

Climate impacts on Sanitation and hygiene in rural Burkina Faso and Bangladesh

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**WATER
&
WASH** 2023
FUTURES

Achieving SDG6 in a Changing Climate



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Research questions

- How are climate hazards directly and indirectly impacting sanitation practices in communities?
- How do climate hazards affect sanitation programming?
- How could programming strengthen rural sanitation services and community resilience?



Burkina Faso - Setting the scene..

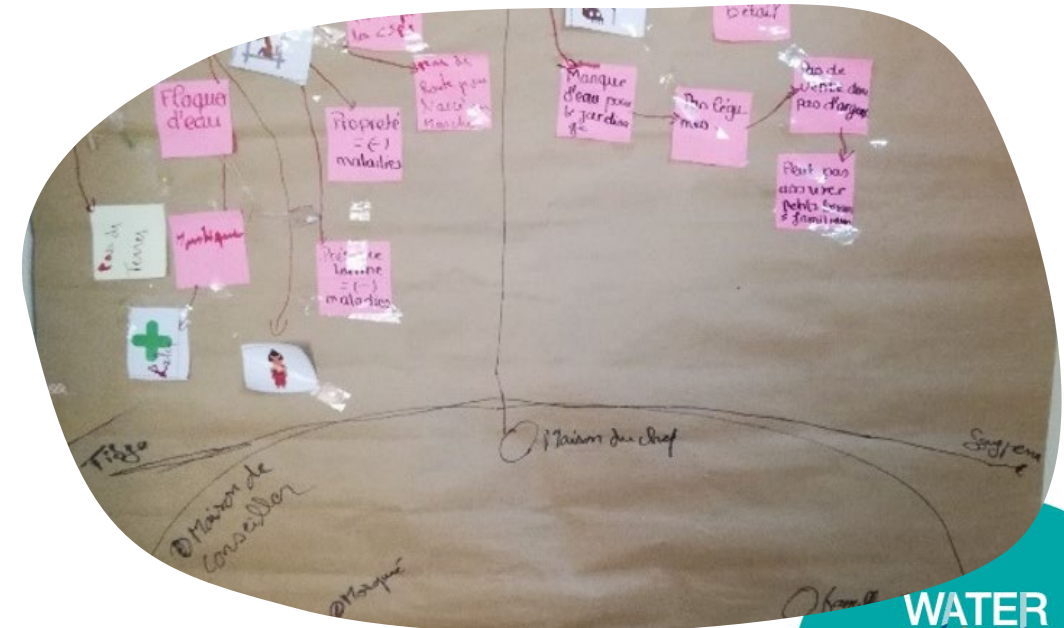
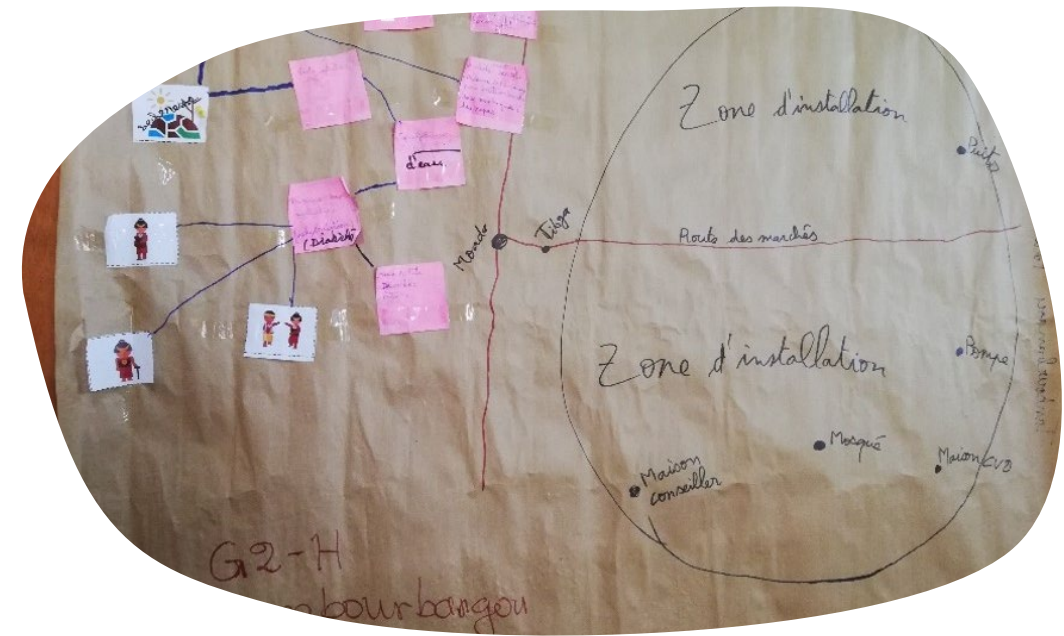
- Land locked country West African with a population of 18 million, 70% of whom live in rural areas (World Bank 2017).
- Temperatures are predicted to increase by 3–4% by 2080–99, higher than global average of 1.7% (World Bank n.d.).
- The Eastern Region is already experiencing high temperatures, heavy rains, pockets of drought and water scarcity (UNDP)
- In rural areas, 54.72% still practice open defecation and 13.46% have access to a basic facility (WHO and UNICEF 2020).
- Ongoing CLTS programme













