WASH SYSTEM STRENGTHENING

An implementation guide for local government

AGENDA FOR CHANGE

OXFAM

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CONTENTS

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AN IMPLEMENTATION GUIDE FOR LOCAL GOVERNMENTS

To strengthen WASH systems at the local level, local governments need a clear pathway to develop the institutions, capacities, processes, and mechanisms that underpin sustainable services. This Implementation Guide provides that pathway through a sequenced framework that translates eight conceptual "building blocks" into actionable steps.

WASH system strengthening has its complexities, as it deals with actors with different motivations, influencing power, and interests. Interconnectedness, evolution, and adaptiveness are its basic attributes; hence, the authors expect this framework to be a simplifying approach. This approach can evolve over time, and therefore reflection will be needed at certain time spans to assess the manual's relevance and effectiveness.

1. THE BUILDING BLOCKS OF A WASH SYSTEM

Given the complexity of WASH systems, practitioners and policymakers need tools to understand how these systems function and to identify where and how to intervene. One practical and widely used approach is the building blocks framework, which breaks down the system into key governance functions that must be in place to ensure effective and sustainable service delivery.

Each building block represents a critical sub-system within the broader WASH system. While different organizations use slightly different frameworks, most converge around eight common building blocks. This guide adapts these eight building blocks for Nepal, drawing on the author's experience in Nepal's WASH sector and on international frameworks from IRC, UNICEF, and Agenda for Change.

Figure 1: Eight Essential Building Blocks of a WASH System

A. Institutional Arrangement

It refers to the formal structures and organizations responsible for WASH sector functions. This includes service authorities, service providers, asset creators, regulators, and agencies involved in planning, financing, monitoring, and capacity building.

B. Regulation

It ensures that service providers meet performance standards and that users receive reliable, safe, and equitable services. Accountability extends beyond formal regulation to include transparency, public engagement, and mechanisms that enable users to hold providers and authorities accountable. Together, these elements uphold rights, manage risks, and maintain service quality.

C. Planning

It involves setting clear goals, prioritizing interventions, and determining the resources and timelines required to deliver and sustain WASH services. Effective planning must be data-driven, inclusive, and responsive to changing contexts. Strategic and investment planning typically occurs at national and regional levels, while operational and asset management planning is conducted locally. Coordination between levels is essential to align priorities, timelines, and funding streams.

D. Water Resource Management

Water resource management involves safeguarding the availability and quality of water sources, ensuring sustainable use, and protecting ecosystems. It connects WASH with broader environmental management and land-use planning. This building block addresses catchment protection, source protection, pollution control, water resource allocation, and climate resilience, requiring cross-sectoral coordination beyond the WASH domain.

E. Service Delivery & Infrastructure

Infrastructure encompasses not only the physical assets required to deliver water, sanitation, and hygiene services, such as water supply systems, toilets, treatment facilities, and handwashing stations, but also the framework of services that ensures their operation. This block therefore covers construction, as well as operation, maintenance, and rehabilitation. Infrastructure and its associated service delivery chain must be appropriate to local conditions, resilient to climate risks, and designed for long-term functionality.

F. Learning and Adaptation

Learning and adaptation refer to the system's ability to reflect on performance, incorporate new knowledge, and adjust strategies and behaviors in response to change. This includes formal mechanisms such as reviews, evaluations, and knowledge exchange, as well as informal processes like peer learning and innovation. A culture of learning is essential for resilience and continuous improvement.

G. Financing

It refers to the identification, mobilization, allocation, and management of financial resources required to cover the full life-cycle costs of WASH services. This includes capital expenditure, operation and maintenance, system strengthening, and both direct and indirect support costs. Sustainable financing should draw on a blended approach, combining public budgets, user fees, transfers, and potentially credit or private investment.

H. Monitoring & Evaluation

Monitoring involves the systematic collection, analysis, and use of data to assess the functionality, coverage, quality, and equity of WASH services. It enables evidence-based decision-making and supports adaptive management. Effective monitoring must be routine, reliable, and integrated across all levels, rather than limited to project-driven reporting.

2. THE IMPLEMENTATION GUIDE FRAMEWORK

This guide provides a framework for local governments to operationalize the eight building blocks of WASH system strengthening. The framework identifies and organizes activities within each building block, enabling municipalities to understand, plan, prioritize, implement, and monitor their plans systematically.

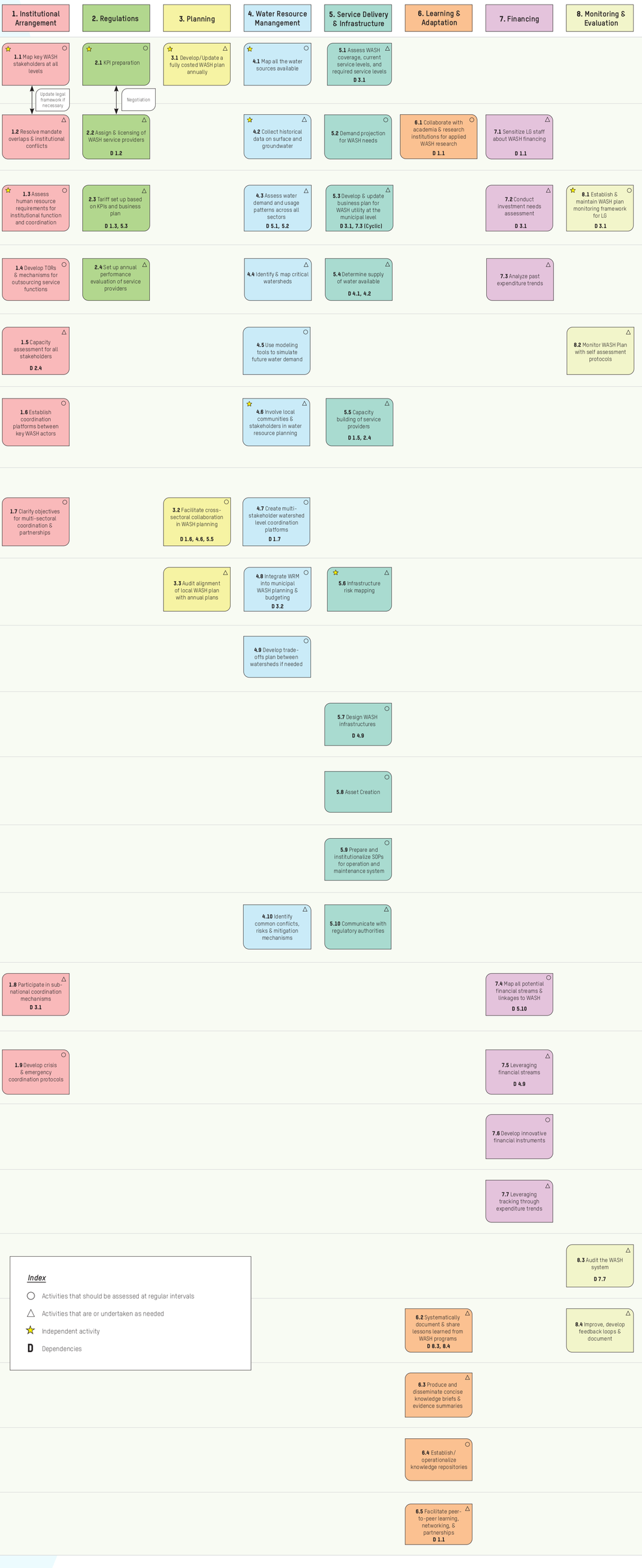
The framework is structured around the principle of strengthening each building block incrementally. For each block, activities are identified and sequenced in a logical progression. These activities are then interlinked across building blocks, enabling local governments to understand how progress in one area, such as finance, supports or depends on progress in another, such as institutions. This sequencing provides both vertical logic, within a block, and horizontal logic, across blocks, ensuring that efforts are coordinated over time.

