

Background and Context

- Nepal is ranked as the 10th most vulnerable country to climate change between 2000 to 2019
- In September 2024, intense rainfall over just two days (27–28 September) resulted in widespread flooding and landslides, causing losses of NPR 3.55 billion (USD 26.44 million) to the water-supply sector alone
- WASH infrastructure is among the **most climate-affected sectors**.

Study Objectives

- Assess how **national climate frameworks** integrate climate-resilient WASH principles
- Examine **vertical coherence** from national to provincial and local levels
- Assess **preparedness and adaptation actions** of water-supply service providers

STUDY METHODOLOGY



Nepal's map indicating study area

Findings National Level

Document	Score	Summary
Nationally Determined Contribution (NDC) 3.0	6	Thematic Area: Health, Drinking Water, and Sanitation, Capacity Building on CR-WASH, Rainwater Harvesting, Spring Source Conservation and restoration, Groundwater monitoring, Groundwater Recharge, Climate -Resilient WASH Plans
National Adaptation Plan (NAP)-2021-2050	6	Health, Drinking Water, and Sanitation. Proposed Budget-Development of Climate Resilient and Inclusive WASH Service and Facilities through Building Capacities, Developing Institutions and Systems, Adopting Innovative Technologies and, extending Collaboration
Climate Change Policy 2019	3	Climate change effects on Water and Sanitation mentioned, adaptation related activities groundwater recharge
WASH Policy 2022	6	Focused on Climate Resilient WASH Infrastructure with focusing adaptation and Mitigation
Water and Sanitation Act 2023	6	Focused on Climate Resilient WASH Infrastructure with focusing adaptation and Mitigation
Water and Sanitation Guideline 2024	6	Focused on Climate Resilient WASH Infrastructure with focusing adaptation and Mitigation
Third National Communication	2	Public Health and WASH
WASH Sector Development Plan (2024-2043)	6	Climate Resilient Design for WASH, CR-Water Safety Plan, Separate Theme: Climate Challenges and Crisis Navigation, Well Defined CR-WASH Implementation process with cost
16th Year plan	6	Climate Resilient Communities Drinking water and sanitation: Ensure the availability of clean drinking water to all citizens. Keep all water sources separate from man-made wastes to protect the sources. Convert waste into money.

Findings National Level (Draft)

Document	Score	Summary
Province 1	2	WASH budget more focus on drinking water
Province 2	2	WASH budget more focus on drinking water
Province 3	2	WASH budget more focus on drinking water
Province 4	2	WASH budget more focus on drinking water
Province 5	2	WASH budget more focus on drinking water
Province 6	2	WASH budget more focus on drinking water
Province 7	2	WASH budget more focus on drinking water

Findings Local government level (WASH Budget and Programme)

Municipality	Water (Budget)	Sanitation (Budget)	Hygiene	CR-WASH n	Mitigation	Adaptation
Phidim Municipality						
Lahan Municipality						
Roshi Municipality						
Shuklagandaki Municipality						
Kaligandaki Rural Municipality						
Shubha Kalika Rural Municipality						
Bhajani Municipality						

Findings at Service Providers level

Service Provider	No. of HH	Supply per day	Structure insurance	AMP	Backup Supply (up to 72 hrs)	Mitigation Measures	Adaptation Measures
KUKL	450,000	1-2hr per week	No	No	No	Online Billing	N/A
NWSC-	6,454	11 hr/day	No	No	Yes	Online Billing	CR-WSP, Groundwater use, 9 water-level sensors
Hetauda Drinking Water Board	30,000	8-9 hr/day	No	Yes	Yes	Online Billing	Additional water sources
Jwalamukhi Rural WASH Board	2,793	4-5hr/day	No	Yes	No	Online Billing	Additional water sources
Pragatinagar-WSUC	5,580	24hr	No	No	Yes	Online Billing	Additional water sources
Dukuchhap-WSUC	707	24hr	Yes	Yes	Yes	Online Billing	Additional water sources

Conclusion

- National frameworks (NDC, NAPA, Climate Policy, WASH plans) strongly emphasize climate-resilient WASH, with focus on adaptation and mitigation.
- Service providers have initiated climate-responsive actions; these require scaling up.
- WASH is prioritized across federal, provincial, and local annual programmes, with water as a key focus area.

Recommendations

- Endorse national CR-WASH guidelines and strengthen capacity of WASH service providers for implementation.
- Revise WASH plans to integrate climate-resilience indicators.
- Introduce WASH infrastructure insurance and digital/online water tariff billing systems.
- Promote wastewater reuse, fecal sludge treatment and reuse, with strong monitoring and regulatory mechanisms.
- Operationalize national commitments (NDC, NAPA, Climate Policy) at local level through increased budgets and updated WASH design guidelines and provide capacity of local government in CR-WASH



WSUC's staff collecting the water meter at the household at Dukuchhap (Photo credit: Anand Gautam-WaterAid Nepal)

Key Message: Nepal's climate-resilient WASH commitments are strong; effective delivery requires better vertical coordination, stronger institutional capacity, and dedicated sub-national financing.