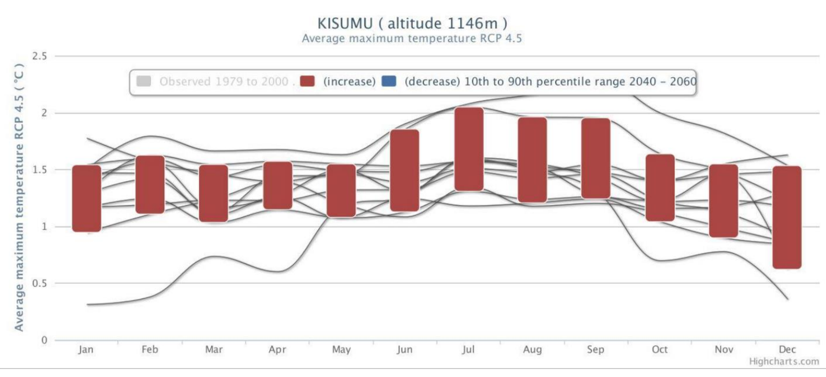
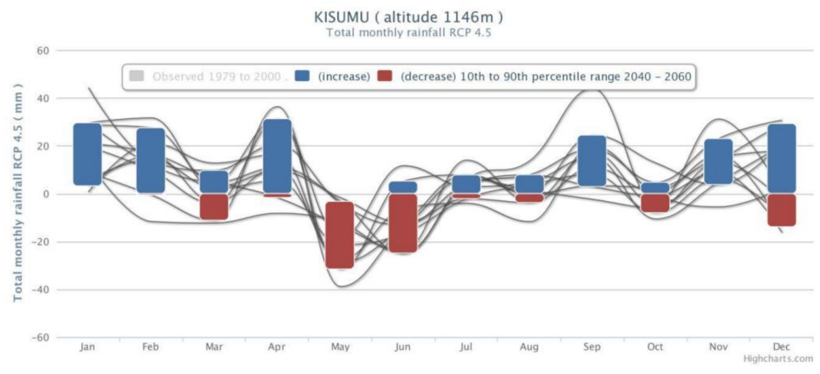
Practical ACTION

# CLIMATE & URBAN COMMUNITY RESILIENCE WASH SYSTEMS CONNECTIONS

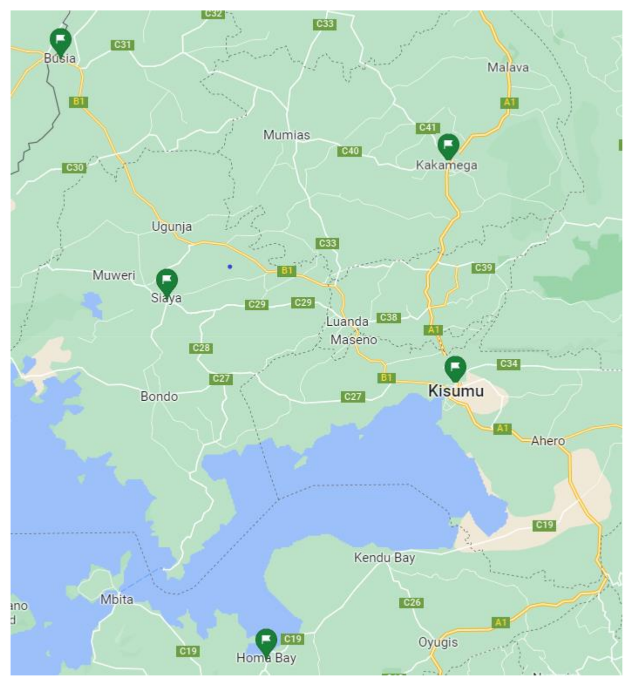
## CLIMATE PREDICTIONS FOR WESTERN KENYA

All months predicted to be at least 1˚ warmer 2040-2060.
Rainfall patterns will change with some months significantly wetter, and others drier




