climate resilience 1.2.1 Reviewing and updating WASH policies and strategies to account for climate risks 1.2.2 Strengthening evidence based policy advocacy 1.3.1 Making budget allocations available to enhance resilience of existing WASH systems 1.3.2 Making budget allocations available to prioritize WASH interventions in identified risk areas 1.3.3 Ensuring adequate emergency budget allocations for WASH sector 1.4.1 Developing, implementing and monitoring plans 1.4.2 Mainstreaming bottleneck analysis and planning 1.5.1 Identifying and incorporating cross-sectoral considerations to manage climate risks 1.5.2 Increasing partnership and collaborative working 1.6.1 Ensuring Early Warning Systems predict and mitigate climate risks to WASH related outputs and outcomes	2.1.1 Assessing water resources – quantity and quality 2.1.2 Assessing risks to water resources from climate change and other pressures 2.2.1 Monitoring water availability and quality 2.2.2 Monitoring patterns of use and climate-linked (and other) threats 2.3.1 Developing agreed guidelines/rules across water sector informed by climate risks 2.3.2 Supporting basin planning initiatives that coordinate water-using and polluting sectors and prioritise support for the most vulnerable areas 2.4.1 Developing new water sources in a resilient and sustainable manner 2.4.2 Allocating resources between sectors with WASH as a priority	3.1.1 Ensuring conformity with climate-informed standards 3.1.2 Supporting supervision and enforcement of standards 3.2.1 Developing decentralised storage systems 3.2.2 Strategically developing groundwater resources 3.3.1 Spreading risk between different water sources and systems 3.3.2 Targeting areas/communities affected by climate hazards and vulnerable sources by providing climate resilient WASH systems 3.4.1 Adapting technologies to account for climate risks 3.4.2 Exploring innovative, climate smart technologies (e.g. solar systems) 3.4.3 Exploring wastewater reuse/ recycling, nutrient recovery and energy production from waste 3.4.4 Improving sanitation and hygiene practices (e.g. ending open defecation) to reduce vulnerability	4.1.1 Strengthening capacity of WASH professionals and practitioners 4.1.2 Making sure sufficient resources are available for local WASH agencies in most vulnerable regions 4.2.1 Education and training of community groups for climate-responsive WASH management 4.2.2 Sharing knowledge on local WASH climate resilient options 4.3.1 Supporting local markets and supply chains for resilient WASH systems/technologies 4.4.1 Assessing status and functionality of early warning and response systems in relation to WASH needs 4.4.2 Contingency planning for WASH – esp. droughts and floods 4.4.3 Water Security and Water Safety Planning

RESULTS FRAMEWORK: NATIONAL LEVEL

NATIONAL LEVEL

Intermediate Outcome

An **ENABLING ENVIRONMENT** conducive to climate resilient WASH services and communities

Output

Strengthen WASH sector enabling environment

Examples of activities

Reviewing and updating WASH policies and strategies

Making budget allocations available to enhance resilience of existing WASH systems

Ensuring Early Warning Systems predict and mitigate climate risks to WASH related outputs and outcomes

RESULTS FRAMEWORK: SUBNATIONAL LEVEL

SUBNATIONAL LEVEL

Intermediate Outcome

Water resources are **MONITORED** and **MANAGED** considering climate risks to WASH services and infrastructure

Output

Build water resource monitoring and management capacity

Examples of activities

Monitoring patterns of use and climate-related (and other) threats

Developing agreed guidelines/rules across water sector informed by climate risks

Supporting basin planning initiatives that coordinate water-using and polluting sectors and prioritise support for the most vulnerable areas

RESULTS FRAMEWORK: LOCAL LEVEL

LOCAL LEVEL

Intermediate Outcomes

ACCESS to climate resilient WASH infrastructure and services

Climate resilient **BEHAVIORAL CHANGE** and **GOVERNANCE** at community and local level

Output

Support “Climate-smart” infrastructure and technologies

Support institutional reform and behavior change

Examples of activities

Targeting areas/communities affected by climate hazards by providing climate resilient WASH systems

Improving sanitation and hygiene practicing (e.g. ending open defecation) to reduce vulnerability

Assessing status and functionality of early warning and response systems in relation to WASH needs

WASH Climate Resilient Development Website



THE FRAMEWORK

The Strategic Framework consists of 4 quadrants which provide guidance on how to ensure resilient WASH services.

Resilient WASH programming helps ensure that WASH infrastructure and services are sustainable and resilient to climate related risks; and WASH contributes to building community resilience to climate change.



Read more and download the Strategic Framework Strategy here:



English, Spanish, French

TECHNICAL BRIEFS

To support the implementation of the Strategic Framework, a number of Technical Briefs have also been developed. The briefs go into further detail on specific topics to support the implementation of the Framework.