HOW THE FRAMEWORK IS PRESENTED

The framework is presented in a tabular format:

- Rows represent stages of implementation. Activities in the first row are foundational and should generally be completed before moving to subsequent rows, reflecting a stepwise progression.
- Columns represent the eight building blocks, showing which dimension of the WASH system each activity addresses. This enables local governments to identify strengths and gaps during a self-assessment.
- A star symbol within an activity block represents an independent activity.
- Symbols, other than the star, indicate frequency:
  - o A triangle denotes activities that should be assessed at regular intervals, typically once a year, and repeated if needed.
  - o A circle denotes activities that are one-off in nature or undertaken as needed.
- Arrows indicate strong linkages between activities, showing where sequencing or coordination is required.

3. FRAMEWORK


1. Institutional Arrangement
2. Regulations
3. Planning
4. Water Resource Manangement
5. Service Delivery & Infrastructure
6. Learning & Adaptation
7. Financing
8. Monitoring & Evaluation
1.1 Map key WASH stakeholders at all levels
Update legal framework if necessary
2.1 KPI preparation
Negotiation
3.1 Develop/Update a fully costed WASH plan annually
4.1 Map all the water sources available
5.1 Assess WASH coverage, current service levels, and required service levels
D 3.1
1.2 Resolve mandate overlaps & institutional conflicts
2.2 Assign & licensing of WASH service providers
D 1.2
4.2 Collect historical data on surface and groundwater
5.2 Demand projection for WASH needs
6.1 Collaborate with academia & research institutions for applied WASH research
D 1.1
7.1 Sensitize LG staff about WASH financing
D 1.1
1.3 Assess human resource requirements for institutional function and coordination
2.3 Tariff set up based on KPIs and business plan
D 1.3, 5.3
4.3 Assess water demand and usage patterns across all sectors
D 5.1, 5.2
5.3 Develop & update business plan for WASH utility at the municipal level
D 3.1, 7.3 (Cyclic)
7.2 Conduct investment needs assessment
D 3.1
8.1 Establish & maintain WASH plan monitoring framework for LG
D 3.1
1.4 Develop TORs & mechanisms for outsourcing service functions
2.4 Set up annual performance evaluation of service providers
4.4 Identify & map critical watersheds
5.4 Determine supply of water available
D 4.1, 4.2
7.3 Analyze past expenditure trends
1.5 Capacity assessment for all stakeholders
D 2.4
4.5 Use modeling tools to simulate future water demand
8.2 Monitor WASH Plan with self assessment protocols
1.6 Establish coordination platforms between key WASH actors
4.6 Involve local communities & stakeholders in water resource planning
5.5 Capacity building of service providers
D 1.5, 2.4
1.7 Clarify objectives for multi-sectoral coordination & partnerships
3.2 Facilitate cross-sectoral collaboration in WASH planning
D 1.6, 4.6, 5.5
4.7 Create multi-stakeholder watershed level coordination platforms
D 1.7
3.3 Audit alignment of local WASH plan with annual plans
4.8 Integrate WRM into municipal WASH planning & budgeting
D 3.2
5.6 Infrastructure risk mapping
4.9 Develop trade-offs plan between watersheds if needed
5.7 Design WASH infrastructures
D 4.9
5.8 Asset Creation
5.9 Prepare and institutionalize SOPs for operation and maintenance system
4.10 Identify common conflicts, risks & mitigation mechanisms
5.10 Communicate with regulatory authorities
1.8 Participate in sub-national coordination mechanisms
D 3.1
7.4 Map all potential financial streams & linkages to WASH
D 5.10
1.9 Develop crisis & emergency coordination protocols
7.5 Leveraging financial streams
D 4.9
7.6 Develop innovative financial instruments
7.7 Leveraging tracking through expenditure trends
8.3 Audit the WASH system
D 7.7
Index
Activities that should be assessed at regular intervals
Activities that are or undertaken as needed
Independent activity
D Dependencies
6.2 Systematically document & share lessons learned from WASH programs
D 8.3, 8.4
8.4 Improve, develop feedback loops & document
6.3 Produce and disseminate concise knowledge briefs & evidence summaries
6.4 Establish/ operationalize knowledge repositories
6.5 Facilitate peer-to-peer learning, networking, & partnerships
D 1.1

BUILDING BLOCK: INSTITUTIONAL ARRANGEMENT

ACTIVITY 1.1

Map Key WASH Sector Stakeholders at All Levels

Stakeholder mapping in WASH is the systematic process of identifying and categorizing all actors who influence, deliver, regulate, or use WASH services within a municipality across all building blocks. This process helps identify gaps, overlaps, and coordination pathways, forming the basis for planning, accountability, and system strengthening.

For consistency, local governments should classify stakeholders into four core groups—policymakers, service providers, consumers/users, and market forces—and record their roles, responsibilities, interests, capacities, and communication linkages. This classification provides a shared understanding of "who does what" in the WASH sector and lays the foundation for collaboration, accountability, and evidence-based decision-making.

Stakeholder mapping should be updated periodically to reflect institutional changes, emerging actors, and shifts in policy or service delivery arrangements. Where relevant, this activity should also include reviewing and updating legal frameworks after resolving mandate overlaps and institutional conflicts (see Activity 2).

Purpose
To identify all influential actors required to strengthen the WASH system based on the current status.

Dependencies
Independent

Tools
Consultative workshops, Accountability Triangle, Interest–Influence diagrams

Time/Capacity
- Time: 1–2 sessions (less than a day)
- Capacity: Facilitator must have completed WASH System Strengthening Training of Trainers (ToT) and possess strong facilitation skills

ACTIVITY 1.2

Resolve mandate overlaps and institutional conflicts

Resolving mandate overlaps refers to the process through which local governments analyze, clarify, and harmonize the roles and responsibilities of different WASH stakeholders to eliminate duplication, competition, and conflict. This ensures that every actor operates within a clearly defined mandate, strengthening accountability, efficiency, and service quality. Where overlaps or conflicts are identified, the relevant legal frameworks should be reviewed and updated, if necessary.

Purpose

To reduce duplication, close service gaps, and create a clear accountability framework so citizens and institutions know who is responsible for what in the WASH system.

Dependencies

Depends upon Activity 1

Tools

Legal/policy review (Local Government Operation Act, Sector Development Plan 2023–2043, municipal by-laws), Existing TORs review, Municipal WASH Mandate Matrix, Multi-stakeholder dialogue/workshops

Time/Capacity

- Time: 2–3 sessions (1–2 days)
- Capacity: Facilitators must understand WASH policies, local government governance mandates, and possess negotiation and mediation skills

ACTIVITY 1.3

Assess human resource requirements for institutional function and coordination

Human resource assessment refers to the process of analyzing the need, availability, distribution, skills, and performance of all WASH-related personnel within a municipality. It ensures local governments have the right number of people with the right skills in the right positions, while using outsourcing strategically to fill capacity gaps.

Purpose

To identify staffing gaps, skill shortages, and opportunities for outsourcing or capacity building, ensuring that the municipality can deliver sustainable and accountable WASH services.

Dependencies

Independent

Tools

Human resource inventory template (covering in-house, community, and outsourced staff), skills and capacity checklist, gap analysis and workload ratios (e.g., number of schemes per engineer, sanitation worker-to-population ratio)

Time/Capacity

- Time: 2–3 sessions (1–2 days)
- Capacity: Facilitators must understand municipal staffing structures, human resource management (job type, grade, incentives, appraisal, etc) , and WASH service delivery models, with support from human resource/administration staff

ACTIVITY 1.4

Develop Terms of Reference (TORs) and mechanisms for outsourcing service functions

Developing a Terms of Reference (TOR) refers to preparing a clear, structured document that defines the mandate, objectives, scope, roles and responsibilities, deliverables, and accountability mechanisms for any WASH-related assignment, committee, working group, or outsourced service provider within a municipality. A good TOR ensures that all actors understand their responsibilities and expected outputs in strengthening the WASH system.

Purpose

To provide clarity and accountability for both internal staff and outsourced partners, avoiding misunderstandings, ensuring alignment with local government mandates, and creating a basis for monitoring performance against agreed roles and deliverables.