## IMPACTS ALREADY BEING FELT



Low-income urban communities are already feeling the impacts of climate change

- Water shortages in Busia and Kakamega
- Floods in Kisumu and Siaya

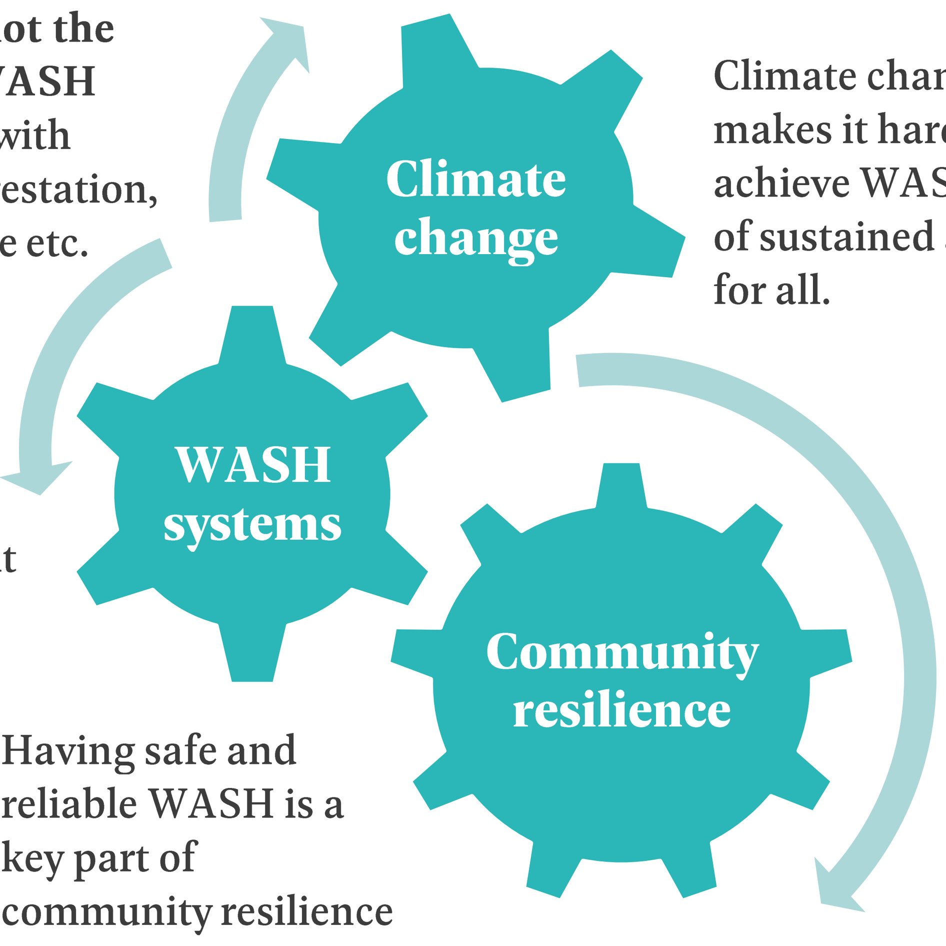
Busia "piped water is not frequent and the volume is low… it comes intermittently 3-4 days a week and for a short time… The water in our wells is also reducing."

Kisumu: flood water overflows into the streets, sewage pipes burst, toilets overflow or collapse.

Siaya: The utility struggles to cope "In 2021 between April and May our operations came to a standstill… because flooding submerged the pump house". Costs for electricity and maintenance are rising. Non-revenue water is also high.

## WASH SYSTEMS – CLIMATE CONNECTIONS

Climate Change is **not the biggest threat to WASH services** compared with urban growth, deforestation, failing infrastructure etc.




Climate change makes it harder to achieve WASH goals of sustained access for all.

WASH System Strengthening IS **Climate Action**, but what do we need to do more or better?