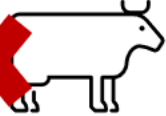
Villages	4
Participatory group discussions	22
Key informant interviews	35
Total number of research participants	208

Methods

- Participatory group discussions – impact diagrams and hazard mapping
- Key informant semi structured interviews with local officials, community leaders and NGO staff
- Series of 2 facilitated workshops with UNICEF to think through recommendations, strengthen programming







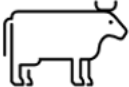




Findings

Climate Impacts	Impact on Sanitation and hygiene practices					
Dry spells, droughts and increasing desertification						
Heavy and irregular rainfall						

Reverting to OD, partial use and slippage

Slipping MHM and handwashing

Key:

-  Handwashing
-  Menstrual Health
-  Increased time pressures
-  Infrastructure damage
-  Cattle illness, death
-  Termite damage
-  Crop damage
-  Fatigue
-  Floods

Impacts on programming

- reduced water availability during dry conditions → difficult for practitioners to encourage communities to build latrines, especially in households with no borewell.
- Expensive emptying services → households resort to digging another pit when first pits fill up → Full pits collapsing with inundated water during floods → unsafely managed facilities
- Rains and floods → frequent breakdown of infrastructure → increased fatigue and difficulty with behaviour change programming

Local coping mechanisms

- rebuilding of latrines with available material after each rainy season
- relocating these facilities to better protect them,
- rallying as a community to help households with toilets that are affected to rebuild after the rains,
- barricading yards to reduce stormwater inundation,
- investing small pots of money during the dry season to make toilets more resilient
- using toilets to wash in the dry season so the water is reused to clean toilets.

Bangladesh - Setting the scene..



- Existing climate change-borne hazards – Salinity, Cyclone, Flash Flood, Waterlogging, Heavy Rainfall
- Includes ethnic minority communities, people from diverse religion
- Major occupation of the community people – fishing and farming
- WASH facilities are mostly unimproved

**Mixed-
Method
Process**

**10
Steps**

**Ward-level
Assessment**

Qualitative Data Collection (PWVA)

- Ward level assessment - Identifies existing **WASH problems** led by climate hazards
- Prepares **social map, seasonal calendar and a comprehensive plan** to resolve the issues
- FGDs arranged with women on menstrual hygiene management
- Data **validation** in 3 different tiers