Dependencies

Depends upon Activity 3

Tools

Standard TOR template (covering background, mandate, objectives, scope, roles, deliverables, timelines, reporting), sample TORs from Ministry of Water Supply (MoWS), Department of Water Supply and Sewerage Management (DWSSM), or previous WASH projects, stakeholder validation workshops to review draft TORs

Time/Capacity

- Time: 1–2 sessions (less than a day for a single TOR; longer if multiple TORs are required)
- Capacity: Facilitators must have strong writing skills, familiarity with local government WASH mandates and procurement processes, and prior experience with TOR development

ACTIVITY 1.5

Capacity assessment for all stakeholders

Capacity assessment in WASH refers to the structured process of analyzing municipality and its human resource's ability against their respective TORs to assess, plan, implement, monitor, and sustain WASH services. It should also look at relevant stakeholders and look beyond human resource numbers to include systems, resources, leadership, and the enabling environment, identifying strengths, weaknesses, and areas for improvement.

Purpose

To understand whether the local government and its partners have the mandate, skills, mechanism, and resources needed to deliver WASH services effectively, and to generate evidence for designing capacity development plans or deciding when outsourcing is required.

Dependencies

Depends upon Activity 4 and Activity 4 (Regulation Block)

Tools

Institutional Capacity Assessment Framework (covering governance, finance, technical, social inclusion), scorecards and self-assessment checklists (aligned with Sector Development Plan 2023–2043), SWOT analysis of WASH system functions, stakeholder workshops for validation

Time/Capacity

- Time: 2–3 sessions (2–3 days depending on depth)
- Capacity: Facilitators must be trained in organizational assessment, WASH system strengthening, and participatory facilitation techniques, with support from municipal officials and service providers

ACTIVITY 1.6

Establish Coordination Platforms Between Key WASH Actors

Establishing a coordination platform involves creating and institutionalizing a formal mechanism where policymakers, service providers, consumers/users, and market forces regularly meet to share information, align plans, resolve conflicts, and monitor progress in the WASH sector. This platform should operate in two circles: the inner circle (e.g., a working group) focuses on inter-sector coordination and meets more frequently or as needed, while the extended circle (e.g., a Municipal WASH Forum) convenes annually.

Purpose

To strengthen collaboration, avoid duplication, and ensure all stakeholders contribute to a common WASH vision. The platform enhances accountability, supports joint planning, and creates space for citizen voices and market actors in municipal decision-making.

Dependencies

Depends on Activity 4

Tools

Terms of Reference for the coordination platform, stakeholder mapping and mandate matrix (from Activities 1 and 2), meeting guidelines and templates (agenda, minutes, action tracker), digital tools for coordination (e.g., National WASH Management Information System [NWASH-MIS] dashboards, group messaging apps)

Time/Capacity

- Time: Initial setup requires 2–3 sessions (1–2 days) to design and agree on structure; ongoing coordination requires quarterly or biannual meetings
- Capacity: Facilitator must have strong convening skills, neutrality, and knowledge of WASH governance. Municipal leadership should chair the platform, supported by a dedicated secretariat. Technical coordination and the inner circle will function at their current technical capacity

ACTIVITY 1.7

Clarify objectives for multi-sectoral coordination and partnerships

Clarifying objectives for multi-sectoral coordination and partnerships refers to defining shared goals, roles, and collaboration priorities across sectors, especially climate, health, and education, to ensure aligned planning and joint action in WASH service delivery.

Purpose

To enhance coherence, reduce overlap, and strengthen integrated service outcomes through coordinated efforts among key sectors.

Dependencies

Depends upon Activity 6

Tools

Human resource inventory template (covering in-house, community, and outsourced staff), skills and capacity checklist, gap analysis and workload ratios (e.g., number of schemes per engineer, sanitation worker-to-population ratio)

Time/Capacity

- Incorporated during annual planning; requires 1–2 days of joint discussions.
- Capacity: Municipal leadership, sector focal persons and facilitation support for consensus-building.

ACTIVITY 1.8

Participate in sub-national coordination mechanisms

Participation in sub-national coordination mechanisms refers to the engagement of municipalities in provincial and inter-municipal WASH forums, Joint Sector Reviews (JSRs), and working groups convened by federal or provincial bodies. These mechanisms ensure alignment of local WASH plans and budgets with national priorities (Sector Development Plan 2024–2043, 16th Periodic Plan) and provide access to technical backstopping.

Purpose

To represent municipal priorities in higher-level planning, access resources, and coordinate on cross-boundary issues such as watershed management and disaster response.

Dependencies

Municipal WASH coordination platform (Activity 6) and an updated WASH Plan (Planning Activity 1)

Tools

Provincial WASH coordination committee Terms of Reference (mandated by the Water Supply and Sanitation Act 2022), NWASH-MIS dashboards for evidence sharing at provincial and federal levels

Time/Capacity

- 2–3 meetings annually (1–3 days each)
- Capacity: Requires a WASH focal person or elected representative with policy knowledge and reporting skills, with budget allocated for travel and preparation

ACTIVITY 1.9

Capacity assessment for all stakeholders

Developing crisis and emergency coordination protocols refers to preparing clear procedures for how the municipality, provincial agencies, service providers, and communities will coordinate during emergencies such as floods, landslides, droughts, epidemics, or earthquakes. Protocols define roles, communication channels, and resource mobilization mechanisms to protect and quickly restore WASH services. This aligns with the Disaster Risk Reduction and Management Act 2017 and the Water Supply and Sanitation Act 2022, which mandate preparedness and resilience in local service delivery.

Purpose

To ensure WASH services remain functional during crises, reduce service disruption, and enable rapid recovery through pre-agreed coordination mechanisms.

Dependencies

Depends upon Activity 8

Tools

Local Disaster and Climate Resilience Plan (LDCRP), Emergency Standard Operating Procedures (SOPs), contact lists of provincial/federal support agencies, simulation and tabletop exercises

Time/Capacity

- Time: Initial drafting requires 2–3 sessions (2–3 days); updates are required annually or after major emergencies
- Capacity: Requires the municipal WASH desk, Local Disaster Management Committee, and service providers trained in disaster response and coordination

BUILDING BLOCK: REGULATION

ACTIVITY 2.1

KPI preparation

Developing a standardized set of Key Performance Indicators (KPIs) refers to identifying indicators that measure service coverage, adequacy, water quality, reliability, financial sustainability, equity, customer satisfaction of WASH service providers etc. KPIs must be jointly agreed by authority and service provider and should be aligned with WASH Regulation 2025 and integrated with NWASH-MIS reporting modules.

Purpose

To provide a common yardstick for monitoring and comparing service provider performance, ensuring accountability and compliance with national regulation.

Dependencies

Independent

Tools

KPI annexes from WASH Regulation 2025, NWASH-MIS reporting and dashboards, global benchmarking references (e.g., ESAWAS, International Benchmarking Network for Water and Sanitation Utilities (IBNET)) adapted to Nepal

Time/Capacity

- Time: One dedicated training on KPI in WASH Regulation 2025; 1 day workshop on KPI localization for municipality
- Capacity: Local government WASH focal person, service providers, and provincial technical backstopping

ACTIVITY 2.2

Assign and licensing of WASH service providers

Assigning and licensing WASH service providers refers to formalizing the roles, service areas, and responsibilities of Water Users and Sanitation Committees (WUSCs), utilities, and/or private vendors. Licensing may be updated as required.

Purpose

To eliminate overlapping mandates, establish accountability, and give providers a legal mandate to operate under agreed conditions.

Dependencies

Depends upon Activity 1 and Activity 2 (Institutional Arrangement Block)

Tools

Licensing guidelines under WASH Regulation 2025, service area maps, memoranda of understanding (MoUs) or contracts with service providers

Time/Capacity

- Time: 1–2 months for preparation, consultation, and issuance

ACTIVITY 2.3

Tariff setup based on KPIs and business plan

Tariff setup refers to setting water tariffs and service fees that are evidence-based, linked to performance indicators, and aligned with licensing agreements of service providers. Tariffs and the setting process must comply with WASH Regulation 2025 provisions.

Purpose

To ensure tariffs are scientific, affordable, cost-reflective, equitable, and performance-oriented, balancing financial sustainability with user protection.