1. Understand the problem - Guidance Note

- Risk assessments for WASH + Instructions tool

2. Identify and appraise options - Technical Briefs

- Linking risk with response: options for climate resilient WASH
- Appraising and prioritizing options for climate resilient WASH

3. Deliver solutions - Technical Briefs

- Integrating climate resilience into national WASH strategies and plans
- Local participatory water supply and climate change risk assessment: modified water safety plans

4. Monitor and move forward - Technical Brief

- Monitoring and evaluation for climate resilient WASH

Additional references available here

LEARNING MODULES

The following Learning Modules have been developed in order to build the capacity of WASH practitioners to implement WASH climate resilience programming.

1. Understand the problem

- Learning Module 1: Introduction

- Learning Module 2: WASH Climate Risk Assessments

2. Identify and appraise options

- Learning Module 3: Options to improve Climate Resilience

3. Deliver solutions

- Learning Module 4: Integrating Options into Strategies and Plans

4. Monitor and move forward

- Learning Module 5: Monitoring Programmes and Systems

Country Initiatives



<http://www.gwp.org/en/WashClimateResilience/>

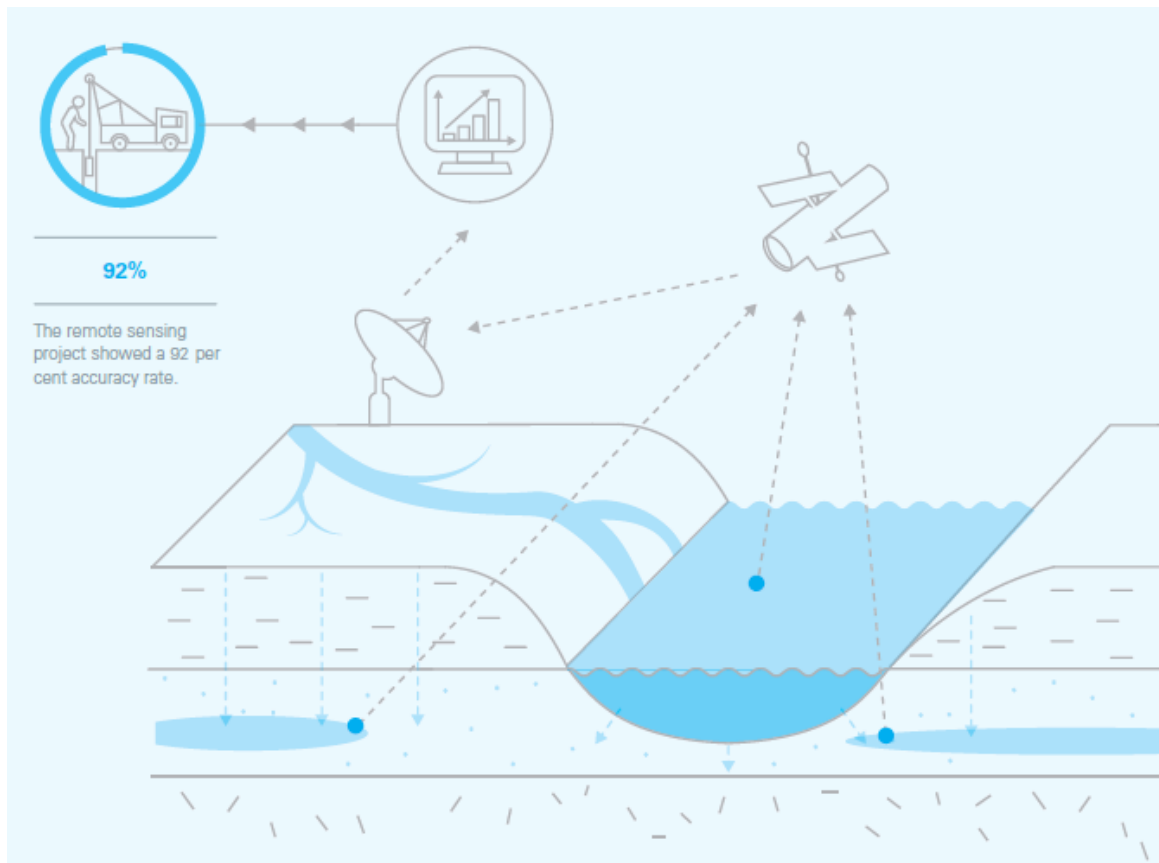
Examples of Climate Resilient Programming

WASH



Examples of WASH Resilience Programming

GIS Water Mapping



- In 2016, Ethiopia experienced one of its worst droughts in decades.
- Piloting of remote sensing - combines satellite earth scanning with hydrological investigation techniques → groundwater suitability map.
- Improved drilling success rates from 50% to 92% accuracy in the most water scarce regions.
- More than 540,000 people have now gained access to safe water in drought-prone regions, including Multi Village Schemes.
- Approach is being scaled-up in 39 more districts.