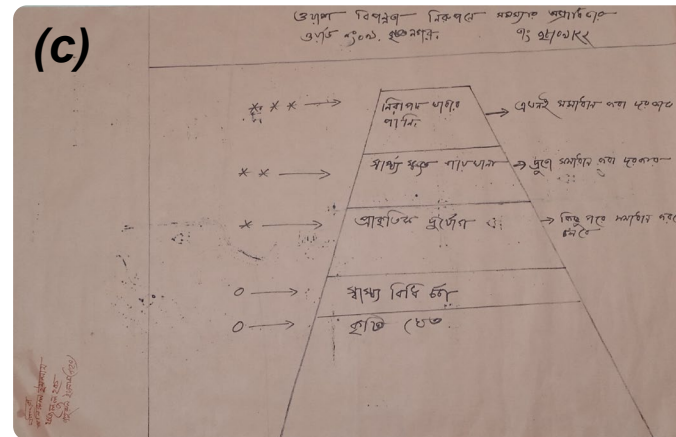
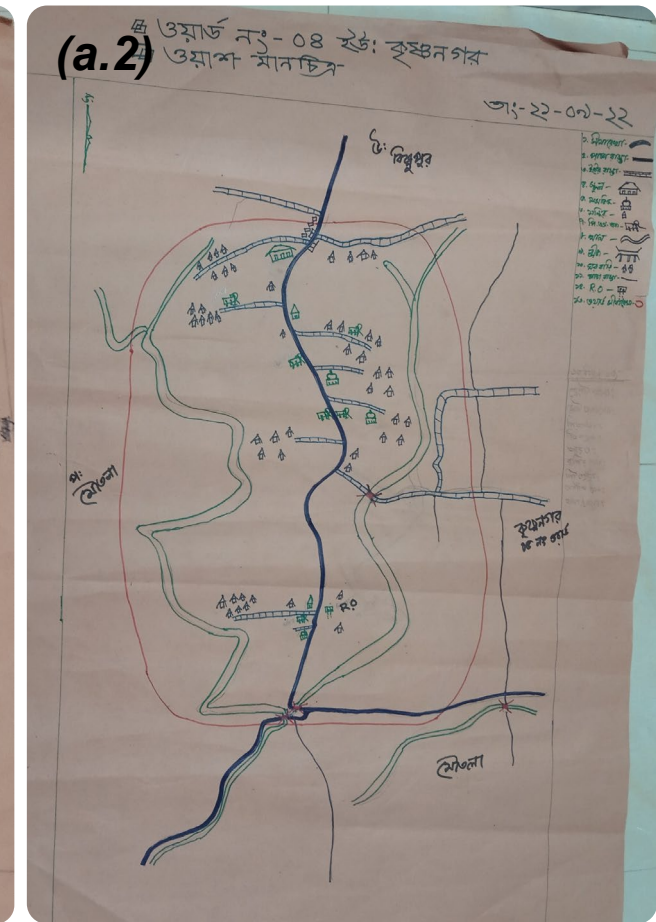
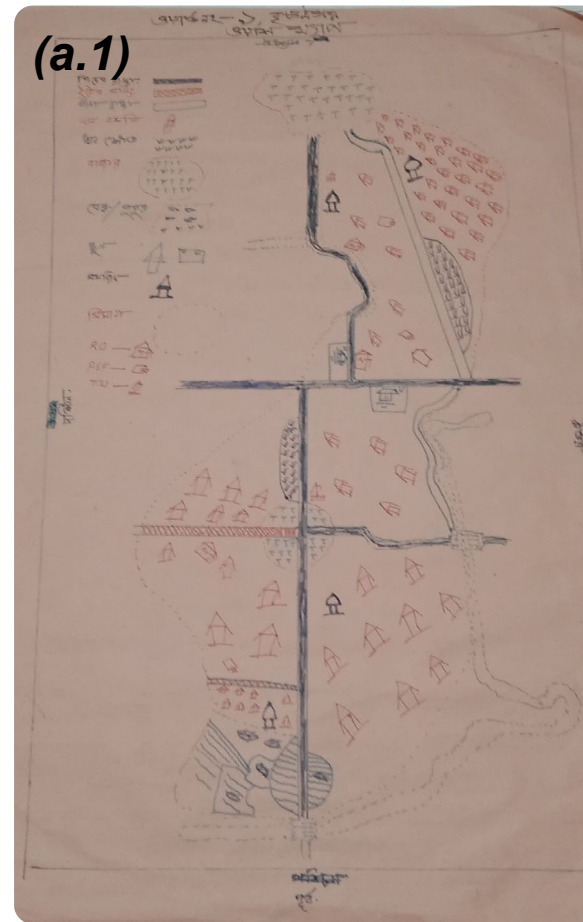


Figure: (a) Social map including major WASH facilities; (b) Group discussion for identifying issues; (c) Problem priority analysis

Climate Hazards

- The frequency and intensity of cyclones and storm surges increased
- Change in unique seasonal pattern

Indirect impacts

- Increased salinity affects water quality
- Reduction of income from livelihood options) leads to reduced prioritization towards constructing sanitation facilities

One older man said that “Open defecation was very common in the area one decade ago. Now, the affluent people have made their own improved toilet. The poorer ones are suffering since they can neither defecate in open space due to hesitation nor make a good quality latrine. In my opinion, defecating in a poorly-constructed latrine is much more dangerous than defecating in an open space.”

Findings

Impacts on Sanitation

- Waterlogging and flash floods inundate sanitation facilities
- Toilet pits are filled quickly, fecal matters from other dysfunctional toilets accumulate around households with flooding
- Reduced access to markets and resources
- Overflowing drainage

Impacts on Hygiene

- Using saline water cause diseases and difficulties to manage during menstruation
- Not enough time for sanitary towels to dry

Some ideas for responses for programming...

- Integrate climate risk factors into ongoing sanitation interventions.
- Assess and strengthen local capacities
- Construct locally relevant drainage systems around latrines to prevent collapse of pits
- Expand behaviour change programming
- Draw and build on existing strong guidance around gender equitable programming
- Draw on existing community support funding mechanisms and networks to increase the durability of latrines
- Build on the strengths of CLTS
- Operationalise area wide programming –

Conclusions

- Damage to household infrastructure and latrine facilities and the loss of livelihood options magnify vulnerability and household stress
- Competing needs with financial resources less likely to be used towards the rebuilding and continued use of latrines.
- Consistent hazards increase fatigue and reduce motivation
- We need to about both safe managed robust technologies and ensuring prioritisation continues during and after climate shocks
- There may be a combination of responses than can complement and build on existing approaches
- Climate impacts challenge sustained sanitation outcomes, and recommendations currently emerging from sustainability related research remain pertinent with increases in climate hazards.