Dependencies

Depends upon Activity 1 and Activity 2. Also depends upon Activity 3 (Institutional Arrangement Block) and Activity 3 (Service Delivery and Infrastructure Block)

Tools

Tariff-setting guidelines from the Drinking Water Tariff Fixation Commission, business plan, financial models for operation and maintenance (O&M) cost recovery and cross-subsidization, KPI-linked tariff adjustment formulas

Time/Capacity

- Time: Six weeks (data analysis, stakeholder hearings, approval)
- Capacity: Finance section staff/ Consultant with tariff modeling and business plan development (of WASH utilities) knowledge, supported by planning/legal units where available.

ACTIVITY 2.4

Set up annual performance evaluation of service providers

Setting up annual performance evaluation refers to conducting yearly reviews of providers based on agreed set of KPIs targets (per WASH Regulation 2025), business plans, annual plans, and tariffs, using both self-reports and municipal/ provincial verification.

Purpose

To ensure providers are assessed consistently against agreed set of KPIs and to guide tariff adjustments, license renewals, and capacity support.

Dependencies

Depends upon Activity 1 and Activity 3

Tools

Annual performance scorecards, audit templates (technical, financial, social), NWASH-MIS dashboards for KPI tracking

Time/Capacity

- Time: Annual; 3–5 days for evaluation and reporting
- Capacity: Evaluation team comprising local government WASH focal point, provincial agencies, and external auditors if needed

BUILDING BLOCK: PLANNING

ACTIVITY 3.1

Develop/Update a fully costed WASH plan annually

Developing or updating a fully costed WASH plan refers to preparing a comprehensive, evidence-based municipal WASH plan each year, aligned with national and provincial policies and local priorities, with detailed cost estimates for both capital and recurrent expenditures. The plan must be generated and updated through the National WASH Management Information System (NWASH-MIS) platform, which ensures consistency, comparability, and integration with national monitoring and reporting systems. During the planning process, representation of marginalized groups must also be ensured.

Purpose

To ensure that WASH plans serve as the basis for annual budgeting, resource mobilization, and performance tracking.

Dependencies

Independent

Tools

WASH planning guidelines, NWASH-MIS planning module and data dashboards, municipal WASH plan template (aligned with Sector Development Plan 2023–2043), participatory planning workshops with stakeholders, social inclusion matrix, stakeholder participation records

Time/Capacity

- Time: 5–7 days annually (including NWASH-MIS updates, workshops, and validation)
- Capacity: Planning staff, finance officers, WASH desk, and technical experts. Training in NWASH-MIS use and cost modeling is essential

ACTIVITY 3.2

Facilitate cross-sectoral collaboration in WASH planning

Cross-sectoral collaboration in WASH planning refers to the process of engaging health, education, environment, urban development, and disaster/climate sectors in joint planning to ensure WASH is integrated into broader municipal priorities and services. NWASH-MIS outputs (coverage gaps, functionality data, and investment needs) provide the evidence base for cross-sectoral dialogue.

Purpose

To maximize resources, avoid fragmentation, and ensure WASH contributes to wider health, education, climate resilience, and social inclusion goals.

Dependencies

Depends upon Activity 1, Activity 6 (Institutional Arrangement Block), Activity 5 (Service Delivery & Infrastructure Block), and Activity 6 (Water Resources Management Block)

Tools

NWASH-MIS reports for baseline and sectoral entry points, multi-sectoral planning workshops, sectoral consultations, joint meeting minutes, accountability triangle framework (policy makers, service providers, users), integration checklists (health facilities, schools, environment, disaster preparedness)

Time/Capacity

- Time: 2–3 days annually during the municipal planning cycle
- Capacity: Strong facilitation, cross-sectoral negotiation skills, and leadership commitment from municipal executives

ACTIVITY 3.3

Audit alignment of local WASH plan and annual plan

Auditing alignment refers to reviewing whether the approved WASH plan (developed through NWASH-MIS) is fully integrated into the municipality's Annual Plan and Budget, and checking if planned priorities, targets, and costs are reflected in the official fiscal documents.

Purpose

To ensure WASH priorities are not sidelined during the budget approval process and that commitments in WASH plans are backed by financial allocations.

Dependencies

Depends upon Activity 1 and Activity 2

Tools

Alignment checklist (WASH plan from NWASH-MIS vs. municipal Annual Plan), budget tracking tools, narrative records, audit or peer review by provincial/federal regulatory bodies, citizen oversight through municipal hearings

Time/Capacity

- Time: Annually, before budget approval; duration 1–2 days
- Capacity: Finance and planning staff, WASH desk focal persons. Independent auditors or peer reviewers may be engaged

BUILDING BLOCK: WATER RESOURCE MANAGEMENT (WRM)

ACTIVITY 4.1

Map all the water sources available

Identifying water sources refers to mapping and documenting all drinking water, irrigation, and multipurpose water sources (springs, wells, rivers, ponds, reservoirs) within the municipality. However, mapping should also include users of the sources as in some cases the user may be of different municipality. If user of the municipality depends on water source from another municipality, it should also be mapped and noted.

Purpose

To establish a baseline inventory of water availability.

Dependencies

Independent

Tools

Source inventory forms, Geographic Information System (GIS) maps, ward-level consultations

Time/Capacity

- Time: 2–3 days per ward
- Capacity: Local government engineers and ward staff with community input

ACTIVITY 4.2

Collect historical data on surface and groundwater

Collection of historical data refers to gathering past records on water flow, rainfall, aquifer levels, and seasonal variability. It should start with basic, local government–friendly methods (manual logs, community recall, government records) and gradually progress to information technology-based tools (remote sensing, automated loggers, GIS dashboards).

Purpose

To understand long-term water availability trends and identify risks.

Dependencies

Independent

Tools

Local government archives, Ministry of Water Supply (MoWS) and Department of Hydrology and Meteorology (DHM) data, Water and Energy Commission Secretariat (WECS) data , Department of Irrigation data, hydrogeological surveys, ward-level participatory timelines, digital sensors

Time/Capacity

- Time: Initial compilation one week; advanced IT methods 1–3 months
- Capacity: Hydrogeologists who can do watershed modelling, Enumerators with discharge measurement ability, Other technical backstopping required based on technology used.

ACTIVITY 4.3

Assess water demand and usage patterns across all sectors

Assessing water demand and usage patterns refers to estimating current and projected water needs for domestic, agricultural, industrial, and ecological uses. It is recommended to assess overall water demand at the municipal level and not just drinking water, if possible.

Purpose

To match water supply with demand and prevent over-extraction.

Dependencies

Depends upon Activities 1 and Activity 2. Also, depends upon Activity 1 and Activity 2 (Service Delivery & Infrastructure)

Tools

Household surveys, NWASH-MIS demand data, water accounting and water balance templates

Time/Capacity

- Time: 1–2 weeks
- Capacity: Requires enumerators, WASH desk staff, and technical support

ACTIVITY 4.4

Identify & map critical watersheds

Identifying and mapping critical watersheds refers to locating and mapping key recharge zones, river sheds, and spring catchments vital for municipal water supply.

Purpose

To protect ecosystems that sustain long-term water security.

Dependencies

Depends upon Activity 1 and Activity 3

Tools

GIS and remote sensing, participatory mapping, watershed modelling tools, springshed management (for smaller system)

Time/Capacity

- Time: 1–2 weeks
- Capacity: Enumerators, Hydrogeologist who can do watershed modelling, GIS specialist with community validation

ACTIVITY 4.5

Use modelling tools to simulate future water demand

Modeling and simulating future water demand involves integrating hydrological and demand-side models to assess how water availability and consumption will evolve under different climate, land-use, and socio-economic scenarios. Hydrological models simulate flows and recharge, while demand models estimate future water requirements across domestic, agricultural, and industrial sectors.

Purpose

To guide evidence-based decision-making for sustainable extraction and investment.

Dependencies

Depends upon Activity 1, Activity 3, and Activity 4

Tools

Water Evaluation and Planning (WEAP), Soil and Water Assessment Tool (SWAT), DHM datasets, scenario-building workshops, other demand simulating tools.

Time/Capacity

- Time: 2 weeks
- Capacity: Requires external experts and national/provincial backstopping

ACTIVITY 4.6

Involve local communities and stakeholders in water resource planning

Involving local communities and stakeholders in water resource planning refers to ensuring communities, including indigenous groups and marginalized users, participate in WRM decision-making. In some cases, users or groups may be extended beyond administrative boundary depending upon the local scenario.