Examples of WASH Resilience Programming

Diversification of Water Supply Sources

Cambodia: Beyond groundwater



- Shallow wells dry up during dry season
- Complement with use of treated surface water sources

Bhutan: Rainwater harvesting



- Rain water captured when available and stored it (tanks or underground) for use throughout the year.
- Great way to diversify/provide back-up option

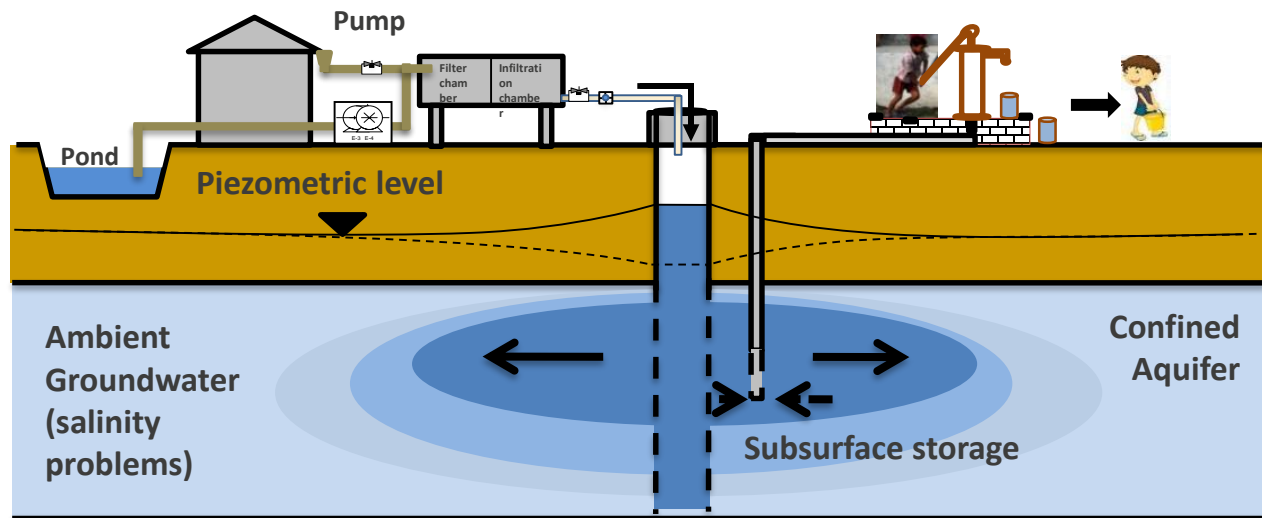
Myanmar: Solar powered water systems



- Durable, cost-effective, climate smart technology, also provides a water storage “buffer”

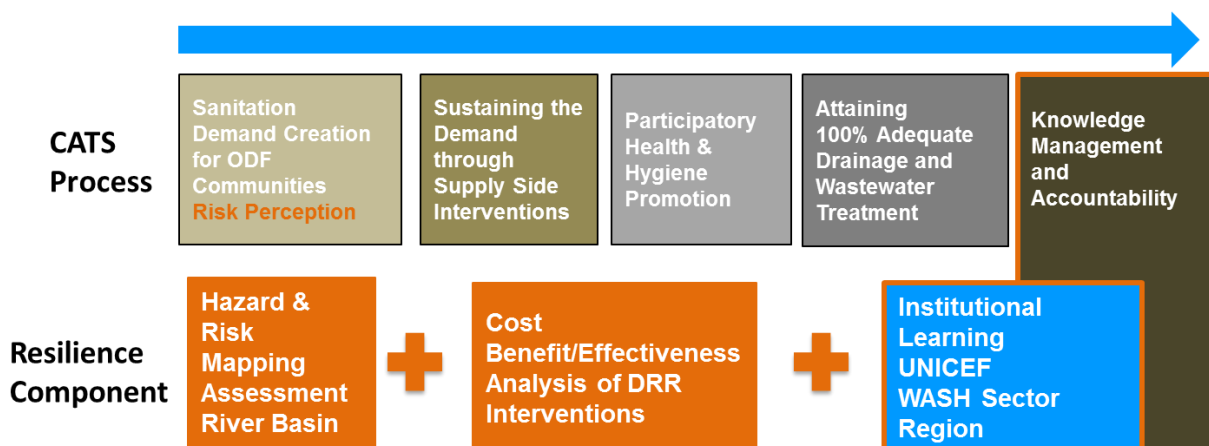
Examples of WASH Resilience Programming

Bangladesh: Managed Aquifer Recharge (MAR)



Examples of WASH Resilience Programming

Pakistan Approaches to Total Sanitation (PATs)



Examples of WASH Resilience Programming

Madagascar: Increasing community resilience through Multi Use Systems (MUS)



- MUS: Meets both people's domestic and productive livelihood needs, whilst at the same time, ensuring the most efficient use of water resources.
- Construction/rehabilitation of 72 boreholes (including solar powered water systems).
- Protects livelihoods and agricultural production in communities → improved health and nutrition of children
- Increased financial sustainability of systems: water use is directly related to livelihoods → increased desire to pay for water and maintain system

Thank you

Useful links:

Thirsting for a Future Report:

https://www.unicef.org/publications/index_95074.html

UNICEF-GWP WASH Climate Resilience Programming
Guidance Portal:

<https://www.gwp.org/en/WashClimateResilience/>



Thank You



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