

Strengthening Climate-Responsive WASH Monitoring in Kenya: *Bridging Policy, Systems, and Data Gaps for Adaptive Governance*

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Why Climate-Responsive WASH Matters

- ❖ CC - intensifying water scarcity, flooding, and disease risks;
- ❖ Infrastructure -increasingly fragile under climate stress- WASH, Drainage, Roads etc.
- ❖ Climate hazards disrupt water availability, sanitation infrastructure, and hygiene practices;
- ❖ Floods contaminate water sources; droughts reduce service continuity;
- ❖ Weak monitoring limits early warning, preparedness, and response;
- ❖ Africa contexts face compounded vulnerability and capacity gaps;
- ❖ ***Monitoring is central to resilience, accountability, and adaptive governance***



Why Climate-Responsive WASH Matters

IMPACTs

The April-May 2024 floods, caused extensive devastation, causing 315 fatalities, displaced 101,132 households, and damaged vital infrastructure.

The situation has reached a critical point, with over 40,000 households losing homes and sanitation facilities.

Progressive policy environment:

- Kenya Vision 2030
- Climate Change Act
- National Water Policy, 2021
- Water Act, 2016
- National Environmental Policy (2013)
- County Integrated Development Plans (CIDPs)



Approach

- ❖ Key Informant Interviews (KIIs): MoWSI, NDOC, NDMA, KMD,, NEMA, County Governments, WRUAs, DP;
- ❖ Review relevant legislation, Climate change act etc.
- ❖ Institutional and Systems Analysis;
- ❖ CC impact assessments and hazard mapping aligned with IPCC projections and national climate strategies small scale;
- ❖ Monitoring Tools and Frameworks- digital monitoring platforms eg. mWater sector coordination,
- ❖ Joint Sector Reviews, climate-resilience frameworks (Climate-Resilient WASH and Climate Vulnerability and Capacity Assessment), and equity-oriented monitoring approaches;
- ❖ Comparative Analysis from the Global best practices;
- ❖ Analytical Framework and Synthesis.

Key Findings

- ❖ Institutional Fragmentation overlapping and unclear mandates exist between the Ministries and county authorities;
- ❖ Policy and Legal Gaps while several Acts exist, there is no integrated national flood management law linking all stakeholders under a common operational and accountability framework, coordination: Siloed sectoral data (water, health, climate);
- ❖ Financing Constraints limited, unpredictable, and fragmented funding for flood preparedness, with most resources channelled toward emergency response rather than prevention;
- ❖ Insufficient Climate-Proofing of WASH Infrastructure water and sanitation systems are not designed for climate extremes- Floods damage sanitation systems, while droughts reduce water availability and system reliability.
- ❖ Aging infrastructure, leaks, illegal connections, and limited monitoring persist;
- ❖ Limited adoption of smart technologies and real-time data systems - Limited real-time digital monitoring and visualization;
- ❖ Accountability: Weak citizen feedback and transparency/ Equity: Inadequate gender- and vulnerability-disaggregated data.

Recommendation

Actionable Road Map for Monitoring WASH & Climate Change

- ❖ **Legal & Institutional Harmonization:** Establish a single binding framework that aligns mandates, roles, and coordination between national, county, basin-level, and community institutions;
- ❖ **Integrated Planning & Infrastructure Development** embed disaster risk reduction in all infrastructure and land-use planning, including climate-adaptive drainage design, urban water retention systems, and nature-based solutions;
- ❖ **Data & Early Warning Systems:** Create a unified national hydrometeorological data platform linking KMD, WRA, NDMA, WRUAs, and County governments for real-time decision-making: Smart technologies-real time dash boards to report disruptions;
- ❖ **Sustainable Financing & Community Resilience:**Secure predictable funding streams for preparedness and resilience-building via the Public Finance Management framework; supplemented by donor and private sector investments- [How to attract Private Sector?](#)
- ❖ **Improve policy coherence, decentralize monitoring capacity, and institutionalize feedback loops to build adaptive and inclusive governance.**

County Level

- ❖ Capacity building: County engineers, WRUAs, NDOC officers, utility WASH Teams;
- ❖ Rapid/ regular WASH audits: Toilets, water points, drainage systems- informal settlements;
- ❖ Establish a central coordinating authority. Community committees , basin-level monitoring platforms and legal framework for flood-resilient WASH monitoring- able to promote climate-resilient sanitation as part of urban WASH planning;
- ❖ Upgrade urban drainage and sanitation systems to withstand floods-Climate-proof infrastructure: toilets, treatment plants, sewers, multiple water sources, renewable energy;
- ❖ Scale up nature-based solutions (wetlands, reforestation, green;
- ❖ Integrate Indigenous knowledge in climate resilience indicators into national, county and community level WASH monitoring and investment plans- routine activity;
- ❖ BGP - Kenya's WASH-related risk mapping is fragmented, outdated, and largely project-based, with weak legal backing and limited linkage to water points, sanitation facilities, and sewer systems;
- ❖ Institutional coordination in Kenya's WASH and flood-risk governance also lags behind international benchmarks.

Way Forward - Governance & Policy Integration Drafted Policy - Key Pillars



Policy Framework



Infrastructure Investment



Early Warning Systems

Key Takeaways

- ❖ Climate change threatens urban WASH, especially in informal settlements;
- ❖ Monitoring + adaptive governance = resilient sanitation systems;
- ❖ Equity & inclusion are central for climate-responsive WASH.
- ❖ ***The research reveals WASH infrastructure vulnerabilities to climate stress and proposes practical solutions for Kenya and Africa***







Thank You

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