Purpose

To create equitable, socially inclusive plans that reflect all user needs.

Dependencies

Independent

Tools

Participatory Rural Appraisal (PRA) methods, citizen forums, community mapping, social inclusion checklists

Time/Capacity

- Time: 2–3 days per watershed
- Capacity: Requires trained facilitators

ACTIVITY 4.7

Create multi-stakeholder watershed level coordination platforms

Multi-stakeholder watershed coordination platforms refer to forums that bring together local governments, Water Users and Sanitation Committees (WUSCs), farmers, private sector, non-governmental organizations (NGOs), and government agencies to coordinate WRM actions. This should be at the watershed level and is different from general WASH coordination group. This platform integrates multiple local government and CSOs in a watershed. In an ideal situation, this platform will help to generate watershed plan that informs WASH plan in the future.

Purpose

To reduce conflicts, pool resources, and align interventions across stakeholders in a watershed, but different administrative boundary or different water use groups.

Dependencies

Depends upon Activity 1 and Activity 4.
Also depends upon Activity 7 (Institutional Arrangement Block)

Tools

Terms of Reference for WRM forum, regular meetings, coordination dashboards.

Time/Capacity

- Time: Setup requires 2–3 days; ongoing requires quarterly meetings
- Capacity: Local government facilitators, stakeholder representatives, and technical support

ACTIVITY 4.8

Integrate WRM into municipal WASH planning and budgeting

Integrating Water Resources Management (WRM) in WASH planning and budgeting refers to embedding water resource availability, demand, and protection priorities into the annual WASH plan (via NWASH-MIS).

Purpose

To ensure WASH planning is supply-aware and climate-resilient.

Dependencies

Activity 1 and Activity 2 (Planning Block)

Tools

NWASH-MIS planning module, municipal WASH plan templates.

Time/Capacity

- Time: Integrated annually; 1–2 days added during the planning cycle.
- Capacity: Municipal planning team and WASH focal persons with basic NWASH-MIS competencies.

ACTIVITY 4.9

Develop trade-off plans between watersheds

Developing trade-off plans between watersheds refers to creating systems to quantify and balance trade-offs between competing water uses (domestic vs. agriculture vs. industry vs. environment).

Purpose

To make transparent, fair, and evidence-based decisions on allocation.

Dependencies

Activity 1, Activity 4, and Activity 5

Tools

Water balance sheets, trade-off scorecards, decision-support models, joint meetings.

Time/Capacity

- Time: Advanced stage; requires technical expertise and data integration over months.
- Capacity: Technical experts in hydrology/WRM, cross-sectoral coordination, and municipal leadership for decision-making.

ACTIVITY 4.10

Identify conflicts, risks, and mitigation mechanisms

Identifying conflicts, risks, and mitigation mechanisms refers to proactively identifying water-related conflicts (e.g., upstream vs. downstream users), risks (climate, over-extraction, pollution), and designing mitigation strategies.

Purpose

To strengthen resilience, equity, and conflict management in WRM.

Dependencies

Activity 1, Activity 4, Activity 6, and Activity 7

Tools

Risk assessment matrix, conflict mapping, mediation/negotiation frameworks.

Time/Capacity

- Time: Ongoing; requires LG facilitation, stakeholder buy-in, and possibly third-party mediation.
- Capacity: Local government facilitation capacity and access to mediation expertise.

BUILDING BLOCK: SERVICE INFRASTRUCTURE AND DELIVERY

ACTIVITY 5.1

Assess WASH coverage, current service levels, and required service levels

Assessing WASH coverage, current service levels, and required service levels refers to evaluating the existing service coverage (population served), quality, reliability, and comparing these with the required/agreed service levels (safely managed water, fecal sludge management [FSM], solid waste, hygiene) as per the Sector Development Plan (SDP) 2023–2043 (draft) and WASH Regulation 2025.

Purpose

To identify gaps between current and required services, guiding infrastructure planning.

Dependencies

Depends upon Activity 1 (Planning Block)

Tools

NWASH-MIS coverage data, household and facility surveys, Joint Monitoring Programme (JMP) service ladders, WASH plan

Time/Capacity

- Time: 2–3 weeks
- Capacity: Requires trained enumerators, local government WASH desk, and provincial technical support

ACTIVITY 5.2

Demand projection for WASH needs

Demand projection refers to estimating future service demand based on population growth, urbanization, industrial needs, and climate resilience considerations.

Purpose

To plan infrastructure that meets future demand, not only current gaps.

Dependencies

Depends upon Activity 1

Tools

Population projection models, National Water Supply Design Guideline, NWASH-MIS demographic data, demand forecasting software

Time/Capacity

- Time: 2 days
- Capacity: Requires planners, statisticians, and local government technical staff

ACTIVITY 5.3

Develop and update business plan for WASH utility at the municipal level

Developing and finalizing a business plan for the municipal WASH utility involves preparing a comprehensive financial and operational roadmap to ensure sustainable and equitable service delivery. The business plan defines service objectives, investment requirements, tariff requirements and other revenue streams, cost-recovery strategies, and performance improvement targets. It integrates financial projections, tariff modeling, and investment planning to guide the utility toward long-term viability and alignment with national WASH Financing and Regulation Frameworks. This activity is primarily the responsibility of the service provider, with support from the local government during the infancy stage.

Purpose

To establish a financially sound and operationally viable roadmap for the municipal WASH utility, ensuring that WASH services are sustainable, affordable, and aligned with national and municipal financing frameworks.

Dependencies

Depends upon Activity 2. Also depends upon Activity 1 (Planning Block). Cyclic and iterative dependency on Activity 3 (Financing Block)

Tools

Business plan templates; financial projection models (CapEx, OpEx, CapManEx); tariff simulation and cost-recovery tools; NWASH-MIS financial modules; utility performance benchmarks (IBNET, ESAWAS); and Agenda for Change Financing Block guidance materials.

Time/Capacity

- Time: 10-12 days (including consultation and validation)
- Capacity: Municipal finance staff, WASH utility management team, and technical specialists in finance and engineering

ACTIVITY 5.4

Determine supply of water available

Determining the supply of water available refers to assessing available water resources and infrastructure capacity, linked with WRM activities such as source identification, watershed mapping, and modeling.

Purpose

To ensure service infrastructure design is realistic and sustainable, matching supply with projected demand.

Dependencies

Depends upon Activity 1 and Activity 2. Also depends upon Activity 1 and Activity 2 (Water Resources Management Block)

Time/Capacity

- Time: 1–2 weeks
- Capacity: Requires engineers, watershed modeler, hydrogeologist and WRM specialists

Tools

For groundwater – Monitoring borewells for aquifer levels (both static and dynamic).
For surface and sub-surface flow – Use discharge calculation approaches (actual), and for multiple uses of water throughout the municipality, use the water balance tool.

ACTIVITY 5.5

Capacity building of service providers

Capacity building of service providers refers to structured programs that strengthen providers' technical, managerial, and compliance capacity to meet KPIs under WASH Regulation 2025 and fulfill licensing conditions. This includes facilitative regulation, mentoring, and performance-based grants. During the infancy stage of a service provider, this responsibility lies with the regulator.

Purpose

To convert regulation into improvement pathways, enabling providers to enhance service delivery while being rewarded for meeting or exceeding performance targets.

Dependencies

Depends upon Activity 5 (Institutional Arrangement Block) and Activity 4 (Regulation Block)

Time/Capacity

- Time: Annual capacity plan refreshed after performance evaluations; trainings quarterly, each lasting 2–3 days
- Capacity: Requires local government WASH focal person

Tools

SWOT analysis (from business plan), capacity development plan linked to KPI gaps, training and mentoring modules (2–3 days per area such as O&M, water safety plans, fecal sludge management, financial management, customer care, gender equality and social inclusion (GESI), etc.), performance improvement plans (PIPs) issued after evaluations, performance-based grant frameworks, peer learning exchanges and benchmarking

ACTIVITY 5.6

Infrastructure risk mapping

Infrastructure risk mapping refers to systematically identifying and analyzing risks to WASH infrastructure from climate hazards, earthquakes, floods, landslides, pollution, and vandalism. It includes hazard mapping, exposure mapping, and vulnerability assessment to anticipate risks and plan for resilient design, operation, and maintenance.