Having safe and reliable WASH is a key part of community resilience

## APPROACHES IN URBAN CONTEXTS

| Key factors in urban contexts | Approaches |
|---|---|
| Most people are tenants. Not all landlords are present in the community. | Landlords are key stakeholders to be reached with help of Local Government |
| Communities are diverse, people move areas, and are away from home | Use a variety of engagement strategies and media, and consider gender differences in reach |
| WASH services exist but don't reach everyone. Informal providers fill gaps. | Build capacities in Utilities and Informal Providers in WASH and resilience and focus on accountability of providers. |
| Price and availability of water are key factors limiting access | Identify strategies to keep prices more constant throughout the year, and ensure the variety of sources people use are safe |

## WASH SYSTEMS AND RESILIENCE

Flood Resilience Alliance

Climate Resilience Measurement for Communities

Practical Action uses the Climate Resilience Measurement for Communities (CRMC) tool to assess resilience, and help communities plan actions. An assessment of WASH features as part of this broader analysis. https://floodresilience.net/frmc/

Bristol University has created a more in-depth tool to measure the resilience of WASH Services and plan for action: https://resilientwash.blogs.bristol.ac.uk/research-areas/home/how-tough-is-wash/

## IDEAS FOR INTERVENTIONS
### What do you think?

Which of the WASH building blocks do you think are priorities for building resilience? Vote with stickers (3 votes per person), and add comments with post-it.

**Climate Resilience aspects in WASH systems building blocks**

| Building Block | Climate Resilience aspects |
|---|---|
| Service delivery and behaviour change | Service delivery systems should adapt to the risks of climate change to minimise the exposure of the population to system failure.<br>Service delivery mechanisms should be resilient.<br>User behaviours may need to change to help improve climate resilience |
| Environment and water resources | Data on water resources is needed, and should be used for risk analysis and planning, linked with climate predictions |
| Policy, strategy and planning | WASH plans and strategies should include climate change considerations |
| Institutional arrangements and capacity | Clarity needed about who is responsible for climate change aspects of WASH.<br>WASH institutions should have capacity to address climate change. |
| Co-ordination and integration | Processes for co-ordination should exist. And Climate Change should be part of WASH sector processes. |
| Financing | An assessment of the costs of climate change adaptation is needed. Priorities on risk management and adaptation need to be backed by additional money. |
| Monitoring | Should include tracking climate change threats |
| Accountability and regulation | There should be mechanisms to monitor progress towards commitments, and the information should be public |
| Gender and social inclusion | Different impacts of climate change on WASH should be understood and different groups involved in assessments and design of solutions |
| Government leadership | The Government at different levels needs to show leadership on climate resilience and WASH |
| Active, empowered people and communities | Communities can take their own adaptation measures. And they should be involved in decision-making and demand action on climate resilient WASH |

WaterAid (2021) https://washmatters.wateraid.org/publications/integrating-climate-resilience-with-wash-system-strengthening

Which actions would you prioritise to build WASH resilience in low-income urban communities like those in Western Kenya?

**Selected actions to build urban WASH resilience**

| Category of action | Examples of solutions |
|---|---|
| Preparing | • Nature-based solutions to reduce impact of flooding such as planted channel banks (biodykes), and planting in upper parts of the catchment<br>• Nature-based and hard infrastructure solutions to improve water storage and groundwater recharge<br>• Scheduled emptying of pit latrines and clearing drains of solid waste in key locations prior to flooding season |
| During an event | • Early Warning Systems and community response (moving to higher ground, ensuring key documents, possessions, valuable assets are safe)<br>• Support access to water purification. Ensure fair distribution of minimum water quantities to all neighbourhoods<br>• Boost access to handwashing with soap<br>• Promote responsible use of water during scarcity |
| Rebuilding | • Ensure support and access to finance or insurance for informal WASH enterprises<br>• Use feedback and accountability mechanisms to ensure good communication about repairs needed<br>• Encourage repairs and rebuilding of improved designs, or re-think locations with landlords and tenants<br>• Use monitoring data to capture impact, understand which services continued to operate safely, and learn lessons |

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