Purpose

To design and manage WASH systems that are resilient to shocks and stresses, minimizing service disruptions and protecting public health.

Dependencies

Independent

Tools

Risk assessment matrix, GIS hazard maps, climate risk screening tools, exposure mapping tools (infrastructure inventories and asset registries), vulnerability assessment checklists

Time/Capacity

- Time: 1 week
- Capacity: Requires disaster risk reduction specialists, climate experts, and WASH engineers trained in risk analysis and GIS

ACTIVITY 5.7

Design WASH infrastructures

Designing WASH infrastructure involves the preparation of detailed technical designs, feasibility studies, and engineering specifications for new or upgraded water, sanitation, and hygiene (WASH) facilities. This includes systems such as source protection, water supply pipelines, treatment plants, fecal sludge management (FSM) facilities, laboratories, and solid and liquid waste management systems. The design process ensures that all infrastructure and its associated ecosystem is technically sound, economically feasible, environmentally sustainable, and aligned with national standards and climate-resilient design principles. This section only looks at the technical side of the design.

Purpose

To ensure designs are technically sound, costed, climate-resilient, and inclusive.

Dependencies

Depends upon Activity 2, Activity 3, Activity 4, and Activity 6

Tools

National design standards, cost estimation models, environmental and social safeguard checklists, Design approval checklist.

Time/Capacity

- Time: 1–3 months depending on scale
- Capacity: Requires licensed engineers and planners

ACTIVITY 5.8

Asset creation

Asset creation refers to executing construction or rehabilitation of WASH infrastructure based on approved designs, ensuring quality, resilience, and alignment with municipal WASH plans. It includes project management including risk assessment, market readiness, and institutionalizing Standard Operating Procedures (SOPs) for implementation and handover.

Sub-activity 5.8a

Assess the risk for implementing the design

Assessing implementation risk refers to evaluating time, cost, and quality risks associated with the approved infrastructure design.

Purpose

To anticipate potential delays, cost overruns, or quality failures and design mitigation measures before construction begins.

Dependencies

Depends upon Activity 7 and Activity 1 (Planning Block)

Tools

Project management tools (Critical Path Method, Program Evaluation and Review Technique), financial feasibility and cost analysis templates, risk assessment matrix, capacity assessment checklists for implementing agencies

Time/Capacity

- Time: Continuous during implementation
- Capacity: Requires engineers, municipal WASH desk staff, project managers, and oversight committees with risk analysis skills

Sub-activity 5.8b

Market readiness

Market readiness refers to ensuring that local supply chains, vendors, and service providers (masons, contractors, equipment suppliers) have capacity to deliver goods and services for infrastructure implementation and/or on demand repair/maintenance.

Purpose

To secure reliable, affordable, and quality inputs for WASH infrastructure while promoting local economic participation and sustainability.

Dependencies

Depends upon Activity 7 and Sub-activity 8a

Tools

Market surveys, vendor mapping templates, price benchmarking tools, product quality testing kits, user satisfaction surveys, business model canvases, subsidy templates, MoU templates, vendor qualification checklists, cooperative engagement guidelines

Time/Capacity

- Time: 1–2 months after commissioning of the project, including market assessment, vendor engagement, and partnership setup
- Capacity: Requires local government–private sector partnerships

Sub-activity 5.8c

Prepare and institutionalize Standard Operating Procedures (SOPs)for operation and maintenance system

Preparing and institutionalizing SOPs refers to formalizing step-by-step processes for procurement, design, construction/ implementation, monitoring, quality assurance/quality control (QA/QC), handover of WASH assets,

Purpose

To create uniform standards that guide implementation, minimize risks of non-compliance, and ensure accountability.

Dependencies

Depends upon Sub-activity 8b

Tools

SOP templates for design, construction/ implementation, monitoring, quality assurance/ quality control (QA/QC), handover of WASH assets, MoU templates for contractors and service providers, compliance guidelines from the Water Supply and Sanitation Act 2022 and WASH Regulation 2025

Time/Capacity

- Time: 1 month for SOP development; periodic updates as required
- Capacity: Consultant with expertise on SOP development of WASH system, Requires municipal WASH desk, procurement section, and legal/contract management staffskills

ACTIVITY 5.9

Establish and institutionalize SOPs for operation and maintenance (O&M) systems

Operation and Maintenance refer to the systems and processes that ensure WASH infrastructure and services remain functional, efficient, and sustainable. It covers two aspects: (i) preparing the local market and service chains (technicians, vendors, spare parts suppliers, laboratories) to deliver timely support, and (ii) preparing and institutionalizing SOPs for preventive maintenance, repairs, quality monitoring, and grievance redress.

Purpose

To establish reliable and standardized O&M practices that minimize service interruptions, extend asset life, and safeguard public health.

Dependencies

Depends upon Activity 8; This can also be done during Activity 8b and Activity 8c

Tools

Market surveys and vendor mapping templates, supply chain analysis tools, service contracts with local vendors, SOP templates for preventive maintenance and repairs, water quality monitoring and emergency response guidelines, asset management systems linked to NWASH-MIS, grievance redress protocols and customer service guidelines

Time/Capacity

- Time: Initial setup 2–3 weeks for market mapping and SOP preparation; ongoing updates every 2–3 years, with quarterly training and refreshers
- Capacity: Requires municipal WASH desk, service providers, engineers, trained operators, and private sector support

ACTIVITY 5.10

Communication with regulatory authorities

Communication with regulatory authorities refers to ensuring regular reporting to regulators on KPIs, tariffs, service levels, and compliance with WASH Regulation 2025.

Purpose

To guarantee accountability and continuous improvement of services.

Dependencies

Depends upon Activity 9

Tools

NWASH-MIS reporting linked to KPIs, SOP templates, grievance redress protocols, preventive maintenance calendars, annual compliance reports, municipal–regulator review meetings

Time/Capacity

- Time: Quarterly and annual reporting
- Capacity: Requires dedicated staff and regulatory liaison officers

BUILDING BLOCK: LEARNING AND ADAPTATION

ACTIVITY 6.1

Collaborate with academia and research institutions for applied WASH research

Collaboration with academia and research institutions refers to partnering with universities, research centers, and think tanks to co-generate evidence, test innovations, and integrate WASH system challenges into academic agendas.

Purpose

To ground WASH policies and practices in scientific evidence and foster innovation in technology, governance, and financing.

Dependencies

Depends upon Activity 1 (Institutional Arrangement Block)

Tools

Service barrier analysis, memoranda of understanding (MoUs) with universities or research institutes, joint research grants, student internships and field studies linked with municipalities

Time/Capacity

- Time: 1–2 MoUs annually; ongoing collaboration
- Capacity: Requires local government leadership and designated academic focal persons

ACTIVITY 6.2

Systematically document and share lessons learned from WASH programs

Systematically documenting and sharing lessons learned refers to recording experiences, case studies, lessons, and best practices from WASH interventions, including both successes and failures.

Purpose

To preserve institutional memory and translate practice into knowledge that informs future planning and capacity building.

Dependencies

Depends upon Activity 4 (Monitoring Block)

Tools

Case study templates, action trackers linked with NWASH-MIS, storytelling and photo documentation guidelines

Time/Capacity

- Time: Quarterly documentation; each exercise 1–2 days
- Capacity: Monitoring and evaluation (M&E) or communication staff trained in documentation

ACTIVITY 6.3

Produce and disseminate concise knowledge briefs and evidence summaries

Producing and disseminating knowledge briefs and summaries refers to sharing documented lessons, innovations, and evidence through reports, briefs, websites, social media, workshops, and policy dialogues.

Purpose

To ensure that knowledge reaches decision-makers, service providers, and communities, creating feedback loops for adaptation.

Dependencies

Depends upon Activity 2

Tools

Policy briefs, learning notes, municipal websites, newsletters, annual learning conferences or fairs

Time/Capacity

- Time: Semi-annual or annual events of 1–2 days
- Capacity: Requires facilitation, communication experts, and dissemination budget

ACTIVITY 6.4

Establish and operationalize knowledge repositories

Establishing and operationalizing knowledge repositories refers to creating centralized, accessible digital and physical platforms to store and retrieve WASH knowledge such as plans, reports, datasets, case studies, and training materials.

Purpose

To ensure knowledge is accessible, preserved, and used by current and future practitioners.

Dependencies

Depends upon Activity 2 and Activity 3

Tools

Municipal knowledge hub linked to NWASH-MIS, open-access digital libraries, resource centers at municipal or provincial level

Time/Capacity

- Time: Initial setup 2–3 months; ongoing maintenance
- Capacity: Requires IT support, documentation staff, and hosting budget

ACTIVITY 6.5

Facilitate peer-to-peer learning, networking, and partnerships

Facilitating peer-to-peer learning, networking, and partnerships refers to establishing horizontal learning platforms where municipalities, service providers, and stakeholders exchange knowledge, benchmark performance, and co-create solutions.

Purpose

To accelerate scaling of good practices and strengthen partnerships across municipalities, provinces, and regions.

Dependencies

Depends upon Activity 1 (Institutional Arrangement Block)

Tools

Peer review exchanges, benchmarking networks (e.g., utility associations, federations), partnership forums with NGOs, donors, and private sector, Peer Practice platform (whatsapp, google meet etc)

Time/Capacity

- Time: Annual peer-learning events; quarterly networking forums
- Capacity: Requires municipal leadership support and budget for coordination and travel

BUILDING BLOCK: FINANCING

ACTIVITY 7.1

Sensitize local government staffs about WASH financing

Sensitization of local governments on WASH financing refers to the process of building a common understanding among elected representatives, municipal staff, and committees on the importance of sustainable financing for WASH services. It clarifies financing sources (tariffs, taxes, transfers, self-supply, and private investment) and highlights the roles of local governments in mobilizing and managing resources.

Purpose

To ensure political and administrative leaders recognize WASH financing as a priority, allocate sufficient resources, and take ownership of their financing mandate.

Dependencies

Depends upon Activity 1 (Institutional Arrangement Block)

Tools

Orientation modules on WASH financing basics, case studies from other local governments, infographics showing financing sources and flows, policy briefs summarizing the Sector Development Plan (SDP) 2023–2043 financing vision

Time/Capacity

- Time: Half-day to one-day sensitization session
- Capacity: Facilitators with municipal finance and WASH expertise, simplified materials for elected leaders

ACTIVITY 7.2

Conduct investment needs assessment

Investment needs assessment refers to the systematic process of estimating the total resources required for achieving universal, safely managed WASH services within a municipality. It covers both capital expenditure (CapEx) and operational expenditure (OpEx), and considers climate resilience, equity, and long-term sustainability.

Purpose

To provide local governments with a realistic picture of the financing gap between available resources and required investments.

Dependencies

Depends upon Activity 1 and Activity 1 (Planning Block)

Tools

WASH costing models (CapEx, OpEx, Capital Maintenance Expenditure (CapManEx)) from NWASH-MIS and municipal infrastructure inventories, investment projection templates (short-, medium-, and long-term), scenario planning tools

Time/Capacity

- Time: 3–5 days of analysis and workshops
- Capacity: Finance, engineering, and planning expertise; external facilitation may be required for cost modeling

ACTIVITY 7.3

Analyze past expenditure trends

Analyzing past expenditure trends refers to reviewing historical municipal WASH budgets and actual spending at the municipal level to understand allocation and utilization patterns over the last 3–5 years.

Purpose

To provide evidence on how much has been spent, on what, and with what results, guiding better future planning and advocacy.

Dependencies

Depends upon Activity 1

Tools

Municipal financial records and budgets, expenditure tracking templates (CapEx, OpEx, CapManEx), NWASH-MIS financial modules, trend analysis charts

Time/Capacity

- Time: 3–4 days
- Capacity: Municipal finance staff with technical support, collaboration between the WASH desk, finance section, and auditors

ACTIVITY 7.4

Map all potential financial streams and linkages to WASH

Mapping potential financial streams refers to identifying and documenting all possible sources of WASH financing available to the municipality, including tariffs, taxes, and transfers.

Purpose

To diversify and expand the financial base for WASH services, reducing reliance on any single source.

Dependencies

Depends upon Activities 1,2,3, and 4. Also depends upon Activity 5 (Service Delivery & Infrastructure Block) and Activity 10 (Service Delivery and Infrastructure)

Tools

Local government budget integration guides, 4Ts framework (tariffs, taxes, transfers, trade/market or repayable financing), stakeholder consultation, resource flow diagrams, affordability studies, tariff simulation tools, cost recovery tools, feasibility templates, business plan

Time/Capacity

- Time: 2–3 days' workshop
- Capacity: Facilitators with knowledge of TrackFin methodology, municipal finance laws, donor financing, and private sector engagement

ACTIVITY 7.5

Leverage financial streams

Leveraging financial streams refers to mobilizing different financial sources such as tax, transfer, tariff, self-supply, repayable finance and innovative finance to sustainably finance WASH services at the local government level in Nepal. This activity is dependent upon Activities 1–5 under the finance block and Activity 9 (Water Resources & Management Block).

Sub-activity 7.5a

Mobilize local taxes for WASH

Mobilizing local taxes refers to allocating municipal revenue sources (property tax, business tax, environmental fees) to WASH services and infrastructure.

Purpose

To secure predictable, internal funding for WASH and reduce dependency on external sources.

Tools

Local Government budget integration guidelines, WASH budgeting formats, revenue improvement plans.

Sub-activity 7.5b

Mobilize transfers (Intergovernmental and Donor Funding)

Mobilizing transfers means accessing fiscal grants provided by the federal and provincial governments and development partners for WASH activities.

Purpose

To secure external public funds for capital investment, pro-poor services and rehabilitation of WASH systems.

Tools

Advocacy briefs for budget allocation, sector budget maps, conditional grant proposal formats.

Sub-activity 7.5c

Tariff as a source of revenue

Tariffs provide a predictable and sustainable source of income for water and sanitation service providers. This sub-activity focuses on using equitable and cost-reflective tariffs to strengthen financial sustainability, improve cost recovery, and ensure funds are available for operation, maintenance, and service expansion. Tariffs must remain affordable for poor and vulnerable users and comply with Drinking Water Tariff Fixation Commission guidelines.

Purpose

To support municipal WASH financing by ensuring that tariff revenues contribute effectively to cost recovery and long-term service sustainability.

Tools

Tariff simulation tools, affordability study templates, KPI frameworks, licensing guidelines, Terms of Reference for regulatory committees.

Sub-activity 7.5d

Promote household self-supply

Self- supply refers to households or communities investing their own money in water supply and sanitation systems such as dug wells, rainwater harvesting or household toilets.

Purpose

To expand WASH access in areas where centralized systems are not feasible or too expensive.

Tools

Household WASH investment templates, subsidy guidelines for low-income households, technical drawings for rainwater harvesting and toilets.

Sub-activity 7.5e

Repayable finance (Loans, PPPs, Microfinance)

Repayable finance refers to using loans or credit from cooperatives, microfinance institutions, banks, or private partners (e.g., through Public–Private Partnerships) to finance WASH capital investments, with the capital cost repaid over time through user tariffs or service revenues on an annuity basis.

Purpose

To fund large WASH projects when grants and tax revenue are not enough.

Tools

Cost recovery models, financial feasibility templates, municipal project bank, Public Private Partnership framework.

Sub-activity 7.5f

Innovative finance

Innovative finance means accessing non-traditional funding sources such as climate finance, corporate social responsibility (CSR) funds, diaspora contributions or results-based financing for WASH.

Purpose

To supplement traditional funding and support climate-resilient and inclusive WASH services.

Tools

Green Climate Fund proposal templates, climate finance briefs, CSR engagement models, PPP frameworks, credit assessment tools.

ACTIVITY 7.6

Develop innovative financial instruments

Developing innovative financial instruments refers to designing mechanisms and tools that enable municipalities to mobilize, manage, and sustain WASH financing, such as earmarked funds, revolving funds, blended finance, microcredit, or performance-based grants.

Purpose

To create practical mechanisms that increase predictability of funding and attract new investments for WASH.

Dependencies

Depends upon Activity 4 and Activity 5c

Tools

Municipal WASH Fund guidelines, contract templates, revolving fund models, insurance schemes, public–private partnership frameworks

Time/Capacity

- Time: 1–2 months (design, validation, and approval)
- Capacity: Finance and legal experts, municipal leadership endorsement, and provincial/national compliance support

ACTIVITY 7.7

Leverage tracking through expenditure trends

Leverage tracking through expenditure trends refers to monitoring and documenting how municipal WASH allocations attract or catalyze additional funding from households, the private sector, provincial/federal government, and development partners.

Purpose

To demonstrate that local government investments mobilize co-financing, strengthening the case for sustained or increased WASH allocations.

Dependencies

Depends upon Activity 1 and Activity 2; it is a cyclic process

Tools

Expenditure tracking matrix (local government spending vs. leveraged funds), NWASH-MIS financial reporting, leverage ratio indicators (e.g., "1 NPR local government funding attracted 3 NPR co-funding")

Time/Capacity

- Time: Annual, aligned with the budget cycle
- Capacity: Finance staff, monitoring and evaluation officers, and WASH desk staff trained in leverage measurement.

BUILDING BLOCK: MONITORING

ACTIVITY 8.1

Establish and maintain WASH plan monitoring framework for local governments

Establishing and maintaining a monitoring framework refers to operationalizing the National WASH Management Information System (NWASH-MIS) at the local government level. Operationalizing NWASH-MIS means setting up clear processes, schedules, and responsibilities for regular data entry, updating, validation, and reporting. Instead of designing a new system, local governments must integrate NWASH-MIS into their routine work so that WASH information is accurate, timely, and actionable.

Purpose

To ensure that NWASH-MIS data remains up to date, reliable, and useful for planning, budgeting, and decision-making at municipal, provincial, and national levels.

Dependencies

Independent

Tools

NWASH-MIS platform with user accounts for local government staff, municipal monitoring plan specifying frequency (quarterly/annually), responsible staff, and reporting deadlines, data quality assurance checklist (triangulation with health, education, and service provider records), orientation and training materials for municipal staff and service providers

Time/Capacity

- Time: Setup requires one half-day session to establish the monitoring plan; routine updates are at least annual, with quarterly progress updates for priority indicators (coverage, functionality, quality)
- Capacity: Enumerators and local government staff require two days of training to become accustomed to NWASH-MIS, including digital data entry, indicator definitions, and data validation methods

ACTIVITY 8.2

Monitor WASH plans with self-assessment protocols

Continuous monitoring with self-assessment protocols refers to establishing a regular, internal review process where local governments, service providers, and community groups periodically assess their own WASH performance using standardized checklists, scorecards, and reflection tools. This complements NWASH-MIS reporting by promoting ownership, early problem detection, and adaptive management at the local level.

Purpose

To build a culture of accountability and learning where WASH actors do not wait for external reviews but continuously check progress, identify gaps, and take corrective actions.

Dependencies

Depends on Activity 1

Tools

Self-assessment checklists and scorecards (aligned with NWASH-MIS and Sector Development Plan 2023–2043), community feedback tools (citizen report cards, ward-level review meetings), traffic-light system (red–amber–green) for quick visualization of progress

Time/Capacity

- Time: Quarterly self-assessments at ward and service provider level; annual consolidated self-assessment at municipal level
- Capacity: 1–2 days of training for local government staff, Water Users and Sanitation Committees (WUSCs), and ward offices on using self-assessment protocols. Facilitators must have monitoring and evaluation and participatory assessment skills. Local governments should dedicate a focal person (usually the WASH desk) to compile results and feed them into NWASH-MIS

ACTIVITY 8.3

Audit the WASH system

A system audit in WASH refers to a periodic, independent, and structured review of the municipality's WASH systems, including governance, service delivery, finance, human resources, and monitoring practices, to check compliance with policies, standards, and agreed performance benchmarks. Unlike self-assessment, a system audit provides an external validation of data, processes, and outcomes.

Purpose

To ensure credibility, transparency, and accountability in WASH performance.

Dependencies

Depends upon Activity 2. Also depends upon Activity 7 (Financing Block)

Tools

Standard WASH system audit checklist (aligned with Sector Development Plan 2023–2043 and NWASH-MIS indicators), compliance review templates (legal, financial, service delivery, environmental safeguards), external audit guidelines (developed at national or provincial level), risk assessment matrix to capture systemic vulnerabilities

Time/Capacity

- Time: Once every 2–3 years, or aligned with municipal planning cycles; typically 3–5 days depending on scope (desk review and field verification)
- Capacity: Conducted by an independent team (provincial/federal backstopping agencies, third-party consultants, or inter-municipal peer review teams). Local government staff must be oriented to facilitate the audit and act on recommendations. Budget provision is required in the municipal WASH plan

ACTIVITY 8.4

Improve, develop feedback loops, and document

Continuous improvement, feedback loops, and documentation in WASH refers to the process of ensuring that monitoring results and audit findings are systematically analyzed, shared, and acted upon. It creates a learning cycle where data informs decisions, corrective actions are taken, and lessons are documented for future reference.

Purpose

To move monitoring from being a compliance exercise to a driver of adaptive management, accountability, and institutional memory.

Dependencies

Depends upon Activity 3

Tools

Feedback loop protocols specifying who receives results, how, and when, municipal learning workshops or reflection meetings after audits and self-assessments, Action Tracker tool to record follow-up on recommendations, knowledge management tools (case studies, annual WASH reports, digital archives), community feedback platforms (suggestion boxes, hotlines, citizen scorecards)

Time/Capacity

- Time: After each quarterly self-assessment at ward and municipal levels, and annually as part of municipal WASH review and planning; each reflection and documentation session typically requires one day
- Capacity: Local government staff must be trained in monitoring and evaluation, facilitation, and documentation skills. A dedicated focal person at the WASH desk should maintain records and follow-up actions. Engagement of civil society and users is required to validate and co-own feedback.

AUTHORS' BIO

Anjil Adhikari is a Climate and Water systems specialist working at the intersection of WASH, water resources governance, and climate resilience. He leads Oxfam Nepal's work on professionalising rural water utilities, strengthening public institutions, and integrating water into climate and landscape governance, with a focus on transforming fragmented projects into accountable, resilient public systems through policy reform, institutional design, and practical implementation across Nepal. He has played a leading role in advancing the establishment of water boards as professional utilities at the local level, has extensive field experience in strengthening their governance, service delivery, and operational systems, and is closely involved in the revision of Nepal's national water supply design guidelines to integrate climate resilience, service quality, and sustainability into national standards.

Garima Acharya is a young researcher with over four years of experience in water supply and water resources management, gained during her undergraduate studies at Pulchowk Campus, Lalitpur. She has worked with multidisciplinary teams across multiple international institutions on water and environmental research and has authored more than six peer-reviewed publications. Her work on WASH in Nepal received the Best Paper Award 2023 from ACS EST Water.

Madhu Sudhan Khanal is a water and environmental engineer, policy practitioner, and researcher with nearly a decade of leadership experience in the WASH sector of Nepal. Currently pursuing a PhD in Environmental Engineering at the University of Cincinnati, his work spans engineering, economics, governance, and data-driven decision-making. He has led and contributed to major donor-financed water infrastructure and governance programs, played a key role in shaping national WASH policies and monitoring systems, and supported institutional reforms across all levels of government, with a strong focus on resilient service delivery and sustainable development.

Rajit Ojha, PhD, is a Water Supply, Sanitation, and Hygiene Specialist with over 17 years of experience in Water Supply and Sanitary Engineering. He has extensive expertise in WASH governance, localizing SDG 6.1 and 6.2, and devising local government WASH plans. His proficiency lies in evaluating financing options, determining investment requirements, and analyzing expenditure trends across different levels of government. His PhD focuses on the nexus of Tariff, Consumer, and Environmental externalities. Furthermore, he holds a strong interest in networking and partnerships, through which he has created multi-stakeholder engagement strategies in local WASH plans, such as linking health, nutrition, and climate agendas to leverage access to WASH services. He identifies himself as a "System Thinker" and has a deep interest in examining the "evolution," "adaptation," "interconnectedness," and "fluid nature of actor dynamics" within WASH systems.

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